Zane Corman

CEHMM

2025 Annual Report

Candidate Conservation Agreements: Lesser Prairie-Chicken and Dunes Sagebrush Lizard

LETTER FROM THE EXECUTIVE DIRECTOR

Greetings,

On behalf of CEHMM and the Lesser Prairie-Chicken (LPC) and Dunes Sagebrush Lizard (DSL) Candidate Conservation Agreements (CCA/As), thank you for your continued participation and commitment to conservation in southeast New Mexico. Your engagement–across both the ranching and oil and gas communities–has been critical to the success of these cooperative agreements.

This year marked a significant milestone with the vacating of the LPC listing in August. In the decision to vacate the listing, conservation plans–including voluntary conservation efforts implemented through programs such as the CCA/As–were specifically cited as justification. As a result, the LPC CCA/As were reopened for enrollment for LPC only, creating renewed opportunities for voluntary conservation and collaboration.

During the year, more than $1.8 million was awarded in conservation projects, including critical research efforts. All of this work was fully funded through oil and gas enrollments with permission from ranching partners, underscoring the strength and effectiveness of the CCA/A framework.

On-the-ground accomplishments in 2025 were substantial. We treated 13,184 acres of mesquite and removed approximately 1,600 acres of dead standing mesquite. Infrastructure improvements included the replacement of 12 stock tanks and 8.2 miles of water pipeline, the removal of 4 windmills, and the replacement of 39.5 miles of fencing. Collectively, these efforts resulted in a net conservation gain of 839.93 acres within Chat 1 and Chat 2 habitat categories–representing prime LPC habitat.

These achievements would not be possible without the cooperative nature of the CCA/As and the strong relationships built among stakeholders. We extend sincere thanks to our ranching and oil and gas participants, as well as our partners at the Bureau of Land Management and the U.S. Fish and Wildlife Service. Your collaboration, trust, and shared commitment to conservation make these agreements work.

Thank you again for your participation and support. We look forward to continuing this important work together.

Sincerely,

Emily K. Wirth
Executive Director

Contents

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PROGRAM OVERVIEW

INTRODUCTION

The Center for Environmental Health, Monitoring, and Management (CEHMM) is a 501(c)(3) non-profit corporation involved in research and development in southeastern New Mexico. CEHMM uses funding from the Candidate Conservation Agreement (CCA) and Candidate Conservation Agreement with Assurances (CCAA) to provide conservation measures to maintain and improve habitat for two species of conservation concern in New Mexico.

The lesser prairie-chicken (LPC; *Tympanuchus pallidicinctus*) is a prairie grouse species native to the southern Great Plains. Its historic and current home ranges include parts of Colorado, Kansas, New Mexico, Oklahoma, and Texas (Rodgers 2016). Historically the LPC was found within Chaves, Curry, De Baca, Eddy, Lea, Quay, and Roosevelt counties in New Mexico (Bailey and Williams 2000; Rodgers 2016). Currently, the LPC is found only within Chaves, Curry, De Baca, Lea, and Roosevelt counties (Portillo-Quintero et al. 2022). In New Mexico, the LPC relies on vegetation that consists of a mix of shinnery oak (*Quercus harvardii*) and mixed grasses (Johnson et al. 2004; Haukos and Zavaleta 2016). This ecoregion is known as the Sand Shinnery Oak Prairie Ecoregion.

The dunes sagebrush lizard (DSL; *Sceloporus arenicolus*) is a small, light brown spiny lizard species native to a small area of southeastern New Mexico and western Texas. The DSL is considered a habitat specialist, showing a high preference for large dunal blowouts surrounded by shinnery oak (Stebbins 1985; Gorum et al. 1995; Degenhardt et al. 1996; Smolensky and Fitzgerald 2010, 2011; Walkup et al.2022). Currently in New Mexico, the DSL is found only within the Mescalero Sands in Chaves, Eddy, Lea, and Roosevelt counties (Acre et al. 2023; Block et al. 2023).

The Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. § 1531, et seq.), provides for the conservation of species that are endangered or threatened throughout all, or a significant portion, of their ranges. The ESA also provides conservation of ecosystems that are important to a species. 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 a listed species on public and private lands. In addition to the Section 9 prohibitions, Section 7 requires federal agencies to ensure their actions will not jeopardize the continued existence of the listed species. In March of 2023, the U.S. Fish and Wildlife Service (FWS) listed the LPC as threatened in the northern Distinct Population Segments (DPS) of their range which includes Colorado, Kansas, Oklahoma, and the Texas panhandle, and endangered in the southern DPS which includes New Mexico and western Texas (FWS 2023). However, in August of 2025 the LPC was delisted after a federal court vacated the FWS listing. This finding determined that the distinction of the LPC into northern and southern DPS was invalid. In May of 2024, the DSL was listed as endangered throughout its entire range of Texas and New Mexico (FWS 2024).

Input from the public was requested in the development of the CCA/CCAA through public forums. Forum locations were strategically placed to accommodate the attendees who were directly affected by, or had a particular interest in, the species of concern. Through public input, government and private entities involved in the drafting of the CCA/CCAA were able to address the needs and concerns of those who would be affected by a decision to list either/or both species.

The New Mexico LPC/DSL Working Group was formed in 2003 to address concerns and develop strategies for the future conservation of the LPC and DSL. Members of the group included representatives from the FWS, the Bureau of Land Management (BLM), CEHMM, oil and gas operators, and livestock producers. Their findings were published in a document titled *Collaborative Conservation Strategies for the Lesser Prairie-Chicken and Sand Dune Lizard in New Mexico* (BLM et al. 2005). The group's work provided a pathway that led to the signing of the CCA and CCAA on December 8, 2008. The CCA and CCAA, collectively referred to as the CCA/CCAA, provide a mechanism to conserve LPC and DSL habitats on federal and non-federal lands while allowing the FWS, BLM, and CEHMM to work in cooperation with private landowners and industry to support conservation while continuing to work on the land.

CANDIDATE CONSERVATION AGREEMENT AND CANDIDATE CONSERVATION AGREEMENT WITH ASSURANCES

Federal lessees, operators, and grazing permittees (collectively referred to as Participating Cooperators) can enter into the CCA by voluntarily signing a Certificate of Participation (CP) which outlines conservation commitments for both species. Legal descriptions and/or maps of the properties/leases where the Participating Cooperator desires to implement said conservation measures are also included in the CP. By entering into the CCA, Participating Cooperators receive a high degree of certainty that additional restrictions are not being placed on their otherwise legal activities.

By voluntarily signing a Certificate of Inclusion (CI), Participating Cooperators can enter into the CCAA, which grants them the opportunity to receive incentives for implementing specific conservation measures for the LPC and DSL on their non-federal land interests. By taking part in the CCAA, Participating Cooperators are provided with assurances that additional restrictions are not to be placed on their otherwise legal activities.

The voluntary nature of the agreements is important because it allows Participating Cooperators to relinquish their participation if they deem it necessary.

Upon the execution of a CP and/or CI, oil and gas, and linear development operators agree to contribute funds that will be used for conservation projects, research, and activities to restore, protect, and create suitable habitat for the LPC and/or DSL. Proposals for these projects are submitted annually to CEHMM and the CCA/CCAA ranking team, who rank them in order of conservation priority for either or both species. Dependent on the available funding for project completion that year, the highest priority projects are approved and funded. The ranking team includes wildlife biologists from the BLM, FWS, CEHMM, New Mexico State Land Office (NMSLO), and the New Mexico Department of Game and Fish (NMDGF). In addition to biologists, one Participating Cooperator from the oil and gas industry and one Participating Cooperator from the ranching community are included in the ranking process.

Based in Carlsbad and Milnesand, NM, CEHMM is the permit holder for the CCA/CCAA. CEHMM is obligated to administer, monitor, and report on projects completed with CCA/CCAA funds. CEHMM's participation allows for an approved, independently audited financial management system to provide for fund management and administration.

For oil and gas operators, one of the CCA/CCAA enrollment processes (Parcel-by-Parcel) includes identifying parcels to enroll. With the Parcel-by-Parcel enrollment process there was no mechanism for utility companies that operate linear features to enroll because they do not have a lease defined by legal descriptions. At the request of multiple industry partners to resolve these setbacks, CEHMM and the CCA/CCAA stakeholders committee began working on a CCA/CCAA amendment in 2018. In September 2022, the amendment was signed into effect and is known as the All-Activities Amendment (FWS 2022). This amendment allowed existing or new oil and gas Participating Cooperators to enroll all of their operations within the historic range of the LPC in New Mexico without having to add new parcels that they may acquire or trade for in the future. It also provided a pathway for linear infrastructure to be enrolled and covered under the agreements.

There are several benefits to this option of enrollment. For example, greater conservation can be achieved for both species because leases acquired after an ESA listing are covered under the Participating Cooperators All-Activities Enrollment. Conservation measures to benefit both species will continue to be implemented in the All-Activities program.

Habitat categories are also reclassified in the amendment. These categories reflect occupied habitat and Crucial Habitat Assessment Tool (CHAT) scores (Appendix B). A refined conservation fee structure was implemented based on the quality of habitat where activities are taking place. The conservation fee schedule will be adjusted annually to account for inflation or deflation. The final change to the CCA/CCAA through this amendment was to lower the initial enrollment fee for new participants with fewer than 20,000 acres who chose to exercise the traditional, Parcel-by-Parcel enrollment option.

By implementing the CCA/CCAA, the following will be accomplished (FWS 2008):

- Develop, coordinate, and implement conservation actions which reduce and/or eliminate known threats to the LPC and the DSL in New Mexico on federal, state, and private surface and mineral holdings;

- Support ongoing efforts to re-establish and maintain viable populations of both species in currently occupied and suitable habitats; and,

- Encourage preservation, restoration, and development of suitable LPC and DSL habitat by incentivizing Participating Cooperators to implement specific conservation measures.

PARTICIPATING COOPERATORS' NEED FOR THE CCA/CCAA

Under the ESA, a listing of the LPC or the DSL authorizes the FWS to prohibit activities that may harm either species or their habitats. Throughout LPC and DSL habitat, two of the primary land uses are ranching and oil and gas development. If ranching and oil and gas entities are not enrolled in the CCA/CCAA, they may face restrictions on their operations. Ranching operations may be required to reduce stocking rates, implement different management strategies, or be subject to other regulatory measures. Industry entities not enrolled may be subject to an increased permitting period for oil and gas infrastructure. As stated previously, through participation in the CCA/CCAA, Participating Cooperators are provided a high degree of certainty (CCA) and assurances (CCAA) that their operations will not be subject to additional restrictions as long as conservation measures are achieved as outlined in each respective CP and/or CI agreements.

ENROLLMENT

In June of 2024, the DSL was federally listed as endangered, officially closing enrollment into the CCA/CCAA for the DSL (FWS 2024). With the delisting decision of the LPC in August of 2025, enrollment for the LPC CCA/CCAA has been reopened. Currently there are 2,339,206.61 acres enrolled by ranching participants (Figures 1, 2, 4, and 5) and 3,534,366.44 acres enrolled by industry participants (Figures 1, 3, 6, and 7) in the program. It is important to note that some of the enrolled acres are outside of the CHAT boundary. Therefore, not all the enrollment acres are included in the CHAT table below (Table 1). Additionally, the Habitat Condition areas established for the DSL by the FWS overlap with the LPC CHAT area. Although the acres in the Habitat Condition table (Table 2) are accounted for in the CHAT table (Table 1), they only represent the DSL habitat condition categories.

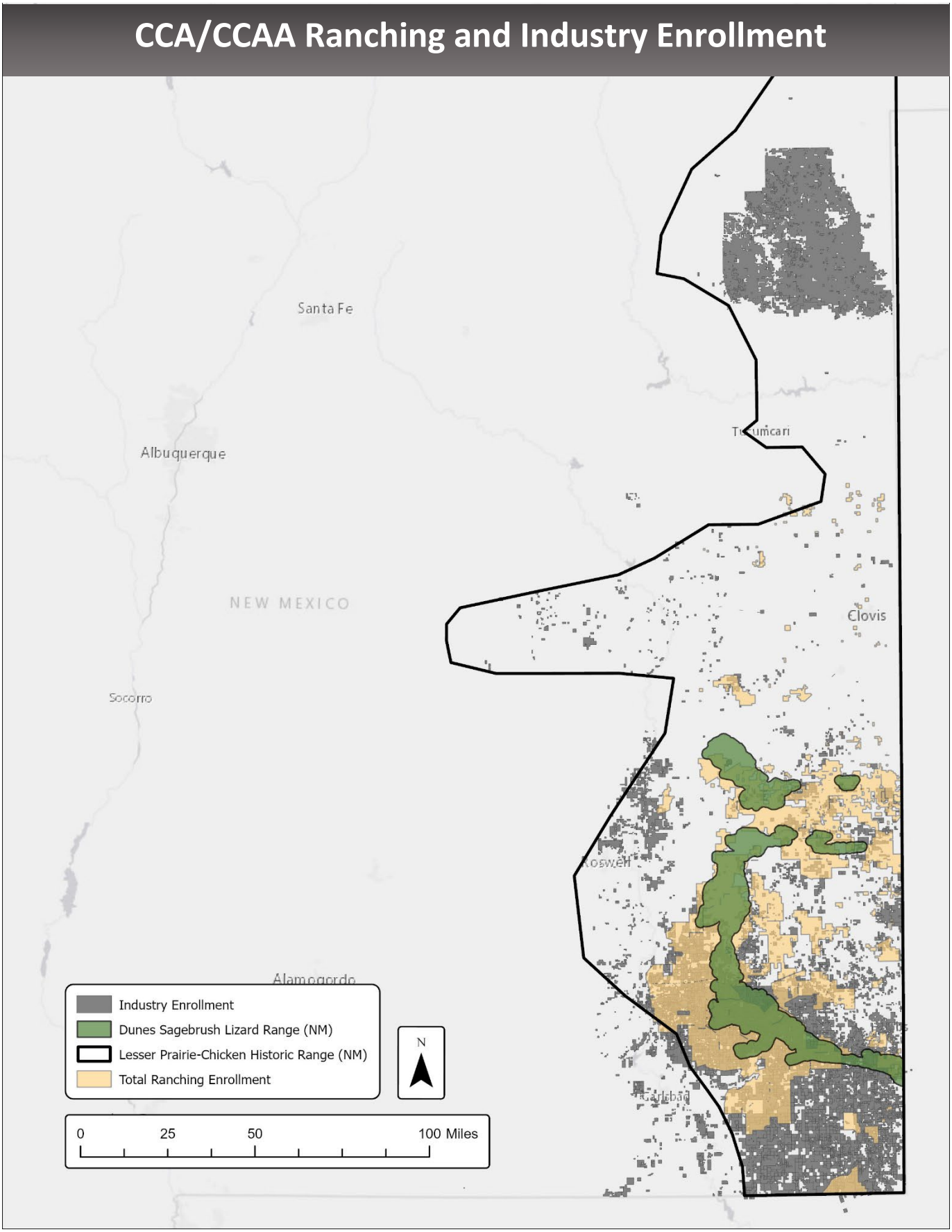


Figure 1. CCA/CCAA enrollment areas of ranching (i.e., yellow) and industry (i.e., gray) in relation to the dunes sagebrush lizard range (i.e., green) and the lesser prairie chicken historic range (i.e., black outline).

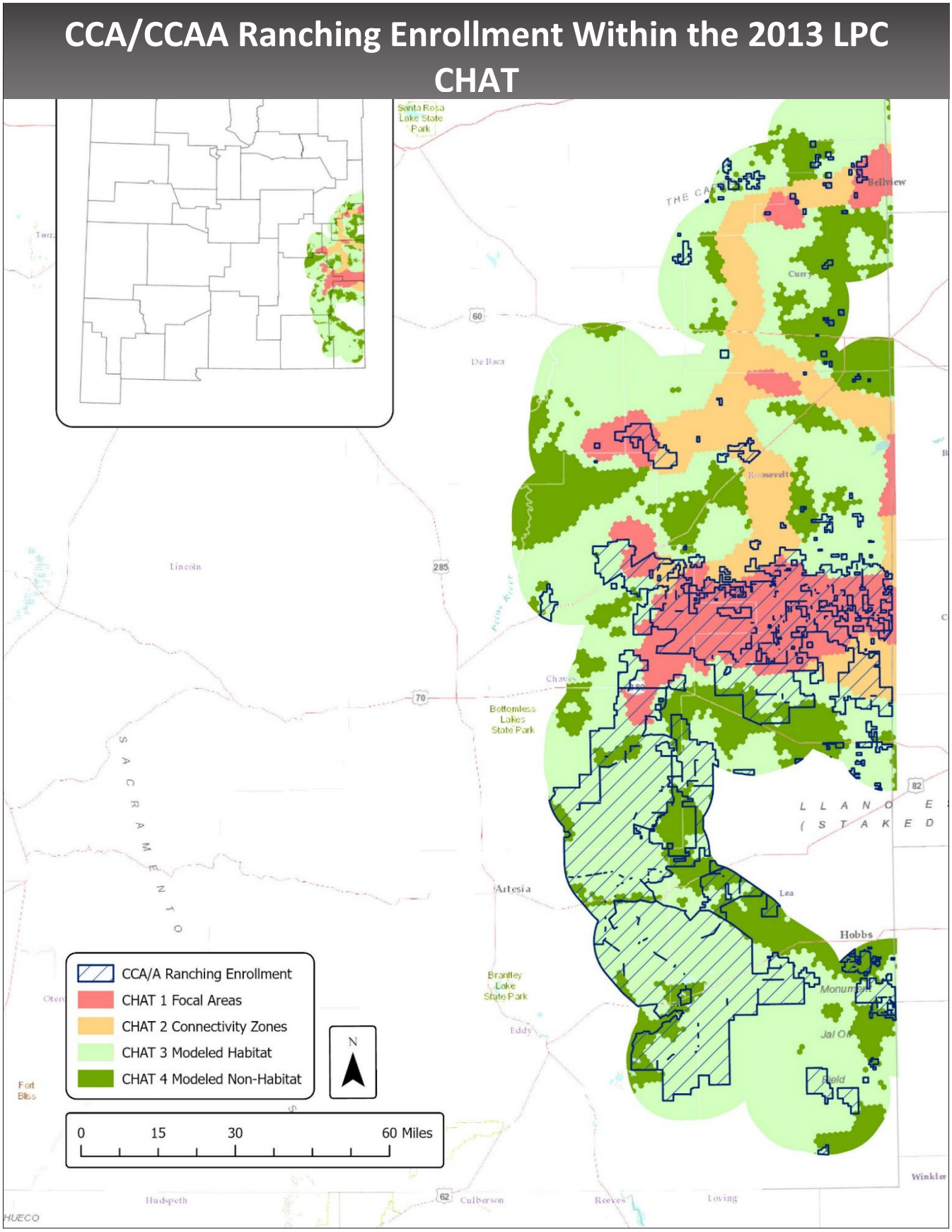


Figure 2. CCA/CCAA ranching enrollment (i.e., blue with parallel hatch) within Focal Areas (i.e., red), Connectivity Zones (i.e., orange), Modeled Habitat (i.e., light green), and Modeled Non-Habitat (i.e., green) according to LPC Crucial Habitat (CHAT) Scores.

