



United States Department of the Interior

FISH AND WILDLIFE SERVICE

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AUG 08 2012

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Consultation No. 02ETAU00-2012-F-0151

Dear Mr. Shirley:

This transmits our final programmatic biological opinion for activities affecting up to 204 acres of golden-cheeked warbler (GCWA) habitat on the Camp Stanley and your GCWA mitigation program. It is anticipated that the individual projects will occur over the next five years that may adversely affect the golden-cheeked warbler (*Setophaga (=Dendroica) chrysoparia*), which is listed as endangered pursuant to the Endangered Species Act of 1973, as amended (Act)(16 U.S.C. 1531 et seq.) and its habitat.

The geographic scope of this consultation includes lands within the boundaries of Camp Stanley Storage Activity (Camp Stanley), Bexar County, Texas. Although other species listed as endangered pursuant to the Act (black-capped vireo and potentially Bexar County karst invertebrates) may occur on Camp Stanley, the projects in this programmatic opinion are not anticipated to cause any adverse effects to those species. Therefore, they will not be discussed further in this programmatic opinion.

The structure of this programmatic opinion is designed to provide an overall section 7 consultation framework pursuant to the Act within which Camp Stanley may seek regulatory approval for projects over a five year period. A project with adverse effects to listed species that do not meet the criteria set forth in this programmatic opinion will not be covered by this programmatic opinion and would require separate formal consultation. The Service will evaluate projects pursuant to this programmatic opinion as needed to ensure that its continued application will not result in adverse effects on listed species or their habitat in excess of those effects authorized under this programmatic opinion.

Projects covered by this programmatic opinion for incidental take of the golden-cheeked warbler will adhere to the following criteria: No more than 204 acres of golden-cheeked warbler habitat may be adversely affected by the proposed project during a five-year period. Restricting this programmatic opinion to relatively small projects will limit the effects of the programmatic actions on the golden-cheeked warbler and its habitat.

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The findings and recommendations in this consultation are based on: (1) various electronic mail correspondence (e-mails), meetings, site visits, and telephone conversations between Camp Stanley staff, U.S. Army's consultant, Parsons Corp., and the Service; (2) the May 1, 2012, letter to the Service requesting consultation; (3) the Biological Assessment of the Programmatic Golden-cheeked Warbler (*Setophaga chrysoparia*) Habitat Mitigation Process for Camp Stanley Storage Activity dated May 2012; and (4) other sources of information available to the Service.

Consultation History

- January 14, 2008* Service provides the U.S. Army final programmatic biological opinion for Camp Stanley Storage Activity pursuant to the Integrated Natural Resource Management Plan (INRMP).
- April 21, 2011* U.S. Army provides description of proposed road paving project at Camp Stanley to Service.
- May 6, 2011* Service provides the U.S. Army with letter affirming the road paving project and mitigation is consistent with terms and conditions of January 14, 2008 biological opinion.
- October 26, 2011* Camp Stanley provides its annual report to the Service.
- May 1, 2012* Service receives the U.S. Army's biological assessment and request for formal consultation.
- May 14, 2012* U.S. Army provides tour of Camp Stanley to the Service.
- July 17, 2012* Service provides a draft programmatic biological opinion to the U.S. Army.
- July 19, 2012* U.S. Army provides comments on the draft biological opinion to the Service.

Programmatic Opinion Guidelines

Implementing Procedure

The following process will be used when implementing future proposed projects under this programmatic opinion:

1. Camp Stanley will submit a letter to the Service requesting that a proposed action be covered by this programmatic opinion. The letter will be accompanied by a brief biological assessment of the specific action;

2. The Service will review the proposed action (project) to determine if the activity: (a) is not likely to adversely affect golden-cheeked warblers; (b) is appropriate to cover under to this programmatic opinion; or (c) requires a separate biological opinion;
3. When considering a proposed activity under this programmatic opinion, the Service will, in consultation with Camp Stanley staff: (a) review the proposed action with best available information; (b) determine the extent of habitat affected; (c) verify the number of golden-cheeked warbler habitat credits needed; and, (d) document Camp Stanley's off-site conservation measures (use of credits in an approved golden-cheeked warbler conservation bank or its equivalent).

BIOLOGICAL OPINION

Proposed Action

Over a five year period, Camp Stanley intends to design and build several facilities. These include, but are not limited to, buildings for training and water supply infrastructure. The actions covered by this programmatic opinion are necessary to support the varied missions of Camp Stanley Storage Activity. Section 7 (a)(1) of the Act directs Federal agencies to use their authorities to further the purposes of the Act by carrying out conservation programs for the recovery of listed species. Camp Stanley's conservation planning and golden-cheeked warbler mitigation measures are commendable examples of section 7(a)(1) efforts. For more detailed information on Camp Stanley missions, facilities, and conservation measures, please see the BA.

Project location is a key environmental planning opportunity. Selection of project location (siting) will consider a number of factors at Camp Stanley including but not limited to: (1) munitions storage quantity distance arcs; (2) buffer of the range fan; (3) flooding; (4) topography; (5) roads; (6) water and sewage infrastructure; (7) heritage tree preservation; and (8) habitat for the GCWA.

Camp Stanley proposes to establish an account with an adequate number of credits in a GCWA conservation bank. The first project to be covered is estimated to directly degrade about 19 acres of GCWA habitat. The initial number of credits acquired (2012) will be 23, which is expected to be adequate mitigation for the first project to be covered by this programmatic opinion. Camp Stanley estimates a maximum of 204 credits will serve its mitigation needs over the next five years and actual credits needed may be about 50 to 60. Camp Stanley will develop a project description for actions to be reviewed and covered by this programmatic biological opinion. The project description and evaluation of impacts to GCWA habitat will be submitted to the Service. The Service will respond to Camp Stanley with its determination for the project and proposed mitigation units. Camp Stanley will debit a commensurate number of GCWA credits in a GCWA conservation bank prior to ground disturbance for the subject action.

As stated in the BA, as much as 204 acres of GCWA habitat could be degraded by proposed actions. These effects would be mitigated by permanently conserving habitat in an accredited conservation bank. The BA describes the measures to avoid and minimize adverse effects to

GCWA habitat on Camp Stanley and the mitigation strategy for conserving GCWA off-post. The Service recognizes the need for flexibility in identifying and conserving GCWA habitat off-post and offers two options: (1) secure credits from any accredited GCWA conservation bank that includes Camp Stanley in its service area or (2) in coordination with the Service, establish a permanent conservation easement that meets all of the requirements of an accredited conservation bank. The following table (Table 1) summarizes the off-post measures proposed for GCWA habitat affected on Camp Stanley under this consultation. The BA provides descriptions for unoccupied habitat, buffer habitat, and occupied habitat.

