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Biological Studies

Part A
Replanting & Mitigation Plan – Napa False Indigo
&
Special-Status Plan Review

KJELDSEN BIOLOGICAL CONSULTING
Chris K. Kjeldsen Ph.D., Botany
Daniel T. Kjeldsen B.S., Natural Resource Management
923 St. Helena Ave.
Santa Rosa, CA 95404

Date: January 8, 2018

Replanting and Mitigation Plan
Napa False Indigo

Att: Napa County Planning, Building, and Environmental Services Department
1195 Third Street, Suite 210
Napa, CA 94559

Re: Removal of Five Napa False Indigo Plants
Aloft Winery Cold Springs Road
Napa County, CA

Introduction

The site is in Napa County, (APN 024-340-010) with access from Cold Springs Road south of Angwin. The property is within the USGS St. Helena Quadrangle. The project proposes a winery, wine caves, a hospitality building, guest parking area, a realigned HMA driveway with fire truck turnarounds, employee parking area, designated spoils areas, waste water treatment and dispersal field with 200% replacement area.

Floristic surveys conducted in 2017 identified Napa False Indigo (*Amorpha californica* var. *napensis)* adjacent to proposed construction activities. Napa False Indigo is a CNPS List 1B. The plants are growing on a north-facing slope where the access must be widened to current standards.

Plants with a California Rare Plant Rank of 1B are rare throughout their range with the majority of them endemic to California. Most of the plants that are ranked 1B have declined significantly over the last century.

All of the plants constituting California Rare Plant Rank 1B meet the definitions of the California Endangered Species Act of the California Fish and Game Code, and are eligible for state listing. Impacts to these species or their habitat must be analyzed during preparation of environmental documents relating to CEQA, or those considered to be functionally equivalent to CEQA, as they meet the definition of Rare or Endangered under CEQA Guidelines §15125; (c) and/or §15380.

Widening of the access where Napa False Indigo is located has the potential to impact approximately five plants. There are other significant populations of Napa False Indigo on the property.

Mitigation Planning Action

It is proposed that prior to construction and upon completion of the engineering plans for the project, that the area of impact will be reviewed and the number of individual plants and cover of Napa False Indigo within the footprint of the project be measured.

Impact

Grading for the road expansion will result in the loss of Napa False Indigo. There are significant populations of the Napa False Indigo on undeveloped portions of the property. We estimate that the widening of the road will impact approximately 0.5% of the population on the property.

Mitigation Goal

A goal of no net loss is proposed. Mitigation for the loss of Napa False Indigo is proposed to be accomplished by seed harvest and plant salvage. It is proposed that seed be gathered and plants be salvaged from the project site.

Mitigation Site

Salvaged Plants: Salvaged Plants will be replanted on the slope above the project area.

Seed: Harvested Seed was gathered on October 26, 2017. This seed will be scattered on the cut bank of the project site.

Background Information Relating to the Proposed Mitigation

Transplanting
Information from local native plant nurseries indicates that potted stock is not readily available. Therefore, it is proposed that the plants within the construction zone be salvaged and replanted upslope in an area with similar aspect and soils.

Our plan is based on the assumption that the most reasonable approach is to salvage stock and replant on site. This will have the potential for preserving the genetic stock on site as well as immediate replacement and establishment. The alternative of acquiring nursery stock or germinated seed stock would extend the replacement-planting establishment for at least one year.

We called local native plant nurseries and they indicated that they did not have any stock but occasionally have stock available. A local botanist (Rich Stabler-Sonoma County PRMD as per telephone conversation) has been unsuccessful in germinating Napa False Indigo from seed. Seeds from his population have weevils. This is the only one we know who has tried to germinate seed.

With advanced orders local native plant nurseries may be able to secure planting stock. Native plant nurseries will take seeds on consignment for germination.

Location of Plantings

The area proposed for re-vegetation is on lands under the ownership of the applicant. The proposed re-vegetation site will have available water for establishment and an onsite vineyard manager with experience in maintaining native vegetation. The uncultivated areas of the parcel support woodlands and chaparral.

Photograph Number 1 illustrates the area of road widening and the location of the Napa False Indigo. The construction will cut into the bank and establish a stable slope. It is proposed that the area above the new slope be revegetated with the salvaged Napa False Indigo and that the new bank be seeded with the salvaged seeds.

Photograph 1. Project site illustrating where the entrance road will be widened. Napa False Indigo is growing along the upper bank of the area that will be graded to meet access road standards.

Napa False Indigo Plant Salvage Techniques

• Plants will be flagged prior to salvage. Transplanting of Napa false indigo must be overseen by a qualified biologist or a landscape architect or land manager experienced in native plant relocation.

• Replacement sites will be flagged and prepped prior to salvage of plant stock.
  Ground clearing
  Excavation of root pit and supplemental soil from salvage site stockpiled adjacent to the pit
  Drip line installation

• Salvage stock will be pruned back to canes after leaf fall.

• Initiate Salvage during plant dormancy (late winter early spring before leaf break).

• Salvage stock by hand excavated with a soil root ball.

• Place immediately in previously prepped replacement sites, saturate immediately with water.

• Pack soil tight to remove air spaces.

• Place permanent stake for future identification and monitoring.

Spacing: = Average five feet on center in a random irregular non-linear pattern.

Planting Design and Layout: Because of the site variability, it is highly recommended that the individual plant locations be selected in the field in consultation with the vineyard manager. The design layout will be flagged in the field prior to planting by a qualified biologist/horticulturist.

Plant Protection: All plants should receive a two foot woven polypropylene weed mat. The mats will be secured to the ground with heavy gauge steel staples or pins. The weed mat will serve as mulch for soil moisture retention and weed suppression purposes. Woven polypropylene is recommended over other weed control fabrics because of its durability and resistance to punctures.

Nutrients: All plants should be given an appropriate amount of fertilizer at the time of planting to promote healthy growth in the first growing season. General purpose, slow release fertilizers, such as Ozmocote® 14-14-14 or Agriform® pellets are commonly used in plant installations. It is important that the fertilizer is applied directly to the root site of the plants (sub- soil surface) to avoid encouraging weed growth.

Timing: Typically the best time of year to install native plants is in the winter dormancy period, when the soil has become adequately wet from fall rains. Getting plants in the ground early gives the plants more time to develop roots and site familiarity before breaking dormancy in the spring. Delaying planting into the late winter and spring can decrease planting success if an irrigation system is not online.

Irrigation: To minimize drought stress and to encourage successful establishment, the plants must be irrigated during the dry season. The first year of establishment is the most critical, and supplemental irrigation may be needed for the first three to five years. A simple above-ground drip irrigation system is recommended (it may be that hand watering can be used since the site is relatively small). The transplants should be targeted with drip emitters. The irrigation system should run at regular intervals and the system should be checked on a regular basis to insure that the system is functioning properly and that the plants are getting the proper quantity of water

Irrigation should be activated in the spring when soil on the site begins to dry out from winter rains, typically in mid to late April. Drought conditions may require an earlier activation date, and heavier spring rains may allow for a later activation date. Irrigation to the site would typically be shut down by mid-October. Early fall rains may allow for an earlier shut down date, and a prolonged fall drought may require that irrigation occur later into the fall.

Maintenance: Weed control can be just as important as irrigation during the first few years of native planting. Weeds directly compete with the plantings for water, light, and nutrients. Heavy weed growth can also provide habitat for rodents, such as mice, voles, and gophers which can girdle young plants and damage drip irrigation lines.

Hand Weeding: Spring hand weeding of all weeds growing inside the plant protection hardware and weed mat openings will have the most profound positive effect on the young plantings. It is important to carefully perform hand weeding when weeds have not become too large and the soil is still soft and moist from winter rains. Periodic hand weeding may be necessary throughout the growing season if irrigation is used. It is very important that crews performing hand weeding are familiarized with the different species selected, so that the project plants are not accidentally damaged or removed.

Weed Mowing/Weed-Eating: It may be desired by the property owner and/or property manager to mow weeds in the project area. Weed removal can also be very beneficial to the plantings, as long as great care is taken not to damage the plants, plant protection hardware, weed mats, or the irrigation system. It is very important that personnel performing weed-eating be shown the various elements of the enhancement planting and that steps be taken to prevent any damage to the plants, hardware, or the irrigation system.

Time Line

• Approval of Proposed Re-vegetation Plan	Fall	2017
• Salvage and Transplanting	Winter	2017
• 1st Monitoring Report	Fall	2018

Napa False Indigo Seed Salvage Techniques

Seed from the Napa False Indigo on site were harvested October 26, 2017. Personal conversation with a local biologist, who is familiar with Napa False Indigo, indicates that the viability of seed is low. It is proposed that the seed be scattered on the new slope.

The harvested seed will be given a cold shock to eliminate any seed infected with insects.

Time Line

Seed will be spread on the site in the spring following completion of the site construction and erosion control.

• Approval of Proposed Re-vegetation Plan	Fall	2017
• Seed Salvage	Fall	2017
• Seed Dispersal	Spring	2018 or 2019
• 1st Monitoring Report	Fall	2018

Monitoring Plan

Project Monitoring

A monitoring plan is essential for assurance of the goals of the revegetation plan. The monitoring plan proposed is an assessment of the project upon completion of the prescribed work at the end of years one and three. At the end of three years survivorship should be 80% of the total transplanted stock as per the performance standard.

To ensure a successful revegetation effort, all transplants shall be monitored and maintained as necessary for a minimum of three years. If the mitigation fails, a search for nursery potted stock will be secured as replacement.

Performance Standard

A performance standard of 80% survival of transplanted stock at end of the monitoring period is proposed as a success standard for compliance by this project. Salvaged seed germination on the construction site is not considered to be a part of the performance standard.

