

2020 Annual Report  
for the  
Range-wide Oil and Gas  
Candidate Conservation Agreement with  
Assurances for the Lesser Prairie-Chicken

Submitted to the  
U.S. Fish and Wildlife Service  
on  
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by the  
Western Association of Fish and Wildlife Agencies  
and the  
WAFWA Species Restoration Fund

Chris Moore  
Interim Executive Director

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## INTRODUCTION AND BACKGROUND

### *Entities and Business Structure*

The Western Association of Fish and Wildlife Agencies (WAFWA) is a 501(c)4 non-profit organization representing the state and provincial fish and wildlife agencies from 24 states and Canadian provinces, an area covering nearly 3.7 million square miles of western North America. WAFWA's mission is to support sound resource management and building partnerships at all levels to conserve wildlife for the use and benefit of all citizens, now and in the future. WAFWA holds the permit for the Range-wide Oil and Gas Candidate Conservation Agreement with Assurances for Lesser Prairie Chicken (*Tympanuchus pallidicinctus*) in Colorado, Kansas, New Mexico, Oklahoma, and Texas (hereafter the CCAA).

The WAFWA Species Restoration Fund (SRF) is a 501(c)4 nonprofit organization created by WAFWA to manage the financial operations for the CCAA. The CCAA and permit originally referenced The Foundation for Western Fish and Wildlife, but WAFWA transferred the responsibility for financial operations to SRF as part of a restructuring effort in May 2014.

### *Report Format*

From 2014 through 2018, WAFWA included annual reporting of the CCAA in the annual progress report for the Lesser Prairie-Chicken Range-wide Conservation Plan. Beginning with the 2019 report, WAFWA/SRF changed the report format from summarizing all impact and conservation efforts outlined in the Lesser Prairie-Chicken Range-wide Conservation Plan (Van Pelt et al. 2013) to include only the CCAA program (USFWS 2014). Any additional tabular data from the previous report format covering the CCAA, WAFWA Conservation Agreement (WCA), and the Range-wide Conservation Plan will be posted separately on the WAFWA website at:

[https://www.wafwa.org/initiatives/grasslands/lesser\\_prairie\\_chicken/rwp\\_annual\\_performance\\_reports/](https://www.wafwa.org/initiatives/grasslands/lesser_prairie_chicken/rwp_annual_performance_reports/)

### *Program Overview and Goals*

The Range-Wide Oil and Gas CCAA for LPC represents a collaborative effort between the U.S. Fish and Wildlife Service (USFWS), WAFWA, WAFWA's Foundation for Western Fish and Wildlife, interested oil and gas companies, and trade associations. The CCAA is one of the enrollment options for implementing the conservation strategy set forth in the 2013 Lesser Prairie-Chicken Range-wide Conservation Plan (RWP), which is a comprehensive conservation plan developed by the WAFWA Lesser Prairie-Chicken (LPC) Interstate Working Group. This CCAA utilizes the same impact metrics and conservation delivery system outlined in the RWP. The CCAA is a voluntary agreement intended to address the effects of oil and gas activities on the LPC and its habitat in the species' five-state range in Kansas, Colorado, Oklahoma, New Mexico, and Texas. The agreement is administered by WAFWA with oversight by the USFWS.

In section XIX(B) of the CCAA, it states that:

- The RWP mitigation framework is a biologically based system that incorporates space, time and habitat quality to quantify both the impacts to habitat (impact units) and improvements to habitat (offset and remediation units).
- The mitigation framework assigns an impact multiplier depending on CHAT category that range between 2.5 for CHAT category 1 and 1.6 for CHAT category 4 that, when averaged across the CHAT categories, produces an average 2:1 mitigation ratio.
- This 2:1 ratio ensures that mitigation efforts are greater than impacts, resulting in a conservation benefit for the LEPC habitat, and ultimately populations.

### ***Data Sources and Access to Data***

All raw data and data summaries represented in this report are housed within the WAFWA Conservation ToolKit website (<https://wafwawct.org/Dashboard>). This website is a data portal that allows for:

- Tracking of industry and conservation enrollments including spatial mapping of enrollments,
- Mitigation project documentation including project submission, mapping, evaluation and approval,
- Industry compliance monitoring and reporting,
- Conservation contract documentation including site monitoring, evaluation, and payment calculations,
- Ledger tracking for monitoring credits and debits and balances, and
- Reporting tools and data summaries.

Data confidentiality is maintained by managing and restricting data access for industry and conservation participants, technical service providers, and regulatory agencies. The USFWS has secure log-in access to this site to view but cannot download or possess the data housed on that site. The USFWS can log-in to the site independently to confirm the data represented in this report.

### ***Reporting Requirements***

Section XX of the CCAA requires that WAFWA provide an annual report describing implementation of the CCAA, including the following:

- a) Participants enrolled under the CCAA over the past year, including copies of the executed Certificates of Inclusion (CI), excluding Exhibit 1;
- b) A summary of habitat management and habitat conditions in the Covered Area and on all Enrolled Property over the past year with any identifying information related to Participants removed;
- c) Summary of the effectiveness of the conservation activities implemented in previous years at meeting the intended conservation benefits;
- d) Population surveys and studies conducted over the past year with any identifying information related to Participants removed;
- e) Any LPC mortality or injuries that are observed of the species over the previous year;
- f) Compliance issues as provided in Section XXIX (Participant Compliance) or any other issues with implementation of the CCAA. Compliance reporting will be provided on the password-protected website in accordance with Section XXI (Confidentiality);
- g) A discussion on the funds used for habitat conservation on private/state lands.

The permit issued to WAFWA by the USFWS (Permit # TE27289B-0) further stipulates that incidental take of LPC not exceed 8,530 birds, as measured by habitat impacts:

- a) At 10 years from the effective date of this permit, more than 622,272 acres of habitat are developed by oil and gas activities within the Covered Area,
- b) At 20 years from the effective date of this permit, more than 1,244,545 acres of habitat are developed by oil and gas activities within the Covered Area,
- c) At 30 years from the effective date of this permit, more than 1,866,855 acres of habitat are developed by oil and gas activities within the Covered Area,

### ***Reporting Summary***

In this section, WAFWA/SRF is including a tabular summary of all reporting requirements for the CCAA, a brief description of the result for each requirement, and a section and page number where that information occurs in this report (Table 1).

**Table 1. Report Summary.**

<b>Reporting Requirement</b>	<b>Result</b>	<b>Report Section</b>
Participants enrolled under the CCAA over the past year	No new enrollment during 2020, 111 current participants, 6,228,136 acres enrolled, exhibit 1 information on the WCT.	See Industry Participation
A summary of habitat management and habitat conditions in the Covered Area and on all Enrolled Property over the past year with any identifying information related to Participants removed	20 development projects impacting 71 acres in 2020. 149k acres of current conservation enrollment (25% permanent, 75% iterative term) and 17,602 acres of restoration completed since inception of the program.	See Habitat Management and Condition
Summary of the effectiveness of the conservation activities implemented in previous years at meeting the intended conservation benefits	2020 development projects exhibit 89% co-location rate and an average HEG score of 0.28. Conservation contracts address threats to LPC. Conservation properties have an average HEG score of 0.71.	See Effectiveness of Conservation Activities
Population surveys and studies conducted over the past year with any identifying information related to Participants removed	2020 population estimate of. 34,408 (90% CI: 21,270-47,946) with statistically significant positive annual rate of increase since 2012.	See Population Survey section.
A discussion on the funds used for habitat conservation on private/state lands	\$2,025,729 paid to landowners for annual maintenance payments during 2020.	See Financial Reporting and Audit Response sections
Incidental take of LPC not exceed 8,530 birds	No mortality reported since implementation in 2014.	See Mortality subsection
At 10 years from the effective date of this permit, more than 622,272 acres of habitat are developed by oil and gas activities within the Covered Area	17,577 acres impacted by mitigated development since 2014	See Mitigation Projects subsection

