Low-Effect Habitat Conservation Plan

for the Endangered Mount Hermon June Beetle

for Proposed Construction of a Residential Addition

at 224 Hidden Glen Drive (APN 067-533-04)

in Santa Cruz County (near Scotts Valley), California

Prepared for:
James & Melinda Carter
224 Hidden Glen Drive
Scotts Valley, CA 95066
(831) 438-2830
svjimc@aol.com

Prepared by:
Richard A. Arnold, Ph.D.
Entomological Consulting Services, Ltd.
104 Mountain View Court
Pleasant Hill, CA 94523-2188
(925) 825-3784
bugdctr@comcast.net

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EXECUTIVE SUMMARY

Dr. James Carter and his wife, Mrs. Melinda Carter, have applied for a permit pursuant to section 10(a)(1)(B) of the Endangered Species Act of 1973 as amended (16 U.S.C. 153101544, 87 Stat. 884), from the U.S. Fish & Wildlife Service (USFWS) for the incidental take of the endangered Mount Hermon June beetle (MHJB) (*Polyphylla barbata*: Coleoptera: Scarabaeidae). The potential taking would occur incidental to construction of a new addition to their existing single-family residence at a 0.52-acre property (APN 067-533-04), located at 223 Hidden Glen Drive in the Hidden Glen neighborhood of Santa Cruz County (near the city of Scotts Valley), CA.

Although the Carters' home is situated in a portion of the Zayante Sandhills that historically supported endemic plant communities, extensive residential and commercial development during the past 50 years throughout this portion of Santa Cruz County has substantially degraded the original native habitat values. Their 0.52-acre property currently supports an existing single-family home, garage, driveway, patios, and decking.

Prior to residential development, this property and the surrounding properties supported Ponderosa Pine forest with sand parkland. Today, the resident vegetation includes a mixture of landscaping and remnant native plants, in particular a few mature Coast Live Oaks (*Quercus agrifolia*) and Ponderosa Pines (*Pinus ponderosa*). However, other native sandhill plants have been replaced by landscaping and ornamentals. Because Zayante sands are present at the property, and MHJB is known to occur at nearby properties in the Hidden Glen neighborhood, Dr. and Mrs. Carter assume that the endangered beetle is likely to occur at their property. Therefore, the Carters have applied for a section 10(a)(1)(B) permit and they propose to implement the habitat conservation plan (HCP) described herein, which provides for measures for mitigating adverse effects on the MHJB for activities associated with the construction of their new addition. The Carters are requesting issuance of the section 10(a)(1)(B) permit for a period of five (5) years.

This HCP summarizes information about the project and identifies the responsibilities of the USFWS and the Carters for implementing the actions described herein to benefit the MHJB. The biological goal of the HCP is to replace the MHJB habitat impacted by the construction project at a secure site in perpetuity. For mitigation, Dr. and Mrs. Carter have purchased 1,780 ft.^{2} (0.041 acre) of conservation credits for the endangered MHJB from the Ben Lomond Sandhills Preserve of the Zayante Sandhills Conservation Bank, which is operated by PCO, LLC and is located in Ben Lomond, CA. This HCP also describes measures that ensure the elements of the HCP are implemented in a timely manner. Funding sources for implementation of the HCP, actions to be taken for changed circumstances, alternatives to the proposed permit action, and other measures required by the USFWS are also discussed.

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2. Street-level location map illustrating the location of the Hidden Glen project site.

3. Site plan, illustrating the impact and habitat maintenance areas.

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1.0 INTRODUCTION

This Habitat Conservation Plan (HCP) is for the proposed construction of a new addition to an existing single-family residence at 224 Hidden Glen Drive, a 0.52-acre property (APN 067-533-04) located in the Hidden Glen residential neighborhood of Santa Cruz County (near the city of Scotts Valley), California. It has been prepared pursuant to the requirements of section 10(a) of the Federal Endangered Species Act (ESA). The HCP is intended to provide the basis for issuance of a section 10(a)(1)(B) permit to Dr. James Carter and his wife, Mrs. Melinda Carter, (hereafter referred to as "the Carters"), the permit applicant, to authorize incidental take (see section 6.0) of the Mount Hermon June beetle (MHJB) (*Polyphylla barbata*: Coleoptera: Scarabaeidae), a federally-listed endangered species, that could potentially result from the grading and construction activities for the new living space within the 0.041-acre impact area of the 0.52-acre property. The U.S. Fish & Wildlife Service (USFWS) has concluded that the property provides potential habitat for this beetle. The Carters request a permit for a period of five (5) years commencing on the date of permit issuance.

This HCP provides an assessment of the existing habitat at the Hidden Glen Drive property for the MHJB, evaluates the effects of the proposed project on this beetle, and presents a mitigation plan to offset habitat losses and/or direct harm to this beetle that could result from grading and construction activities at the project site. The biological goal of this HCP is to replace the MHJB habitat impacted by the development of Hidden Glen Drive at a secure site in perpetuity. Specifically, 0.041 conservation credits for the MHJB have been purchased from the Ben Lomond Sandhills Preserve of the Zayante Sandhills Conservation Bank. Because habitat quality at the Ben Lomond Sandhills Preserve is superior to that at the impact area and remainder of the property, and habitat at the conservation bank is protected in perpetuity via a conservation easement, this mitigation solution will provide greater long term conservation value to the MHJB and its habitat than would on-site mitigation.

1.1 PROJECT LOCATION

The Carter's property measures approximately 0.52 acre and is located at 224 Hidden Glen Drive in the Hidden Glen residential neighborhood in Santa Cruz County (near the city of Scotts Valley), California. The property lies west of Hidden Glen Drive near the intersection with Royal Oak (Figure 1). The site is located within the boundaries of the Felton 7.5' U.S. Geological Survey (USGS) topographic quadrangle, specifically in Township 10S. and Range 2W. of the Mt. Diablo Meridian. No section numbers are identified in this portion of the topographic quadrangle. Because of the extensive development that has occurred in the Hidden Glen neighborhood since the Felton quadrangle was photo revised in 1980, Figure 2 is a street-level location map.

1.2 PROJECT SITE

The property is located in a residential neighborhood known as Hidden Glen. Surrounding properties are developed as single-family homes.

An existing single family residence is situated on the 0.52-acre parcel. Other existing improvements include a driveway that runs between the existing garage and Hidden Glen Drive, plus several decks and patios that surround the immediate perimeter of the home. At this time

approximately 4,095 ft.^{2} (= 0.094 acre) are covered by existing structures, driveway, walkways, and decks. Due to the existing development, the former native plant communities have been largely replaced by landscaping and ornamentals. Undeveloped portions of the project site are landscaped, although Coast Live Oaks and Ponderosa Pines still grow among the landscaping.

1.3 HISTORY OF THE HCP PROCESS

Dr. Richard Arnold, President of Entomological Consulting Services, Ltd., performed a habitat assessment survey for the Mount Hermon June beetle on the Carters, in April 2005. Dr. Arnold found marginally suitable habitat for the endangered beetle. A presence-absence survey was not performed due to the known occurrence of the MHJB at nearby properties in the surrounding Hidden Glen neighborhood. A copy of Arnold's habitat assessment report is attached as Appendix A.