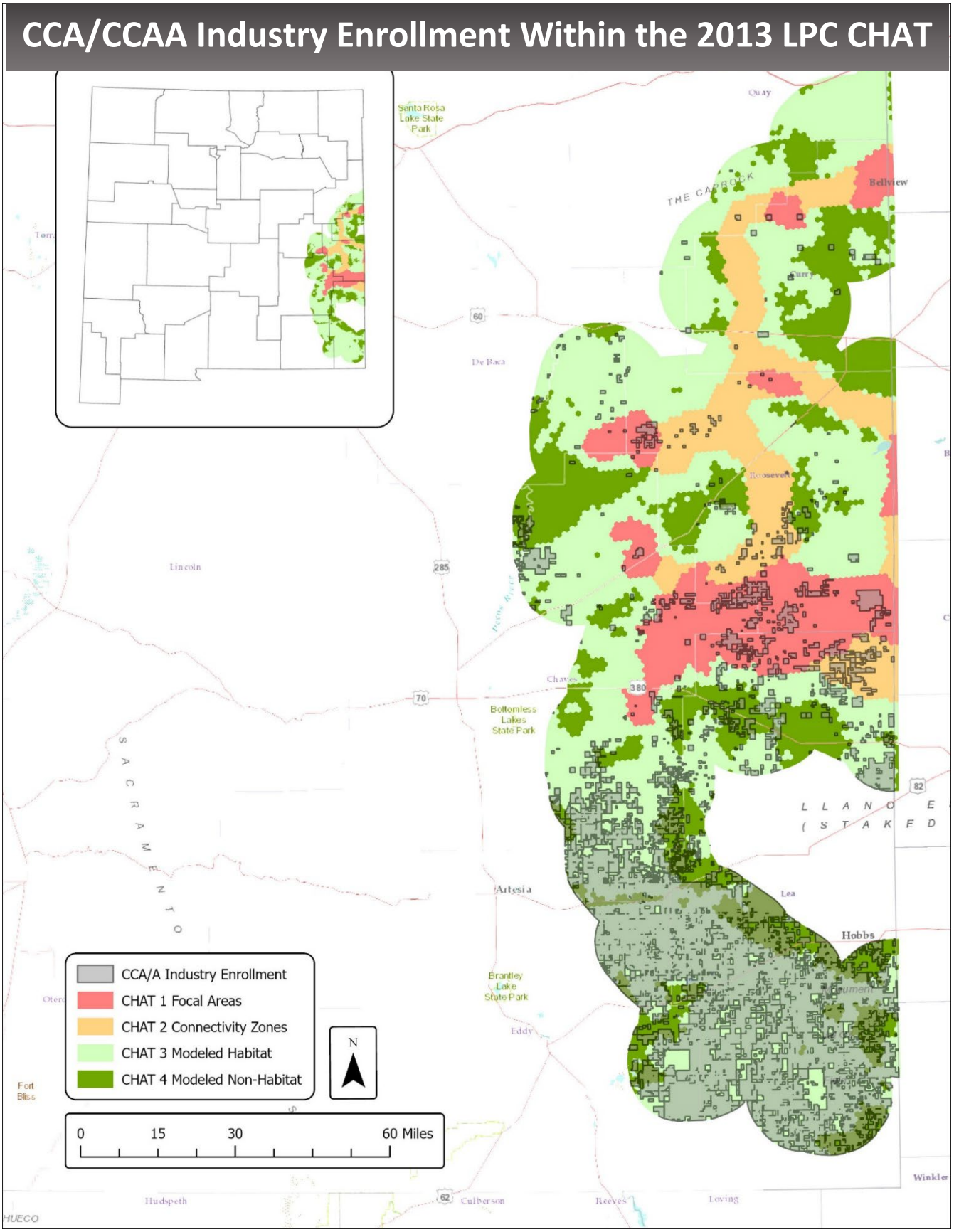


Figure 3. CCA/CCAA industry enrollment (i.e., gray with black outline) within Focal Areas (i.e., red), Connectivity Zones (i.e., orange), Modeled Habitat (i.e., light green), and Modeled Non-Habitat (i.e., green) according to LPC Crucial Habitat (CHAT) Scores.

CCA/CCAA Ranching Enrollment within the DSL Habitat Conditions

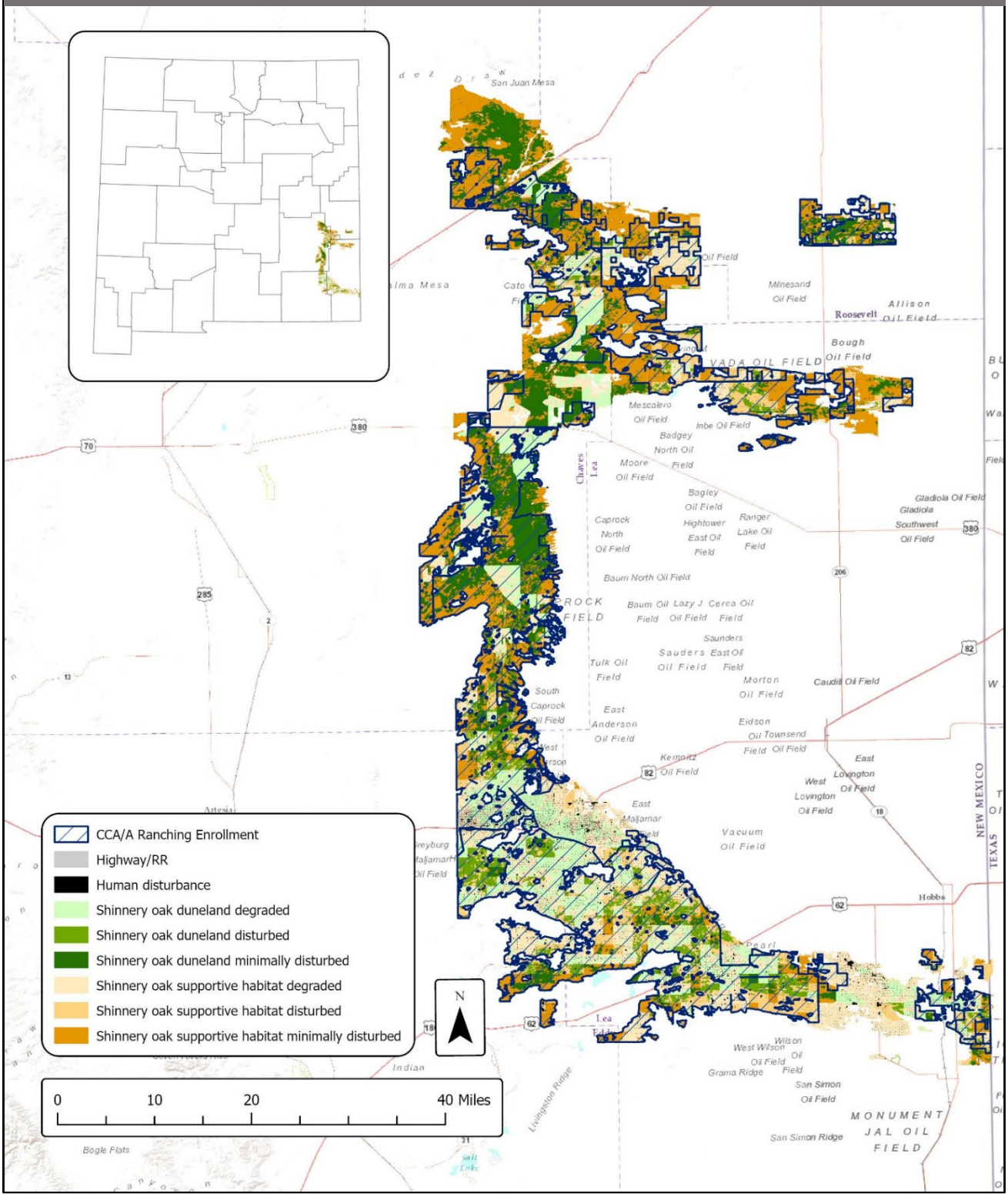


Figure 4. CCA/CCAA ranching enrollment areas (i.e., blue with parallel hatch) and DSL habitat conditions including highways and railroads (i.e., grey), human disturbance (i.e., black), shinnery oak duneland degraded (i.e., light green), shinnery oak duneland disturbed (i.e., green), shinnery oak duneland minimally disturbed (i.e., dark green), shinnery oak supportive habitat degraded (i.e., tan), shinnery oak supportive habitat disturbed (i.e., orange), and shinnery oak supportive habitat minimally disturbed (i.e., dark orange).

CCA/CCAA Ranching Enrollment within the FWS Modeled DSL Habitat

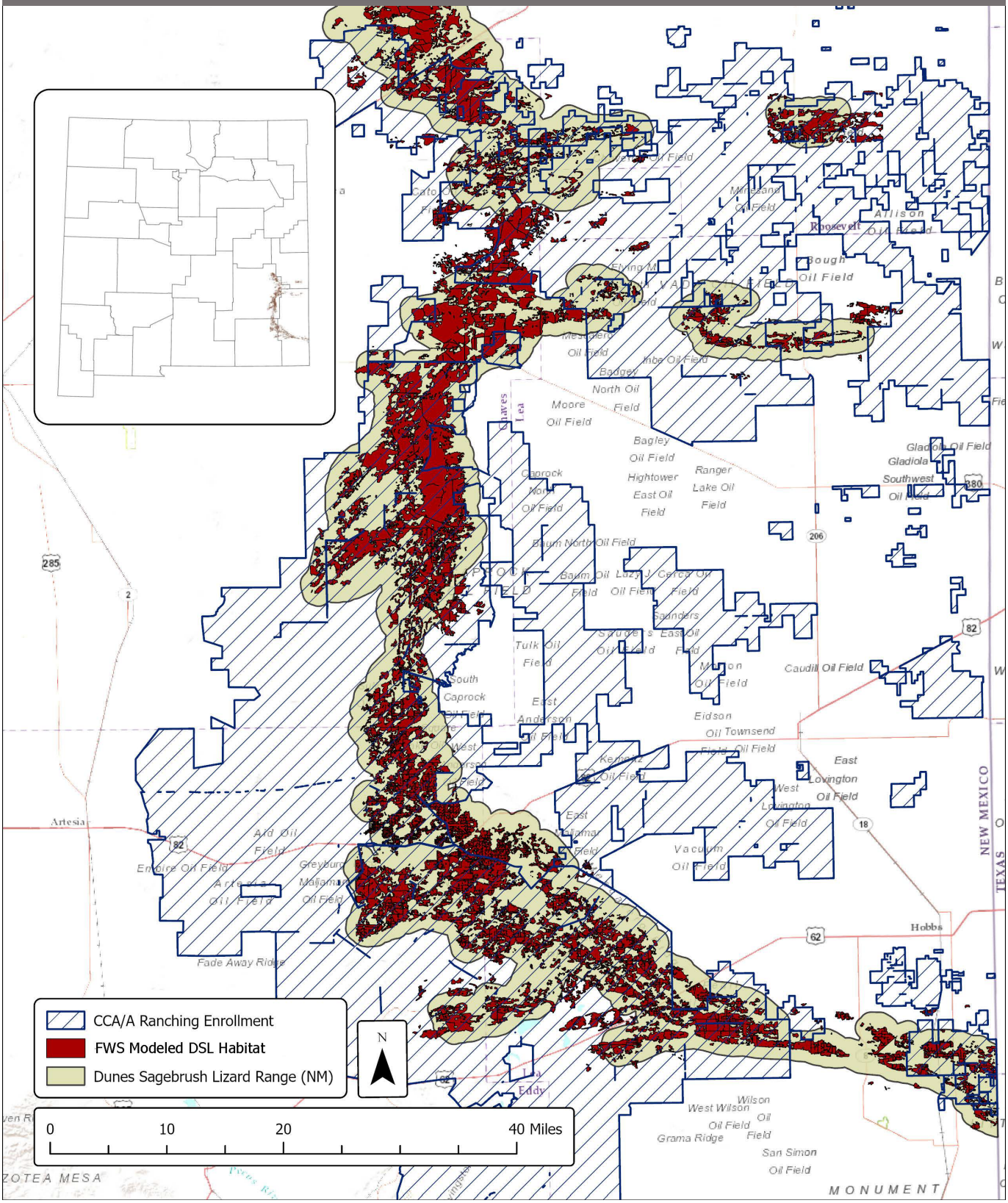


Figure 5. CCA/CCAA ranching enrollment areas (i.e., blue with parallel hatch) and FWS Modeled DSL Habitat (i.e., red) within the DSL range in New Mexico (i.e., green).

CCA/CCAA Industry Enrollment within the DSL Habitat Conditions

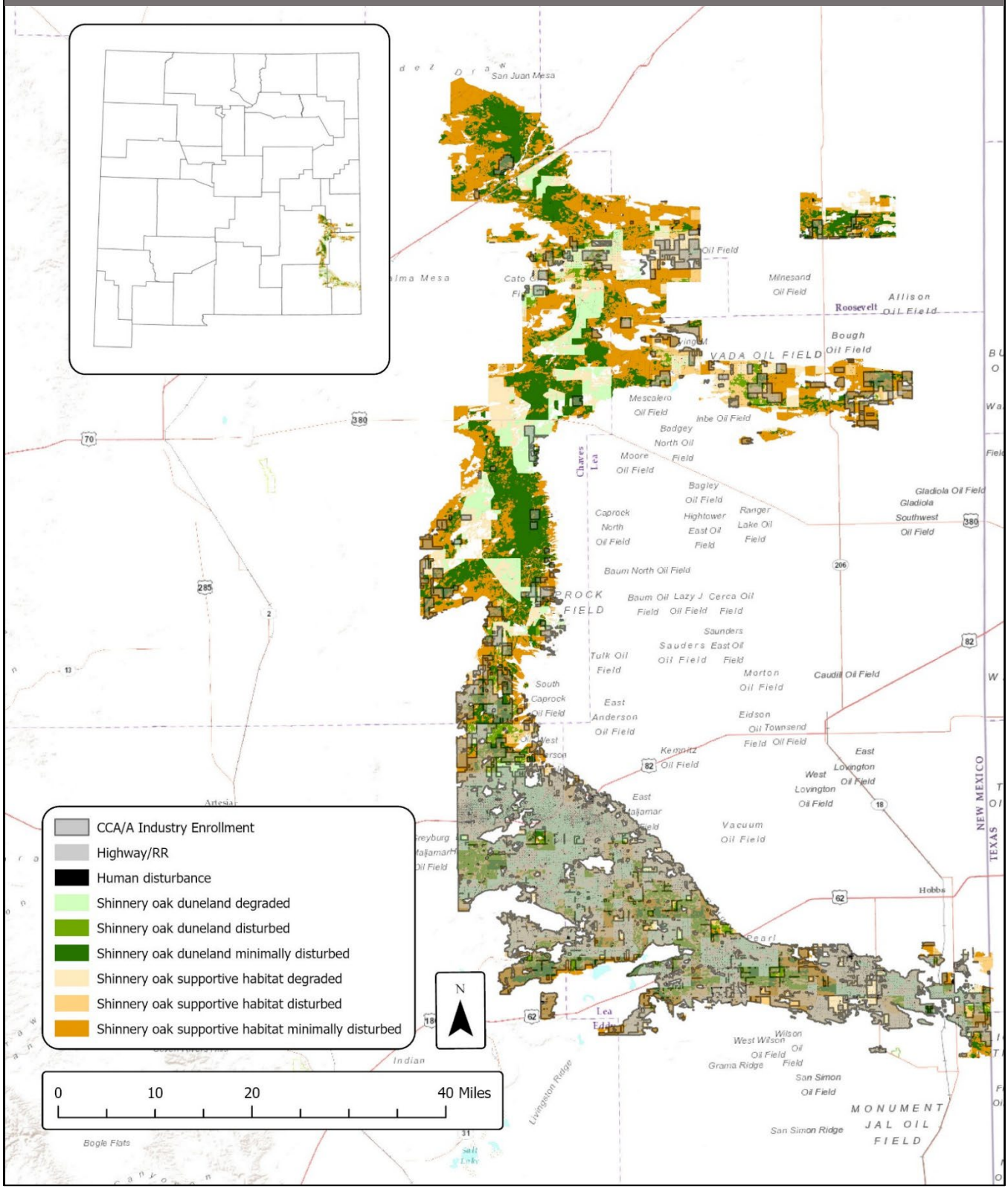


Figure 6. CCA/CCAA industry enrollment areas (i.e., gray with black outline) and DSL habitat conditions including highways and railroads (i.e., grey), human disturbance (i.e., black), shinnery oak duneland degraded (i.e., light green), shinnery oak duneland disturbed (i.e., green), shinnery oak duneland minimally disturbed (i.e., dark green), shinnery oak supportive habitat degraded (i.e., tan), shinnery oak supportive habitat disturbed (i.e., orange), and shinnery oak supportive habitat minimally disturbed (i.e., dark orange).