Table 1. Proposed Off-Post Mitigation by Category of Habitat Affected.

Category of GCWA Habitat Per Biological Assessment	Ratio of Off-Post Acres in Conservation Stewardship to On-Post Acres Affected
1. Unoccupied (Potential)	1 : 1
2. Buffer Habitat	2 : 1
3. Occupied Habitat	3 : 1

To improve consistency in GCWA habitat determinations, the Service has provided detailed descriptions on our website, <http://www.fws.gov/southwest/es/AustinTexas>. One of the first steps in assessing a proposed project effects on GCWA habitat, is to follow the Texas Parks and Wildlife Department (2003) guidelines and identify/delineate GCWA habitat. It is noteworthy that GCWA have been found in habitat patches smaller than 12 acres and Butcher et al (2010) estimated that the minimum patch size for GCWA reproductive success is between 37 and 50 acres. While larger habitat patches are expected to support larger and more persistent GCWA populations, smaller patches may be important in a landscape where habitat is increasingly fragmented (TPWD 2003).

If GCWA have been detected in a given woodland patch, we consider the patch itself to be occupied. We are unaware of any appropriate means to identify a subset of a patch as occupied (with the balance of the patch designated unoccupied) based on a GCWA observation made during a presence/absence survey. Similarly, a circular buffer around one point (GCWA observation) should not be used to estimate the subset of a patch that is occupied because GCWA typically move freely within and sometimes among habitat patches. Studies of the territories, reproduction, feeding, and movement by all life stages indicate GCWA use a variety of areas within a patch.

Action Area

The Action Area is Camp Stanley Storage Activity, Bexar County, Texas. Figure 1 shows Camp Stanley and an adjacent part of Camp Bullis. Due to safety restrictions, future permanent facilities need to be located outside the range fan. Projects covered by this programmatic consultation are likely to be located in the western part of the North Pasture and the Inner

Cantonment (in the southwest part of Camp Stanley). Figure 2 shows the potential GCWA habitat from Model C developed by Missouri Resource Assessment Partnership (MoRAP) at the University of Missouri, Columbia. Camp Stanley is updating their 2005 vegetation surveys of potential habitat and will provide the report to the Service as part of the five-year review of the Camp's Integrated Natural Resource Management Plan (INRMP) no later than October 2012. These vegetation surveys were accomplished by field work in May and June 2012 following Service protocols and may refine the areas of potential habitat depicted in Figure 2.

Status of the Golden-cheeked Warbler

Species Description and Life History

The golden-cheeked warbler 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. For more information regarding the biology of the golden-cheeked warbler, please see the 1992 Golden-cheeked Warbler Recovery Plan.

The GCWA is a small, insectivorous songbird, 4.5 to 5 inches long with a wingspan of about 8 inches (Pulich 1976, Oberholser 1974). Golden-cheeked warblers breed exclusively in the mixed Ashe juniper/deciduous woodlands of the central Texas Hill Country west and north of the Balcones Fault (Pulich 1976). Golden-cheeked warblers require the shredding bark produced by mature Ashe junipers for nest material. Typical deciduous woody species include Texas oak (*Quercus buckleyi*), Lacey's oak (*Q. laceyi*), escarpment live oak (*Q. fusiformis*), Texas ash (*Fraxinus texensis*), cedar elm (*Ulmus crassifolia*), hackberry (*Celtis occidentalis*), bigtooth maple (*Acer grandidentatum*), sycamore (*Platanus occidentalis*), Arizona walnut (*Juglans major*), and pecan (*Carya illinoensis*) (Pulich 1976, Ladd and Gass 1999). Breeding and nesting GCWA feed primarily on insects, spiders, and other arthropods found in Ashe junipers and associated deciduous tree species (Pulich 1976).

Male GCWA arrive in central Texas around March 1st and begin to establish breeding territories, which they defend against other males by singing from visible perches within their territories. Females arrive a few days later, but are more difficult to detect in the dense woodland habitat (Pulich 1976). Three to five eggs are generally incubated in April, and unless there is a second nesting attempt, nestlings fledge in May to early June (Pulich 1976). If there is a second nesting attempt, it is typically in mid-May with nestlings fledging in late June to early July (Pulich 1976). By late July, GCWA begin their migration south (Chapman 1907, Rappole et al. 2000). Golden-cheeked warblers winter in the highland pine-oak woodlands of southern Mexico and northern Central America (Kroll 1980).

Historic and Current Distribution

The GCWA's entire breeding range occurs on the Edwards Plateau and Lampasas Cut Plain of central Texas. Golden-cheeked warblers have been confirmed in 39 counties: Bandera, Bell, Bexar, Blanco, Bosque, Burnet, Comal, Coryell, Dallas, Eastland, Edwards, Erath, Gillespie, Hamilton, Hays, Hill, Hood, Jack, Johnson, Kendall, Kerr, Kimble, Kinney, Lampasas, Llano, Mason, McLennan, Medina, Menard, Palo Pinto, Real, San Saba, Somervell, Stephens, Tom Green, Travis, Uvalde, Williamson, and Young. However, many of the counties where it is

known to occur, now or in the past, have only small amounts of suitable habitat (Pulich 1976, Service 1996, Lasley et al. 1997). Diamond (2007) estimated that the amount of suitable GCWA habitat across the species' range was about 4.2 million acres, much of this habitat occurring on private lands. As a result, the population status for the GCWA on private lands remains mostly undocumented throughout major portions of the breeding range.

Reasons for Decline and Threats to Survival

Before 1990, the primary reason for GCWA habitat loss was juniper clearing to improve conditions for livestock grazing. Since then, habitat loss has occurred as suburban developments spread into prime GCWA habitat. Groce et al. (2010) summarized the rates of expected human population growth within the range of the GCWA and found by 2030 the growth rate ranges from 17 percent around the Dallas-Fort Worth area to over 164 percent around San Antonio. As the human population continues to increase, so do associated roads, single and multi-family residences, and infrastructure, resulting in continued habitat destruction, fragmentation, and increased edge effects (Groce et al. 2010).

Fragmentation is the reduction of large blocks of a species' habitat into smaller patches. While GCWA have been found to be reproductively successful in small patches of habitat (less than 50 acres), there is an increased likelihood of occupancy and abundance as patch size increases (Coldren 1998, Butcher et al. 2010, DeBoer and Diamond 2006). Increases in pairing and territory success are also correlated with increasing patch size (Arnold et al. 1996, Coldren 1998, Butcher et al. 2010). In addition, while some studies have suggested that small patches that occur close to larger patches are likely to be occupied by GCWA, the long-term survival and recovery of the GCWA is dependent on maintaining the larger patches (Coldren 1998, Peterson 2001, Texas Nature Conservancy (TNC) 2002).