In March 2006, the Carters hired Dr. Arnold to prepare this HCP. Dr. Arnold spoke with Roger Root, biologist with the Ventura Fish and Wildlife Office of the USFWS about the proposed project and need for an HCP in May 2006. USFWS advised Dr. Arnold that an incidental take permit would be necessary for the proposed project to comply with the ESA. This draft, low-effect HCP was prepared and submitted to the Ventura Fish and Wildlife Office of USFWS in June, 2006. Although this document has been presented as a low-effect HCP, the USFWS still needs to complete a Low-Effect Habitat Conservation Plan Screening Form. After completing this form, the USFWS will determine whether the HCP for the proposed project qualifies for the low-effect category, thereby qualifying for a categorical exclusion under the National Environmental Policy Act.

FIGURE 1 (USGS topo map)

FIGURE 2 (street-level location map)

2.0 PROJECT DESCRIPTION AND AREA

2.1 PROJECT SITE AND PROJECT DESCRIPTION

The Carters' property consists of a single parcel, measuring 0.52 acre, which supports an existing single-family residence, garage, driveway, decks, and patios that collectively cover about 4,095 ft.^{2} or 18% of the property. Upon completion of the proposed addition, an estimated 5,645 ft.^{2} of the parcel or 24.5% of the site will be covered by the existing and new improvements.

The property is generally flat with a mild slope from Hidden Glen Drive to the rear of the property. Several Coast Live Oaks and Ponderosa Pine trees grow around the perimeter of the existing home in the yard. One small oak tree will be removed to accommodate the proposed new addition. During construction activities these native trees will be protected and are hereafter referred to as "the habitat maintenance area." Figure 3, the site plan, illustrates the location of the habitat maintenance area. This portion of the property will not be disturbed except as needed to conform to any fire clearance regulations of the Scotts Valley Fire District.

The addition will be built at the western end of the existing single-family home. Some remodeling of rooms in this portion of the existing house will also occur as part of the addition project. The new living space will measure 495 ft.^{2}. An existing deck, located at the southwestern corner of the existing home, will be removed to accommodate the new addition. New decking will be constructed and cover 245 ft.^{2}. A diversion valve for the existing septic system will be installed which will require some manual excavation.

The existing home and the locations of the proposed, new addition are illustrated in Figure 3, the site plan. Portions of the property where development activities will occur are referred to as the "impact area". Since all trenching for the foundation for the addition and the diversion valve will be dug manually, a 5-foot wide work area (1,285 ft.^{2}) surrounds the perimeter of all new construction (including new decks) and is included as part of the 1,780 ft.^{2} impact area (i.e., new living space, new deck, and work area). Spoils from the foundation trenching will be distributed in the crawl space of the new living area.

On street parking is available for workers, and materials will be temporarily stored on the existing driveway or in the garage. Workers will access the impact area from the north side of the home, where there is an existing brick walkway that connects from the driveway to the impact area and will be used for all access to the impact area. Since workers will only use the existing impermeable walkway for access, it is not being considered part of the impact area. Since the existing home is already serviced by electrical, natural gas, and water lines, no new trenching will be required to add these services to the proposed new living space. No grading of the site is required to accommodate the new living space.

Altogether, these activities will disturb approximately 1,780 ft.^{2} within the impact area of the property. Vegetation within the impact area is characterized by landscaping and one small oak tree. As a minimization measure, all project activities will avoid native trees in the surrounding habitat maintenance area. Additional minimization measures will be employed

before, during, and after construction activities to minimize any adverse impacts to the MHJB and its habitat at the property, including:

1) Temporary fencing and signs will be erected before any grading activities occur to protect the habitat maintenance area;
2) Appropriate dust control measures, such as periodically wetting down the work areas, will be used as necessary during excavation for the new foundations in of the impact area or any other project-related activities that generate dust; and
3) All workers for the addition project will participate in a tailgate session presented by the construction monitor to learn about the endangered beetle, its habitat, protective measures, and procedures to follow if any individuals of the MHJB are actually observed at the property during the course of all construction–related activities.

2.2 PERMIT HOLDER/PERMIT BOUNDARY

James and Melinda Carter will be the holders of the section 10(a)(1)(B) permit. They can be contacted via mail at 224 Hidden Glen Drive, Scotts Valley, CA 95066, or via telephone (home) at (831) 438-2830 (home), or via telephone (work) at (831) 440-2315, or via email at svjimc@aol.com . In the event of sale of the property prior to completion of the proposed addition, a new permit application along with an Assumption Agreement will be submitted to the USFWS by the new owner.

The requested permit boundaries are the same as the boundaries of the 1,780 $ft.^2$ impact area of the 0.52-acre project site. Locations of the impact area and habitat maintenance area at the project site are illustrated in Figure 3.

2.3 SURROUNDING LAND USES

The Carter's property is located in a residential neighborhood of Santa Cruz County (near the City of Scotts Valley) known as Hidden Glen. Surrounding properties primarily support single-family homes. Zoning for the project site and immediately surrounding properties is R-1-20, which means that one single-family residence is allowed on a minimum lot size of 20,000 $ft.^2$.

Insert Fig. 3 Site Plan

3.0 REGULATORY FRAMEWORK

3.1 FEDERAL ENDANDERED SPECIES ACT OF 1973

Section 9 of the ESA and Federal regulations pursuant to section 4(d) of the ESA 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 USFWS 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 USFWS as intentional or negligent actions that create 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 ESA, any person who knowingly violates section 9 of the ESA 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 take of federally listed species are encouraged to apply for an incidental take permit under section 10 (a)(1)(B) of the ESA to be in compliance with the law. Such permits are issued by the USFWS 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 habitat conservation plan, commonly referred to as an HCP. The regulatory standard under section 10 (a)(1)(B) of the ESA is that the effects of authorized incidental take must be minimized and mitigated to the maximum extent practicable. Under section 10 (a)(1)(B) of the ESA, 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 ESA 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 ESA by the USFWS is a Federal action subject to section 7 of the ESA. As a Federal agency issuing a discretionary permit, the USFWS 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 USFWS.

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 ESA. 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 USFWS with its internal consultation.

3.1.1. Section 10 Permit Process and HCP Requirements.

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 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, mitigate for, and minimize impacts;
- funding that will be made available to undertake such measures;
- procedures to deal with unforeseen circumstances;
- alternative actions considered that would not result in take; and
- additional measures the USFWS may require as necessary or appropriate for purposes of the plan.

The USFWS has established a special category of HCP, called a low-effect HCP, for projects with relatively minor or negligible impacts. Based on criteria for determining whether a HCP qualifies as "low-effect," as described below and in the USFWS's (1996) Habitat Conservation Planning Handbook, the applicant for the proposed Hidden Glen Drive project believes this is a low-effect HCP.

A low-effect HCP is defined as having:

- minor or negligible effects on federally listed, proposed, or candidate species and their habitats that are covered under the HCP; and
- minor or negligible effects on other environmental resources.

