

Low-Effect Habitat Conservation Plan
for the Endangered Mount Hermon June Beetle
at the Collado Drive Subdivision site (APN 021-031-13),
a 4-unit residential development located at the terminus of
Collado Drive in Scotts Valley (Santa Cruz County), California

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EXECUTIVE SUMMARY

Scotts Valley LLC has 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 a minor land subdivision and construction of four new single-family residences at a 1.093-acre undeveloped project site that consists of a single parcel (APN 021-031-13). This parcel is located at the northern terminus of Collado Drive in the Whispering Pines neighborhood of Scotts Valley (Santa Cruz County), CA. This proposed residential development project is known as the Collado Drive Subdivision.

Although the project site 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 the City of Scotts Valley has substantially degraded the original native habitat values. The vacant lot is surrounded by single-family homes, a mobile home park, and the Valley Gardens Golf Course.

Prior land uses have substantially degraded habitat quality at the property. Twenty-one Coast Live Oak (*Quercus agrifolia*) trees and one Madrone (*Arbutus menziesii*) grow in six small clusters. In addition, three mature Ponderosa Pine (*Pinus ponderosa*) trees grow on the vacant lot. Collectively, these trees are referred to as a degraded Ponderosa Pine and Coast Live Oak Forest plant community (note: this is not a standard plant community name but rather a phrase used to describe the plant community at the project site). It is referred to as “degraded” because the understory vegetation is primarily characterized by ruderal grasses and forbs, as is the remainder of the property, rather than the native understory vegetation that would normally characterize this plant community.

During a presence-absence survey conducted in 2001, adults of the MHJB were observed at the proposed project site. Therefore, Scotts Valley LLC has applied for a Section 10(a)(1)(B) permit and proposes 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 minor land division, as well as the site grading and construction of the four new single-family residences. Scotts Valley LLC is 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 Scotts Valley LLC 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 proposed construction project at a secure site in perpetuity. For mitigation, Scotts Valley LLC has purchased 1.093 conservation credits for the endangered MHJB from a USFWS-approved conservation bank known as 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. Estimated costs for minimization and mitigations measures.

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1. Portion of Felton 7.5' USGS topographic map illustrating the location of the Collado Drive Subdivision project site.
2. Street-level location map illustrating the location of the Collado Drive Subdivision project site.
- 3a. Tentative map for minor land division.
- 3b. Site plan, illustrating the impact area and protected tree areas.
4. Location map for the Ben Lomond Sandhills Preserve and its service territory.

1.0 INTRODUCTION

This Habitat Conservation Plan (HCP) has been prepared for the proposed minor land subdivision and construction of four new, single-family residences at the Collado Drive Subdivision, a 1.093-acre project site (APN 021-031-13) located at the northern terminus of Collado Drive in the Whispering Pines residential neighborhood of the City of Scotts Valley (Santa Cruz County), 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 Scotts Valley LLC, 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 at the 1.093-acre project site. The U.S. Fish & Wildlife Service (USFWS) has concluded that the project site provides habitat for this beetle. Scotts Valley LLC requests 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 Collado Drive Subdivision project site 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 Collado Drive Subdivision at a secure site in perpetuity. Specifically, 1.093 MHJB conservation credits 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 project site, 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 Collado Drive Subdivision project site measures 1.093 acres (47,629 ft.²) and is located at northern terminus of Collado Drive in the Whispering Pines residential neighborhood in the city of Scotts Valley, California (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 City of Scotts Valley since the Felton quadrangle was printed in 1967, Figure 2 is a street-level location map.

1.2 PROJECT SITE

The project site is located in a residential neighborhood known as Whispering Pines. Surrounding properties to the south and east are single-family homes, the Valley Gardens Golf Course abuts the project site on its western border, and the Spring Lakes Mobile Home Park is immediately north and east of the site.

Due to prior land uses, no native plant communities still occur at the property. The presence of three mature Ponderosa Pines (*Pinus ponderosa*), one Madrone (*Arbutus menziesii*)

and 21 Coast Live Oaks (*Quercus agrifolia*) indicates that Ponderosa Pine forest and Coast Live Oak forests were the native plant communities that formerly occurred at the site. Understory vegetation, as well as vegetation between the remaining, resident trees at the project site is currently characterized by an urban, ruderal plant community.

1.3 HISTORY OF THE HCP PROCESS

Dr. Richard Arnold, President of Entomological Consulting Services, Ltd. performed a habitat assessment survey for the MHJB at the Collado Drive Subdivision site for Olberding Environmental in 2000. Since Dr. Arnold found potentially suitable habitat for the endangered beetle, a presence-absence survey for the beetle was performed in May, 2001. A total of 94 MHJBs were observed on the parcel during a single night survey conducted on May 30, 2001. A copy of the presence-absence survey report (Arnold 2001) is attached as Appendix A.

In March 2006 Scotts Valley LLC hired Dr. Arnold to prepare this HCP. Dr. Arnold spoke with Roger Root, biologist with the Ventura office of the USFWS about the proposed project and need for an HCP in April 2006. USFWS advised Dr. Arnold that an incidental take permit would be necessary for the proposed project to comply with the Endangered Species Act. Mr. Charles Eadie, (Hamilton Swift Land Use & Development Consultants, Inc.) and Dr. Arnold also spoke with Mr. Root about the proposed project and HCP topics on May 22, 2006. This draft HCP was prepared and submitted to the Ventura office of USFWS in June, 2008. 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.

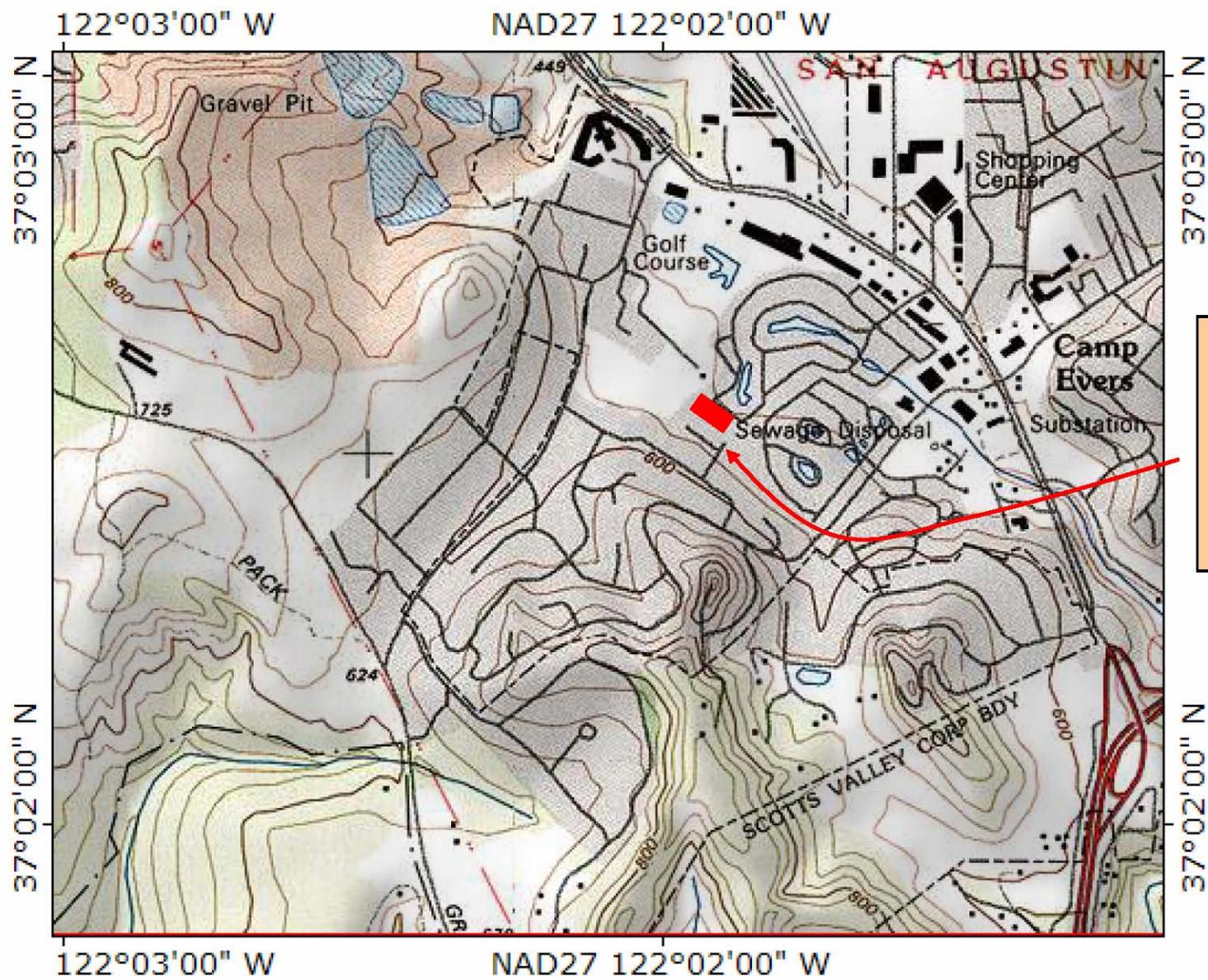
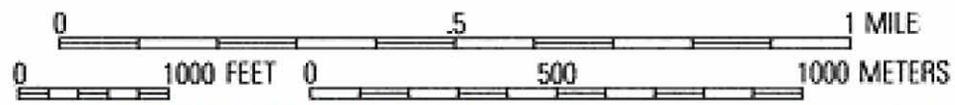