As GCWA habitat fragmentation increases it creates edges where two or more different vegetation types meet. For the GCWA edge is where woodland becomes shrubland, grassland, a subdivision, etc., and depending on the type of edge, it can act as a barrier for dispersal; act as a territory boundary; favor certain predators; increase nest predation; and/or reduce reproductive output (Arnold et al. 1996, Johnston 2006, Sperry et al. 2008, Sperry et al. 2009). Canopy breaks (the distance between tree top foliage) of as little as 36 feet have been shown to be barriers to GCWA movement (Coldren 1998). Territory boundaries have not only been shown to stop at edges, but GCWA will often avoid nesting near habitat edges (Beardmore 1994, DeBoer and Diamond 2006, Sperry 2007).

Other threats to GCWA include the clearing of deciduous oaks upon which the GCWA forage, oak wilt infection in trees, nest parasitism by brown headed cowbirds (Engels and Sexton 1994), drought, fire, stress associated with migration, competition with other avian species, and particularly, loss of habitat from urbanization (Ladd and Gass 1999). Human activities have reduced GCWA habitat throughout the species' range, particularly areas associated with the I-35 corridor between the Austin and San Antonio metropolitan areas.

Range-wide Survival and Recovery Needs

The recovery strategy outlined in the Golden-cheeked Warbler Recovery Plan (Service 1992), which is currently being revised, divides the breeding range of the GCWA into eight regions, or units, and calls for the protection of sufficient habitat to support at least one self-sustaining viable population in each unit. These recovery units were delineated based primarily on watershed, vegetation, and geologic boundaries (Service 1992).

According to the Golden-cheeked Warbler Population and Habitat Viability Assessment Report (Service 1996 (Golden-cheeked warbler PHVA) and Alldredge et al. (2002)), a viable GCWA population needs to consist of more than 3,000 breeding pairs. This and other population viability assessments on GCWA have indicated the most sensitive factors affecting their continued existence are population size per patch, fecundity (productivity or number of young per adult), and fledgling survival (Service 1996, Alldredge et al. 2002). These assessments estimated one viable population will need a minimum of 32,500 acres of prime unfragmented habitat to reduce the possibility of extinction of that population to less than five percent over 100 years (Service 1996). Further, this minimum carrying capacity threshold estimate increases with poorer quality habitat (e.g., patchy habitat resulting from fragmentation).

Mathewson et al. (2012) recently estimated the range-wide GCWA male population at 263,339 (95 percent confidence interval: 223,927 – 302,620). Morrison et al. (2012) concluded that the GCWA exists as a single population across its breeding range. Waples and Gaggiotti (2006) reviewed the varied use of the term population and described the difficulties and paradigms associated with defining a 'population'.

Based on the Golden-cheeked Warbler Recovery Plan (Service 1992), protection and management of occupied habitat and minimization of degradation, development, or environmental modification of unoccupied habitat necessary for buffering nesting habitat are necessary to provide for the survival of the species. Habitat protection must include elements of both breeding and non-breeding habitat (i.e., associated uplands and migration corridors). Current and future efforts to create new and protect existing habitat will enhance the GCWA's ability to expand in distribution and numbers. Efforts, such as land acquisition for GCWA habitat conservation and conservation easements, to protect existing viable populations is critical to the survival and recovery of this species, particularly when rapidly expanding urbanization continues to result in the loss of prime breeding habitat.

Several State and federally owned lands occur within the breeding range of the GCWA, but the overriding majority of the species' breeding range occurs on private lands that have been either occasionally or never surveyed (Service 1992). Currently, there are four large GCWA populations receiving some degree of protection: those at the Balcones Canyonlands Preserve in Travis County; the nearby Balcones Canyonlands National Wildlife Refuge (NWR) in Travis, Burnet, and Williamson counties; Camp Bullis Military Installation in Bexar County; and the Fort Hood Military Reservation in Coryell and Bell counties. There are also several conservation banks (CB) whose goal is to protect GCWA habitat (acres presented are the total if all bank credits are sold): Hickory Pass CB (3,003 acres) in Burnet County, Majestic Ranch CB (495 acres) in Kendall County, and Bandera Corridor CB (4,363 acres) in Bandera and Real

counties. The first phase (also called *tranche*) of the Bandera Corridor CB (about 2,400 acres) is in Bandera County about 48 miles from Camp Stanley.

Environmental Baseline

As described in the Golden-cheeked Warbler Recovery Plan (Service 1992), the breeding range of the GCWA in Texas is divided into eight recovery units and Camp Stanley is located in recovery unit 6. Camp Stanley is comprised of 4,004 acres. The Service estimates that about 30 percent (1,200 acres) of Camp Stanley is medium to high quality GCWA habitat based on models built on remotely sensed forest canopy cover data (Missouri Resource Assessment Partnership (MoRAP) 2008 and Loomis Partners 2008). The majority of Camp Stanley's oak – juniper woodlands are inside the boundaries of the range fan. GCWA surveys at Camp Stanley indicate that all large blocks of oak – juniper woodlands are occupied by GCWA.

The action area, Camp Stanley, constitutes a very small fraction of recovery unit 6. In determining the amount of GCWA habitat affected by a project, the Service uses (and directs others to use) the habitat descriptions in Texas Parks and Wildlife Department's 2003 management guidelines for the GCWA. Woodlands with tree canopy cover exceeding 35 percent containing a mix of Ashe juniper, oaks, and other hardwoods are considered potential GCWA habitat. The Service considers contiguous woodland habitat patches (having the hallmarks of TPWD's GCWA habitat guidance) as occupied if any portion of the woodland patch has been found to be occupied by GCWA during a current or relevant previous survey.

Relatively large blocks of GCWA habitat in Bexar and Comal counties, outside Camp Stanley, are located at Camp Bullis, Government Canyon State Natural Area (SNA) and Honey Creek SNA. Threats within the action area include a lack of oak recruitment due to herbivory from native and non-native animals, death of mature oaks from oak wilt, and wildfires (Pulich 1976, Armstrong et al. 1991, Texas Forest Service 2008, USDA and DOI 2001). Further, as large blocks of good quality habitat become developed, opportunities to meet recovery goals become more limited due to increased development pressure, increased land prices, and fragmentation.

According to our consultations tracking database, there have been 48 formal section 7 consultations on the GCWA range-wide. The action area these consultations covered was over 70.8 million acres. Four of these consultations were on Fort Hood; therefore, we've only counted that action area once in the total area covered by formal consultations. One consultation covered almost half of Texas at 60 million acres. Over 60,290 acres of GCWA habitat were authorized to be affected by these consultations. Several large consultations make up the majority (over 52,000) of this acreage: (1) over 33,000 acres were associated with Fort Hood activities; (2) over 14,000 acres were associated with brush control projects throughout the GCWA's 35 county range; and (3) 5,000 acres were for activities on Camp Bullis, less than 15 percent of which was considered occupied. The result of these consultations is over 63,000 acres of GCWA habitat maintained on DOD land and over 68,000 acres of private land preserved and/or maintained for the benefit of the GCWA.