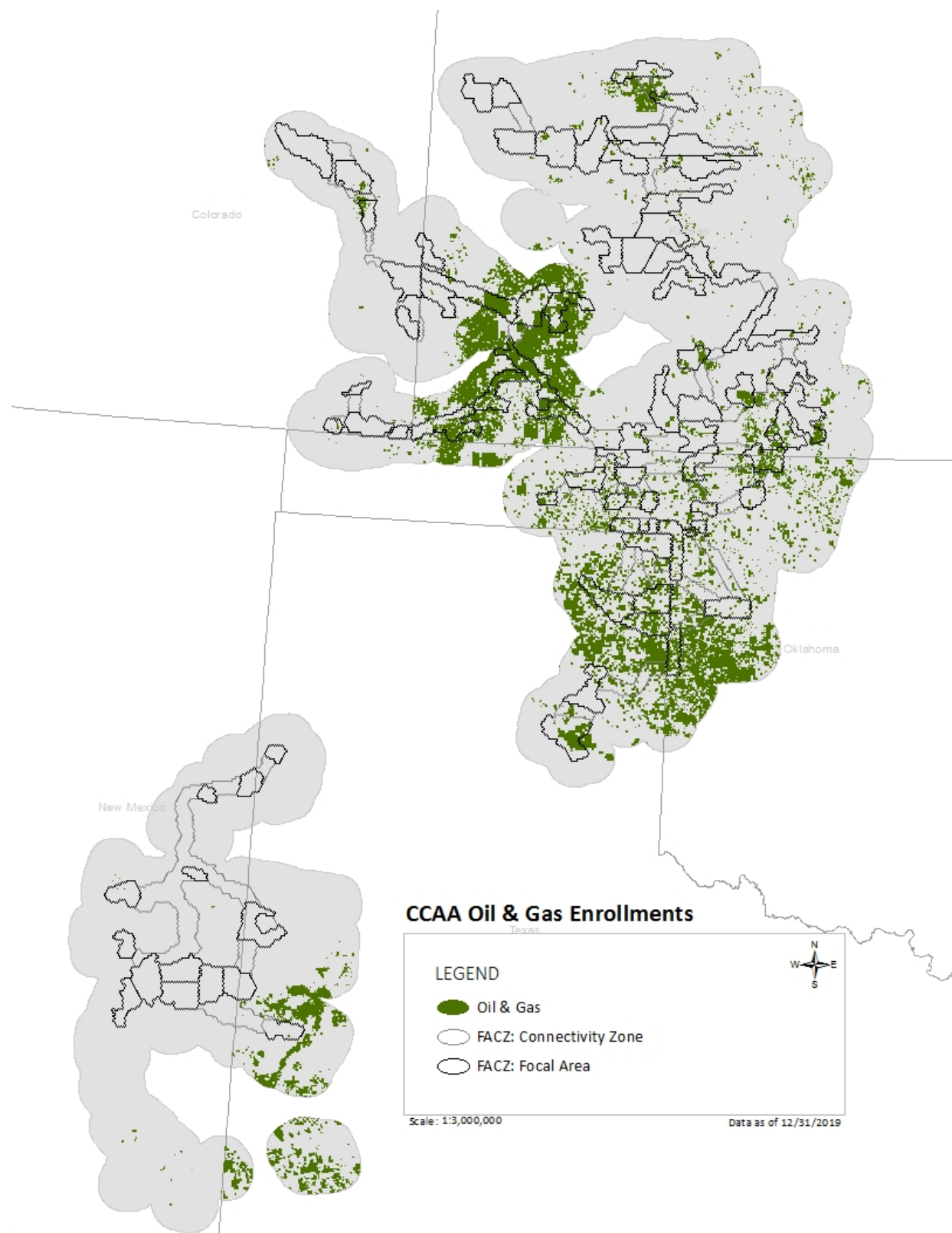
## INDUSTRY PARTICIPATION

As of December 31, 2020, there were 111 active agreements in the CCAA (Appendix A) the same as reported in the 2018 report. Active agreements are those where the enrollment was not terminated or suspended. Enrollment totaled 6,228,136 acres as of December 31, 2020 (Table 2, Figures 1 & 2). Industry enrollment in the CCAA was closed in March 2019 and remained closed throughout 2020. CCAA enrollment acreage remained the same from 2019.

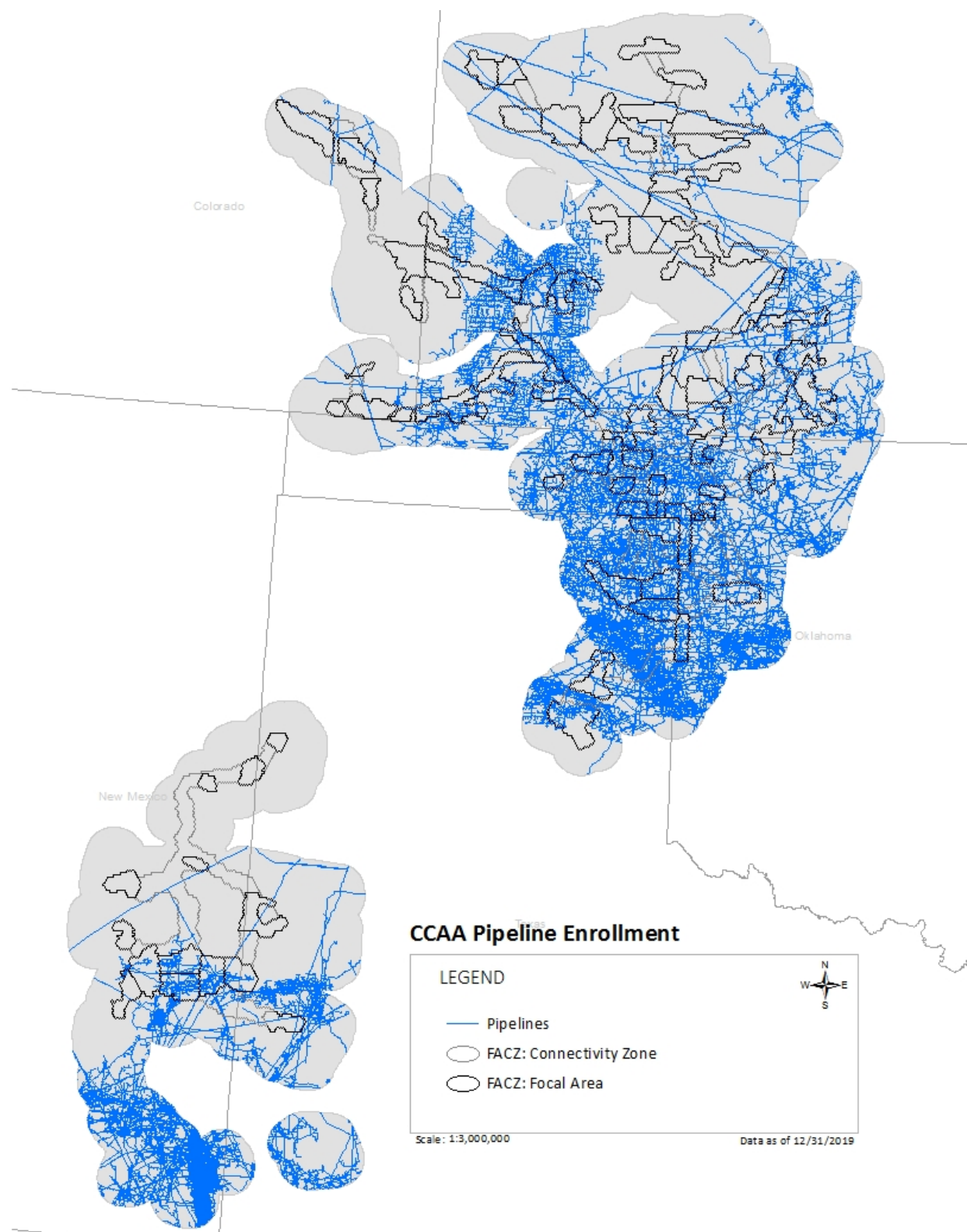
**Table 2. Summary of active CCAA enrollment acreage by ecoregion, CHAT category and industry and the percentage that these enrollments represent of the total acreage in each CHAT category within the EOR+10 as of December 31, 2020.**

