FY 2019 Summary of Wildlife Management Activities on

Travis County-managed Tracts of the Balcones Canyonlands Preserve



Feral hogs on the Scott and White tract of the Balcones Canyonlands Preserve.

Travis County
Department of Transportation and Natural Resources
Natural Resources and Environmental Quality Division

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INTRODUCTION

The Balcones Canyonlands Preserve (BCP) was created in May 1996 to protect the endangered golden-cheeked warbler (*Setophaga chrysoparia*) and seven other federally endangered species. Travis County, the City of Austin, and other partners now protect and manage 32,302 acres of wildlands as part of the BCP. One aspect of managing these lands includes controlling populations of non-native or nuisance animals which can negatively impact endangered species either directly or by damaging their habitat. Non-native animals are species that are not indigenous to an area and were brought in by human activity, either intentionally or unintentionally. Examples of non-native animals in Travis County include red-imported fire ants (*Solenopsis invicta*), tawny crazy ants (*Nylanderia fulva*), and feral hogs (*Sus scrofa*).

Nuisance animals are native species that present threats to human health, safety, property or natural resources due primarily to high population densities. Nuisance animals on the BCP include brown-headed cowbirds (*Molothrus ater*) and white-tailed deer (*Odocoileus virginianus*).

In Fiscal Year 2019 (FY19, Oct. 1, 2018-Sept. 30, 2019), wildlife management activities on Travis County-managed portions of the BCP focused on five species. Monitoring and control of cowbirds, hogs, and deer are described in their respective sections in this report. Fire ant control and tawny crazy ant monitoring efforts are described in *Appendix I* and *Appendix T4* of the FY2019 BCCP Annual Report.

BROWN-HEADED COWBIRDS

Introduction

Brown-headed cowbirds (cowbird) parasitize the nests of two protected Central Texas songbirds; the black-capped vireo (*Vireo atricapilla*) and golden-cheeked warbler, in addition to many other avian hosts. Cowbird trapping has been the subject of considerable research and management effort and is believed to be an important technique for the conservation of both species. At Fort Hood U.S. Army Base, cowbird trapping has been credited for drastically reducing parasitism rates of black-capped vireos from 91% before cowbird management, to below 20% after a cowbird management program was implemented. Fort Hood currently meets local and regional recovery goals for the black-capped vireo and partially attributes this success to cowbird management (Kostecke et al. 2005).

This report summarizes the results of the FY19 Travis County cowbird trapping program. Six traps were operated within, or near, Travis County's BCP properties, including:

Hamilton Pool Preserve (HP), Reimers Ranch Park, the Nootsie tract, and on private land adjacent to the Kotrla, Toops, and Vireo Ridge tracts.

Methods

Cowbird trapping in FY19 was conducted exclusively in the western half of the county. Travis County operated two mega traps (16'x16') and four metal hybrid traps (6'x 8'). The two mega traps were located at Hamilton Pool Preserve (HP trap) and on private property adjacent to the Vireo Ridge tract (Vireo Ridge trap). The four hybrid traps were operated within the Nootsie tract (Nootsie trap), Reimers Ranch Park (Reimers Ranch trap), and on private property adjacent to the Kotrla tract (Kotrla trap) and Toops tract (Toops trap).

A group of decoy birds (17 males, 2 females) were acquired from a trapping effort on private land in Hays County in the middle of March, which allowed the Nootsie trap to open on March 14, 2019. Some of these birds were later transferred to the Kotrla trap on March 18th, the Toops trap and Vireo Ridge trap on March 21st, and the Reimers Ranch trap and HP trap on April 9th. Table 1 summarizes the FY19 cowbird trapping schedule and initial stocking numbers of decoy birds.

Table 1. FY19 Cowbird trap locations, trapping period dates, and initial cowbird stocking numbers.

Trap	Date Opened	Date Closed	Initial Stocking Numbers
Nootsie	March 14	May 22	17 Males, 2 Females
Kotrla	March 18	May 22	4 Males, 0 Females
HP	April 9	May 22	12 Males, 5 Females
Vireo Ridge	March 21	April 25	3 Males, 1 Females
Toops	March 21	April 25	3 Males, 1 Females
Reimers Ranch	April 9	May 23	6 Males, 2 Females

Traps were inspected and maintained every day throughout the season and any non-target species were removed. If no one was available to check for non-target species on the weekend, the trap was shut down by placing a board over the opening. Water and feed (whole millet seed) were refreshed three times per week. To offset the impact of rising air temperatures on bird health and survivability, plastic water baths and shade cloth were added to the traps. Some traps were reinforced with poultry fencing along the outer base edges to prevent digging by predators attempting to gain access. Cowbirds were euthanized by placing them in a container with carbon dioxide gas following Texas Parks and Wildlife Department (TPWD) protocol (TPWD No Date).

Results

In FY19, a total of 90 male, and 53 female cowbirds were captured. This year's grand total of 143 individuals was a significant increase from the previous year's total of 40. This

increase can partially be attributed to the near elimination of predation events at the Kotrla trap. Table 2 summarizes cowbird captures at each trap by sex, days of operation, and trapping efficiency (or capture rate). Trap efficiency was calculated by dividing the number of females captured by the number of days in operation (x 100).

Travis County Natural Resources prefers to maintain a minimum goal of 20% trap efficiency for the program. In FY19, two traps (HP, Kotrla) met or exceeded this threshold with an overall trapping efficiency 18.89%. Kotrla continues to be the most productive trapping location since it is in close proximity to rural areas and cattle ranches.

Table 2. Results of the FY19 Travis County cowbird trapping season.