Additionally, we have issued 129 individual 10(a)(1)(B) incidental take permits covering more than 885,819 acres (note: this is the permit area, not the actual acres of affected habitat). The

majority of this acreage comes from two Regional HCPs: Balcones Canyonlands Conservation Plan (BCCP) at 561,000 acres (Balcones Canyonlands Preserve or BCP) and Williamson County at 316,883 acres. In total all permits authorized effects to over 29,900 acres of GCWA habitat. Mitigation for these effects resulted in preservation of over 15,000 acres of GCWA habitat and almost \$1.3 million dollars towards GCWA conservation either to the BCP to buy additional lands or to TPWD to manage the 4,500 acre Parrie Haynes Ranch in perpetuity. Additionally, the BCP has another 20,000 acres of land as part of their preserve, some of which supports GCWA; and if Williamson County exercises their entire take authorized, an additional 4,000 acres will be preserved in perpetuity for the GCWA.

Since 2008, there has been one section 7 formal consultation on the GCWA in the action area. This consultation was on Camp Stanley's Integrated Natural Resources Management Plan (INRMP), which authorized no more than 0.8 acre of GCWA habitat per year to be permanently lost and no more than 3 acres of GCWA habitat per year to be temporarily adversely affected. There have been no 10(a)(1)(B) incidental take permits issued within the action area, as Camp Stanley is a Federal facility.

Distribution on Camp Stanley

Figure 3 shows the distribution of GCWA detections on Camp Stanley and nearby parts of Camp Bullis. The results of surveys and population monitoring of GCWA on Camp Stanley are provided in the BA. Figure 4 shows GCWA detection on Camp Stanley relative to areas characterized by their GCWA occupancy probability as estimated by Morrison et al. (2010). Golden-cheeked warblers have been documented in the majority of the areas of Camp Stanley with suitable habitat in surveys from 2005, 2007, 2009, and 2011. However, these surveys are not adequate for trend analyses. It is noteworthy that certain moderate size habitat patches (e.g., patches in orange in Figure 4, which is the site of the proposed warehouse expansion) appear to be continuously occupied. Golden-cheeked warblers have also been observed in areas surrounding Camp Stanley, including Camp Bullis, Eisenhower Park to the south, and Friedrich Wilderness Park to the west, as well as some adjacent private lands.

Effects of the Proposed Action

It is anticipated that up to 204 acres of golden-cheeked warbler habitat will be destroyed or degraded over a five year period due to the proposed activities. Incidental take of the golden-cheeked warbler under this programmatic opinion will be measured in terms of the direct and indirect effects to habitat resulting from the proposed activities.

The range fan part of the action area (outlined in Figures 1, 2, and 3) has maintained value as a large block of GCWA habitat due in part to restrictions from munitions storage and firearm testing.

Using habitat as an alternative for take of individual golden-cheeked warblers is consistent with the previous consultations and incidental take permits. Estimation of take of individual golden-cheeked warblers is difficult and this programmatic opinion substitutes the acres of habitat for the golden-cheeked warbler that will be affected, directly or indirectly, by proposed activities.

As stated in the proposed conservation measures of the BA, habitat impacts will be mitigated at various ratios depending on GCWA occupancy, commensurate with the estimated level of adverse effect to golden-cheeked warblers and their habitats. The greater the adverse effect to GCWA, the higher the mitigation ratio will be applied. Due to the mitigation ratio reflecting acquisition for amounts higher than a 1:1 ratio, it is anticipated that more suitable habitat for the golden-cheeked warbler will be preserved in perpetuity than that which is destroyed by the proposed clearing activity resulting in a net benefit to the golden-cheeked warbler in the long-term.

Cumulative Effects

Cumulative effects include the effects of future State, 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.

An undetermined number of future land use conversions and routine agricultural practices are not subject to Federal authorization or funding and may alter the habitat or increase incidental take of warblers and are, therefore, cumulative to the proposed project. These additional cumulative effects include: (1) unpredictable fluctuations in habitat due to urbanization; (2) increase in impervious cover due to urbanization and the installation of appurtenant facilities, i.e., roads, etc.; (3) use of pesticides on and near GCWA habitat; (4) contaminated runoff from agriculture and urbanization; (5) nest parasitism; and, (6) predation by feral animals and pets.

Camp Stanley and Camp Bullis provide relatively large patches of GCWA habitat in an urban and suburban landscape. The area around Camp Stanley is quickly being developed and GCWA habitat continues to be converted to other uses.

Conclusion

After reviewing the current status of the golden-cheeked warbler, 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 individual projects that meet the qualifications for this programmatic opinion, and will be evaluated for cumulative take and habitat losses annually, are not likely to jeopardize the continued existence of the golden-cheeked warbler. This is based primarily on the limited areal extent of the proposed projects. Woodland clearing associated with projects will not occur between March 1 and August 15, which will likely avoid direct take of individual birds. Further, the proposed mitigation strategy will render more protected habitat than that which is currently protected in proposed Recovery Unit 6 and the amount of habitat protected through the proposed mitigation strategy will exceed the amount lost from the proposed clearing on the Installation. The Service anticipates that the habitat protected in conservation banks off-post will be of better quality than that which is cleared.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined by the Service as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by the Service as an intentional or negligent act or omission which creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavioral patterns, which include, but are not limited to, breeding, feeding and sheltering (50 CFR §17.3). Harm is defined by the Service to include significant habitat modification or degradation that results in death or injury to listed species by impairing behavioral patterns, including breeding, feeding, and sheltering. Incidental take is defined by the Service 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 this Incidental Take Statement.

The measures described below are nondiscretionary and must be implemented by Camp Stanley so that they become binding conditions of any authorization issued to implement a project covered by this programmatic opinion, as appropriate, in order for the exemption in section 7(o)(2) to apply. Camp Stanley has a continuing duty to regulate the activity covered by this incidental take statement. If Camp Stanley (1) fails to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the authorizations, and/or (2) fails to retain oversight to ensure compliance with these terms and conditions, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, the Installation 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

The Service anticipates incidental take of golden-cheeked warblers will occur as a result of the proposed project. Project sizes and effects authorized under this programmatic opinion are expected to have both beneficial and adverse effects. The Service anticipates the following amount of incidental take from vegetation clearing on the Installation:

1. No more than 204 acres of golden-cheeked warbler habitat may be permanently destroyed over a five year period beginning August 16, 2012; and,
2. The number of golden-cheeked warblers that may be found within 204 acres of habitat may be disturbed, harassed, harmed, or killed as a result of actions authorized under this opinion.