The impacts are assessed on both a project and cumulative basis. Implementation of low-effect HCPs and their associated incidental take permits, despite authorization of some small level of incidental take, individually and cumulatively have a minor or negligible effect on the species covered in the HCP. The determination of whether an HCP qualifies for the low-effect category is based on the anticipated impacts of the project prior to implementation of the minimization and mitigation plan. The purpose of the low-effect HCP is to expedite handling of HCPs for activities with inherently low impacts; it is not intended for projects with significant potential impacts that are subsequently reduced through mitigation programs. Environmental compliance under the National Environmental Protection Act (NEPA) for low-effect HCPs is achieved via a categorical exclusion because the incidental take permit issued involves no individual or cumulative significant effects on the environment.

The HCP development phase concludes and the permit-processing phase begins when a complete application package is submitted to the appropriate permit-issuing office of USFWS. The complete application package for a low-effect HCP consists of:

1) an HCP;
2) a completed permit application; and
3) a $100 permit fee from the applicant.

The USFWS must publish a Notice of Receipt of a Permit Application in the Federal Register; prepare a section 7 Biological Opinion; prepare a Set of Findings that evaluates the section 10(a)(1)(B) permit application in the context of permit issuance criteria (see below); and prepare an Environmental Action Statement, a brief document that serves as the USFWS's record of compliance with NEPA for categorically excluded actions (see below). An implementing agreement is not required for a low-effect HCP. A section 10 (a)(1)(B) incidental take permit is granted upon determination by USFWS that all requirements for permit issuance have been met. Statutory and regulatory criteria for issuance of an incidental take permit (16 U.S.C. 1539(a)(2)(B) and 50 CFR 17.22(b)(2)) are as follows:

- 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 USFWS requires as being necessary or appropriate; and
- the USFWS has received assurances, as may be required, that the HCP will be

implemented.

After receipt of a complete application, a low-effect HCP and permit application is typically processed within approximately 12 months. This schedule includes the Federal Register notification and a 45-day public comment period (note: for low-effect HCPS the public comment period is only 30 days).

During the post-issuance phase, the permittee and other responsible entities implement the HCP and the USFWS monitors the permittee's compliance with the HCP and the long-term progress and success of the HCP. The public is notified of permit issuance through publication in the Federal Register.

3.2 NATIONAL ENVIRONMENTAL POLICY ACT OF 1969

The National Environmental Policy Act of 1969, as amended (NEPA), requires that Federal agencies analyze and disclose the environmental impacts of their proposed actions (e.g., issuance of an incidental take permit) and include public participation in the planning and implementation of their actions. Issuance of an incidental take permit by the USFWS is a Federal action subject to NEPA compliance. Although section 10 and NEPA requirements overlap considerably, the scope of NEPA also considers the impacts of the action on non-biological resources such as water quality, air quality, and cultural resources. Depending on the scope and impact of the HCP, NEPA requirements can be satisfied by one of the following documents or actions:

1) preparation of an environmental impact statement (generally prepared for HCPs with known significant impacts to the human environment);

2) preparation of an Environmental Assessment (generally prepared for HCPs with moderate, but not significant effects, or when the significance of the impacts is unknown); or

3) a categorical exclusion (allowed for low-effect HCPs).

The NEPA process helps Federal agencies make informed decisions with respect to the environmental consequences of their actions and ensures that measures to protect, restore, and enhance the environment are included, as necessary, as a component of their actions. Low-effect HCPs, as defined in the USFWS (1996) Habitat Conservation Planning Handbook, are categorically excluded under NEPA, as defined by the Department of Interior Manual 516DM2, Appendix 1, and Manual 516DM6, Appendix 1.

3.3 CALIFORNIA ENVIRONMENTAL QUALITY ACT

In many ways the California Environmental Quality Act, commonly known as CEQA (Public Resources Code Section 21000 *et seq*.), is analogous at the State level as NEPA is to the Federal level. CEQA applies to projects that require approval by State and local public agencies. It requires that such agencies disclose a project's significant environmental effects and provide mitigation whenever feasible. This environmental law covers a broad range of resources. With regard to wildlife and plants, those that are already listed by any State or Federal governmental

agency are presumed to be endangered for the purposes of CEQA and impacts to such species and their habitats may be considered significant.

The project presented in this HCP may be subject to CEQA review, with the County of Santa Cruz as the lead agency. However, because of the existing residential development at the project site and in the surrounding neighborhood, as well as the mitigation proposed in this HCP for the MHJB, the proposed project is unlikely to reach a level of significance that would require a formal or more extensive CEQA review.

3.4 CALIFORNIA PUBLIC RESOURCES CODE

Public Resources Code 4291 requires homeowners living in or adjacent to forest or brush-covered lands to maintain a firebreak of not less than 30 feet on all sides around all structures, or to the property line, whichever is nearer. The Scotts Valley Fire District enforces this code in the Scotts Valley area. See section 7.1.6 of this HCP for a discussion of how this code affects the management of habitat at the project site.

3.5 SANTA CRUZ COUNTY'S GENERAL PLAN AND CODE

Santa Cruz County's General Plan (1988) and its County Codes (16.32) identify protective measures for sensitive habitats and species. The County's on-line geographic information system (GIS) recognizes the Carters' property as occurring within a sensitive biotic habitat area, presumably Ponderosa Pine forest. This plant community is one of the special habitats protected by the County's General Plan (Chapter 5, Conservation and Open Space) and codes, specifically 16.32 for Sensitive Habitat Protection.

As was described in Section 2.1 of this HCP, only a single, small Coast Live Oak tree will be removed to accommodate the new addition. All trees in the habitat maintenance area will be protected by temporary construction fencing throughout the entire construction period.

4.0 BIOLOGY

This chapter describes the existing biotic resource conditions at the Hidden Glen Drive property. In addition, it discusses the one species addressed in this HCP, namely the MHJB (hereafter referred to as the covered species), which would be covered by the requested section 10(a)(1)(B) permit. The MHJB is federally-listed as endangered. Based on historical and recent observations at nearby locations, the MHJB is expected to occur at the property and will be directly or indirectly affected by the planned residential addition. This section summarizes available information about the taxonomy, identification, distribution, habitat, biology, and conservation of the covered species.

4.1 HABITATS

Soils present at the Hidden Glen Drive project site are Zayante sands. The property supports a single terrestrial plant community, namely Ponderosa Pine forest; however, prior land uses have removed nearly all native understory vegetation indigenous to the Zayante Sandhills. Nonethess, a few mature Ponderosa Pines and Coast Live Oaks still grow at the property, while other resident plants are primarily ornamental and landscape species. Thus habitat quality for this plant community has been degraded. Table 1 lists the acreage for each habitat type, including existing, impacted, and maintained acreages.

Table 1. Habitat types of the Hidden Glen Drive project site and estimates for existing, impacted, and maintained (i.e., habitat maintenance area) acreages for each habitat type.