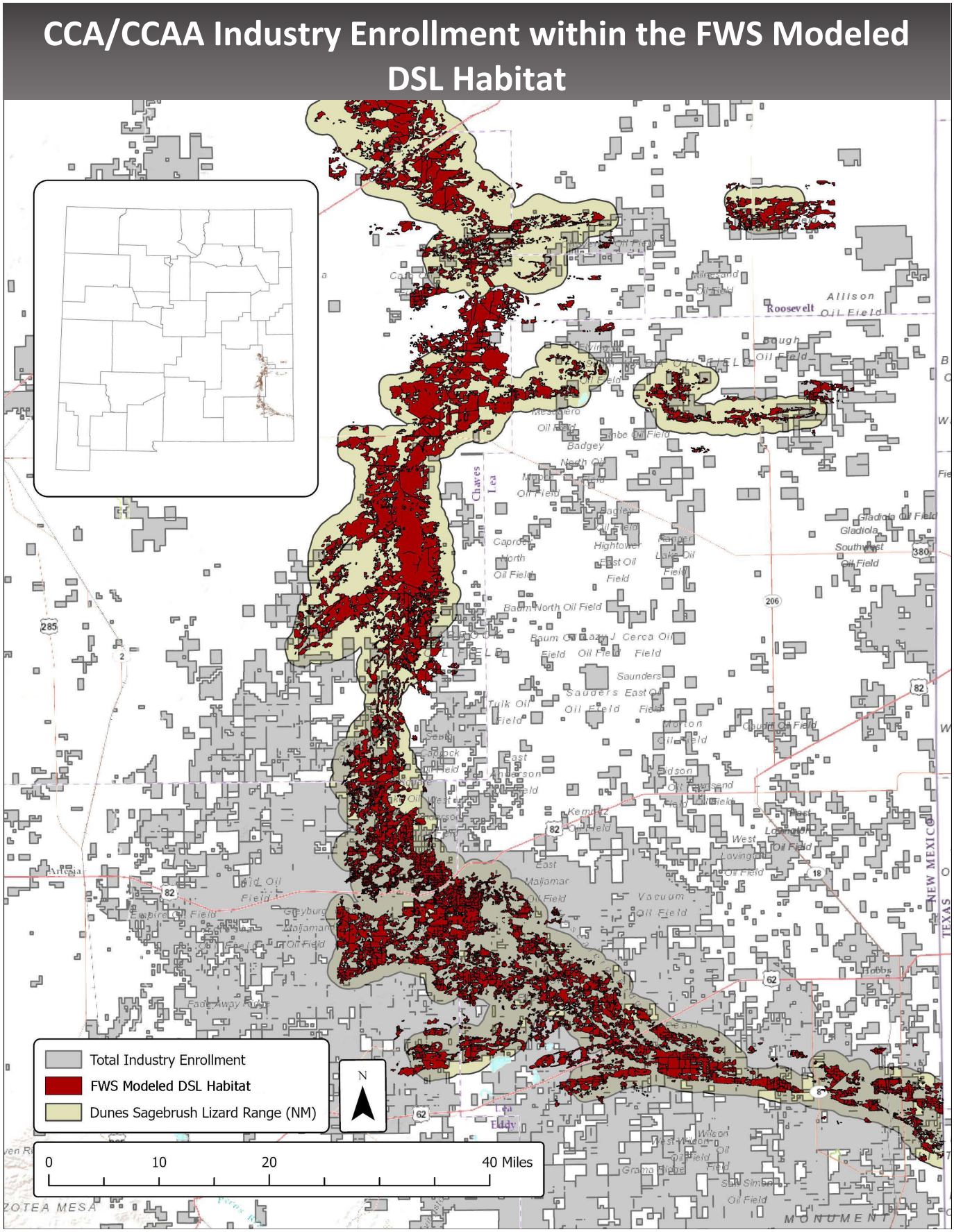


Figure 7. CCA/CCAA industry enrollment areas (i.e., gray with black outline) and FWS Modeled DSL Habitat (i.e., red) within the DSL range in New Mexico (i.e., green).

Table 1. CCA/CCAA enrolled acreages of ranching and industry enrollments across CHAT categories. Note that enrollment acreages may change interannually.

CHAT Scores	Ranching Enrollment	Industry Enrollment
CHAT 1 (Federal)	54,353.04 acres	3,994.62 acres
CHAT 1 (Non-Federal)	401,082.24 acres	100,033.37 acres
CHAT 2 (Federal)	5,610.09 acres	0 acres
CHAT 2 (Non-Federal)	87,320.81 acres	42,468.61 acres
CHAT 3 (Federal)	617,859.88 acres	549,046.68 acres
CHAT 3 (Non-Federal)	569,899.25 acres	701,922.81 acres
CHAT 4 (Federal)	66,652.35 acres	56,319.19 acres
CHAT 4 (Non-Federal)	167,946.39 acres	281,727.48 acres
Total CHAT (Federal)	**744,475.36 acres**	**609,360.49 acres**
Total CHAT (Non-Federal)	**1,226,248.69 acres**	**1,126,152.27 acres**

Table 2. CCA/CCAA enrolled acreages of ranching and industry enrollments across DSL habitat conditions[1].Note that enrollment acreages may change interannually.

Habitat Class	Ranching Enrollment	Industry Enrollment
Highway/RR* (Federal)	879.96 acres	969.72 acres
Highway/RR (Non-Federal)	485.89 acres	638.63 acres
Human Disturbance (Federal)	13,545.40 acres	15,097.98 acres
Human Disturbance (Non-Federal)	9,699.15 acres	10,751.83 acres
SOD▪ Degraded (Federal)	69,166.27 acres	53,113.24 acres
SOD Degraded (Non-Federal)	25,403.23 acres	23,118.19 acres
SOD Disturbed (Federal)	32,464.30 acres	27,208.73 acres
SOD Disturbed (Non-Federal)	19,340.63 acres	13,352.70 acres
SODMD (Federal)**	63,698.15 acres	17,424.40 acres
SODMD (Non-Federal)	44,905.64 acres	10,731.99 acres
SOSH[2] Degraded (Federal)	88,133.31 acres	71,928.65 acres
SOSH Degraded (Non-Federal)	61,074.96 acres	63,093.91 acres
SOSH Disturbed (Federal)	35,829.28 acres	30,281.92 acres
SOSH Disturbed (Non-Federal)	40,357.49 acres	27,262.54 acres
SOSHMD* (Federal)**	67,391.95 acres	26,040.69 acres
SOSHMD* (Non-Federal)**	113,648.23 acres	29,811.07 acres
Total DSL Habitat Conditions (Federal)	**371,108.62 acres**	**242,067.33 acres**
Total DSL Habitat Conditions (Non-Federal)	**315,115.22acres**	**178,760.86 acres**

***RR**-Railroad; **▪SOD**-Shinnery Oak Duneland; ****SODMD**-Shinnery Oak Minimally Disturbed; [2]**SOSH**- Shinnery Oak Supportive Habitat; *****SOSHMD**- Shinnery Oak Supportive Habitat Minimally Disturbed

[1]U.S. Fish and Wildlife Service 2023.

CONSERVATION MEASURES

Conservation measures are actions that are agreed upon by Participating Cooperators, the BLM (with signed CP), FWS, and CEHMM. When these actions are implemented, they can help to reduce or eliminate threats to the LPC and/or DSL. Below are some examples of the conservation measures that Participating Cooperators agree upon when enrolling in the CCA/CCAA programs.

Oil and Gas Conservation Measures Examples

- Allow no new surface occupancy within 30 meters of areas designated as occupied or suitable DSL dune complexes or within delineated shinnery oak corridors.
- Bury new powerlines that are within 2 miles of active LPC lek sites and/or within 1 mile of historic LPC lek sites.
- Allow no 24-hour drilling operations between March 1 and June 15 for federal wells, and March 1 and June 15 for non-federal wells within Timing Zone 1.
- Conduct trench monitoring for any trench left open longer than 8 hours.
- Limit seismic exploration to areas outside of occupied and suitable shinnery dune complexes.

Ranching Conservation Measures Examples

- Improve or maintain enrolled lands as suitable LPC and/or DSL habitat.
- Allow CEHMM and its partners to survey and monitor enrolled lands with prior notification.
- Prohibit leasing of enrolled lands to wind power development, where the private land holder has discretion.
- Prohibit leasing of enrolled lands to oil and gas, where the private land holder has discretion.
- Develop and implement a grazing monitoring plan.
- Provide escape ramps in all open water sources.

CONSERVATION MEASURE VIOLATIONS

As the administrator of the CCA/CCAA, it is CEHMM's responsibility to provide the Participating Cooperators with formal notifications if any of the conservation measures are not being implemented as listed in their CIs and CPs. A Conservation Measure Violation (CMV) formally notifies a Participating Cooperator of the failure to implement conservation measure(s). It is similar to the BLM's Incident of Non-Compliance (INC) issued to operators who do not meet the conditions of use on their respective operations. When a CMV is issued, CEHMM will work with the Participating Cooperator to plan corrective actions specific to the conservation measures in question. No fine or penalty is assessed with a CMV; however, if three CMVs are issued in a 12-month period, the Participating Cooperator will be at risk of termination of their CI and/or CP. They will also lose any benefits from their CCA/CCAA enrollment. No CMVs were issued in 2025.

COLLABORATIVE EFFORTS

RANKING TEAM

The ranking team prioritizes each proposal using a ranking system that was developed by CEHMM staff. The team includes project managers from CEHMM and biologists from the FWS, BLM, NMSLO, and NMDGF. In addition to these biologists and project managers, one Participating Cooperator from the ranching community and one from the oil and gas community are on the ranking team. The ranking team has historically met quarterly, via phone or in person. Votes on proposed projects are taken at least once annually. The annual meeting for ranking and voting occurs in person; however, the ranking team may also vote on projects via electronic transmission at any time. In 2025, the ranking team met on August 14 and voted to fund eight new habitat improvement projects, awarding $1,455,031.65 in support of conservation efforts. In addition to these projects, the ranking team also voted to fund four research projects, awarding $362,169.02 to advance knowledge on LPC and DSL habitat and survey methodologies.

STAKEHOLDER COMMITTEE

The role of the stakeholder committee is to voice the concerns and opinions of the CCA/CCAA program's stakeholders. Additionally, the committee was included in the development and planning of the annual stakeholder meeting. On December 4, 2025, in Hobbs, New Mexico, CEHMM's LPC/DSL program held its annual stakeholder meeting in conjunction with CEHMM's Texas hornshell mussel program. Representatives from the ranching community, industry, and partner agencies attended in person or virtually to learn about program activities from the past year and plans for the future. Attendees also received updates on the status of each of the species of concern from representatives of CEHMM, the BLM, NMDGF, and FWS.

FUNDING

HABITAT CONSERVATION FUND

CEHMM establishes a Habitat Conservation Fund (HCF) for each oil and gas operator that has an executed CI or CP agreement. The contribution amount is determined by the number of acres included in their CI and/or CP agreement. Once land-disturbing activities are identified and permitted in the operator's enrollment, conservation fees are debited from their HCF. Activities that do not occur on enrolled acreage (i.e., in Parcel-by-Parcel enrollments) are also subject to a habitat conservation fee if disturbance caused from these activities is associated with an enrolled lease. The debited amount is determined by the habitat zone (as described in the All-Activities Amendment) where surface-disturbing activities occur. CEHMM manages each Participating Cooperator's HCF by tracking balances and debiting when appropriate.

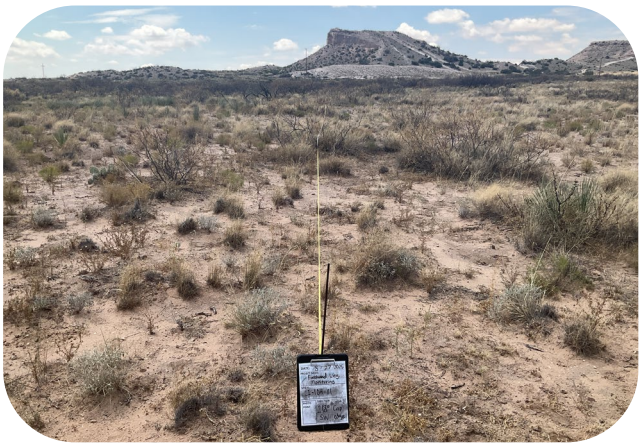
Approximately 29 percent of the funds received through industry participation are allocated to overhead costs such as building rentals, utilities, and insurance. The remaining balance is used solely and exclusively in support of the CCA/CCAA programs which include, but are not limited to: planning and implementation, on-sites, grazing programs, projects authorized by the ranking team, research, enrollments and amendments, project monitoring, education and outreach, and support services (e.g., vehicles and equipment).

GRANTS

CEHMM has sought grant funding from federal, state, and private sources. Grant funding can facilitate new partnerships with agencies and granting institutions, as well as diversify funding sources for the future. Throughout the life of the CCA/CCAA, CEHMM has been awarded multiple grants to help fund habitat restoration projects, research projects, and educational outreach. In 2025, funding from four grants was used to remove dilapidated fencing, complete a mesquite spray, educate high school students, and create educational DSL signs. CEHMM strives to continue searching for grant opportunities that help with conservation efforts for the LPC and DSL.

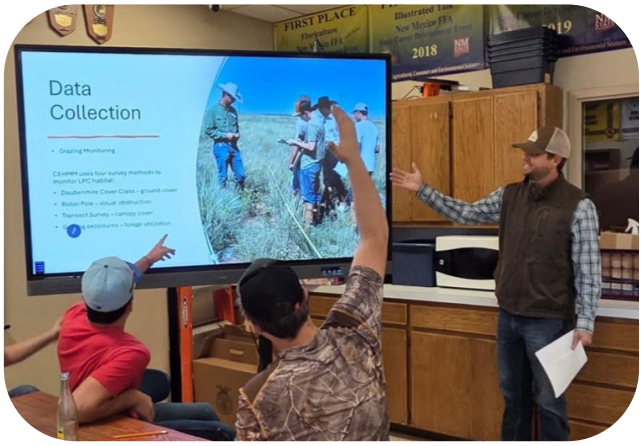
Southern Plains Grasslands 2022 (NFWF)

Funded 6 miles of fence removal. Completed in 2023 and 2025.



Devon Community Relations 2024 (Devon Energy)

Funded mesquite spray covering 1,026 acres. Spray completed in 2025. Monitoring will continue until 2028.



Share with Wildlife 2024 (NMDGF)

Funded a classroom and hands-on learning experience for Dora High School students. The first classroom/field day occurred in September 2025, and a second classroom/field day will occur in September 2026.

Community Investment Grant 2024 (ConocoPhillips)

Funded the creation and installation of two educational exhibits addressing the DSL and its habitat. Design completed in 2025. Installation will be completed in 2026.

PROJECTS

OVERVIEW

Enrollees, universities, government agencies, and the general public may submit project proposals to the ranking team for funding consideration. CEHMM personnel work closely with enrollees to develop project proposals. Projects are separated into two groups: 1) habitat reclamation and restoration, and 2) research and education. Reclamation and restoration projects improve habitat for the species, including, but not limited to, the following: mesquite treatment, improved infrastructure relating to improved grazing management, caliche removal, and reseeding. Research projects are projects that help to improve the knowledge of the species or their habitats, resulting in conservation of the species and their habitats. Education projects must promote the ecology of the southern shortgrass prairie and the flora and fauna of the associated ecosystem, with an emphasis on the LPC and DSL. All proposal categories have unique ranking systems. After the proposals are evaluated and scored, the ranking team convenes to assess the benefits of each proposal regarding the two species of conservation concern and, by a majority vote (consensus), determines which projects should be funded. This methodology provides an objective, non-biased system of evaluation for ranking team members.

The upcoming sections describe the types of projects or activities funded by the CCA/CCAA Program. This section of the report will delineate projects that were completed in 2025. Additionally, Appendix A describes all projects completed to date through the CCA/CCAA Program.

- 2025 Mesquite Treatment - Treated 13,184 acres of mesquite
- 2025 DSM Removal - Removed 1,600 acres of mesquite
- 2025 Stock Tanks - Replaced 12 stock tanks
- 2025 Water Pipelines - Replaced 8.2 miles of water pipelines
- 2025 Windmill Removals - Removed 4 windmills
- 2025 Fence Removals - Removed 6 miles of dilapidated fencing
- 2025 Fence Replacements - Replaced 39.5 miles of fencing

MESQUITE TREATMENT

Honey mesquite (*Prosopis glandulosa*), although a native species, is recognized as an aggressive and highly competitive shrub in many grassland ecosystems (Harris 1996; Van Auken 2000). Mesquite can encroach onto landscapes that did not historically support the species and into areas that have experienced disturbance or changes in natural ecological processes over time (Van Auken 2000).