All field biologists working on GCWA on Camp Stanley need to have their own section 10(a)1(A) permit. Any work conducted pursuant to valid permits will be covered for incidental take as prescribed in the individual permit conditions.

Effect of the Take

In the accompanying programmatic opinion, the Service has determined that this level of anticipated take is not likely to result in jeopardy to the golden-cheeked warbler due to the long-term beneficial effects associated with the proposed mitigation strategy and the commitment to provide for protection of GCWA habitat in perpetuity. Off-site mitigation will be secured prior to the initiation of clearing activities. No critical habitat has been designated for the golden-cheeked warbler, therefore, none will be affected.

Reasonable and Prudent Measures

The Service believes the following reasonable and prudent measure is necessary and appropriate to minimize incidental take of golden-cheeked warblers:

1. Minimize harassment and harm of golden-cheeked warblers during activities associated with project actions (e.g., clearing of woody vegetation); and,
2. Mitigation in the form of credits in GCWA conservation banks will occur prior to project-related adverse effects to GCWA habitat. The ratio of conservation bank credits acquired to the area affected by a given project will follow the description in Section 2 of the BA.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, Camp Stanley must comply with the following terms and conditions that implement the reasonable and prudent measures described above and outline required reporting/monitoring requirements. These terms and conditions are non-discretionary.

1. The following terms and conditions implement reasonable and prudent measure number one:
 - A. To the greatest extent practicable, authorized activities within golden-cheeked warbler habitat should be conducted between August 16th and February 28th. This is the non-nesting period for golden-cheeked warblers. Activities outside the breeding season that impact GCWA habitat may still result in indirect take of GCWA (in the form of harassment). Planning for projects should avoid GCWA habitat, when possible and minimize impacts when habitat cannot be avoided;
 - B. All personnel involved in any authorized activity covered by this programmatic opinion shall be informed of these terms and conditions prior to the implementation of the authorized activity;
 - C. Golden-cheeked warblers encountered during authorized activities should be allowed to move away from activities on their own;

D. To the greatest extent practicable, movement of heavy equipment to and from a project site shall be restricted to established roadways to minimize habitat disturbance;

E. Golden-cheeked warbler surveys shall be conducted biannually and in coordination with the Austin Ecological Services Field Office;

F. Occupied golden-cheeked warbler habitat, as described by the Service on page 3 of this programmatic opinion, is considered sensitive and valuable areas and personnel and planning efforts shall, to the greatest extent practicable, avoid such areas;

G. After completion of activities covered by this programmatic opinion that result in habitat alteration, any temporary fill, construction, or other debris shall be removed; and,

H. Camp Stanley shall ensure compliance with the reporting requirements below to assist in management decisions to avoid and minimize effects on golden-cheeked warblers and their associated habitats.

2. The following terms and conditions implement reasonable and prudent measure number two:

A. Prior to clearing activities, Camp Stanley shall ensure that mitigation for the affected area has been secured in an accredited conservation bank in perpetuity.

Reporting Requirements

Appropriate Camp Stanley personnel shall notify the Service immediately if golden-cheeked warblers are found on site as detailed in term and condition 1C, and will submit a report including date(s), location(s), habitat description, and any voluntary corrective measures taken to protect each bird found. Appropriate personnel shall submit locality information to the TPWD no more than 90 calendar days after completing the last field visit of the project site. Each form shall have an accompanying scale map of the site, such as a photocopy of a portion of the appropriate 7.5 minute U.S. Geological Survey map, and shall provide at least the following information: name of the quadrangle; dates (day, month, year) of field work; number of individuals and life stage (where appropriate) encountered; and a description of the habitat by community-vegetation type.

After a given project is submitted and the Service has provided its review of mitigation required, a brief summary should be provided within one month to the Service documenting when the project will be started, and where mitigation credits have been secured.

Where temporary or permanent adverse effects occur, a post-activity report shall be forwarded to the Field Supervisor, Austin Ecological Services Field Office, within 60 calendar days of the completion of such activities. This report shall detail (1) dates that activity occurred; (2) pertinent information concerning the success in implementing restoration measures, as appropriate; (3) an explanation of failure to meet such measures, if any; (4) known project effects

on species listed pursuant to the Act, if any; (5) occurrences of incidental take of species listed pursuant to the Act, if any; and (6) other pertinent information.

Camp Stanley shall provide an annual report to the Service recording each action, the effects of that action to golden-cheeked warblers, and the mitigation efforts to off-set adverse effects of the action to golden-cheeked warblers. This report may be included as a section in the report provided annually (due October 31) pursuant to the biological opinion for the INRMP.

The Austin Ecological Services Field Office is to be notified within three working days of the finding of any dead listed species or any unanticipated harm to the species addressed in this programmatic opinion. The Service contact person for this is the Field Supervisor at (512) 490-0057.

Review Requirements

The reasonable and prudent measures, with their implementing terms and conditions, are designed to minimize the effects of incidental take that might otherwise result from the proposed action. With implementation of these measures, the Service believes that no more than 204 acres of golden-cheeked warbler habitat will be permanently lost in Proposed Recovery Unit 6 for the duration authorized under this programmatic opinion, or a total of five years. Due to the proposed mitigation strategy, it is anticipated that there will be no net loss of habitat on the Installation within Proposed Recovery Unit 6.

If, during the course of the authorized activities, this level of incidental take is exceeded prior to the annual review, such incidental take represents new information requiring review of the reasonable and prudent measures provided. Camp Stanley must immediately provide an explanation of the causes of the taking and review with the Service the need for possible modification of the reasonable and prudent measures. This programmatic opinion will expire five years from the date of issuance. Issuance of a new programmatic opinion will be subject to evaluation of the recovery of the species.

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 GCWA, to help implement recovery plans, or to develop information.

The recommendations provided here relate only to the proposed action and do not necessarily represent complete fulfillment of the agency's section 7(a)(1) responsibilities for these species.

1. Camp Stanley should prepare and implement a fire protection plan in coordination with Austin Ecological Services and the Fire Management team at Balcones Canyonlands National Wildlife Refuge;

2. Camp Stanley should assist the Service in the re-development and implementation of the recovery plan for the golden-cheeked warbler;
3. Camp Stanley, in partnership with the Service, should develop maintenance guidelines for Camp Stanley projects that will reduce adverse effects of routine maintenance on GCWA and their habitat. Such actions may contribute to the conservation and recovery of GCWA by preventing degradation of existing habitat and increasing the amount and stability of suitable habitat; and,
4. Camp Stanley should work cooperatively with partners to develop the Southern Edwards Plateau Regional Habitat Conservation Plan.