Ecoregions	CHAT Score	Oil and Gas	Pipeline	Total Acres	% Total Area
<b>Mixed Grass Prairie</b>	CHAT1	524,071	73,209	597,280	23.2%
	CHAT2	237,990	48,201	286,190	25.6%
	CHAT3	1,565,328	192,224	1,757,552	33.9%
	CHAT4	476,716	114,135	590,851	15.7%
	<b>Ecoregion Total:</b>	<b>2,804,104</b>	<b>427,769</b>	<b>3,231,873</b>	<b>26%</b>
<b>Sand Sagebrush Prairie</b>	CHAT1	518,981	24,702	543,683	34.3%
	CHAT2	14,533	1,085	15,618	6.4%
	CHAT3	284,174	18,213	302,387	16.1%
	CHAT4	1,019,115	56,589	1,075,704	24.9%
	<b>Ecoregion Total:</b>	<b>1,836,803</b>	<b>100,589</b>	<b>1,937,392</b>	<b>24%</b>
<b>Shinnery Oak Prairie</b>	CHAT1	2,142	12,779	14,921	1.4%
	CHAT2	2,747	3,070	5,817	0.7%
	CHAT3	261,950	94,194	356,143	6.0%
	CHAT4	298,478	62,477	360,954	11.4%
	<b>Ecoregion Total:</b>	<b>565,316</b>	<b>172,520</b>	<b>737,836</b>	<b>7%</b>
<b>Shortgrass Prairie</b>	CHAT1	52,427	4,590	57,017	3.0%
	CHAT2	17,424	1,066	18,489	10.1%
	CHAT3	43,020	6,181	49,201	2.8%
	CHAT4	174,100	22,230	196,329	4.1%
	<b>Ecoregion Total:</b>	<b>286,970</b>	<b>34,066</b>	<b>321,036</b>	<b>4%</b>
<b>EOR+10 Total:</b>		<b>5,493,193</b>	<b>734,943</b>	<b>6,228,136</b>	<b>15%</b>

**Figure 1. Map displaying all oil and gas leases enrolled in the Range-wide Oil and Gas Candidate Conservation Agreement with Assurances as of December 31, 2020.**



**Figure 2. Map displaying all pipelines currently enrolled in the Range-wide Oil and Gas Candidate Conservation Agreement with Assurances as of December 31, 2020.**





## **INDUSTRY COMPLIANCE MONITORING AND REPORTING**

### ***Compliance Monitoring***

The CCAA requires a set of avoidance and minimization measures of all industry participants as part of the CCAA conservation strategy (see CCAA Section XII). WAFWA evaluates industry compliance with these avoidance and minimization measures annually based on two methods:

- Random site visits to evaluate compliance with conservation measures on mitigated projects, and
- Evaluation of public project permitting data to evaluate whether all projects are being mitigated that are under the control of participants and on enrolled property.

In 2020, compliance monitoring was reduced due to travel restrictions from the COVID-19 pandemic, WAFWA randomly selected a total of 17 mitigation projects for random site visits (See Appendix B for a summary of industry compliance monitoring results), that were within day-trip distance of the homes of WAFWA/SRF staff and contractors. Those staff and contractors contacted each company responsible for those projects and received responses for all of them. Three of the 17 project were not constructed at the time of compliance monitoring, so staff/contractors established field visits on the remaining 14 projects. Of those 14 projects, 13 were determined to be in compliance. The location of the remaining project was incorrectly mapped, and that issue was resolved with the company without issuance of a compliance notice.

Two companies are currently suspended (243,624 acres total) for activities that occurred from 2014-2017. All options to resolve these issues under the agreement have been expended and WAFWA/SRF is evaluating or pursuing options outside the agreement to develop resolutions.

### ***Emergency and Non-Emergency Operations***

There are several avoidance and minimization measures related to emergency and non-emergency operations. Emergency operations are defined as those activities unexpectedly and urgently required to prevent or address immediate threats to human health, safety, or property; the environment; or national defense or security. Non-emergency operations are defined as construction and maintenance activities that occurred on undisturbed areas in rangeland or planted grass cover (e.g., off of a well pad, road, or facility) between March 1 and July 15 of the previous calendar year that are within 1.25 miles of leks active within the previous 5 years.

No instances of emergency or non-emergency operations were reported by participating companies in 2020.

### ***Mortality***

No LPC mortalities were reported in 2020 by industry participants, or in any previous years since 2014.

## **HABITAT MANAGEMENT AND CONDITION ON ENROLLED PROPERTY**

### ***Mitigation Projects***

In 2020, WAFWA/SRF processed 20 new mitigation projects under the CCAA totaling \$3,493.50 in mitigation costs (Table 3). All 20 projects were new oil and gas wells. These projects impacted a total of 71 new acres of habitat and resulted in 5.96 new impact units.

**Table 3. Summary of 2020 mitigated projects under the CCAA by impact type and by ecoregion.**

Ecoregions	Enrollment Program	Number of Projects	Potential Acres	Impact Acres	Annual Units	Cost
<b>Sand Sagebrush Prairie</b>	CCAA	12	372	71	5.96	\$3,493.50
	<b>Ecoregion Total:</b>	<b>12</b>	<b>372</b>	<b>71</b>	<b>5.96</b>	<b>\$3,493.50</b>
<b>Shinnery Oak Prairie</b>	CCAA	8	279	0	0.00	\$0.00
	<b>Ecoregion Total:</b>	<b>8</b>	<b>279</b>	<b>0</b>	<b>0.00</b>	<b>\$0.00</b>
<b>CCAA Total:</b>		<b>20</b>	<b>652</b>	<b>71</b>	<b>5.96</b>	<b>\$3,493.50</b>

Over the life of the program (2014-2020), a total of 1,360 projects have been mitigated under the CCAA program. Those projects impacted a total of 17,577 acres of habitat (Table 4). The acres impacted to date represent 2.8% of the total impacted acreage allowed by the CCAA permit in the first 10 years of the program (622,272 acres) and less than 0.1% of the total allowable impact over the 30-year life of the program (1,866,855 acres). Through December 31, 2020, the projects mitigated under the CCAA have generated 11,198.04 annual impact units. Impact units are debited every year from the ledger on the anniversary date of the project.

**Table 4. Summary of projects mitigated under the CCAA since inception (2014-2020) by ecoregion including the potential (full impact buffer) and actual impact acres (new impact area), annual impact units and mitigation fees.**

Ecoregions	Enrollment Program	Years	Number of Projects	Potential Acres	Impact Acres	Annual Units	Cost
Mixed Grass Prairie	CCAA	2014	180	5,600	3,274	2,598.54	\$3,416,061.42
		2015	299	9,346	5,655	4,684.38	\$6,079,395.38
		2016	10	371	105	69.27	\$92,955.24
		2017	53	1,656	908	941.28	\$1,296,426.32
		2018	19	632	268	219.15	\$315,055.18
		2019	6	186	80	108.70	\$156,194.85
		2020	0	0	0	0.00	\$0.00
		<b>Total:</b>	<b>567</b>	<b>17,792</b>	<b>10,290</b>	<b>8,621.32</b>	<b>\$11,356,088.39</b>
Sand Sagebrush Prairie	CCAA	2014	45	1,367	629	7.21	\$4,440.73
		2015	72	2,236	1,345	514.59	\$271,212.42
		2016	22	683	338	53.12	\$28,993.47
		2017	33	1,024	534	20.63	\$11,444.27
		2018	16	497	136	12.36	\$7,237.88
		2019	29	871	279	30.13	\$17,656.15
		2020	12	372	71	5.96	\$3,493.50
		<b>Total:</b>	<b>229</b>	<b>7,049</b>	<b>3,331</b>	<b>644.00</b>	<b>\$344,478.42</b>
Shinnery Oak Prairie	CCAA	2014	47	1,453	162	161.98	\$146,512.43
		2015	124	3,844	752	631.60	\$549,689.08
		2016	71	2,203	222	112.08	\$98,321.73
		2017	78	2,403	242	200.43	\$181,925.36
		2018	77	2,372	169	118.66	\$112,836.12
		2019	46	1,427	99	90.43	\$85,985.95
		2020	8	279	0	0.00	\$0.00
		<b>Total:</b>	<b>451</b>	<b>13,982</b>	<b>1,647</b>	<b>1,315.18</b>	<b>\$1,175,270.67</b>
Shortgrass Prairie	CCAA	2014	31	950	783	208.74	\$166,374.38
		2015	71	2,074	1,350	343.97	\$293,655.04
		2016	5	155	83	14.85	\$12,344.02
		2017	3	93	56	15.52	\$13,614.84
		2018	2	62	34	34.38	\$30,154.41
		2019	1	31	2	0.08	\$77.90
		2020	0	0	0	0.00	\$0.00
		<b>Total:</b>	<b>113</b>	<b>3,365</b>	<b>2,309</b>	<b>617.54</b>	<b>\$516,220.59</b>
<b>CCAA Total:</b>			<b>1360</b>	<b>42,188</b>	<b>17,577</b>	<b>11,198.04</b>	<b>\$13,392,058.07</b>

### ***Habitat Conservation Enrollments***

WAFWA/SRF enrolls private lands in the mitigation program to offset development impacts. The properties summarized in this section provide habitat that is quantified annually to offset impacts for both the CCAA and the WAFWA Conservation Agreement (WCA) under the RWP. Offset units can be used by either agreement, but not both. The habitat offset units are annually assigned to each conservation program (the CCAA or RWP) and to each participant's impacts within each program to ensure that habitat units are meeting or exceeding CCAA and RWP requirements to offset each impact unit.