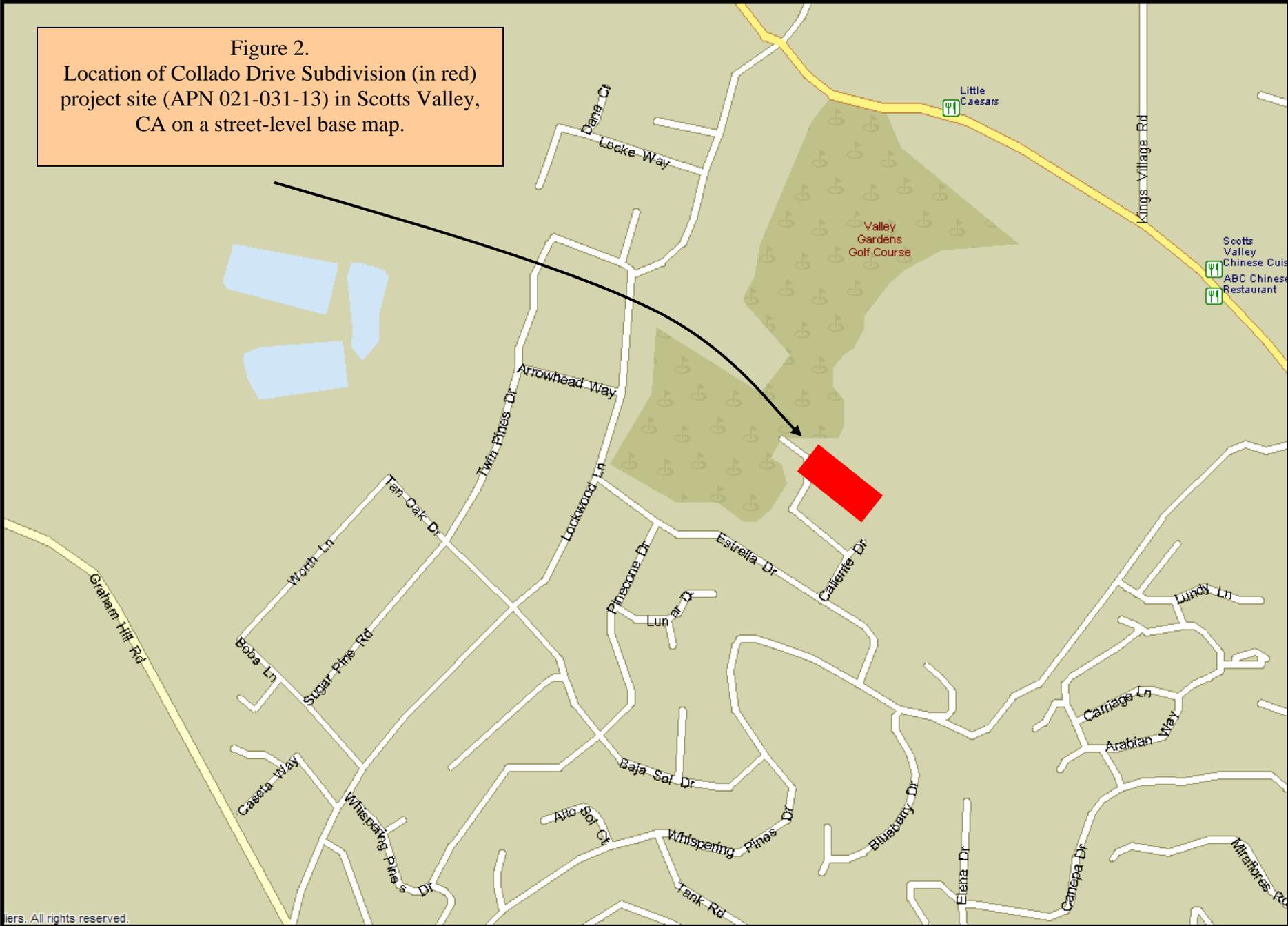
Figure 1.
Location of Collado Drive
Subdivision (in red)
project site
(APN 021-031-13) in Scotts
Valley, CA on the Felton
7.5' USGS topo map.

TN
 MN
 15°



Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

Figure 2.
Location of Collado Drive Subdivision (in red)
project site (APN 021-031-13) in Scotts Valley,
CA on a street-level base map.



2.0 PROJECT DESCRIPTION AND AREA

2.1 PROJECT SITE AND PROJECT DESCRIPTION

The project site consists of a single parcel measuring 1.093 acres. Currently the parcel is a vacant lot that is rectangular in shape, ca. 353 x 134 ft. There are no structures on the property. Two 18-inch diameter, buried storm drains run parallel to the northern border across the full length of the property. An existing easement for sanitary sewer use runs along the southern border to Collado Drive (Figures 3a and 3b).

The project site is generally flat with gentle slopes from south to north and west to east. Elevations range from approximately 525 to 550 ft. Twenty-one Coast Live Oak trees, three Ponderosa Pine trees, and one Madrone tree grow at the project site. Because they grow in six small clusters separated by areas of ruderal vegetation, they are referred to as degraded Ponderosa Pine and Coast Live Oak Forest (note: this is not a standard plant community name but rather a phrase used to describe the plant community at the project site). It is referred to as “degraded” because the understory vegetation is primarily characterized by ruderal grasses and forbs, as is the remainder of the property, rather than the native understory vegetation that would normally characterize this plant community. Site planning was done in an attempt to save as many of these resident trees as possible. Nine Coast Live Oak trees will be removed to accommodate the new subdivision (Figure 3a).

The proposed project will split the existing single parcel into four smaller parcels. Four new single-family homes and a 24-foot wide private street (an extension of Collado Drive) and cul-de-sac will be built. Lot sizes will range from 10,027 to 10,689 ft.². Locations of the four proposed, single-family homes and other associated site improvements are illustrated in Figures 3a and 3b, the tentative map for the minor subdivision and preliminary site plan. Portions of the project site where permanent development activities will occur are referred to as the “impact area” and collectively measure 0.909 acres (Figure 3b).

The new homes will be plumbed with domestic water and sanitary sewer. Since the sanitary sewer lines would drain to a public sewer line, no septic or cesspool systems will be required. Electrical power is fed from overhead power lines. Likewise natural gas is also provided by the local utility provider via underground connection at property line. Most trenching for the connection of underground utilities will occur within the impact area.

As indicated in the Tree Survey Summary on the tentative map, the three resident Ponderosa Pines, the Madrone, and 12 Coast Live Oaks will be retained. These trees and the associated ground that immediately surrounds them collectively measure 8,015 ft.² (0.184 acre). These portions of the site will be protected during grading and construction activities; these areas are referred to as the “protected tree areas” and are illustrated as green polygons in Figure 3b. These protected trees may eventually become part of the landscaping of each of the four new homes.

Altogether, the construction activities will permanently disturb approximately 0.909 acres at the project site. As a minimization measure, the aforementioned trees will be protected

during grading and construction activities in the 0.184-acre protected tree area. However, because of possible indirect impacts to the trees, and limited trenching for sewer hookups, the applicant is mitigating for impacts to the full site. Additional minimization measures will be employed before and during construction activities to minimize any adverse impacts to the MHJB and its habitat at the project site, including:

- 1) Temporary fencing, and if necessary signs, will be erected before any grading or vegetation clearing activities occur to protect the protected tree areas during construction activities;
- 2) Appropriate dust control measures, such as periodically wetting down the graded areas, will be used as necessary during grading of the impact area or any other activities that generate dust; and
- 3) All workers at the project site will participate in an educational session 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 project site during the course of all construction-related activities.

