OLBERDING ENVIRONMENTAL, INC.
Wetland Regulation and Permitting

October 21, 2008

Mr. Denis Sutro
Clark Vineyard Management
3106 Palisades Road
Calistoga, California 94515

SUBJECT: Carver Vineyard Property Pre-construction Survey for Special-Status Bats, Calistoga, Napa County, California.

Dear Mr. Sutro:

At the request of Clark Vineyard Management, David Simi, a biologist with Olberding Environmental, conducted a pre-construction survey of the Carver Vineyard Property (Property) located in Calistoga, Napa County, California. The purpose of this survey is to determine if special-status bat species are roosting or foraging within or adjacent to the proposed impact area on the Property in advance of construction activities (see attached aerial photograph). The survey was conducted on October 21, 2008 between 10:00 a.m. and 12:00 p.m. Weather conditions during the survey were warm, with clear skies and temperatures in the low 80s Fahrenheit.

LOCATION

The Property is located at Carver Vineyard at 3106 Palisades Road, just to the north of the intersection of Lincoln Avenue/Highway-29 North and Palisades Road in the City of Calistoga, Napa County, California. An aerial photograph of the Property has been included as an attachment to this letter. Access to the Property is attained by taking Interstate-780 West toward Benicia/Vallejo from Interstate-680 North toward Sacramento. After roughly seven miles, merge onto Interstate-80 East toward Sacramento, then merge onto Highway-37 via Exit 33 toward Napa. After approximately two miles, take the Highway-29/Sonoma Boulevard exit, Exit 19, toward Napa and follow it for 38 miles. Make a right onto Lincoln Avenue/Highway-29 North and continue to follow Highway-29 North for two miles. Make a right onto Palisades Road and end at 3106 Palisades Road. The Property is accessed through a coded gate at the entrance.

PROPERTY DESCRIPTION

The Property is currently being run as an active vineyard. The majority of the site contains row crops of vineyards with residential housing to the east of the proposed impact area. Mixed oak woodland and chaparral habitat exists to the north of the site, residential housing exists to the east, while vineyards occupy the south and west sides of the Property. Dominant vegetation in the survey area to the north of the Property consists of manzanita (*Arctostaphylos sp.*), coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*), pine (*pinus sp.*), and coyote brush (*Baccharis pilularis*). The impact area resides at the base of a hill just south and adjacent to the survey area (see attached photographs). The Property sits at 427 feet above sea level and is positioned less than 0.3 miles northeast of the Napa River.

SURVEY METHODS

On October 21, 2008, an Olberding Environmental biologist walked the entire proposed impact area and adjacent lands surrounding this area (up to a 200-foot radius) looking for signs of bat habitation. The majority of the survey was focused on the mixed oak woodland and chaparral habitat directly to the north of the proposed impact area (see attached aerial photograph). During the survey, the biologist inspected the entire area for visual observations of bats, as well as secondary signs, such as vocalizations, prey remains, and guano. Special attention was given to the large trees adjacent to the site to the north, as certain bats, including the pallid bat, often roost in the hollows of oak and pine trees that were observed on the site. When tree hollows were observed, the inside of the tree and area surrounding the trunk were inspected for bat habitation. In addition, the planted rows within the vineyard were inspected using 20-foot transects to determine if bats were possibly using the Property as foraging habitat. Observations were made and recorded.

RESULTS

Special-Status Bats

Bats (Order - *Chiroptera*) are the only mammals capable of "true" flight. They are nocturnal feeders and locate their prey which consists of small to medium-sized insects by echolocation. Bats consume vast amounts of insects, making them very effective pest control agents. They may eat as much as their weight in insects per day. Maternity roosts, comprised of only females, may be found in buildings or mine shafts with temperatures up to 40 degrees Celsius and a high percentage of humidity to ensure rapid growth in the young. Female bats give birth to only one or two young annually and roost in small or large numbers. Males may live singly or in small groups, but scientists are still unsure of the whereabouts of most males in summer.

A search and review of the California Department of Fish and Game's California Natural Diversity Database (CNDDB) revealed the occurrence of five special-status bat species within the Calistoga 7.5 minute quadrangle and three surrounding quadrangles (see attached table). These special-status bats are listed below.

