

Final

**Low-Effect Habitat Conservation Plan for the
Mount Hermon June Beetle at 22 Blake Lane (APN: 022-172-47)
Scotts Valley, Santa Cruz County, California**



Prepared by:

Jodi McGraw, Ph.D.
*Population and Community
Ecologist*
PO Box 883
Boulder Creek, CA 95006
(831) 338-1990
jodimcgraw@sbcglobal.net

Prepared for:

Mr. Paul Locatelli
Blake Ln LLP
Lifestyles Real Estate Inc.
500 Seabright Ave, Suite
105
Santa Cruz, CA 95062

Submitted to:

Ms. Diane K. Noda
Field Supervisor
US Fish and Wildlife Service
2493 Portola Road, Suite B
Ventura, CA 93003

April 9, 2008

HCP for Mount Hermon June Beetle at 22 Blake LN, Scotts Valley, CA

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Executive Summary

Executive Summary

Blake Ln LLP is seeking an incidental take permit, under Section 10(a)(1)(B) of the Federal Endangered Species Act, to cover take of the Mount Hermon June beetle (*Polyphylla barbata*) associated with their proposed construction of six condominiums on an existing single family located at 22 Blake Lane (APN: 022-172-47), in the City of Scotts Valley in Santa Cruz County, central coastal California.

A 5-year permit term is requested to address incidental impacts to the federally endangered Mount Hermon June beetle associated with project construction. The impacts of the project would include permanent impacts to Mount Hermon June beetles potentially living within the 15,584 ft² (0.36 acre) area of the 18,204 ft² (0.42 acre) parcel that is not currently covered by existing improvements, which cover 2,620 ft² (0.06 acre). These impacts will result from demolition and grading of the site in preparation for construction. Of the 15,584 ft² (0.36 acre) area of potential habitat on the site, 6,298 ft² (0.14 acre) will be permanently removed through construction of the six condominiums and associated hardscapes. The remaining 9,286 ft² (0.21 acre) will be landscaped using elements designed to not deter use of habitat by Mount Hermon June beetle, such that the impacts on habitat will be temporary.

The Mount Hermon June beetle is a fossorial insect that lives in Zayante soils, which support unique communities known as the Zayante (or Santa Cruz) Sandhills (Sandhills). Though several other special status plants and animals are known to occur within the Sandhills, only the Mount Hermon June beetle will be impacted by this project. Due to the project's small size and occurrence within an area of high density residential development that is of marginal long term conservation value, the project is not anticipated to significantly impact the Mount Hermon June beetle.

This plan's conservation strategy includes the following measures designed to minimize the project's impacts on the Mount Hermon June beetle:

1. Locating the project on and adjacent to the already existing structure, and where habitat is more degraded relative to the remainder of the parcel.
2. Avoiding the flight season, if at all possible, and using erosion control fabric to prevent Mount Hermon June beetles from burrowing into exposed soil in the construction site when/if soil disturbing activities occur between May and August.

3. Having a qualified biologist translocate any larval beetles unearthed during construction activities to a portion of the project site outside of the impact area that supports intact vegetation.
4. Minimizing hardscaping associated with the project, and using native Sandhills plants to revegetate the area that will be temporarily disturbed.
5. Avoiding removal of the single native tree on the site, a 24" diameter ponderosa pine.
6. Revegetating areas of temporary habitat disturbance with native and non-invasive ornamental plants that do not degrade Mount Hermon June beetle habitat.

In addition, the applicants will mitigate the permanent impacts Mount Hermon June beetles potentially living in the 15,584 ft² (0.36 acre) area of the parcel not currently covered by impervious surfaces, and the permanent and temporary loss of habitat resulting from the project, through off-site mitigation at a ratio of 1:1. To accomplish this, a total of 15,584 ft² of conservation credits will be purchased from the Zayante Sandhills Conservation Bank—a conservation bank that conserves, manages, and monitors high quality Sandhills habitat preserves that have high conservation value for the Mount Hermon June beetle and other Sandhills species. The conservation credits will be purchased following receipt of the incidental take permit and prior to the inception of any project activities that would cause take, including soil disturbance.

The applicant will fund all elements of the proposed conservation strategy. A receipt for the purchase of conservation credits, which will provide proof of the habitat compensation, will be provided to the U.S. Fish and Wildlife Service following issuance of the incidental take permit, and prior to conducting any activities that would cause take. A qualified biologist will monitor project construction and upon completion of the project, conduct compliance monitoring and biological effects monitoring to evaluate success toward the biological goals and objectives, adherence to the proposed minimization measures, and the effects of the project on Mount Hermon June beetle individuals and habitat. Results of this monitoring will be provided to the U.S. Fish and Wildlife Service in annual project reports.

Section 1

Introduction and Background

1.1 Overview and Background

This Habitat Conservation Plan (HCP) for proposed construction of condominiums at 22 Blake Lane, a 0.42-acre home site in the City of Scotts Valley, Santa Cruz County, California, has been prepared pursuant to the requirements of Section 10(a)(1)(B) of the Federal Endangered Species Act of 1973, as amended (Act). The HCP is intended to provide the basis for issuance of a Section 10(a)(1)(B) permit to Blake Ln, LLP, the proposed developers, to authorize incidental take of the Mount Hermon June beetle (*Polyphylla barbata*), a federally-listed endangered species, that may result from development of the proposed condominiums. In August 2006, a qualified biologist determined that the project site contains Zayante soils, and therefore supports habitat for the federally endangered insect (Appendix A). A prior survey identified Mount Hermon June beetles emerging from the site (Arnold 2002).

1.2 Permit Holder/Permit Duration

Blake Ln LLP requests an incidental take permit to cover take of Mount Hermon June beetle for 3 years commencing on the date of permit approval. Project construction is anticipated to require less than 1 year. However, seasonal limitations on development may delay project inception following permit issuance. For this reason, a 5-year permit duration is requested to ensure that the covered activities will be implemented during the term of the permit.

1.3 Permit Boundary/Covered lands

A permit is requested to authorize the incidental take of Mount Hermon June beetles within the project area on the 0.42-acre property (APN: 022-172-47), located at 22 Blake Lane in the City of Scotts Valley, Santa Cruz County, central coastal California (Figure 1). The project site is located within the Felton 7.5" United States Geological Survey (USGS) topographic quadrangle, in Township 10S and Range 2W of the Mount Diablo Meridian.

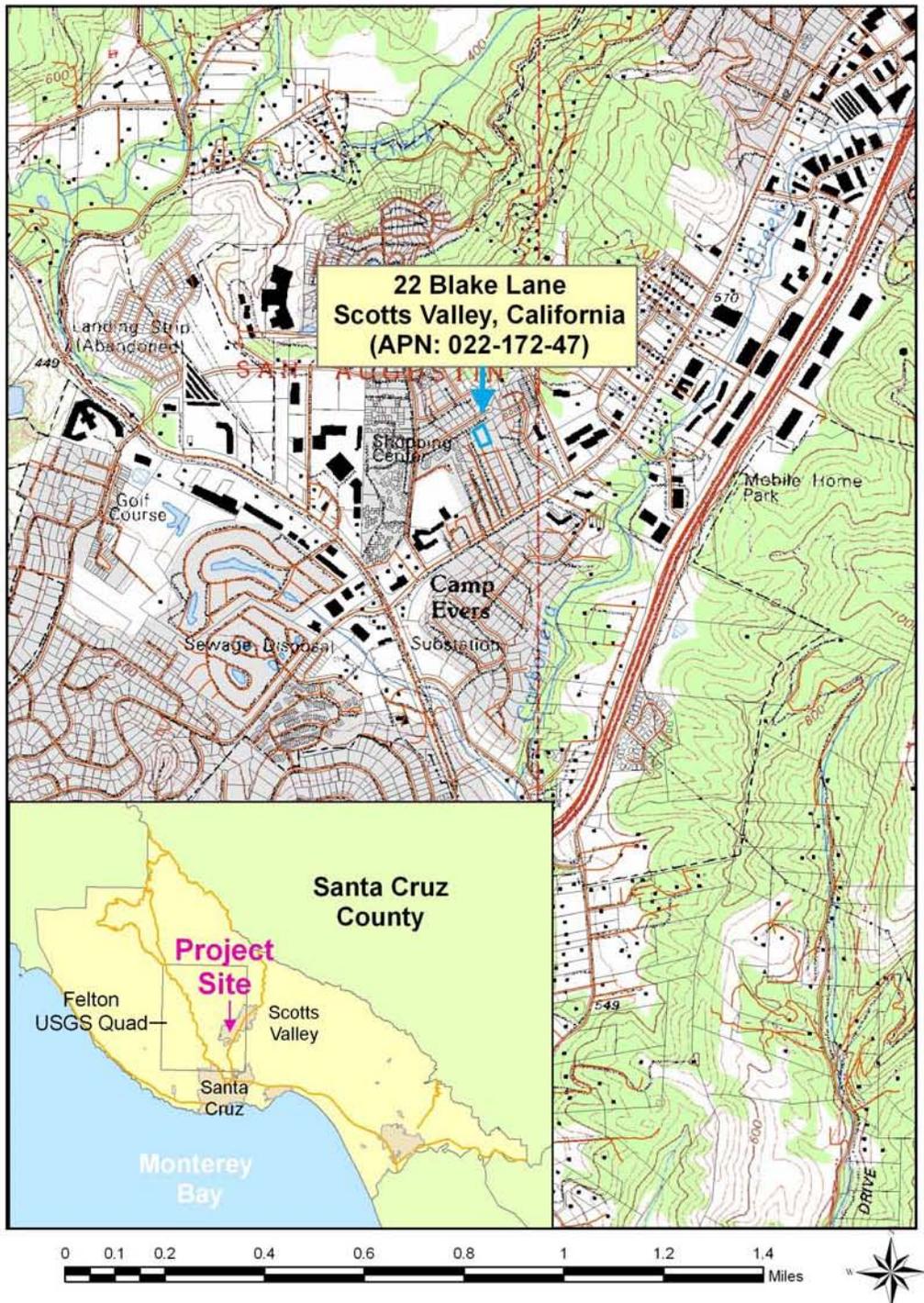


Figure 1: Location of proposed project site at 22 Blake Lane in the City of Scotts Valley, in Santa Cruz County, central coastal California. The project site is located within the Felton US Geological Survey Quadrangle. Map prepared by Jodi M. McGraw.