The permittee is responsible for replacement planting, additional watering, weeding, invasive exotic eradication, or any other practice, to achieve these requirements. Replacement plants shall be monitored with the same survival and growth requirements for five years after planting.

A report will be filed with the Napa County Planning, Building, and Environmental Services Department at the end of each monitoring period. Monitoring should be conducted in the fall a year following planting. Monitoring reports should be submitted to the Napa County Planning, Building, and Environmental Services Department by November 1 of each year.

Monitoring Report Contents

1.0 Project Information
- 1.1 Project name
- 1.2 Applicant name, address, and phone number
- 1.3 Consultant name, address, and phone number

2.0 Mitigation Site Information
- 2.1 Location of the site (including regional map)
- 2.2 Specific purpose/goals for the mitigation site
- 2.3 Date planting was completed
- 2.4 Dates summary of previous monitoring visits
- 2.5 Name, address, and contact number of responsible parties for the site
- 2.6 Summary of remedial action, if any

3.0 Tabulated Results of Monitoring Visits, Including Previous Years
4.0 Summary of Field Data
5.0 Photo Monitoring
6.0 Problems Noted and Proposed Remedial Measures

Location Map / Site Map

Contingency Plan And Adaptive Management

Death of the transplanted stock will necessitate replanting with nursery grown stock. Monitoring reports for achievement of the success will identify problems and remedial adaptive management to correct any problems will be implemented.

Responsible Party For Short–Term and Long-Term Maintenance

Responsible party for development, short-term maintenance and long-term maintenance will be the vineyard manager. It is the owner's responsibility to submit reports or contact a qualified biologist to conduct monitoring and submit monitoring reports.

Aloft Wines
c/o Charles Krug Winery
1800 Main Street
St. Helena, CA 94574

Should you have any questions, please do not hesitate to contact us at: telephone (707) 544-3091, Email kjeldsen@sonic.net, or by fax (707) 575-8030.

Plate I. Transplanting Site

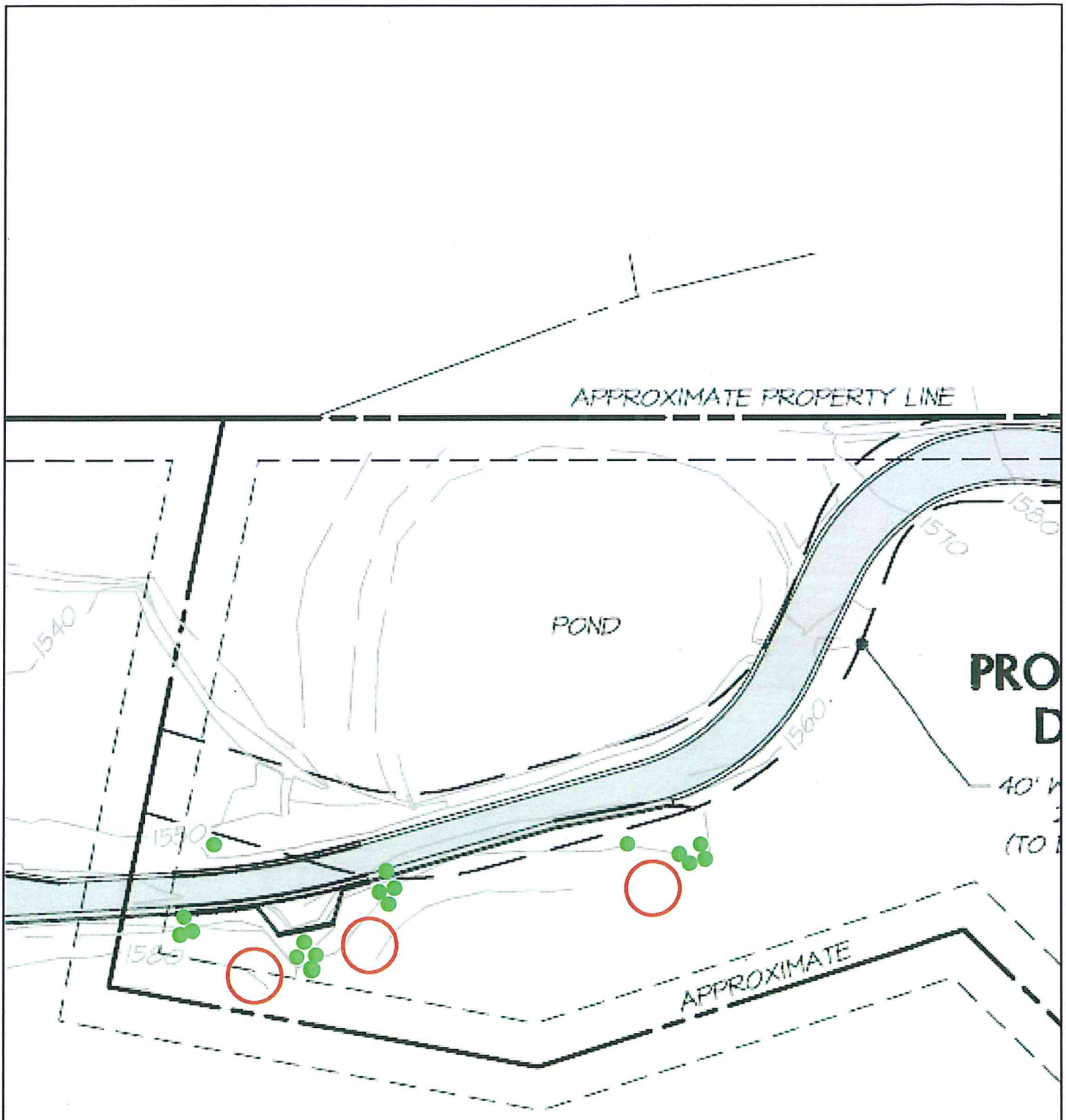

Plate I. Transplant Sites

(Location of Napa False Indigo Revised 10/27/2017)

Special-Status Plant Review
Aloft Winery
Cold Springs Road
Napa County

KJELDSEN BIOLOGICAL CONSULTING
923 St. Helena Ave.
Santa Rosa, CA 95404

June 2017

Special-Status Plant Review
Aloft Winery
Cold Springs Road

EXECUTIVE SUMMARY

This study was conducted at the request of Donna B. Oldford, Plans4Wine on behalf of Aloft Winery, as background information for permits from the Napa County Planning, Building and Environmental Services Department.

The project proposes a winery wine caves, a hospitality building guest parking area, a realigned HMA driveway with fire truck turnarounds, employee parking area, designated spoils areas, and waste water treatment and dispersal field with 200% replacement area (Bartelt Engineering Proposed Site Plan).

The project site is a property (APN 024-340-010) with access from Cold Springs Road south of Angwin. The property is within the USGS St. Helena Quadrangle. The findings presented are the result of field study conducted on March 25, May 8 and 31st, 2017, by Kjeldsen Biological Consulting.

- The proposed building phase of the project will be within existing vineyards and on an adjacent hillside. The realigned HMA driveway extends through Douglas-fir woodland and then connects to an existing vineyard access road. Napa-false Indigo is present along the section of the road adjacent to the pond;

- No sensitive plant habitat, or special-status plant species were identified within the footprint of the winery. Napa False Indigo (*Amorpha californica* var. *napensis)* is known for the property and was located along the entrance road adjacent to the pond. Road widening if necessary has the potential to impact Napa False Indigo. It is unlikely that the winery footprint would impact any special-status plant species known for the Quadrangle or the region based on the habitat present and our fieldwork;

- The proposed project footprint will not significantly reduce the habitat for any State or Federally listed plants. Napa False Indigo is a CNPS List 1B;

  The project will not impact any Sensitive Natural Communities regulated by the California Department of Fish and Wildlife or listed by the County of Napa;

- The habitat and agricultural use is such that there is no need for seasonal floristic surveys or seasonal wildlife surveys;

- The footprint of the project will not significantly contribute to habitat loss or habitat fragmentation; and

- The flora observed on and near the proposed project is included as an Appendix.

Based on our site visit and available information, no State or Federal permits are required and the project will be in compliance with the Federal Endangered Species Act (FESA) and the California Endangered Species Act (CESA) for plant.

Recommendations

Best Management Practices (BMPs) for all construction activities must be implemented.

Widening of the access road adjacent to the pond where Napa False Indigo has been located, has the potential to impact approximately 5 plants.

We recommendation that the project applicant consult with the County in order to not widen the road in this area. If the road is not widening adjacent to the pond where the Napa False Indigo is located then no action is necessary.

If the road has to be widened and the Napa False Indigo can not be avoided then we recommend that:

A. Prior to conducting ground-disturbing activities, suitable habitat within the footprint of the proposed activity should be surveyed by a qualified botanist for Napa False Indigo in accordance with the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFG 2009 or current version) to document the amount of Napa False Indigo on the property. Locations of special-status plant populations must be clearly identified in the field by staking, flagging, or fencing.

B. The applicant must consult with California Department of Fish and Wildlife (CDFW) Regional botanist, to approve minimization measures for potential impacts to the species. Minimization measures may include transplanting perennial species, seed collection and dispersal, and other conservation strategies that will protect the viability of the local population. If minimization measures are implemented, monitoring of plant populations will be conducted annually for 5 years to assess the mitigation's effectiveness. The performance standard for the mitigation will be no net reduction in the size or viability of the local population.

Special-Status Plant Review
Aloft Winery
Cold Springs Road
Napa County

INTRODUCTION

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The project proposes a winery, wine caves, a hospitality building guest parking area, a realigned HMA driveway with fire truck turnarounds, employee parking area, designated spoils areas, and waste water treatment and dispersal field with 200% replacement area (Bartelt Engineering Proposed Site Plan).

