



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Ecological Services
2005 NE Green Oaks Blvd., Suite 140
Arlington, Texas 76006

In Reply Refer to:
21420-2010-F-0369-R001

January 26, 2015

Mr. Brian L. Dosa
Directorate of Public Works
Department of the Army
U.S. Army Installation Management Command
Headquarters, U.S. Army Garrison, Fort Hood
Fort Hood, Texas 76544-5000

Dear Mr. Dosa:

This document transmits the U.S. Fish and Wildlife Service's (Service) biological opinion on the U.S. Department of Army's (Army) reinitiation of consultation due to the exceedance of incidental take of endangered golden-cheeked warbler (*Setophaga chrysoparia*)(GCWA) related to wildfire at Fort Hood Military Installation in Bell and Coryell Counties, Texas. The original consultation resulted in the issuance of a biological opinion dated December 1, 2010 (hereafter, 2010 biological opinion). The Army's letter requesting reinitiation of consultation was received on August 28, 2014.

In addition to addressing the exceedance of incidental take, the Army has proposed to modify specific take authorizations within the 2010 biological opinion to better suit the current needs of the training mission at Fort Hood Military Installation (hereafter, Fort Hood). The following changes are proposed:

1. 500 acres of remaining take allowance for improvement and construction projects to cover wildfires on the installation
2. Relocation of 300 acres of infantry thinning projects from Land Groups 3, 4, 5, and 6 to Land Group 1

This biological opinion has been prepared in accordance with section 7 of the Endangered Species Act of 1973, as amended (16 U.S.C 1531 et seq.)(Act). It is based on the biological assessment included with your letter reinitiating consultation, information provided by Fort Hood Natural Resource Management Branch (NRMB) staff, and other sources of information. A complete administrative record of this consultation is on file at the Service's Arlington, Texas, Ecological Services Field Office.

Consultation History

- July 14, 2010* The Service accepted Fort Hood's request for consultation regarding ongoing activities and revisions to the Endangered Species Management Plan.
- December 1, 2010* The Service issued a biological opinion (Service Consultation number 21420-2010-F-0369). Its 5-year term would expire December 1, 2015.
- April 1, 2014* Wildfire takes 503.10 acres of GCWA habitat, exceeding the 1,606 acres of take anticipated within the 2010 biological opinion by 60.2 acres.
- August 6, 2014* Service staff visited Fort Hood to discuss future coordination with NRMB staff regarding various needs, including potential reinitiation of consultation prior to the expiration of the 2010 biological opinion.
- August 28, 2014* The Service received a biological assessment and a request for reinitiation of formal consultation from Fort Hood regarding the use of take authorized for improvement and construction projects to be used for potential wildfires on the installation.
- September 24, 2014* Letter sent from the Service to Fort Hood accepting request for reinitiation of formal consultation.
- October 29, 2014* Fort Hood requested additional take reassignment for infantry thinning projects in Land Group 1 from Land Groups 2-6. Exact acreage figures are not known at this time. The Service and Fort Hood mutually agreed that this should be incorporated within the ongoing reinitiation of consultation.
- November 19, 2014* Final acreage figures for additional take reassignment for infantry thinning projects in Land Group 1 from Land Groups 2-6 provided by Fort Hood.
- December 17, 2014* Draft biological opinion provided to Fort Hood.

Background

Fort Hood provides resources and training facilities for active and reserve units in support of the Army's mission. Fort Hood maintains facilities to support approximately 50,000 Soldiers. Training activities conducted at Fort Hood include maneuver exercises for units up to brigade level, live weapons firing, and aviation training.

