

2019-2020

Winter Prairie Bird Survey

CIBOLO PRESERVE, BOERNE TEXAS



Savannah sparrow, Ken Butler

Grasshopper sparrow, Ken Butler



Vesper sparrow, Tara Randle

Winter Prairie Bird Survey

CIBOLO PRESERVE

HISTORY

The Winter Prairie Bird Survey (WPBS) has been conducted on The Cibolo Preserve (aka Herff Falls Ranch) since the winter of 2003. The survey utilizes a volunteer workforce of Citizen Scientists who are familiar with grassland species of birds. Prior to each survey, the volunteers are instructed in the protocol for data collection and are re-familiarized with the flight patterns of the expected species to facilitate identification.

Because grassland species are quite difficult to distinguish based on feather patterns and coloration, using flight patterns is an acceptable method to utilize in determining species. The WPBS has identified at least 10 different species using the grasslands on the Cibolo Preserve over the last 16 years. There are three bird species that are of interest to the Texas Parks & Wildlife Department. The Le Conte's sparrow, grasshopper sparrow and the meadowlark are all listed in the [Texas Parks & Wildlife Department Conservation Action Plan](#) (2012) as Species of Greatest Conservation Need (SGCN). These species have declined or have a very restricted range and should be considered a management priority for the area. All three of these species have been previously recorded during the WPBS at the Cibolo Preserve.

FINDINGS

Within the confines of the Winter Prairie Bird Survey protocol transects for the 2019-2020 season, there were only 3 birds recorded during the January survey. The surveys in December and February resulted in zero observations on the transects. It should be noted that **all** transects were completed this survey year, unlike last year when transects were not run due to high winds. All three observed birds were found on transect HF6 which is located just north of Herff Falls. The species were a single savannah sparrow, single vesper sparrow and a single grasshopper sparrow. Incidental observations outside the protocol included one LeConte's sparrow near HF2 in December and two savannah sparrows near the same transect in January (see comment fields on the raw data sheets).

The total count of birds within the transects was 3, resulting in an average of 0.84 per hectare, which is significantly lower than last year's average of 5.34 per hectare. Although counts and precipitation historically trended similarly from 2009 – 2012, the years after show variability that cannot be solely attributed to annual cumulative rainfall. Seasonal precipitation variability is a factor we will need to consider, as well as land management practices that have been implemented including the removal of mesquite in transects HF2 and HF4. As more refined land management practices are implemented on the Cibolo Preserve, we hope to be able to take a closer look at those practices and their influence on the winter prairie bird counts.

Total bird densities and precipitation for the past ten seasons are presented on the following pages.

Table 1. The 2019-2020 season resulted in an average annual density of 0.84/ hectare for all bird species.

Year	Density / hectare (all birds)	Annual precipitation (inches)*
2020	0.84	26.98
2019	5.34	43.39
2018	3.26	26.01
2017	10.06	40.51
2016	5.59	53.94
2015	11.89	26.26
2014	24.01	33.64
2013	43.82	31.08
2012	0.7	14.67
2011	31.47	40.02
2010	10.26	28.79
2009	1.86	13.67

*annual precipitation is based on calendar year.