Habitat Types	Habitat Acreages		
	Existing	Impacted	Maintained
Ponderosa Pine forest	0.426	0.041	0.385
Developed	0.094	0.094*	0.000
Project Site Totals	0.520	0.135	0.385

* = impacted by original development of the single-family residence

4.2 COVERED SPECIES: MOUNT HERMON JUNE BEETLE

The species addressed in this HCP and covered by its associated section 10(a)(1)(B) permit (hereinafter referred to as "the covered species") includes one federally-listed species, the MHJB. This endangered species is presumed to occur on the Hidden Glen Drive property, due to the proximity of nearby known occurrences, and will be directly or indirectly affected by the proposed residential addition project. A brief discussion of the biology of this species and its occurrence on the property follows.

4.2.1 Conservation Status

The MHJB is a federally-listed endangered species. Throughout most of its range, the primary threats to the beetle are sand mining and urbanization. In a few instances, other types of land uses, such as agricultural conversion, recreation activities, plus pesticide use, alteration of fire cycles, and possibly even collectors, have also threatened the beetle. For these reasons, the

beetle was recognized as an endangered species by the USFWS (1997) in 1997 and a recovery plan was published by the USFWS (1998) in 1998. Critical habitat has not yet been proposed by the USFWS for the MHJB.

The State of California does not recognize insects as endangered or threatened species pursuant to the State's Fish & Game Code. However, the MHJB does receive consideration under the California Environmental Quality Act (CEQA) since it satisfies the definition of a rare species under this statute.

4.2.2 Description and Taxonomy

The MHJB is a member of the family Scarabaeidae (Insecta: Coleoptera). Adult males measure about 0.75 inch in length and females are slightly longer. The adult male has a black head and dark brown elytra (leathery forewings) that are covered with brown hairs. The elytra also have stripes that are broken and irregular rather than continuous and well-defined as in related species of June beetles. Larvae are grub-shaped (scarabaeiform) and vary in color from cream to pale yellow for the body segments and darker brown for the head.

Cazier (1938) described the beetle from specimens collected at Mount Hermon, Santa Cruz County, California. The genus *Polyphylla*, which contains 28 species, was recently revised by Young (1988). Although the scientific name *Polyphylla barbata* has been used since its original description, the beetle has commonly been referred to as the Mount Hermon June beetle or the Barbate June beetle.

4.2.3 Distribution and Habitats

Of the 28 North American species of *Polyphylla*, 20 have restricted ranges, with 15 being endemic to isolated sand deposits (Young 1988). The MHJB is restricted to the Zayante sandy soils that are found in the Scotts Valley-Mount Hermon-Felton-Ben Lomond-Santa Cruz area of the Santa Cruz Mountains. Historically, MHJB localities were referred to as sandhills (Cazier 1938; Young 1988), but more recently this area has been called the Zayante Sandhills (USFWS 1998). Arnold (2004) reviewed museum specimens and other reported records for the beetle and determined that it had been observed at about 70 locations within this area.

Habitats in the Zayante sandhills where MHJB has been found include Northern Maritime Chaparral, Ponderosa Pine Forest, Sand Parkland (which is a mixture of the aforementioned habitats with a shrub/subshrub and grass/forb understory), and mixed Deciduous-Evergreen Forest. In addition, adults have been found in disturbed sandy areas where remnants of these habitats still occur. Ponderosa Pine grows at all known MHJB locations and for this reason is a presumed larval food plant of the beetle. However, recent analyses of partially-digested plant fragments in fecal pellets of MHJB larvae by Kirsten Hill (2005) indicate that larvae feed on other plant species. Even if Ponderosa Pine is not a food plant, it is a useful indicator of suitable habitat for the MHJB.

4.2.4 Natural History

The MHJB is univoltine, i.e., it has only one generation per year. As its common name suggests, adult emergence and seasonal activity normally starts in May or June and continues through about mid-August; although, seasonal activity may vary from year to year depending on

weather conditions. Adults are nocturnal, being active between about 8:45 and 9:30 pm. Adult males actively fly low to the ground in search of females, which are flightless. Presumably the female emits a pheromone for the males to find her.

Lifespan data from a brief capture-recapture study suggest that adult males live no longer than one week (Arnold 2000). Dispersal data from the same capture-recapture study indicate that most adult males are quite sedentary, with home ranges of no more than a few acres. Similar data on lifespan and dispersal of females is lacking at this time since they are so infrequently observed.

Specific life history information for the MHJB is unknown, but can be inferred from related species. Presumably the entire life cycle (egg, larva, pupa, and adult) takes two to three years to complete. The majority of the life cycle is spent as a subterranean larval stage that feeds on plant roots (Furniss and Carolin 1977).

4.2.5 Occurrence at the Project Site and Vicinity

Arnold (2001, see Appendix A) conducted a MHJB habitat assessment survey at the property and found marginally suitable habitat to be present. Given the proximity of several nearby known locations of MHJB within the Hidden Glen neighborhood (BUGGY Data Base 2006; California Natural Diversity Data Base 2006), the Carters have assumed that the MHJB is present at their property.

5.0 IMPACTS AND ENVIRONMENTAL COMPLIANCE

5.1 IMPACT ASSESSMENT

Both temporary and permanent impacts are anticipated to occur due to project-related activities. The remainder of this section identifies the specific activities that could result in impacts to the MHJB as well as its habitat.

Permanent impacts will be confined to the 0.041-acre impact area (Table 1) of the 0.52-acre property that will be developed for residential uses. These impacts will occur during excavation and construction activities of the new living space, as well as demolition of an existing deck to accommodate the new living space. Incidental take of the MHJB as a result of these activities is expected to be limited because the impact area is so small.

Lesser, temporary impacts to the endangered beetle are expected to occur in the 0.041-acre impact area during construction. For example, about 1,000 $ft.^2$ of the impact area is a work zone for the construction crew that can be revegetated upon completion of the proposed project. Similarly, temporary losses may also occur when fencing to protect the habitat maintenance area is installed, or repaired, or removed after completion of all construction activities.

The Scotts Valley Fire District will ultimately determine the fire clearance requirements, if any, for the property. According to the Fire District, fire clearance requirements depend on the type of construction materials used to build the structure, the location of the proposed structure within the building envelope, and the presence of sensitive habitat on site. At this time, it is anticipated that no fire clearance will be necessary outside of the impact area. If at a later date ground disturbance or vegetation removal outside of the impact area is required to satisfy local fire clearance requirements and that activity could cause a take of the MHJB, the Carters will seek an amendment to their incidental take permit.

To summarize, impacts to the MHJB and its habitat will occur during demolition, excavation, and construction activities at the site necessary to complete the proposed residential addition. These impacts will be restricted to the 0.041-acre impact area of the 0.52-acre property. As discussed in greater detail in section 7.0 on Minimization and Mitigation Measures, the loss of 0.041 acres of landscaped understory of Ponderosa Pine Forest at the Carter property will be offset by the purchase of 0.041 MHJB conservation credit in prime sandhills habitat at the Ben Lomond Sandhills Preserve of the Zayante Sandhills Conservation Bank.

5.2 DIRECT AND INDIRECT EFFECTS

Although direct and indirect impacts to the MHJB as well as its preferred habitat are expected to be minimal, incidental take of this endangered species is expect to occur within the impact area. As previously discussed in this HCP, the Hidden Glen Drive property is situated in a region where nearby parcels support patches of suitable habitat and populations of the MHJB. Immediately surrounding properties have been developed for residential uses, so habitat values have been degraded not only at the Carters' property, but also in the surrounding neighborhood. Although the loss of degraded habitat at their property will be permanent, the applicants will purchase conservation credits in the form of 0.041 acre of prime habitat at the Ben Lomond Sandhills Preserve that is known to support the MHJB.