All conservation under the LPC mitigation program is designed to be implemented in perpetuity. However, the CCAA allows for conservation enrollment based on a shifting habitat mosaic strategy which targets 25% of enrollments toward permanent easements and 75% toward iterative term (5-10 year) contracts. The iterative term contracts can be renewed to retain conservation in the same location. But if conservation priorities change due to climate change, changes in adjoining land use patterns or habitat quality, or if an individual landowner decides to opt out of the program, the iterative term contracts can be shifted to new areas to ensure continued LPC conservation benefits.

Conservation enrollment as of December 31, 2020 included 22 properties totaling 149,606 acres (128,230 unimpacted acres) (Tables 5 and 7). There are an additional 24 properties (91,822 acres) with enrollment applications on file awaiting additional mitigation funding (Table 6). The iterative term portion of the current enrollment includes 15 contracts totaling 112,037 acres (75% of the total enrolled acres) (Table 5). Permanent enrollment includes seven contracts totaling 35,769 acres (25% of the total enrolled acres) (Table 7). Sixty-seven percent of iterative term contracts are located within CHAT 1&2, and 94% of permanent easements are within CHAT 1&2 (Table 5 and 7). Based on the ledger, 58% percent of the total units from the enrolled conservation acreage (-130,864.55 credits) has been used to offset mitigation projects for the CCAA and WCA (Appendix C Table 3). Of the 58% used for offsets, 53.8% of that (-57818.99 credits) has been used to offset projects specifically for the CCAA (Table 8 and Table 15).

**Table 5. Summary of the 10-year term contract conservation sites secured by WAFWA through the lesser prairie chicken range wide conservation plan, 2020.**

<b>Ecoregions</b>	<b>Contract</b>	<b>Raw Acres</b>	<b>Total Unimpacted Acres</b>	<b>CHAT1 Unimpacted Acres</b>	<b>CHAT2 Unimpacted Acres</b>	<b>CHAT3 Unimpacted Acres</b>	<b>CHAT4 Unimpacted Acres</b>
<b>Mixed Grass Prairie</b>	7	73,902	62,456	46,264	374	677	15,140
<b>Sand Sagebrush Prairie</b>	1	12,575	8,806	8,806	0	0	0
<b>Shinnery Oak Prairie</b>	3	16,059	12,722	11,389	0	1,333	0
<b>Shortgrass Prairie</b>	4	9,501	8,791	4,886	3,808	97	0
<b>Grand Total:</b>	<b>15</b>	<b>112,037</b>	<b>92,774</b>	<b>71,345</b>	<b>4,182</b>	<b>2,107</b>	<b>15,140</b>

**Table 6. Summary of term applications received for the WAFWA offset unit generation program. Data are summarized through the end of the current reporting period (December 31, 2020).**

Ecoregions	Number of New Applications	New Applications Acres	Number of Open Applications on File <sup>1</sup>	Open Applications Acres
Mixed Grass Prairie	0	0.00	10	61,600
Sand Sagebrush Prairie	0	0.00	4	16,507
Shinnery Oak Prairie	0	0.00	5	6,403
Shortgrass Prairie	0	0.00	5	7,312
<b>Range Wide:</b>			<b>24</b>	<b>91,822</b>

**Table 7. Permanently conserved sites secured by WAFWA through the lesser prairie-chicken range-wide conservation plan, through report date December 31, 2020.**

WAFWA Site ID	Ecoregion	CHAT Score	Site Acres	Unimpacted Acres	Enrollment Date
CZ024	Sand Sagebrush Prairie	CHAT1	29,593	28,898	2016
CZ026	Shinnery Oak Prairie	CHAT1	1,554	1,208	2015
CZ063	Mixed Grass Prairie	CHAT1	1,758	1,740	2016
CZ065	Mixed Grass Prairie	CHAT1	968	968	2017
CZ081	Shortgrass Prairie	CHAT1	276	232	2017
CZ082	Shortgrass Prairie	CHAT1	1,429	1,123	2017
CZ083	Shortgrass Prairie	CHAT1	1,991	1,559	2017
<b>Total</b>			<b>37,569</b>	<b>35,729</b>	

**Table 8. Summary of the percentage of debits registered in the WAFWA ledger for mitigation projects for the WCA and CCAA programs from 2014-2020.**

Region	Percent WCA Debits	Percent CCAA Debits
Mixed Grass	50.7%	49.3%
Sand Sagebrush	9.9%	90.1%
Shinnery Oak	29.7%	70.3%
Short Grass	7.9%	92.1%
<b>Range-wide</b>	<b>46.2%</b>	<b>53.8%</b>

### ***Habitat Restoration***

Both rangeland management and planted grass management plans may qualify for restoration practices with a minimum 10-year contract. In 2020, there were no new restoration acres completed. Since

implementation, the program has contracted for 17,602 acres of habitat restoration and completed 17,602 acres (Table 9).

**Table 9. Acreage of restoration completed and prescribed under WAFWA conservation agreements through report date December 31, 2020.**

Ecoregions	Date Completed	Chemical Brush Management <sup>1</sup>	Heavy Brush Management	Light Brush Management	Moderate Brush Management	Range Planting	Total Acres
Mixed Grass Prairie	Completed Since Inception of RWP	0	1,011	727	778	0	2,516
Shinnery Oak Prairie	Completed Since Inception of RWP	8,272	1,148	1	4,416	629	14,465
Shortgrass Prairie	Completed Since Inception of RWP	0	0	0	0	620	620
<b>Cumulative Total:</b>		<b>8,272</b>	<b>2,159</b>	<b>728</b>	<b>5,194</b>	<b>1,250</b>	<b>17,602</b>
<b>Year 2020 Total:</b>		<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

## EFFECTIVENESS OF CONSERVATION ACTIONS

### *Avoidance and Minimization for Mitigation Projects*

The CCAA includes a series of discretionary and required conservation measures designed to reduce disturbance and mortality for LPCs, minimize impacts to habitat, and to incentivize siting of new development in low quality habitat. The required measures include breeding season timing restrictions, noise restrictions near leks, and off-road travel restrictions to minimize disturbance to breeding birds, requirements for fence marking near leks and escape ramps in open water sources to minimize potential mortality, and requirements to mitigate for impacted habitat. The discretionary measures focus on collocation with existing infrastructure and avoidance of high-quality habitat.

The methods used to evaluate the impact of projects enrolled in the CCAA are designed to incentivize minimization of habitat loss through co-location of new development with pre-existing development and focusing development on lower quality habitat. Co-location is assessed as the percent overlap of impact buffers (page 95, Van Pelt et al. 2013) for new versus pre-existing development. Habitat quality is quantified based on the Habitat Evaluation Guide (HEG) (pages 98-99, Van Pelt et al., 2013).

Projects mitigated under the program in 2020 exhibited an 89.1% co-location rate with pre-existing development (Table 10). Co-location also decreased the resulting habitat impacted from 652 potential acres to 71 acres. It also documents a high-level of compliance with discretionary conservation measures among participant companies.

**Table 10. Area of potential impact acres, the actual impact acres as a result of co-siting projects, and the proportion the impact area was reduced due to co-siting in 2020.**

Ecoregions	Count	Potential Acres	Actual New Acres	% overlap
Sand Sagebrush Prairie	12	372	71	80.93%
Shinnery Oak Prairie	8	279	0	100.00%
<b>Grand Total:</b>	<b>20</b>	<b>652</b>	<b>71</b>	<b>89.10%</b>

Participant companies also documented compliance with discretionary conservation measures in the CCAA by consistently selecting low quality habitat to site new development projects. Since implementation, the mean HEG score for all mitigated projects was 0.28, representing low quality habitat on a 0-1 scale (Table 11).