Savannah sparrow, Tara Randle

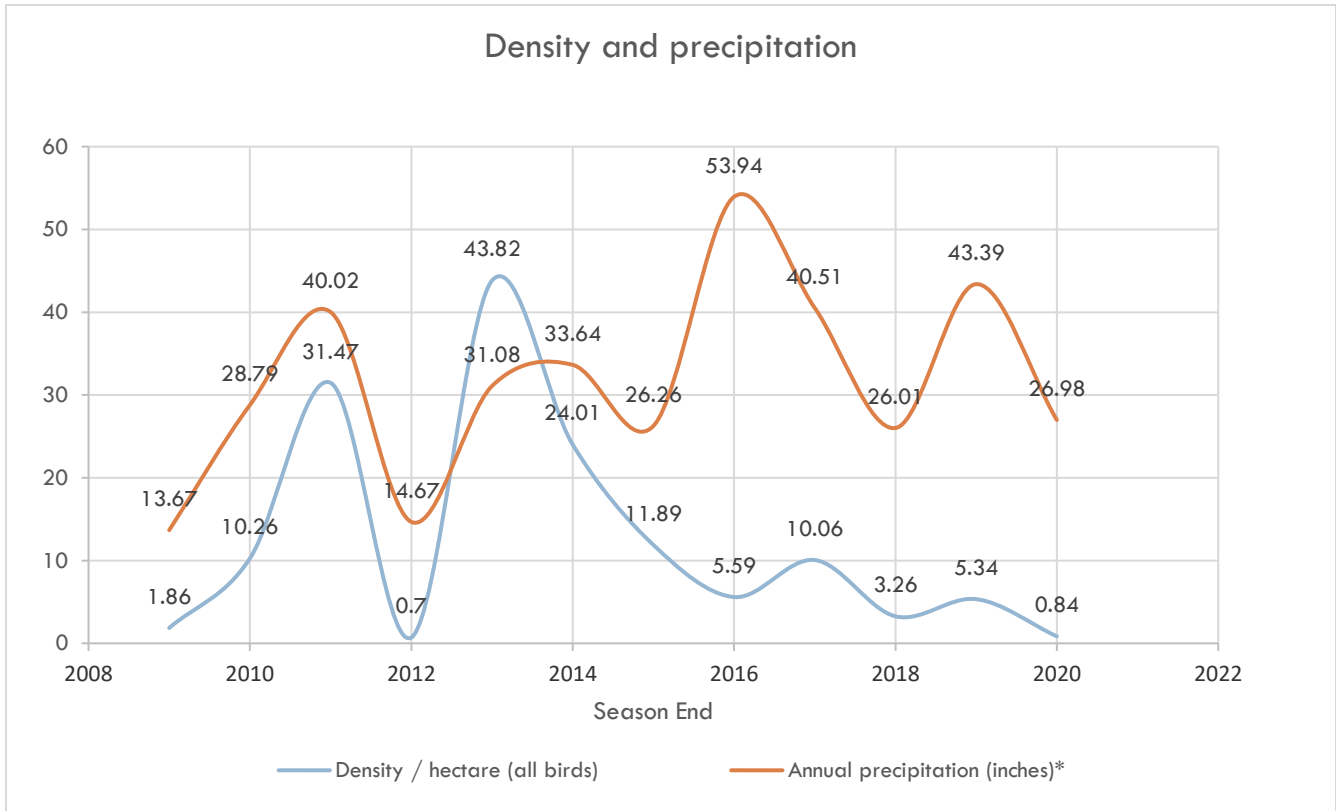


Figure 1. Annual rainfall year ending 2019 was 26.98 inches. Only the annual cumulative precipitation was considered for this report. Analysis of monthly precipitation data may be warranted in the future. *Calendar year.