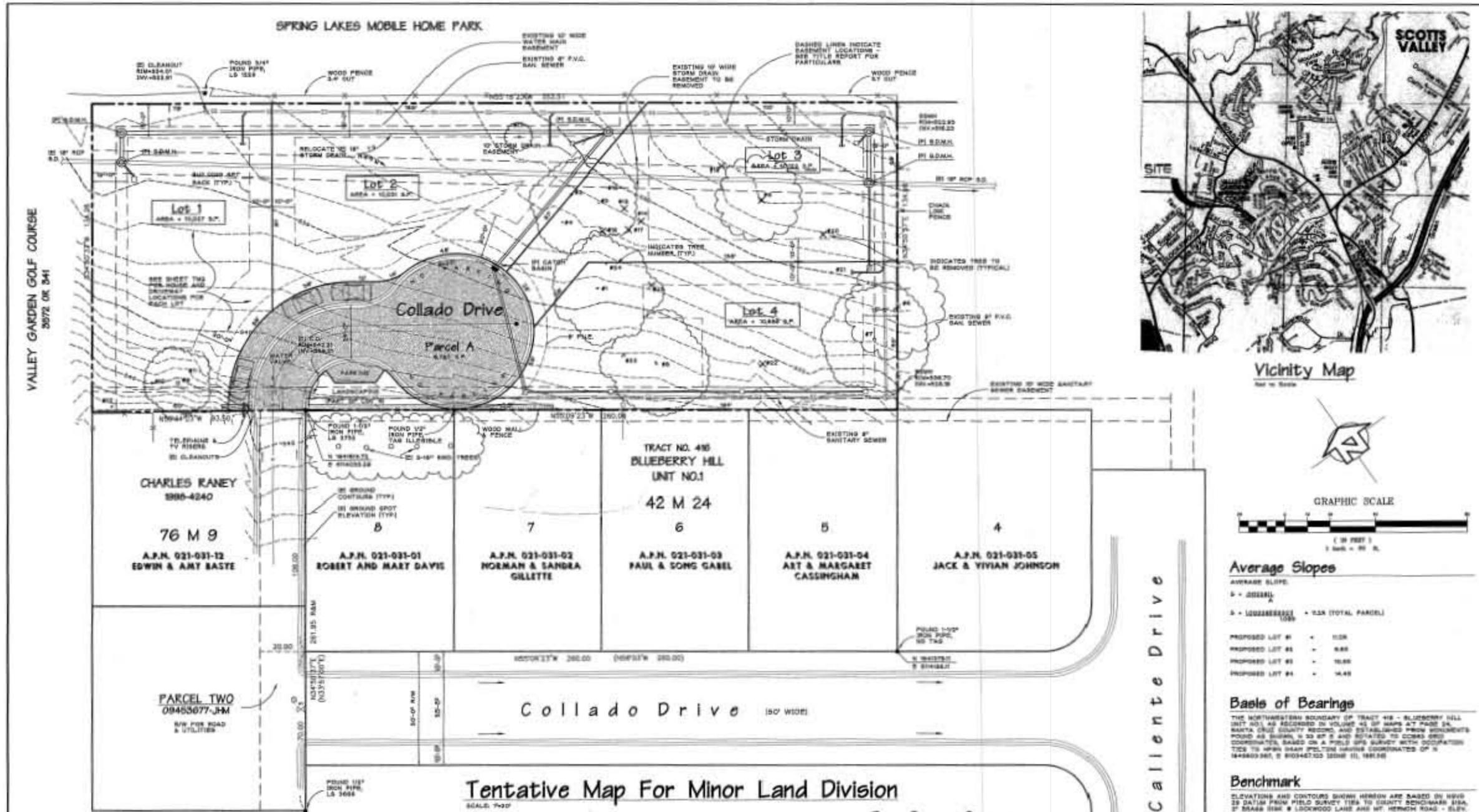
2.2 PERMIT HOLDER/PERMIT BOUNDARY

Scotts Valley LLC will be the holder of the section 10(a)(1)(B) permit. Mr. Charles Eadie of Hamilton-Swift Land Use & Development Consultants, Inc. is the applicant's representative. Mr Eadie can be contacted via mail at 500 Chestnut Street, Suite 100, Santa Cruz, CA 95060, or via telephone at (831) 459-9992, or via cell phone at (831) 431-3396, or via email at hs-charlie@pacbell.net . In the event of sale of the property prior to completion of the proposed development, 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 1.093-acre project site. Locations of the impact area and protected tree areas at the project site are illustrated in Figure 3b.

2.3 SURROUNDING LAND USES

The Collado Drive Subdivision project site is a planned unit development that is located in a residential neighborhood of the City of Scotts Valley known as Whispering Pines. Surrounding properties primarily support single-family homes and the Spring Lakes Mobile Home Park; however, immediately west of the project site is the Valley Gardens Golf Course. Zoning for the project site is R-1-10. The residential neighborhoods to the south and east are also zoned R-1-10, which means that one single-family residence is allowed on a minimum lot size of 10,000 ft.².



Project Data

Owner Jan and Carol Ann Lee 460 Lockwood Lane Scotts Valley, Ca. 95066	Subdivider Scotts Valley L.L.C. 882 N. Hillview Drive Milpitas, Ca. 95035 Phone: 408-719-1190 Fax: 408-719-1191	Cable Television AT&T Broadband
Existing Zoning R-1-10	Water Supply San Lorenzo Valley Water District	Total Area of Site 47,623 S.F. / 1.093 Acres
Existing Use Vacant	Proposed Use Four Single Family Lots	Sewer Disposal City of Scotts Valley
		Gas & Electric Pacific Gas & Electric

Figure 3a. Tentative map for minor land division at Collado Drive Subdivision site.

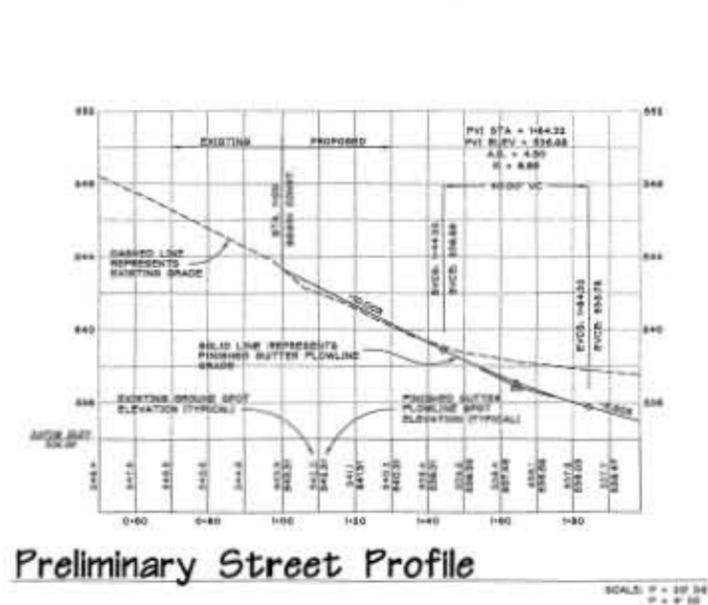
1100 WATER STREET
SAN JOSE, CALIF. 95128
PHONE (408) 438-1313
FAX (408) 438-1743

Illand ENGINEERS, INC.
CIVIL ENGINEERING • LAND PLANNING • STRUCTURAL DESIGN

Tentative Map For Minor Land Division
Scotts Valley L.L.C.
Collado Drive, Scotts Valley, California

APN 021-031-13
SHEET 06/06/07
SCALE: AS SHOWN
DATE: 06/07/07

TM1
SHEET 06/06/07
APN 021-031-13



Preliminary Street Profile

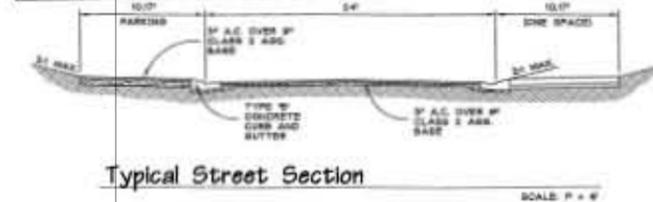
Erosion Control Notes

- NO LAND CLEARING, GRADING OR EXCAVATION SHALL BE DONE BETWEEN OCTOBER 15th AND APRIL 15th. ANY DEVIATION FROM THIS CONDITION REQUIRES REVIEW AND APPROVAL OF A SEPARATE WATER EROSION CONTROL PLAN BY ENVIRONMENTAL PLANNERS PRIOR TO BEGINNING CONSTRUCTION. THE DEVELOPER SHALL BE RESPONSIBLE FOR IMPLEMENTING AND MAINTAINING SITE EROSION CONTROL AT ALL TIMES.
- UNNECESSARY GRADING AND DISTURBING OF SOIL SHALL BE AVOIDED.
- BETWEEN OCTOBER 15th AND APRIL 15th, EXPOSED SOIL SHALL BE PROTECTED FROM EROSION AT ALL TIMES. HAY BALES, FILTER BERMS, SILT FENCES OR OTHER MEANS SHALL BE EMPLOYED TO PREVENT SEDIMENT FROM LEAVING THE SITE OR ENTERING ANY WATER COURSE.
- DURING CONSTRUCTION NO TURBID WATER SHALL BE PERMITTED TO ENTER THE STORM DRAIN SYSTEM. USE OF SILT AND BREAK TRAPS, FILTER BERMS, HAY BALES OR SILT FENCES SHALL BE USED TO PREVENT SUCH DISCHARGE.
- ALL AREAS ON- AND OFF-SITE EXPOSED DURING CONSTRUCTION ACTIVITIES, IF NOT PERMANENTLY LANDSCAPED PER PLAN, SHALL BE PROTECTED BY MULCHING AND/OR PLANTING OF THE FOLLOWING EROSION CONTROL: SEE ST 4 & ST 5 OF AS PER AGE.
- ALL EXCAVATED MATERIAL SHALL BE REMOVED TO AN APPROVED DISPOSAL SITE OR DISPOSED OF ON-SITE IN A MANNER THAT WILL NOT CAUSE EROSION.
- ANY MATERIAL STOCKPILED DURING CONSTRUCTION SHALL BE COVERED WITH PLANTS.
- UPON COMPLETION OF CONSTRUCTION ALL REMAINING EXPOSED SOILS SHALL BE PERMANENTLY REVEGETATED PER LANDSCAPING PLAN.
- EXPOSED SOIL ON SLOPES GREATER THAN 20% SHALL BE SECURED COVERED WITH 2 INCHES OF STRAW, AND AN EROSION CONTROL BLANKET. THE EROSION CONTROL BLANKET SHALL BE STAKED IN PLACE.
- IT IS THE DEVELOPER'S RESPONSIBILITY TO SEE THAT ADDITIONAL MEASURES NECESSARY TO CONTROL SITE EROSION AND PREVENT SEDIMENT TRANSPORT OFF-SITE ARE IMPLEMENTED.