1.4 Species to be Covered by Permit

The following species is referred to as a "covered species" related to the Incidental Take Permit if it is issued.

<u>Covered Species</u>	<u>Federal Status/State Status</u>
Mount Hermon June beetle (<i>Polyphylla barbata</i>)	Federally Endangered

The following additional federally endangered species that occur with the Mount Hermon June beetle at other locations will not be addressed in this HCP or covered under the requested Incidental Take Permit as they do not occur at the project site due to a lack of suitable habitat (J. McGraw, pers. obs. 2006):

<u>Additional Species</u>	<u>Federal Status/State Status</u>
Zayante band-winged grasshopper (<i>Trimerotropis infantilis</i>)	Federally Endangered
Ben Lomond spineflower (<i>Chorizanthe pungens</i> var. <i>hartwegiana</i>)	Federally Endangered
Santa Cruz (Ben Lomond) wallflower (<i>Erysimum teretifolium</i>)	Federally Endangered/ CA State Endangered

1.5 Regulatory Framework

1.5.1 Federal Endangered Species Act

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 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 U.S. Fish and Wildlife Service (Service) as an intentional or negligent act or omission that creates the likelihood of

injury to listed species by annoying them to such an extent as to significantly disrupt normal behavioral 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.

Pursuant to section 11(a) and (b) of the Act, any person who knowingly violates section 9 of the Act or any permit, certificate, or regulation related to section 9, may be subject to civil penalties of up to \$25,000 for each violation or criminal penalties up to \$50,000 and/or imprisonment of up to one year.

Individuals and State and local agencies proposing an action that is expected to result in the incidental take of federally listed species are encouraged to apply for an incidental take permit under section 10(a)(1)(B) of the Act to be in compliance with the law. Such permits are issued by the Service when take is not the intention of and is incidental to otherwise legal activities. An application for an incidental take permit must be accompanied by a HCP. The regulatory standard under section 10 of the Act is that the effects of authorized incidental take must be minimized and mitigated to the maximum extent practicable. Under Act section 10, a proposed project also must not appreciably reduce the likelihood of the survival and recovery of the species in the wild, and adequate funding for a plan to minimize and mitigate impacts must be ensured.

Section 7 of the Act requires Federal agencies to ensure that their actions, including issuing permits, do not jeopardize the continued existence of listed species or destroy or adversely modify listed species' critical habitat. "Jeopardize the continued existence of..." pursuant to 50 CFR 402.2, means 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. Issuance of an incidental take permit under section 10(a)(1)(B) of the Act by the Service is a Federal action subject to section 7 of the Act. As a Federal agency issuing a discretionary permit, the Service is required to consult with itself (i.e., conduct an internal consultation). Delivery of the HCP and a section 10(a)(1)(B) permit application initiates the section 7 consultation process within the Service.

The requirements of section 7 and section 10 substantially overlap. Elements unique to section 7 include analyses of impacts on designated critical habitat, analyses of impacts on listed plant species, if any, and analyses of indirect and cumulative impacts on listed species. Cumulative effects are effects of future State, tribal, local or private actions that are reasonably certain to occur in the action area, pursuant to section 7(a)(2) of the Act. The action area is defined by the influence of direct and indirect impacts of covered activities. The action area may or may not be solely contained within the HCP boundary. These additional analyses are included in this HCP to meet the requirements of section 7 and to assist the Service with its internal consultation.

1.5.2 The Section 10(a)(1)(B) Process - Habitat Conservation Plan Requirements and Guidelines

The Section 10(a)(1)(B) process for obtaining an incidental take permit has three primary phases: (1) the HCP development phase; (2) the formal permit application processing phase; and (3) the post-issuance phase.

During the HCP development phase, the project applicant prepares a plan that integrates the proposed project or activity with the protection of listed species. An HCP submitted in support of an incidental take permit application must include the following information:

- impacts likely to result from the proposed taking of the species for which permit coverage is requested;
- measures that will be implemented to monitor, minimize, and mitigate impacts; funding that will be made available to undertake such measures; and procedures to deal with unforeseen circumstances;
- alternative actions considered that would not result in take; and
- additional measures USFWS may require as necessary or appropriate for purposes of the plan.

The HCP development phase concludes and the permit processing phase begins when a complete application package is submitted to the appropriate permit-issuing office. A complete application package consists of: 1) an HCP, 2) an Implementing Agreement (IA), 3) a permit application, and 4) a \$100 fee from the applicant. An implementing agreement is not required for an HCP that qualifies as a low-effect HCP. The Service prepares an Intra-Service Section 7 Biological Opinion; and also prepares a Set of Findings, which evaluates the Section 10(a)(1)(B) permit application in the context of permit issuance criteria (see below). An Environmental Action Statement, Environmental Assessment, or Environmental Impact Statement serves as the Service's record of compliance with the National Environmental Policy Act (NEPA). The Service must publish a Notice of Availability of the HCP package in the Federal Register to allow for public comment. The draft NEPA document, HCP, and IA (if applicable) are made available for public review during this 30-day to 90-day comment period. A Section 10(a)(1)(B) incidental take permit is granted upon a determination by that all requirements for permit issuance have been met. Statutory and regulatory criteria for issuance of the permit, pursuant to section 10(a)(2)(b) of the Act and 50 CFR 17.22 (b)(2) and 17.32 (b)(2) specify that:

- the taking will be incidental;
- the impacts of incidental take will be minimized and mitigated to the maximum extent practicable;
- adequate funding for the HCP and procedures to handle unforeseen circumstances will be provided;
- the taking will not appreciably reduce the likelihood of survival and recovery of the species in the wild;

- the applicant will provide additional measures that the Service requires as being necessary or appropriate; and
- the Service has received assurances, as may be required, that the HCP will be implemented.

During the post-issuance phase, the Permittee and other responsible entities implement the HCP, and USFWS monitors the Permittee's compliance with the HCP as well as the long-term progress and success of the HCP. The public is notified of permit issuance by means of the Federal Register.

1.5.3 National Environmental Policy Act

The purpose of the National Environmental Policy Act (NEPA) is two-fold: to ensure that Federal agencies examine environmental impacts of their actions (in this case deciding whether to issue an incidental take permit) and to utilize public participation. NEPA serves as an analytical tool on direct, indirect, and cumulative impacts of the proposed project alternatives to help the Service decide whether to issue an incidental take permit (ITP or section 10(a)(1)(B) permit). NEPA analysis must be done by the Service for each HCP as part of the incidental take permit application process.

1.5.4 National Historic Preservation Act

All Federal agencies are required to examine the cultural impacts of their actions (e.g. issuance of a permit). This may require consultation with the State Historic Preservation Office (SHPO) and appropriate American Indian tribes. All incidental take permit applicants are requested to submit a Request for Cultural Resources Compliance form to the Service. To complete compliance, the applicants may be required to contract for cultural resource surveys and possibly mitigation.

1.5.5 California Endangered Species Act (CESA)

The California Endangered Species Act (CESA) provides for the designation of native species or subspecies of fish, wildlife, and plants as endangered or threatened (CESA Section 2062-2067). The Mount Hermon June beetle is not listed under CESA. Therefore, this HCP will not further address CESA permitting requirements.

1.5.6 California Environmental Quality Act (CEQA)

The California Environmental Quality Act (CEQA) (Pub. Res. Code §21000 seq.) requires state and local governmental agencies to complete an environmental review of discretionary projects that could impact environmental resources. CEQA differs from NEPA in that it requires that significant environmental impacts of proposed projects be reduced to a less-than significant level through adoption of feasible avoidance,

minimization, or mitigation measures unless overriding considerations are identified and documented.

1.5.7 City of Scotts Valley Tree Ordinance

In February 2002, the City of Scotts Valley updated an ordinance regarding tree protection regulations (City of Scotts Valley 2002). The purpose of the ordinance is to protect significant trees which are a valued resource to the community of Scotts Valley. Determination of which trees receive protection is based on 1) location, 2) size, 3) requirements of permits approved by the Planning Department or Planning Commission, and 4) status as a “heritage tree.” For example, the City’s tree ordinance may protect some ponderosa pine trees that are designated heritage trees, grow near roadways, grow on slopes, or are large in size.

Section 2

Project Description/Activities Covered by Permit

2.1 Project Description

This proposed project will construct six condominiums and associated infrastructure on a 0.42 acre parcel in the City of Scotts Valley, Santa Cruz County, California. The parcel currently supports a single family home and other associated improvements, including several sheds, paved walkways, and a driveway. Despite the pre-existing development, Mount Hermon June beetles were observed throughout the parcel during surveys conducted in June 2002 (Arnold 2002).

2.2 Activities Covered by Permit

An incidental take permit is requested to cover impacts to the Mount Hermon June beetle that will result from construction of the condominiums and associated improvements, including:

- demolition and removal of the existing structures and improvements (e.g. pavement)
- grading to prepare the site for building
- construction of six condominiums
- installation of driveways, hardscaping, and native plant landscaping.

Construction would begin by removing existing structures and hardscaping, which cover a total of 2,620 ft² or 14% of the project parcel (Table 1).

Table 1: Area of proposed project parcel currently covered by structures and hardscaping that will be removed prior to construction

Structure	Area (square feet)
House	999
Sheds (3)	174
Brick patio	51
Concrete slab	660
Driveway	736
Total Existing Structures	2,620

Following removal of existing structures and hardscaping, the site will be graded. This will result in removal of all existing vegetation, which consists of landscape (non-native) plants in beds and planter boxes, as well as three locust trees which cover an estimated 800 ft². Demolition and grading are anticipated to be completed within one week.

Once the site is leveled, construction will begin immediately. Creation of the foundation will require approximately one week, after which the soil in the building footprint will no longer be exposed. Remaining work including building, paving, and landscaping will require six to nine months, though project delays could result in an extended period of take.

