



Final Golden-cheeked Warbler Presence/Absence Survey

Loop 1604 from SH 16 to IH 35

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Abstract

The Texas Department of Transportation is proposing improvements to Loop 1604 from State Highway 16 to Interstate Highway 35 in Bexar County, Texas. A season of presence/absence surveys was conducted in 25 segments identified as potential Golden-cheeked Warbler (GCWA; *Setophaga chrysoparia*) habitat. Three GCWA observations were recorded. Two of the observations were along Leon Creek on the northwest side of the Loop 1604 and I-10 interchange and the third observation was on the south side of Loop 1604 on the University of Texas at San Antonio campus.

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Introduction

The Texas Department of Transportation (TxDOT) is proposing improvements to Loop 1604 from State Highway (SH) 16 to Interstate Highway (IH) 35 in Bexar County, Texas (Figure 1). TxDOT proposes to expand Loop 1604 from a 4-lane expressway to a 10-lane expressway, reconfigure the layout of auxiliary lanes, and modernize the IH 10 interchange. TxDOT conducted a single year of Golden-cheeked Warbler (GCWA; *Setophaga chrysoparia*) presence/absence surveys within 25 potential habitat segments identified along the length of the project.

Biological Setting

The GCWA is a small, neotropical songbird with bright yellow cheeks and a black head and back that breeds primarily in the Edwards Plateau ecological region of Texas. The breeding range of the GCWA is restricted to the closed-canopy Ashe juniper (*Juniperus ashei*) – oak (*Quercus* spp.) woodlands of the Edwards Plateau, including Bexar County. Breeding habitat for the GCWA includes tall, dense, mature stands of Ashe juniper interspersed with live oak (*Q. fusiformis* or *Q. virginiana*) as well as a variety of deciduous trees, such as Texas red oak (*Q. buckleyi*), post oak (*Q. stellata*), Texas ash (*Fraxinus texensis*), and cedar elm (*Ulmus crassifolia*). Breeding habitat for the GCWA typically occurs in relatively mesic areas with steep canyons and slopes. However, the GCWA are also known to breed in drier, upland Ashe juniper-oak woodlands over flat topography (Campbell 2003). The GCWA breeding season begins in early March and continues through mid-August; and, they typically occupy areas of habitat ranging from 5 acres (ac) to 20 ac in size per breeding pair (Campbell 2003).

The U.S. Fish and Wildlife Service (USFWS) describes three major categories for potential GCWA habitat (USFWS 2010). Those categories are used by the USFWS to assess GCWA habitat and are paraphrased as: vegetation associations where GCWAs are expected to occur; vegetation associations that may be used by GCWAs; and vegetation associations where GCWAs are not expected to occur. The “may be used” and “not expected to occur” vegetation association descriptions include vegetation components that typically may not be used by GCWAs, unless they are adjacent to or near GCWA habitat.

Habitat types where GCWAs are expected to occur include woodlands with mature Ashe juniper trees (15 feet [ft] in height with a trunk diameter at breast height [dbh] of 5.0 inches [in]) interspersed with a mix of hardwoods, including oaks and elms (*Ulmus* spp.) in mesic areas encompassing steep canyons and slopes. Canopy cover should be nearly continuous with 50 percent to 100 percent canopy closure and an overall woodland canopy height of 20 ft or more.