**Average number per hectare of prairie birds, by group,
at The Cibolo Preserve / Herff Falls Ranch**

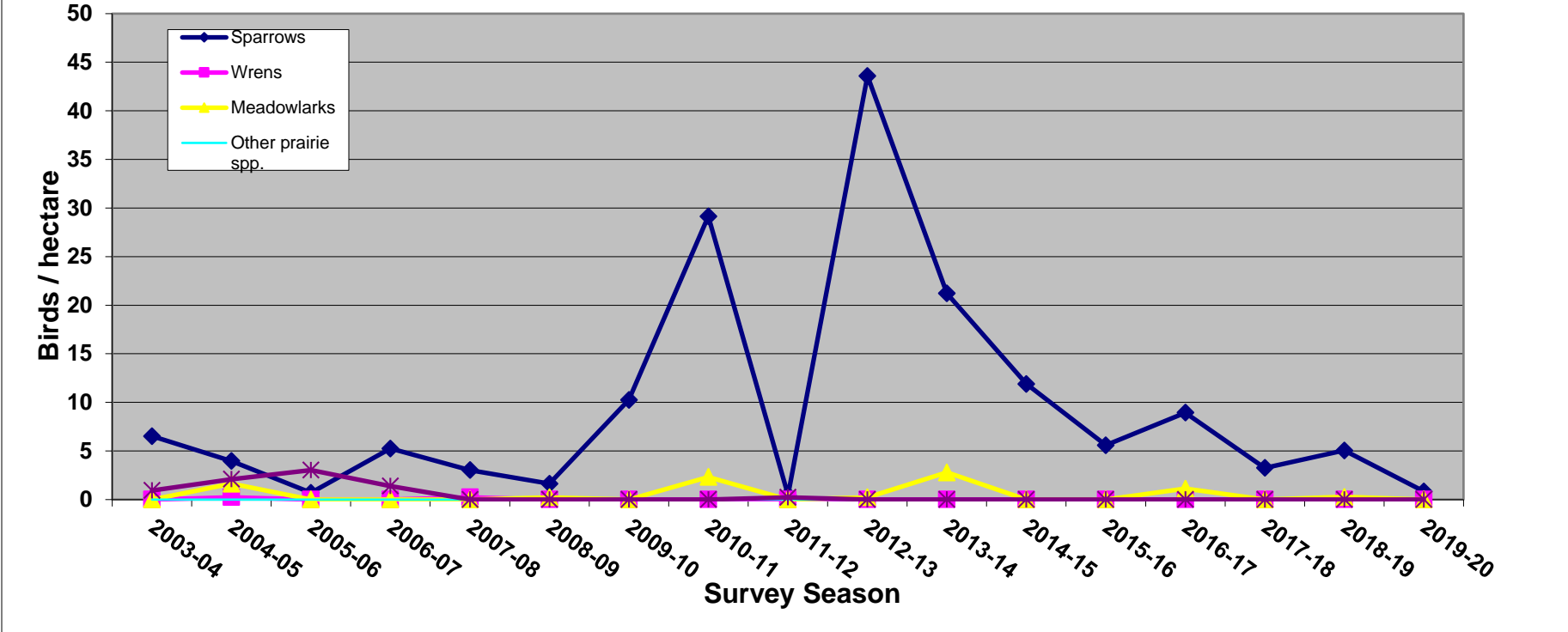


Figure 2. Density of all prairie birds observed, by group, since survey inception. Sparrows are the predominant group.