A more detailed description of the covered activities is provided in Section 4.1, which assess their direct and indirect impacts on the covered species.

Section 3

Environmental Setting/Biological Resources

3.1 Environmental Setting

3.1.1 Climate

Located in central Santa Cruz County, the project area experiences a mediterranean climate, characterized by cool, wet winters and hot, dry summers. Summer temperatures range from 45°F to 95°F, with an average of 68°F. Winter temperatures range from 36°F to 65°F, with an average of 51°F.

Annual precipitation is 44 inches, with most falling as rain. The rainy season is from October to May, with the majority of the rainfall occurring between December and March.

3.1.2 Topography/Geology

The project site is located in a valley at an elevation of 633 feet above sea level. The soil in the area of the proposed project is a light brown, loose sand soil characteristic of the Zayante series, which is an excessively well drained, low nutrient soil derived from the weathering of marine sediments and sandstones of the Santa Margarita Formation (U.S. Department of Agriculture 1980).

3.1.3 Hydrology/Streams, Rivers, Drainages

The project site is located within the San Lorenzo River Watershed. Carbonera Creek, a tributary to the San Lorenzo River that runs through Scotts Valley, is located 0.3 mile southeast of the project site.

The project area is within upland habitat and not within a flood zone or alluvial fan.

3.1.4 Existing Land Use

The proposed project will occur on a 0.42-acre home site located within a high density residential development within the City of Scotts Valley. Developed beginning in the mid-1900's, this area consists of a mix of single family homes, condominiums, and apartments. Of the 637 parcels located within a 109 acre area around the project parcel, the median parcel size is 0.09 acres, and 97% of the parcels are already developed.

The proposed project parcel is surrounded on three sides by developed parcels less than 0.5 acres, with the eastern border adjacent to a 2 acres parcel containing condominiums (Figure 2). The nearest patch of intact Sandhills habitat is located 0.5 miles north of the proposed project site, between Bean Creek and Bean Creek Road (McGraw 2004b; Figure 2).

3.2 Covered Species

Mount Hermon June beetle (*Polyphylla barbata*)

Status and Distribution

The Mount Hermon June beetle is a member of the family Scarabaeidae (Insecta: Coleoptera; Figure 3). The Mount Hermon June beetle was listed as federally endangered on January 24, 1997 (62 *Federal Register* 3509; Service 1997). Critical habitat has not been designated for this species.

The Mount Hermon June beetle occurs in association with Zayante sand soil in central Santa Cruz County. Outcroppings of Zayante soils support a unique ecosystem known as the Zayante (or Santa Cruz) Sandhills (Sandhills). Within the Sandhills, the Mount Hermon June beetle has been recorded from approximately 150 locations in the vicinity of Mount Hermon, Felton, Ben Lomond, Zayante, and Scotts Valley (Arnold 2004). While the entire known range of the Mount Hermon June beetle encompasses 10,000 acres, suitable habitat for the endangered insect is only known to occur within approximately 2,800 acres (McGraw 2004b) of that area. The amount of habitat which is presently occupied by the Mount Hermon June Beetle is unknown.

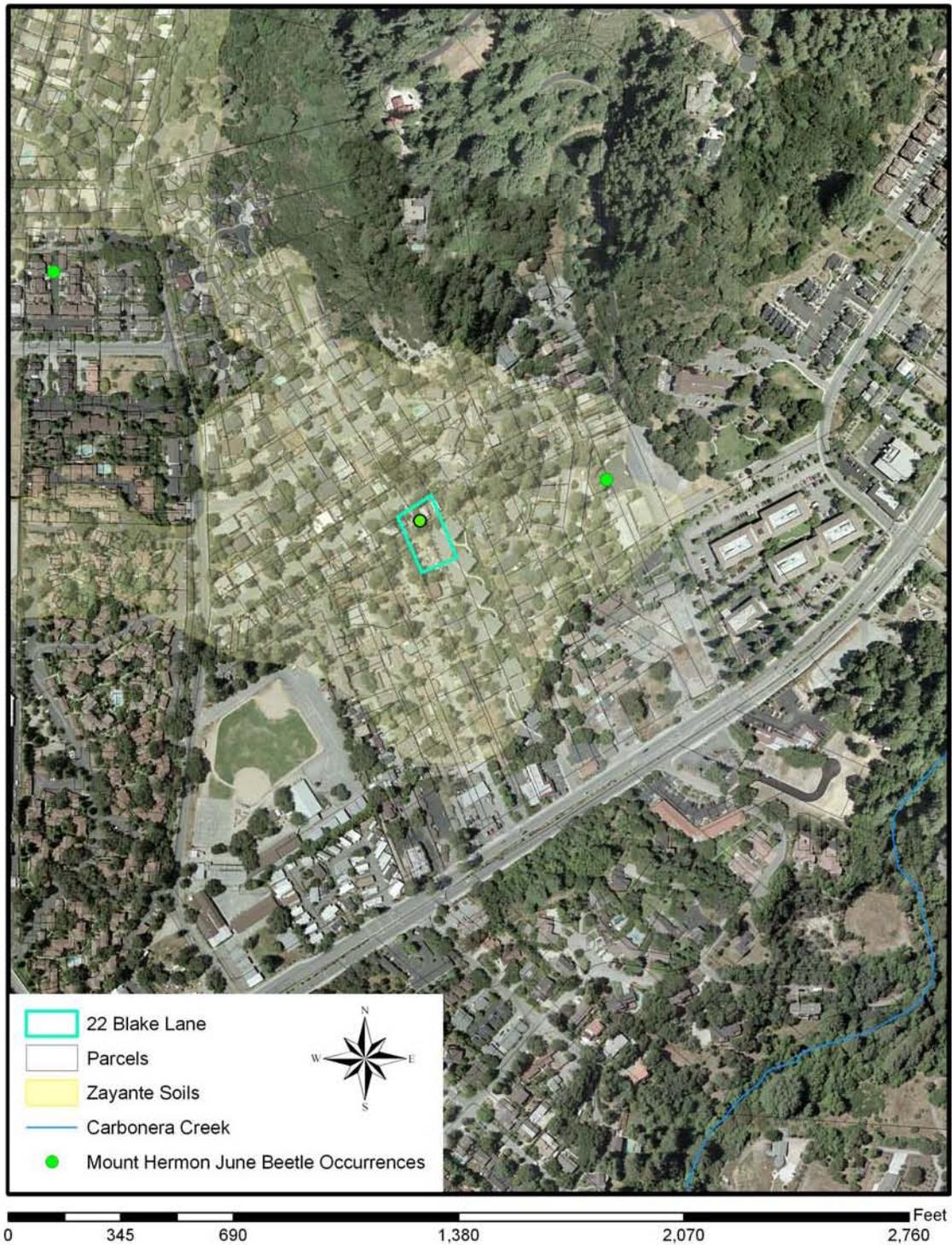


Figure 2: Location of proposed project site at 22 Blake Lane within the City of Scotts Valley, showing known occurrences of the Mount Hermon June beetle and (BUGGY 2004). Map prepared by Jodi M. McGraw.

Habitat Characteristics

The Mount Hermon June beetle occurs in the various plant assemblages or communities of the Sandhills, including those that could be broadly categorized as coast range ponderosa pine forest and northern maritime chaparral. In addition, the Mount Hermon June beetle has been found in areas where native Sandhills plant species have been removed, such as recently disturbed areas, and in areas covered by ornamental or other non-native plant species, including areas that have been converted for residential use (Arnold 2004).

Occurrences within the Project Area

In June 2002, a presence/absence survey documented the occurrence of Mount Hermon June beetles within the project parcel. A total of five Mount Hermon June beetles were trapped within four black light traps located in the four corners of the project parcel, and individuals of the species were also observed emerging within the center of the project parcel (Arnold 2002). Mount Hermon June beetles are also known to occur on sites located 450 feet east, 1,360 feet northwest, 1,810 feet southwest, and 2,600 feet north of the project parcel (BUGGY 2004; Figure 2).

The project parcel supports habitat suitable for Mount Hermon June beetle except where the ground is covered by impermeable surfaces including the house, sheds, walkways, patios, and driveway. The remainder of the parcel contains degraded habitat for the Mount Hermon June beetle. Approximately 3,000 square feet consist of an unpaved driveway and parking area which completely lack plants. The remainder of the parcel supports landscaping with plant species that are not native to the Sandhills. These factors reduce the abundance of native plant roots beneath the soil surface upon which larva of the Mount Hermon June beetle can feed.

Life History

The Mount Hermon June beetle is univoltine (i.e., has only one generation per year). The majority of the life cycle of the Mount Hermon June beetle occurs beneath the soil surface. Though little research has been conducted on below-ground stages of the life cycle of the Mount Hermon June beetle (e.g., eggs, larvae, pupae, and portions of the adult stage), information can be cautiously inferred from other species of *Polyphylla* that are well-studied, including the tenlined June beetle (*Polyphylla decemlineata*).

The life cycle of the Mount Hermon June beetle is estimated to require two to three years. After mating during the summer, adult females lay eggs beneath the soil

surface on, or in close proximity to, host plant roots. Eggs hatch into larvae that feed on roots of host plants. As the larvae grow, they molt from first to second, and finally third instars. Third instar larvae pupate below the soil surface, and eventually male and female adults emerge from pupae. Adult emergence and seasonal activity often begins in May and continues through about mid-August (activity period). However, seasonal activity may vary from year to year depending on weather conditions (Arnold 2004).



Figure 3: Mount Hermon June beetle adult male (left) and larva (right). Photographs by Jodi McGraw.

During the summer, adult Mount Hermon June beetles are active between approximately 7:00 p.m. and 10:00 p.m., with peak activity usually between 8:45 p.m. and 9:30 p.m. At dusk, adult males emerge from the soil, fly up through herbs and shrubs, and then fly low to the ground in search of flightless females, which emerge from the soil but remain on the surface of the ground and can be found by males which sense their pheromones. After mating occurs on the soil surface, females burrow underground where they presumably lay eggs.