5.3 CUMULATIVE EFFECTS

Construction of the proposed residential addition will result in minor cumulative impacts to the MHJB. Even though 0.041 acre of the landscaped understory of the Ponderosa Pine-Coast Live Oak woodland will be permanently removed along with small numbers of MHJB, these losses are not expected to affect the range-wide survival of the beetle due to the occurrence and abundance of this species and its habitat at several nearby locations, as well as elsewhere throughout its entire geographic range. Indeed, the affected acreage will be compensated for through the permanent protection of prime habitat at a conservation bank that is known to support the endangered beetle.

Since MHJB has been observed inhabiting soils in residential yards that occur in close proximity to the Carter property (Arnold 2004), it can presumably co-exist in such habitat once soil disturbance has ceased. Thus, some MHJBs may ultimately recolonize the less disturbed portions of the impact area, where loose, sandy soils remain after all construction activities have been completed.

5.4 EFFECTS ON CRITICAL HABITAT

Critical habitat has not been designated for the MHJB. The Carter property and the conservation bank are located within the area designated as critical habitat (USFWS 2001) for the federally-listed endangered Zayante band-winged grasshopper (*Trimerotropis infantilis*). The Zayante band-winged grasshopper was not covered in this HCP because it does not occur at the project site due to the absence of its sunlit, sand parkland habitat there.

6.0 TAKE OF THE COVERED SPECIES

Since there are no accurate estimates of the numbers of MHJB that reside at the Carter property, it is not possible to quantify the exact number of individual animals that could be taken by the removal of its degraded habitat within the impact area. For these reasons, the level of take of the MHJB is expressed as the affected acreage, i.e., the 0.041-acre impact area of the property. Take of MHJB could result from removal of approximately 0.041 acre of degraded habitat of the property within the impact area. In addition, beetle eggs, larvae, pupae, or adults may be injured or killed during excavation or construction activities or by construction equipment and vehicles.

The level of take of the MHJB at the Hidden Glen Drive property, as described above, is expected to have negligible effects on the species' overall survival. This is because the actual number of animals incidentally taken will be very low, the percentage of the species' habitat affected is very small relative to the species' entire geographic range, and the property's relative importance to the species, both regionally and throughout its range, is thought to be minor. For these reasons, the amount of take of the MHJB that would result from the Hidden Glen Drive property is considered negligible.

The maximum levels of take of the MHJB anticipated in this HCP, and hereby requested for authorization, are as follows:

> any MHJB that may be taken (killed, injured, harmed, harassed, or captured) as a result of the following activities occurring within the boundaries of the 0.041-acre impact area of the 0.52-acre property during the following covered activities:
>
> a) any excavation and construction operations including, but not limited to, use of any equipment, vegetation removal, trampling of vegetation, compaction of soils, ground disturbance, installation of drainage and irrigation systems, or creation of dust;
>
> b) any permanent loss of habitat as a result of development of infrastructure including but not limited to new structure, sidewalks, and decking; and
>
> c) any activities associated with protection of the maintained habitat area, including but not limited to installation and repair of fences or signs, or other activities required in the HCP.

These incidental take limits are subject to full implementation of all minimization and mitigation measures described in section 7.0.

7.0 MINIMIZATION AND MITIGATION MEASURES

The following measures have been incorporated into the proposed project to minimize and mitigate potential incidental take of the MHJB. Successful implementation of these measures conducted prior to, concurrent with, and following construction of the residential addition will enable the project to achieve its biological goals.

7.1 MINIMIZATION MEASURES DURING CONSTRUCTION

The following minimization measures will be implemented during the construction related activities at the Carter property.

7.1.1 Construction Monitor

A person knowledgeable about the MHJB and its habitats, and approved by the USFWS, shall be present during initial excavation activities (i.e., clearing of vegetation and stripping of the surface soil layer). The monitor shall be present on site beginning with the installation of temporary fencing around the habitat maintenance area prior to clearing of vegetation elsewhere within the impact area and demolition of the existing deck, and shall conduct inspections of the project site on an as-needed basis during the initial excavation and construction period to ensure compliance with the minimization measures provided in this HCP. The monitor will also periodically visit the property throughout the entire construction period to insure that no impacts occur in the maintained habitat portion of the property. The monitor shall have authority to immediately stop any activity that does not comply with this HCP, and to order any reasonable measures to avoid the MHJB.

7.1.2 Delineation and Protection of the Habitat Maintenance Area During Construction

Prior to the initiation of any grading or other work at the project site, the permittee, in conjunction with the construction monitor, will install a temporary fence along the boundaries of the 0.385-acre maintained habitat area to minimize any disturbance to this portion of the site by excavation or other construction-related activities during construction of the new addition. Warning signs will be posted on the temporary fencing to alert excavators and other construction workers not to proceed beyond the fence. All protective fencing will remain in place until all construction and other site improvements have been completed. Signs will include the following language:

"NOTICE: SENSITIVE HABITAT AREA. DO NOT ENTER."

All equipment operators and field supervisors will attend a pre-construction conference to be conducted by the construction monitor. The purpose of the conference will be to inform all excavation and construction workers of the presence of endangered species on and adjacent to the project site, conduct a site visit to show participants where work-related activities can and cannot occur, identify appropriate dust control measures, inform operators of appropriate protocol should they encounter the MHJB during any project-related activities, and to advise operators of the penalties they may incur if harm to either endangered species or their maintained habitat on site occurs.

The construction monitor will routinely inspect the site and oversee activities on a regular

basis during the grading. Should any violation occur, a "stop work" order will be issued immediately. The Ventura Fish and Wildlife Office of the USFWS will be contacted and the "stop work" order will remain in effect until the issue is resolved.

7.1.3 Construction and Operational Requirements

All project-related parking and equipment storage shall be confined to the impact area or existing paved roads in the adjacent neighborhood. Project-related vehicle traffic shall be restricted to established roads and the existing driveway that service the impact area.

7.1.4 Contractor and Employee Orientation

The construction monitor shall conduct an orientation program for all persons who will work on-site during construction. The program will include a brief presentation from a person knowledgeable about the biology of the MHJB, its habitats, and the terms of the HCP. The purpose of the orientation will be to inform equipment operators and field supervisors of the excavation limits, equipment storage locations, materials laydown areas, and construction activity restrictions, and to identify other habitat protection and work procedures.

If any life stages of the MHJB are observed within the 0.041-acre impact area at the Carter property during construction-related activities, the construction monitor will advise all construction personnel to immediately halt work. The construction monitor will contact the Ventura Fish and Wildlife Office of the USFWS for guidance before any work at the project site resumes.