The project site is a property (APN 024-340-010) with access from Cold Springs Road south of Angwin. The property is within the USGS St. Helena Quadrangle. The findings presented are the result of field study conducted on March 25, May 8 and 31st, 2017, and analysis of background material. Plate II provides an aerial photograph of the study area.

PURPOSE

The purpose of our survey is to review the project site, with emphasis on potential habitat for special-status plants or unique plant populations associated with the proposed project.

Our study also addresses the presence of, or potential for sensitive plant communities listed by the California Department of Fish and Wildlife (CDFW), Napa County Base Line Data Report, Critical Habitat listed by the U.S. Fish and Wildlife Service (USFWS), within or adjacent to the proposed project footprint.

This review provides general information on the potential presence of sensitive plant species and habitats. This is not an official protocol-level survey for listed species that may be required for project approval by local, state, or federal agencies. This assessment is based on information available at the time of the study and on site conditions that were observed on the date of the site visit.

METHODS

Our study was conducted by walking the site while recording field notes and photographing the existing conditions. Our fieldwork searched for potential habitat, which would support local or regional special-status plant species. Field surveys were conducted identifying and recording all species on the site and along the edge of the proposed road. Plants unidentifiable in the field were collected for identification with reference sources and a binocular microscope. Plant materials collected and identified in the laboratory are noted in the attached appendix.

Typically, blooming examples are required for identification however it is not the only method for identifying the presence of or excluding the possibility of rare plants. Vegetative morphology and dried flower or fruit morphology, which may persist long after the blooming period, may also be used. Skeletal remains from previous season's growth can also be used for identification. Some species do not flower each year or only flower at maturity and therefore must be identified from vegetative characteristics. Algae, fungi, mosses, lichens, ferns, Lycophyta and Sphenophyta have no flowers and there are representatives from these groups that are now considered to be special-status species, that require non-blooming identification. For some plants unique features such as the aromatic oils present are key indicator. For some trees and shrubs with unique vegetative characteristics flowering is not needed for proper identification. The vegetative evaluation as a function of field experience can be used to identify species outside of the blooming period to verify or exclude the possibility of special-status plants in a study area.

Habitat is also a key characteristic for consideration of special-status species in a study area. Many special-status species are rare in nature because of their specific and often very narrow habitat or environmental requirements. Their presence is limited by specific environmental conditions such as: hydrology, microclimate, soils, nutrients, interspecific and intraspecific competition, and aspect or exposure. In some situations special-status species particularly annuals may not be present each year and in this case one has to rely on skeletal material from previous years. A site evaluation based on habitat or environmental conditions is therefore a reliable method for including or excluding the possibility of special-status species in an area.

Sensitive Communities

CDFW CNDDB identifies environmentally sensitive plant communities that are rare or threatened in nature. Sensitive habitat is defined as any area which meets one of the following criteria: (1) habitats containing or supporting "rare and endangered" species as defined by the State Fish and Wildlife Commission, (2) all perennial and intermittent streams and their tributaries, (3) coastal tide lands and marshes, (4) coastal and offshore areas containing breeding or nesting sites and coastal areas used by migratory and resident water-associated birds for resting areas and feeding, (5) areas used for scientific study and research concerning fish and wildlife, (6) lakes and ponds and adjacent shore habitat, (7) existing game and wildlife refuges and reserves, and (8) sand dunes.

The Napa County Baseline Data Report as well as the California Department of Fish and Wildlife Natural Diversity Data Base (CDFW CNDDB) lists recognized Sensitive Biotic Communities. The Napa County Baseline Data Report lists twenty-three communities which are considered sensitive by DFG due to their rarity, high biological diversity, and/or susceptibility to disturbance or destruction. The CNDDB communities in Napa County are the following: Serpentine bunchgrass grassland,

Wildflower field (located within native grassland), Creeping ryegrass grassland, Purple Needlegrass grassland, One-sided bluegrass grassland, Mixed serpentine chaparral, McNab cypress woodland, Oregon white oak woodland, California bay forests and woodlands, Fremont cottonwood riparian forests, Arroyo willow riparian forests, Black willow riparian forests, Pacific willow riparian forests, Red willow riparian forests, Narrow willow riparian forests, Mixed willow riparian forests, Sargent cypress woodland, Douglas fir-ponderosa pine forest (old-growth), Redwood forest, Coastal and valley freshwater marsh, Coastal brackish marsh, Northern coastal salt marsh, and Northern vernal pool.

Napa County biotic communities of limited distribution that are sensitive include: Native grassland; Tanbark oak alliance; Brewer willow alliance; Ponderosa pine alliance; Riverine, lacustrine, and tidal mudflats; and Wet meadow grasses super alliance.

Special-status Species

Special-status organisms are plants that have been designated by Federal or State agencies as rare, endangered, or threatened. Section 15380 of the California Environmental Quality Act [CEQA (September, 1983)] has a discussion regarding non-listed (State) taxa. This section states that a plant must be treated as Rare or Endangered even if it is not officially listed as such. If a person (or organization) provides information showing that a taxa meets the State's definitions and criteria, then the taxa should be treated as such.

The California Endangered Species Act (CESA)

Fish and Wildlife Code Sections 2050-2098 establishes State policy to conserve, protect, restore, and enhance any endangered species or any threatened species and its habitat. The Fish and Wildlife Commission is charged with establishing a list of endangered and threatened species. State agencies must consult with the CDFW to determine if a proposed project has the potential to jeopardize the continued existence of listed endangered, threatened, or candidate species.

California Department of Fish and Game Code Section 1602

An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

Critical Habitat

Critical habitat is a specific geographic area(s) that contains features essential for the conservation of a threatened or endangered species and that may require special management and protection. Critical habitat may include an area that is not currently occupied by the species but that will be needed for its recovery.

The Endangered Species Act

The federal endangered species act provides for the protection and conservation of various species of fish, wildlife, and plants that have been federally listed as threatened or endangered. Section 9 of the ESA prohibits the "take" of any fish or wildlife species that is listed as endangered under the ESA unless such take is otherwise specifically authorized pursuant to either Section 7 or Section 10(a)(l)(B) of the Act.

SCOPING

The scoping for the study area considered location and type of habitat and or vegetation types present on the property or associated with potential special-status plant species known for the Quadrangle, surrounding Quadrangles, the County or the region. Our scoping also considered records in the most recent version of the Department of Fish and Wildlife California Natural Diversity Data Base (CDFW CNDDB Rare Find), and U.S. Fish and Wildlife species list for the property. "Target" special-status species are those listed by the State or Federal government as rare, endangered or threatened in the region. Our scoping is also a function of our familiarity with the local flora and fauna as well as previous projects on other properties in the area.

FINDINGS

The property is located above the Napa Valley within the inner North Coast Range Mountains, a geographic subdivision of the larger California Floristic Province (Hickman, 1993). The property and surrounding region is strongly influenced storms and fog from the Pacific Ocean. The region is in climate Zone 14 "Ocean influenced by Northern and Central California" characterized as an inland area with ocean or cold air influence. The climate of the region is characterized by hot, dry summers and cool, wet winters, with precipitation that varies regionally from less than 30 to more than 60 inches per year. This climate regime is referred to as a "Mediterranean Climate." The average annual temperature ranges from 45 to 90 degrees Fahrenheit. The variations of abiotic conditions including geology results in a high level of biological diversity per unit area in the region.

The project footprint will impact existing agricultural lands (vineyard) and a relatively small area of natural habitat (Doug-Fir, Madrone, Oak Woodlands).

There are two Ponderosa Pines in the Douglas-fir woodland in the proposed alignment of the entrance road. The woodlands do not constitute a Ponderosa Pine forest due to the dominance of Douglas-fir trees.

Habitat

The road alignment traverses a woodland habitat and extends through producing vineyards. The winery and cave system including parking and offices will be within a small area of hillside with native Oak Woodland vegetation. The Habitat Type for the project site would be considered to be Agricultural, Oak Woodlands, Madrone, and Doug-Fir

Forest Alliance Madrone Forest; *Arbutus menziesii* is dominant or co-dominant tree in the canopy with *Acer macrophyllum, Notholithocarpus densiflorus, Pseudotsuga menziesii, Quercus agrifolia, Q. chrysolepis, Q. kelloggii, Q. wislizeni* and *Umbellularia californica.* Trees < 50m; canopy is continuous. The shrub layer is sparse to intermittent. Herbaceous layer is sparse. Membership rules *Arbutus menziesii* >50% relative cover in the tree canopy. *Arbutus menziesii* groves are considered, as part of the mixed evergreen forest and in most cases the species is common as a secondary species in many forest types. *Arbutus menziesii* is a fast growing evergreen, hardwood that can live for 500 years.

Forest Alliance Mixed Oak Woodlands; *Quercus* (*agrifolia, douglasii, garryana, kelloggii, lobata, wislizeni*) Forest Alliance Mixed Oak Forest; *Quercus agrifolia, Q. douglasii, Q, garryana, Q. kelloggii, Q. lobata* and/or *Q. wislizeni* are co-dominant in the tree canopy with *Aesculus californica, Arbutus menziesii, Pinus sabiniana, Pseudotsuga menziesii,* and *Umbellularia californica.* Trees > 30 m. The canopy is intermittent to continuous. Shrubs are infrequent or common, herbaceous layer is sparse or abundant, may be grassy. This Alliance is found in valley and on gentle to steep slopes. The membership rules require three or more *Quercus* species present at >30% constancy and they are co-dominant in the tree canopy.