A seasonal capture-recapture study suggested that adult males live no longer than eight days and that most males have home ranges of less than a few acres (Arnold 2001). The maximum dispersal distance documented for adult male Mount Hermon June beetles is 923 feet (Arnold 2000). Similar data on lifespan and dispersal of females are lacking at this time because they are so infrequently observed.

The Mount Hermon June beetle can be distinguished from three congeners (species of the same genus) which also occur in central Santa Cruz County by the presence of

relatively dense, long, erect hairs that are scattered over the elytra (leathery forewings), and short erect hairs on the pygidium (last abdominal segment) (Young 1967,1988). Adult males are typically 20 millimeters (mm) long and 9.7 mm wide, while the slightly larger females are approximately 22 mm long and 12 mm wide (Hill 2006).

3.3 Other Sandhills Endangered Species in Region

The Sandhills communities support other special status plant and animal species (Table 2), including three other federally endangered species.

Table 2: Special status species occurring within the Santa Cruz Sandhills.

Common Name	Scientific Name	Status
Mount Hermon June beetle	<i>Polyphylla barbata</i>	Federally Endangered
Zayante band-winged grasshopper	<i>Trimerotropis infantilis</i>	Federally Endangered
Ben Lomond spineflower	<i>Chorizanthe pungens</i> var. <i>hartwegiana</i>	Federally Endangered; CNPS 1B (most rare, threatened, or endangered)
Ben Lomond wallflower	<i>Erysimum teretifolium</i>	Federally Endangered; California Endangered; CNPS 1B
silverleaf manzanita	<i>Arctostaphylos silvicola</i>	CNPS 1B
Ben Lomond buckwheat	<i>Eriogonum nudum</i> var. <i>decurrens</i>	CNPS 1B

¹ California Native Plant Society *Inventory of Rare and Endangered Plants of California* (CNPS 2003)

The project parcel does not support habitat for the Zayante band-winged grasshopper, Ben Lomond wallflower, and Ben Lomond spineflower. The Zayante band-winged grasshopper occurs in Sandhills habitat characterized by loose sand soil that is covered with sparse herbaceous plant cover, with low tree canopy and thus high light conditions (Chu 2002, Arnold 2004a). The proposed project site contains a relatively dense canopy of honey locust (*Gleditsia triacanthos*)—trees that create low light conditions that are not conducive to the Zayante band-winged grasshopper. In addition, herbaceous plant cover within the site is limited to a few raised beds. The nearest known location of the endangered grasshopper is located 1.2 miles west of the proposed project site at the Hanson Quarry.

Ben Lomond spineflower, Ben Lomond wallflower, and silverleaf manzanita were not observed at the site during recent surveys. These species are likely excluded from the site due to low light conditions, historic landscaping, and ongoing soil disturbance associated with use of the parcel as a homesite. Though the Ben Lomond buckwheat can occur under lower-light conditions, it similarly was not observed on the proposed project site, likely due to human disturbance.

Section 4

Potential Biological Impacts/Take Assessment

4.1 Direct and Indirect Impacts

Direct Impacts

The proposed project has the potential to directly negatively impact Mount Hermon June beetles by causing mortality of individuals within the remaining area of exposed soil in the project footprint, and by causing permanent and temporary loss of habitat.

Impacts to Individuals

In order to remove the existing structures and hardscapes (Table 1) and level the project site, heavy equipment would disturb the soil within the majority of the site. Though a small portion of the area along the parcel perimeter might not be disturbed, this plan assumes that the entire 18,204 ft² (0.42 acre) parcel will be disturbed. Of this area, 2,620 ft² (0.06 acre) does not constitute habitat for the Mount Hermon June beetle, and instead consists of existing impermeable surfaces associated with prior development (Table 1). As a result, this proposed project could kill the fossorial larva of the Mount Hermon June beetles living within the 15,584 (0.36 acre) of open soil within the proposed project parcel through the process of grading the site in preparation for building.

Permanent Habitat Loss

This project will permanently remove 6,298 ft² (0.14 acre) of habitat for the Mount Hermon June beetle. The proposed condominiums, driveways, walkways, and retaining walls will cover a total of 8,918 ft² (0.2 acre) within 18,204 ft² (0.42 acre) parcel (Table 2). Of the area to be permanently covered by this project, 2,620 ft² (0.06 acre) does not constitute habitat for the Mount Hermon June beetle, and instead consists of existing impermeable surfaces associated with prior development (Table 1). As a result, the permanent habitat lost resulting from this project would be 6,298 ft² (i.e. 8918 ft² - 2,620 ft²).

The 6,298 ft² (0.14 acre) of habitat to be permanently covered as part of this project is highly degraded. An estimated 2,500 ft² within the parcel is used as secondary driveway and parking area. Though this area is not paved, and thus could be used by emerging Mount Hermon June

beetles, their abundance in this area is likely very low, owing to the absence of perennial plants and the occurrence of scattered rock on the soil surface. Much of the uncovered portion of the parcel that is not driven over regularly consists of sparse, non-native plants including English ivy (*Hedera helix*; Asteraceae) and honey locust (*Gleditsia triacanthos*).

The sole individual perennial native Sandhills plant known within the project site is an adult ponderosa pine (DBH= approx. 24') which is located on the northern boundary of the parcel, immediately adjacent to an existing fence. An arborist who examined the tree previously found that it was in fair to poor condition, as evidenced by its yellowing needles and sparse growth (Hamb 2005). The tree will not be removed and grading will be prevented within 7 feet of its trunk. Construction of the adjacent retaining wall may impact roots and further weaken the tree, however, potentially causing ultimate mortality.

Table 3: Area and percent of the project parcel to be impacted by the proposed project. Details provided in text.

Location	Area (square feet)	Percent of Parcel
Proposed Project Components		
Condominiums	3,095	17
Driveways	4,722	26
Walkways	799	4
Retaining Walls (3)	302	2
Total Area to be Covered by Project	8,918	49
Project Parcel	18,204	100
Area that is Currently Covered and Not Habitat (Table 1)	2,620	14
Potential Habitat within the Project Parcel	15,584	86
Potential Habitat to be covered by Project: Permanent Habitat Loss	6,298	35
Potential Habitat to be landscaped: Temporary Habitat Loss	9,286	51

Temporary Habitat Loss

Following construction, the open space areas within the proposed project site will be landscaped with native and non-invasive ornamental plant species. Landscaping elements that deter use of habitat by Mount Hermon June beetles including turf grass, mulch, aggregate, and weed matting, as well as other elements that could constrain emergence of adult beetles, will be avoided. The CC & Rs recorded for the property will preclude use of these elements on the property. As a result, habitat loss within 9,286 ft² of the proposed project parcel will be temporary.

Indirect Effects

Indirect impacts are those effects caused by covered activities that may occur at a different time or in a different place than the direct impacts. The project could indirectly affect Mount Hermon June beetles through the installation of new outdoor lighting, which can reduce reproductive success of the species. Adult male beetles are attracted to lights and may remain on them, rather than searching for females, during the breeding season. Lights installed in the proposed project parcel could attract beetles from adjacent parcels. To minimize the likelihood of these impacts, lights installed on the outside of the condominiums will be motion sensing and designed to illuminate the designated area (e.g. driveway) only during the period required. Persistent outdoor lighting will be avoided.

The proposed project has the potential to affect male Mount Hermon June beetles that might disperse into the project area from adjacent parcels and then burrow into open soil during construction, perhaps being killed by construction activities before they re-emerge. To avoid this impact, any exposed soil that was previously covered by impervious surfaces (Table 1) will be covered before 7 p.m. each night with erosion control fabric (e.g. Geo Jute), which will preclude dispersing males from burrowing into soil within the project area and being impacted by ongoing construction.

4.2 Anticipated Take of Covered Species

The proposed project could cause mortality of Mount Hermon June beetles that might occur within the 15,584 ft² (0.36 acre) of soil that is not currently covered by impervious surfaces and that will be disturbed during grading to construct the condominiums and associated improvements. Of this area, 6,298 ft² (0.14 acre) would be permanently covered with impervious surfaces and thus unavailable to Mount Hermon June beetles, thus representing permanent habitat loss. The remaining 9,286 ft² (0.21 acre) will be landscaped to provide access by Mount Hermon June beetles, which could recolonize the site. As a result, this represents temporary habitat loss.

4.4 Effects on Critical Habitat (if applicable)

Critical habitat has not been designated for the Mount Hermon June beetle. In designating critical habitat for the Zayante band-winged grasshopper, the Service included 10,560 acres of land in central Santa Cruz County. This area represents the boundaries of the known distribution of the endangered insect. The primary constituent elements of critical habitat for the Zayante band-winged grasshopper are the presence of Zayante soils, the occurrence of Zayante Sandhills habitat and the associated plant species, and certain microhabitat conditions, including areas that receive large amounts of sunlight, widely scattered tree and shrub cover, bare or sparsely vegetated ground, and loose sand (Service 2001).

This proposed project occurs within the boundaries of the Zayante band-winged grasshopper critical habitat designation. However, because the site is well-shaded by exotic trees and thus receives minimal direct sunlight and lacks herbaceous plant species, the site does not contain

the primary constituent elements for the Zayante band-winged grasshopper. Therefore, the proposed project activities would not impact the endangered insect's critical habitat.

4.5 Anticipated Impacts of the Taking

Neither the mortality of Mount Hermon June beetles potentially occupying the 15,584 ft² of intact soil proposed to be disturbed during project destruction, nor the permanent removal of 6,298 ft² of habitat due to the construction of the condominiums, are anticipated to affect persistence of the Mount Hermon June beetle in the Scotts Valley region or throughout the species range. The project impacts are extremely unlikely to influence successful recovery of the endangered species. This assessment is made based on several factors including:

1. The small area of habitat that will be removed
2. The degraded nature of the habitat that will be lost
3. The high density residential development surrounding the project area.

Within this residential area within the City of Scotts Valley, the Mount Hermon June beetle population faces numerous threats from on-going activities associated with existing residential development, including but not limited to: irrigation, installation of non-native landscaping, fire suppression, night lighting, existing buildings, walls, fences and swimming pools, native plant removal, and digging by pets.