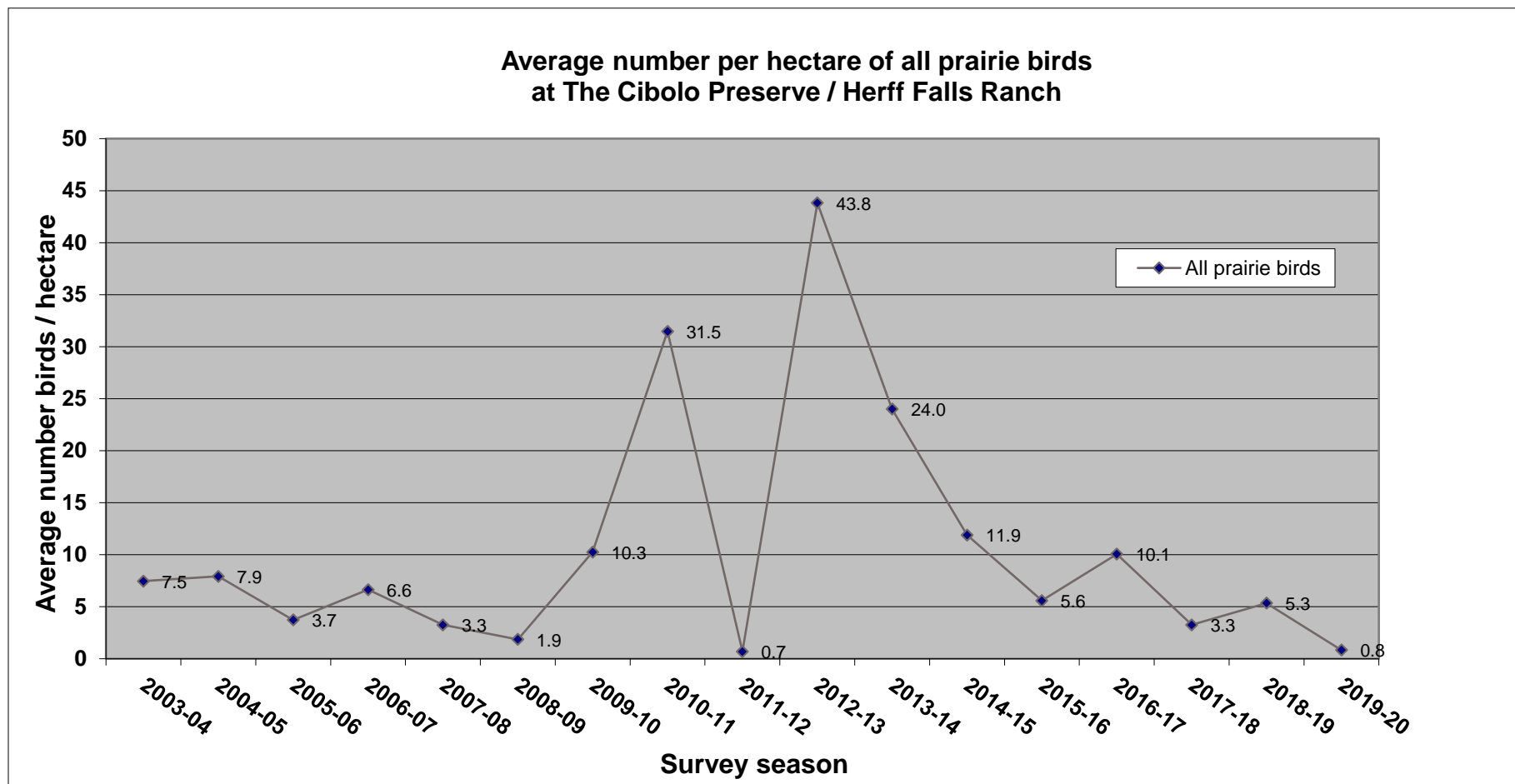


Figure 3. Density of all prairie birds combined for each year observed since survey inception.

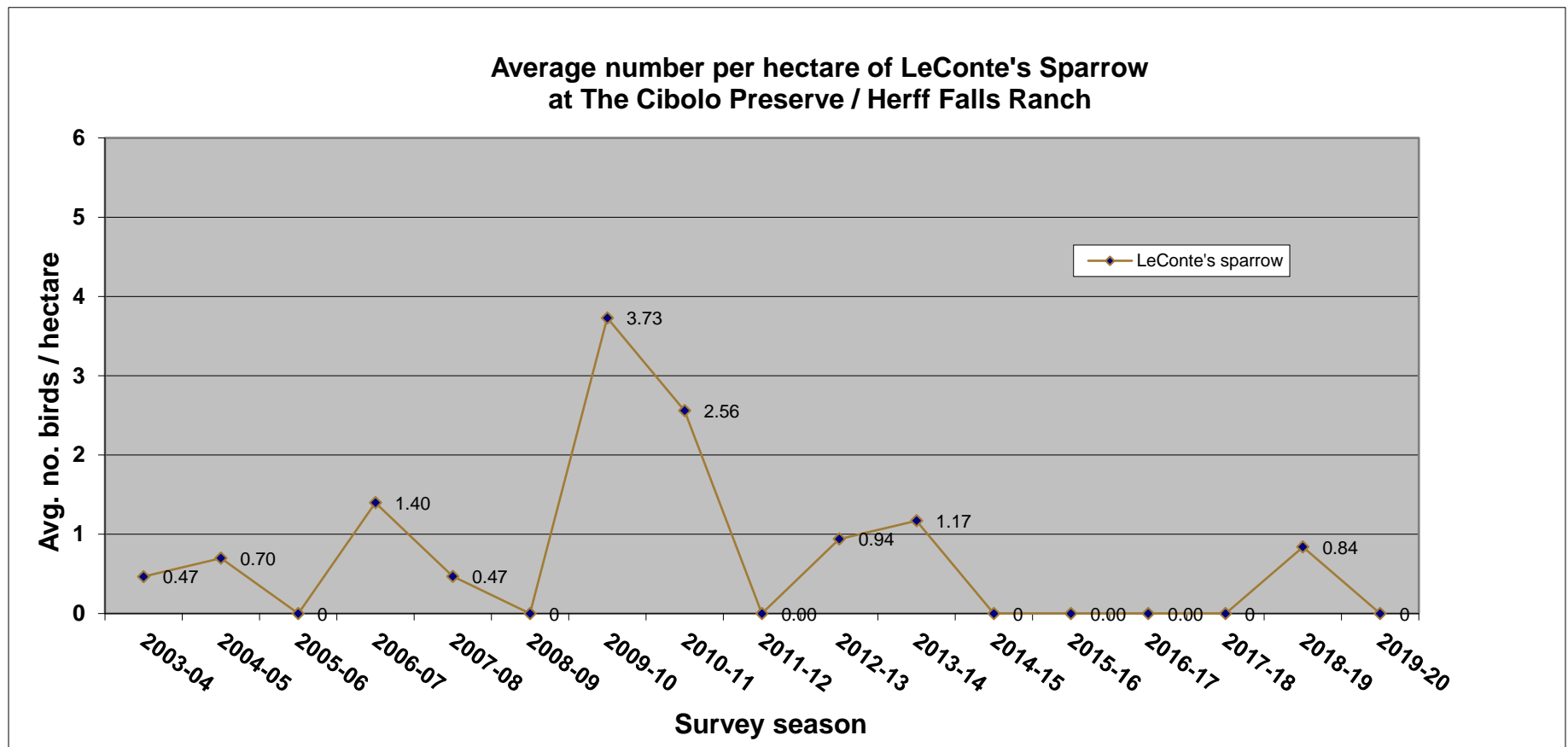


Figure 4. Density of LeConte's Sparrow per hectare for each year observed since survey inception