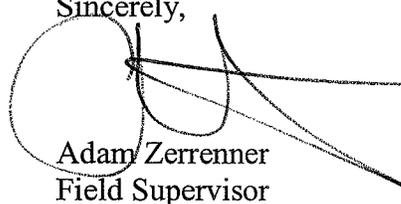
In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefiting GCWA or other listed species, the Service requests notification of the implementation of any conservation recommendations.

Reinitiation Notice

This concludes formal consultation on the implementation of the Habitat Mitigation Process for Camp Stanley Storage Activity, Bexar County, Texas. As provided in 50 CFR Sec. 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 consultation; (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 biological opinion; or, (4) a new species is listed or critical habitat designated that may be affected by the action. In instances where the amount or extent of incidental take is exceeded, any operations causing such take must cease pending reinitiation.

If you have any questions regarding this programmatic biological opinion, please contact Patrick Connor at (512) 334-8419.

Sincerely,



Adam Zerrenner
Field Supervisor

cc: James V. Cannizzo, U.S. Army, Camp Stanley, Boerne, TX

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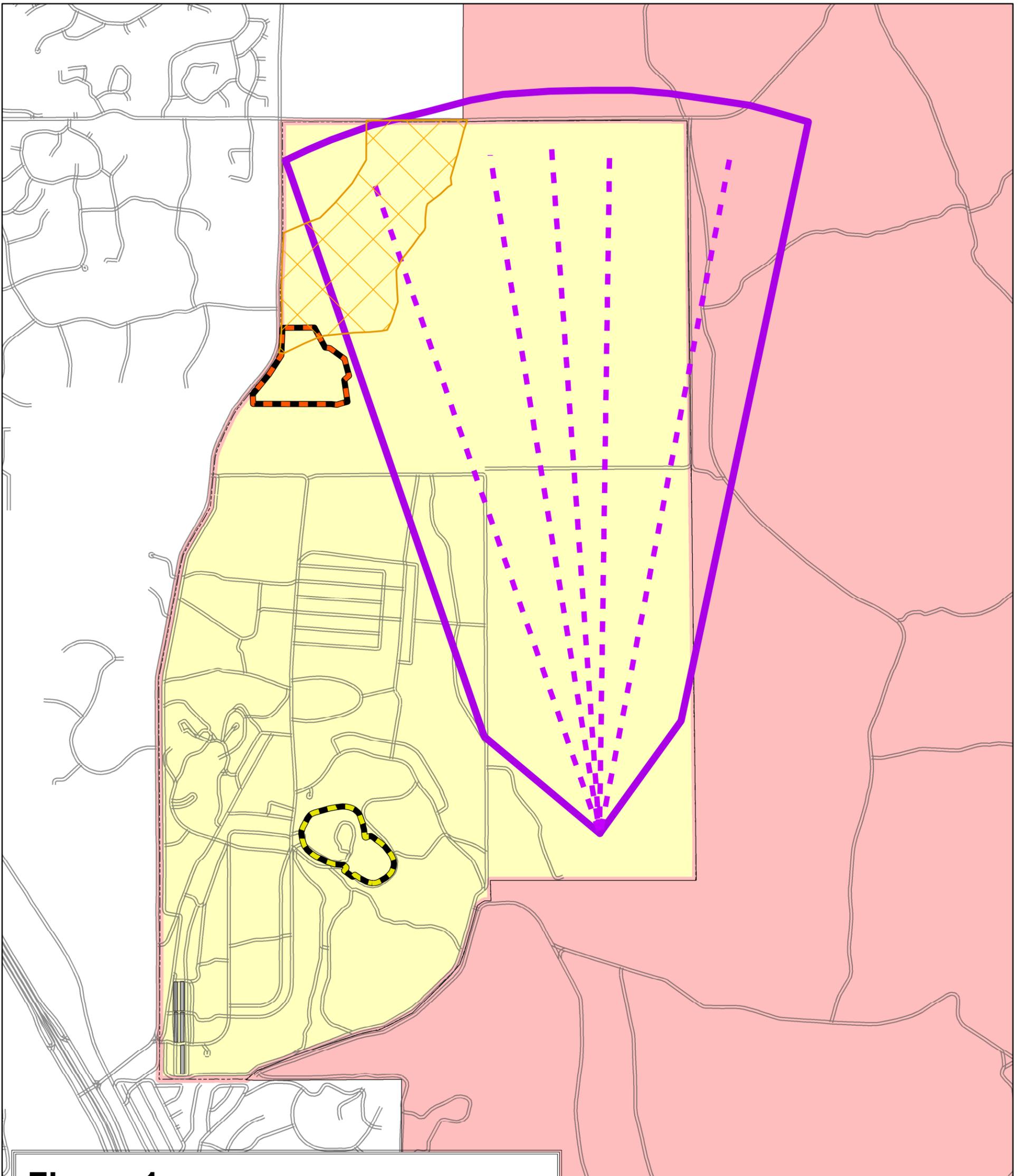
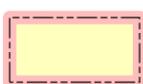


Figure 1.
Camp Stanley Storage Activity
Overview and Action Area

-  Camp Stanley & Action Area
-  Camp Bullis
-  Area Burned Sept. 2011
-  Range Fan Outline
-  General Area for Potential Project 2012
-  General Area for Potential Water Tower