As a result of historic residential development, the Mount Hermon June beetle population within this area is likely unnaturally small and as a result, may be susceptible to extirpation from random genetic, demographic, or environmental events. The small size of the project parcel, as well as the low number of undeveloped parcels within the neighborhood, greatly limits opportunities for permanent conservation through acquisition or conservation easements. Given the ongoing threats and lack of conservation opportunities for Mount Hermon June beetle, remaining habitat in the project area and vicinity is considered degraded and suboptimal.

That said, habitat within this Scotts Valley residential neighborhood could provide some long term conservation value for Mount Hermon June Beetle. Though degraded, fragmented, and reduced in size, the habitat may support persisting populations of the endangered insect. The Mount Hermon June Beetle lives 99% of its life belowground. Therefore, it is possible that development, at least at the current level, might not cause extirpation (population extinction). Indeed, the fact that Mount Hermon June Beetles, which have a 2-3 year life cycle, still inhabits this area, which began to be developed several decades ago, suggests that populations could persist here despite the current level of development.

4.6 Cumulative Impacts

In contrast with the analysis of cumulative impacts under section 7, section 10 of the Act and HCPs analyze cumulative impacts as incremental impacts of the action on the environment when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. The

geographic area for analysis should be defined by the manifestation of direct or indirect impacts as a result of covered activities. Cumulative impacts under section 10 of the Act can result from individually minor but collectively significant actions taking place over a period of time.

The impacts of this project on the persistence of the endangered Mount Hermon June beetle are low, owing not only to the small size of the project, but also its occurrence in a already developed and therefore both degraded and fragmented habitat area. Redevelopment to increase the number of units on small parcels such as this will continue to reduce the amount of open sand habitat available for the species. It is possible that, over time, this development will result in the extirpation of the Mount Hermon June beetle from this developed area. Such infill development is unlikely to impact populations which persist at presumably higher densities within the intact habitat that is being protected to the west of this project (Figure 2; McGraw 2004b). As a result, the cumulative impacts of this project on the persistence of the Mount Hermon June beetle are anticipated to be very small.

Section 5

Conservation Program/Measures to Minimize and Mitigate for Impacts

5.1 Biological Goals and Objectives

Section 10(a)(2)(A) of the Act requires that an HCP specify the measures that the permittee will take to minimize and mitigate to the maximum extent practicable the impacts of the taking of any federally listed animal species as a result of activities addressed by the plan.

As part of the “Five Point” Policy adopted by the Services in 2000, HCPs must establish biological goals and objectives (65 *Federal Register* 35242, June 1, 2000). The purpose of the biological goals is to ensure that the operating conservation program in the HCP is consistent with the conservation and recovery goals established for the species. The goals are also intended to provide to the applicant an understanding of why these actions are necessary.

These goals were developed based upon the species’ biology, threats to the species, the potential effects of the Covered Activities, and the scope of the HCP.

Goal 1: Avoid and minimize take of the Mount Hermon June beetle within the project site.

Objective 1.1: Conduct the project in an area of degraded habitat for the Mount Hermon June beetle.

Objective 1.2: During any portion of construction occurring during the flight season of the Mount Hermon June beetle, use erosion control cloth to cover exposed soil in areas that previously were covered with impervious surfaces to prevent dispersing males from burrowing into these areas and being impacted by construction

Objective 1.3: Revegetate the temporarily disturbed habitat with native Sandhills plants and non-invasive ornamental plant species, and avoid landscaping with turf grass, weed matting, aggregate, and mulch.

Objective 1.4: Minimize night lighting during the flight season of the Mount Hermon June beetle.

Objective 1.5: Avoid removing the single native tree, a ponderosa pine, by preventing grading within seven feet of the tree.

Goal 2: Protect habitat for the Mount Hermon June beetle at an off-site location of high long-term conservation value to the species.

Objective 2.1: Provide funds to protect, manage, and monitor habitat for the Mount Hermon June beetle at a conservation bank.

5.2 Avoidance, Minimization, and Mitigation Measures

Section 10 of the Act requires that all applicants submit HCPs that “minimize and mitigate” the impacts of take authorized by an incidental take permit, and that issuance of the permit will not “appreciably reduce the likelihood of the survival and recovery of the species in the wild.” In general, HCPs should include mitigation programs that are based on sound biological rationale, practicable, and commensurate with the impacts of the project on species for which take is requested. Additionally, the Service encourages applicants to develop HCPs that contribute to the recovery of a listed species. If the proposed project is expected to result in permanent habitat loss, then the mitigation strategy must include compensatory mitigation consisting of the permanent preservation of suitable habitat or similar measures.

In accordance with these guidelines and the requirements of the Endangered Species Act, the Conservation Program of this HCP is intended to achieve its biological goals and objectives and to ensure that the impacts of Covered Activities on the Mount Hermon June beetle are minimized and mitigated to the maximum extent practicable.

5.2.1 Measures to Minimize Impacts

The following measures are designed to minimize the indirect effects of the covered activities on the Mount Hermon June beetle by reducing incidental take of individuals and the degradation of habitat adjacent to the project area and existing development.

5.2.1.1: Locate project on and adjacent to current development.

The project will occur in an already developed parcel. New buildings will be constructed on areas that either do not provide habitat due to prior development, or have highly degraded habitat as a result of chronic soil disturbance and removal of native plant species resulting from long-term use of the project parcel as a homesite.

5.2.1.2: If ground disturbing activities are conducted during the flight season of the adult Mount Hermon June beetle, erosion control fabric will be placed over exposed soil in areas that were previously covered by concrete in order to avoid impacts to dispersing males.

Adult male Mount Hermon June beetles actively search for mates and breed during the evenings for approximately 12-14 weeks sometime between May 15 and August 15. During this period, males and females may burrow into duff and soils at relatively shallow depths for protection during the daytime hours. Every attempt will be made to conduct soil disturbing aspects of the project outside of the adult flight season. If construction occurs during any part of the flight season, erosion control fabric will be used to cover open soil that was previously covered with impervious surfaces (Table 1) each night by 7 p.m. to prevent adult males from burrowing into the area and later being impacted by subsequent soil disturbance (digging, grading, or covering).

5.2.1.3 The area of temporary habitat disturbance will be revegetated with native and non-invasive ornamental plants, and no additional landscaping elements that degrade Mount Hermon June beetle habitat will be installed as part of this project.

Adult Mount Hermon June beetles emerge from under the soil surface to attract and locate mates. Turf grass, dense ground cover plants (e.g. ivy), weed matting, aggregate, and mulch can degrade habitat for this endangered insect, and will not be added in this project. Instead, the open space areas will be planted with native and non-invasive ornamental plant species.

5.2.1.4 Any potential larva or adult of the Mount Hermon June beetle (Figure 3) encountered in an area to be impacted by Covered Activities will be relocated in the intact habitat in the northern portion of the parcel around the ponderosa pine, and re-buried at the approximate depth at which it was unearthed. If the Mount Hermon June beetle is found on the soil surface, then it will be relocated to this area and left on the soil surface in a location protected by vegetation.

This measure will minimize take of the Mount Hermon June beetle by reducing the number of larvae, pupae, and adults that could be injured or killed as a result of project-related activities.

5.2.2 Measure to Mitigate Unavoidable Impacts

The proposed project will cause mortality to Mount Hermon June beetles within 15,584 ft² of potential habitat within the 18,204 ft² project parcels. (The remaining 11 2,620 ft² is covered by existing impervious surfaces and therefore does not constitute habitat.) To mitigate these impacts, the applicant will secure conservation credits at the Zayante Sandhills Conservation Bank at a 1:1 ratio, such that 15,584 ft² square foot credits to be secured. These ratios are appropriate,

given that the habitat impacted is highly degraded due to historical residential uses, and the habitat to be protected and managed by the Zayante Sandhills Conservation Bank is of exceptionally high conservation value for the Mount Hermon June beetle. The conservation credits will be purchased following receipt of the incidental take permit and prior to the inception of any project activities that would cause take, including soil disturbance.

The Zayante Sandhills Conservation Bank was established to provide mitigation for impacts to Mount Hermon June beetle and other special status Sandhills plants and animals that might result from development projects within the Felton USGS quad, such as this project. Presently, the Zayante Sandhills Conservation Bank is selling credits for the Ben Lomond Sandhills Preserve, a 23 acre Sandhills habitat preserve located in Ben Lomond, California, approximately 3.2 miles northwest of the project site (Figure 4).