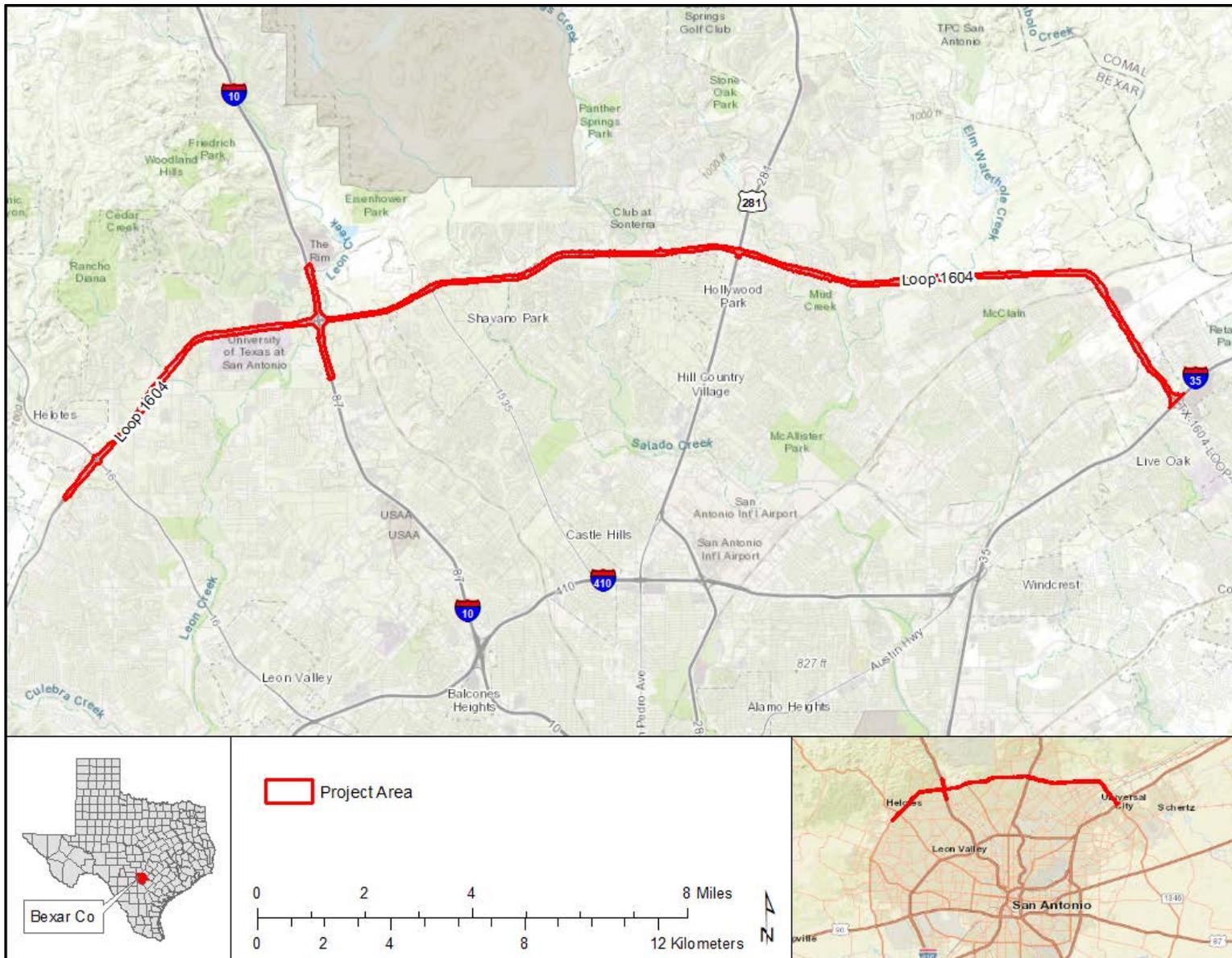


Figure 1. The Project Area for GCWA surveys was along Loop 1604 from west of SH 16 to IH 35.

Regulatory Setting

This work ensures project compliance with the Endangered Species Act (ESA). The GCWA was federally listed as endangered on May 4, 1990 by means of an emergency rule (USFWS 1990). The final rule listing the GCWA as endangered under the ESA was published on December 27, 1990 (USFWS 1992). In February 1991, the species was designated as endangered by the State of Texas (USFWS 1992). The ESA prohibits harassing, harming, pursuing, hunting, shooting, wounding, killing, trapping, capturing, and collecting listed species. The law also protects against interfering with vital breeding and behavioral activities or degrading critical habitat. Current threats to the species include habitat loss and fragmentation from urban sprawl, conversion of wooded areas to agricultural land, juniper eradication, creation of impoundments for flood control and livestock, loss of winter and migration habitat, destruction of oaks by oak wilt, over-browsing by white-tailed deer (*Odocoileus virginianus*) and livestock, and Brown-headed Cowbird (*Molothrus ater*) nest parasitism (USFWS 1992). Critical habitat has not been designated for this species.