0 0.4 0.8 1.6 Kilometers



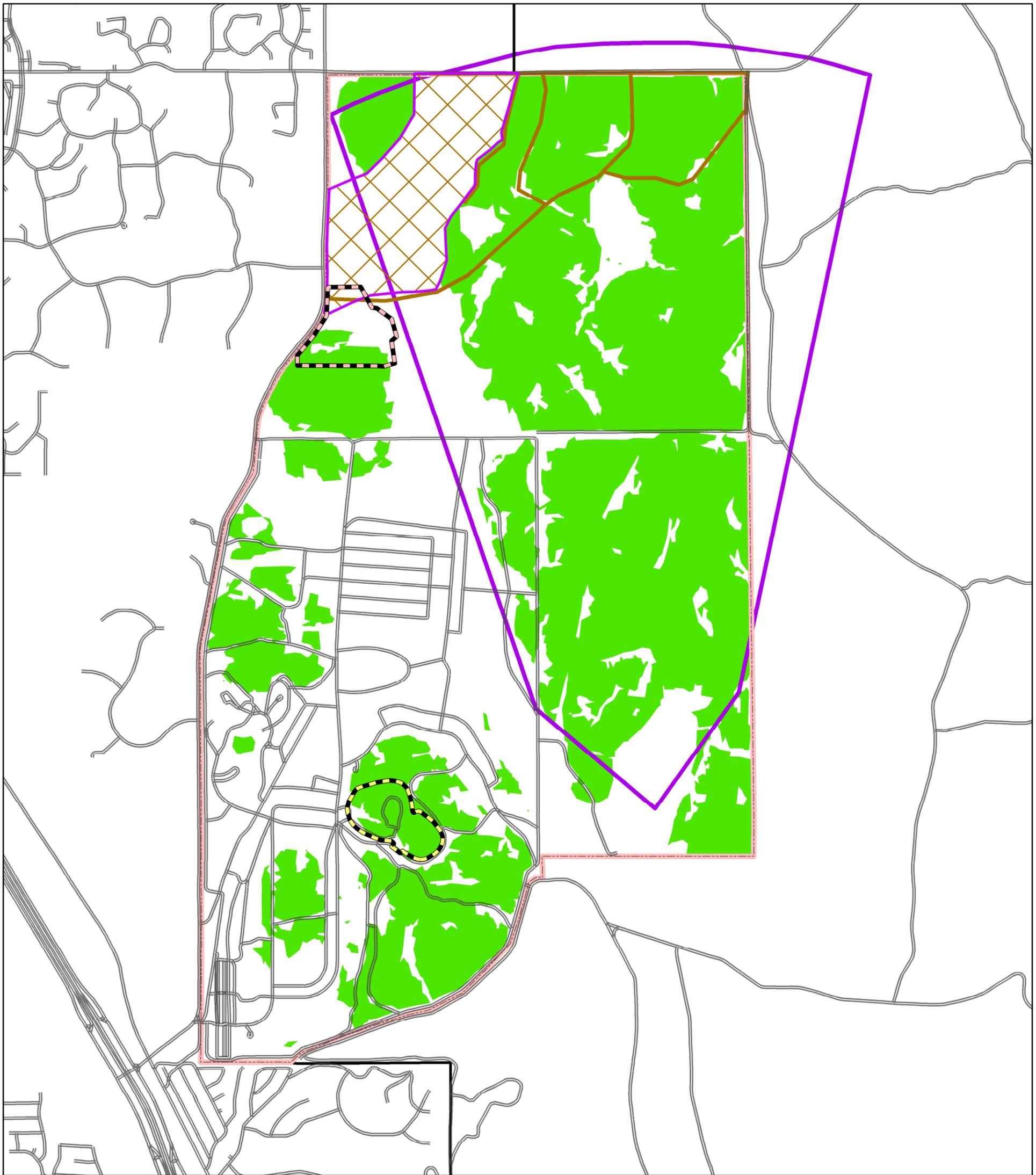
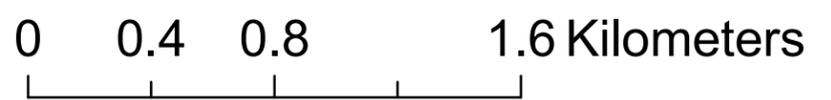
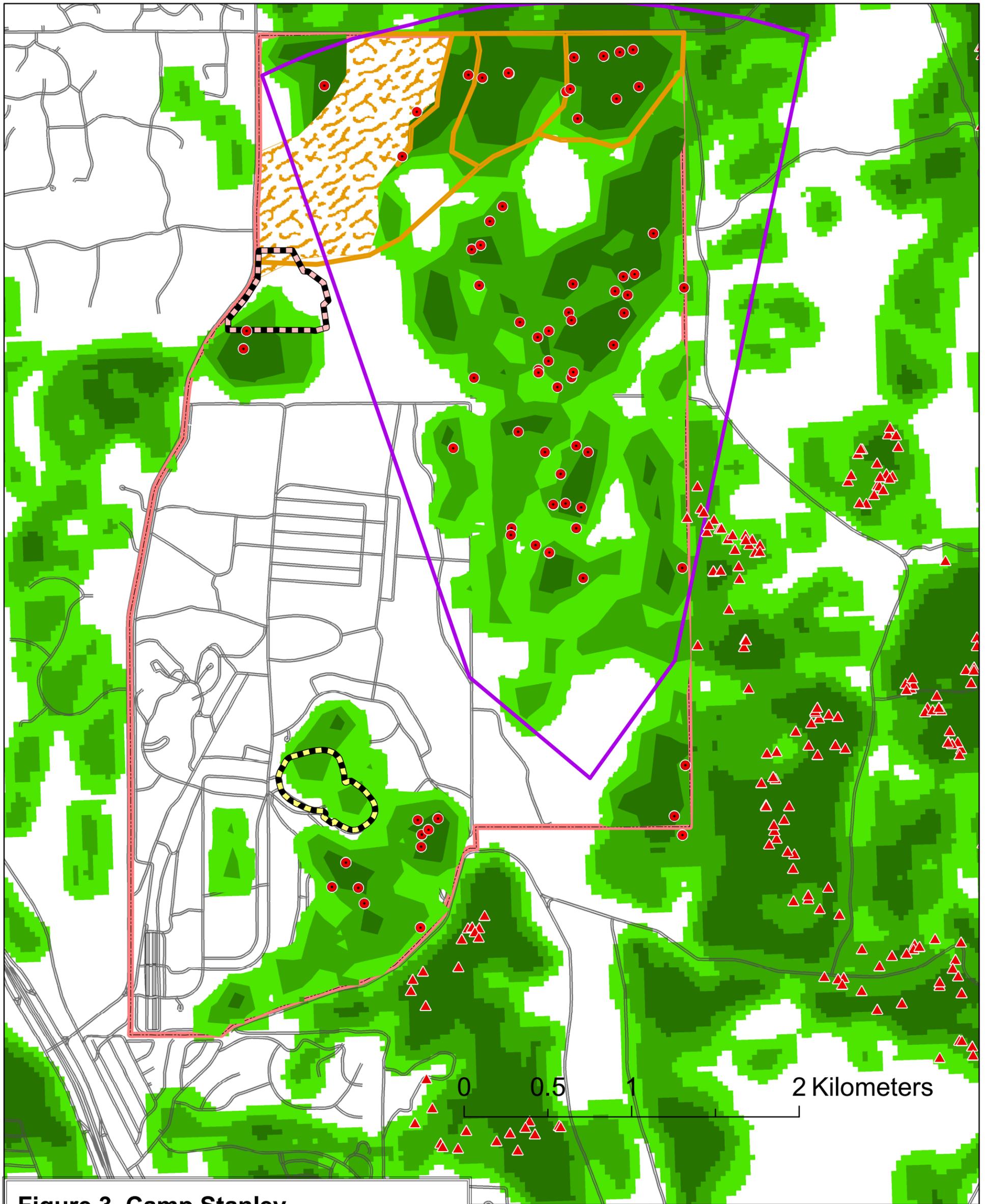


