

July 8, 2009

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, 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 whether 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 July 7, 2009 between 10:00 a.m. and 11:00 a.m. Weather conditions during the survey were warm, with clear skies and temperatures in the low to mid 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 and has been actively farmed for the last 100 years. The majority of the site contains row crops of vineyards with residential housing and tool sheds located 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 the base of a hill just south and adjacent to the survey area. 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 July 7, 2009, an Olberding Environmental biologist walked the entire proposed impact area and adjacent lands surrounding this area (up to a 50-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 woodland trees adjacent to the site to the north, as certain bats, including the pallid bat, often roost in the hollows of large oak and pine trees in old growth forests. When tree hollows were observed, the inside of the tree and area surrounding the trunk were inspected for bat habitation. In addition, the northern woodland area and 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 bat species 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; and
- Fringed Myotis (*Myotis thysanodes*), Locally Rare.

Based on CNDDB records, the most recent occurrences of each of these bat species within the vicinity of the site are as follows:

- 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;
- **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 **silver-haired bat** occurred on August 26, 1933 (Occurrence #46) roughly 9.8 miles north of the Property at Long Valley;
- The **hoary bat** occurred on April 19, 1932 (Occurrence #41) roughly 9.8 miles north of the Property at Long Valley; and
- 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.

Therefore, based on recent occurrences within the vicinity of the site, only the pallid bat has the potential to occur on the site. Upon analysis of the woodland habitat adjacent to the site, it was concluded that roosting habitat does not occur on or adjacent to the site due to the absence of large, hollowed-out trees, caves, mines, tunnels, rock crevices, or any other area in which the pallid bat might find suitable roosting habitat. In addition, the buildings that could potentially act as roosting sites are currently in use as a residence and tool/storage shed. Therefore, suitable roosting sites do not occur on the Property.

As pallid bats commonly forage in woodland habitats, the woodlands that occur adjacent to the proposed impact area to the north would be considered potentially suitable to support foraging bat species. A large prey base of insects was observed within the woodland habitat during the survey. However, despite the suitable foraging habitat available adjacent to the proposed impact area, the biologist was informed by the Property owner of the detailed activities which take place on this active vineyard. According to the Property owner, "vineyard work is not only done by crews during the day, but it is aggressively farmed during the night and with tractors which spray any number of minerals and fertilizers with a tractor and a high decibel sprayer, at least 10 times during the growing season, and with an overspray radius well over 200 feet. Noisy mowing, cultivating and weed eating machinery works that vineyard block approximately 30 times per year." Unlike other bat species, pallid bats forage on the ground or in foliage, feeding on crickets, scorpions, and beetles. Prey is located by using echolocation and by listening for movement on the ground. Due to the high sensitivity of the pallid bat to human disturbance, the vineyard activities described above would preclude this species from using the site in any capacity, including foraging.

CONCLUSIONS

Based on the results of the July 2009 survey, suitable roosting habitat for bat species does not occur within or adjacent to the Property. Based on the suitable foraging habitat observed within

the woodland habitat adjacent to the site and recent CNDDB occurrences in the area, only the pallid bat was recognized as having the potential to utilize the site. However, the highly disturbed nature involved with running an active vineyard, the close proximity to humans, and the presence of loud machinery being used day and night would preclude the use of this site by the pallid bat. Based on the July 7, 2009 survey, no pallid bats or secondary sign of their occurrence was observed and are therefore presumed absent from the Property.

If you have any questions, please feel free to contact me at (925) 866-2111.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff Olberding". The signature is fluid and cursive, with a long, sweeping underline.