The 2010 programmatic biological opinion addresses potential impacts to the GCWA and endangered black-capped vireo (*Vireo atricapilla*)(BCVI) occurring at Fort Hood resulting from the construction or implementation of:

1. Tank trail and hillside access trail improvements
2. Live-fire area range improvements
3. Heavy brigade combat team maneuver corridors
4. Tactical low-water crossing improvements
5. Habitat thinning for dismounted soldier access
6. Miscellaneous construction activities
7. Maneuver training
8. Dismounted infantry training
9. Live-fire training
10. Aviation training
11. Operational testing
12. Prescribed fire
13. Brown-headed cowbird control
14. Juniper management
15. Cattle grazing
16. Recreation
17. Population research and monitoring programs

The 2010 biological opinion was developed to evaluate the Army's Proposed Action and address incidental take for anticipated range improvement activities and habitat modification from fire over a 5-year period to maintain planning flexibility and adaptability to fast-paced changes in mission readiness requirements and national security needs. The 2010 biological opinion was based on the biological assessment provided by the Army, which projected projects from 2010-2015. The result of the incidental take analysis categorized projects based on the Army's projections which are included in the Table 1.

This biological opinion is a re-initiation of consultation of the 2010 biological opinion which addresses actions over a 5-year period consisting (2010 – 2015) of ongoing military training and other activities, land management, range improvements, and other associated activities to support the military mission, including endangered species management on Fort Hood.

A complete description of these activities is provided in the 2010 biological opinion. Not all of these activities were determined to result in take of GCWA and/or BCVI. The 2010 biological opinion quantifies the anticipated incidental take using habitat acres as a surrogate measure for the species (Table 1). While the 2010 biological opinion considers potential adverse impacts to both the BCVI and GCWA, this biological opinion addresses potential impacts resulting from the proposed action to the GCWA alone.

Table 1. Anticipated incidental take measured in habitat area (acres) resulting from project actions and fire loss in excess of allowable incidental take under the Fort Hood 2010 Biological Opinion.		
Project Type	GCWA	BCVI
Range Improvement Incidental Take		
Tank Trails/HAT	186	184
Live-Fire Range Improvements	359	146
HBCT Maneuver Corridor Clearing	1528	450
Low Water Crossings	24	19
Miscellaneous Construction Activities	350	350
Infantry Thinning in Land Groups (LG)		
LG2	237	0
LG 3	235	0
West Side (LGs 4, 5, & 6)	600	0
Total Range Improvement	3519	1149
Habitat loss from fire in excess of 2005 BO incidental take limits	0	1452
5-year Fire Take	1606	1780
Total Potential Incidental Take	5125	4381

The 2010 biological opinion included a programmatic approach whereby two categories of projects, HBCT and infantry thinning, would be submitted at the site specific level, reviewed, and appended to the original opinion. Because this biological opinion only addresses a portion of the original actions, it will be appended to the 2010 biological opinion which remains valid until its expiration on December 1, 2015.

BIOLOGICAL OPINION

I. Description of Proposed Action

The proposed action is the re-evaluation and reassignment of remaining take allowances for: 1) live-fire range improvements and miscellaneous construction projects to cover unexpected

wildfires and 2) the relocation of infantry thinning projects in Land Groups 3, 4, 5, and 6 to Land Group 1. Actions associated with this take would occur within GCWA habitat.

Reassignment for wildfire take

The total incidental take of GCWAs resulting from fire was estimated based on habitat acreage and anticipated to be no more than 1,606 acres across the 5-year term of the 2010 biological opinion (Table 2). Fort Hood's biological assessment indicates that they are currently 60.2 acres in excess of this anticipated take resulting from fire.

Table 2. Anticipated incidental take resulting from project actions and fire loss quantified within the December 1, 2010 biological opinion (all totals given in acres).	
Project Type	Anticipated take of GCWA Habitat Acres
Range Improvement Incidental Take	
Tank Trails/HAT	186
Live-Fire Range Improvements	359
HBCT Maneuver Corridor Clearing	1,528
Low Water Crossings	24
Miscellaneous Construction Activities	350
Infantry Thinning in Land Groups (LG) 2-6	
LG2	237
LG 3	235
West Side (LGs 4, 5, & 6)	600
Total Range Improvement incidental take	3,519
<u>5-year Fire Take</u>	<u>1,606</u>
Total Potential Incidental Take	5,125