- Pallid Bat (*Antrozous pallidus*), California Species of Special Concern
- Townsend's Western Big-Eared Bat (*Corynorhinus townsendii*), California Species of Special Concern
- Silver-Haired Bat (*Lasionycteris noctivagans*), California Species of Special Concern
- Hoary Bat (*Lasiurus cinereus*), California Species of Special Concern
- Fringed Myotis (*Myotis thysanodes*), Locally Rare

Foraging habitat occurs on the site for all of these species within the vineyard and to the north within the mixed oak woodland and chaparral habitats. Suitable roosting habitat exists in the mixed woodland habitat for all but the Townsend's western big-eared bat, which requires caves, mines, tunnels, buildings and other manmade structures for roost habitat in mesic areas along humid coastal regions. The Townsend's western big-eared bat is also very sensitive to human disturbance, which makes it unlikely to inhabit an active winery. No abandoned buildings can be

found on or adjacent to the site. The most recent CNDDB listing of the **Townsend's western big-eared bat** occurred on August 26, 1987 (Occurrence #129) roughly 5.8 miles northeast of the Property at Aetna Mines, 1.7 miles northwest of Aetna Springs and 4.2 miles east of the Highway-29 and Livermore Road junction.

The most recent CNDDB listing of the **pallid bat** occurred on September 2, 1999 (Occurrence #62) roughly 6.5 miles southwest of the Property at The Porter Creek Bridge off Porter Creek Road, 1.5 miles northeast of Mark West Springs and 1.1 miles south of Telegraph Hill. The most recent CNDDB listing of the **silver-haired bat** occurred on August 26, 1933 (Occurrence #46) roughly 9.8 miles north of the Property at Long Valley. The most recent CNDDB listing of the **hoary bat** occurred on April 19, 1932 (Occurrence #41) roughly 9.8 miles north of the Property at Long Valley. The most recent CNDDB listing of the **fringed myotis** occurred on June 1, 1996 (Occurrence #19) roughly 7.5 miles southwest of the Property at Bechtel House on the Pepperwood Ranch Natural Preserve on Horse Hill, about 1.7 miles northeast of Mark West Springs.

Based on the suitable habitats observed on and adjacent to the site and recent CNDDB occurrences in the area, only the pallid bat has the highest potential to utilize the site. While the October survey was directed toward the pallid bat, all special-status bats listed above were also surveyed for as potentially utilizing the Property as roosting or foraging habitat. The results of the October 21, 2008 survey concluded that no bats currently occupy the Property.

CONCLUSIONS

As of October 21, 2008, bats are currently absent from the Property. This includes the proposed impact area as well as a 200-foot radius surrounding this area. Aside from vineyard maintenance done by work crews during the day, this site is ideal habitat for a variety of bat species in the area. The mixed oak woodland provides dense foliage cover for stalking prey and eluding predators, tree hollows for roosting, many insects for foraging, and a nearby source of water exists in Napa River 0.3 miles southwest of the Property.

Please be aware that the results of this survey are only valid for a period of 30 days after the initial survey date. If vegetation clearing or construction activity occurs after this date, the results of this survey should be updated by conducting another survey.

If you have any questions, please feel free to contact me at (925) 825-2111.

Sincerely,

Jeff Olberding
Wetland Regulatory Scientist

Table 1
Special-Status Species for the Calistoga, Mount Saint Helena, Detert Reservoir, and Mark West Springs 7.5 Minute Quadrangle Maps[1]

Common Name/ Scientific Name	Status (Fed/State/ CDFG)[2]	Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
BATS					
Pallid Bat (*Antrozous pallidus*)	-/-/SC	N/A	Forages in grasslands, shrublands, deserts, forests, and woodlands. Most common in open, dry habitats. Roosts in rock crevices, caves, tree hollows, and buildings. Roosts must protect bats from high temperatures; very sensitive to disturbance of roosting sites.	High	May Occur
Townsend's Big-Eared Bat (*Corynorhinus townsendii*)	-/-/SC	Resident	Roosts in the open, hanging from walls and ceilings. Needs sites free from human disturbance. Most common in mesic sites.	None	Presumed Absent
Silver-Haired Bat (*Lasionycteris noctivagans*)	-/-/SC	Resident	Primarily a coastal and montane forest dweller feeding over streams, ponds, and open brushy areas. Roosts in hollow trees, beneath exfoliating bark, abandoned woodpecker holes, and rarely under rocks. Needs drinking water.	Moderate	Not Likely to Occur
Hoary Bat (*Lasiurus cinereus*)	-/-/SC	Resident	Prefers open habitats or habitat mosaics with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees near water. Feeds mainly on moths.	Moderate	Not Likely to Occur

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Common Name/ Scientific Name	Status (Fed/State/ CDFG)[2]	Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
Fringed Myotis (*Myotis thysanodes*)	-/-/-	Resident	In a wide variety of habitats, optimal habitats are pinyon-juniper, valley-foothill hardwood, and hardwood conifer; uses caves, mines, buildings, crevices, and sometimes trees for maternity colonies and roosts.	Moderate	Not Likely to Occur

1. Special-status animals as reported by the California Natural Diversity Data Base and other background research October 2008.
2. Order of Codes for Animals - Fed/State/CDFG