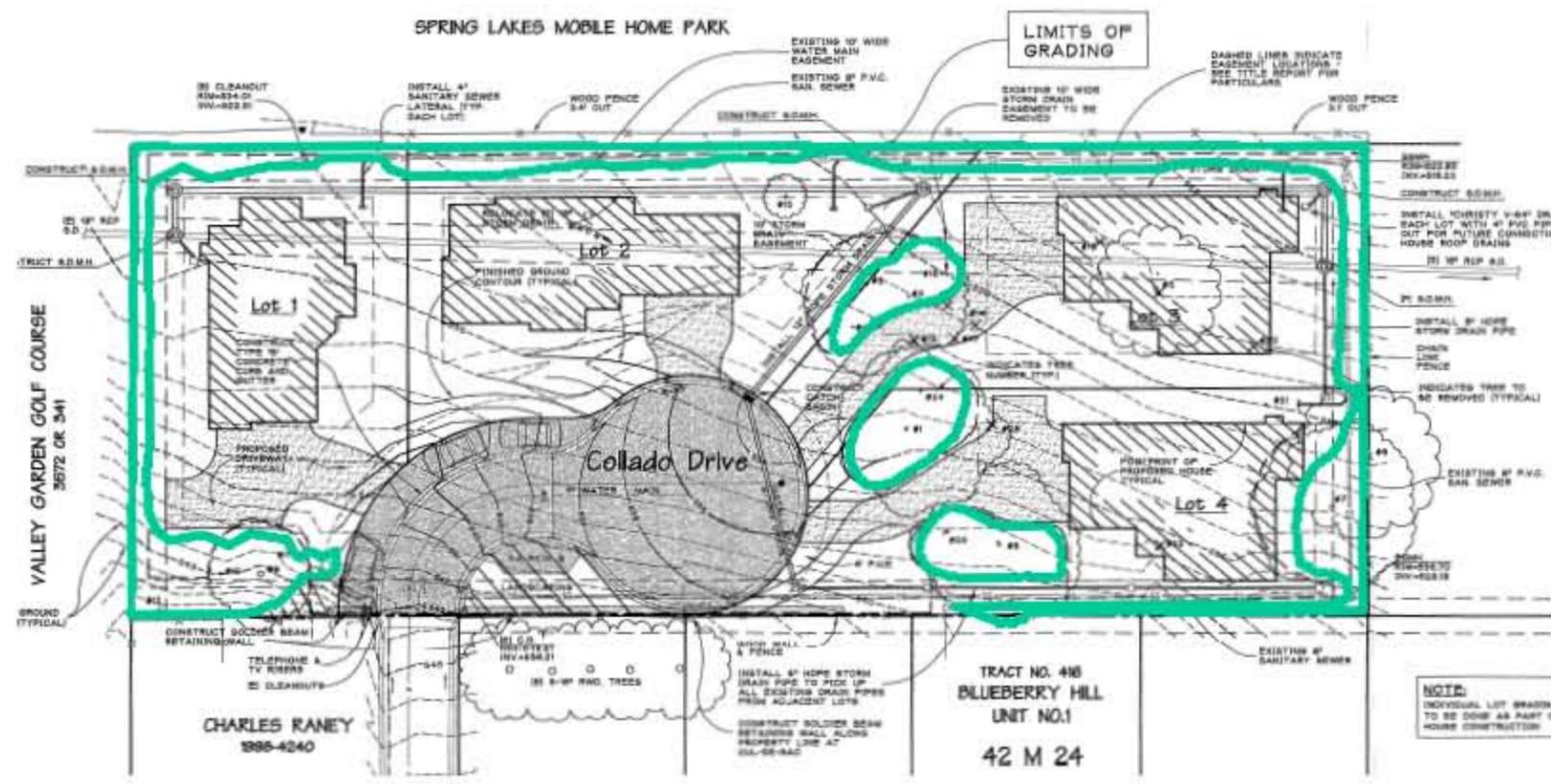
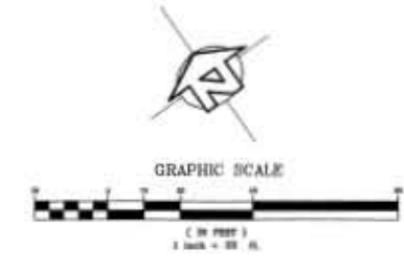
Site Area Coverage (square feet)

LOT NO.	GROSS AREA	STRUCTURES	PARKING/ DRIVEWAYS	PATIO'S/ WALKS	LANDSCAPING/ OPEN
1	10,027	2,305	1,580	500	6,142
2	10,031	3,840	883	225	6,183
3	10,733	3,830	1,000	180	6,823
4	10,850	2,340	1,240	300	6,970
COMMON AREAS	4,750	0	0	0	0
TOTALS	47,391 S.F.	13,285 S.F.	4,623 S.F.	880 S.F.	24,803 S.F.

Figure 3b.
Preliminary site plan for Collado Drive Subdivision. Green polygons illustrate protected tree areas, while non-green illustrates the impact area.
XXXXXXXX



Typical Street Section



Preliminary Improvement Plan

Parking Provided

- (4) 3-CAR GARAGES = 12
- (4) 3 CARS ON DRIVEWAY = 12
- 4 CARS ON STREET = 4
- TOTAL = 28 SPACES (7 PER LOT)

Storm Drainage Calculations

SITE AREA = 1.093 ACRES
 RAINFALL INTENSITY - 10 YEAR STORM = 3.40 IN/HR
 RUNOFF COEFFICIENT - PRE-DEVELOPMENT = 0.23
 - POST-DEVELOPMENT = 0.46

Pre-Development Run-off

$$Q_{10} = 0.23(3.40)(0.88) = 0.68 \text{ C.F.S.}$$

Post-Development Run-off

$$Q_{10} = 0.46(3.40)(0.88) = 1.38 \text{ C.F.S.}$$

Preliminary Earthwork Quantities

700 CUBIC YARDS EXCAVATION
 100 CUBIC YARDS EMBANKMENT
 800 CUBIC YARDS EXPORT

REMARKS: DOES NOT INCLUDE STRIPPINGS, UTILITY TRENCH VOLUMES OR ANY OVEREXCAVATION, IF REQUIRED BY SITE CONDITIONS.

ESTIMATE ASSUMES A 95% COMPACTION FACTOR ON ALL FILL MATERIAL AND A 2% EXPANSION FACTOR ON ALL CUT MATERIAL.

EXCAVATION QUANTITIES ARE PRELIMINARY ESTIMATES ONLY. DURING FINAL PROJECT DESIGN ESTIMATES MAY BE ADJUSTED TO ACCOUNT FOR UNSTABLE SOILS EXISTING PRIOR TO SURFACES AND SITE STRIPPINGS SHOULD SUCH INFORMATION BE AVAILABLE.

1100 WATER STREET
 SANTA CRUZ, CA 95062
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 FAX (831) 428-1763

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APN 011-031-15
 DATE 08/01/01
 SCALE 1/8" = 1'-0"

TM2
 OF 2 SHEETS
 JOB NO. 00082

3.0 REGULATORY FRAMEWORK

3.1 FEDERAL ENDANGERED SPECIES ACT OF 1973

Section 9 of the ESA and Federal regulation 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 Service to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Harass is defined by the Service as intentional or negligent actions that create the likelihood of injury to listed species 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 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 habitat conservation plan, commonly referred to as an HCP. The regulatory standard under section 10(a)(1)(B) of the Act 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 Act, 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 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 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 Service 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-permit 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 is “low-effect,” as described below and in the USFWS’s (1996) Habitat Conservation Planning Handbook, the applicant for the proposed Collado Drive Subdivision project believes this HCP qualifies as 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 a low-effect HCP, 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 (i.e., 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 ESA 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's (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 is known as Collado Drive Subdivision and is subject to CEQA review. The City of Scotts Valley is the lead agency.

3.4 SCOTTS VALLEY FIRE DISTRICT

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.

3.5 CITY OF SCOTTS VALLEY

Section 17.44.080 of the City of Scotts Valley's municipal code describes the protective measures for native and heritage trees. Removal of living, native trees measuring at least 8 inches in diameter at breast height (ca. 54 inches above ground) that are in good health requires a permit from the City of Scotts Valley. When feasible, removed trees should be replaced by new trees that are planted elsewhere on the property. The City of Scotts Valley requires the project applicant to submit a tree removal and preservation plan and to replace removed trees at a 2:1 ratio. It is anticipated that all replacement trees will be planted on the Collado Drive Subdivision site and will become part of the landscaping plan for the project.

The City of Scotts Valley also has a policy to maintain a storm drainage system that provides optimal flood protection and maximum groundwater recharge. Developers are required to mitigate for any loss of recharge. Mitigations may be accomplished by on-site recharge, construction of recharge improvements, contributions to the City's groundwater recharge program, or a combination of any or all of these measures. The Collado Drive Subdivision project will mitigate by constructing recharge improvements on-site, as illustrated in Figure 3b.

4.0 BIOLOGY

This chapter describes the existing biotic resource conditions at the Collado Drive Subdivision project site. 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 recent observations, the MHJB is known to occur at the project site and will be directly or indirectly affected by the planned residential development. This section summarizes available information about the taxonomy, identification, distribution, habitat, biology, and conservation of the covered species.

4.1 HABITATS

The Collado Drive Subdivision project site is characterized by Zayante sands (Bowman and Estrada 1980). It supports ruderal annual grassland and a degraded stand of Ponderosa Pine and Coast Live Oak forest. Although the soils present at the project site are Zayante sands, prior land uses have removed nearly all native vegetation indigenous to the Zayante Sandhills (Arnold 2000). Three Ponderosa Pines, one Madrone, and 21 Coast Live Oaks grow at the property, along Coyote Brush (*Baccharis pilularis*) and Poison Oak (*Toxicodendron diversilobum*), and Buckbrush (*Ceanothus* sp.). Understory vegetation is dominated by ruderal annual grasses and forbs rather than native plants characteristic of the aforementioned forests.

The proposed subdivision will impact 0.66 acre of the ruderal grassland and 0.433 acre of the Ponderosa Pine and Coast Live Oak forest habitat due to grading and construction activities. An estimated cumulative total of 0.184 acre around the bases of 15 of the resident trees will be protected during grading and construction.