Figure 2.
Camp Stanley
Potential GCWA Habitat
After September, 2011 Burn
GCWA Habitat Model C
With Live Oak as Evergreen

Model C Live Oak as Evergreen

- Potential GCWA Habitat - All Classes - Low to High
- SEPT2011BURNAREACSSA
- 50ft_wide_FIRE_BREAKS_SEPT_2011
- WarehouseTraningArea2012
- Hilltop_for_Water_Tower





**Figure 3. Camp Stanley
Potential GCWA Habitat
Loomis Partners Model 2008**

GCWA Potential Habitat

Low

Medium

High

Range Fan Outline

Area Burned Sept. 2011

Warehouse Training Area 2012

Firebreaks

Hilltop_for_Water_Tower

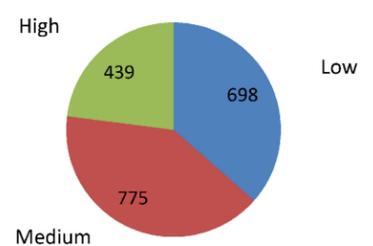
Camp Stanley GCWA Detected 2005 - 2011

Camp Bullis GCWA Detections 2010 - 2011

Row Labels	Sum of Acres	GCWA Potential
1	698.4	Low
2	774.9	Medium
3	439.3	High
Grand Total	1,912.6	

Sum of Acres

Potential GCWA Habitat Camp Stanley Total Area, in Acres with September 2011 Burn Removed



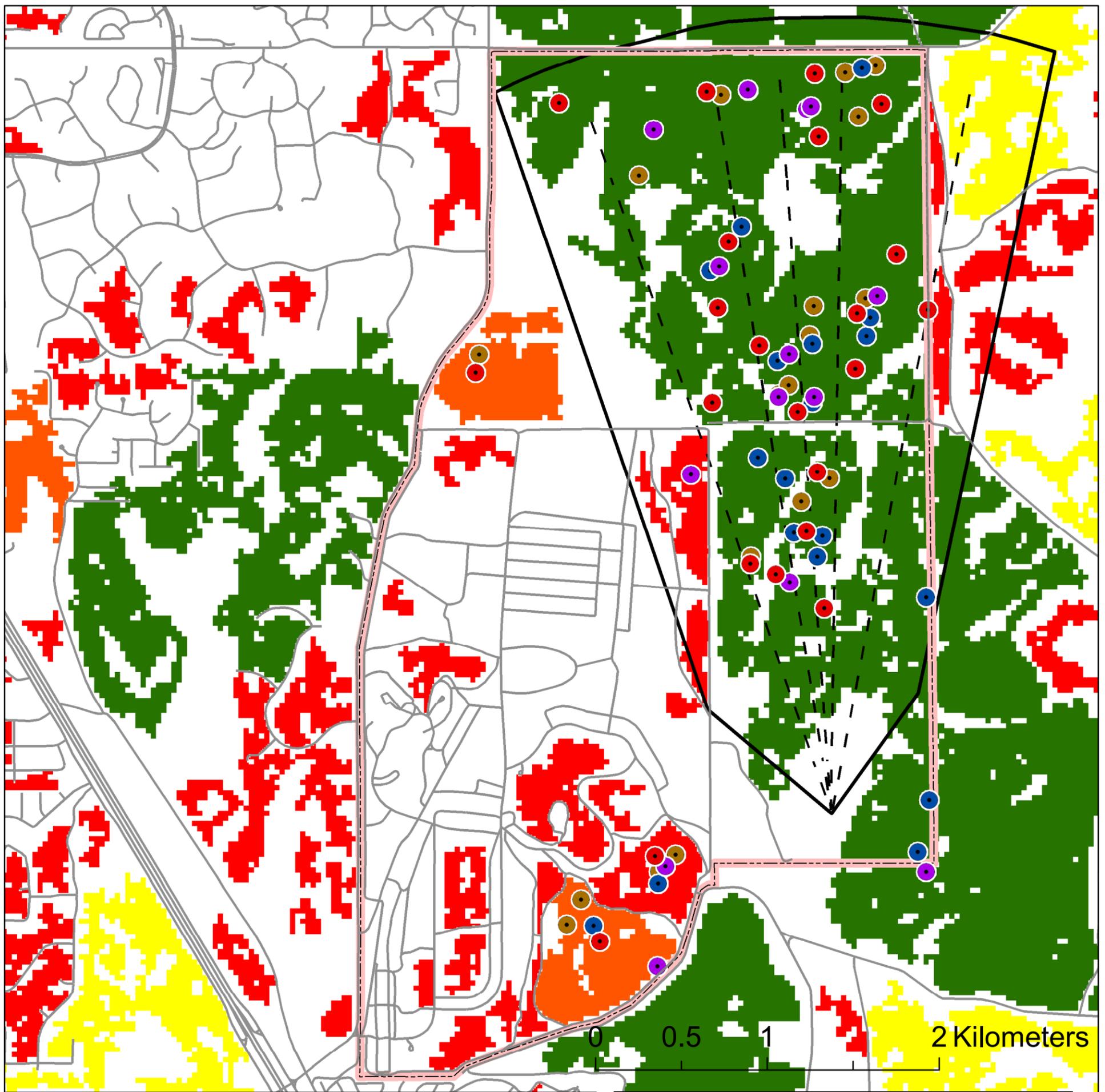
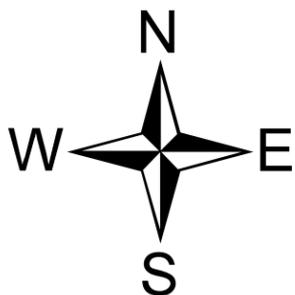


Figure 4. Camp Stanley with Texas A&M University 2010 IRNR GCWA Habitat Model

-  Camp Stanley
-  Range Outline
- Golden-Cheeked Warbler Model Habitat - Texas A&M 2010**
-  0.01 - 0.30 Occupancy Probability
-  0.31 - 0.50
-  0.51 - 0.70
-  0.71 - 1.00
-  2011-GCWA-detections
-  2009-GCWA-detections
-  2007-GCWA-detections
-  2005-GCWA-detections



Occupancy Probability Bin	Camp Stanley Total Acres GCWA in Bin
0.01 to 0.1	157.1
0.1 to 0.2	36.3
0.2 to 0.3	103.0
0.3 to 0.4	83.6
0.4 to 0.5	93.7
0.5 to 0.6	0.0
0.6 to 0.7	0.0
0.7 to 0.8	0.0
0.8 to 0.9	1343.3
0.9 to 1.0	0.0
Texas A&M GCWA Model (Statewide 2010)	
Total Acres	1817.0