Forest Alliance Douglas fir Forest; *Pseudotsuga menziesii*; *Pseudotsuga menziesii* is dominant or co-dominant with hardwoods in the tree canopy with *Abies concolor, Acer macrophyllum, Alnus rhombifolia, Arbutus menziesii, Calocedrus decurrens, Chamaecyparis lawsoniana, Chrysolepis chrysophylla, Cornus nuttallii, Pinus contorta, P. lambertiana, P. jefferyi, Quercus agrifolia, Q. chrysolepis, Q. garryana, Q. kelloggii,* and *Sequoia sempervirens*. Membership rules *Pseudotsuga menziesii* >50% relative cover in the tree canopy and reproducing successfully, though hardwoods may dominate or co-dominate in the subcanopy and regeneration layer. Trees >75 m; canopy is intermittent to continuous, and it may be two tiered. Shrubs are infrequent or common. Herbaceous layer is sparse or abundant. North Coast interior stands are local and often associated with relic populations of *Sequoia sempervirens. Pseudotsuga menziesii* Forest Alliance Douglas fir Forest are in some instances a seral stage in Oak Woodlands and in the absence of fires will reach a climax stage eliminating associated oaks.

The following photos illustrate existing conditions and habitat found on site.

Photo 1. View of the existing access road through the vineyard.

Photo 2. View of the access road and the project site for winery construction on the left.

Photo 3. View of the proposed site of the Hospitality building and parking area.

Photo 4. View the site for cave portals and associated parking within the vineyard.

Photo 5. View of the access road that will serve the hospitality building and winery cave portals.

Special Status Species

A map from the CDFW CNDDB Rare Find shows known special-status species in the proximity of the project as shown on Plate II. These taxa as well as Special-status species known for the Quadrangle and Surrounding Quadrangles were considered and reviewed as part of our scoping for the project site and property. Reference sites were reviewed as part of our scoping for some of the species.

Napa False Indigo (*Amorpha californica* var. *napensis)* is present on the property and was found along the existing entrance road. Plate IV shows the locations of this plant adjacent to the access road. There are significant populations on the property out side of the proposed project site and survey area. It is estimated that approximately 1% of the population on the property would be impacted if the road was widened adjacent to the pond.

Table I below provides a list of species that are known to occur (CDFW CNDDB Rare Find search). The table includes an analysis of habitat and potential for presence or absence on the project site.

Table I. Analysis of CDFW CNDDB and USFWS special-status plant species from the region. Columns are arranged alphabetically by scientific name.

Scientific Name Common Name	**Species Habitat Association or Plant Community**	**Habitat present on Project Site**	**Bloom Time**	**Obs. on or Near Site**	**Analysis of habitat on project site for presence or absence.**
Amorpha californica var. *napensis* Napa False Indigo	Cismontane Woodland	Yes	April-July	Yes	Present along entrance road near pond.
Amsinkia lunularis Bent-flowered Fiddleneck	Cismontane Woodland, Valley and Foothill Grassland	Yes	March-June	No	Potential for project site. No indications for presence during our fieldwork.
Allium peninsulare var. *franciscanum* Franciscan Onion	Cismontane Woodland, Valley and Foothill Grassland/Clay often Serpentinite	No	May-June	No	Absence of requisite edaphic conditions.
Arctostaphylos manzanita ssp. *elegans* Konocti Manzanita	Chaparral, Cismontane Woodland, Lower Montane Coniferous Forest	No	March -May	No	Absence of requisite habitat and vegetation associates on the site or in the immediate vicinity.
Arctostaphylos stanfordiana ssp. *decumbans* Rincon Manzanita	Chaparral, Lower Montane Coniferous Forest (openings), Rocky, often Serpentinite	No	Feb.-April	No	Absence of requisite habitat and vegetation associates on the site or in the immediate vicinity.

Scientific Name Common Name	Species Habitat Association or Plant Community	Habitat present on Project Site	Bloom Time	Obs. on or Near Site	Analysis of habitat on project site for presence or absence.
Astragalus claranus Clara Hunt's Milk-vetch	Chaparral, Cismontane Woodland, Valley and Foothill Grassland	Yes	March-May	No	Absence of requisite micro-habitat and vegetation associates.
Astragalus rattanii var. *jepsonianus* Jepson's Milk-Vetch	Cismontane Woodland, Valley and Foothill Grassland	Yes	April-June	No	Absence of requisite micro-habitat and vegetation associates. No evidence for presence during our field studies.
Brodiaea leptandra (= B. californica var. *leptandra)* Narrow-anthered California Brodiaea	Open Cismontane Woodland, Mixed-evergreen Forest or Chaparral Gravely Soil	Yes	May-June	No	Absence of typical vegetation associates and soils. No evidence for presence during our field studies.
Ceanothus confusus Rincon Ridge Ceanothus	Closed Cone Conifer Forests, Chaparral	No	Feb.-April	No	Absence of typical habitat and vegetation associates.
Ceanothus divergens Calistoga Ceanothus	Chaparral, Serpentinite or Volcanic-Rocky.	No	May-Sept.	No	Lack of mesic habitat.
Ceanothus purpureus Holly-leaved Ceanothus	Chaparral	No	March-May	No	Absence of typical habitat and vegetation associates.
Erigeron greenei Green's Narrow-leaved Daisy	Chaparral, (Serpentinite)	No	May-Sept.	No	Absence of edaphic conditions required for presence.
Fritillaria pluriflora Adobe-lily	Chaparral, Cismontane Woodland, Valley and Foothill Grassland	No	Feb.-April	No	Requisite habitat and vegetation associates absent on the site or in the immediate vicinity.
Hesperolinon sharsmithiae Sharsmith's Western Flax	Serpentine endemic	No	May-July	No	Requisite edaphic habitat absent on the site or in the immediate vicinity.

Scientific Name Common Name	Species Habitat Association or Plant Community	Habitat present on Project Site	Bloom Time	Obs. on or Near Site	Analysis of habitat on project site for presence or absence.
Layia septentrionalis Colusa Layia	Cismontane Woodland, Valley and Foothill Grassland, Serpentinite	No	April-May	No	Requisite edaphic habitat absent on the site or in the immediate vicinity.
Leptosiphon jepsonii Jepson's Leptosiphon	Chaparral, Cismontane Woodland, Valley and Foothill Grassland	No	April-May	No	Requisite habitat absent on the site or in the immediate vicinity.
Limnanthes floccosea ssp. *floccosa* Woolly Meadowfoam	Meadows and Seeps, Valley and Foothill Grassland, Cismontane Woodland Vernal Pools.	No	April-May	No	Requisite mesic habitat absent on the site or in the immediate vicinity.
Lupinus sericatus Cobb Mountain Lupine	Broadleaved Upland Forest, Chaparral, Cismontane Woodland	No	March -June	No	Absence of requisite vegetation associates as well as historical use of project site precludes presence.
Navarretia leucocephala ssp. *bakeri* Baker's Navarretia	Meadows and Seeps Cismontane Woodland, Valley and Foothill Grassland, Vernal Pools	No	May-July	No	Absence of typical habitat and vegetation associates.
Penstemon newberryi var. *sonomensis* Sonoma Beardtongue	Cismontane Woodland	No	April-Aug.	No	Absence of typical habitat and vegetation associates.
Plagiobothrys strictus Calistoga Popcorn-flower or Calistoga Allocarya	Vernal Pools near thermal springs	No	March -June	No	Requisite mesic habitat absent on the site or in the immediate vicinity.
Sidalcea oregana ssp. *hydrophila* Marsh Checkerbloom	Meadows And Seaps, Riparian Scrub Mesic	No	June-Aug.	No	Requisite mesic habitat absent.

Scientific Name Common Name	Species Habitat Association or Plant Community	Habitat present on Project Site	Bloom Time	Obs. on or Near Site	Analysis of habitat on project site for presence or absence.
Strepthanthus hisperidis Green Jewel-flower	Rocky Chaparral, Grassland	No	April-July	No	Lack of edaphic habitat and historic use of project site precludes presence.
Trichostema ruygtii Napa Bluecurls, Vinegar Weed	Open areas with thin clay soils seasonally saturated	No	June-Oct.	No	Requisite habitat absent on the site.
Viburnum ellipticum Oval-leaved Viburnum	Chaparral, Cismontane Woodland, Lower Coniferous Forest	No	May-June	No	Requisite habitat absent on the site or in the immediate vicinity.

The absence of wetlands, vernal pools and serpentinite reasonably preclude presence of any of the local or regional special-status species of plants other than the Napa-false Indigo which was present along the entrance road.

The CNDDB five-mile search does not show any records of special-status species on the property.

Sensitive Communities

The sensitive habitat types in the region consist of vernal pools, fresh water marshes, serpentinite, riparian corridors and native grasslands. There was no evidence within the proposed project footprint for the presence of any of these sensitive habitat types.

There is no Critical Habitat associated with the project site.

Ponderosa Pine Alliance

Ponderosa pines are present as part of the Douglas fir Alliance within property. There are occasional Ponderosa Pines mixed with this Alliance but their canopy cover does not meet the criteria for considering this as a separate alliance (Sawyer et. al. 2009 membership rules require *Pinus ponderosa* presence as the principal canopy species >10% absolute cover). The Ponderosa Pine Trees present within the proposed entrance road alignment do not constitute a sensitive woodland community listed by the County Baseline Data Report.

Native Grassland

The grasslands within the footprint of the project do not consist of any of the sensitive grassland communities listed by the County Baseline Data Report or CDFW. Native grasses on the project site do not meet the definition of Native Grass Grassland and would not be considered a species with limited distribution or a sensitive natural plant communities for the following reasons: Lack of typical native grassland species and diversity. The grasses present are within an understory and not associated with historic grasslands. The grasslands within the footprint of the project do not consist

of any of the sensitive grassland communities listed by the County Baseline Data Report. The project will not impact any native grassland.