Habitat fragmentation and degradation due to mesquite encroachment can cause a decline in forage availability, decrease the suitability of LPC habitat, and increase predation risks in LPC populations (Lautenbach et al. 2017). In addition to fragmenting habitats, high densities of mesquite can affect nesting site locations (Lawrence et al. 2022). In fact, research has shown that female LPCs tend to avoid areas with low to medium tree density (Lautenbach et al. 2017). Eradicating and removing mesquite can open habitat for lekking, nesting, and brood-rearing (Lautenbach et al. 2017). Other research suggests that, where present, mesquite canopy cover exceeding 15 percent can negatively impact habitat in areas occupied by the LPC (Boggie et al. 2017). Mesquite proliferation coincides with the loss of beneficial grasses, forbs, and shrubs (i.e., by way of competitive exclusion), which subsequently leads to the transition of native grassland landscapes into shrub lands or mixed shrub grasslands (Schilder et al. 2022). Chemical treatments applied by hand or aerial means are the primary methods CEHMM utilizes to suppress mesquite within the LPC range. By removing mesquite, native grasses can reestablish via increased resource availability, which in turn provides suitable habitat for nesting, brooding, foraging, and refuge for the LPC (Jamison et al. 2000; Jones 2008). During all life cycles, the LPC relies on native grasses and forbs (Larsson et al. 2013). By clearing mesquite, these areas should become more productive as grasses and forbs become more dominant on the landscape.

Not only does mesquite impact the quality of LPC habitat, but it can also be damaging to DSL habitat. Encroachment of mesquite into dunelands can cause loss of dune structure and degrade DSL habitat (Johnson et al. 2016, p. 20). Suitable DSL habitat is categorized as an area with open dune blowouts stabilized by shinnery oak; additional suitable habitat includes shinnery oak flats and open dune areas (Walkup et al, 2022). Unsuitable habitat is categorized by the presence of taller vegetation, excess amounts of litter, grass and forb cover (including dead grass), and high densities of mesquite (Ryan et al., 2023). Studies have found that when mesquite exceeds five percent measured vegetation cover, detection of DSL is reduced (TAMU 2016, pp. 44, 59; Fitzgerald et al. 2011, p. 13; Hardy et al. 2018, p. 25; Johnson et al. 2016, p. 25; Texas Comptroller 2017, p. 52; Hardy et al. 2018, p. 25). One study found that DSL were not detected during surveys where the mesquite cover was greater than ten percent (Texas Controller, 2017). Therefore, we expect a reduction in quantity and quality of DSL habitat where mesquite has encroached. By clearing mesquite, these habitats can open up blowouts and allow for the spread of shinnery oak in dunelands.

<u>Benefits of hand treatments include:</u>

- Hand treatments can be completed year-round. This allows land managers to respond to requests any time of year, and it is not constrained by seasonal leaf emergence as is the case with aerial applications.

- Due to direct application, this method reduces negative impacts on non-target plants within a defined area and alleviates any inadvertent harmful effects on non-target species. Figure 8 shows individual mesquite shrubs that were sprayed by hand. The blue coloring is a dye used to ensure the chemical was applied properly and only to the desired plant.

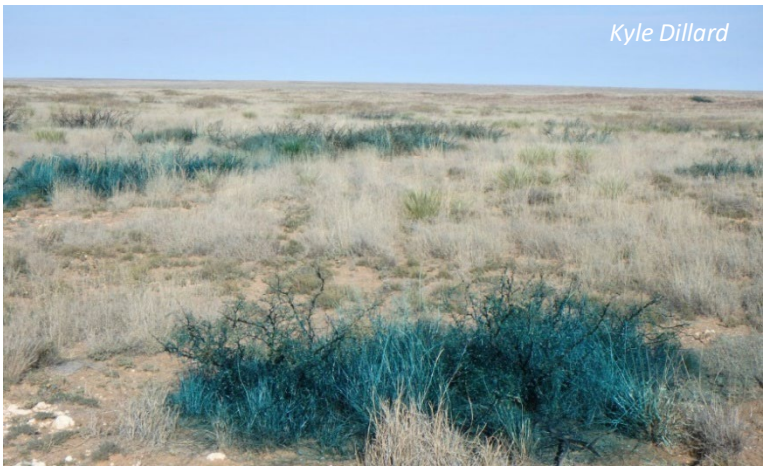


Figure 8. Hand treatment of mesquite.

- The application can be used effectively, and in close proximity to, sensitive areas (e.g., agricultural crops or resident livestock).

- This method has the precision to avoid mesquite occupied by resident wildlife (e.g., nesting birds).

- Hand application is highly effective. Initial observations indicate hand sprays are over 95 percent effective in killing above-ground mesquite biomass. This is evidenced by observations of chlorosis (i.e., yellowing in the leaves), and other visible signs of stress that can be seen within days of prescribed treatment. When applied during the winter, an even higher percentage of stressed and/or dying mesquite may be observed.

Benefits of aerial applications include:

- Aerial applications (Figure 9) are less expensive than hand treatments. Costs typically range from $55 – $66.60 per acre for electrostatic and conventional applications, whereas hand treatments typically cost $150 per acre. The costs for requisite support personnel and administrative services in support of aerial application are not included in the per acre cost.

Figure 9. Airplane completing an aerial mesquite spray.

- 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.

- Although constrained by seasonal status and overall plant condition (Figures 10 and 11), this method encompasses much larger expanses of landscape in less time, with highly effective results.

In 2025, approximately 13,184 acres of mesquite were treated on three enrolled ranches (Figure 12; more information about these projects can be found in Appendix A). To date, CEHMM has sprayed a total of 125,259 acres of mesquite (Appendix C). Mesquite control at this scale improves habitat for the LPC and mitigates mesquite encroachment into dunal areas that are suitable for the DSL.

Figure 10. Fungal rust on mesquite leaves is indicative of a condition that is not ideal for treatment.

Figure 11. Damage from insects cause the mesquite to be in poor condition for treatment.

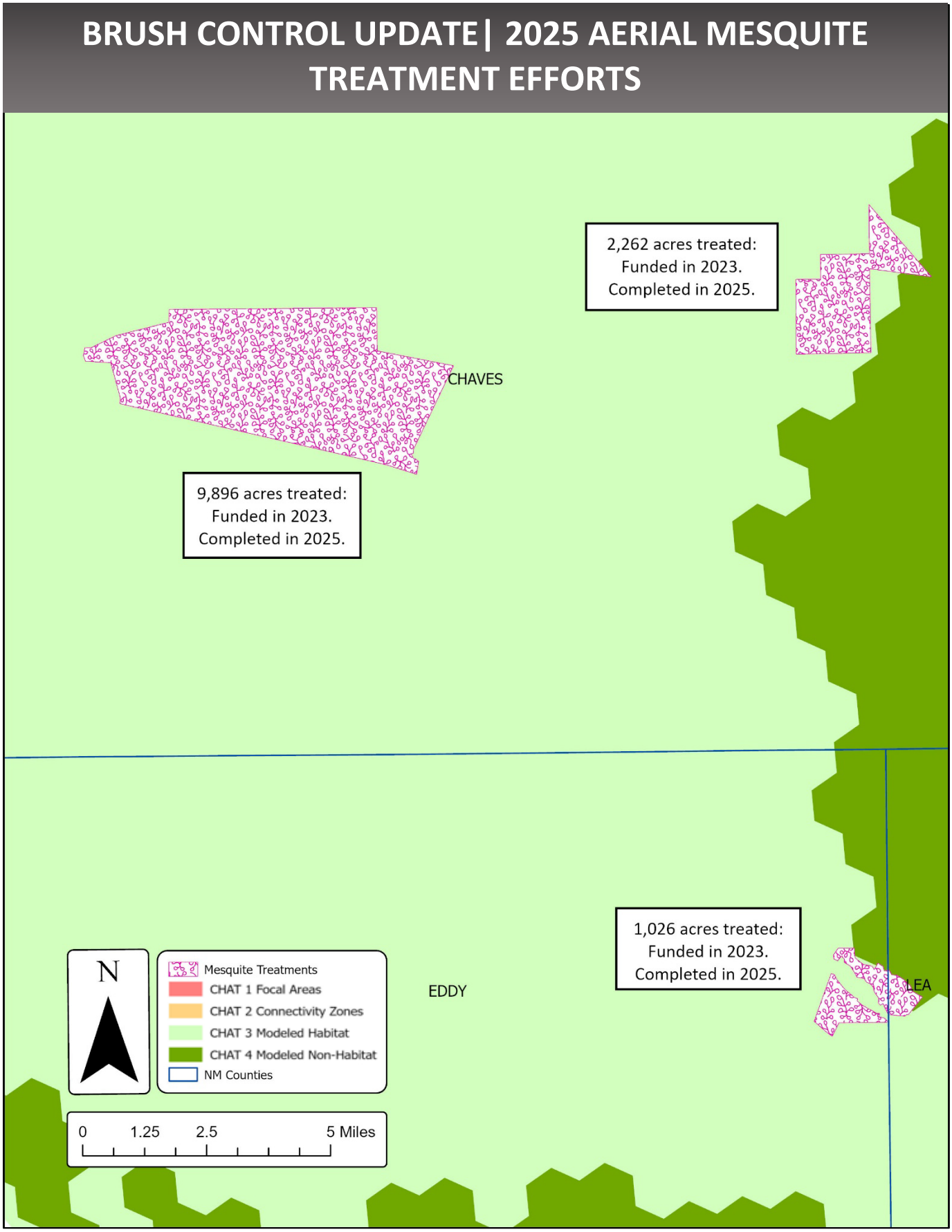


Figure 12. Aerial mesquite treatments (i.e., pink polygons) completed in 2025, in Modeled Habitat (i.e., light green), and Modeled Non-Habitat (i.e., green) according to Crucial Habitat (CHAT) Scores.

REMOVAL OF DEAD, STANDING MESQUITE

Brush encroachment into grasslands ecosystems alters vegetative community structure, which can have negative impacts on rangeland health and habitats. Previous studies have shown that the LPC avoids vertical structures, including mesquite (Boggie et al. 2017). Anecdotal evidence suggests that removal of all mesquite within two kilometers of historic and active leks can benefit LPC habitat quality and habitat connectivity. CEHMM, the FWS, the BLM, and the Natural Resources Conservation Service (NRCS) have voiced concerns over erect mesquite skeletons, as sprayed mesquite cannot be considered "removal of woody species or removal of vertical structures" until standing biomass is removed. In 2015, with approval from the ranking team, CEHMM purchased two track steers and mastication attachments (Figure 13) to remove dead, standing mesquite (DSM) as a part of mesquite removal projects (Figures 14 and 15). Since then, CEHMM has obtained two additional track steers and mastication attachments. The decision to remove DSM is based on the project's proximity to an active lek and evidence of an average 80 percent mesquite kill from chemical treatments applied at least two years prior to the proposed mechanical removal. CEHMM staff have been trained to safely operate equipment and to ensure the soil is not unnecessarily disturbed during DSM removal. Currently, CEHMM has four machines in operation and has successfully removed 25,851 acres of DSM since implementation of this management began (Appendix C). In 2025, approximately 1,600 acres of DSM were successfully removed from one enrolled ranch (Figure 16; more information about this project can be found in Appendix A).

Figure 13. Track steer outfitted with a mastication attachment.

Figure 14. Pasture before DSM removal.

Figure 15. Pasture after DSM removal.

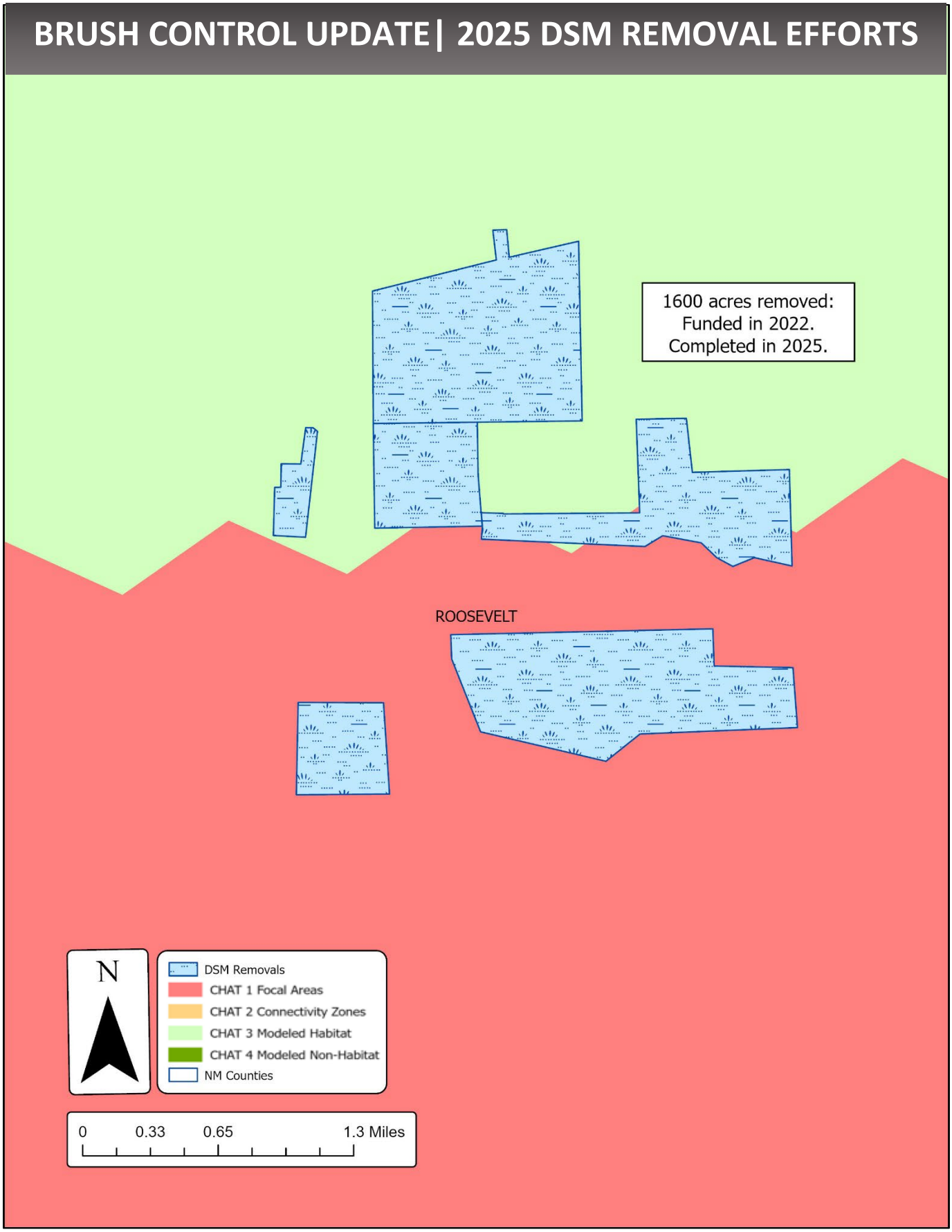


Figure 16. Dead, standing mesquite removal (DSM) removal efforts (i.e., blue) completed by CEHMM in 2025 in Focal Areas (i.e., red), Modeled Habitat (i.e., light green) according to Crucial Habitat (CHAT) Scores.

WATER IMPROVEMENTS

Stock tanks are important to livestock and indigenous wildlife (Burkett and Thompson 1994; Rosenstock et al. 1999). In fact, many animals utilize these structures as a permanent source of water, especially during times of drought (Taylor and Tuttle 2012). However, these structures may also pose risks to wildlife (i.e. drowning) (Bond 1943; Lafon 2006; Di Sylvestro 2007; Kauffman et al. 2019). This threat can also affect the LPC, which are known to seasonally utilize these water sources (Jamison et al. 2020). To avoid these situations, all water sources installed by CEHMM are equipped with escape ramps to assist entrapped animals (Figure 17). CEHMM's escape ramps are modeled after BLM standard ramp designs. To increase traction for an entrapped animal and extend ramp longevity, the ramps are coated with a stable, non-toxic, textured polymer material (similar to spray-on truck bed liners). In 2014, CEHMM modified the escape ramp design by adding a rubber hose around its perimeter to prevent the metal from rubbing against the sides and bottoms of the tanks, which had previously caused holes in some stock tanks. All previously installed ramps with the old design have been retrofitted or replaced to prevent this scenario. To date, 736 escape ramps have been installed or replaced in stock tanks on ranches with signed CIs and CPs, and CEHMM will continue to install/replace escape ramps on enrolled ranches within LPC and DSL habitats.

Figure 17. Escape ramp installed in water tank.

Figure 18. Fiberglass stock tank with solar well.

The installation of new stock tanks (Figure 18), wildlife waters, water pipelines, and storage tanks on enrolled ranches provide critical water sources, allowing ranchers to utilize the landscape more efficiently. Additionally, these water sources are critical in providing suitable habitat and may serve the LPC in times when diet and surface water, dependent on precipitation, are not adequate for hydration.

Water wells outfitted with windmills (Figure 19) have been found to be undependable water sources due to windmill age and repair expenses. Wind is not a constant force and usually subdues during the hottest time of the year in southeastern New Mexico, resulting in reduced water delivery into stock tanks. While the initial investment in a solar pump is high, lower maintenance and repair costs, along with the system's longevity, far outweigh that initial expense. Converting a water well from a windmill to a solar pump includes removal of the tower and associated windmill, as they are no longer necessary and are identified as potential threats (e.g., vertical structures) to the LPC (FWS 2008). After the tower is removed, the solar panel and associated submersible pump are installed. Only a small amount of sunlight is required to power the pumps, so they have a high level of efficiency.

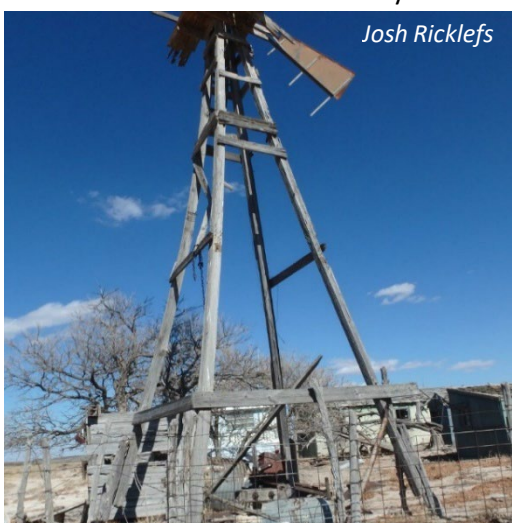


Figure 19. Old windmill prior to solar conversion.