Table 1. Habitat types of the Collado Drive Subdivision project site and estimates of existing and impacted acreages for each habitat type.			
Habitat Types	Habitat Acreages		
	Existing	Impacted	Protected Trees
Ruderal Annual Grassland	0.660	0.660	0.000
Degraded Ponderosa Pine and Coast Live Oak Forest	0.433	0.249	0.184
Project Site Totals	1.093	0.909	0.184

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 covered species) includes one federally-listed species, the MHJB. This endangered species is known to occur on the Collado Drive Subdivision project site and will be directly or indirectly affected by the proposed minor land subdivision and development project. A brief discussion of the biology of this species and its occurrence on the project site 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 occurs at all known MHJB locations and for this reason has been 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 crepuscular, 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 2004). 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 presence-absence survey at the project site and identified 94 adults of the MHJB at the project site. MHJBs are also known to occur at several nearby properties within the Whispering Pines neighborhood (BUGGY Data Base 2006; California Natural Diversity Data Base 2006).

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 0.909-acre impact area that will be developed for residential uses. These impacts will occur during grading, excavation, and construction activities. As evidenced by the findings of the presence-absence survey in 2001 (Arnold 2001), MHJBs occur at the project site.

Lesser, but persistent and unquantifiable impacts to the endangered beetle are expected to occur in the 0.184-acre protected tree areas that will be protected during grading and construction. For example, such losses may occur when temporary fencing to protect the trees is installed, repaired, or removed after completion of all construction, during removal of invasive, non-native plants, during implementation of other management actions (such as revegetation or landscaping), or if landowners within the planned residential development conduct ground-disturbing activities following the construction of the subdivision.

The Scotts Valley Fire District will ultimately determine the fire clearance requirements, if any, for the future residences on site. 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 for any of the protected trees; however, it is possible that at a later date the Fire District may require clearing or pruning of such vegetation at the project site. If the fire clearance is needed at a later date, USFWS will be advised of the situation.

To summarize, impacts to the MHJB and its habitat will occur during grading of the site and the installation of various improvements to the site associated with the construction of four new single-family residences. During construction of the homes and associated infrastructure, these impacts will be primarily restricted to the 0.909-acre impact area at the project site. As discussed in greater detail in Section 7.0 on Minimization and Mitigation Measures, the permanent loss of 0.909 acre of ruderal grassland vegetation and degraded Ponderosa Pine and Coast Live Oak forest at the project site, and lesser but unquantifiable impacts to the MHJB on the remaining 0.184 acre of the parcel, will be fully offset by the purchase of 1.093 MHJB conservation credits 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 and its preferred habitat are expected to be minimal, take of this endangered species will occur within the impact area and to a lesser degree elsewhere on the site. As previously discussed in this HCP, the Collado Drive Subdivision project site is situated in a region and residential neighborhood where nearby parcels support similarly degraded patches of suitable habitat and individuals of the MHJB.

Immediately surrounding properties have been developed for residential uses (single-family homes and a mobile home park) and a golf course, so habitat values have been substantially degraded from the historic prime habitat conditions. Nonetheless, all areas characterized by Zayante sandy soils within the historic geographic range of the MHJB are considered to be suitable habitat. Although the loss of habitat at the project site will be permanent, the applicant has purchased conservation credits in the form of 1.093 conservation credits for prime MHJB habitat at the Ben Lomond Sandhills Preserve.

5.3 CUMULATIVE EFFECTS

Development of the four new homes will result in minor cumulative impacts to the MHJB. Even though 0.909 acre of ruderal grassland and degraded Ponderosa Pine and Coast Live Oak woodland habitats 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 throughout its entire geographic range. Indeed, the affected acreage will be fully 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 project site (Arnold 2004), it can presumably co-exist in such habitat once soil disturbance has ceased. Thus, some MHJBs may remain in the protected tree portions of the project site during construction of the four homes, or recolonize portions of the project site such as the yards of the newly constructed homes, if loose, Zayante sandy soils remain after all site improvements have been completed.

5.4 EFFECTS ON CRITICAL HABITAT

Critical habitat has not been designated for the MHJB. However, the project site and the Zayante Sandhills Conservation Bank are located within the zones of 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 on the project site due to the absence of open sand parkland habitat.

6.0 TAKE OF THE COVERED SPECIES

Since there are no accurate estimates of the numbers of MHJB that reside at the project site, 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 impacted acreage of the 1.093-acre project site. Take of MHJB could result from the permanent removal of approximately 0.909 acres of degraded habitat within the impact area. In addition, beetle eggs, larvae, pupae, or adults may be injured or killed during initial grading activities, by construction equipment and vehicles, or during other activities throughout the parcel. An undetermined, but limited number of MHJB may also be injured or killed during activities within the “Protected Tree Areas” at the project site.

The level of take of the MHJB at Collado Drive Subdivision, 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 project site’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 Collado Drive Subdivision project is considered negligible.

The maximum levels of take of the MHJB anticipated in this HCP, and authorized by the requested Section 10(a)(1)(B) incidental take permit, 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 1.093-acre project site during the following covered activities:

- a) any grading and construction operations including, but not limited to, use of any equipment, vegetation removal, trampling of vegetation, compaction of soils, ground disturbance, grading, or creation of dust;
- b) any permanent loss of habitat as a result of development of infrastructure including, but not limited to buildings, roads, sidewalks, swimming pools, or installation of utilities, drainage and irrigation systems;
- c) any activities to manage or enhance habitat including, but not limited to leveling ground, creating bare ground, planting vegetation, watering vegetation, or removal of exotic plant species;
- d) any activities associated with protection, management, and enhancement of the protected tree areas, including but not limited to removal of exotic plant species, 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 subdivision development, 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 project site.

7.1.1 Construction Monitor

A person knowledgeable about the MHJB and its habitats, and approved by the USFWS, shall be present during initial grading and 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 protected trees prior to clearing of vegetation elsewhere at the project site, and shall conduct inspections of the project site on an as-needed basis during the initial grading period to ensure compliance with the minimization measures provided in this HCP. The monitor will also periodically visit the project site throughout the entire construction period to insure that no impacts occur in the protected trees portion of the project site. 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 Native Trees 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 around the protected tree areas to minimize any disturbance to these portions of the site by grading, excavation, or other construction-related activities during construction of the new homes. Warning signs will be posted on the temporary fencing to alert grader and excavator operators, plus 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. GRADING PROHIBITED."

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 grading and construction workers of the presence of endangered species on and adjacent to the project site, conduct a site visit to show participants where grading can and cannot occur, identify appropriate dust control measures, inform operators of appropriate protocol should they encounter the MHJB during grading and construction activities, and to advise operators of the penalties they may incur if harm to either endangered species or the protected trees 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 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 vehicular traffic shall be restricted to established roads that service the impact area, as well as the new extension of Collado Drive and driveways to the new homes.

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 grading limits and construction activity restrictions, and to identify other habitat protection and work procedures.

If any life stages of the MHJB are observed within the 0.909-acre impact area at the project site during construction-related activities, the construction monitor will advise all construction personnel to immediately halt work. The construction monitor will contact the Ventura Field 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 project site to monitor compliance with the terms and conditions of this HCP

7.1.6 Vegetation Management of the Protected Tree Areas

The permittee intends to incorporate the protected tree areas into the landscaping of the new homes. Plants indigenous to the sandhills will be installed where feasible. However, because of the uncertainty about future vegetation pruning or clearing activities that may be required by the Scotts Valley Fire District, these portions of the project site cannot be permanently protected. It is for this reason that off-site mitigation is being utilized to compensate for all of the anticipated project-related impacts. Also, no post-construction monitoring will occur in the protected tree areas at the project site.

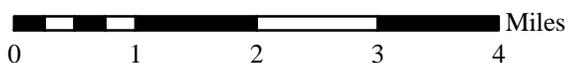
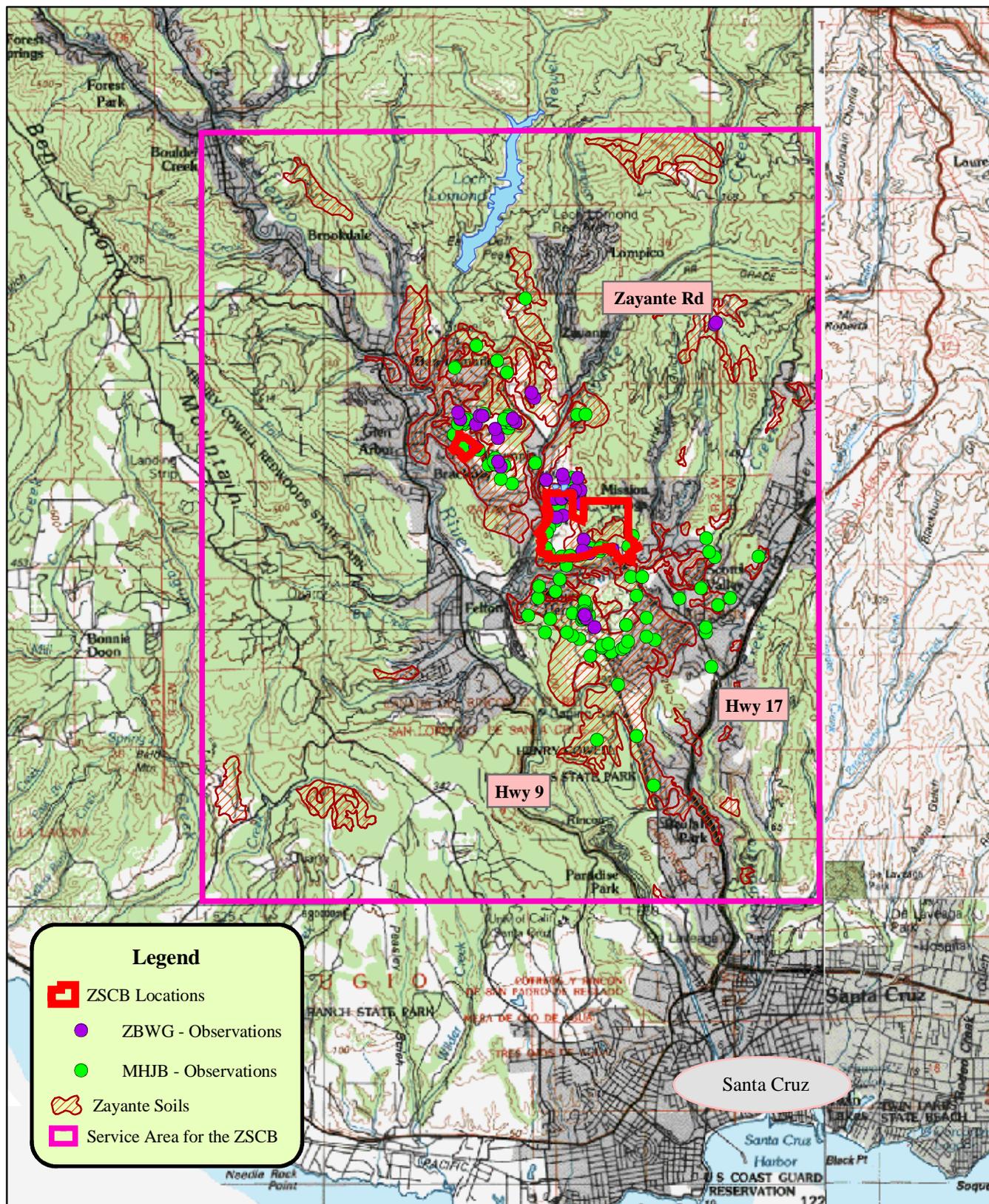
7.2 MITIGATION PLAN