Unique Species that are Endemic, Rare or Atypical for the Area
Unique populations of organisms are associated with microclimates or specific habitats which are part of the diversity of the California landscape. This includes fringing populations of organisms at their limits geographically or associated with particular soils or geologic features. There were no unique populations of plants present within the footprint of the proposed project.

Napa False Indigo is known to occur within the woodlands on the north side of the property and was found along the entrance road alignment adjacent to the pond. We did not observe any special-status plant species associated with the proposed hospitality site, proposed parking areas, cave spoils areas, primary waste-water dispersal field, or cave winery site.

POTENTIAL BOTANICAL IMPACTS

The project's effect to onsite or regional botanical resources is considered to be significant if the project results in:

- Alteration of unique characteristics of the area, such as sensitive plant communities and habitats (i.e. serpentine habitat, wetlands, riparian habitat);
- Adverse impacts to special-status plant species;
- Adverse impacts to important or vulnerable resources as determined by scientific opinion or resource agency concerns (i.e. sensitive biotic communities, special-status habitats);

The project has the potential to impact Napa False Indigo if the entrance road is widened in the area of the pond (see Plate IV for specific locations)

The habitat impacted by the proposed hospitality building, parking areas, wine caves and disposal areas t is such that there is little reason to expect impacts to special-status plant species. We found no evidence for the presence of any special-status plant species on or in the vicinity of the proposed footprint of the area considered for construction. The habitat present reasonably precludes presence of special-status plant species other than the Napa-false Indigo on or associated with the proposed project.

With the exception of the Napa False Indigo, there is no reason to expect any significant negative impacts to special-status plant species or locally significant biological resources by the proposed project, provided Best Management Practices are followed.

The sensitive habitat types identified in the CDFW CNDDB and known for the region are not present within the proposed project site. The project will not impact any seasonal wetlands, grasslands, ponderosa woodlands, or vernal pools.

RECOMMENDATIONS

Best Management Practices (BMPs) for all construction activities must be implemented.

Widening of the access road adjacent to the pond where Napa False Indigo has been located, has the potential to impact approximately 5 plants.

We recommendation that the project applicant consult with the County in order to not widen the road in this area. If the road is not widening adjacent to the pond where the Napa False Indigo is located then no action is necessary.

If the road has to be widened and the Napa False Indigo can not be avoided then we recommend that:

A. Prior to conducting ground-disturbing activities, suitable habitat within the footprint of the proposed activity should be surveyed by a qualified botanist for Napa False Indigo in accordance with the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (CDFG 2009 or current version) to document the amount of Napa False Indigo on the property. Locations of special-status plant populations must be clearly identified in the field by staking, flagging, or fencing.

B. The applicant should consult with California Department of Fish and Wildlife (CDFW) Regional botanist, to approve minimization measures for potential impacts to the species. Minimization measures may include transplanting perennial species, seed collection and dispersal, and other conservation strategies that will protect the viability of the local population. If minimization measures are implemented, monitoring of plant populations will be conducted annually for 5 years to assess the mitigation's effectiveness. The performance standard for the mitigation will be no net reduction in the size or viability of the local population.

SUMMARY

This botanical review is provided as background information necessary for evaluating potential impacts on local botanical resources specifically special-status plant species that could be impacted by the proposed project.

The project has the potential to impact the Napa False Indigo (*Amorpha californica* var. *napensis)* if the entrance road is widened. Napa False Indigo is known to occur on other parts of the property. . It is estimated that approximately 1% of the population on the property would be impacted if the road was widened adjacent to the pond.

The site conditions associated with the footprint of the project, lack of any findings during our studies, soils, site topography, lack of any records for the site other than the Napa-false Indigo, habitat and plant associates present would reasonably preclude the presence of any local or regional special-status plant species;

No other sensitive habitat or unique plant populations were identified within the proposed project footprint: and

An analysis, based on our fieldwork, for each of the target species listed by CDFW associated with the habitat on the project site is presented and justification for concluding absence defined.

All plant species observed during our seasonal surveys of the property are included in Appendix A.

Should you have any questions, please do not hesitate to contact us at, (707) 544-3091, Fax (707) 575-8030, or by email at (kjeldsen@sonic.net).

Kjeldsen Biological Consulting

ATTACHMENTS

Plate I. Location Map
Plate II. CDFW CNDDB Map
Plate III. Aerial Photo / Survey Area
Plate IV. Location of Napa-false Indigo along Access Road

APPENDIX A Plants Observed Associated With The Project Site

APPENDIX B CDFW CNDDB Rare Find 5 State and Federal Listed Species for the Quadrangle and Surrounding Quadrangles

U.S. Fish & Wildlife Service IPaC Trust Resources
Federal Endangered and Threatened Species that Occur in or may be Affected by the Project

Names of and Qualifications of Field Investigators

Daniel T. Kjeldsen, B.S., Natural Resource Management, California Polytechnic State University, San Luis Obispo, California. He spent 1994 to 1996 in the Peace Corps managing natural resources in Honduras, Central America. His work for the Peace Corps in Central America focused on watershed inventory, mapping and the development and implementation of a protection plan. He has over fifteen years of experience in conducting Biological Assessments, CDFW Habitat Assessments, ACOE wetland delineations, wetland rehabilitation, and development of and implementation of mitigation projects and mitigation monitoring. He has received 3.2 continuing education units MCLE 27 hours in Determining Federal Wetlands Jurisdiction from the University of California Berkeley Extension. A full resume is available upon request.

Chris K. Kjeldsen, Ph.D., Botany, Oregon State University, Corvallis, Oregon. He has over thirty-five years of professional experience in the study of California flora. He was a member of the Sonoma County Planning Commission and Board of Zoning (1972 to 1976). He has over thirty years of experience in managing and conducting environmental projects involving impact assessment and preparation of compliance documents, Biological Assessments, CDFW Habitat Assessments, CDFW SB 34 Mitigation projects, ACOE Mitigation projects and State Parks and Recreation Biological Resource Studies. Experience includes conducting special-status species surveys, jurisdictional wetland delineations, general biological surveys, 404 and 1600 permitting, and consulting on various projects. He taught Plant Taxonomy at Oregon State University (three years) and numerous botanical science and aquatic botany courses (thirty-five years) at Sonoma State University including sections on wetlands and wetland delineation techniques. He has supervised numerous graduate theses, NSF, DOE and local agency grants and served as a university administrator. A full resume is available upon request. He has a valid CDFW collecting permit.

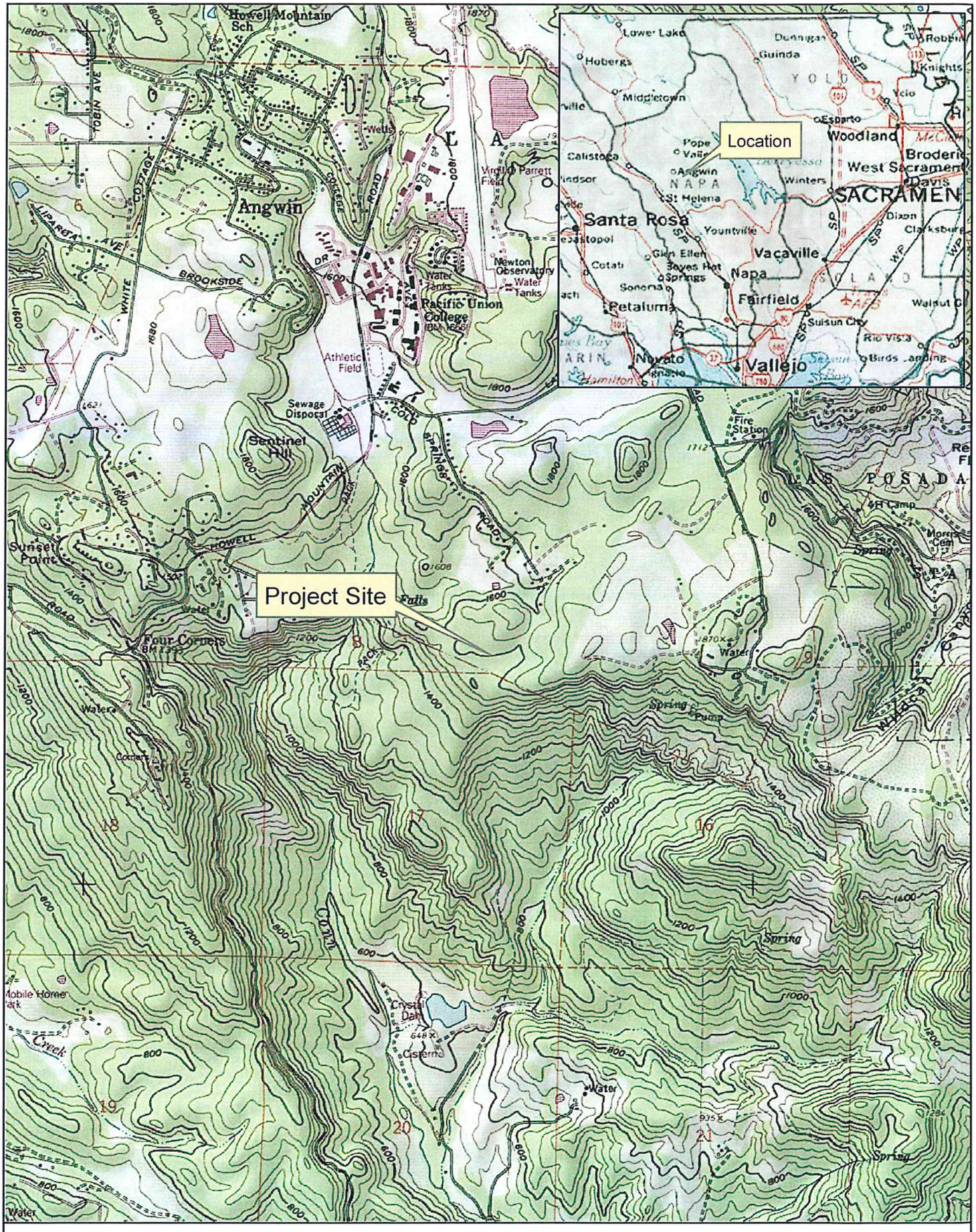


Plate I. Location and Site Map (St. Helena USGS Quadrangle)