In 2025, 12 stock tanks (one storage tank) and 8.2 miles of water pipeline were installed across four enrolled ranches (Figure 20). CEHMM also funded the removal of four windmills in 2025. More information about the water projects completed in 2025 can be found in Figure 20 and Appendix A. To date, CEHMM has removed 33 windmills and converted 24 of those windmills to solar pumps, replaced 72 stock tanks, and installed 58.2 miles of water pipeline (Appendix A).

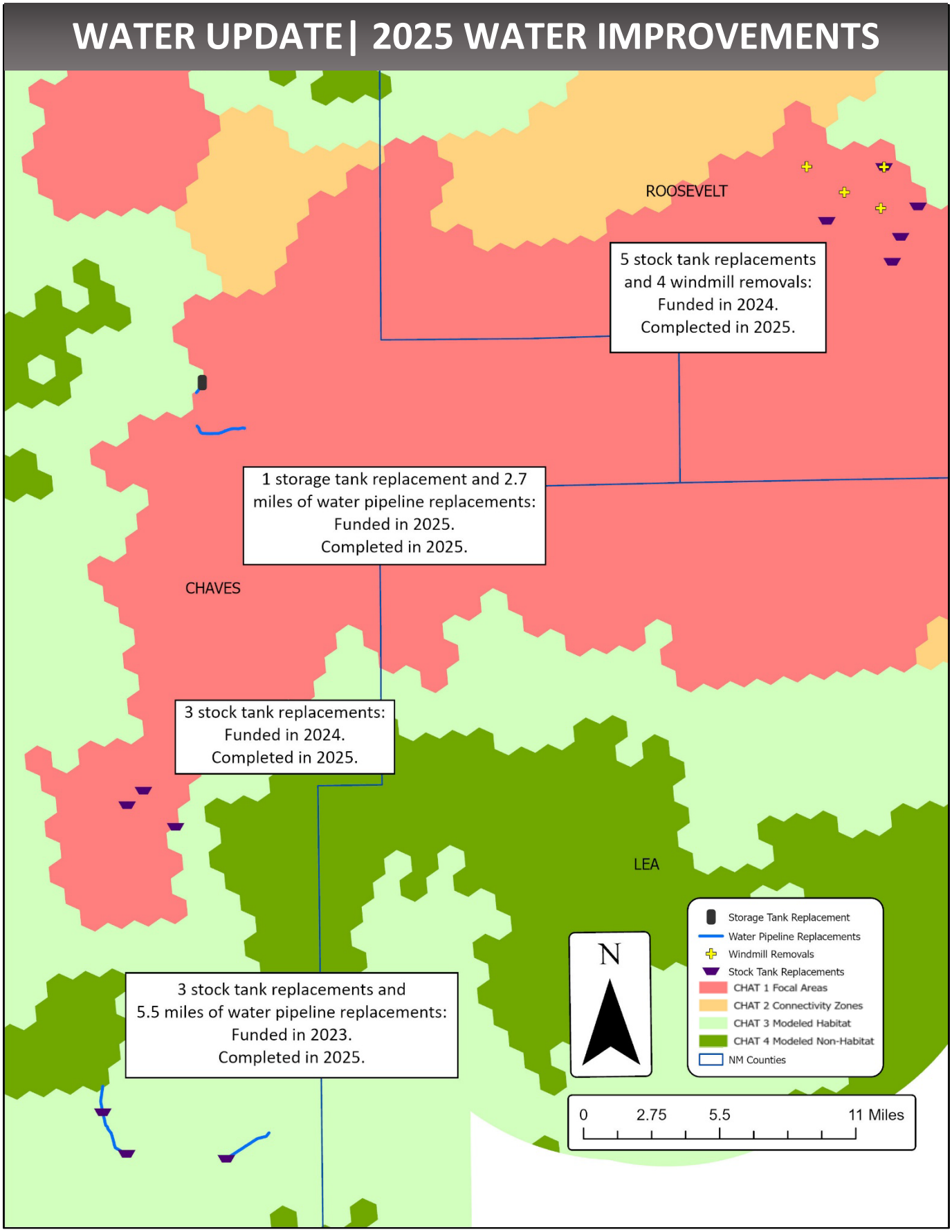


Figure 20. Water improvements completed in 2025 in Focal Areas (i.e., red), Connectivity Zones (i.e., orange), Modeled Habitat (i.e., light green), and Modeled Non-Habitat (i.e., green) according to Crucial Habitat (CHAT) Scores.

FENCE REMOVAL AND REPLACEMENT

Fencing, paired with the implementation of a ranch-wide grazing management plan, benefits all grassland species including the LPC. The installation of wildlife-friendly fences allows enrollees to graze cattle more efficiently, allowing other pastures to rest. Adequate rest provides recovery time for native grasses and forbs, while also providing suitable habitat for nesting, brood-rearing, foraging, and cover for the LPC. Removing old, dilapidated fencing (i.e., five-strand barbed and sheep fence; Figure 21) and replacing with new wildlife-friendly fencing (Figure 22) can help decrease the risk of trespass cattle on the enrolled property, giving enrollees better control of their management practices. In 2025, 31.45 miles of boundary fence and 8.05 miles of interior fencing were replaced across five enrolled ranches. In 2025, 6 miles of old, dilapidated fencing were removed on one enrolled ranch to reduce the hazard for wildlife. More information about the fencing projects that were completed in 2025 can be found in Figure 24 and Appendix A.

Figure 21. Dilapidated boundary fencing in need of replacement.

Figure 22. Newly constructed wildlife-friendly boundary fencing.

CALICHE REMOVAL AND RESEEDING

Caliche, a layer of calcium carbonate that has been precipitated below the soil surface, has been used to construct roads and well pads in areas where the soil is loose. Caliche makes an ideal substrate for roads and well pads since it becomes almost impenetrable when compacted with heavy equipment. When companies construct these roads and well pads in LPC and DSL habitats, this impenetrable layer fragments the habitats. Reclamation of these wells and pads includes removal of the caliche from the surface using heavy equipment. Once caliche is removed, disturbed areas are reseeded with a custom native seed mix to expedite site rehabilitation. CEHMM uses a drill seeder to disperse the seed throughout the disturbed area (Figure 23). By removing caliche and reseeding, LPC and/or DSL habitat fragmentation is reduced or eliminated.

Figure 23. CEHMM staff reseeding an old, reclaimed road.

Reseeding has previously been identified as a conservation tool in areas with potential LPC habitat where native vegetation is present but lacks tall bunchgrasses (i.e., big bluestem, sand bluestem, little bluestem, Indiangrass, switchgrass, and side-oats grama). This can include reintroduction of these grasses to areas including, but not limited to, old farm fields, mesquite treatment areas, shinnery oak dominated landscapes or burn scars. Site selection will be determined based on the proximity to active lek sites. To date, as part of the CCA/CCAA, CEHMM has removed caliche and reclaimed and reseeded 154 roads and well pads, totaling 171.8 acres (Appendix C). No reclamations were completed or monitored in 2025.

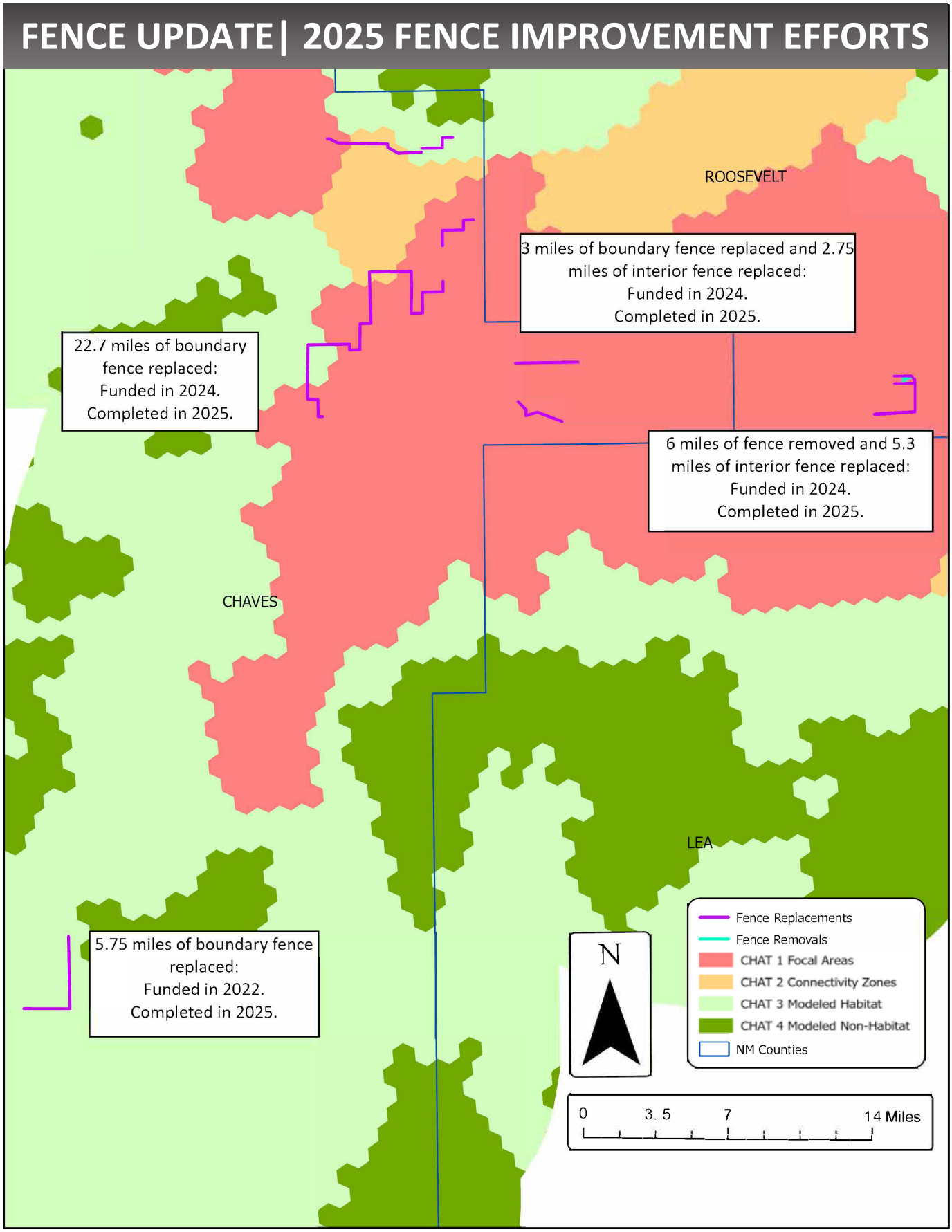


Figure 24. Fence removals (i.e., blue lines) and fence replacements (i.e., purple lines) completed in 2025 in Focal Areas (i.e., red), Connectivity Zones (i.e., orange), Modeled Habitat (i.e., light green), and Modeled Non-Habitat (i.e., green) according to Crucial Habitat (CHAT) Scores.

RESEARCH

2025 Aerial Infrared LPC Survey – BLM-Roswell Field Office – This project assisted the BLM by funding Owyhee Air Research to perform aerial infrared (AIR) surveys that utilize thermal signatures of wildlife. A specialized fixed-wing aircraft outfitted with powerful, high-resolution cooled-infrared imaging sensors allowed biologists to classify and quantify wildlife accurately, efficiently, and safely. The high altitudes at which fixed-wing aircraft fly also permit identification and classification without disturbing wildlife, allowing for observation of uninterrupted and uninfluenced behavior. In 2025, Owyhee surveyed a defined area of known active leks to refine their survey methods specifically for the LPC. If they successfully modify their survey protocol for this species, the BLM and other agencies can adopt this technology to accurately and effectively survey for LPC using AIR in subsequent years.

Dunes Sagebrush Lizard Population Monitoring Plan Development - USGS – This project will request data from partnering agencies to help create an activity budget for the DSL following standard methodologies. In addition to this, the monitoring plan will estimate two important aspects of the biology of the DSL: occupancy and demography. These aspects account for the geographic spread (occupancy) and the population dynamics (demography) of populations throughout the range of the lizard. The contract for this study was extended in 2023 for data collection and analysis of the DSL range and population. Once the study is complete, reports are expected to be published on the findings.

Natural Heritage LPC Data Management Amendment - This project was funded in 2014. Natural Heritage New Mexico consolidated all historic New Mexico LPC data, including raw data yet to be validated or published, into an easily accessible database. The Ranking Team approved the funding to extend this project in 2023, through 2026.

Short Duration/ High Intensity Grazing and Its Effect on Vegetation and Soil Health in Southeastern New Mexico - This project was funded by the NRCS under the New Mexico Conservation Innovation Grant Program. The objective is to determine if a grazing system utilizing high stock densities in small paddocks for a short duration can be economically and ecologically feasible in a low-rainfall area. This project is focused on a 320-acre parcel of land that was previously used for crop production and has been allowed to naturally re-vegetate with native vegetation. This has led many desirable plant species to re-populate the area, along with some invasive species (e.g., Lehmann's lovegrass, *Eragrostis lehmanniana*) and undesirable brush species (e.g., catclaw acacia, *Senegalia greggii*). Additionally, the previous agricultural use of this land left soil health in poor condition in many areas with high bare ground measures throughout. The study found the high intensity/short duration grazing treatment resulted in greater soil health and a stable response to climatic variability (e.g., drought) when compared to the traditional grazing system employed within the control plot. However, this grazing system did not reduce the spread of invasive or undesirable species within the project area. This project is ongoing.

Orphan Well Reclamation Protocol – This project is creating methodology to collaborate with the Oil Conservation Division (OCD) of the New Mexico Energy, Minerals, and Natural Resources Department (EMNRD) to restore orphan well sites. OCD will provide orphan well locations to CEHMM, and a selection protocol will be used to determine whether site restoration would actively assist LPC or DSL conservation. If restoration is beneficial to the species, CEHMM will be responsible for the restoration of the site. Restoration includes reclamation and species-specific habitat improvement post- remediation. Additionally, the success of the reclamation will be evaluated through a post-reclamation monitoring program that utilizes tracking metrics designed to measure the species' responses to site rehabilitation at different spatial and temporal scales.

Passive Acoustic Monitoring as a Method of LPC Detection – This project will assess the use of autonomous recording units (ARUs) as a novel method for monitoring LPC populations and quantifying parameters that can be used to evaluate LPC habitat restoration efforts. An ARU is a self-contained audio recording device that is deployed in the environment for bioacoustical monitoring. This project aims to develop protocols for using ARUs as a method to survey for LPC; investigate the cost-effectiveness of LPC survey methodologies by comparing detectability metrics of ARUs and standardized ground-based survey methodologies; and explore the potential of ARU's to target future restoration efforts. This experiment will include 1) the deployment of 40 ARUs and simultaneously conducted ground-based surveys across approximately 70,948 acres of historic and currently occupied LPC habitat and 2) analyses of LPC detection probabilities and occupancy metrics from count data collected from passive acoustic monitoring and ground-based surveys. The primary goal is to advance

methodological strategies for monitoring the LPC population in New Mexico. The secondary goal is to develop a noninvasive, cost-effective framework for targeting future restoration efforts.

Linking Weather and Microclimate to Model Persistence of DSL – Environmental Solutions & Innovations, Inc. – This project will describe the thermal environment experienced by the DSL across space and time. A series of data collection and modeling approaches will be used to characterize small-scale variation in thermal environments experienced by the DSL, which can then be extrapolated across the species' entire range via remote sensing and satellite imagery. This work represents the first step toward developing predictive models on the species thermal ecology and will inform on future restoration initiatives to maximize DSL fitness and improve understanding of how the species may respond to a changing climate. The two objectives of this study are 1) quantify microclimates at four sites with high spatial and temporal resolution and 2) create dynamic models to combine these data with habitat, microhabitat, and climate information to predict thermal microclimates throughout the DSL's entire range.

Use of Unmanned Aerial Vehicles (UAVs) to Quantify and Evaluate DSL Habitat – This project will use unmanned aerial vehicles (UAVs; drones) to quantify the physical structure and thermal structure of DSL habitat, providing a more detailed understanding of the species' habitat tolerances. This data will better inform conservation decisions and help refine definitions of habitat quality. The project will be conducted for one year, over three sampling periods during peak DSL activity. The analysis of these data can be used to generate 3-D models of DSL structural and thermal habitat providing a framework for the quantification of DSL habitat suitability.

NET CONSERVATION GAIN

OVERVIEW

Net Conservation Gain (NCG) compares the amount of LPC habitat reclaimed or restored to the amount of habitat lost due to development under the CCA/CCAAs. NCG is used to calculate LPC habitat, but not DSL habitat. DSL habitat is not considered in NCG because the CCA/CCAAs state take is not allowed in DSL habitat. Operations not enrolled in the CCA/CCAA are not considered in this process. Practices that achieve a conservation gain include, but are not limited to, removal of windmills, reclamation of legacy pads and roads, treatment of mesquite, removal of DSM, and removal of power lines and poles. Please note that mesquite treatments calculated under NCG are done so by considering mesquite sprays occurring below NM 380, where no active leks are currently present and DSM removal occurring above NM 380, in proximity to active leks.

Although fence and water projects are not considered when calculating NCG, CEHMM believes that these are important improvements to the land. To determine acreage improved by fences, CEHMM staff determines how many acres are within pastures that are connected to the improved fence, as long as they are enrolled in the CCA/CCAA. To calculate acreage for water improvements, CEHMM calculates how many acres are within the pasture where the new water source is located. In 2025, approximately 100,690.28 acres were improved through water and fencing projects.