**Table 11. Habitat Evaluation Guide (HEG) scores quantifying habitat quality across all evaluation units associated with industry impact areas (2014-2019).**

Industry Impact	Mixed Grass Prairie	Sand Sagebrush Prairie	Shinnery Oak Prairie	Shortgrass Prairie	EOR+10
<b>Mean</b>	0.35	0.15	0.20	0.19	<b>0.28</b>
<b>Median</b>	0.25	0.05	0.01	0.10	<b>0.20</b>
<b>Min - Max</b>	0.00 - 1.00	0.00 - 1.00	0.00 - 1.00	0.00 - 1.00	<b>0.00 - 1.00</b>
<b>Variance</b>	0.11	0.05	0.09	0.05	<b>0.10</b>
<b>Count</b>	3,307	799	1,003	344	<b>5,453</b>

### *Conservation Plans and Practices*

WAFWA/SRF works with landowners to develop an LPC-specific management plan for each conservation contract directed at addressing threats to the species and maintaining and improving habitat quality. Landowners have the option of choosing a rangeland management plan that includes livestock grazing or a planted grass management plan that does not include livestock grazing.

Rangeland management plans address threats to the species from overgrazing by capping livestock forage utilization at 33%. Every landowner currently enrolled in a rangeland management plan is required to reduce stocking rates to qualify for enrollment, and some reduced their herds by as much as 70%. Rangeland management plans also require that landowners address threats related to exotic and invasive plants and trees through approved herbicide use, tree removal, seeding native plants and temporary grazing deferments. These plans also address drowning and collision mortality threats by installing escape ramps in water sources and marking fences near leks. Landowners are also required to manage prescribed disturbance to improve habitat quality. If properties under rangeland management plans meet all the goals of those plans and have sufficient rainfall, there are options to increase stocking rates that result in up to

50% forage utilization rates as long as those properties have met and maintain the habitat goals of the plan. Of the total current conservation enrollment, 148,409 acres (128,230 unimpacted acres) are under rangeland management plans (Table 12).

Planted grass management plans do not include livestock grazing but require landowners to address threats related to exotic and invasive plants and trees through approved herbicide use, tree removal, seeding native plants. Landowners are required to address mortality threats by marking fences near leks. Planted grass plans also require prescribed disturbances like fire or tilling and planting native forbs to improve habitat quality. There are currently 1,246 acres enrolled in grassland management plans, representing less than 1% of the current total conservation enrollment (Tables 5, 7, and 12).

**Table 12. Property specific information for each of the 22 contracted sites that produced mitigation offset units during the 2020 reporting period.**

WAFWA Site ID	Ecoregions	Conservation Plan Type	Expiration Year	Primary CHAT	Total Acres	Active Lek Observations within 3 mi. (2015-2020)	2020 Habitat Evaluation Guide Score (0-1)
CZ003	Shinnery Oak Prairie	Rangeland	2024	1	15,433	41	0.51
CZ008	Mixed Grass Prairie	Rangeland	2024	1	625	1	0.54
CZ013	Shinnery Oak Prairie	Planted Grass	2024	1	316	31	0.60
CZ014	Shinnery Oak Prairie	Planted Grass	2023	1	310	0	0.90
CZ016	Sand Sagebrush Prairie	Rangeland	2024	1	12,575	2	0.82
CZ024	Sand Sagebrush Prairie	Rangeland	2999*	1	29,626	35	0.69
CZ026	Shinnery Oak Prairie	Rangeland	2999*	1	1,554	6	0.49
CZ033	Shortgrass Prairie	Rangeland	2024	2	4,024	1	0.56
CZ035	Shortgrass Prairie	Rangeland	2024	1	1,109	6	0.72
CZ036	Mixed Grass Prairie	Rangeland	2024	1	27,646	0	0.78
CZ037	Mixed Grass Prairie	Rangeland	2024	4	10,255	0	0.80
CZ038	Mixed Grass Prairie	Rangeland	2024	1	21,256	0	0.68
CZ040	Mixed Grass Prairie	Rangeland	2026	1	1,222	4	0.66
CZ061	Shortgrass Prairie	Rangeland	2025	1	3,749	6	0.52
CZ062	Shortgrass Prairie	Planted Grass	2025	1	620	3	0.28
CZ063	Mixed Grass Prairie	Rangeland	2999*	1	1,758	5	0.80
CZ065	Mixed Grass Prairie	Rangeland	2999*	1	968	5	0.90
CZ066	Mixed Grass Prairie	Rangeland	2026	1	172	5	0.90
CZ067	Mixed Grass Prairie	Rangeland	2026	1	12,739	0	0.86
CZ081	Shortgrass Prairie	Rangeland	2999*	1	276	1	0.99
CZ082	Shortgrass Prairie	Rangeland	2999*	1	1,429	2	0.77
CZ083	Shortgrass Prairie	Rangeland	2999*	1	1,991	2	0.81
<b>Range Wide Total:</b>		<b>NA<sup>a</sup></b>	<b>NA</b>	<b>NA</b>	<b>149,655</b>	<b>156<sup>a</sup></b>	<b>0.71</b>



### ***Habitat Quality and LPC Occurrence***

The conservation plans and actions are designed to improve and maintain habitat quality for LPCs. In 2019, enrolled conservation properties had an average HEG score of 0.71 (Table 12). This HEG score represents a very high level of habitat quality.

It is important to recognize that it is likely optimistic to assume that management could achieve a 1.0 score across all conservation properties. The HEG was designed around vegetative cover to be a stable measure of habitat quality, but it is still affected by both drought and the season when the property is sampled. Drought can affect forage production which may decrease vegetative cover. Seasonal effects may be related to the timing of spring green up and the timing of rotational grazing or other disturbances, both of which can affect vegetative cover and plant species composition. The distribution of soil types on the landscape can also affect variability in HEG scores. The LPC mitigation program focuses on enrolling entire ranches that may be several thousand acres in size. Properties of that scale will always encompass some soil types that will support the preferred vegetation for LPCs and some that will not.

Lek occurrence can be another measure of habitat quality and conservation success. Despite limited survey coverage, 17 of 22 conservation properties have one or more leks identified within a 3-miles buffer of the property (Table 12), indicating that these properties are providing lekking, nesting, brooding, and foraging habitat for LPCs. LPCs have been observed on the remaining 5 conservation properties, but no leks have been detected to date.

### ***Mitigation Ratio and Ledger***

The CCAA was designed to mitigate impacts at a 2:1 ratio of 2 habitat units conserved for every 1 habitat unit of impact. Habitat units are defined as the impacted or conserved acreage multiplied by a proportional habitat quality score (HEG) and a Crucial Habitat Assessment Tool (CHAT) multiplier.

The HEG is the product of rankings representing:

- Proportion of vegetation versus bare ground,
- Percent cover of seven preferred species of vegetation for the LPC,
- Density of trees per acre present, and
- Percentage of suitable habitat expressed as grassland within one mile of the site.

The CHAT multiplier is designed to accomplish two objectives: 1) incentivize avoidance and minimization within focal areas and connectivity zones that are important for the management of LPC populations, and 2) establish the mitigation ratio for the program. To accomplish these objectives separate multipliers for impacts projects and offset units from conservation contracts were developed. The ratio between impact and offset multipliers is 2:1 within a CHAT category and averages 2:1 across all CHAT categories (Table 13).

**Table 13. CHAT multipliers for impacts and offsets representing the mitigation ratio within CHAT categories and the average across all CHAT categories for the CCAA.**

CHAT Category	Impact Multiplier	Offset Multiplier	Mitigation Ratio
CHAT 1	2.5	1.25	2:1
CHAT 2	2.1	1.05	2:1
CHAT 3	1.8	0.9	2:1
CHAT 4	1.6	0.8	2:1
Avg.	2	1	2:1

Annual impact units (debits) and offset units (credits) are calculated in the same manner using the impact multiplier for debits and the offset multiplier for credits. Credits and debits are generated annually from each conservation property and impact project based on the HEG score (quantifying habitat quality) measured on site. For impacts, debits are generated based on the HEG score assessed before construction occurred and are debited annually from the ledger on the anniversary date of the project. For offsets, credits are generated based on the HEG score measured within the current year. Credits for individual conservation properties are generated and recorded on the ledger in two stages. Half of the estimated annual credits for each property are released on January 1. The remaining credits are released each year upon completion of the annual habitat monitoring (see Van Pelt et al. 2013, Appendix I for a thorough discussion of the HEG, debits and credits).