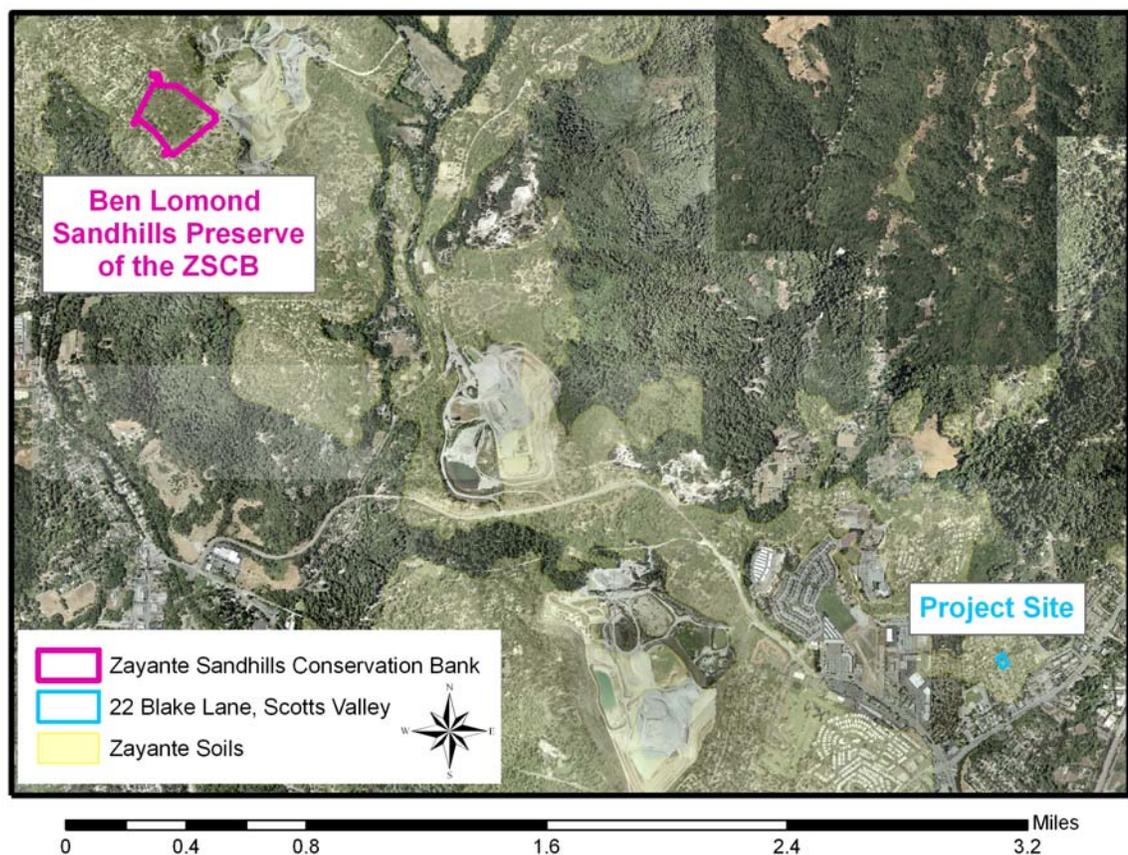


Figure 4: Location of the proposed project site at 22 Blake Lane, Scotts Valley, California, with respect to the Ben Lomond Sandhills Preserve of the Zayante Sandhills Conservation Bank: the location of the off-site mitigation proposed in this plan. Map prepared by Jodi McGraw.

5.4 MONITORING

Monitoring tracks compliance with the terms and conditions of the HCP and permit. Biological effectiveness monitoring will be conducted at the Zayante Sandhills Conservation Bank Preserves, where the mitigation for the project's impacts on Mount Hermon June beetle will occur. This monitoring will be the responsibility of the bank operator.

Construction and compliance monitoring to track the permit holder's compliance with the requirements specified in the HCP and permit, while effects monitoring will be used to document the project's impacts on the covered species. A biologist approved by the US Fish and Wildlife Service will conduct the following monitoring activities.

5.4.1 Construction and Compliance Monitoring

Pre-construction Orientation: Prior to construction, the biologist will conduct a construction crew training, in which individuals involved in construction will be provided a brief presentation about the biology of the Mount Hermon June beetle, and will be shown pictures of both adults and larva, to aid their identification during construction.

Construction Monitoring: The biologist will conduct regular inspections of the project site during initial grading to salvage and relocate any larva, and to ensure that the erosion control cloth is being used nightly during the flight season to prevent Mount Hermon June beetles entering the soil that was previously covered by impervious surfaces.

5.4.2 Effects Monitoring

To quantify the incidental take, the biologist will calculate the area of soil disturbance and thus incidental take, and count the number of larval and adult Mount Hermon June beetles that were found and removed during the construction monitoring.

5.4.3 Access to Project Site

The permit holder shall allow representatives from the Service access to the project site to monitoring compliance with the terms and conditions of the HCP, and the effects of the project.

5.6 Reporting

A qualified biologist will submit a report to the US Fish and Wildlife Service in order to document the status of the project. The report will include:

1. A brief summary of project activities accomplished during the reporting year (e.g. this includes development/construction activities, and other covered activities)

2. Effects monitoring results describing the amount of incidental take, in terms of number of Mount Hermon June beetle adults and larva observed and the area of soil disturbed.
3. Construction and compliance monitoring results
4. Brief description of the aspects of the conservation strategy implemented
5. Description of any changed or unforeseen circumstances that occurred and how they were dealt with
6. Funding expenditures, balance, and accrual
7. Description of any minor or major amendments.

The report will be submitted to the Service by January 31 of each year of the project.

Section 6

Plan Implementation

6.1 Plan Implementation

The project will be implemented by the applicants, Blake Ln LLP, and their contractors. Precise timing of the project will depend on the timing of the incidental take permit and efforts will be made to minimize ground disturbing activities during the flight season (Section 5.2.1).

6.2 Changed Circumstances

6.2.1 Summary of Circumstances

Section 10 regulations (69 *Federal Register* 71723, December 10, 2004 as codified in 50 Code of Federal Regulations (C.F.R.), Sections 17.22(b)(2) and 17.32(b)(2)) require that an HCP specify the procedures to be used for dealing with changed and unforeseen circumstances that may arise during the implementation of the HCP. In addition, the HCP No Surprises Rule [50 CFR 17.22 (b)(5) and 17.32 (b)(5)] describes the obligations of the permittee and the Service. The purpose of the No Surprises Rule is to provide assurance to the non-Federal landowners participating in habitat conservation planning under the ESA that no additional land restrictions or financial compensation will be required for species adequately covered by a properly implemented HCP, in light of unforeseen circumstances, without the consent of the permittee.

Changed circumstances are defined in 50 CFR 17.3 as changes in circumstances affecting a species or geographic area covered by an HCP that can reasonably be anticipated by plan developers and the Service and for which contingency plans can be prepared (e.g., the new listing of species, a fire, or other natural catastrophic event in areas prone to such event). If additional conservation and mitigation measures are deemed necessary to respond to changed circumstances and these additional measures were already provided for in the plan's operating conservation program (e.g., the conservation management activities or mitigation measures expressly agreed to in the

HCP), then the permittee will implement those measures as specified in the plan. However, if additional conservation management and mitigation measures are deemed necessary to respond to changed circumstances and such measures were not provided for in the plan's operating conservation program, the Service will not require these additional measures absent the consent of the permittee, provided that the HCP is being "properly implement" (properly implemented means the commitments and the provisions of the HCP and the IA have been or are fully implemented).

Foreseeable changed circumstances within the project area of this HCP include:

- the new listing of a species;
- the discovery of the Zayante band-winged grasshopper, Santa Cruz wallflower, or Ben Lomond spineflower at the project site.

6.2.2 Newly listed species

If a new species that is not covered by the HCP but that may be affected by activities covered by the HCP is listed under the Federal ESA during the term of the section 10 permit, the section 10 permit will be reevaluated by the Service and the HCP covered activities may be modified, as necessary, to insure that the activities covered under the HCP are not likely to jeopardize or result in the take of the newly listed species or adverse modification of any newly designated critical habitat. The applicant, Blake Ln LLP, shall implement the modifications to the HCP covered activities identified by the Service as necessary to avoid the likelihood of jeopardy to or take of the newly listed species or adverse modification of newly designated critical habitat. The property owners shall continue to implement such modifications until such time as the Permittee has applied for and the Service has approved an amendment of the Section 10(a)(1)(B) permit, in accordance with applicable statutory and regulatory requirements, to cover the newly listed species or until the Service notifies representatives of Blake Ln LLP in writing that the modifications to the HCP covered activities are no longer required to avoid the likelihood of jeopardy of the newly listed species or adverse modification of newly designated critical habitat.

The occurrence of a newly listed species at the project site during the course of the requested 5-year permit is highly unlikely due to the small size of the project site, the degraded nature of the habitat, which is already developed, and the short duration of the permit.

6.2.3 Discovery of other currently listed species at the project site

In the event that one or more other already listed endangered species are found at the site, the applicant will cease project activities that would likely result in incidental take of newly-discovered listed species, and apply for a permit amendment. It is unlikely that other listed species will be discovered at the project site, due to the degraded nature of the

habitat, the distance to nearest other populations, and the short duration of the project permit, among other factors.

6.3 Unforeseen Circumstances

Unforeseen circumstances are defined in 50 CFR 17.3 as changes in circumstances that affect a species or geographic area covered by the HCP that could not reasonably be anticipated by plan developers and the Service at the time of the HCP's negotiation and development and that result in a substantial and adverse change in status of the covered species. The purpose of the No Surprises Rule is to provide assurances to non-Federal landowners participating in habitat conservation planning under the Act that no additional land restrictions or financial compensation will be required for species adequately covered by a properly implemented HCP, in light of unforeseen circumstances, without the consent of the permittee.

In case of an unforeseen event, the permittee shall immediately notify the Service staff that have functioned as the principal contacts for the proposed HCP. In determining whether such an event constitutes an unforeseen circumstance, the Service shall consider, but not be limited to, the following factors: size of the current range of the affected species; percentage of range adversely affected by the HCP; percentage of range conserved by the HCP; ecological significance of that portion of the range affected by the HCP; level of knowledge about the affected species and the degree of specificity of the species' conservation program under the HCP; and whether failure to adopt additional conservation measures would appreciably reduce the likelihood of survival and recovery of the affected species in the wild.

If the Service determines that additional conservation and mitigation measures are necessary to respond to the unforeseen circumstances where the HCP is being properly implemented, the additional measures required of the permittee must be as close as possible to the terms of the original HCP and must be limited to modifications within any conserved habitat area or to adjustments within lands or waters that already set-aside in the HCP's operating conservation program. Additional conservation and mitigation measures shall involve the commitment of additional land or financial compensation or restrictions on the use of land or other natural resources otherwise available for development or use under original terms of the HCP only with the consent of the permittee.

6.4 Amendments

6.4.1 Minor Amendments

Minor amendments are changes that do not affect the scope of the HCP's impact and conservation strategy, change amount of take, add new species, and change significantly the boundaries of the HCP. Examples of minor amendments include correction of spelling errors or minor corrections in boundary descriptions. The minor amendment process is accomplished through an exchange of letters between the permit holder and the Service's Field Office.

6.4.2 Major Amendments

Major amendments to the HCP and permit are changes that do affect the scope of the HCP and conservation strategy, increase the amount of take, add new species, and change significantly the boundaries of the HCP. Major amendments often require amendments to the Service's decision documents, including the NEPA document, the biological opinion, and findings and recommendations document. Major amendments will often require additional public review and comment.