In 2025, throughout the Focal Areas and Connectivity Zones of the LPC crucial habitat, there has been a net gain of 839.93 acres due to the conservation activities listed above (Table 3). This gain in habitat created more connectivity between occupied habitat patches. The five-year strategic plan identified mesquite eradication as the top priority for LPC habitat restoration. Implementation of mesquite eradication projects that are funded and waiting for completion will lead to approximately 9,800 additional acres of LPC habitat being restored.

Table 3. 2024 Net Conservation Gains Across the 2013 CHAT Scores.

CHAT Score	Habitat Gain	Habitat Loss	Net Conservation Gain
CHAT 1 (Federal)	0 acres	0 acres	0 acres
CHAT 1 (Non-Federal)	839.93 acres	0 acres	(+) 839.93 acres
CHAT 2 (Federal)	0 acres	0 acres	0 acres
CHAT 2 (Non-Federal)	0 acres	0 acres	0 acres
CHAT 3 (Federal)	5,134.74 acres	21,372.48 acres	(-) 16,237.74 acres
CHAT 3 (Non-Federal)	8,585.02 acres	6,672.88 acres	(+) 1,912.14 acres
CHAT 4 (Federal)	1.74 acres	910.31 acres	(-) 908.57 acres
CHAT 4 (Non-Federal)	284.87 acres	1,418.59 acres	(-) 1,133.72 acres
Total (Federal)	**5,136.48 acres**	**22,282.79 acres**	**(-) 17,146.31 acres**
Total (Non-Federal)	**9,709.82 acres**	**8,091.47 acres**	**(+) 1,618.35 acres**

Habitat loss occurs during construction of new infrastructure on enrolled operations. Such infrastructure includes new oil wells, frac ponds, rights-of way (ROW) and central tank batteries (CTB). Infrastructure that was in place prior to the implementation of the CCA/CCAA, and that has not been reclaimed, is considered in the NCG calculations. Accounting for these prior disturbances is important because new development may not have resulted in habitat loss because existing development had already caused loss of habitat.

SPECIES MONITORING

In 2025, as part of a project funded in 2018, CEHMM staff assisted herpetologist Mike Hill (Figure 25) in surveying seven pitfall trap grids to determine occupancy of suitable habitat and demographics of the DSL on seven enrolled ranches. A pitfall trap consists of a five-gallon bucket that is placed in the sand with the top of the bucket level with the ground. Buckets are filled with approximately two inches of sand to allow trapped wildlife (Figure 26) and arthropods to seek cover. Each trap has holes drilled in the bottom to allow water from precipitation events to percolate through and prevent drowning mortality of trapped wildlife. While traps are open, a plywood cover rests on pegs approximately one-half inch above the top of the bucket. Lizards seeking cover from the summer heat and predators run under these covers, and they subsequently fall into the bucket. Each grid consisted of 36 buckets (six-by-six grid arrangement) with 15 meters between each bucket. Grids were strategically placed throughout the range of the DSL to capture genetic differences that were documented in a project funded by the CCA/CCAA for Duke University in 2012. Each of the seven grids was opened for one five-day period, resulting in a total of 35 grid days.

Figure 25. Mike Hill processes a DSL as part of ongoing population monitoring efforts.

In 2025, aside from the surveys mentioned above, CEHMM did not conduct any individual surveys (Figure 30). In 2026, CEHMM staff plans to conduct approximately fifty visual encounter surveys and conduct three pitfall trap surveys.

dunes sagebrush lizard (*Sceloporus arenicolus*)

glossy snake (*Arizona elegans*)

common side-blotched lizard (*Uta stansburiana*)

marbled whiptail (*Aspidoscelis marmoratus*)

Figure 26. Reptile species captured during pitfall trap surveys.

CEHMM conducted LPC surveys on CCA/CCAA ranches in March and April of 2025. In 2025, CEHMM surveyed 23 enrolled ranches. During roadside surveys, the surveyors shut off their vehicles and stood outside listening for ten minutes at each stop. The surveyors collected the following data at each stop: survey area (ranch name), presence of LPCs, direction of LPC location(s), time, temperature, wind speed (Figure 27), cloud cover, noise sources, noise levels, and other wildlife observed or heard. At the end of ten minutes, the surveyors returned to their vehicles and drove one mile down the road and repeated the above protocol. When LPCs are heard on a roadside survey, a bearing is taken in the direction of the LPC, then another bearing is taken at the next stop. This allows the approximate location of the LPC to be triangulated. On enrolled ranches, listening stops are conducted on a route through the ranch that allows for adequate survey coverage. When the LPC is heard, surveyors walk to the lek and count individuals (Figure 28). This allows a count to be taken and the lek to be GPS tagged. Surveys were initiated 30 minutes prior to sunrise and concluded at 9 a.m. If wind speeds exceeded 15 miles per hour, the survey was stopped and continued the following day. Winds at those speeds inhibit the surveyors from hearing the LPCs and thus may produce false negatives for the area. During 2025 surveys, staff observed 660 LPCs (Figure 29) across 73 leks (Figure 31). These numbers are lower than those observed and reported in 2024. However, it should be noted that the survey efforts for 2025 were lower than in previous years due to a shortage of personnel. In 2026, CEHMM plans to conduct LPC surveys across both districts.

Figure 27. CEHMM staff member checks wind speed during a listening stop for LPC surveys.

Figure 28. Three LPC in flight from a lek site in southern Roosevelt County.

Figure 29. A male LPC individual displaying on a lek.

DSL SURVEYS| HISTORIC DSL SURVEY EFFORTS

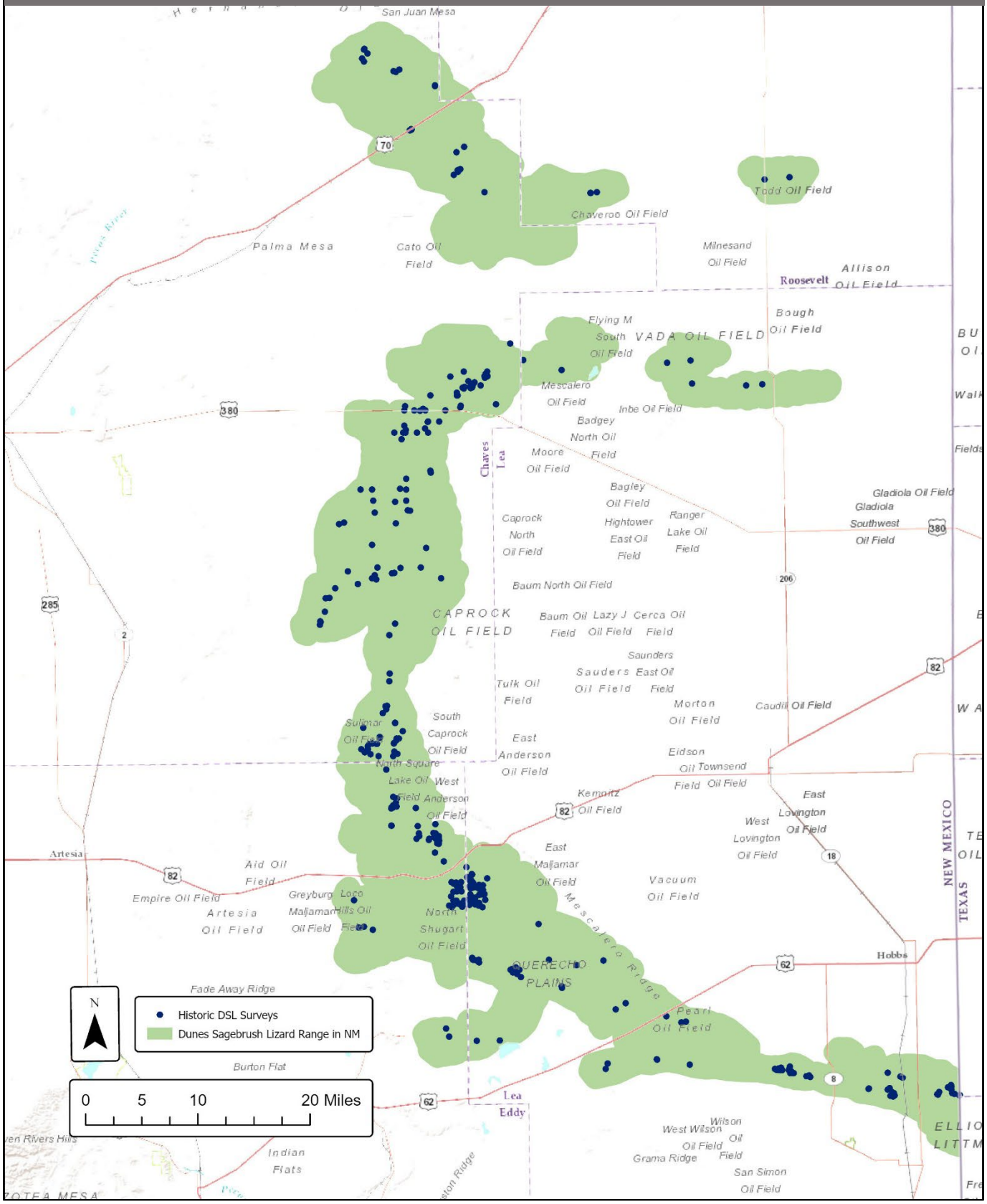


Figure 30. Historic DSL surveys completed throughout the species range in New Mexico.

LPC SURVEYS| CURRENT AND HISTORIC LPC SURVEY EFFORTS

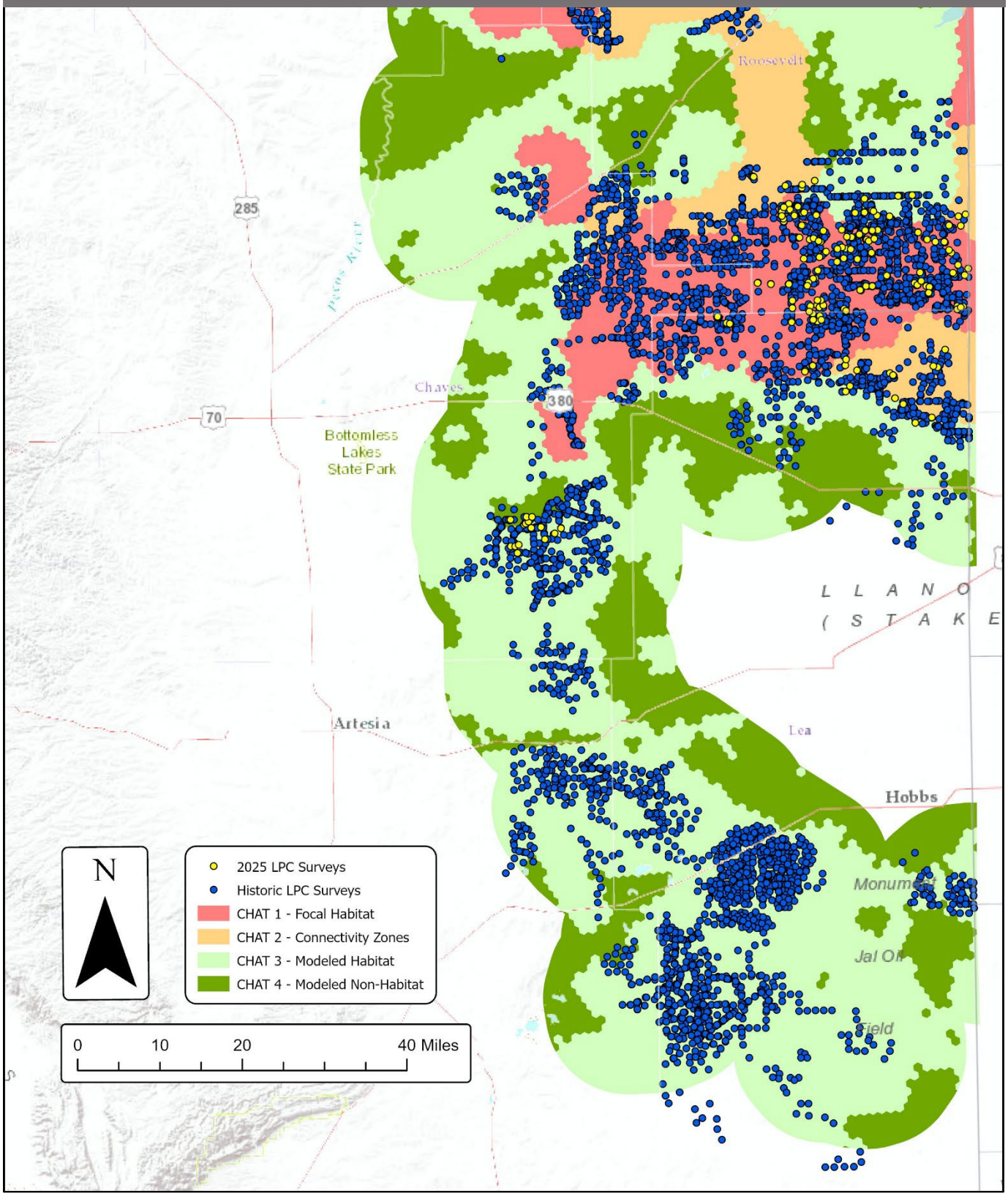


Figure 31. Current (i.e., 2025) and Historic LPC surveys completed by CEHMM staff.

GRAZING AND HABITAT MONITORING

Baseline data for livestock grazing operations, with acreage identified in a CI or CP, were monitored for the vegetative habitat attributes described in *Collaborative Conservation Strategies for Lesser Prairie Chicken and Sand Dune Lizard in New Mexico* (New Mexico LPC and DSL Working Group 2005) and the BLM RMPA (2008). The seven attributes that serve as habitat quality indicators include rangeland health, canopy cover, ground cover, species frequency, forage production, forage utilization, and visual obstruction from vegetation. In 2025, CEHMM range conservation scientists worked on creating a new Standard Operating Procedure (SOP) to provide a more detailed description of how survey methodologies will be conducted and how data will be collected. The SOP provides 1) a list of materials needed to monitor each vegetation site, 2) data collection procedures, 3) data entry procedures, 4) data analysis instructions, and 5) report writing guidelines that are based on the findings. Using the new SOP, CEHMM staff will complete vegetation monitoring on enrolled ranches using Line-Point Intercept, Robel Pole Method (Robel), and biomass clipping at monitoring sites. All enrolled ranches will be monitored on a four-year rotation.

Figure 32. CEHMM staff preparing transect for line-intercept, and Robel data collection.

In 2025, CEHMM staff monitored a total of 85 sites within 17 ranches for basal cover, canopy cover and visual obstruction readings (i.e., Robel) (Figure 32). Data was collected between July and October 2025 so habitats could be analyzed during late nesting and brood-rearing seasons. The LPC requires a wide variety of vegetation for various needs throughout the year; however, for nesting and brood-rearing, they prefer little bluestem (*Schizachyrium scoparium*), side-oats grama (*Bouteloua curtipendula*), big bluestem (*Andropogen gerardii*), Indiangrass (*Sorghastrum nutans*), sand bluestem (*Andropogen hallii*), and switchgrass (*Panicum virgatum*). During grazing monitoring, CEHMM encountered these preferred grasses on 9 of the 17 ranches during point-intercept surveys.

In addition to the data collection mentioned above, CEHMM also prepared grazing exclosure cages at the same 85 vegetation monitoring sites to measure forage utilization and determine forage production for the year. CEHMM staff, between January and April 2025, prepared the cages by clipping all vegetation in the cage (similar to the height that cattle would consume). This preparation step allows field staff to ensure they are only monitoring the vegetation growth from 2025. In December, after receiving the first hard freeze, CEHMM staff returned to the same grazing exclosure cages to determine forage utilization of each pasture. To determine forage utilization, a hoop with an area of approximately 1,452 square inches (sq. in.) is placed into the cage, and all grasses are clipped and weighed. Then the same process with the hoop occurs outside the cage in a representative area, within 15 feet of the cage location. The two weights are compared and calculated to determine the percentage of utilization for each site. When utilization calculations are completed for all sites on the ranch, an average percent utilization is calculated to determine the forage utilization of the entire ranch. As a conservation measure, ranching enrollees agree to a livestock forage utilization rate of 45 percent. After analyzing the 2025 forage utilization data, 15 ranches had an average utilization rate of 45 percent or less throughout their enrolled ranches.

INDUSTRY MEASURES

MITIGATION OF IMPACTS TO HABITAT

In 2025, CEHMM staff completed 286 reviews of proposed infrastructure projects (i.e., well locations and various ROWs) to ensure conservation measures were met under the requirements of the CCA/CCAA. Approximately 33 percent of these reviews included some kind of field-based analysis to identify or avoid LPC or DSL habitats (e.g., see Figure 33).

In 2025, 2,145 wells and 283 ROWs were permitted and/or drilled/constructed by CCA/CCAA enrolled participants on enrolled acreage.

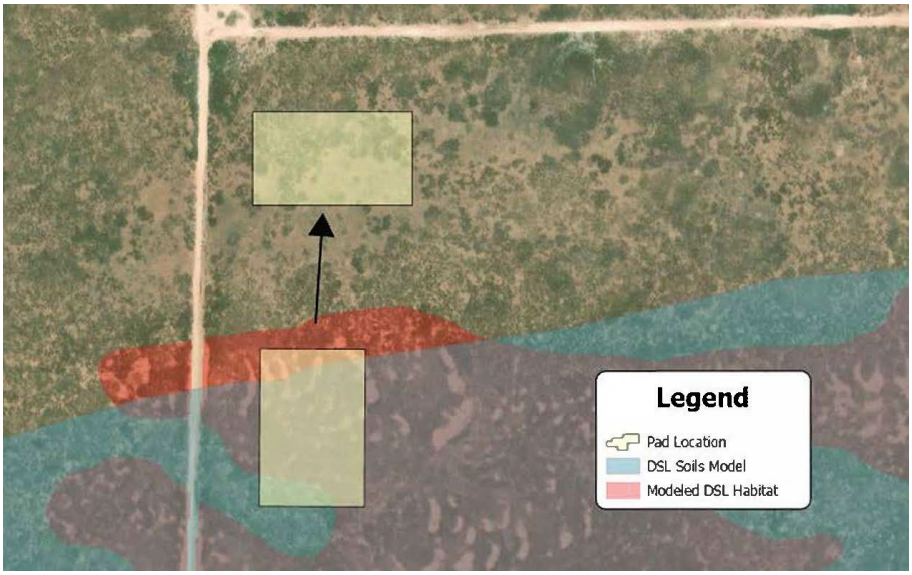


Figure 33. Map depicting original and new locations of a proposed well pad that has been moved out of DSL habitat through the CCA/CCAA. DSL habitat is evaluated using a variety of tools and resources (e.g., spatial habitat modelling and field-based evaluations). Here a soils model (i.e., blue) and habitat model (i.e., red) are overlayed on the map to indicate potentially suitable habitat at this location.