Debits and credits are specific to the ecoregion in which they occur and are tallied in 4 separate ledgers maintained within the WCT and USFWS has access to those ledgers. Because credits and debits are tallied annually for each impact project and offset property, the raw ledgers include thousands of records. In the interest of brevity, only summary tables of the ledgers are included in this report.

The ledgers maintained by WAFWA/SRF for the LPC mitigation program include debits and credits for both the CCAA and the WCA. Table 14 summarizes debits from the ledger by ecoregion, CHAT category, and contract type. A total of -70,428.34 debits have been assessed from the CCAA, accounting for 53.8% of all debits under the mitigation program.

**Table 14. Ledger summary by ecoregion, CHAT category, and contract type as of March 25, 2021**

<b>Region</b>	<b>CHAT</b>	<b>Total Debits</b>	<b>WCA Debits</b>	<b>CCAA Debits</b>
Mixed Grass Prairie	1	-40,341.97	-23,840.97	-16,501.00
Mixed Grass Prairie	2	-8,746.08	-1,891.71	-6,854.37
Mixed Grass Prairie	3	-54,839.58	-27,687.71	-27,151.87
Mixed Grass Prairie	4	-7,488.11	-3,080.25	-4,407.86
<b>Mixed Grass Prairie</b>	<b>Region Total</b>	<b>-111,415.74</b>	<b>-56,500.64</b>	<b>-54,915.10</b>
Sand Sagebrush Prairie	1	-2,650.76	-265.32	-2,385.44
Sand Sagebrush Prairie	2	0	0	0
Sand Sagebrush Prairie	3	-1,106.32	0	-1,106.32
Sand Sagebrush Prairie	4	-689.88	-174.08	-515.8
<b>Sand Sagebrush Prairie</b>	<b>Region Total</b>	<b>-4,446.96</b>	<b>-439.4</b>	<b>-4,007.56</b>
Shinnery Oak Prairie	1	0	0	0
Shinnery Oak Prairie	2	-264.34	-1.6	-262.74
Shinnery Oak Prairie	3	-6,679.01	-1,837.76	-4,841.25
Shinnery Oak Prairie	4	-3,676.42	-1,311.18	-2,365.24
<b>Shinnery Oak Prairie</b>	<b>Region Total</b>	<b>-10,619.77</b>	<b>-3,150.54</b>	<b>-7,469.23</b>
Shortgrass Prairie	1	-2,374.53	-90.52	-2,284.01
Shortgrass Prairie	2	-44.71	0	-44.71
Shortgrass Prairie	3	-1,362.55	-247.17	-1,115.38
Shortgrass Prairie	4	-600.29	-7.94	-592.35
<b>Shortgrass Prairie</b>	<b>Region Total</b>	<b>-4,382.08</b>	<b>-345.63</b>	<b>-4,036.45</b>
<b>Range-wide Summary</b>	<b>Region Total</b>	<b>-130,864.55</b>	<b>-60,436.21</b>	<b>-70,428.34</b>

Impact units must be debited from the same ecoregion in which they occurred and credited in an equal or higher CHAT category. Table 1 in Appendix C summarizes all debits by both ecoregion and CHAT category. Between 2014 and 2019, a total of 130,822.50 debits have been entered into the ledger and there is a current balance of 93,865.4 available credits (41.8%) for use by the CCAA and WCA for future mitigation projects. All ecoregions have positive credit balances. Negative balances within lower CHAT categories reflect that debits within these CHAT categories that have been offset with credits from conservation properties in higher CHAT categories.

Table 2 in Appendix C summarizes the ledger by ecoregion and individual conservation property. Of the 22 conservation properties enrolled in the program, 19 have available credit remaining, 14 have more than 100 credits available, and 12 have more than 1,000 credits available for future mitigation.

## POPULATION SURVEYS

In 2020, aerial surveys were conducted, range-wide, for the LPC for the eighth year (2012-2018 and 2020) the result of these surveys was summarized in a report that is posted, in full, at:

<https://wafwa.org/download/range-wide-population-size-of-the-lesser-prairie-chicken-2012-to-2020/?ind=1603459108986&filename=2020%20LEPC%20Range%20Wide%20Report%2012%20October%202020.pdf&wpdmdl=13483&refresh=5f92dcd057c181603460304>

In summary, 514 grid cells were surveyed in 2020 with a resulting population estimate of 34,408 (90% CI: 21,270-47,946). LPC populations have increased from a low of 15,397 (90% CI: 8,145-22,406) in 2013. The report notes that there was a statistically significant annual rate of increase in the total LPC population size from 2013 to 2020 (p-value = 0.01) (Nasman et al. (2020).

## FINANCIAL SUMMARY

Section XX of the CCAA requires that “a discussion on the funds used for habitat conservation on private/state lands”. Table 15 summarizes all iterative term conservation offset payments by ecoregion specifically for the CCAA in 2020 and Table 16 summarizes the same information for permanent easements. CCAA payments are calculated as the total annual conservation payments for each region multiplied by the proportion of CCAA debits in each region to date from Table 5. Total CCAA conservation payments for 2020 were \$2,025,729. Table 17 summarizes all iterative term and permanent conservation payments for the CCAA from 2014-2020, totaling \$8,283,796.42.

**Table 15. Summary of all 2020 iterative term conservation offset payments by ecoregion for the CCAA.**

	Mixed Grass	Short Grass	Shinnery Oak	Sand Sagebrush	TOTAL
Incentive Payments	\$0	\$0	\$0	\$0	\$0
Rangeland Management Plan	\$1,332,904	\$87,602	\$64,038	\$120,601	\$1,605,145
Habitat Restoration Payments	\$0	\$0	\$0	\$0	\$0
<b>TOTAL</b>	<b>\$1,332,904</b>	<b>\$87,602</b>	<b>\$64,038</b>	<b>\$120,601</b>	<b>\$1,605,145</b>

**Table 16. Summary of all 2020 permanent conservation offset payments by ecoregion for the CCAA.**

	Mixed Grass	Short Grass	Shinnery Oak	Sand Sagebrush	TOTAL
Incentive Payments	\$0	\$0	\$0	\$0	\$0
Rangeland Management Plan	\$38,503	\$43,462	\$4,617	\$334,001	\$420,584
Habitat Restoration Payments	\$0	\$0	\$0	\$0	\$0
<b>TOTAL</b>	<b>\$38,503</b>	<b>\$43,462</b>	<b>\$4,617</b>	<b>\$334,001</b>	<b>\$420,584</b>

**Table 17. Summary of all 2014-2020 iterative term and permanent conservation offset payments by ecoregion for the CCAA.**

	Mixed Grass	% to Total	Short Grass	% to Total	Shinnery Oak	% to Total	Sand Sage	% to Total	TOTAL
Landowner Incentive Payments <i>*includes contract and permanent</i>	\$137,740.71	33.5%	\$47,541.67	11.6%	\$46,847.92	11.4%	\$179,049.32	43.5%	<b>\$411,179.63</b>
Landowner Contract Restoration Payments	\$212,865.85	14.3%	\$63,008.75	4.2%	\$1,209,202.89	81.4%	\$0.00	0.0%	<b>\$1,485,077.49</b>
Landowner Management Plan/Maint Payments	\$3,344,875.71	70.1%	\$397,801.73	8.3%	\$350,916.19	7.4%	\$676,832.92	14.2%	<b>\$4,770,426.55</b>
Landowner Permanent Maint Exp	\$133,418.87	8.3%	\$157,760.96	9.8%	\$41,626.93	2.6%	\$1,273,306.85	79.3%	<b>\$1,606,113.62</b>
Landowner Long Term Restoration Exp	\$0.00	0.0%	\$0.00	0.0%	\$10,999.14	100.0%	\$0.00	0.0%	<b>\$10,999.14</b>
<b>TOTAL CONSERVATION EXPENSES</b>	<b>\$3,828,901.14</b>		<b>\$666,113.11</b>		<b>\$1,659,593.07</b>		<b>\$2,129,189.09</b>		<b>\$8,283,796.42</b>

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Nasman, K., T. Rintz, D. Pham, and L. McDonald. 2020. Range-wide Population Size of the Lesser Prairie-Chicken: 2012-2020. Western EcoSystems Technology, Inc. <https://wafwa.org/download/range-wide-population-size-of-the-lesser-prairie-chicken-2012-to-2020/?ind=1603459108986&filename=2020%20LEPC%20Range%20Wide%20Report%2012%20October%202020.pdf&wpdmdl=13483&refresh=5f92dcd057c181603460304>. Accessed March 25, 2021.