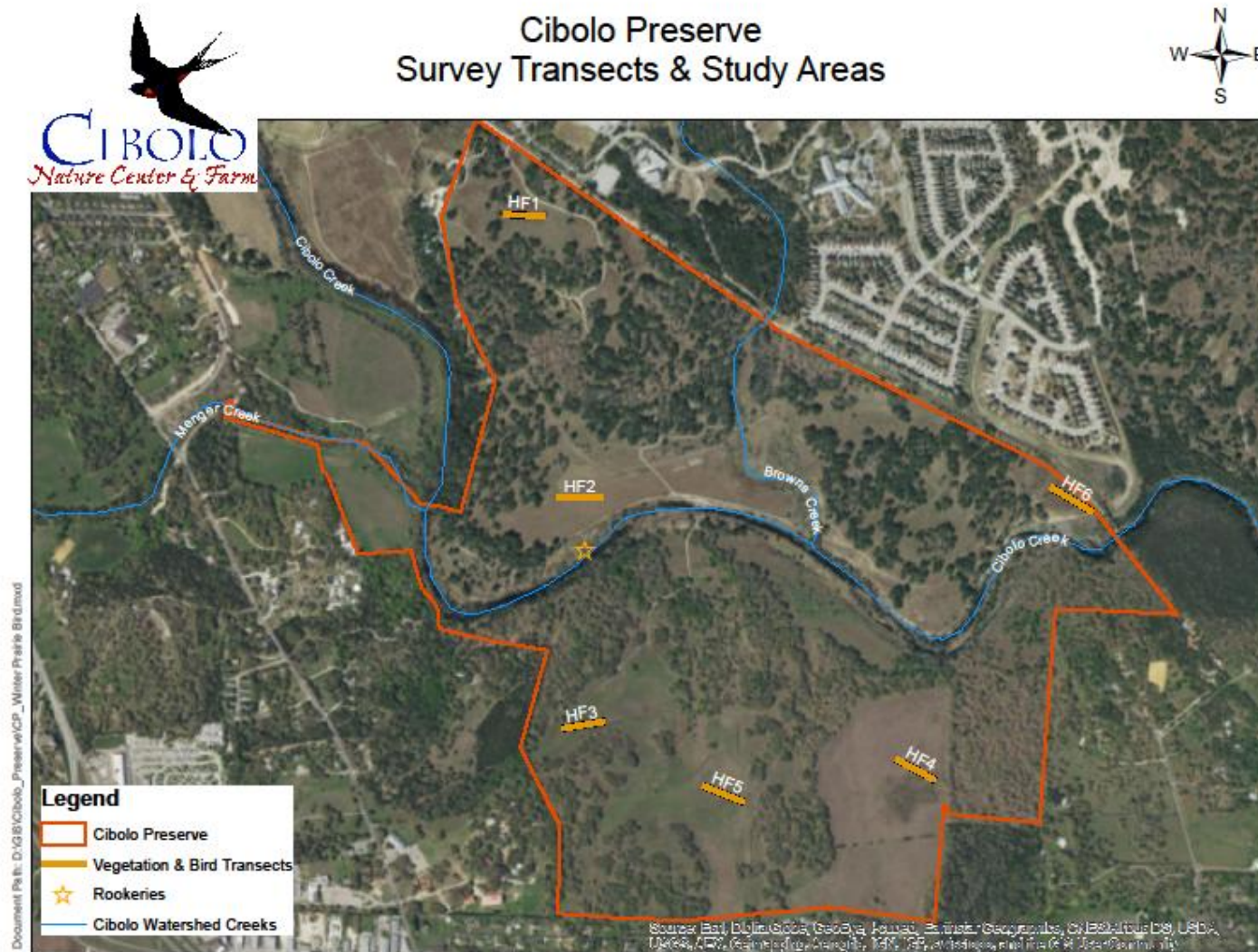


Figure 5. Cibolo Preserve. Winter Prairie Bird transect locations are shown in orange and labeled HF1-HF5. HF2 and HF4 had mesquite removed prior to this survey season.

This page is reserved for the raw data sheets

File name: CP_WPB_2019_2020data

Attached digitally