

SECTION 6 RARE SPECIES MANAGEMENT

6.1 PROGRAM DESCRIPTION AND OVERALL MANAGEMENT GOALS

For the purposes of this INRMP, the term "rare species" is used to refer to various plants and animals that warrant special management concern and are protected by law in some cases. Rare species include the following:

- Species listed or proposed as endangered or threatened, or designated as candidates for listing, by the USFWS under the Endangered Species Act (ESA) of 1973 (Public Law 93-205);
- Animals listed as endangered or threatened species in Chapters 67 and 68 of the Texas Parks and Wildlife Code and Sections 65.171 - 65.184 of Title 31 of the Texas Administrative Code (TAC); and
- Plants listed as endangered and threatened in Chapter 88 of the Texas Parks and Wildlife Code, and Sections 69.01 - 69.14 of the TAC.

The overall rare species management goal for CSSA is to conserve listed species in accordance with the ESA, Endangered Species Recovery Plans, U.S. Army regulations and guidance, and approved site-specific management plans, including Endangered Species Management Plans (ESMP). The ESA requires that all federal agencies conserve listed species. Conservation, as defined by the ESA, means the use of all methods and procedures necessary to bring any listed species to the point where protection pursuant to the ESA is no longer necessary. The ESA specifically requires agencies not to "take" or "jeopardize" the continued existence of any endangered or threatened species, or to destroy or adversely modify habitat critical to any endangered or threatened species. Under Section 9 of the ESA, "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect. Under Section 7 of the ESA, "jeopardize" means to engage in any action that would be expected to reduce appreciably the likelihood of the survival and recovery of a listed species by reducing its reproduction, numbers, or distribution.

AR 200-3 requires installations to prepare ESMPs for each listed and proposed species and critical habitat present at an installation, including areas used by tenant organizations. AR 200-3 does not require ESMPs for candidate species, but installations are encouraged to develop ESMPs for candidate species and to participate in conservation agreements with the USFWS. Installations requiring more than one ESMP (*i.e.*, more than one listed or proposed species is present) are permitted to prepare a combined ESMP provided the combined plans satisfy the substantive requirements detailed in AR 200-3, Chapter 11-5(b)(3 and 4). ESMPs must prescribe area-specific measures to meet conservation goals for the subject species and critical habitats. This INRMP serves as the ESMP for the black-capped vireo and golden-cheeked warbler at CSSA, both of which are federally listed as endangered. A checklist of INRMP projects is listed in Section 9 of this plan (see Figure 9.1), and INRMP project factsheets comprise Appendix A.

In accordance with AR 200-3, CSSA will engage in informal Section 7 consultations at the earliest opportunity with the USFWS to ensure that proposed actions that may affect listed species or critical habitat are consistent with the requirements of the ESA. The CSSA Environmental Office is responsible for identifying actions at CSSA that require ESA consultation and initiating the consultation process, in cooperation with the proponent of the action. The informal Section 7 consultation process is typically initiated by sending a written description of the proposed action and a map showing the location of the proposed action to the USFWS Texas Ecological Services Field Office in Austin. Contact information for the USFWS is provided in Appendix G and a more detailed description of the ESA coordination/consultation process is provided in Chapter 11 of AR 200-3, which can be accessed on the Internet at the U.S. Army Publishing Agency Home Page (<http://www.usapa.army.mil/index.html>).

Species that are state listed as threatened or endangered are not protected under the ESA. However, AR 200-3 specifies that installations should cooperate with state authorities in efforts to conserve state listed species as a matter of responsible stewardship. The ID-OEC will engage in informal consultations at the earliest opportunity with the Texas Parks and Wildlife Department (TPWD) to ensure that the conservation of state listed species is addressed during the planning process for proposed actions. Appendix G provides contact information and Internet addresses for TPWD.

6.2 PROGRAM STATUS AND MANAGEMENT ISSUES

6.2.1 Overview

As discussed in Subsection 2.8.4, the black-capped vireo and golden-cheeked warbler, both of which are federally listed as endangered, are the only rare species that have been documented at the installation. Critical habitat has not been designated for either of these species.

The black-capped vireo and golden-cheeked warbler were first documented at CSSA in 1993. A pair of black-capped vireos and one male golden-cheeked warbler were detected during the 1993 survey in the northeastern portion of the installation (Stewardship Services 1993). More intensive presence-absence surveys and habitat mapping were conducted during the 2005 spring and summer survey season. A single black-capped vireo and 19 golden-cheeked warblers were detected during 2005 (Parsons 2005). No surveys for these birds were conducted at CSSA from 1994 through 2004.

Black-capped vireo and golden-cheeked warbler detections and habitat from the 2005 surveys are shown in Figure 6.1 and Table 6.1 provides a summary of core and non-core habitat acreage. Core habitat was defined by a 200 meter radius circle around bird detections recorded during the 2005 survey and is intended to represent habitat that was occupied during the 2005 season. Non-core habitat was defined by vegetation community type and abiotic factors such as slope and canopy structure. Non-core habitat is intended to represent all potentially suitable habitat for these species at the installation. Species-specific information and management issues for these endangered birds are provided below.