Codes:
SOC - Federal Species of Concern
SC - California Species of Special Concern
E - Federally/State Listed as an Endangered Species
T - Federally/State Listed as a Threatened Species
C - Species listed as a Candidate for Federal Threatened or Endangered Status
R - Rare
CP- California protected
FP - State Fully Protected
DFG: SC California Special Concern species

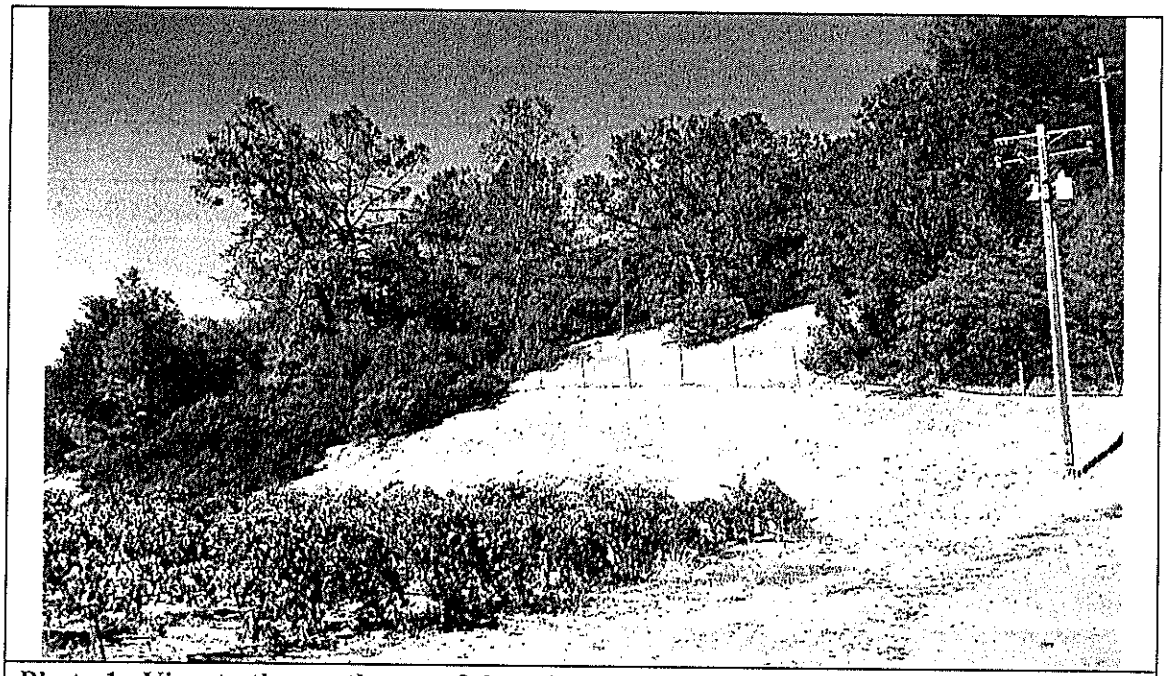


Photo 1. View to the northwest of the mixed oak woodland habitat to the north of the proposed impact area. The proposed impact area in this photograph is the bare slope in between the vineyard and the fence line.