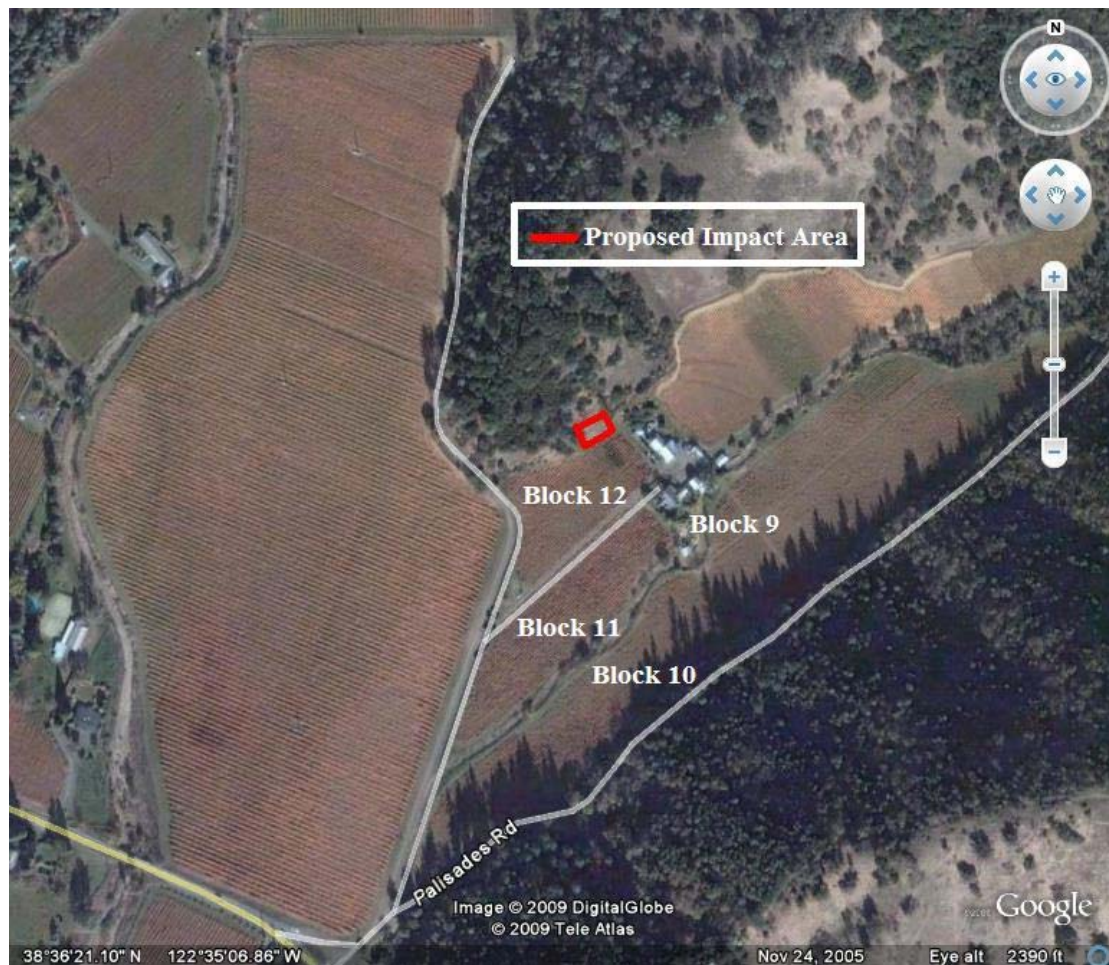
Jeff Olberding
Wetland Regulatory Scientist

Table 1
Special-Status Species for the Calistoga, Mount Saint Helena, Detert Reservoir, and Mark West Springs
7.5 Minute Quadrangle Maps¹

Common Name/ Scientific Name	Status (Fed/State/ CDFG) ²	Survey Period	Habitats of Occurrence	Potential on Site	Status on Site**
BATS					
Pallid Bat (<i>Antrozous pallidus</i>)	-/-/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.	Foraging Only	Presumed Absent
Townsend's Big-Eared Bat (<i>Corynorhinus townsendii</i>)	-/-/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 (<i>Lasionycteris noctivagans</i>)	-/-/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.	Low	Presumed Absent
Hoary Bat (<i>Lasiurus cinereus</i>)	-/-/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.	Low	Presumed Absent
Fringed Myotis (<i>Myotis thysanodes</i>)	-/-/-	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.	Low	Presumed Absent

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1. Special-status animals as reported by the California Natural Diversity Data Base and other background research July 2009. 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					



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This document is not intended for detail design work.

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