6.5 Suspension/Revocation

The Service may suspend or revoke their respective permits if fails to implement the HCP in accordance with the terms and conditions of the permits or if suspension or revocation is otherwise required by law. Suspension or revocation of the Section 10(a)(1)(B) permit, in whole or in part, by the Service shall be in accordance with 50 CFR 13.27-29, 17.32 (b)(8).

6.6 Permit Renewal

The applicant requests a 5-year permit, to ensure that the covered activities can be completed prior to permit expiration.

Upon expiration, the Section 10(a)(1)(B) permit may be renewed without the issuance of a new permit, provided that the permit is renewable, and that biological circumstances and other pertinent factors affecting covered species are not significantly different than those described in the original HCP. To renew the permit, the property owners shall submit to the Service, in writing:

- ✕ a request to renew the permit; reference to the original permit number;
- ✕ certification that all statements and information provided in the original HCP and permit application, together with any approved HCP amendments, are still true and correct, and inclusion of a list of changes;
- ✕ a description of any take that has occurred under the existing permit; and
- ✕ a description of any portions of the project still to be completed, if applicable, or what activities under the original permit the renewal is intended to cover.

If the Service concurs with the information provided in the request, it shall renew the permit consistent with permit renewal procedures required by Federal regulation (50 CFR 13.22). If the applicants file a renewal request and the request is on file with the issuing Service office at least 30 days prior to the permits expiration, the permit shall remain valid while the renewal is being processed, provided the existing permit is renewable. However, the applicant may not take listed species beyond the quantity authorized by the original permit. If the applicant fails

to file a renewal request within 30 days prior to permit expiration, the permit shall become invalid upon expiration. The applicant and the mitigation bank operator must have complied with all annual reporting requirements to qualify for a permit renewal.

6.7 Permit Transfer

If the proposed permit holders, Blake Ln, LLP, transfer the property to another party during the period of the permit and that party agrees to implement the project and comply with the terms of the HCP, the permit can be transferred to the new party.

In the event of sale or transfer of ownership of the property during the life of the permit, a new permit application, permit fee, and an Assumption Agreement will be submitted to the Service by the new owner(s). The new owner(s) will commit to all requirements regarding the take authorization and mitigation obligations of this HCP unless otherwise specified in the Assumption Agreement and agreed to in advance with the Service.

Section 7 Funding

7.1 Costs of HCP Implementation

The estimated costs to implement the conservation strategy described in this plan are listed in Table 4.

7.2 Funding Source(s), Mechanism, and Management

The applicant will provide all funds required to implement the conservation strategy (Table 4). The applicant understands that failure to provide adequate funding and consequent failure to implement the terms of this HCP in full could result in temporary permit suspension or permit revocation.

The conservation credits, which provide the compensation in this conservation strategy and represent the bulk of the costs of its implementation, will be purchased in advance of project implementation. A copy of the receipt documenting the sale will be provided as proof to the Service upon project permitting and prior to implementation of the project. The conservation bank has provided a letter to the applicant indicating their intent to sell the conservation credits (Appendix C). The applicant has submitted a bank statement demonstrating the ability to cover the remaining costs (Appendix D).

The applicant will fund all other costs associated with implementing the terms of the HCP as needed. The applicant will assure funding to cover all costs by submitting a bank statement or letter of credit demonstrating the availability of funds to cover these costs.

Table 4: Estimated costs to implement elements of the conservation strategy described in this plan.

Element	Item	Details	Units		Costs (\$)	
			Type	Number	Per Unit	Total
Mitigation	Minimization Measure 5.2.1.2	Cover open soil in previously impervious portion of project area (2,620 square feet) with erosion control fabric to prevent burrowing during flight season	GeoJute: 4' x 147' roll	5	80	400
Mitigation	Compensation	Purchase conservation credits at the Zayante Sandhills Conservation Bank at 1:1 ratio for impacts	square foot conservation credits	15,584	7.5	116,880
Subtotal: Mitigation						117,280
Monitoring	Construction and Compliance Monitoring	Biologist to conduct pre-project orientation	labor hours	5	95	475
Monitoring	Construction and Compliance Monitoring	Biologist to conduct construction monitoring	labor hours	20	95	1,900
Monitoring	Effects Monitoring	Biologist to conduct effects monitoring	labor hours	8	95	760
Reporting	Annual Reporting	Biologist to complete annual report (est. 3 years)	labor hours	18	95	1,710
Subtotal: Monitoring and Reporting						4,845
Total						122,125

Section 8

Alternatives

8.1 Summary

Section 10(a)(2)(A)(iii) of the Endangered Species Act of 1973, as amended, [and 50 CFR 17.22(b)(1)(iii) and 17.32(b)(1)(iii)] requires that alternatives to the taking of species be considered and reasons why such alternatives are not implemented be discussed.

8.2 No Action Alternative

Under the No Action Alternative, the proposed project parcel would not be redeveloped to create six condominiums in a site currently supporting a single family residence, and an incidental take permit would not be requested or issued. The applicant would not be able to increase the value of the property and provide additional housing to the community. The exposed soil within the parcel would remain as degraded habitat for the Mount Hermon June beetle.

Under the No Action Alternative, the conservation measures proposed in this HCP would not be implemented, and the 15,584 ft² of conservation credits would not be protected at the Zayante Sandhills Conservation Bank. This would reduce funds available for preservation, management, and monitoring of the high quality reserve established to protect the Mount Hermon June beetle. Because the benefits of the HCP conservation measures outweigh the impacts of the project on the Mount Hermon June beetle, the No Action alternative has been rejected.

8.3 Alternative 2: Redesign Project (Reduce Take)

Under this alternative, the development would be limited to 3 condominiums located in a single building, rather than 6 condominiums in two buildings. The single building would be located over the existing residential structures on the southern half of the parcel, and the current driveway and parking area on the northern portion of the parcel would not be altered. This would reduce the area of impervious surfaces and thus permanent habitat loss by an estimated 3,050 ft² (half of the condominium or 1550 ft² and an estimated 1500 ft² of driveways). Though some grading in the northern portion would likely still be required for construction of the condominiums, such that not all impacts to Mount Hermon June beetle could be avoided in the northern half of the property.

Given the small size of the area on site that would be protected and its degraded nature, it is not clear whether Mount Hermon June beetle would persist within the project parcel if this

alternative project were implemented. This redesign would decrease the value of the property relative to the proposed action, and thus the ability of the applicant to fund the conservation strategy, which is designed to have a net benefit to the Mount Hermon June beetle by preserving high quality habitat to replace the degraded habitat within the project site. For these reasons, this redesign alternative has been rejected.

8.4 Alternative 3: Proposed Action (Permit Issuance)

Under the proposed action alternative, Blake Ln LLP would construct six condominiums and associated improvements as described in Section 2. The proposed action will require the issuance of a Section 10(a)(1)(B) permit in order that the project be implemented in compliance with the federal Endangered Species Act. The project will result in the impact to Mount Hermon June beetle within the 15,584 ft² of open soil to be graded in preparation for construction, and cause the permanent loss of 6,298 ft² of degraded habitat where impervious surfaces will be installed over currently open habitat. However, the conservation measures proposed in the HCP would provide for greater conservation benefit to the Mount Hermon June beetle than that which would result from the No Action alternative. Specifically, under the Proposed Action, the applicants will secure 15,584 square foot conservation credits (0.36 acre credits) in the Zayante Sandhills Conservation Bank, thus ensuring the preservation, management, and monitoring of Mount Hermon June beetle habitat in a relatively large, contiguous, and high quality habitat preserve, in perpetuity. The Proposed Action thus provides greater conservation benefits than the No Action and Redesigned Project alternative, while best meeting the needs of the applicant. Therefore, the Proposed Action is the preferred alternative.

9.0 LITERATURE CITED

- Arnold, R. A. 1999. Monitoring report for the Mount Hermon June Beetle and Zayante Band winged grasshopper at the Quail Hollow Quarry. Entomological Consulting Services, Ltd., Pleasant Hill, CA.
- Arnold, R. A. 2000. Monitoring report on the Mount Hermon June Beetle at Quail Hollow Quarry. Entomological Consulting Services, Ltd., Pleasant Hill, CA.
- Arnold, R. A. 2001. 2001 Monitoring Report for the Mount Hermon June Beetle at Hanson Aggregates' Felton Quarry. Entomological Consulting Services, Ltd.
- Arnold, R. A. 2004. Biology of the Mount Hermon June Beetle and Biology of the Zayante Band Winged Grasshopper. In J. M. McGraw, *Sandhills Conservation and Management Plan*. June 2004.
- Arnold, R. A. 2005. 2004 Monitoring report for the Mount Hermon June Beetle and Zayante Band Winged Grasshopper at the Cellular One Antenna Site on Mount Hermon in Santa Cruz County, CA. Report prepared for Central Coast Wilds. January 2004. 4 pages.
- Arnold, R. A. 2006. The Zayante Sandhills Conservation Bank. A proposal submitted to the US Fish and Wildlife Service. December 2005.
- BUGGY. 2004. Report of Occurrences for the Mount Hermon June beetle from the BUGGY Data Base. Entomological Consulting Services, Ltd., Pleasant Hill, CA. May 2004.
- County of Santa Cruz 1994. General Plan and Local Coastal Program. Santa Cruz County Planning Department, Santa Cruz, CA.
- California Native Plant Society. 2003. Inventory of rare and endangered plants of California. Sacramento, CA.
- Chu, J. B. 2002. Diet for an endangered insect: What does the Zayante band-winged grasshopper eat? San Jose State University, San Jose, CA.
- Hill, K. 2006. Mount Hermon June Beetle host plant specificity. Master's Thesis, Department of Environmental Studies, San Jose State University.
- McGraw, J. M. 2004a. Interactive effects of disturbance and exotic species on the structure and dynamics of an endemic sandhills plant community. University of California, Berkeley, California. 309 pages
- McGraw, J. M. 2004b. Sandhills conservation and management plan: a strategy for preserving native biodiversity in the Santa Cruz sandhills. Report submitted to the Land Trust of Santa Cruz County, Santa Cruz, CA.
- U.S. Department of Agriculture. 1980. Soil Survey of Santa Cruz County. Soil Conservation Service, United States Department of Agriculture and University of California Agriculture.