7.1.5 Access to Project Site

The permit holder shall allow representatives from the USFWS access to the property to monitor compliance with the terms and conditions of this HCP

7.1.6 Vegetation Management of the Habitat Maintenance Area

The permittee intends to conserve the habitat maintenance area with the existing native trees (Coast Live Oak and Ponderosa Pine) indigenous to the sandhills and existing landscaping. However, because of the uncertainty about future vegetation pruning or clearing activities that may be required by the Scotts Valley Fire District, this portion of the property cannot be permanently protected. Also, no post-construction monitoring will occur in the habitat maintenance area at their property. It is for these reasons that off-site mitigation is being utilized to compensate for all of the anticipated project-related impacts that will occur within the impact area.

7.1.7 Cover Exposed Soils

Grading and construction activities are likely to occur during the MHJB's summer flight season, which typically runs from about May 15th to August 15th. During this period, adults of the beetle may be attracted to barren sandy soils. To minimize the chance that adult beetles are attracted to sandy soils that are cleared within the impact area during construction, any exposed sandy soils will be covered at the end of each work day during the MHJB's flight season. Tarps, plywood, sterile hay, or another appropriate material(s) will be used to cover exposed sands to discourage the beetle from using these portions of the impact area.

7.2 MITIGATION PLAN

The Carters will compensate for MHJB habitat that will be eliminated due to construction of their residential addition by purchasing 0.041 MHJB conservation credit from the Ben Lomond Sandhills Preserve of the Zayante Sandhills Conservation Bank, which is a USFWS-approved MHJB conservation bank. The level of mitigation (i.e., conservation credits) is clearly commensurate with the level of impacts to MHJB habitat at the Carter property because the habitat quality at the conservation bank is prime compared to the degraded habitat at the property; thus the conservation value of the bank habitat is much greater than that of the property.

Figure 4 is a map that illustrates the location of the Ben Lomond Sandhills Preserve of the Zayante Sandhills Conservation Bank operated by PCO, LLC and its service area. A copy of the sales agreement between the Carters and PCO, LLC is attached to this HCP as Appendix B.

The operator of the conservation bank, PCO, LLC, will be responsible for all species monitoring, habitat management, and other conservation related activities that occur at the Ben Lomond Sandhills Preserve. An annual monitoring report will be prepared for submission to the USFWS and the County of Santa Cruz. The responsibility for preparing the annual monitoring report and the information that will be included in the report are described in section 8.7.2 of this HCP.

Figure 4 (location map of BLSP and ZSCB service area.)

8.0 PLAN IMPLEMENTATION

8.1 BIOLOGICAL GOALS AND OBJECTIVES

The biological goals and objectives of this HCP include -site measures that will minimize take of the MHJB at the project site and off-site measures that will protect habitat with high conversation value for the beetle in perpetuity. Specific goals and objectives are as follows:

Goal 1: Minimize, to the extent practical, take of the MHJB within the project site.

Objective 1.1: Minimize removal of plant taxa indigenous to the Zayante Sandhills that grow at the project site.

Objective 1.2: Revegetate temporarily disturbed portions of the project site with plant taxa indigenous to the Zayante Sandhills and minimize landscaping with turf grass, weed matting, aggregate, and mulch.

Objective 1.3: Minimize outdoor night lighting during the flight season of the MHJB or use light bulbs that are certified to not attract nocturnal insects.

Goal 2: Protect habitat for the MHJB at an off-site location with high conservation value for the beetle.

Objective 2.1: Provide funds, through the purchase of conservation credits at the Ben Lomond Sandhills Preserve of the Zayante Sandhills Conservation Bank, to protect, manage, and monitor habitat of the MHJB in perpetuity.

Objective 2.2: Maintain and, if feasible, increase the distribution of the MHJB with the Ben Lomond Sandhills Preserve.

Objective 2.3: Maintain and increase the abundance of the MHJB at the conservation bank property.

The degraded MHJB habitat on the 0.041 acre that will be impacted by the proposed construction of a new addition to the Carter's existing residence at the 0.52-acre property will be accomplished by purchasing 0.041 MHJB conservation credits from the Ben Lomond Sandhills Preserve of the USFWS-approved Zayante Sandhills Conservation Bank. This action also contributes to a regional preserve design to benefit the MHJB.

8.2 IDENTIFICATION OF PROJECT REPRESENTATIVE

The designated representative is Mr. Russell J. Short, Architect. Mr. Short can be contacted by mail at 5274 Scotts Valley Drive, Suite 201, Scotts Valley, CA 95066, or by telephone at (831) 439-8555. Mr. Short's email address is rjsarchitects@aol.com. The Ventura Fish and Wildlife Office of the USFWS shall be notified in writing if a substitute representative is designated.

8.3 IDENTIFICATION OF CONSTRUCTION AND BIOLOGICAL MONITORS

Subject to approval by the USFWS, Kathy Lyons will be the construction monitor on the project site. Duties of the construction monitor are provided in section 7.1. She can be contacted at the Biotic Resources Group, 2551 S. Rodeo Gulch #12, Soquel, CA 95073, phone (831) 476-4803, fax (831) 476-8038, and via email at brg@cruzio.com.

The Zayante Sandhills Conservation Bank will be responsible for biological monitoring

of the conservation bank site only. Mr. Paul Burrowes is the Managing Member of the ZSCB and can be contacted at: 24650 Glenwood Drive, Los Gatos, CA 95033, (408) 497-3989 phone, (408) 353-4336 (fax), or by email at paul@zayantesandhills.com .

8.4 SCOPE

The Hidden Glen Drive property consists of a single parcel measuring 0.52 acres and is located at 224 Hidden Glen Drive in Scotts Valley, as described in section 2.0 of this HCP. The mitigation site is the Ben Lomond Sandhills Preserve of the Zayante Sandhills Conservation Bank. It is located off of Hihn Road in Ben Lomond. This HCP covers activities only within the 0.041-acre impact area of the Hidden Glen Drive project site.

8.5 RESPONSIBILITIES

As specified in the USFWS' (1996) Habitat Conservation Planning Handbook, an Implementing Agreement (IA) is not required for low-effect HCPs unless requested by the permit applicant. Dr. and Mrs. Carter understand that they are responsible for implementing this HCP in accordance with the specifications for mitigation and funding.

The Carters will satisfy their mitigation responsibilities by the purchase of 0.041 MHJB conservation credits from PCO, LLC, operator of the Zayante Sandhills Conservation Bank. The mitigation site is the Ben Lomond Sandhills Preserve of the aforementioned bank.

Habitat at the Ben Lomond Sandhills Preserve is protected in perpetuity via a conservation easement held by The Center for Natural Lands Management. PCO, LLC is responsible for annual monitoring and reporting, as described herein, and in the management agreement at the bank site and has already committed to completing the obligations assigned to it in this HCP. The Carters' mitigation responsibilities will be completed upon the purchase of the conservation credits. A copy of the completed sales agreement is in Appendix B. The Carters will still be responsible for ensuring that all minimization measures are completed, reports are submitted on time, and any other terms and conditions included in the incidental take permit are adhered to.

8.6 PLAN DURATION

The Carters seek a five-year permit from the USFWS to cover those activities associated with the incidental take of MHJB at their Hidden Glen Drive property. The five-year period is necessary to allow adequate time to secure necessary permits from the County of Santa Cruz and for construction of the addition. Since 0.041 MHJB conservation credits have been purchased from PCO, LLC, the operator of the conservation bank will assume all responsibilities for implementation of the required mitigation. The permit will expire once the Carters have fulfilled all of their responsibilities.