Methods

A desktop review and field habitat assessment within the study area identified 25 potential habitat segments within the study area, which included 300 ft from the Loop 1604 right-of-way (ROW) and easements from IH 35 to SH 16. Right-of-Entry (ROE) requests were mailed to property owners for privately owned parcels within those segments where there was no TxDOT easement. Notification letters stating that the surveys would be taking place were mailed to property owners with TxDOT easements on their properties.

Between April 3, 2019 and May 27, 2019, USFWS Section 10(a)(1)(A) permitted biologists Jacob Owen (TE-55633C-1), Jeanette Joost (TE-85077A-0), Paul Fushille (TE-42737A), Crystal Datri (TE-89697B-0), and Matthew Kitchen (TE-74409C-0) performed presence/absence surveys for the GCWA within the 25 potential habitat segments, where ROE was granted. All surveys followed current USFWS protocols for conducting GCWA presence/absence surveys (USFWS 2010). Temperature and wind speed were measured at the beginning and end of each survey using a Kestrel 5000 Pocket Weather Meter, while other weather data (wind direction, precipitation, and cloud cover) were estimated by the surveyor. As required by USFWS GCWA presence/absence survey protocols, recordings of both Eastern Screech-Owl (*Megascops asio*) calls and GCWA songs were played in various locations after the last survey to verify negative results. Incidental avian observations were recorded during each survey.

Results

GCWAs were detected near segments 3, 22, and 23 (Figure 2). GCWAs were auditorily and visually observed by Jacob Owen and Paul Fushille. Wildlife species observed within the study area during the survey season include 84 avian species representing 31 families.

On April 17, 2019, Paul Fushille saw and heard a single male GCWA while observing from Old Fredericksburg Road and the Leon Creek Greenway trail (Segment 22) on an adjacent tract of land from which there was no ROE. A second GCWA observation was recorded on the same date on the same adjacent tract of land, while Mr. Fushille was observing from Segment 23.

On May 9, 2019, Jacob Owen saw and heard a single male GCWA in a narrow strip of Ashe juniper directly adjacent to N Loop 1604 on the University of Texas at San Antonio campus while observing from Segment 3. The GCWA was among a large group of warbler species that included Black-throated Green Warblers (*Setophaga virens*), American Redstarts (*Setophaga ruticilla*), Black-and-white Warblers (*Mniotilta varia*), Yellow-rumped Warblers (*Setophaga coronata*), Yellow Warblers (*Setophaga petechia*), Nashville Warblers (*Leiothlypis ruficapilla*), Orange-crowned Warblers (*Vermivora celata*), and Common Yellowthroats (*Geothlypis trichas*).

Discussion

Three GCWA detections were recorded from within the study area along Loop 1604. Two of the detections were recorded on the same day by the same observer on two separate potential habitat segments near Leon Creek. These detections may represent a single individual, as no counter-calling was recorded. The third detection was recorded on the University of Texas at San Antonio Campus in an urbanized area on the south side of Loop 1604.