Additionally, total incidental take of GCWA habitat resulting from live-fire range improvements was anticipated to be no more than 359 acres across the 5-year term of the 2010 biological opinion (Table 2). Likewise, incidental take resulting from miscellaneous construction activities

was anticipated to be no more than 350 acres. Currently, no take of GCWA habitat has occurred resulting from live-fire range improvements and only 16.78 acres has been taken during miscellaneous construction activities. This leaves 350 acres remaining take allowance for live-fire range improvements and 339.32 acres remaining for miscellaneous construction activities. Fort Hood proposes to reassign 250 acres from each of the remaining balances to address take resulting from wildfire. The result of which would increase initial allowance for fire take from 1,606 acres to 2,106 acres, decrease remaining take for live-fire range improvements from 359 acres to 109 acres, and decrease remaining take for miscellaneous construction activities from 350 acres to 89.32 acres. Table 3 illustrates changes resulting from the proposed reassignments.

	Authorized in 2010	Current remaining	Proposed change in take	Total after proposed take reassignments
Live-fire Range Improvements	359 acres	359 acres	-250 acres	109 acres
Miscellaneous Construction Activities	350 acres	339.32 acres	-250 acres	89.32 acres
Wildfire	1,606 acres	-60.2 acres	+500 acres	439.8 acres

Relocation of infantry thinning projects

Across Land Groups 2-6, 1,072 acres of GCWA habitat take for infantry thinning was authorized within the 2010 biological opinion (Table 1). Fort Hood has indicated that 642 acres of this authorized take has not been utilized (Dr. Brett Moule, Fort Hood, pers. comm. November 6, 2014). No authorized take remains for individual birds in Land Group 2. Fort Hood proposes to relocate infantry thinning projects that would result in 300 acres of take from the remaining 642 acres authorized in Land Groups 3-6 to Land Group 1. This would leave a balance of GCWA incidental take in 342 acres of habitat- in Land Groups 3-6 and authorize the incidental take of GCWAs in 300 acres in Land Group 1. Table 4 illustrates changes resulting from these proposed reassignments.

Table 4. Proposed changes in GCWA habitat acreages from reassignment of take authorized for Infantry Thinning in Land Groups 2-6 to Land Group 1

Land Group	Authorized in 2010	Current balance	Proposed change in take authorization	Total after proposed take reassignments
Land Group 1	0 acres	0 acres	+ 300 acres	300 acres
Land Group 2	237 acres	0 acres	0 acres	0 acres
Land Group 3	235 acres	42 acres	- 300 acres cumulatively across Land Groups 3-6	342 acres cumulatively across Land Groups 3-6
West Side (Land Groups 4,5,& 6)	600 acres	600 acres		

II. Status of the Species

The federally listed endangered species that does occur in the action area and that may be affected by the proposed action is the GCWA. The GCWA was emergency listed as endangered on May 4, 1990 (55 FR 18844). The final rule listing the species was published on December 27, 1990 (55 FR 53160). No critical habitat is designated for this species. The recovery plan for the GCWA was finalized on September 30, 1992, and a 5-year review was completed in August 2014 (Service 2014).

A description and life history, historic and current distribution, reasons for decline and threats to survival, and range-wide survival and recovery needs for the GCWA may be found in the 2010 biological opinion. Information within the remainder of this section is supplemental to the 2010 biological opinion.

Species biology and life history – new information

Several studies have assessed GCWA abundance. The first, by Pulich (1976, pp. 9-12), was based on one site each in Dallas, Bosque, and Kendall Counties and estimated 14,950 individuals (Pulich 1976, pp. 10-11, 163). In 1990, Wahl et al. (1990, pp. 32-35, 55) estimated available habitat and determined there was a maximum carrying capacity of 4,822 to 16,016 pairs. Comparing Wahl et al.'s and Pulich's estimates, the Service (1992, pp. 18-20) estimated 13,800 territories. In 2007, SWCA Environmental estimated 20,445 to 26,978 pairs (SWCA 2007, pp.

34-43). Finally, Mathewson et al. (2012, pp. 1, 117) estimated the range-wide population of male GCWA to be 263,339. However, others have cautioned that this analysis may have over-predicted density estimates, resulting in inflated population estimates. For example, Mathewson et al. (2012) used point counts to estimate the number of GCWA on a portion of the Balcones Canyonlands Preserve in Travis County, Texas. The same area was intensively surveyed by City of Austin staff using territory-mapping, color banding, and nest monitoring (Reiner et al. 2013, p. 28). Abundance estimates from Mathewson et al. (2012) were 1.4 to 13 times the data generated by the City of Austin. Due to the size and geographic distribution of the breeding and wintering habitat, an actual count of GCWA individuals in any given year is not possible range-wide. However, the differences in individual population estimates listed above underscores the need for more accurate status and distribution information for the GCWA.