- U.S. Fish and Wildlife Service. 1997. Endangered and threatened wildlife and plants; determination of endangered status for two insects from the Santa Cruz Mountains of California. Federal Register 62:3616-3628.
- U.S. Fish and Wildlife Service. 1998. Recovery plan for insect and plant taxa from the Santa Cruz Mountains in California, Portland, OR.
- U.S. Fish and Wildlife Service. 2001. Endangered and threatened wildlife and plants; final determination of critical habitat for the Zayante Band-Winged grasshopper. Federal Register 66:9219-9233.
- Young, R. M. (1967). Polyphylla Harris in America, North of Mexico. Part I: The DiffRACTA complex (Coleoptera: Scarabaeidae: Melolonthinae). Transactions of the American Entomological Society, 93, 279-318.
- Young, R. M. (1988). A Monograph of the Genus Polyphylla Harris in America North of Mexico (Coleoptera: Scarabaeidae: Melolonthinae). Bulletin of The University of Nebraska State Museum, 11(2), 1-106.

Appendix A: Habitat Evaluation Conducted for 22 Blake Lane On Behalf of Paul Locatelli

August 23, 2006

Mr. Paul Locatelli
Lifestyles Real Estate Inc.
500 Seabright Ave, Suite 105
Santa Cruz, CA 95062

RE: Biotic Assessment of Parcel 022-172-47, Scotts Valley, CA

Dear Mr. Locatelli:

I am writing to provide you with results of the habitat assessment that I conducted for you on August 23, 2006 on parcel 022-172-47, a 0.42 acre home site located at 22 Blake Lane, in Scotts Valley, California. The purpose of the assessment was to evaluate the likelihood that your proposed project to construct six condominiums would impact breeding habitat for the federally endangered Mount Hermon June Beetle (*Polyphylla barbata*), a fossorial insect that lives in sandy soils in the region.

At the time of my assessment, the site featured an approximately 1,000 square foot single family home in the southern portion of the parcel. The remainder of the parcel consisted of an unpaved but graveled loop driveway, and a yard consisting of relatively minimal landscaping (i.e. no turf grass or large beds).

As mapped by the Soil Conservation Service, the 0.52 acre parcel contains Zayante soils, which are poorly developed, deep, coarse, sand soils derived from the weathering of uplifted marine sediments and sandstones (USDA 1980). My examination of the soils on the center and north portion of the parcel revealed the occurrence of light grey brown, loose sand soil characteristic of the Zayante series. This soil supports endemic Sandhills communities and species within Scotts Valley and central Santa Cruz County.

Native vegetation on the site has been greatly altered as a result of historic land use of the parcel. I observed five adult Ponderosa pines (*Pinus ponderosa*) within a 150' radius of the project area, including one large adult tree on the north end of the parcel. This species of tree is a key indicator of Zayante soils and Sandhills habitat occupied by the Mount Hermon June beetle. Prior surveys have revealed multiple occurrences of Mount Hermon June beetles within the approximately 9,000 acres patch of Zayante soils in which your project is located, including one occurrence located within 150 feet of the proposed project parcel (BUGGY 2004). Based on these observations, it is likely that the proposed project would negatively impact Mount Hermon June beetle by removing habitat and/or causing mortality of individuals living below the soil surface.

The Mount Hermon June beetle has been listed by the United States Fish and Wildlife Service (USFWS) as a Federally Endangered Species under the federal Endangered Species Act (ESA). The ESA makes it illegal to 'take' (kill, harm, harass, etc.) endangered species such as the MHJB. However, the USFWS can permit take of MHJB that occurs incidentally during the course of otherwise lawful projects, such as building a house, but issuing what is known as an 'incidental take permit' (ITP).

In order to receive an incidental take permit, project proponents must complete a Habitat Conservation Plan (HCP), which outlines how they will mitigate the project's negative effects on the endangered species. Mitigation can and should include steps to avoid, minimize, and repair impacts at the project site, as well as efforts to compensate for them by benefiting similar habitat elsewhere.

The County of Santa Cruz and City of Scotts Valley are presently developing a Regional HCP for the

Sandhills, which is designed to cover take of MHJB that occurs during the course of projects such as yours. Once the Regional HCP is completed, project proponents can receive an ITP for MHJB provided that their project meets certain specifications and that they mitigate their projects impacts as outlined in the plan. The Regional HCP is currently being developed by the County and City and is estimated to require five years for completion.

If you wish to receive an ITP for your proposed project prior to completion of the Regional HCP, you will need to submit an HCP for your own project. Projects that are deemed to have minimal impacts on the endangered species, environment in general, and public health and safety, such as yours, can receive an ITP through completion of a Low-Effect HCP, which requires fewer documents be prepared by the applicant and is designed to reduce both the costs and time required to obtain an ITP.

In approximately 2002, the USFWS issued an ITP for MHJB to landowners who submitted a low-effect HCP to develop a single family dwelling on 1 acre of sandhills habitat. Since that time, a local company has worked to establish a conservation bank—a series of high quality Sandhills habitat areas that are purchased and managed to protect the endangered species. The Zayante Sandhills Conservation Bank can sell “conservation credits” to landowners seeking to mitigate for the impacts of their development projects, thus facilitating the HCP process by providing an important component of the conservation strategy.

Based on my observations indicating that the study parcel supports habitat appropriate for the MHJB, I recommend that you obtain an ITP before conducting any project which will involve soil disturbance within the parcel. To obtain an ITP, you could either wait for the Regional HCP to be completed, or you could prepare your own project-specific HCP.

This information is provided to aid evaluation of the parcel and not to regulate its use. I strongly recommend that parties interested in evaluating the development potential of the parcel contact the City of Scotts Valley and the U.S. Fish and Wildlife Service to discuss the project and permitting requirements. The following is some contact information you might find helpful.

U.S. Fish and Wildlife Service	City of Scotts Valley	Zayante Sandhills Conservation Bank
Roger Root Fish and Wildlife Biologist 2493 Portola Road, Suite B, Ventura CA, 93003 (805) 644-1766 roger_root@r1.fws.gov	Steve Russell Community Development Director One Civic Center Drive Scotts Valley, CA 95066 (831) 440-5630 srussell@scottsvally.org	Paul Burrowes Managing Partner 245-M Mt. Hermon Road PMB#154, Scotts Valley, CA 95066 (408) 497-3989 paul@zayantesandhills.com

Please do not hesitate to contact me if you have any questions regarding the habitat assessment, or processes for obtaining an incidental take permit to cover your project.

Sincerely,

Jodi M. McGraw

References

- BUGGY. 2004. Report of known occurrences for the Mount Hermon June beetle from the BUGGY Data Base. Entomological Consulting Services, Ltd., Pleasant Hill, CA.
- USDA. 1980. Soil Survey of Santa Cruz County. Soil Conservation Service, United States Department of Agriculture and University of California Agriculture.

Appendix B: Letter of Intent to Sell Conservation Credits



Zayante Sandhills Conservation Bank

245-M Mt. Hermon Rd. #154 Scotts Valley CA 95066

April 2, 2008

Mr. Paul Locatelli
Blake Ln LLP
Lifestyles Real Estate Inc.
500 Seabright Ave, Suite 105
Santa Cruz, CA 95062

RE: Sale of Conservation Credits for 22 Blake Lane Habitat Conservation Plan

Dear Mr. Locatelli:

Thank you for the opportunity to assist the Blake Ln LLP with its plan to redevelop 22 Blake Lane in Scotts Valley, CA (APN: APN: 022-172-47), by providing conservation credits to mitigate the impacts of the project on the Mount Hermon June beetle—a federally endangered species for which the Zayante Sandhills Conservation Bank sells conservation credits.

We understand that you will purchase the conservation credits after you receive the Incidental Take Permit (ITP) from the US Fish and Wildlife Service, but before causing take as part of the project. As we discussed, the Zayante Sandhills Conservation Bank has sufficient credits within the Ben Lomond Sandhills Preserve to sell to Blake Ln LLP the 15,584 square foot conservation credits required to mitigate your projects impacts as described in your Habitat Conservation Plan. During 2008, the price per credit will be \$7.50; however, the price will increase beginning January 1, 2009.

Thank you,

Pifal Burrowes
Managing Partner

cc: Jodi McGraw, *Population and Community Ecologist*



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PAGE 1

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ACCOUNT NO.

SUMMARY OF ACTIVITY SINCE YOUR LAST STATEMENT		INTEREST SUMMARY	
BALANCE FORWARD FROM 01/31/08	50,211.39 ✓	INTEREST EARNED FROM.....	02/01/08
0 DEPOSITS/CREDITS.....	.00+	INTEREST EARNED THROUGH.....	02/29/08
0 WITHDRAWALS/DEBITS.....	.00-	DAYS IN EARNINGS PERIOD.....	29
0 BANK CHARGES.....	.00-	ANNUAL PERCENTAGE YIELD EARNED...	4.50%
1 INTEREST PAID.....	175.83+	INTEREST PAID IN 2008.....	363.11
ENDING BALANCE AS OF 02/29/08	50,387.22 ✓		

TRANSACTION DETAIL FOR THIS ACCOUNT

DATE	DESCRIPTION	AMOUNT
DEPOSITS/CREDITS/INTEREST-PAID		
2/01	EFFECTIVE INTEREST RATE 4.4000%	
2/29	Interest Credit	175.83 ✓

BALANCE SUMMARY					
DATE	BALANCE	DATE	BALANCE	DATE	BALANCE
1/31	50,211.39	2/29	50,387.22		





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Chinese: 1-800-288-2288

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Portland, OR 97228 6995

January 31, 2008

Total assets:	\$104,476.28
Last month:	\$104,138.18
Change in \$:	\$338.10
Change in %:	0.32%

Total liabilities:	\$0.00
Last month:	\$0.00
Change in \$:	\$0.00
Change in %:	0.00%

PMA Qualifying Balance: \$104,476.28

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