This plan provides a conservation benefit to the BCVI and GCWA. This plan provides assurances that the management plan will be implemented and that the conservation efforts will be effective.

Table 6.1 BCVI and GCWA Core and Potential Habitat at CSSA

Species	Habitat Level	TOTAL Installation		East Pasture		North Pasture		Inner Cantonment	
		Acres	%	Acres	%*	Acres	%*	Acres	%*
		BCVI	Core	31.1	0.8%	31.1	0.8	0	0.0
	Non-core	109.9	2.7%	43.5	1.1	41.8	1.0	24.6	0.6
GCWA	Core	463.1	11.2%	82.5	2.1	275.9	6.9	104.7	2.6
	Non-core	778.1	19.5%	160	4.0	507.4	12.7	110.7	2.8

*Percent of total installation acreage (4,004 acres)

6.2.2 Black-capped Vireo

General information on the black-capped vireo and its distribution, life history, and habitat are provided in Subsection 2.8.4 and in the 2005 survey report (Appendix B). Additional detailed information is provided in the *Black-capped Vireo Recovery Plan* (USFWS 1991).

BCVI habitat was divided into two classifications: core habitat and non-core habitat (Figure 6.1). Core habitat was defined by a 200 meter radius circle around bird detections recorded during the 2005 survey. Non-core habitat was defined by vegetation community type and abiotic factors such as slope and canopy structure. Core habitat designations will be valid for three years after initial detection. Table 6.1 shows BCVI core and potential habitat at CSSA.

BCVI habitat is found on the rocky limestone soil of the Edwards Plateau. Although BCVI habitat throughout Texas is highly variable with regard to plant species, soil, temperature, and precipitation, habitat is similar in vertical structure. BCVI require shrubby vegetation reaching to ground level for nesting cover. An occasional higher tree is beneficial to BCVI males for territory defense. Typical shrub cover is between 30-60% of the area, averaging 6-feet in height. Open grassland separates the clumps of trees and shrubs.

A single BCVI, 31 acres of core habitat, and a total of 110 acres of non-core habitat were identified during the 2005 surveys. The non-core habitat consists of four non-contiguous patches (two patches in the East Pasture, one in the North Pasture, and one in the inner cantonment). Despite intensive survey of all four patches of non-core BCVI habitat, only one BCVI was detected during 2005. The low BCVI population on CSSA is likely due to the installation's location at the extreme southeastern extent of BCVIs range and lack of suitable habitat (approximately 2.7 percent of the total installation).

Major threats to BCVI survival include loss of habitat and nest parasitism by brown-headed cowbirds, neighboring development, over browsing by ungulates, and suppression and alteration of natural disturbance regimes.

BCVI nesting season in Texas lasts from April through July, and winter in interior and coastal areas of the Pacific Coast of southern Mexico. To the maximum extent practicable, CSSA will schedule activities in areas where BCVIs have been identified from August through March, the period when BCVIs are away from Central Texas. This should minimize or eliminate the potential for takings and the need for consultation with USFWS.

Quality BCVI habitat suitable for management treatments is present at CSSA. Management for BCVI will include the following survey and habitat management projects:

- **BCVI population survey and core/non-core habitat mapping.** Surveys will continue for BCVI at CSSA, with the 2005 field survey serving as a baseline for BCVI population numbers. Surveys will be conducted every 2 years, with the next survey scheduled for 2007. Survey methodology will be matched with survey methodologies currently in use at Camp Bullis. Surveys will be conducted along fixed transects in suitable habitat, and BCVI observations will be recorded at 200-meter intervals. Time will also be budgeted for BCVI detections in more marginal habitat areas.
- **BCVI habitat enhancements.** Habitat enhancements for BCVI will be focused on one area identified as non-core habitat in the North Pasture and an area of core and non-core habitat in the East Pasture, where the BCVI detection occurred. These areas will be treated with hand tools to simulate prescribed burn effects. Treatments will include “topping” of young live-oak and shin-oak mottes. The effect will be to thicken motte stands to be more favorable to BCVI nesting and screening. Shrubby, low-stature Ashe junipers will be subject to selective removal, maintaining a relatively open shrub canopy and encouraging growth of beneficial broad-leaf shrub species, such as flame leaf sumac. Habitat areas will be subject to small scale prescribed burn treatments. Plot sizes will not exceed 10% of the habitat area, and are shown on Figure 6-1.

6.2.3 Golden-cheeked Warbler

General information on GCWA and its distribution, life history, and habitat are provided in Subsection 2.8.4 and in the 2005 survey report (Appendix B). Additional detailed information is provided in the *Golden-cheeked Warbler Recovery Plan* (USFWS 1991).