Since the GCWA was listed in 1990, there have been increased efforts to obtain survival and productivity data to better understand population trends. Several life history characteristics of the GCWA contribute to difficulties in obtaining accurate data including the elusive behavior of females (Hayden and Tazik 1991, pp. 40), the difficulty in locating and accessing nest sites (Hayden and Tazik 1991, pp. 48), and the high rate of juvenile dispersal (Jette et al. 1998, pp. 35). Therefore, much of the information available for population demographics on the breeding grounds is based on observations of the more conspicuous male. Accurate measures of reproductive success and survival for the species rely on the detection of females, nests, and fledglings. Survey techniques, such as point counts, that rely on detection of males do not detect whether males have successfully paired; therefore, reproductive success of the GCWA may be underestimated when based on counts of males (Weckerly and Ott 2008, p. 3).

Spatial distribution – new information

In Central America, the occurrence of GCWA in northern El Salvador and north-central Nicaragua during the winter has only been confirmed within the last 6 years (Morales et al. 2008, p. 30; King et al. 2009, p. 48; Komar 2008, pp. 2-3). In addition, several new areas with warbler occurrences have been documented since 2000 (Jones and Komar 2008a, pp. 169; Jones and Komar 2008b pp. 317). Eight sightings from Costa Rica (highlands of the Central Valley) and one from Panama suggest the warbler's wintering range may extend further south than Nicaragua (Jones and Komar 2006, p. 155; Groce et al. 2010, p. 33).

Habitat or ecosystem conditions – new information

A recent habitat analysis concluded there had been an estimated 29 percent loss of existing breeding season habitat between 1999-2001 and 2010-2011 (Duarte et al. 2013, p. 7). The authors acknowledge that such a large estimated reduction in habitat is likely a function of the additive influence of direct GCWA breeding habitat loss, their minimum habitat patch size criterion, and their lack of consideration for creation of new warbler breeding habitat. Others have previously documented the loss of habitat within the breeding range of the GCWA as a result of residential and commercial development, highways, transmission corridors, reservoirs, and human population growth (Groce et al. 2010, p. 113-131).

The Alliance for the Conservation of Mesoamerican Pine-oak Forest (2008, p. 22; ACMPOF) developed a map of potential wintering habitat based on documented sightings (Pulich 1976, pp. 57-62; Vidal et al. 1994, pp. 685-687; Thompson 1995, pp. 13-49; and Rappole et al. 1999, pp. 763-765; ACMPOF 2008, p. 12). The area covered by pine-oak forests and pure oak stands (*Quercus* spp.) ranging from 900 to 2,200 m (2,953 to 7,218 ft) above sea level, and considered potential GCWA habitat, is approximately 19,500 km² (7529 mi²) or 18.78 percent of the Mesoamerican Pine-oak Forest's total area (ACMPOF 2008, p. 21). A survey in Honduras indicated that GCWA have less specific habitat requirements in their wintering range as long as the habitat is forested and contains approximately 5.6 m²/ha of encino oak basal area (King et al. 2012, pp. 7).

III. Environmental Baseline

A. Description of the action area

The action area is limited to within the boundaries of Fort Hood. Refer to the 2010 biological opinion for details on the climate, topography, geology, vegetation, and other ecological information related to the action area.

B. Status of the species within the action area

The GCWA and BCVI populations and habitats on Fort Hood are monitored and managed according to the Endangered Species Management Plan, FY06-10 (Cornelius et al. 2007) and Integrated Natural Resources Management Plan, FY14-18 (III Corps and Fort Hood 2014). The goal of these action plans is to implement endangered species conservation actions such that GCWA and BCVI populations and their habitats are managed to ensure survival of the species on Fort Hood while maintaining Army mission readiness in a manner consistent with Army and Federal environmental regulations. Population inventory and monitoring and habitat management and protection have been conducted on Fort Hood since the species were listed as endangered.