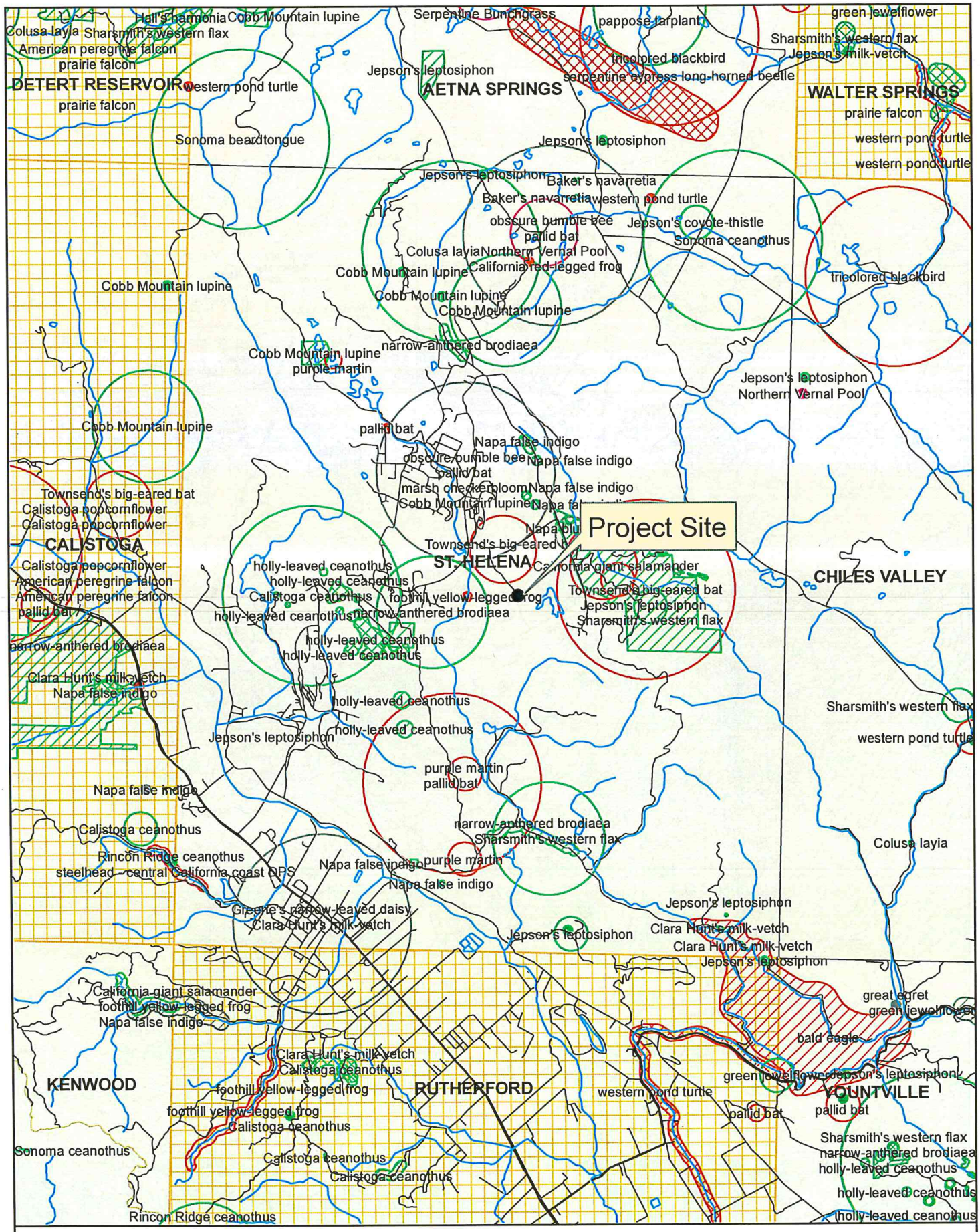


Plate II. CDFW CNDDB Rare Find Data

(Data Date May 2017)

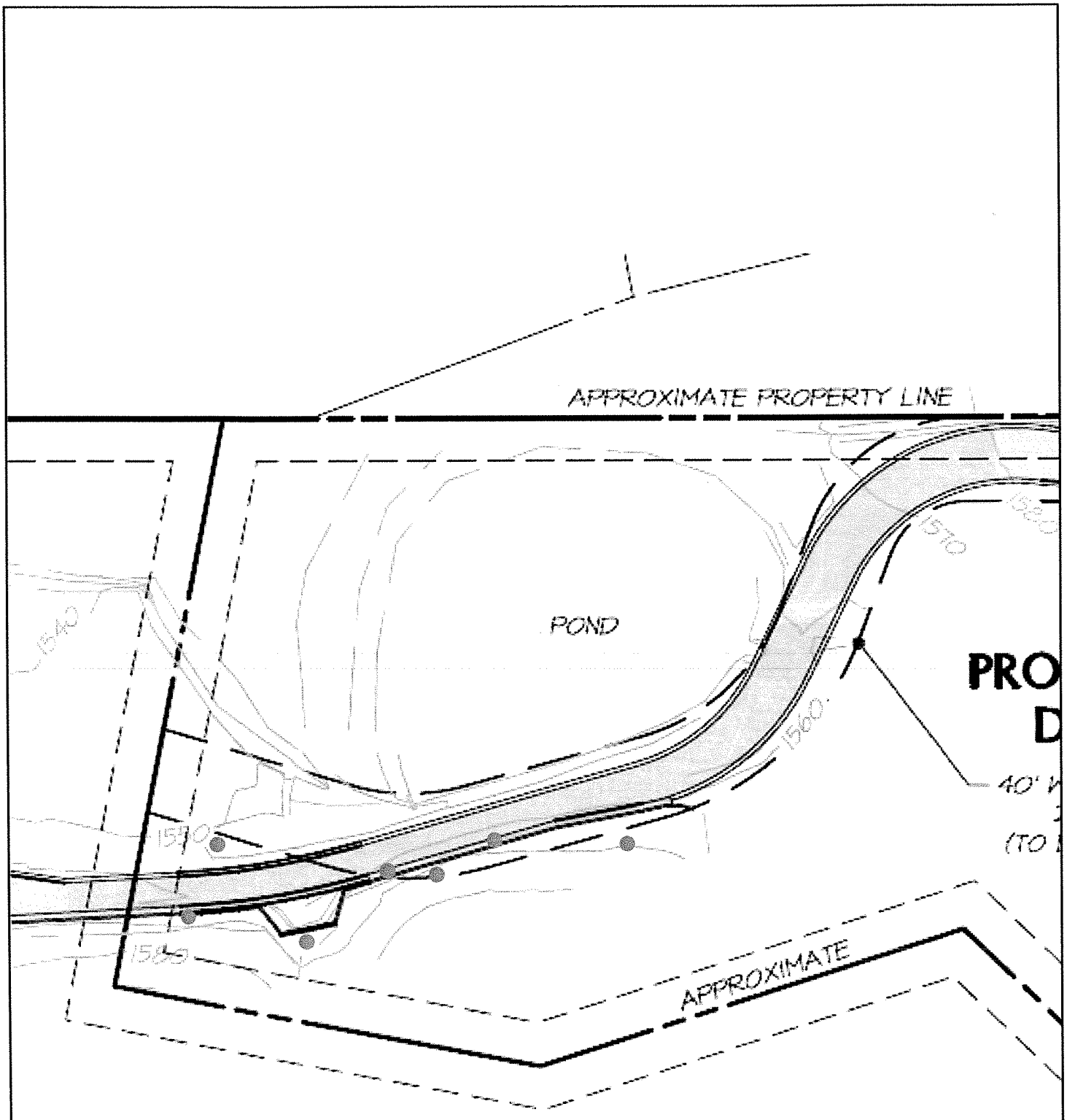


Plate IV. Location of Napa False Indigo (CNPS list 1B.2)

APPENDIX A
Plants Observed Associated With The Project Site

PLANTS

The nomenclature for the list of plants found on the project site and the immediate vicinity follows: Brodo, Irwin M., Sylvia Duran Sharnoff and Stephen Sharnoff, 2001, for the lichens; Arora -1985, for the fungi; S Norris and Shevrock - 2004, for the mosses; and Baldwin, Goldman, Keil, Patterson, Rosati, and Wilkens, editors, 2012 - for the vascular plants. The plant list is organized by major plant group.

Habitat type indicates the general associated occurrence of the taxon on the project site or in nature. **Abundance** refers to the relative number of individuals on the project site or in the region.