8.7 REPORTING

8.7.1 Post-Construction Compliance Report

A post-construction compliance report prepared by the construction monitor shall be forwarded to the Ventura Fish and Wildlife Office of the USFWS and the Santa Cruz County Planning Department within 60 calendar days of the completion of construction. This report

shall provide the following information:

1) dates that construction occurred;
2) pertinent information concerning the permittee's success in meeting the project's minimization measures;
3) an explanation of failure to meet such measures, if any;
4) known project effects on federally-listed species, if any;
5) occurrences of incidental take of federally listed species, if any; and
6) other pertinent information.

8.7.2 Annual Mitigation Monitoring Reports

PCO, LLC must submit an annual monitoring report to the Ventura Fish and Wildlife Office of USFWS, describing activities performed to benefit the MHJB as part of its agreement to sell conservation credits and operate a conservation bank. Thus, mitigation monitoring reports will be prepared annually by PCO, LLC. This report shall be submitted to USFWS by December 31st of the monitoring year. This report shall include:

1) a general assessment of the condition of the habitat at the Ben Lomond Sandhills Preserve;
2) a description of all management actions taken on the Preserve along with an assessment of their effectiveness toward enhancing the biological goals and objectives;
3) a description of any problems encountered in managing the Preserve;
4) results of monitoring studies for the endangered species and/or communities conducted during the year and an assessment of their implications for the biological goals and objectives;
5) a description of other activities designed to enhance the Preserve

8.8 FUNDING

The Carters are responsible for the full cost of the 0.041 MHJB conservation credits, the minimization measures described in section 7.1 and Table 2, and potential changed circumstances described in section 9.1. The conservation credits were purchased in March 2007 by the Carters in a single, lump sum transaction. A copy of the sales agreement for the purchase of the 0.041 conservation credits is attached as Appendix B. PCO, LLC has already assumed responsibility for funding of annual maintenance of the Ben Lomond Sandhills Preserve and the fulfillment of all monitoring and reporting activities associated with the Zayante Sandhills Conservation Bank through its endowment to cover these costs.

Fees for the minimization activities will be paid by the Carters as these activities occur. The costs for these activities in Table 2 are estimates, but the actual incurred costs could be less or more than these estimates. If the actual costs for the minimization activities are higher than estimated in Table 2, the Carters agree to pay the actual costs.

Table 2. Costs of Minimization and Mitigation Measures for the Hidden Glen Drive Project

Mitigation and Minimization Activities	Unit Cost	Total Cost
Mitigation Activities:		
Purchase 0.041 MHJB conservation credits	$6.00/ft.^{2}/credit	$10,680
Minimization Activities:		
Biological Monitor	25 hrs. @ $100/hr.	$2,500
Protective Fencing & Signs	400 ft. @ $1.00/ft.	$400
Signs	10 signs @ $60 ea.	$600
Dust Control Measures	100 applications @$5/application	$500
	Grand Total Cost	**$14,680**

9.0 CHANGED AND UNFORESEEN CIRCUMSTANCES

Federal regulation pursuant to section 10(a)(1)(B) of the ESA [50 CFR 17.22(b) and 17.32(b)] 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 Habitat Conservation Plan Assurances (No Surprises) Rule [50 CFR 17.3, 17.22(b)(5) and 17.32(b)(5)] (USFWS 2004) defines changed and unforeseen circumstances and describes the obligations of the permittee and the USFWS. The purpose of the No Surprises Rule is to provide assurances to 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.

9.1 CHANGED CIRCUMSTANCES

Changed circumstances are defined as changes in circumstances affecting a species or geographic area covered by an HCP that can reasonably be anticipated by plan developers and the USFWS and for which contingency plans can be prepared (e.g., the new listing of a species, a fire, or other natural catastrophic event in areas prone to such an 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 or IA), then the permittee will implement those measures as specified in the plan as may be reasonable. However, if additional conservation 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 USFWS will not require these additional measures as far as the HCP has been "properly implemented" (properly implemented means the commitments and the provisions of the HCP and the IA have been or are being reasonably implemented).

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(a)(1)(B) permit, the permit may be reevaluated by the USFWS 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 take of the newly listed species or adverse modification of any newly designated critical habitat. The permittee shall implement the modifications to the HCP covered activities identified by the USFWS 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 permittee shall continue to implement the modifications until such time as the permittee has applied for and the USFWS 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 USFWS notifies the permittee in writing that the modifications to the HCP covered activities are no longer required to avoid the likelihood of jeopardy to or take of the newly listed species or adverse modification of newly designated critical habitat. If the USFWS, in consultation with the permittee, determines that the project-related activities cannot be modified to avoid jeopardy to or take of a species not covered under the HCP, then the permittee shall cease any activities that may result in jeopardy to or take of any species not covered under

the HCP until a permit amendment has been issued.

As to other potential changed circumstances, the Carters have applied for a permit for incidental take of the MHJB throughout the entire 0.041-acre impact area at their project site. Therefore, they do not anticipate that any additional changed circumstances will occur during the life of the permit in the area covered by this HCP that will result in unanticipated levels of take of the covered species. Additional changed circumstances; e.g., wildfire, erosion, extended drought, earthquake or other natural disaster, may occur at the off-site conservation bank. However, the short duration of the permit (i.e., five years) lessens the likelihood that one of these phenomena may cause substantial changes to the off-site conservation bank during the permit period. Furthermore, some types of changed circumstances, for example a wildfire, may actually enhance habitat values in the long term because Ponderosa Pine and members of the Ponderosa Pine Forest plant community are adapted to, and regenerate well after such fires. Winter storms or earthquakes could cause landslide or erosion problems in habitat areas that would require subsequent repairs, such as slope stabilization, repair of fencing, and revegetation. A portion of the fees paid by the Carters to PCO, LLC for the MHJB conservation credits include contingency funds to cover the costs of unexpected repairs, or habitat restoration that may be required as a result of any natural disasters occurring at the off-site conservation bank.

9.2 UNFORESEEN CIRCUMSTANCES

Unforeseen circumstances are defined 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 USFWS at the time of the plan'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 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.

In the case of an unforeseen event, the Carters or the current permit holder shall immediately notify the USFWS staff who have functioned as the principal contacts for the proposed action. In determining whether such an event constitutes an unforeseen circumstance, the USFWS 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 USFWS determines that the unforeseen circumstance will affect the outcome of the HCP, additional conservation and mitigation measures may be necessary. Where the HCP is being properly implemented and an unforeseen circumstance has occurred, 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 are already set aside in the HCP's operating conservation program.

Additional conservation and mitigation measures shall not 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 the original terms of the HCP without the consent of the permittee. Resolution of the situation shall be documented by letters between the USFWS, the Carters, and the conservation bank operator.