Scotts Valley LLC will compensate for MHJB habitat that will be eliminated due to development of Collado Drive Subdivision by purchasing 1.093 MHJB conservation credits from the Ben Lomond Sandhills Preserve of the Zayante Sandhills Conservation Bank, which is a USFWS-approved MHJB conservation bank. This level of mitigation (i.e., conservation credits) is clearly commensurate with the extent of impacts to MHJB habitat at the project site, because the habitat quality at the conservation bank is prime compared to the extremely degraded habitat at the project site. In other words, the long-term conservation value of the MHJB habitat that would be protected and managed by purchasing the conservation credits is much greater than the conservation value of the habitat that would be impacted at the project site.

Figure 4 is a map that illustrates the location of the Ben Lomond Sandhills Preserve of the Zayante Sandhills Conservation Bank and its service area. A copy of the sales agreement between Scotts Valley LLC 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 City of Scotts Valley. 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.

Figure 4. Service Area for the ZSCB:
 Insect Observations, Zayante Soils and ZSCB Bank Preserves
 Palo Alto, San Jose & Monterey (USGS 1:100,000 scale) maps = base map



8.0 PLAN IMPLEMENTATION

8.1 BIOLOGICAL GOALS AND OBJECTIVES

The biological goals and objectives of this HCP include measures that will minimize take of the MHJB at the project site and off-site measures that will protect habitat with high conservation 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 that would be impacted by the proposed construction of four new residences at the 1.093-acre project site will be accomplished by purchasing 1.093 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. Charles Eadie of Hamilton-Swift Land Use & Development Consultants, Inc. Mr. Eadie can be contacted via surface mail at 500 Chestnut St., Suite 100, Santa Cruz, CA 95060, or via telephone at (831) 459-9992, or via cell phone at (831) 431-3396, or via email at hs-charlie@pacbell.net. 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, botanist Kathy Lyons will be the construction monitor on the project site. Duties of the construction monitor are provided in Section 7.1.1. Ms. Lyons 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.

PCO, LLC dba 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 PCO, LLC and can be contacted at: 24650 Glenwood Drive, Los Gatos, CA 95033, (408) 497-3989 voice and (408) 353-4336 (fax), or by email at paul@zayantesandhills.com.

8.4 SCOPE

The Collado Drive Subdivision project site consists of a single parcel, measuring 1.093 acres and located at northern terminus of Collado 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. The Ben Lomond Sandhills Preserve is located off of Hihn Road in Ben Lomond. This HCP covers activities only within the Collado Drive Subdivision project site.

8.5 RESPONSIBILITIES

As specified in the USFWS's (1996) Habitat Conservation Planning Handbook, an Implementing Agreement (IA) is not required for low-effect HCP's unless requested by the permit applicant. Scotts Valley LLC understands that it is responsible for implementing this HCP in accordance with the specifications for mitigation and funding.

Scotts Valley LLC will satisfy its mitigation responsibilities by purchasing 1.093 MHJB conservation credits at the Ben Lomond Sandhills Preserve from PCO LLC, operator of the Zayante Sandhills Conservation 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 will complete all obligations assigned to it within the Section 10 permit and this HCP. A copy of the completed sales agreement is in Appendix B. Although Scotts Valley LLC's mitigation responsibilities will be satisfied by purchase of the conservation credits, it will continue to be responsible for ensuring that all minimization measures are completed, reports are submitted on time, and any other conditions included in the permit are completed. In addition, the construction monitor will prepare and submit the post-construction compliance report (see Section 8.7.1) on behalf of Scotts Valley LLC.

8.6 PLAN DURATION

Scotts Valley LLC seeks a five-year permit from the USFWS to cover those activities associated with the incidental take of MHJB at the Collado Drive Subdivision project site. The five-year period is necessary to allow adequate time for construction of all four new residences. Since 1.093 MHJB conservation credits have been purchased from the Ben Lomond Sandhills Preserve of the Zayante Sandhills Conservation Bank, the operator of the conservation bank (PCO LLC) will assume all responsibilities for implementation of the required mitigation. The permit will expire once Scotts Valley LLC has fulfilled all of its responsibilities, which may be earlier than the full five-year permit period.

8.7 REPORTING

8.7.1 Post-Construction Compliance Report

Scotts Valley LLC will submit a post-construction compliance report prepared by the construction monitor to the Ventura Fish and Wildlife Office of the USFWS and the City of Scotts Valley (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 the biological monitor, PCO LLC. This report shall be submitted to the Ventura Fish and Wildlife Office of the USFWS by February 15 of each year. This report shall include, but not be limited to:

- 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; and
- 6) an annotated list of expenditures relative to the annual budget.

8.8 FUNDING

Scotts Valley LLC is responsible for the full cost of the 1.093 MHJB conservation credits, the minimization measures described in Section 7.1 and Table 2, and potential changed circumstances described in section 9.1. A copy of the sales agreement for the purchase of the 1.093 conservation credits is attached as Appendix B. PCO LLC will assume all responsibilities for funding of annual maintenance of the Ben Lomond Sandhills Preserve and the fulfillment of all monitoring and reporting activities. These costs for annual maintenance, monitoring, and reporting activities were determined by a Property Analysis Record (PAR) that was prepared for the Ben Lomond Sandhills Preserve.

**Table 2. Costs of Minimization and Mitigation Measures
for the Collado Drive Subdivision Project**

Mitigation and Minimization Activities	Unit Cost	Total Cost
Mitigation Activities:		
Purchase 1.093 acres of MHJB conservation credits	\$5.25/ft. ² /credit	\$250,000
Minimization Activities:		
Construction Monitor	\$100.00/hr	\$4,000.00
Protective Fencing & Signs	\$2,500.00	\$2,500.00
Dust Control Measures	\$2,500.00	\$2,500.00
	Grand Total Cost	\$259,000

9.0 CHANGED AND UNFORSEEN CIRCUMSTANCES

Federal regulation pursuant to section 10(a)(1)(B) of the ESA [50 CFR 17.22 (b)(2)(C)] 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 No Surprises Rule [50 CFR 17.3, 17.22 (b)(5) and 17.32 (b)(5); 69 Federal Register 71723] 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 section 10(a)(1)(B) permit may be reevaluated by the USFWS and the HCP covered activities may be modified, as reasonable, to insure that the activities covered under the HCP will not result in take of the newly listed species. The permittee shall implement reasonable modifications to the HCP covered activities identified by the USFWS as necessary to avoid the likelihood of take of the newly listed species. The permittee shall continue to implement reasonable 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 take of the newly listed species. If the USFWS, in consultation with the permittee, determines that the project-related activities cannot be modified to avoid take of a species not covered under the HCP, then the permittee shall cease any activities that may result in take of any species not covered under the HCP until a permit amendment has been issued.

As to other potential changed circumstances, Scotts Valley LLC has applied for a permit for incidental take of the MHJB on the entire 1.093 acre project site. Therefore, it does not anticipate that any additional changed circumstances will occur during the life of the permit on the project site 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 Northern Maritime Chaparral 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 Scotts Valley LLC 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, Scotts Valley LLC 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, Scotts Valley LLC, 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, Scotts Valley LLC 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 Habitat Conservation Plan Assurances ("No Surprises") Rule revised by the USFWS and published in the Federal Register on December 10, 2004 (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 Collado Drive Subdivision. However, during the specified permit period, amendment of the Section 10(a)(1)(B) permit for Scotts Valley LLC's 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, a revised biological opinion, 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 Scotts Valley LLC's Collado Drive Subdivision project that would not require permit amendment include:

- a) minor revisions in project design and construction procedures;
- b) minor revisions of the HCP's plan area or boundaries;
- c) minor revisions to monitoring or reporting protocols; 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)(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 MHJB are not significantly different than those described in the original HCP. To renew the permit, Scotts Valley LLC 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 Scotts Valley LLC files 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, Scotts Valley LLC may not take listed species beyond the quantity authorized by the original permit. If Scotts Valley LLC fails to file a renewal request within 30 days prior to permit expiration, the permit shall become invalid upon expiration. Scotts Valley LLC 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, a new permit application, and an Assumption Agreement will be submitted to the USFWS 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 USFWS.