Van Pelt, W.E., S. Kyle, J. Pitman, D. Klute, G. Beauprez, D. Schoeling, A. Janus, J. Haufler, 2013. The Lesser Prairie-Chicken Range-wide Conservation Plan. Western Association of Fish and Wildlife Agencies. Cheyenne, Wyoming, pp.367

USFWS. 2014. Range-Wide Oil and Gas Candidate Conservation Agreement with Assurances for the Lesser Prairie-Chicken (*Tympanuchus pallidicinctus*) in Colorado, Kansas, New Mexico, Oklahoma, and Texas. 78 FR 76639.

## APPENDICES

### *Appendix A. Companies with an active enrollment status in the CCAA for the 2020 reporting year.*

Number	Company Name	Number	Company Name	Number	Company Name
1	Anadarko Minerals, Inc	38	Energy Alliance Company, Inc	75	Pintail Petroleum, Ltd
2	Apache Corporation	39	Energy Transfer Partners, LP	76	Pioneer Natural Resources USA, Inc
3	Apache Corporation (Permian)	40	EnerVest Operating, LLC	77	Plains All American Pipeline, LP
4	Beren Corporation	41	EOG Resources, Inc	78	QEP Energy Company
5	Berexco, LLC	42	Fasken Oil and Ranch, Ltd	79	Questa Energy, Corporation
6	BP America Production Company	43	Griffin Management, LLC	80	Range Production Company, LLC
7	Casillas Petroleum Corporation	44	Imperial American Oil, Inc	81	Red Oak Energy, Inc
8	Castelli Exploration, Inc	45	Jayhawk Pipeline, LLC	82	Rio Petroleum, Inc
9	Central Operating, Inc	46	JMA Energy Company, LLC	83	Samuel Gary Jr. & Associates, Inc
10	Centurion Pipeline, LP	47	Jolen Operating Company	84	SandRidge Exploration and Production, LLC
11	Cimarex Energy Company	48	Kenneth W. Cory, Ltd	85	SemGroup Corporation
12	Cimarex Energy Company (West Texas)	49	Kinder Morgan, Inc	86	Strand Energy, LC
13	CMX, Inc	50	Kirkpatrick Oil Company, Inc	87	Strat Land Exploration Company
14	Coats Energy, Inc	51	Laddex, Ltd	88	Superior Pipeline Company, LLC
15	COG Operating, LLC	52	Landmark Resources, Inc	89	Tabula Rasa Partners, LLC
16	ConocoPhillips Company	53	Legacy Reserves Operating, LP	90	Tandem Energy Corporation
17	Continental Resources, Inc	54	M&M Exploration, Inc	91	Tapstone Energy, LLC
18	Corlena Oil Company	55	Magellan Midstream Partners, LP	92	Tengasco, Inc
19	Crawley Petroleum Corporation	56	MarkWest Oklahoma Gas Company, LLC	93	Texakoma Exploration Production, LLC
20	Culbreath Oil and Gas Company, Inc	57	Maverick Brothers Resources, LLC	94	Texland Petroleum, LP
21	Cynosure Energy, LLC	58	McGinness Oil Company of Kansas, Inc	95	Thomason Petroleum, Inc
22	DaMar Resources, Inc	59	Meridian Energy, Inc	96	Toto Energy, LLC
23	Daystar Petroleum, Inc	60	Merit Energy Company, LLC	97	Triad Energy, Inc
24	DCP Midstream, LLC	61	Mewbourne Oil Company	98	Unit Petroleum Company
25	Devon Energy Corporation (Kansas)	62	MIDCO Exploration, Inc	99	Versado Gas Processors, LLC
26	Devon Energy Corporation (Oklahoma)	63	Midcoast Operating, LP	100	Viking Resources, Inc
27	Devon Energy Corporation (Permian Basin)	64	Mid-Con Energy Operating, LLC	101	Vincent Oil Corporation
28	Devon Energy Corporation (Rockies)	65	Midnight Hour, LLC	102	W.R. Williams, Inc
29	Devon Energy Corporation (Texas Panhandle)	66	Murfin Drilling Company, Inc	103	Ward Petroleum Corporation
30	Diehl Oil, Inc	67	O'Benco IV, LP - O'Brien Resources, LLC	104	Western Operating Company
31	Dorchester Minerals Operating, LP (Oklahoma)	68	ONEOK Partners, LP	105	White Exploration, Inc
32	Duncan Oil Properties, Inc	69	Oolite Energy Corporation	106	Younger Energy Company
33	Edison Operating Company, LLC	70	Osage Investors, LLC	107	Zinszer Oil Company, Inc
34	Edmiston Oil Company, Inc	71	Osage Oil, LLC	108	RG Exploration, LLC
35	Elevation Resources, LLC	72	Oxy Oil and Gas	109	Williams Midstream
36	Empire Energy E&P, LLC	73	Panhandle Topeka, LLC	110	Riviera Operating, LLC
37	Enable Midstream Partners, LP	74	Pickerell Drilling Company, Inc	111	ONE Gas, Inc

*Appendix B. Summary of results from industry compliance monitoring for 2020.*



**WAFWA LPC-RWP Compliance Summary for 2020**

	Yes	No	Sold	Dry
Where efforts to reach the company successful?	17	0	0	0
Is the project constructed?			Yes 14	No 3
Is the location of the project mapped accurately within WAFWA standards?			Yes 14	No 1
If this is a transmission project, are all poles in CHAT 1-3 monopole?	Yes 0	No 0	N/A 14	
If the site is within 1.25 miles of a lek and in CHAT 1-3, are there any impacts under the control of the participant company that were not mitigated for in this project that are not represented in the impact buffer map, including new above ground distribution lines?		Yes 0	No 14	
If the site is within 1.25 miles of a lek and in CHAT 1-3, are there escape ramps in all associated human-made water containment sources?	Yes 0	No 0	N/A 14	
If the site is within 1.25 miles of a lek and in CHAT 1-3, is there evidence of broadcast herbicide use outside the facility boundary that is attributed to the participant?		Yes 0	No 14	
If the site is within 1.25 miles of a lek and in CHAT 1-3, is the project compliant with respect to noise levels recorded at 30 feet from the facility boundary?	Yes 0	No 0	N/A 14	
Estimated the wind speed using the Beaufort Scale (miles/hr)	0-4 2	5-7 4	8-11 8	12-18 0
	19-24 0	25+ 0		
Maximum recorded decibels			<=75dB 14	>75dB 0
Are all fences associated with this project and under the control of the participant marked as needed (Necessary if not surveyed or within 0.25 miles of known leks)?		Yes 14	No 0	
Is there evidence of off-road travel during the breeding season?	Yes 0	No 3	N/A 11	
Is there evidence of violations of breeding season timing restrictions?	Yes 0	No 3	N/A 11	
Were there any compliance issues found?			Yes 1	No 13