Golden-cheeked Warbler

Information within this section is supplemental to the 2010 biological opinion, and largely taken from 2013 and 2014 Annual Endangered Species Monitoring and Management Report submitted by Fort Hood to the Service (Fort Hood 2013, 2014 entire). These reports represent the most recent data related to the status of the GCWA on Fort Hood. According to monitoring on Fort Hood, overall abundance of the golden-cheeked warbler on Fort Hood significantly increased from 1992-2014 (Macey and Grigsby 2014).

Army biologists conducted point count surveys at Fort Hood during the 2013 GCWA breeding season and compared their results with point count survey data collected from 1992-2012 (Peak and Grigsby 2013a, p. 47). Results indicated a significant increase in the abundance of the GCWA on Fort Hood during this time although the mean number of detections from 2000-2013 suggests that the size of the population has stabilized. Peak and Grigsby (2013, pp. 51-52) infer

that an increase in the GCWA population at Fort Hood could result from a variety of factors including increased immigration of young or adults from areas off Fort Hood, increased recruitment of young produced on Fort Hood, increased productivity on Fort Hood, or increased survival on Fort Hood.

During the 2013 breeding season at Fort Hood, Army biologists also monitored 139 GCWA territories utilizing banding and recapture techniques to estimate rates of survival and productivity. These estimates were compared to results of similar studies between 2003-2012 (Peak and Grigsby 2013b, p 59). Earlier productivity data exist, but estimates collected from 2003-2012 were selected for comparison because the methodology has been consistent among those years. Their comparisons revealed fluctuations in the rates of survival across years and productivity within years due to factors such as edge effects, day of year effects (how late in the breeding season the data were collected), and seasonal differences in predator and prey abundance (Peak and Grigsby 2013b, p 65). Regardless of annual survival and productivity fluctuations, trends observed between 2003-2013 suggest that survival estimates for the GCWA on Fort Hood have been within the range required to balance juvenile and adult mortality indicating that Fort Hood functions as high-quality habitat for this species (Peak and Grigsby 2013b, p 66).

As of January 16, 2014, Army biologists have determined that there are approximately 50,566 ac of suitable GCWA habitat on Fort Hood (Table 5). This total represents approximately 23% of the Fort Hood landmass of 218,824 ac. Approximately 18% of GCWA habitat is classified as “core” (habitat protected and military training significantly restricted). The remaining 82% is classified as “non-core” (habitat protected and military training less restricted). These totals differ somewhat from those within the 2010 biological opinion. In most cases these differences are not a result of habitat loss; but rather, are due to differences in habitat mapping techniques and results of species monitoring. Refer to the 2010 biological opinion for specific characteristics of the GCWA habitat on Fort Hood.

Table 5. Current GCWA habitat acreages on Fort Hood as of January 16, 2014* (all totals are approximate)

Total suitable GCWA habitat on Fort Hood	50,566 acres
Percentage of Fort Hood total landmass as suitable GCWA habitat	23%
Total suitable GCWA habitat designated as “core” habitat	8,979 acres
“Core” habitat as percentage of total suitable GCWA habitat on Fort Hood	18%

*January 16, 2014 data supplied by Dr. Brett Moule, Fort Hood (pers. comm. October 28, 2014)

IV. Effects of the Action

Under section 7(a)(2) “effects of the action” refers to the direct and indirect effects of an action on a species or critical habitat, together with the effects of other activities that are interrelated and interdependent with that action. The effects of the proposed action are added to the environmental baseline to determine the future baseline that serves as the basis for the determination in this biological opinion. The impacts discussed below are the Service’s evaluation of the direct and indirect effects of the proposed action. Indirect effects are those caused by the proposed action that occur later in time, but are still reasonably certain to occur (50 CFR 402.02).

Analyses for Effects of the Action

The action addressed within this document is the re-evaluation and reassignment of previously anticipated incidental take between different activities related to military training, operations, and land management on Fort Hood. Refer to the 2010 biological opinion for specifics on the direct, indirect, and cumulative effects of these actions on the GCWA. This effects analysis addresses the effect of authorized take reassignment between activity categories.