11.0 ALTERNATIVES CONSIDERED

11.1 ALTERNATIVE #1: NO-ACTION

Under the No-Action Alternative, development of Collado Drive Subdivision would not occur and Scotts Valley LLC would not implement an HCP or receive a Section 10(a)(1)(B) incidental take permit from the USFWS. However, potential impacts to the covered species may be greater in the absence of this HCP. Currently, habitat conditions at the 1.093-acre project site are substantially 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 would also result in unnecessary economic burden on the applicant. For these reasons, the No-Action Alternative has been rejected.

11.2 ALTERNATIVE #2: REDESIGNED PROJECT (REDUCED TAKE)

Under this alternative, the development footprint of the Collado Drive Subdivision project would be reduced at the project site, thereby reducing the loss of potential habitat for the MHJB. 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 and there would still be an increase in human activity that could affect any beetles that may be using the project site. Also, incidental take of MHJB could still occur during initial grading activities. As the project site measures only 1.093 acres, and is rectangular in shape, relocation of some new homes and other amenities is not practical. 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 also result in unnecessary economic burdens to the applicant. For these reasons, the Reduced Take Alternative has been rejected.

11.3 ALTERNATIVE #3: PROPOSED PROJECT (PERMIT ISSUANCE)

Under the Proposed Action Alternative, Scotts Valley LLC would develop the Collado Drive Subdivision project site 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 0.909 acres 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. Charles Eadie, of Hamilton-Swift Land Use & Development Consultants, Inc., provided various types of information about the site and proposed project. Glen Ifland, of Ifland Engineers, Inc., provided the figures for the minor land subdivision and site plan. Paul Burrowes, a Managing Member of PCO LLC, provided the cost information for the purchase of conservation credits from the Zayante Sandhills Conservation Bank.

13.0 REFERENCES CITED

- Arnold, R.A. 2000. Habitat assessment report for Collado Drive in Scotts Valley, CA. Report prepared for Olberding Environmental, Inc., and dated March 2001. 11 pp.
- Arnold, R.A. 2001. Mount Hermon June Beetle survey report for Collado Drive parcel. Letter report addressed to Jeff Olberding, Olberding Environmental, Inc. 11 June 2001. 3 pp.
- Arnold, R.A. 2004. Mount Hermon June Beetle. Pp. 92-99. IN, McGraw, J.M., *The Sandhills Conservation and Management Plan: a strategy for preserving native biodiversity in the Santa Cruz sandhills*. Prepared for The Land Trust of Santa Cruz County.
- Bowman, R.H., and D.C. Estrada. 1980. Soil survey of Santa Cruz County, California. U.S. Dept. of Agriculture and Soil Conservation Service in cooperation with the University of California, Agricultural Experiment Station Publication. 148 pp. & maps.
- BUGGY Data Base. 2006. Sensitive species report for the Felton 7.5' USGS topographic quadrangle.
- California Natural Diversity Data Base. 2006. Sensitive species report for the Felton 7.5' USGS topographic quadrangle. California Department of Fish & Game.
- Cazier, M.A. 1938. A new California *Polyphylla* with notes concerning the variability of certain characters within the genus. *The Pan-Pacific Entomologist* 14:161-164.
- Furniss, R.L. and V.M. Carolin. 1977. Western forest insects. U.S. Dept. of Agriculture, Forest Service. Misc. Publication No. 1339. Washington, D.C. 654 pp.
- Hill, K. 2005. A picky pallete? The host plant selection of an endangered beetle. Master of Science thesis. San Jose State University. 83 pp.
- U.S. Fish and Wildlife Service and National Marine Fisheries Service. 1996. Endangered Species Habitat Conservation Handbook. November, 1996.
- U.S. Fish & 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 & Wildlife Service. 1998. Recovery plan for two insects (*Polyphylla barbata* and *Trimerotropis infantilis*) and four plants (*Chorizanthe pungens* var. *hartwegiana*, *Chorizanthe robusta* var. *hartwegii*, *Erysimum teretifolium*, and *Polygonum hickmanii*). Portland, OR. 83 pp.
- U.S. Fish & Wildlife Service. 2001. Endangered and threatened wildlife and plants; final determination of critical habitat for the endangered Zayante Band-Winged grasshopper. *Federal Register* 66:9219-9233.

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): 115 pp.

14.0 APPENDIX A: Mount Hermon June Beetle Survey Report

Entomological Consulting Services, Ltd.

104 Mountain View Court, Pleasant Hill, CA 94523 • (925) 825-3784 • FAX 827-1809
bugdctr@home.com • www.ecsltd.com

11 June 2001

Mr. Jeff Olberding
Olberding Environmental, Inc.
4340 Almaden Expressway, Suite 111
San Jose, CA 95118

RE: Report on Mount Hermon June Beetle Survey for Collado Drive Parcel
Located in Scotts Valley, CA

Dear Jeff:

This letter reports on the findings of my one-night presence/absence survey for the endangered Mount Hermon June beetle (MHJB) at the above-referenced parcel. The remainder of this letter provides pertinent background information on the MHJB and describes my survey methods, findings, and recommendations.

Background Information.

This beetle is known scientifically as *Polyphylla barbata* (Coleoptera: Scarabaeidae) and was described in 1938 from specimens collected on Mount Hermon in Santa Cruz County. Of the 28 species of *Polyphylla* that occur in North America, the MHJB has one of the most restricted geographic ranges. It is found in association with Zayante sandy soils in the Felton-Scotts Valley-Ben Lomond area of Santa Cruz County, CA, and is known only from these Zayante sandhills. Due to the beetle's limited geographic range and the historical and anticipated loss of habitat within its limited range, the U.S. Fish & Wildlife Service (USFWS) recognized the MHJB as an endangered species in 1997, pursuant to provisions of the federal Endangered Species Act of 1973 (FESA).

The Zayante sandhills support a sand parkland vegetation community that is the preferred habitat for MHJB. This plant community is characterized by a mosaic mixture of Ponderosa pine, chaparral, and sparsely-vegetated areas of grasses, forbs and subshrubs, several of which are indigenous to the Zayante sandhills. Adults are usually active from about mid-June through mid-August, but their flight season started earlier in 2001. Males fly each evening for approximately one hour after dusk in search of females that are believed to be flightless and remain at their earthen burrows. Observations of flying males suggest that most flight activity occurs within a few feet above ground.

Although specific life history information for the MHJB is unknown, information from closely related species suggests that most of the beetle's life cycle is spent as a larva or grub that lives below ground and is a root feeder, presumably on one or more of the

v By 11/2
1/10/02
#110450
16451

plants that are indigenous to the sand parkland vegetation. Larval development is believed to require at least one year, and perhaps as long as two or three years.

Survey Methods.

Males of MHJB are attracted to black lights, so black light traps operated between about 8:30 and 10:00 pm is the standard procedure used to determine presence/absence of MHJB at new survey locations. My survey at your property was performed on the evening of May 30, 2001. My contacts in the greater Scotts Valley area indicated that the first MHJBs had been seen at porch lights earlier that same week when a heat wave embraced the area.

Your parcel measures approximately 1.1 acres in size. Vegetation at the site consists of a mixture of Ponderosa Pines, Live Oaks, Coyote brush, plus various annual grasses and remnants of sand parkland plus various weeds that have invaded the site.

I placed three black light traps in different portions of the property. They were located in an approximate linear transect in the middle of the property. All traps were placed in small clearings in the vegetation and at ground level in an effort to attract any MHJBs that were on-site, but to minimize the broadcast of light that could have attracted beetles from adjacent parcels.

I also placed two traps on the nearby Cellular One antenna site, located just below the Mount Hermon cross. The antenna site is a known location for the MHJB, so it was used as a control.

All traps were operated from about 8:00 to 10:30 pm. While the traps were operating I walked throughout your parcel to search for any MHJB adults that might be emerging from the ground. I also observed beetle activity at each trap.

Survey Results.

The three traps operated at the Collado Drive parcel yielded a total of 94 MHJB adults, with 33 adults in the northern and middle traps and 28 in the southern trap. In addition, MHJBs were observed in these portions of the parcel as they emerged from the ground and as they were flying on the property. The two control traps operated at the Cellular One antenna site yielded a total of 33 MHJBs, with 14 and 19 beetles in each trap.

Recommendations.

Because the MHJB occurs at the Collado Drive parcel, a permit for incidental take of the beetle will probably need to be obtained from USFWS to comply with the FESA, should your client decide to pursue residential development of your parcel. Although the permit application is brief, a Habitat Conservation Plan (HCP) needs to be prepared and included as an attachment. This document describes the project, impacts to the endangered beetle, appropriate mitigation and monitoring activities to benefit the beetle, and identifies the parties responsible for all described activities. For your client to have the greatest flexibility in designing his project and other site improvements, I suggest that

an off-site mitigation solution may be more appropriate than attempting to accomplish both mitigation and development of the parcel.

I recommend that you contact Colleen Sculley, entomologist for the USFWS's Ventura office (805-644-1766) to discuss this matter further. At other parcels with similar findings, she has requested that additional MHJB surveys be performed so the findings can be used to assist with site planning. Since I found the beetle to be abundant in all portions of the site, additional site surveys probably are not necessary in this case. However, as the beetle's seasonal activity period is now, I don't want your client to miss the opportunity to perform these additional surveys should she consider them necessary.

In addition, USFWS will need to be consulted to identify the appropriate amount of mitigation, since no standardized formula has been established for the MHJB. Once a mitigation solution acceptable to USFWS can be identified, I can then assist you in preparation of the HCP and the application for an incidental take permit.