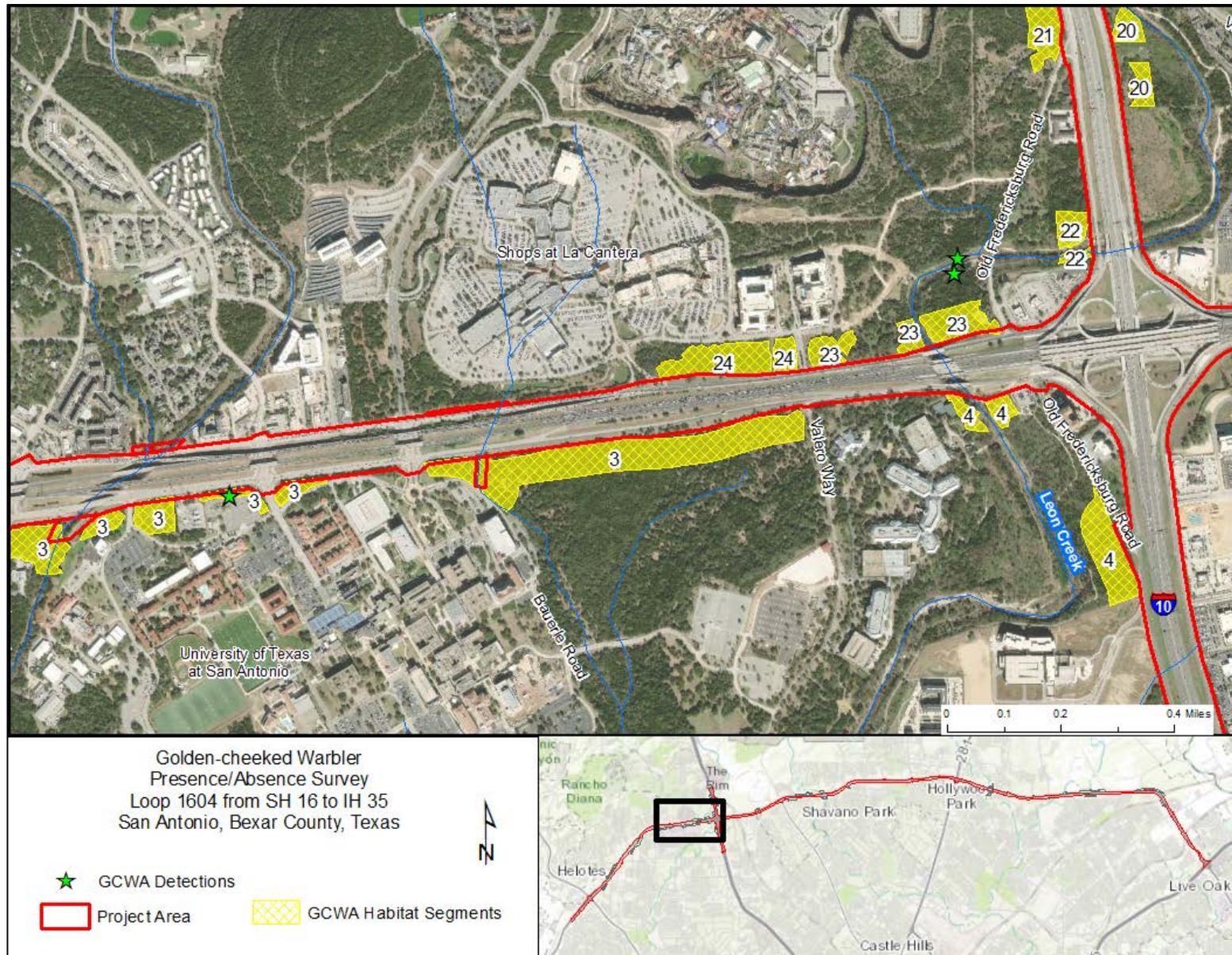


Figure 2. Three GCWA detections were recorded during surveys along Loop 1604 in the spring of 2019.

Literature Cited

Campbell, L. 2003. Endangered and Threatened Animals of Texas: Their Life History and Management. Golden-cheeked Warbler (*Dendroica chrysoparia*). Texas Parks and Wildlife Department, Austin, Texas.

U.S. Fish and Wildlife Service (USFWS). 1990. Emergency. Endangered and Threatened Wildlife and Plants. Emergency Rule to List the Golden-cheeked Warbler as Endangered. 55 Federal Register 55: 18844 – 18845.

USFWS. 1992. Golden-cheeked Warbler Recovery Plan. U.S. Fish and Wildlife Service. Region 2. Albuquerque, NM.

USFWS. 2010. USFWS Section 10(a)(1)(A) Scientific Permit Requirements for Conducting Presence/Absence Surveys and Habitat Assessments for Endangered Golden-cheeked Warblers. Available at:
https://www.fws.gov/southwest/es/Documents/R2ES/GCWA_Survey_Guidelines_2010013.pdf

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