Trap	Days in Operation	Males Captured	Females Captured	Total Captured	Overall Trap Efficiency %
Nootsie	61	20	2	22	3.28
Kotrla	55	55	28	83	50.91
Hamilton Pool	39	7	16	23	41.03
Reimers Ranch	40	7	6	13	15.00
Toops	32	0	1	1	3.13
Vireo Ridge	32	1	0	1	0.00
Total	**259**	**90**	**53**	**143**	**18.89**

FERAL HOGS

Introduction

The BCP Land Management Plan (2007) directs land managers to control populations of feral hogs in order to minimize negative impacts to the native wildlife protected within the preserve system. Feral hogs degrade wildlife habitat and compete directly with native wildlife for food. Hogs are omnivorous, primarily consuming vegetation, mast, roots and tubers, and to a lesser degree a wide range of animal species including invertebrates, reptiles, amphibians, small mammals and birds (Davis 1994, Hellgren 1997). Their rooting habits create severely disturbed areas, which may lead to a localized shift in plant succession and increase the potential for soil erosion (Davis 1994). Feral hogs also destabilize wetland areas, springs, creeks and other riparian areas through excessive rooting and wallowing. Their threat to humans and livestock through the spread of disease has also been documented (Miller 1997, U.S. Department of Agriculture 1992). Potentially producing two litters a year, with an average litter size of four to eight piglets, hog numbers can expand rapidly if left unmanaged (Texas Wildlife Damage Management Service 1998).

Methods

Standard operation for Travis County staff included setting and baiting stock panel traps with feeders filled with dry corn. Each trap had a wireless camera system which allowed

the trapper the ability to monitor images received to their cell phone from the wireless camera. In response to the images, the trapper could choose the precise moment to remotely close the trap door. Up to three traps were in operation at any given time. Trapped hogs were humanely dispatched and carcasses were taken to be composted.

An additional harvest method included shooting hogs from a stand as they came to a feeder. This method was incidental to the deer management program and was carried out by Orion Research and Management Services.

Results

In FY19, a total of 114 feral hogs were removed from Travis County preserve land, including 104 captured in traps and 10 taken from a stand. Table 3 summarizes the number of hogs harvested based on tract and sex.

Table 3. Results of the FY19 hog trapping program on Travis County-managed BCP tracts.

Tract	Sex (M/F)	Total
Karnik	1/3	4
Canyon Vista	11/12	23
Ribelin	13/15	28
Sam Hamilton East	8/5	13
Concordia	3/3	6
Webb	7/11	18
Kotrla	4/2	6
Scott & White	6/9	15
Hamilton Pool	1/0	1
Total	**54/60**	**114**

WHITE-TAILED DEER

Introduction

The BCP Land Management Plan (2007) directs that white-tailed deer populations be monitored and maintained at a level that allows for successful recruitment of plant species which make up habitat supporting the species listed in the permit (e.g. the golden-cheeked warbler and the black-capped vireo). Central Texas historically has some of the highest population densities of white-tailed deer in the United States (Richards 2001). Research indicates that little or no regeneration of vital habitat components occurred on some preserve tracts (Russell and Fowler, 1999; Russell and Fowler 2002; Russell *et al.* 2001) which has generated an effort to design and implement a white-tailed deer population monitoring and control program for Travis County BCP properties.

Methods

Travis County Natural Resources staff and volunteers conducted nighttime spotlight deer surveys during the fall of FY19 on the Kotrla Unit of the BCP and Hamilton Pool Preserve/Reimers Park/Pogue Springs Preserve. In addition to nighttime spotlight surveys, Travis County staff implemented a camera survey technique described in Ortegen *et al.* (2008). This method provides a more accurate population estimation of white-tailed deer in areas where there is a lack of infrastructure needed to perform nighttime spotlight surveys (Roberts et al. 2006). This technique was conducted on the Jollyville and Volente Units in FY19.

TPWD currently recommends population levels in the Texas Hill Country of one deer to 15-20 acres for effective songbird habitat management, and some research indicates population targets of one deer per 30 to 40 acres for successful hardwood forest regeneration. The goal on the BCP is to have a deer density of approximately one deer to 15-30 acres.

Deer were harvested by Orion Research and Management Services (Orion) by shooting from a stand towards a feeder. Orion holds a Scientific Permit through TPWD and collects biological samples from the harvested deer to be tested for diseases and used for research. All meat from harvested deer is donated to Caritas of Austin through the Hunters for the Hungry Program.

Results

Survey data gathered in August and September 2018 were used to estimate deer densities for FY19, and can be found in Table 4. Overall population trends on the BCP are still positively reflecting the harvest management strategies implemented by Travis County. A total of 64 deer were harvested in FY19 with location and sex breakdown displayed in Table 5.

Table 4. FY19 deer census results on Travis County-managed lands.

Location	Acres/Deer	Est. Composition (Buck/Doe/Fawn)
Jollyville Unit	21	26/25/1
Kotrla Unit	18	16/32/6
Volente Unit	19	21/34/3
HP/RR/Pogue	17	37/96/20

Table 5. Deer harvested on Travis County-managed BCP tracts in FY19.

Location	Bucks	Does	Total
Snowden	3	-	**3**
Vireo Ridge	8	1	**9**
Medway	2	4	**6**
Volente	10	5	**15**
Kotrla Unit*	18	13	**31**
Total	**41**	**23**	**64**

*Includes Kotrla and Scott & White tracts

Travis County staff will continue to monitor deer populations on Travis County-managed land and work to implement TPWD recommendations concerning appropriate management strategies and harvest levels. Annual censuses allow managers to evaluate the effectiveness of management strategies, determine whether desired deer densities have been attained, and calculate future harvest recommendations. As long as census data indicate that deer herds exceed the carrying capacity of County preserve or parklands, deer management should continue on select Travis County Parks and the tracts of the BCP.

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