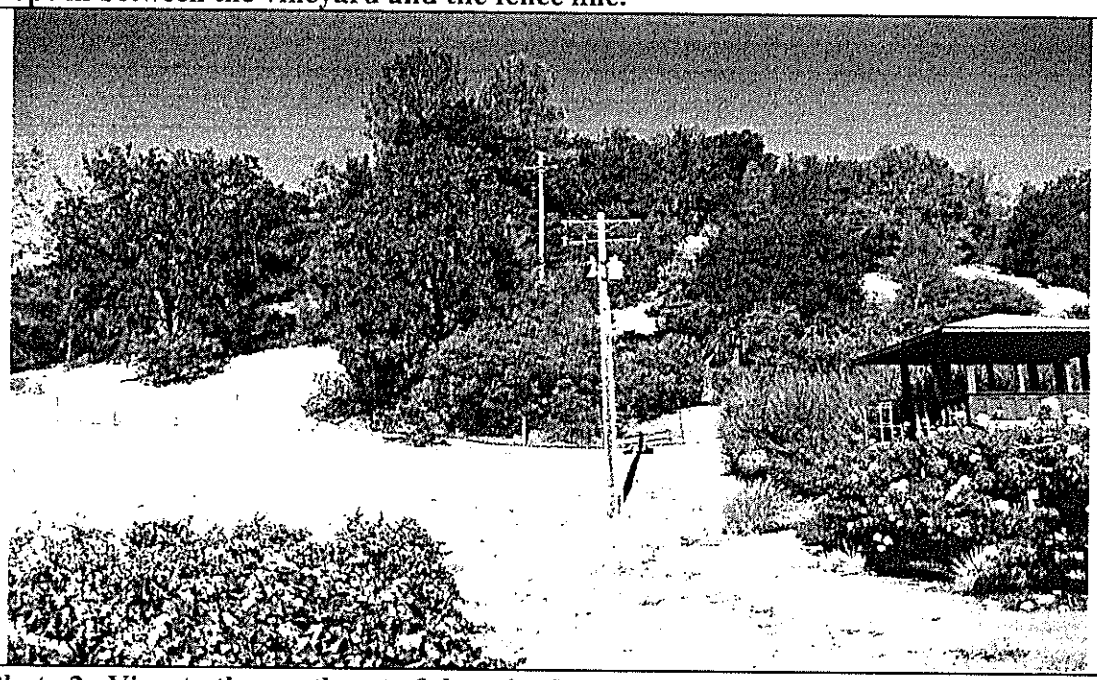
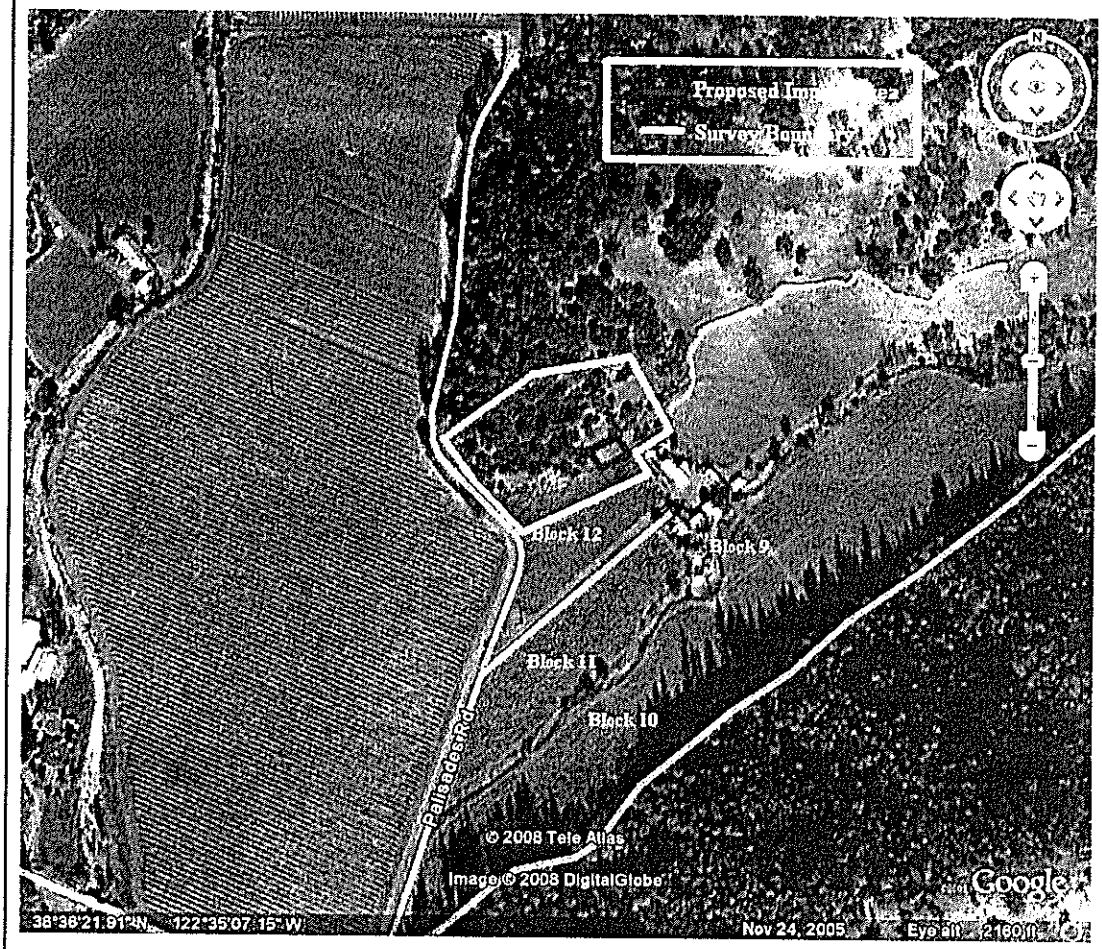


Photo 2. View to the northeast of the mixed oak woodland habitat to the north of the proposed impact area. Due to the amount of tree hollows found in this habitat, the bat survey was concentrated in this area.

Olberding Environmental, Inc.
Carver Vineyard Property – October 2008



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This document is not intended for detail design work.

Figure 1
Aerial Photograph of the Proposed Impact Area and Bat Survey Boundary at the Carver Vineyard Property
Calistoga, California