EDUCATION AND OUTREACH

OVERVIEW

CEHMM staff participated in numerous education and outreach events throughout the region in 2025. Topics included the ESA, CCA/CCAA programs, covered species, native grasses, and regional threats to rangelands. CEHMM recognizes the unique role that education and outreach can have with the public's perception toward natural resource management and its value to conservation as a whole. Since the inception of the program, CEHMM has provided and assisted with programs directed at all ages and backgrounds. CEHMM will continue to prioritize educational and outreach efforts for the foreseeable future.

TIMELINE OF OUTREACH

Carlsbad High School Energy and Natural Resources Pathway Program - March 11

Carlsbad Rotary Club - March 12

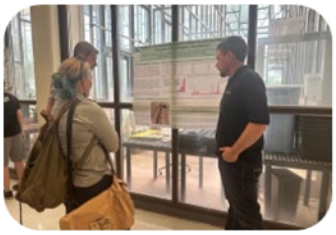
Carlsbad Homeschool Co-Op - April 3

Carlsbad High School Occupation Day 2025 - April 16

PBPA Regulatory Seminar - May 1

Whiteface Elementary Presentation - May 7

Christmas Mountains Research Symposium - May 18 - 20



Southwest Partners in Amphibian and Reptile Conservation 2025 Annual Meeting - August 7 - 10

Ecological Immersion: Teaching High School Students through Lesser Prairie-Chicken Habitat Improvement - September 17 and 24

National HCP Coalition Annual Meeting - October 14 - 17

SUMMARY

YEAR IN REVIEW

As we reflect on 2025 and the efforts devoted to monitoring, project implementation, and research, we do so with great gratitude for our staff, stakeholders, and partners. Since the execution of the original agreements, CEHMM has focused on projects that benefit the ecosystem, community, region, and state through habitat improvements, research, and outreach. These goals and objectives continued to serve as guiding principles over the past year. Partnerships have been bolstered through cooperation with enrollees and stakeholders, leading to increased success and innovation in on-the-ground efforts for both species. In the coming years, CEHMM plans to continue these efforts and partnerships to preserve and protect critical habitat for these two imperiled native species.

CEHMM completed **286 habitat evaluations** to ensure **conservation measures were met**.

In 2025, **13,184 acres** of mesquite were sprayed on **three ranches**. All three projects were funded in 2023.

In 2025, **45.5 miles** of old, dilapidated fencing were **removed and/or replaced.**

CEHMM has **removed 33 windmills** and **replaced 24 of them with solar pumps** throughout the life of the CCA/CCAA.

During LPC surveys, CEHMM staff observed **25 LPC on 2 new leks**.

CEHMM staff continues to assist Mike Hill with his **ongoing DSL mark recapture study** that was **funded in 2018.**

The ranking team approved and funded **4 new research projects**.

Industry participants have enrolled **3,534,366.44 acres** in the CCA/CCAA**.**

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APPENDIX A: Projects Completed throughout the Life of the LPC DSL CCA/CCAA Programs

Projects	Date Funded	Amount Funded	Final Cost	Units	Date Completed	Description
TNC MPP-S Hand Mesquite	May 2010	$17,440.00	$17,440.00	630 acres	June 2010	Mesquite hand treatment - 630 acres.
TTU Cox Shin-Oak	August 2010	$4,537.00	$7,024.71	N/A	February 2012	Research to determine the effect of caliche removal on shinnery oak communities.
Weaver Hand Mesquite	August 2010	$25,000.00	$50,734.01	320 acres	October 2010	Mesquite hand treatment - 320 acres.
Bresenham Hand Mesquite and Windmill Removal	August 2010	$22,584.95	$24,254.03	40 acres	October 2010	Mesquite hand treatment - 40 acres; 1 windmill removal.
TNC MPP-S Aerial Mesquite	August 2010	$13,968.00	$13,968.00	600 acres	June 2011	Aerial mesquite treatment - 600 acres.
APHIS Feral Hog Removal	January 2011	$50,000.00	$54,856.68	128,816 acres	May 2012	Removal of feral hogs within an 8-mile radius of active LPC leks - 3 years.
Berry Aerial Mesquite	January 2011	$100,000.00	$106,702.64	12,000 acres	June 2011	Aerial mesquite treatment - 12,000 acres.
Brininstool Lehmann's	January 2011	$19,905.63	$12,847.61	12 acres	May 2011	Research to compare methodologies for removing Lehmann lovegrass.
DSL and LPC Monitoring	January 2011	$40,000.00	$38,272.03	N/A	September 2014	Research to develop DSL survey protocols and projects that would benefit the LPC and DSL.
BLM Pipeline Mesquite (Bogle Mesquite)	January 2011	$100,000.00	$106,702.64	12,450 acres	June 2011	Aerial mesquite treatment - 12,450 acres.
Sims Aerial Mesquite	January 2011	$35,000.00	$20,800.46	2,560 acres	June 2011	Aerial mesquite treatment - 2,560 acres.
TNC MPP-S Aerial Yucca	January 2011	$7,500.00	$1,935.17	120 acres	October 2011	Research to determine the effectiveness of an aerial treatment on Plains Yucca - 120 acres.
BLM Caliche Removal (on the Turkey Track Allotment)	January 2011	$60,000.00	$68,675.72	20 acres	October 2011	Caliche removal - 20 acres.
Slash ML Caliche	January 2011	$60,000.00	$76,988.46	33 acres	October 2011	Caliche removal - 33 acres.
DSL Research Duke University (Chan DSL Research)	August 2011	$157,627.00	$350,225.07	N/A	March 2014	Research to delineate genetically and geographically isolated populations of DSL and to examine the effects of habitat fragmentation on DSL genetic diversity.
DSL Research Texas A&M University (Fitzgerald DSL Workshop)	August 2011	$12,000.00	$18,105.27	N/A	April 2012	Preparation for a workshop focused on research efforts and potential knowledge gaps.
Pearce Hand Mesquite	August 2011	$8,000.00	$8,000.00	18,108 acres	August 2012	Mesquite hand treatment - 18,108 acres.
BLM ACEC Mesquite	August 2011	$64,833.00	$101,770.52	1,235 acres	June 2012	Mesquite hand treatment - 1,235 acres.
BLM Caliche Removal (on the Clayton Basin Allotment)	August 2011	$60,000.00	$67,119.23	20 acres	February 2012	Caliche removal - 20 acres.
Slash ML Caliche (Group B) #2	August 2011	$49,000.00	$56,985.36	14 acres	February 2012	Caliche removal - 14 acres.
Duke University DSL Research Addendum (Chan DSL Research Addendum)	April 2012	$14,336.00	See: Chan Duke University Research (2011)	N/A	March 2014	Continuation of the genetic research being conducted by L. Chan.
TTU Cox Shin-Oak	April 2012	$62,559.00	$31,637.89 (Year Two Not Funded)	N/A	August 2013	Continuation of the original TTU Cox Shin-Oak project.
Hathcock/Hill Shrike Research	April 2012	$36,283.83	$46,128.33	N/A	November 2012	Research to study predation rates on DSL by loggerhead shrikes in fragmented and unfragmented habitat.
Natural Heritage DSL Research	April 2012	$356,080.00	$356,024.25	N/A	June 2016	Research to create a DSL habitat map using the highest resolution imagery available.
NMSU Carleton LPC Research	April 2012	$247,260.00	$246,921.09	N/A	December 2015	Research to determine if reproduction survival, habitat use, and landscape vegetation were linked to declines in lek attendance.
BLM Windmill Conversion	April 2012	$25,600.00	$12,841.20	N/A	November 2012	1 windmill removal and solar conversion.
BLM Caliche (Caviness and Smith Caliche)	April 2012	$50,000.00	$49,208.13	21.2 acres	November 2012	Caliche removal - 21.2 acres.
ABQ BioPark	April 2012	$81,499.00	$80,636.30	N/A	July 2013	Creation of DSL habitat exhibit in the Albuquerque BioPark.

Weaver Mesquite/ Mechanical	April 2012	$50,000.00	$52,098.88	158 acres	January 2016	Dead, standing mesquite removal - 158 acres.
TNC Solar/Windmill Conversion	May 2012	$17,528.00	$17,281.87	N/A	September 2012	2 windmill removals; 2 solar pump conversions.
Natural Heritage LPC Data Management	January 2013	$25,470.00	$56,426.79	N/A	October 2013	Consolidation of all historic New Mexico LPC data into an easily accessible database.
Bresenham Caliche Removal	January 2013	$100,000.00	$182,525.58	30 acres	February 2014	Caliche removal - 30 acres.
BLM ACEC Replacement Well	January 2013	$14,395.00	$153,137.79	N/A	March 2014	1 water well drill; 1 solar pump installation; 2 windmill removals.
BLM ACEC Fence Removal	January 2013	$29,800.00	$24,428.25	12.5 miles	August 2013	Fence removal - 12.5 miles.
BLM ACEC Storage Tanks/Twin Windmills	January 2013	$22,584.00	$32,298.00	N/A	November 2014	1 water well drill; pipeline installation - 2.5 miles; 2 storage tank installations; 2 water stock tank installations.
Meyers Mesquite	April 2013	$195,480.06	$37,380.31	7,080 acres	June 2014	Aerial mesquite treatment - 7,080 acres.
NFWF Drinkers - Williamson/Mohon	April 2013	$73,215.00	$82,325.83	9 stock tanks	June 2015	9 stock tank installations.
Lauren Chan DSL Research Addendum Claremont McKenna/Pacific University	April 2013	$185,050.00	See: Chan Duke University Research (2011)	N/A	December 2016	Continuation of the genetic research being conducted by L. Chan.
BLM Caviness Mesquite	April 2013	$140,000.00	$141,172.05	5,600 acres	June 2014	Aerial mesquite treatment - 5,600 acres.
BLM Caviness Reclamation	April 2013	$63,000.00	$51,698.68	18 acres	March 2014	Caliche removal - 18 acres.
McCloy/Jesko Fences/McCloy Fence	April 2013	$72,000.00	$67,112.52	Removed: 7.5 miles; Installed: 2.25 miles	September 2015	Fence removal - 7.5 miles; fence installation - 2.25 miles.
McCloy/Jesko Water	April 2013	$57,000.00	$109,289.55	21.19 miles	August 2015	Water pipeline installation - 21.19 miles.
McCloy/Jesko Mesquite	April 2013	$153,000.00	$50,743.04 (3,218 acres not treated)	1,782 acres	June 2014	Aerial mesquite treatment - 1,782 acres.
TNC Mesquite - Hand Treatment #2	April 2013	$123,300.00	$122,803.18	1,640 acres	December 2013	Mesquite hand treatment - 1,640 acres.
TNC Drought/ Grazing Workshop	April 2013	$30,000.00	$21,416.85	N/A	September 2013	4 drought and grazing workshops to help ranchers manage their properties during periods of drought.
TNC Tractor	April 2013	$40,000.00	$31,336.00	N/A	September 2013	Tractor purchase for LPC habitat conservation practices.
G&F Aerial Surveys	April 2013	$38,340.00	$38,340.00	N/A	May 2013	Aerial surveys to get a population estimate for LPC in NM.
G&F Power Line	April 2013	$35,390.00	$12,932.52	6.7 miles	December 2013	Powerline and power pole removal - 6.7 miles.
BLM North ACEC Well	April 2013	$93,322.00	See: BLM ACEC Replacement Well	N/A	March 2014	Continuation of the BLM ACEC replacement well project.
CCA/CCAA Documentary - FWS	February 2014	$7,610.50	$11,546.64	N/A	July 2016	Educational documentary to highlight the key habitats needed for LPC and DSL, restoration sites completed, and outline of benefits to both species.
TTU - Grisham LPC	February 2014	$148,838.70	$181,789.60	N/A	December 2017	Research to identify the conservation actions needed to preserve LPC populations.
Jolley Solar Pump	February 2014	$30,255.00	$42,465.03	N/A	April 2015	1 windmill removal; 1 water well drill; 1 solar pump installation.
Auburn - T Best	February 2014	$49,707.00	$49,707.00	N/A	June 2014	Research to determine the status and distribution of LPC populations in Chaves, Lea, and Roosevelt counties.
Bilberry Water	February 2014	$10,807.00	$10,892.41	0.2 miles	March 2017	Water pipeline installation - 0.2 miles; 1 stock tank installation.
Field Hand Mesquite	February 2014	$50,700.00	$63,671.93	507 acres	January 2015	Mesquite hand treatment - 507 acres.
Riley Mesquite	February 2014	$149,350.08	$132,727.22 (235 acres not treated)	3,793 acres	July 2018	Aerial mesquite treatment - 3,793 acres.
Riley Tank and Booster	February 2014	$17,921.00	$5,625.00	N/A	November 2014	2 storage tank installations; 2 booster pump installations.
TNC Hand Mesquite #3	February 2014	$56,000.00	$68,580.66	560 acres	February 2015	Mesquite hand treatment - 560 acres.