Thus, in the event that unforeseen circumstances adversely affecting the MHJB occur during the term of the requested incidental take permit, the Carters would not be required to provide additional financial mitigation or implement additional land use restrictions above those measures specified in the HCP, provided that the HCP is being properly implemented. This HCP expressly incorporates by reference the permit assurances set forth in the revised (USFWS 2004) Habitat Conservation Plan Assurances ("No Surprises") Rule (50 CFR Part 17).

10.0 PERMIT AMENDMENT/RENEWAL PROCESS

10.1 AMENDMENTS TO THE PERMIT

At this time there is no reason to expect that an amendment to the take permit will be needed to complete the development of Hidden Glen Drive. However, during the specified permit period, amendment of the section 10(a)(1)(B) permit for the Carters' project would be required for any of the following changes:

a) significant revision of the permit area boundary;
b) the listing under the ESA of a new species not currently addressed in this HCP that may be taken by project activities;
c) modification of any important project action or mitigation component under the HCP, including funding, that may significantly affect authorized take levels, effects of the project, or the nature or scope of the mitigation program; or
d) any other modification of the project likely to result in significant adverse effects to the MHJB not addressed in the original HCP and permit application.

Amendment of the section 10(a)(1)(B) permit would be treated in the same manner as an original permit application. Permit amendments typically require a revised HCP, a permit application form and application fee, a revised Implementing Agreement, a revised NEPA document, and a 30-day public comment period. However, the specific documentation needed in support of a permit amendment may vary, depending on the nature of the amendment. If the permit amendment qualifies as a low-effect HCP, an Implementing Agreement would not be needed and amendment of the permit would qualify for a categorical exclusion under NEPA.

10.2 AMENDMENTS TO THE HCP

This HCP may, under certain circumstances, be amended without amending its associated permit, provided that such amendments are of a minor or technical nature and that the effect on the species involved and the levels of take resulting from the amendment are not significantly different from those described in the original HCP. Examples of minor amendments to the HCP for the Carter's residential addition project that would not require permit amendment include:

a) minor revisions to monitoring or reporting protocols;
b) minor revisions of the HCP's plan area or boundaries;
c) minor revisions in project design and construction procedures; and
d) typographical errors.

To amend the HCP without amending the permit, the permittee must submit to the USFWS in writing a description of the proposed amendment, an explanation of why the amendment is necessary or desirable, and an explanation of why the effects of the proposed amendment are believed not to be significantly different from those described in the original HCP. If the USFWS concurs with the amendment proposal, it shall authorize the HCP amendment in writing, and the amendment shall be considered effective upon the date of the USFWS's written authorization.

10.3 PERMIT RENEWAL

Upon expiration, the section 10(a)(l)(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 MHJB are not significantly different than those described in the original HCP. To renew the permit, the Carters shall submit in writing to the USFWS at least 30 days prior to expiration of this permit:

- a request to renew the permit;
- reference to the original permit number;
- an application to renew the permit and the $100 fee;
- 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 USFWS 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 Carters file a renewal request and the request is on file with the issuing USFWS office at least 30 days prior to the permit's expiration, the permit shall remain valid while the renewal is being processed, provided the existing permit is renewable. However, the Carters may not take listed species beyond the quantity authorized by the original permit. If the Carters fail to file a renewal request within 30 days prior to permit expiration, the permit shall become invalid upon expiration. The Carters and the conservation bank operator must have complied with all annual reporting requirements to qualify for a permit renewal.

10.4 PERMIT TRANSFER

Although the sale or transfer of ownership of the property is not expected to occur during the life of the permit, should it occur, the following will be submitted to the USFWS by the new owner(s): a new permit application, permit fee, and written documentation providing assurances pursuant to 50 CFR 13.25 (b)(2) that the new owner will provide sufficient funding for the HCP and will implement the relevant terms and conditions of the permit, including any outstanding minimization and mitigation.. The new owner(s) will commit to all requirements regarding the take authorization and mitigation obligations of this HCP unless otherwise specified in writing and agreed to in advance with the USFWS.

11.0 ALTERNATIVES CONSIDERED

11.1 ALTERNATIVE #1: NO-ACTION

Under the No-Action Alternative, development of Hidden Glen Drive would not occur and the Carters would not implement an HCP or receive a section 10(a)(1)(B) incidental take permit from the USFWS. The existing single-family home would remain at the project site but the proposed addition to it would not be built.

However, potential impacts to the covered species may be greater in the absence of this HCP. Currently, natural habitat conditions within the 0.41 impact area as well as throughout the remainder of the 0.52-acre property are degraded due to the presence and abundance of various non-native plants. Without the HCP, habitat quality would probably continue to decline and no prime habitat at the conservation bank would be acquired to benefit the covered species. Therefore, the No-Action Alternative is concluded to be of lesser conservation value to the covered species than the proposed project and accompanying HCP. It also does not accomplish the applicant's desire to provide a complete living area on a single floor of their home. For these reasons, the No-Action Alternative has been rejected.

11.2 ALTERNATIVE #2: REDESIGNED PROJECT (REDUCED TAKE)

Under this alternative, the impact area of the residential addition would be reduced at the project site, thereby reducing the loss of potential habitat for the MHJB. A project design in which the new living space was planned as a second story was considered but rejected because the applicants want to avoid the use of stairs as they age. Although a section 10(a)(1)(B) permit would still be required, biological impacts, including loss of MHJB habitat, associated with this alternative would still result, but would be reduced in magnitude. A reduction in the development would not significantly improve onsite habitat conditions for the MHJB. Also, incidental take of MHJB could still occur during initial excavation and construction activities. Thus, the gains in reduction of take of the covered species and reduced modification of the covered species habitat would not be significant; furthermore this alternative would not accomplish the applicant's desire to have a complete living area on a single floor of their home. For these reasons, the Reduced Take Alternative has been rejected.

11.3 ALTERNATIVE #3: PROPOSED PROJECT (PERMIT ISSUANCE)

Under the Proposed Action Alternative, the Carters would construct the proposed addition to their existing home as described in section 2.0. The Proposed Project Alternative would require the issuance of a section 10(a)(1)(B) permit to allow construction of the project. The project would result in the loss of approximately 0.041 acre of degraded habitat for the MHJB. However, conservation measures as proposed in the HCP would result in greater habitat value for the endangered beetle than currently exists on the project site, due to the degraded habitat quality and the presence of exotics that can out compete the food plant(s) of the MHJB. The Proposed Project Alternative thus provides greater habitat conservation benefits than the No Action and Redesigned Project Alternatives, and also best meets the needs of the applicant. Therefore, the Proposed Project is the preferred alternative.

12.0 HABITAT CONSERVATION PLAN PREPARERS

Dr. Richard A. Arnold prepared this HCP. Dr. Arnold is an entomologist and the President of Entomological Consulting Services, Ltd., of Pleasant Hill, CA. Paul Burrowes, the Managing Member of PCO, LLC, provided the cost information for the purchase of conservation credits from the Zayante Sandhills Conservation Bank. Mr. Russell Short is the architect who prepared the site plan (Figure 3) for the Carter's addition project.

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14.0 APPENDIX A: Mount Hermon June Beetle Habitat Assessment Report

15.0 APPENDIX B: Conservation Credit Sales Receipt from the Zayante Sandhills Conservation Bank