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

NCN = No Common Name, * = Non-native, @= Voucher Specimen

FUNGI

Basidiomycota- Club Fungi

COPRINACEAE		
Panaeolina fonesecii (Pers.) Marie Haymaker's Mushroom (=*Paneolus foenisecii)*	Lawns or Grasslands	Common
POLYPORACEAE		
Trametes versicolor (L.) Lloyd Turkey Tail (=*Coriolus versicolor, Polyporus versicolor*	Woodlands on Dead Hardwood	Common

MOSSES

MINACEAE		
Dendroalsia abietina (Hook.) Brit. NCN	Woodlands	Common
Hedwigia stellata Hedenas NCN	Grasslands on Rocks	Common
Homalothecium nuttallii (Wilson) Jaeger NCN	Epiphytic on Trees	Common
Orthotrichum lyellii Hook & Tayl. NCN	Woodlands, Upper Canopy	Common
Scleropodium touretii (Brid.) L Koch. NCN	Woodlands	Common
@*Rosulabryum capillare (=Bryum capillare* Hedw.) NCN	Ruderal Open Sites	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

NCN = No Common Name, * = Non-native, @= Voucher Specimen

HORNWORTS

ANTHOCEROTAE

@*Anthoceros fusiformis* NCN	Austin	On Cut Banks	Common

LICHENS

FOLIOSE

Flavoparmelia caperata (L.) Hale Common Green Shield		On Oaks	Common
Flavopunctilia flaventor (Stirt.) Hale Speckled Green Shield		On Oaks, Occasional on Rocks	Common
Parmelia sulcata Taylor Hamered Shield Lichen		On Bark	Common
@*Peltigera membranacea* (Ach.) Nyl. Membranous Dog Lichen		On Road Cuts With Mosses	Common
Physcia adscendens (Fr.) H. Olivier NCN		On Oaks	Common
Xanthoparmelia mexicana (Gyeln.) Hale NCN		On Rocks	Common
Xanthoria polycarpa (Hoffm.) Rieber Pin-cushion Sunburst Lichen		On Oaks Young Twigs	Common

FRUTICOSE

Evernia prunastri (L.) Ach. NCN		On Oaks	Common
Ramalina farinacea (L.) Ach. NCN		On Oaks	Common
Usnea intermedia=U. arizonica NCN		On Oaks	Common

LEPROSE

@*Lepraria neglecta* Zoned Dust Lichen		On Soil, Moss Covered Rocks	Occasional

VASCULAR PLANTS FERNS

DENNSTAEDTIACEAE

Pteridium aquilinum (L.) var. *pubescens* Underw. Grasslands or Woodlands Common
Bracken Fern

PTERIDACEAE

Pentagramma triangularis (Kaulf.)G.Yatsk. subsp. *triangularis* Woodlands Common
Goldback Fern

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

NCN = No Common Name, * = Non-native, @= Voucher Specimen

WOODSIACEAE		
Athyrium filix-fema (L.) Roth Western Lady Fern	Conifer Woodlands-Shade	Common
VASCULAR PLANTS DIVISION CONIFEROPHYTA--GYMNOSPERMS		
PINACEAE		
Pinus ponderosa Laws. Ponderosa Pine	Woodlands-Planted	Occasional
Pseudotsuga menziesii (Vassey) Mayr var. *menziesii* Douglas-fir	Woodlands	Common
VASCULAR PLANTS DIVISION ANTHOPHYTA --ANGIOSPERMS		
CLASS--DICOTYLEDONAE- TREES		
MAGNOLIIDS		
LAURACEAE		
Umbellularia californica (Hook.&Arn.) Nutt. California Laurel, Sweet Bay, Pepperwood, California Bay	Conifer&Oak Woodlands	Occasional
EUDICOTS		
ERICACEAE Heath Family		
Arbutus menziesii Pursh Madrone	Woodlands	Common
FAGACEAE Oak Family		
Quercus agrifolia Nee Live Oak	Woodlands	Common
Quercus kelloggii Newb. Black Oak	Woodlands	Common
Quercus lobata Nee. Valley Oak	Valley Grasslands	Common
OLEACEAE Olive Family		
**Olea europaea* L. Olive	Domestic Ruderal	Occasional
SAPINDACEAE Soapberry Family		
Acer macrophyllum Prush Big-leaf Maple	Riparian, Stream Banks, Canyons	Common
Aesculus californica (Spach) Nutt. California Buckeye	Woodlands, Riparian	Common

MAJOR PLANT GROUP Family Genus	Habitat Type	Abundance
Common Name		

NCN = No Common Name, * = Non-native, @= Voucher Specimen

VASCULAR PLANTS DIVISION ANTHOPHYTA --ANGIOSPERMS
CLASS--DICOTYLEDONAE-SHRUBS AND WOODY VINES

EUDICOTS

ANACARDIACEAE Sumac Family		
Toxicodendron diversilobum (Torry&Gray) E.Green Poison Oak	Woodlands	Common
ASTERACEAE (Compositae) Sunflower Family		
Baccharis pilularis deCandolle Coyote Brush	Woodlands, Grasslands	Common
BETULACEAE Birch Family		
Corylus cornuta Marshall var. *californica* Hazelnut	Riparian, Woodlands	Occasional
CAPRIFOLIACEAE Honeysuckle Family		
Lonicera hispidula Douglas var. *vacillans* Honeysuckle	Woodlands, Riparian	Occasional
ERICACEAE Heath Family		
Arctostaphylos manzanita Parry ssp. *glaucesens* Common Manzanita	Woodlands	Common
FABACEAE (Leguminosae) Legume Family		
Amorpha californica Nuttall var. *napensis* Napa False Indigo	Chaparral, Woodlands	Rare
**Genista monspessulana* (L.) Johnson Broom, French Broom	Woodlands	Common
ROSACEAE Rose Family		
Heteromeles arbutifolia (Lind.) M. Rome. Christmas Berry, Toyon	Shrub/Scrub	Common
**Rubus armeniacus* Focke Himalayan Blackberry	Ruderal	Common

VASCULAR PLANTS DIVISION ANTHOPHYTA --ANGIOSPERMS
CLASS--DICOTYLEDONAE-HERBS

EUDICOTS

APIACEAE (Umbelliferae) Carrot Family		
**Dacus carota* L. Wild Carrot, Queen Anne's Lace	Ruderal Grasslands	Common
**Foeniculum vulgare* Mill. Fennel	Ruderal	Common
Osmorhiza bertoli DC. Sweet Cicely (=*Osmorhiza chilense)*	Woodlands, Ruderal	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

NCN = No Common Name, * = Non-native, @= Voucher Specimen

Sanicula crassicaulis DC. Pacific Sanicle	Woodlands	Common
**Torilis arvensis* (Huds.) Link Hedge-parsley	Grasslands Woodlands	Common
ASTERACEAE (Compositae) Sunflower Family		
Agoseris heterophylla (Nutt.) Green Annual Agoseris	Ruderal	Occasional
**Calendula arvensis* L. Field Marigold	Ruderal	Occasional
**Carduus pycnocephalus* L.subsp.*pycnocephalus* Italian Thistle	Woodlands	Common
**Cichorium intybus* L. Chicory	Ruderal	Occasional
**Circium vulgare* (Savi) Ten. Bull Thistle	Grasslands, Ruderal	Common
**Erigeron canadensis* L. Horseweed (=*Conyza Canadensis)*	Ruderal	Occasional
**Helminthotheca echioides* (L.) Holub Ox-tongue (=*Picris echioides)*	Ruderal	Common
Hieracium albiflorum Hook. White-flowered Hawkweed	Woodlands, Grasslands	Occasional
**Hypochaeris glabra* L. Cat's Ear	Ruderal	Common
**Lactuca serriola* L. Prickly Lettuce	Ruderal	Occasional
**Senecio vulgaris* L. NCN	Ruderal	Occasional
**Sonchus asper* (L.) Hill var. *asper* Prickly Sow Thistle	Ruderal	Common
**Sonchus oleraceus* L. Common Sow Thistle	Ruderal	Common
**Taraxacum officinale* F.H.Wigg Dandelion	Ruderal	Common
Wyethia helenioides (DC.) Nutt. Grey Mules Ears	Edge of Woodlands	Common
BORAGINACEAE Borage or Waterleaf Family		
Amsinckia menziesii (Lehm) Nelson&Macbr. Rancher's Fireweed	Grasslands	Occasional

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

NCN = No Common Name, * = Non-native, @= Voucher Specimen

Cyanoglossum grande Lehm. Hound's Tongue	Woodlands	Common
Nemophila heterophylla Frisch.&Mey. Canyon Nemophila	Woodlands, Shrub/Scrub	Occasional
Nemophila menziesii Hook.&Arn. var. *menziesii* Baby Blue-eyes	Grasslands	Common
Plagiobothrys nothofulvus (A.Gray)A. Gray Popcorn Flower	Grasslands, Woodlands	Common
BRASSICACEAE Mustard Family		
**Brassica rapa* L. Field Mustard	Grasslands, Ruderal	Common
**Capsella bursa-pastoris* L. Shepherd's Purse	Ruderal	Common
Cardamine californica (Nutt.) Green Milk Maids, Tooth Wort (= *Dentaria)*	Woodlands	Common
Cardamine oligosperma Nutt. Bitter-cress	Ruderal	Common
**Raphanus sativus* L. Wild Radish	Ruderal	Common
CARYOPHYLLACEAE Pink Family		
**Cerastium arvense* L. subsp *strictum* Spury, Stickey Sand-Spury	Ruderal	Common
**Silene gallica* L. Small Flower Catchfly Windmill Pink	Ruderal/Grasslands/oakWoodlands	Common
**Stellaria media* (L.) Vill. Chickweed	Ruderal	Common
CONVOLVULACEAE Morning-glory Family		
Convolvulus arvensis L. Morning-glory, Bindweed	Grasslands	Common
FABACEAE (Leguminosae) Legume Family		
Lathyrus vestitus Nutt. var. *vestitus* Hillside Pea	Woodlands	Occasional
@**Lotus corniculatus* L. Bird's-foot Trefoil	Grasslands, Ruderal	Common
Lupinus bicolor Lindl. Miniature lupine	Grassland	Common
**Medicago polymorpha* L. Bur Clover	Ruderal, Grasslands	Common
**Trifolium hirtum* All. Rose Clover	Ruderal	Common