GCWA habitat was divided into two classifications: core habitat and non-core habitat (Figure 6.1). Core habitat was defined by a 200 meter radius circle around bird detections recorded during the 2005 survey. Non-core habitat was defined by vegetation community type and abiotic factors such as slope and canopy structure. Core habitat designations will be valid for three years after initial detection. Table 6.1 shows GCWA core and potential habitat at CSSA.

GCWA habitat is found in woodlands with mature Ashe juniper, mixed with various oaks, elms, and other hardwoods, in relatively mesic areas found on slopes. These areas will have nearly continuous canopy cover of trees with 50 – 100 % canopy closure. Specific GCWA habitat types include (TPWD 1995):

- Stands of mature Ashe juniper, over 3-meters in height, with scattered live oaks, where the total upper canopy cover exceeds 35%.
- Bottomlands along creeks and drainages which support a 35% canopy of deciduous trees, with mature Ashe juniper growing either in the bottom or on nearby slopes.
- Mixed stands of shin oak with scattered Ashe juniper (10-30% canopy cover), where the total canopy cover of trees exceeds 35%.

The 2005 survey documented nineteen GCWA, 463 acres of core habitat, and 778 acres of non-core habitat. The core and non core habitat areas are found mostly on various forested hillocks in the North Pasture, East Pasture and the southern portion of the inner cantonment.

The GCWA migrate to Texas in March to begin the nesting and breeding season, and migrate in July to interior portions of southern Mexico and Central America (USFWS 1992). To the maximum extent practicable, CSSA will schedule activities in areas where GCWAs have been identified from August through March, the period when GCWAs are away from Central Texas. This should minimize or eliminate the potential for takings and the need for consultation with USFWS.

Quality GCWA habitat suitable for management treatments is present at CSSA. Management for GCWA will include the following survey and habitat management projects:

- ***GCWA population survey and core/non-core habitat mapping.*** Surveys will continue for GCWA at CSSA, with the 2005 field survey serving as a baseline for GCWA population numbers. Surveys will be conducted every 2 years, with the next survey scheduled for 2007. Survey methodology will be matched with survey methodologies currently in use at Camp Bullis. Surveys will be conducted along fixed transects in suitable habitat, and GCWA observations will be recorded at 200-meter intervals. Time will also be budgeted for GCWA detections in more marginal habitat areas.
- ***GCWA habitat enhancements.*** Selective thinning of low stature Ashe juniper shrub vegetation on slopes will occur in selected treatment areas in the North Pasture. Thinning would be accomplished with hand tools and be focused on enabling native hardwood growth and regeneration. Treatment areas are shown on Figure 6-1.

6.2.4 Other Federally Listed Species

None of the caves or karst features on CSSA are likely to contain federally listed threatened or endangered karst invertebrates due to CSSA's probable location outside of the zones where they occur (Veni 2002). This finding is also supported by previous work conducted by Veni (1994) and Veni and Reddell (1999).

6.2.5 State Listed Species

None of the caves or karst features is likely to contain state listed threatened or endangered karst species due to CSSA's probable location outside of the zones where they occur (Veni 2002). However, during a downhole video camera survey of wells at CSSA, an unidentified salamander was observed in well CS-2 (Parsons 1996). This unidentified salamander could have been a Comal blind salamander or another rare troglotic salamander. The Comal blind salamander is a state listed species. The Comal blind salamander occurs in two caves on Camp Bullis and one cave on private property just north of CSSA's northern boundary (Veni 2002).

Establishing special karst management buffers a minimum of 50 feet around the karst feature will protect rare species, if present. Actions include the following:

- An evaluation of erosional features within the buffer zones;
- Native outplantings and seeding within the buffer zones; and

- Evaluation of RIFA presence within the buffer zones.
 Project and Goals Summary

Table 6.2 presents a list of rare species management projects with specific goals. Figure 6.1 shows project locations.

Table 6.2 Rare Species Management Projects

Project ID	Project Name	Description and Goals	Duration and Schedule	Priority Classification
6A	BCVI population survey and core/non-core habitat mapping	Point counts of BCVI in suitable habitat to assess population trends and habitat utilization	2007 Breeding/nesting season	Compliance / Class 0
6B	GCWA population survey and core/non-core habitat mapping	Point counts of GCWA in suitable habitat to assess population trends and habitat utilization	2007 Breeding/nesting season	Compliance / Class 0
6C	BCVI habitat enhancements	Shrubby, low-stature Ashe junipers will be subject to selective removal, maintaining a relatively open shrub canopy and encouraging growth of beneficial broad-leaf shrub species, such as flame leaf sumac. Habitat areas will be subject to small scale prescribed burn treatments.	Corresponding to brush management activities	Stewardship / Class III
6D	GCWA habitat enhancements	Selective thinning of low stature Ashe juniper shrub vegetation on slopes will occur in selected treatment areas in the North Pasture. Thinning would be accomplished with hand tools and be focused on enabling native hardwood growth and regeneration.	Corresponding to brush management activities	Stewardship / Class III
6E	Karst Area Management	Coordinate BMP implementation with construction activities.	Corresponding to construction and renovation areas.	Compliance / Class 0