### Appendix C. 2020 Ledger Summaries

**Table 1. Ledger summary by ecoregion and CHAT category, dated March 25, 2021.**

Region	WAFWA ID	Credits	Gross Debits	Refund	Net Debits	Expired Credits	Expired Refund Credits	Balance
Mixed Grass Prairie	CZ008	2,757.48	-3,115.39	631.32	-2,484.07	-0.14	-273.26	0.01
Mixed Grass Prairie	CZ036	116,101.59	-15,341.03	149.05	-15,191.98	-80,778.67	0	20,130.94
Mixed Grass Prairie	CZ037	32,429.77	-8,024.95	536.84	-7,488.11	-19,561.75	0	5,379.91
Mixed Grass Prairie	CZ038	81,800.71	-30,705.90	7,322.25	-23,383.65	-43,045.62	-1,366.64	14,004.80
Mixed Grass Prairie	CZ040	3,434.41	-3,434.29	0	-3,434.29	-0.12	0	0
Mixed Grass Prairie	CZ063	6,416.67	-6,399.56	0	-6,399.56	-16.96	0	0.15
Mixed Grass Prairie	CZ065	4,364.20	-4,363.86	0	-4,363.86	-0.17	0	0.17
Mixed Grass Prairie	CZ066	775.36	-775.07	0	-775.07	-0.22	0	0.07
Mixed Grass Prairie	CZ067	48,799.19	-42,128.37	0	-42,128.37	-1,140.72	0	5,530.10
Mixed Grass Prairie	Remediation Credit	5,766.78	-5,766.78	0	-5,766.78	0	0	0
<b>Mixed Grass Prairie</b>	<b>Region Total</b>	<b>302,646.16</b>	<b>-120,055.20</b>	<b>8,639.46</b>	<b>-111,415.74</b>	<b>-144,544.37</b>	<b>-1,639.90</b>	<b>45,046.15</b>
Sand Sagebrush Prairie	CZ016	51,444.13	-4,430.14	667.44	-3,762.70	-39,158.35	-1.84	8,521.24
Sand Sagebrush Prairie	CZ024	95,838.66	-684.26	0	-684.26	-70,141.74	0	25,012.66
Sand Sagebrush Prairie	Region Total	147,282.79	-5,114.40	667.44	-4,446.96	-109,300.09	-1.84	33,533.90
Shinnery Oak Prairie	CZ003	41,206.66	-1,190.54	122.27	-1,068.27	-32,853.27	0	7,285.12
Shinnery Oak Prairie	CZ013	1,723.84	-1,858.47	238.04	-1,620.43	-0.68	-102.57	0.16
Shinnery Oak Prairie	CZ014	1,802.82	-1,881.42	190.78	-1,690.64	-0.36	-111.8	0.02
Shinnery Oak Prairie	CZ026	6,761.87	-6,507.29	266.86	-6,240.43	-507.34	-13.97	0.13
<b>Shinnery Oak Prairie</b>	<b>Region Total</b>	<b>51,495.19</b>	<b>-11,437.72</b>	<b>817.95</b>	<b>-10,619.77</b>	<b>-33,361.65</b>	<b>-228.34</b>	<b>7,285.43</b>
Shortgrass Prairie	CZ033	10,859.97	-2,511.52	503.97	-2,007.55	-6,727.20	-129.58	1,995.64
Shortgrass Prairie	CZ035	4,585.68	-1,295.72	386.15	-909.57	-2,680.46	-47.03	948.62
Shortgrass Prairie	CZ061	10,330.54	-412.97	0	-412.97	-7,747.56	0	2,170.01
Shortgrass Prairie	CZ062	577.94	-552.68	0	-552.68	-24.4	0	0.86
Shortgrass Prairie	CZ081	1,038.44	-499.31	0	-499.31	-321.19	0	217.94
Shortgrass Prairie	CZ082	3,776.86	0	0	0	-2,692.30	0	1,084.56
Shortgrass Prairie	CZ083	5,975.58	0	0	0	-4,393.24	0	1,582.34
<b>Shortgrass Prairie</b>	<b>Region Total</b>	<b>37,145.01</b>	<b>-5,272.20</b>	<b>890.12</b>	<b>-4,382.08</b>	<b>-24,586.35</b>	<b>-176.61</b>	<b>7,999.97</b>
<b>Rangewide Summary</b>	<b>Region Total</b>	<b>538,569.15</b>	<b>-141,879.52</b>	<b>11,014.97</b>	<b>-130,864.55</b>	<b>-311,792.46</b>	<b>-2,046.69</b>	<b>93,865.40</b>

**Table 2. Ledger summary by Ecoregion and Conservation property, dated March 25, 2021**

Region	CHAT	Credits	Gross Debits	Refund	Net Debits	Expired Credits	Expired Refund Credits	Current Balance	Remaining Annuals	Year End Balance
Mixed Grass Prairie	1	264,449.61	-42,947.66	2,605.69	-40,341.97	-124,982.62	-1,639.90	97,485.12	-2,507.82	94,977.30
Mixed Grass Prairie	2	0	-9,918.55	1,172.47	-8,746.08	0	0	-8,746.08	-1,312.25	-10,058.33
Mixed Grass Prairie	3	5,766.78	-59,164.04	4,324.46	-54,839.58	0	0	-49,072.80	-4,832.40	-53,905.20
Mixed Grass Prairie	4	32,429.77	-8,024.95	536.84	-7,488.11	-19,561.75	0	5,379.91	-1,051.73	4,328.18
<b>Mixed Grass Prairie</b>	<b>Region Total</b>	<b>302,646.16</b>	<b>-120,055.20</b>	<b>8,639.46</b>	<b>-111,415.74</b>	<b>-144,544.37</b>	<b>-1,639.90</b>	<b>45,046.15</b>	<b>-9,704.20</b>	<b>35,341.95</b>
Sand Sagebrush Prairie	1	147,282.79	-3,092.41	441.65	-2,650.76	-109,300.09	-1.84	35,330.10	-383.98	34,946.12
Sand Sagebrush Prairie	2	0	0	0	0	0	0	0	0	0
Sand Sagebrush Prairie	3	0	-1,279.69	173.37	-1,106.32	0	0	-1,106.32	-69.8	-1,176.12
Sand Sagebrush Prairie	4	0	-742.3	52.42	-689.88	0	0	-689.88	-124.41	-814.29
<b>Sand Sagebrush Prairie</b>	<b>Region Total</b>	<b>147,282.79</b>	<b>-5,114.40</b>	<b>667.44</b>	<b>-4,446.96</b>	<b>-109,300.09</b>	<b>-1.84</b>	<b>33,533.90</b>	<b>-578.19</b>	<b>32,955.71</b>
Shinnery Oak Prairie	1	51,495.19	0	0	0	-33,361.65	-228.34	17,905.20	0	17,905.20
Shinnery Oak Prairie	2	0	-264.34	0	-264.34	0	0	-264.34	-0.32	-264.66
Shinnery Oak Prairie	3	0	-7,216.05	537.04	-6,679.01	0	0	-6,679.01	-987.58	-7,666.59
Shinnery Oak Prairie	4	0	-3,957.33	280.91	-3,676.42	0	0	-3,676.42	-610.5	-4,286.92
<b>Shinnery Oak Prairie</b>	<b>Region Total</b>	<b>51,495.19</b>	<b>-11,437.72</b>	<b>817.95</b>	<b>-10,619.77</b>	<b>-33,361.65</b>	<b>-228.34</b>	<b>7,285.43</b>	<b>-1,598.40</b>	<b>5,687.03</b>
Shortgrass Prairie	1	26,285.04	-2,760.68	386.15	-2,374.53	-17,859.15	-47.03	6,004.33	-264.84	5,739.49
Shortgrass Prairie	2	10,859.97	-59.25	14.54	-44.71	-6,727.20	-129.58	3,958.48	-2.61	3,955.87
Shortgrass Prairie	3	0	-1,701.63	339.08	-1,362.55	0	0	-1,362.55	-178.36	-1,540.91
Shortgrass Prairie	4	0	-750.64	150.35	-600.29	0	0	-600.29	-73.35	-673.64
<b>Shortgrass Prairie</b>	<b>Region Total</b>	<b>37,145.01</b>	<b>-5,272.20</b>	<b>890.12</b>	<b>-4,382.08</b>	<b>-24,586.35</b>	<b>-176.61</b>	<b>7,999.97</b>	<b>-519.16</b>	<b>7,480.81</b>
Rangewide Summary	1	489,512.63	-48,800.75	3,433.49	-45,367.26	-285,503.51	-1,917.11	156,724.75	-3,156.64	153,568.11
Rangewide Summary	2	10,859.97	-10,242.14	1,187.01	-9,055.13	-6,727.20	-129.58	-5,051.94	-1,315.18	-6,367.12
Rangewide Summary	3	5,766.78	-69,361.41	5,373.95	-63,987.46	0	0	-58,220.68	-6,068.14	-64,288.82
Rangewide Summary	4	32,429.77	-13,475.22	1,020.52	-12,454.70	-19,561.75	0	413.32	-1,859.99	-1,446.67
<b>Rangewide Summary</b>	<b>Region Total</b>	<b>538,569.15</b>	<b>-141,879.52</b>	<b>11,014.97</b>	<b>-130,864.55</b>	<b>-311,792.46</b>	<b>-2,046.69</b>	<b>93,865.45</b>	<b>-12,399.95</b>	<b>81,465.50</b>