I am not aware that Santa Cruz County has any additional requirements to mitigate for impacts to MHJB. Thus, I anticipate that if we can satisfy the concerns of USFWS, the County's concerns will also be satisfied.

Please feel free to contact me if you have questions or need further assistance.

Sincerely,



Richard A. Arnold, Ph.D.
President

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

Zayante Sandhills Conservation Bank Mitigation Credit Purchase Agreement

This Agreement is entered into this 21st day of Nov, 2006, by and between PCO, LLC dba Zayante Sandhills Conservation Bank (ZSCB) (Bank operator) and Scotts Valley Development, LLC (Project Proponent). Service File No. ✓

RECITALS

- A. The Zayante Sandhills Conservation Bank (ZSCB) is operated as a conservation Bank per the guidance on the establishment, use, and operation of conservation Banks issued by the U.S. Fish & Wildlife Service (USFWS), and located in Santa Cruz County California.
- B. The Bank has received approval by USFWS on June 8, 2006 to offer conservation credits for sale as compensation for the loss of the following four endangered species and two special plants that are protected within the preserve system: Mount Hermon June Beetle, Zayante Band Winged Grasshopper, Santa Cruz Wallflower, Ben Lomond Spineflower, Silverleaf Manzanita, and the Ben Lomond Buckwheat; and is designed to promote conservation of endangered plants and animals and to facilitate their recovery as detailed by the Conservation Bank Project Agreement.
- C. The Project Proponent is seeking to implement the project described on Exhibit "A" of the attached plans for the land described as parcel #021-031-12 and address 364 Collado Drive in the City of Scotts Valley which would unavoidably and adversely impact the Mt Hermon June Beetle and seeks to compensate for the loss by purchasing compensatory credits.
- D. The Project Proponent has been authorized by the Service through a low-impact HCP, Service File No. ✓, to purchase from the Bank Mt Hermon June Beetle credits.

THEREFORE THE PARTIES AGREE AS FOLLOWS:

- 1. The Bank operator agrees to sell and Project Proponent agrees to purchase from the Conservation Bank 1.093 acre credits. The Bank will deliver to the Project Proponent an executed Bill of Sale as attached and marked Exhibit B. The purchase of said credits shall be made by check or wire transfer made payable to "Santa Cruz Title Company".
- 2. The sales and transfer herein is not intended as a sale or transfer to Project Proponent of a security, license, lease, easement, or possession or non-possession interest in real estate property, not the granting of any interest of the foregoing.
- 3. Project Proponent shall have no obligation whatsoever by reason of the purchase of the compensatory credits, to support, pay for, monitor, report on, sustain, continue in perpetuity, or otherwise be obligated or liable for the success or the continued expense or maintenance in perpetuity of the credits sold, or the Bank. Pursuant to the ZSCB Bank Agreement, the Bank shall monitor and make reports to the appropriate agency or agencies on the status of any compensatory credits sold to Project Proponent. Bank shall be fully and completely responsible for satisfying any and all conditions placed on the Bank or the compensatory credits, by all state and federal agencies.
- 4. The compensatory credits sold and transferred to Project Proponent shall be non-transferable and non-assignable, and shall not be used as compensatory mitigation for any other project or purpose, except as set forth herein.

TN

90 days

5. Project Proponent must exercise rights to purchase within ~~30~~ days of the date of this Agreement, or 30 days after receiving the Service File number. After the ~~30~~ day period this Agreement is null and void.

90 day TN

6. Upon purchase of the described credits specified in paragraph D above, the Bank shall complete the payment receipt form attached as Exhibit C, and shall submit the completed payment receipt to the Service.

IN WITNESS WHEREOF, the parties have executed this Agreement

Zayante Sandhills Conservation Bank

By Bank operator (signature) [Signature] Date 11/21/06

Digitally signed by Owen Lawlor
DN: cn=Owen Lawlor, o=Lawlor LandUse, ou, email=owen.lawlor@gmail.com, c=US
Date: 2006.11.21 11:28:21 -08'00'

Project Proponent (Name) THAO NGUYEN

By Project Proponent (signature) [Signature] Date 2/5/07

APPROVED

Service: this Agreement fulfills the _____ mitigation requirement, as specified under Service File No. _____ dated _____

UNITED STATES DEPARTMENT OF THE INTERIOR FISH AND WILDLIFE SERVICE

By _____

Title _____ Date _____

Exhibit "A"

Description of Project to be Mitigated

Service File No. _____, Santa Cruz County, California

Exhibit "C"

Zayante Sandhills Conservation Bank

Type of Credits _____

PAYMENT RECEIPT

PROJECT PROPONENT INFORMATION

Name THAO NGUYEN
Address 1875 Saint Andrews Place
San Jose, CA 95132
Telephone 408-822-6097
Contact _____

PROJECT INFORMATION

Project Description _____
Service File No. _____
Species/Habitat Affected _____
Credits To Be Purchased _____
Payment Amount _____
Project Location _____
Address/County _____

PAYMENT INFORMATION

Payee Zayante Sandhills Conservation Bank c/o Santa Cruz Title Company

Payer THAO NGUYEN

Amount \$250,000.00

Method of Payment Cash Check No. 2341 Money Order No. _____

Received by _____ Date _____

Name DAVID LAWLER Title MANAGER, MANAGER

Deposit Agreement - Addendum "1" is [] attached and applicable [] not applicable

PCO, LLC

Addendum "1"

Zayante Sandhills Conservation Bank DEPOSIT for Mitigation Credit Purchase

This Agreement is entered into this 21st day of November 2006, by and between Zayante Sandhills Conservation Bank (ZSCB) (Bank operator) and THAO NGUYEN (Project Proponent).

RECITALS

- A. The Project Proponent is seeking to implement the project described on Exhibit "A" of the attached plans for the land described as parcel #021-031-13 and address 364 Collado Drive in the City of Scotts Valley) which would unavoidably and adversely impact the Mt Hermon June Beetle and seeks to compensate for the loss by purchasing compensatory credits.
- B. The Project Proponents property has a total of 1.04 Acres and qualifies under the HCP Habitat Conservation Plan.
- C. The total estimated disturbed ground or mitigation area is 1.093 acres. The Project Proponent agrees to minimize impact and educate workers during the permit and construction phase of the project.
- D. The Project Proponent would like to purchase an estimated number of credits based on the proposed ground disturbance of 1.093 acre credits, Mt Hermon June Beetle credits. A deposit has been received from the Project Proponent with this contract in the amount of \$ 250,000.00 dollars to facilitate mitigation in compliance with the Federal Endangered Species Act.

THEREFORE THE PARTIES AGREE AS FOLLOWS:

1. Representations - Project Proponent or Project Proponents agent hereby acknowledges full control of all of building and/or construction plans and acknowledges that the Bank operator makes no warranties or representations as to the planning and zoning requirements on the project property as may be required by the County of Santa Cruz or the City of Scotts Valley, or USFWS.
2. Performance - Settlement costs as stated by the terms of this contract shall be considered good and sufficient tender of performance in accordance with the terms.
3. Compliance - Bank operator agrees to execute and deliver a Payment Receipt upon full settlement. Project Proponent agrees to have the Payment Receipt recorded promptly with the to USFWS, the County of Santa Cruz or the City of Scotts Valley. Project Proponent agrees to move rapidly to complete the Zayante Sandhills Conservation Bank Mitigation Credit Purchase Agreement and exhibits and comply with Service guidelines.
4. Deposits - By accepting these funds, the Bank operator understands that it assumes all responsibility for land management and monitoring and the success of the Bank operator properties as outlined in the Banking Agreement plans and the permit.
5. Forfeiture of deposit/legal remedies - If the Project Proponent shall fail to make full settlement, or a breach by the Project Proponent, the deposit herein and provided for may be forfeited at the option of the Bank

operator, in which event the Project Proponent shall be relieved from further liability hereunder. In the event that the Bank operator elects not to forfeit the deposit, said deposit shall be returned to the Project Proponent. In the event of the forfeiture of the deposit, or if the Bank operator shall fail to take any action or fail to pursue any legal or equitable remedy, then and in that event, the Bank operator shall pay agents compensation for services 1/2 of the amount of the deposit, where said amount shall not to exceed the amount of the full commission fee, and shall not be less than 1/2 of the deposit in the event of a compromise agreement.

6. Notices - Notices required to be given to Bank operator by this contract shall be in writing and effective as of the date on which such notice is received by the Bank operator or to one of the agents of the Bank operator. Notice is required to be given to the Project Proponent by this contract and shall also be in writing and effective when delivered to Project Proponent to the Project Proponent's agents.

7. Agreement Of Principles - We, the undersigned hereby accept and agreed to this contract and acknowledge receipt of a copy thereof. The principals to this contract mutually agreed that it shall be binding upon them, their personal representatives, successors and assigns; that the provisions shall survive the execution and delivery of the agreement herein stated; that this contract contains the final and entire agreement between the parties, and neither they nor their agent(s) shall be bound by any terms, conditions, statements, warranties or representations, oral or written, not herein contained; and that this contract or any modification, amendment or addendum or transmitted assent through a wired or electronic media which produces a tangible record of the transmission (such as email or fax) and provided to the other party the signed or, where appropriate, initialed contract, modification, amendment or addendum or the transmitted assent.

IN WITNESS WHEREOF, the parties have executed this Agreement

Zayante Sandhills Conservation Bank

By Bank operator (signature)  Date _____

Digitally signed by Owen Lawlor
DN: cn=Owen Lawlor, o=Lawlor LendUse, ou=email@owen
lawlor@gmail.com, c=US
Date: 2008.11.21 13:31:19 -0800

Project Proponent (Name) THAO NGUYEN

By Project Proponent (signature)  Date 2/5/07