Effects of the Action on the Species

Reassignment for wildfire take

Effects to species and habitats will continue as described in the 2010 biological opinion. Disturbance and fragmentation of habitat from wildfire at Fort Hood may occur across areas of varying GCWA habitat quality. Likewise, yet-to-be identified live-fire range improvements and miscellaneous construction activities might also occur across areas of varying habitat quality. Therefore, we are unable predict differences in how impactful the reassignment of take (GCWA habitat acres) authorized for live-fire range improvements and miscellaneous construction activities to wildfire take might be. Generally, provided that wildfire does not result in catastrophic crown fire, the restoration time of GWCA habitat would likely be of much shorter duration than live-fire range improvements and miscellaneous construction activities. Continued monitoring will continue to evaluate fuel loads and local climate conditions. Therefore, we believe that these modifications would be expected to result in lesser adverse impacts to the GCWA.

Relocation of infantry thinning projects

Utilizing shapefiles provided by NRMB within ArcMap 10.1, an examination of the topography, habitat patch connectivity, and average patch size does not reveal substantial differences in these predictors of GCWA habitat quality between Land Group 1 and Land Groups 3-6. In fact, Land Groups 3, 5, and 6 contain somewhat larger contiguous patches of GCWA habitat, which have been known to have increased nest success (Peak 2007, entire) and higher probability of occupancy than smaller fragmented patches (Collier et al. 2008, p. 143) like those typical of Land Group 1. This suggests that infantry thinning in Land Group 1 might be less impactful to the species. Alternatively, smaller more fragmented patches may suffer more long term impacts

from degradation, and thus, may require longer restoration periods. Considering these factors, infantry thinning activities proposed for Land Group 1 would not be expected to differ substantially from those previously authorized for Land Groups 3-6. Based on this information, it is not anticipated that there would be appreciable difference in the extent of impact to the GCWA from the relocating of 300 acres of infantry thinning from Land Groups 3, 4, 5, and 6 to Land Group 1.

V. Cumulative Effects

Cumulative effects include the effects of future, State, tribal, local or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act.

At this time, no future state, tribal, local or private actions are known to be planned within the action area. Because the action area encompasses the entire Fort Hood property, any future actions concerning the area would occur at Fort Hood and thus require a separate consultation.

VI. Conclusion

After reviewing the current status of the GCWA, the environmental baseline for the action area, the effects of the proposed action, and the cumulative effects, it is the Service's biological opinion that the action, as proposed, is not likely to jeopardize the continued existence of the GCWA. No critical habitat has been designated for this species, therefore, none would be affected.

The regulations implementing the Act define "*jeopardize the continued existence of*" as: "to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species." An extensive amount of habitat protection and management for the GCWA has occurred at Fort Hood since the species was listed in 1990. Since listing, Fort Hood has managed and monitored the population, which has shown evidence of increasing in population and distribution. The total amount of incidental take anticipated in this opinion would not compromise the recovery population, nor would it differ from the total amount authorized by the 2010 biological opinion. The 2010 biological opinion will expire December 1, 2015. The Service and NRMB are currently preparing to initiate consultation for a new, comprehensive 5-year termed biological opinion before the expiration of the current 2010 biological opinion.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulations pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined

as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harm is further defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by the Army for the exemption in section 7(o)(2) to apply. The Army has a continuing duty to regulate the activity covered by this Incidental Take Statement. If the Army fails to assume and implement the terms and conditions, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Army must report the progress of the action and its impact on the species to the Service as specified in the Incidental Take Statement [50 CFR §402.14(i)(3)].