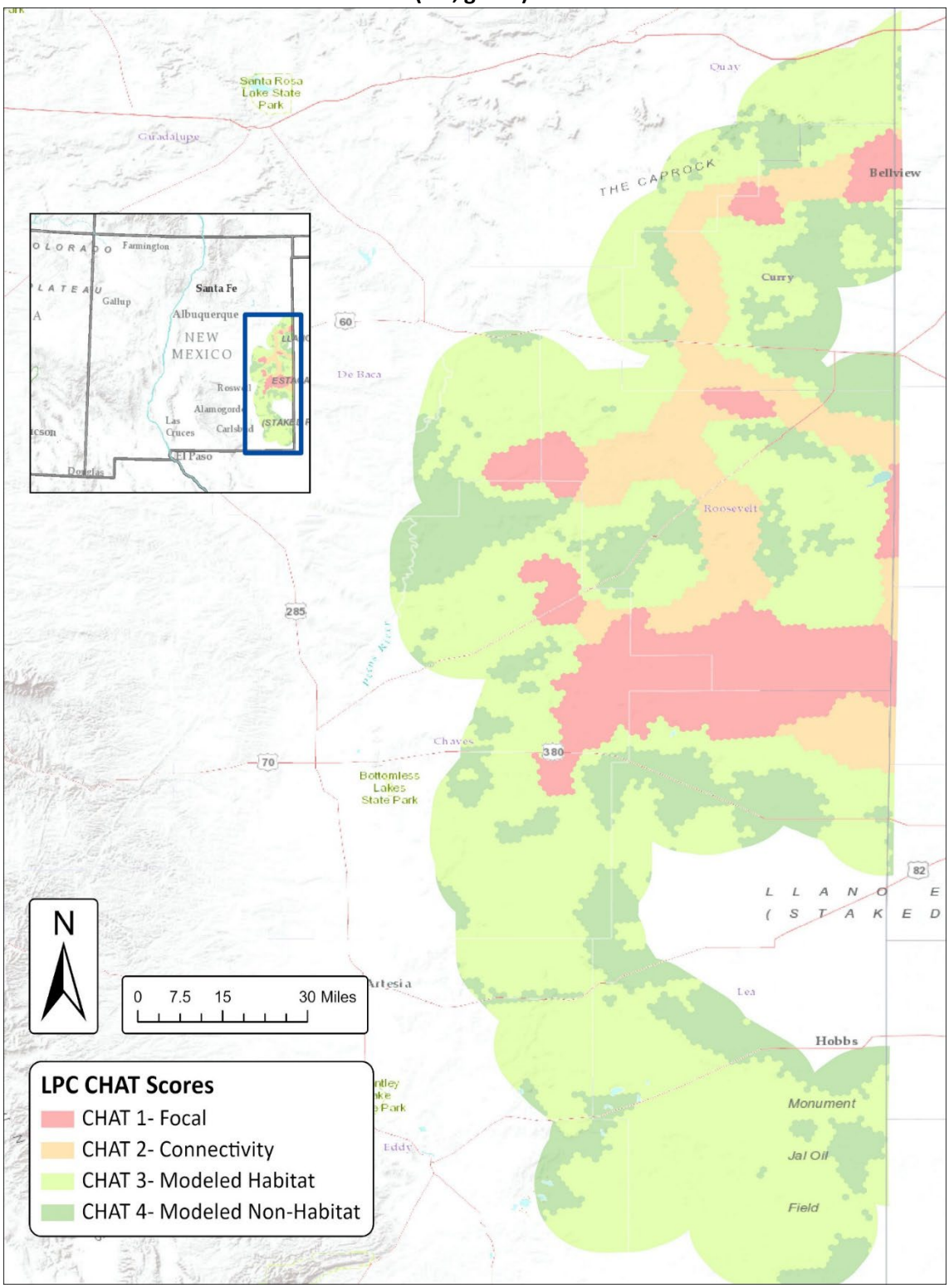
Woody Water	February 2014	$77,852.00	$90,721.68	N/A	August 2016	1 solar pump installation; 3 stock tank installations; water pipeline installation - 2 miles; 1 storage tank installation; 1 lid for existing storage tank.
Woody Fence	February 2014	$7,725.00	$12,422.12	1 mile	September 2015	Fence installation - 1 mile.
Landess Property	February 2014	$220,000.00	$221,888.60	960 acres	April 2015	LPC habitat purchase - 960 acres.
BLM Robel Monitoring	August 2014	$15,000.00	$27,796.25	65 sites	March 2015	Project to assist Roswell BLM field office with Robel data collection- 65 sites.
Richardson Water	August 2014	$56,000.00	$40,277.76	N/A	August 2016	1 water well drill.
Meyers Reclamation	August 2014	$14,500.00	$14,855.43	3 acres	December 2014	Pad and road reclamation - 3 acres.
Jolley Fence Removal/Installation	August 2014	$17,556.00	$48,725.05	1.75 miles	November 2015	Fence installation - 1.75 miles; Fence removal - 8.83 miles.
Bilbrey Solar	August 2014	$31,000.00	$20,002.42	N/A	July 2015	1 windmill removal; 1 solar pump conversion; 1 stock tank installation.
Running N Solar (Clemmons)	August 2014	$83,500.00	$49,439.56	N/A	September 2015	3 windmill removals; 3 solar pump conversions; 1 storage tank installation.
Luman Drinker Repair	August 2014	$13,500.00	$24,559.88	N/A	May 2015	2 stock tank installations.
Mathis Water	August 2014	$5,200.00	$17,029.55	N/A	January 2016	Water pipeline installation - 1.1 miles; 1 stock tank installation.
M Williamson Water	August 2014	$100,000.00	$90,464.92	N/A	February 2016	2 windmill removals; 4 steel stock tank and 4 storage tank removals; 1 pit house installation; water pipeline installation - 2.2 miles; 2 stock tank installations; 1 pond installation.
Clark Fence	August 2014	$19,100.00	$30,289.77	2 miles	December 2015	Boundary fence installation - 2 miles.
Medlin Mesquite	August 2014	$50,500.00	$58,223.04	2,000 acres	August 2015	Aerial mesquite treatment - 2000 acres.
TNC Fence	August 2014	$341,077.62	$352,194.15	23.5 miles	March 2017	Fence installation - 23.5 miles.
M Williamson Fence	August 2014	$242,740.71	$237,942.71	16 miles	January 2017	Fence installation - 16 miles.
Running N Fence (Clemmons)	August 2014	$49,500.00	$48,624.97	3.4 miles	September 2015	Fence installation - 3.4 miles.
TNC DSM Removal	August 2014	$258,000.00	$11,222.55	1,059 acres	July 2017	Dead, standing mesquite removal - 1,059 acres.
Weaver Burn Plan	August 2015	$3,500.00	$4,273.06	25,000 acres	June 2017	Prescribed burn plan for entire Weaver Ranch.
Mesquite Eradication	August 2015	Not Specified	$151,377.66	N/A	July 2017	2 compact loaders, 2 30' gooseneck trailers, 2 brush cutters, and 1 root grapple were purchased for mesquite eradication.
Audubon NM - Engaging Community in Conservation	June 2016	$440,000.00	$298,318.55	N/A	February 2021	Project to educate the community on the LPC, the DSL, and the shortgrass prairie of eastern NM.
Bilberry Boundary Fence	July 2016	$32,438.00	$25,073.82	1.5 miles	March 2017	Boundary fence installation - 1.5 miles.
Coombes Boundary Fence 2 Atlee	July 2016	$115,203.00	$98,231.35	6 miles	December 2017	Boundary fence installation – 6 miles.
Luman Boundary Fence	July 2016	$131,381.00	$106,306.98	6.5 miles	October 2017	Boundary fence installation - 6.5 miles.
Thomas Water 3	July 2016	$27,659.00	$21,285.37	1.75 miles	June 2017	1 pit house installation; 1 submersible pump installation; 1 pressure tank installation; 75' electric line installation; water pipeline installation - 1.75 miles.
Williamson Mohon Wildlife Water Repair	October 2016	$32,220.00	$63,791.95	N/A	February 2017	Project to repair several wildlife waters (i.e., plumbing, foundations, etc.).
Mesquite Hand Treatment Active Leks #1	March 2017	$897,876.85	$882,330.29	3,514 acres	December 2018	Mesquite hand treatment - 3,514 acres.
Running N Interior Fence	July 2017	$26,716.00	$25,808.64	1.72 miles	January 2018	Interior fence installation - 1.72 miles.
Thomas Boundary Fence	July 2017	$126,947.00	$104,291.68	6.5 miles	September 2017	Boundary fence installation - 6.5 miles.
Milnesand Office	July 2017	$319,075.00	$320,033.84	290 acres	May 2018	LPC habitat purchase - 290 acres; District 2 office building purchase.
George Hay DSM Removal	August 2017	$30,342.00	$2,108.57	268.20 acres	October 2017	Dead, standing mesquite removal - 268.20 acres.

Dan Fields DSM Removal	August 2017	$90,540.00	$2,322.17	595.50 acres	October 2017	Dead, standing mesquite removal - 595.50 acres.
Peterson-Luman DSM Removal	August 2017	$26,562.00	$1,206.22	250 acres	October 2018	Dead, standing mesquite removal - 250 acres.
M Williamson DSM Removal	August 2017	$41,996.13	$7,154.61	482 acres	August 2018	Dead, standing mesquite removal - 482 acres.
Medlin DSM Removal	May 2018	$90,276.34	$13,693.77	2,000 acres	September 2018	Dead, standing mesquite removal – 2,000 acres.
Running N State – BLM Mesquite #2	June 2018	$173,089.20	$142,510.58 (600 acres not treated)	3,802 acres	June 2020	Aerial mesquite treatment – 3,802 acres.
Medlin Mesquite	June 2018	$46,235.46	$38,303.25 (115 acres not treated)	993 acres	July 2018	Aerial mesquite treatment – 993 acres.
Weinheimer Mesquite	June 2018	$153,792.89	$142,657.57 (173 acres not treated)	3,727 acres	July 2018	Aerial mesquite treatment – 3,727 acres.
TNC Water	June 2018	$52,830.44	$45,880.15	N/A	April 2019	Water improvement project.
Mohon Water Tanks	June 2018	$19,369.24	$12,345.37	N/A	April 2019	Water improvement project.
M Coombes Water#1 North	June 2018	$141,205.21	$96,776.37	3,900 feet	July 2019	Water pipeline installation – 3,900 feet.
Grazing Workshops	June 2018	$12,712.81	$11,346.74	N/A	October 2018	Conducted 2 workshops to promote adaptive grazing management strategies.
M Coombes Water#2 North	June 2018	$59,911.47	$40,886.02	1 tank	July 2019	1 stock tank installation.
Weinheimer Fence and Water	June 2018	$89,395.41	$45,589.42	3.25 miles fence	September 2018	Fence installation – 3.25 miles.
Weinheimer Interior Fence	June 2018	$110,486.94	$100,769.32	Removed: 1.25 miles; Installed: 7.5 miles	November 2020	Fence removal – 1.25 miles; Fence installation – 7.5 miles.
Peterson-Buffington Fence Repair	June 2018	$26,945.01	$25,460.73	Removed: 1.25 miles; Installed: 3 miles	December 2018	Fence removal – 1.25 miles; Fence installation – 3 miles.
M Coombes Boundary Fence – Removal North	June 2018	$281,631.81	$232,058.47	Removed: 14 miles; Installed: 6.5 miles	January 2019	Fence removal – 14 miles; Fence installation – 6.5 miles.
Bresenham DSM Removal	February 2019	$3,331.15	$1,464.49	350 acres	February 2019	Dead, standing mesquite removal - 350 acres.
Technical Working Group Meeting	April 2019	$15,400.00	$3,830.17	N/A	May 2019	Project to allow DSL and LPC experts to gather and discuss new and innovative ideas.
Bilbrey Water	August 2019	$61,458.39	$41,970.07	N/A	March 2021	Water improvement project.
Bud Bilberry Mesquite	August 2019	$68,128.22	$59,276,32 (188 acres not treated)	1,412 acres	August 2021	Aerial mesquite treatment - 1,412 acres.
Running N Water	August 2019	$65,540.96	$42,886.98	N/A	March 2021	Water improvement project.
Running N Mesquite	August 2019	$237,172.04	$380,099.85 (84 acres not treated)	5,716 acres	August 2021	Aerial mesquite treatment - 5,716 acres.
Mohon Interior Fence	August 2019	$43,959.87	$35,337.74	2.25 miles	September 2020	Interior fence removal and replacement - 2.25 miles.
Running N Boundary Fence	August 2019	$86,158.77	$67,897.59	4.25 miles	January 2022	Boundary fence removal and replacement - 4.25 miles.
Mohon Water	August 2019	$35,887.25	$25,406.70	200 feet	July 2020	Water pipeline installation - 200 feet.
Mohon Boundary Fence	August 2019	$78,313.76	$74,256.38	4.25 miles	March 2020	Boundary fence removal and replacement - 4.25 miles.
TNC Mesquite	August 2019	$58,329.10	$50,818.11	1,214 acres	August 2021	Aerial mesquite treatment - 1,214 acres.
Weaver/Grasslans Water	August 2019	$79,856.06	$51,161.47	N/A	January 2022	3 windmill removals; 1 solar pump conversion; 3 stock tank installations; water pipeline installation - 15,840 feet.
Weaver/Grasslans Boundary Fence	August 2019	$90,890.13	$64,512.67	Removed/replaced: 1.41 miles; Repaired: 10.09 miles	January 2020	Boundary fence removal and replacement - 1.41 miles; Fence repair - 10.09 miles.
Weaver Mesquite	August 2019	$36,432.55	$32,148.50	837 acres	June 2020	Aerial mesquite treatment - 837 acres.
DSL Population Viability Analysis Development	August 2019	$29,250.00	$25,025.00	N/A	July 2021	Project to create a predictive model of longevity for the DSL.
Luman Tank	August 2019	$10,300.43	$6,225.47	N/A	July 2020	Water improvement project.
Pembers Mesquite	August 2019	$67,172.14	$66,176.12	1,580 acres	August 2021	Aerial mesquite treatment - 1,580 acres.
G. Coombes Atlee- Lovejoy Boundary Fence	August 2019	$67,002.37	$66,405.63	Removed/ replaced: 4 miles	May 2020	Boundary fence removal and replacement - 4 miles.
G. Coombes Lovejoy Mesquite	August 2019	$82,591.08	$84,825.48	2,024 acres	August 2021	Aerial mesquite treatment - 2,024 acres.
BLM Running N DSM Removal	September 2019	$26,337.96	$13,119.93	1,160 acres	March 2020	Dead, standing mesquite removal - 1,160 acres.
BLM ACEC DSM Removal	September 2019	$21,741.51	$12,008.81	950 acres	October 2019	Dead, standing mesquite removal - 950 acres.

Pearce Mesquite	June 2020	$141,892.00	$159,487.16	3,782 acres	August 2021	Aerial mesquite treatment - 3,782 acres.
Medlin DSM Removal	June 2020	$17,514.96	$20,761.12 + pending	993 acres	September 2022	Dead, standing mesquite removal - 993 acres.
ACEC DSM Leks #1	June 2020	$31,092.08	$49,510.84 + pending	6,000 acres	November 2022	Dead, standing mesquite removal - 6,000 acres.
TNC Active Leks #1 DSM Removal	June 2020	$16,703.77	$5,371.41	1,004 acres	August 2020	Dead, standing mesquite removal - 1,004 acres.
Weinheimer DSM Removal	June 2020	$67,791.95	$66,375.90	3,727 acres	August 2021	Dead, standing mesquite removal - 3,727 acres.
G. Coombes Atlee - Lovejoy Boundary Fence	March 2022	$66,701.06	Pending	2.5 miles	December 2022	Boundary fence installation - 2.5 miles.
Kinsolving Fence	March 2022	$153,359.01	$153,359.01	5 miles	February 2023	Boundary fence installation - 5 miles.
G. Moore Water	March 2022	$43,784.20	Pending	N/A	February 2023	2 windmill removals; 1 solar pump installation; 1 stock tank installation.
Running N Kenna Fence	March 2022	$106,833.64	Pending	4.5 miles	March 2023	Interior fence installation - 4.5 miles.
G. Moore Fence Removal	March 2022	$15,000.00	Pending	4 miles	April 2023	Interior fence removal - 4 miles.
G. Coombes Atlee - Lovejoy Water	March 2022	$139,754.55	Pending	8.8 miles; 3 stock tanks	May 2023	Water pipeline installation - 8.8 miles; 3 stock tank installations.
Weaver/Grasslans Fencing	March 2022	$138,204.08	Pending	4 miles	June 2023	Boundary fence installation - 4 miles.
Weaver/Grasslans Mesquite	March 2022	$145,704.48	Pending	2,370 acres	August 2023	Aerial mesquite treatment - 2,370 acres.
Kinsolving Water	March 2022	$152,889.63	Pending	N/A	September 2023	Water pipeline installation - 3 miles; 2 stock tank installations; 8 windmill removals; 4 solar pump conversions.
CEHMM District 2 Water	March 2022	$20,281.67	Pending	N/A	August 2023	1 stock tank installation; water pipeline installation - 0.5 miles.
Weaver DSM Removal	March 2022	$145,704.48	Pending	2,370 acres	February 2023	Dead, standing mesquite removal - 2,370 acres
TNC DSM Removal	August 2019	$58,329.10	Pending	27,880 acres	July 2023	Dead, standing mesquite removal - 27,880 acres
M. Coombes Fence	November 2023	$220,000.00	Pending	7.8 miles	March 2024	Fence removal and replacement- interior 3.8 miles, boundary 4 miles.
Weaver/ Grasslans Fencing	March 2022	$138,204.08	Pending	10.5 miles	March 2024	Fence removal and replacement- interior 6.5 miles, boundary 4 miles
Dillard/ Howard Trust Water	November 2023	$45, 122.38	Pending	N/A	June 2024	1 stock tank installation;1 windmill removal; 1 solar pump conversion.
Peterson Fence	November 2023	$227,233.00	Pending	8.7 miles	June 2024	Fence removal and replacement- 8.7 miles
Mathis Fence	November 2023	$293,181.02	Pending	9.5 miles	June 2024	Boundary fence removal and replacement- 9.5 miles
Kinsolving Mesquite	March 2022	$142,282.66	Pending	2,300 acres	August 2024	Aerial mesquite treatment- 2,300 miles
G. Coombes Atlee-Lovejoy Mesquite	March 2022	$79,571.41	Pending	1,250 acres	August 2024	Aerial mesquite treatment- 1,250 acres
Malcolm Coombes 2022 Mesquite	March 2022	$100,475.16	Pending	1,600 acres	August 2024	Aerial mesquite treatment- 1,600 acres
McCloy Mesquite	November 2023	$105, 938.25	Pending	1,276 acres	August 2024	Aerial mesquite treatment- 1,276 acres
Running N Kenna Mesquite	March 2022	$320,263.16	Pending	3,773 acres	August 2024	Aerial mesquite treatment- 3,773 acres
Kerby Fence	August 2023	$268,134.70	Pending	12.5 miles	December 2024	Boundary fence removal and replacement- 12.5 miles
Kerby Water	August 2023	$97,426.37	Pending	5.5 miles; 3 stock tanks	September 2025	Water pipeline installation- 5.5 miles; 3 stock tank installations.
2025 Aerial Infrared LPC Survey	September 2024	$50,000	Pending	N/A	May 2025	Owyhee tested and developed a protocol for conducting infrared aerial LPC surveys.
TNC Fence	September 2024	$175,744.92	Pending	0.7 miles; 5.3 miles	February 2025	Interior fence removal – 0.7 miles; Interior fence replacement – 5.3 miles.
TNC Water	September 2024	$74,450.27	Pending	4 windmills; 5 stock tanks	February 2025	Removal of 4 windmills; 5 stock tank installations.
Mathis Fence	September 2024	$370,803.69	Pending	11.1 miles	June 2025	Boundary fence removal and replacement – 11.1 miles.
Derrick Fence	September 2024	$370.863.88	Pending	11.6 miles	July 2025	Boundary fence removal and replacement – 11.6 miles.
McCloy Fence	September 2024	$193,802.97	Pending	3 miles; 2.75 miles	July 2025	Fence removal and replacement: boundary – 3 miles; interior- 2.75 miles.
Kerby Mesquite	August 2023	$160,818.60	Pending	2,262 acres	August 2025	Aerial mesquite treatment – 2,262 acres.

Taylor Peak Mesquite	November 2023	$75,103.41	Pending	1,026 acres	August 2025	Aerial mesquite treatment – 1,026 acres.
Bogle Mesquite	September 2024	$681,313.00	Pending	9,896 acres	August 2025	Aerial mesquite treatment – 9,896 acres.
Marley Water	September 2024	$23,362.78	Pending	3 stock tanks	August 2025	3 stock tank installations.
Jolley Fence	October 2022	$120,215.80	Pending	5.75 miles	August 2025	Boundary fence removal and replacement – 5.75 miles.
Pembers DSM	March 2022	$45,784.55	Pending	1,600 acres	September 2025	Dead, standing mesquite removal – 1,600 acres.
Derrick Water	September 2025	$106,873.01	Pending	2.7 miles; 1 storage tank	November 2025	Water pipeline installation – 2.7 miles. 1 storage tank installation.

APPENDIX B: Southern Great Plains 2013 LPC Crucial Habitat Assessment Tool (CHAT) depicting Scores for Focal Areas (i.e., red), Connectivity Areas (i.e., orange), Modeled Habitat Areas (i.e., light green), and Modeled Non-Habitat Areas (i.e., green).



APPENDIX C: Total Treatments for Life of the LPC DSL CCA/CCAA Programs by Project Type.

Project Type	Acres Treated
Roads and Pads, Caliche Removal, and Reseeding	171.8
Mesquite Treatment	125,259
Dead, Standing Mesquite Removal	25,851
Yucca Treatment	120.00