Amount or extent of take anticipated

The Service anticipates that the proposed action would result in the incidental take of GCWAs. Take would be in the form of harm, harassment, wounding, and/or killing. Take, in the form of harm and/or harassment, is difficult to quantify and usually cannot be estimated in terms of numbers of individuals. However, because the area of habitat for both species is known for the action area, the maximum amount of incidental take may be estimated in terms of habitat area. Using habitat as a surrogate for incidental take of individuals is consistent with the Service approach with respect to the GCWA and has been utilized in prior section 7 consultations and issuance of incidental take permits under section 10. While surveys for the GCWA provide valuable information for determining the extent of occupation of a given area, they do not provide a precise mechanism for predicting the number of individuals that may actually be "taken" by the proposed action. The effectiveness of bird surveys in quantifying the number of birds in an area is somewhat limited. For example, due to their frequent vocalizations, males of these species are more easily detected than females or fledglings during surveys.

In addition, the area of habitat affected by a particular action is a relatively stable metric of take, compared to the number, size, and location of individual birds or bird territories in the area, which may vary from year to year. Further, the effects of a given activity may not be fully realized in a single season but rather spread over several seasons or even many years, during which the species' utilization of a given area may vary quite significantly for reasons unrelated to the action itself. Variability is influenced by species preferences or environmental factors that may include natural year-to-year variations in the precise habitat utilized by individual birds, variations in individual bird behavior that influence detectability, variations in the ability of surveyors to detect and accurately map individual birds, survey methodology, and other factors.

For these reasons, it is not possible to predict the precise number of GCWAs that may be “taken” over time as a result of the proposed actions covered in this opinion. Therefore, incidental take is provided as loss of habitat in acres under this opinion. The amount of potential incidental take is estimated at 800 acres (i.e., 300 acres in LG 1 and 500 acres resulting from wildfire) of habitat for the GCWA. The take of these 800 acres will remain authorized until the expiration of the 2010 biological opinion on December 1, 2015. Because this represents a reassignment of previously authorized take, there would be no increase in the amount of take of GCWA habitat acres beyond those authorized by the 2010 biological opinion.

Because our incidental take statement relies on habitat as a surrogate for the species, the estimate of take would incorporate all life stages (eggs, nestlings, fledglings) and is not predicated upon specific densities in varying qualities of habitat, i.e., all habitat acres are treated equally. We expect that current monitoring practices as prescribed by the 2010 biological opinion will be sufficient to evaluate the actual extent of the impacts to the GCWA from the proposed actions.

Effect of the take

In the accompanying biological opinion, the Service determined that the level of anticipated incidental take is not likely to result in jeopardy to the GCWA.

Reasonable and Prudent Measures and Terms and Conditions

The actions analyzed in this biological opinion reflect actions evaluated in the 2010 biological opinion for which reasonable and prudent measures and terms and conditions were established. Those measures and conditions continue to apply to these actions where relevant, and no additional measures are required.

Reporting Requirements

Fort Hood shall continue to satisfy the reporting requirements prescribed by the 2010 biological opinion, while incorporating the reassignments of incidental take addressed in this document.

Review Requirements

The conservation measures and terms and conditions of this opinion are designed to minimize the effects of incidental take resulting from the proposed action. With the implementation of these measures and conditions, the Service believes the anticipated amount of take provided in the incidental take statement would be reduced. The 2010 programmatic opinion expires 5-years from the date of issuance on December 1, 2010. The Service and the Army has continued to evaluate the environmental baseline at Fort Hood from reporting under the 2010 biological opinion. The information gathered under that opinion, as well as other information, should be used to develop a subsequent biological assessment for the renewal of formal consultation to replace the expiring 2010 biological opinion.

Conservation Recommendations

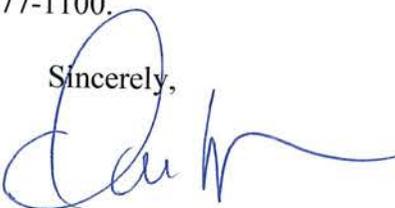
Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The Service recommends that Fort Hood continue to consider those voluntary conservation recommendations included in the 2010 biological opinion.

Reinitiation Notice

This concludes formal consultation on the actions outlined in the reinitiation. As provided in 50 CFR § 402.16, reinitiation of formal consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law) and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action.

The Service appreciates the cooperation extended by the Army staff during this consultation. If further assistance or information is required, please contact Sean Edwards, Omar Bocanegra, or myself at the above address or telephone (817) 277-1100.

Sincerely,



for Debra Bills
Field Supervisor

Literature Cited

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