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

NCN = No Common Name, * = Non-native, @= Voucher Specimen

**Trifolium repens* L. White Clover	Ruderal	Common
**Vicia sativa* L. subsp. *nigra* Narrow Leaved-vetch	Grasslands, Ruderal	Common
**Vicia villosa* Roth. subsp. *villosa* Hairy Vetch, Winter Vetch	Ruderal	Common
GERANIACEAE Geranium Family		
**Erodium botrys* (Cav.) Bertol. Broadleaf Filaree, Long-beaked Filaree	Grasslands	Common
**Geranium dissectum* L. Common Geranium	Grasslands	Common
**Geranium molle* L. Dove's Foot Geranium	Grasslands	Common
**Geranium robertianum* L. Red Robin	Canyons Oak Woodland, Shady	Common
LAMIACEAE (Labiatae) Mint Family		
Stachys ajugoides Benth. Hedge-nettle	Moist Open Places	Occasional
MALVACEAE Mallow Family		
**Malva parviflora* L. Cheeseweed, Mallow	Ruderal	Common
MONTIACEAE Miner's lettuce Family		
*Claytonia perfoliata*Willd. ssp. *perfoliata* Miners Lettuce	Woodlands, Riparian	Common
Trientalis latifolia Hook. Starflower	Woodlands	Common
PAPAVERACEAE Poppy Family		
Eschscholzia californica Cahm. California Poppy	Grasslands	Common
PLANTAGINACEAE Plantain Family		
**Plantago lanceolata* L. English Plantain	Ruderal	Common
POLYGONACEAE Buckwheat Family		
**Rumex acetosella* L. Sheep Sorrel	Ruderal	Common
**Rumex crispus* L. Curly Dock	Ruderal	Common
RANUNCULACEAE Buttercup Family		
**Ranunculus muricatus* L. Pickle-fruited Buttercup	Grasslands, Ruderal	Occasional

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

NCN = No Common Name, * = Non-native, @= Voucher Specimen

RUBIACEAE Madder Family		
Galium aparine L. Goose Grass	Woodlands, Riparian, Ruderal	Common
@*Galium californicum* Hook.&Arn. subsp. *californicum* California Bedstraw, Cleavers	Woodlands	Occasional
VASCULAR PLANTS DIVISION ANTHOPHYTA --ANGIOSPERMS CLASS--MONOCOTYLEDONAE-GRASSES		
POACEAE Grass Family		
**Avena barbata* Link. Slender Wild Oat	Grasslands	Common
**Avena sativa* L. Cultivated Oat	Grasslands, Ruderal	Common
**Bromus diandrus* Roth Ripgut Grass	Ruderal, Grasslands	Common
**Bromus hordeaceus* L. Soft Chess, Blando Brome (*B.mollis*)	Grasslands	Common
**Cynosurus echinatus* L. Hedgehog, Dogtail	Ruderal	Common
**Festuca bromoides* L. Six-weeks Fescue *(=Vulpia bromoides)*	Ruderal, Moist Flats become Dry	Common
Festuca microstachys Nutt. NCN (=*Vulpia microstachys)*	Grasslands, Ruderal	Common
**Festuca myuros* L. Rattail Fescue,Zorro Annual Fescue (=*Vulpia myuros)*	Grasslands	Common
Festuca occidentalis Hook. Western Fescue	Open Forests, Woodlands	Occasional
**Festuca perennis* (L.) Columubus & Sm. Perennial Rye Grass (=*Lolium multiflorum, L. perenne)*	Grasslands	Common
**Hordeum marinum* Huds. subsp. *gusoneanum* Mediterranean Barley	Grasslands	Common
**Hordeum vulgare* L. Barley	Grasslands	Common
Melica californica Schribn. California Melic	Grassland, Oak & Conifer Woodland	Occasional

MAJOR PLANT GROUP Family Genus Common Name	Habitat Type	Abundance

NCN = No Common Name, * = Non-native, @= Voucher Specimen

CLASS--MONOCOTYLEDONAE-SEDGES AND RUSHES

CYPERACEAE Sedge Family		
@*Carex multicaulis* Bailey Stick or Many-stemmed Sedge	Forests	Occasional
Schoenoplectus acutus (Bigelow) Love&Love var. *occidentalis* Palustrine Common Tule *(Scirpus acutus)*		Occasional

VASCULAR PLANTS DIVISION ANTHOPHYTA --ANGIOSPERMS
CLASS--MONOCOTYLEDONAE-HERBS

AGAVACEAE Centuray Plant Family		
Chlorogalum pomeridianum (DC.) Kunth var. *pomeridianum* Soap Root	Woodlands, Grasslands	
IRIDACEAE Iris Family		
Iris macrosiphon Torr. Long-tubed Iris	Sunny Woody or Grassy Hillsides	Occasional
Sisyrinchium bellum Watson Blue-eyed Grass	Grasslands	Common
LILIACEAE Lily Family		
Calochortus albus (Benth.) Benth. White Globe Lily Fairy Lantern	Chaparral SNF	Occasional
Calochortus amabilis Purdy Yellow Globe Lily, Diogenes' Lantern	Grasslands, Woodlands	Occasional
ORCHIDACEAE Orchid Family		
Epipactis gigantea Hook. Stream Orchid	Moist Areas	Occasional
Piperia transversa Suksd. Flat Spurred Piperea	Conifer Forests	Occasional
TYPHACEAE Cat-tail Family		
Typha angustifolium L. Narrow-leaved Cattail	Riparian	Common

APPENDIX B

CDFW CNDDB Rare Find 5 State and Federal Listed Species for the Quadrangle and Surrounding Quadrangles

U.S. Fish & Wildlife Service IPaC Trust Resources
Federal Endangered and Threatened Species that Occur in or may be Affected by the Project

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Query Criteria: Taxonomic Group IS (Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes)
 AND Quad IS (Aetna Springs (3812264) OR Calistoga (3812255) OR Chiles Valley (3812253) OR Detert Reservoir (3812265) OR Kenwood (3812245) OR Rutherford (3812244) OR St. Helena (3812254) OR Walter Springs (3812263) OR Yountville (3812243))
 AND Habitat IS (Cismontane woodland)

Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Allium peninsulare var. franciscanum Franciscan onion	PMLIL021R1	None	None	G5T1	S1	1B.2
Amorpha californica var. napensis Napa false indigo	PDFAB08012	None	None	G4T2	S2	1B.2
Amsinckia lunaris bent-flowered fiddleneck	PDBOR01070	None	None	G2G3	S2S3	1B.2
Arctostaphylos manzanita ssp. elegans Konocti manzanita	PDERI04271	None	None	G5T3	S3	1B.3
Arctostaphylos stanfordiana ssp. decumbens Rincon Ridge manzanita	PDERI041G4	None	None	G3T1	S1	1B.1
Astragalus claranus Clara Hunt's milk-vetch	PDFAB0F240	Endangered	Threatened	G1	S1	1B.1
Astragalus rattanii var. jepsonianus Jepson's milk-vetch	PDFAB0F7E1	None	None	G4T3	S3	1B.2
Brodiaea leptandra narrow-anthered brodiaea	PMLIL0C022	None	None	G3?	S3?	1B.2
Ceanothus confusus Rincon Ridge ceanothus	PDRHA04220	None	None	G1	S1	1B.1
Ceanothus divergens Calistoga ceanothus	PDRHA04240	None	None	G2	S2	1B.2
Ceanothus purpureus holly-leaved ceanothus	PDRHA04160	None	None	G2	S2	1B.2
Fritillaria pluriflora adobe-lily	PMLIL0V0F0	None	None	G2G3	S2S3	1B.2
Layia septentrionalis Colusa layia	PDAST5N0F0	None	None	G2	S2	1B.2
Leptosiphon jepsonii Jepson's leptosiphon	PDPLM09140	None	None	G3	S3	1B.2
Limnanthes floccosa ssp. floccosa woolly meadowfoam	PDLIM02043	None	None	G4T4	S3	4.2
Lupinus sericatus Cobb Mountain lupine	PDFAB2B3J0	None	None	G2	S2	1B.2
Navarretia leucocephala ssp. bakeri Baker's navarretia	PDPLM0C0E1	None	None	G4T2	S2	1B.1
Streptanthus hesperidis green jewelflower	PDBRA2G510	None	None	G2	S2	1B.2
Trichostema ruygtii Napa bluecurls	PDLAM220H0	None	None	G1G2	S1S2	1B.2
Viburnum ellipticum oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3?	2B.3

Record Count: 20

CALIFORNIA DEPARTMENT OF FISH and WILDLIFE **RareFind**

Query Summary:
Taxonomic Group IS (Ferns OR Gymnosperms OR Monocots OR Dicots OR Lichens OR Bryophytes) AND Quad IS (Aetna Springs (3812264) OR Calistoga (3812255) OR Chiles Valley (3812253) OR Detert Reservoir (3812265) OR Kenwood (3812245) OR Rutherford (3812244) OR St. Helena (3812254) OR Walter Springs (3812263) OR Yountville (3812243))
AND Habitat IS (Cismontane woodland)

CNDDB Element Query Results

Scientific Name	Common Name	Federal Status	State Status	Global Rank	State Rank	CA Rare Plant Rank	Habitats
Allium peninsulare var. franciscanum	Franciscan onion	None	None	G5T1	S1	1B.2	Cismontane woodland, Ultramafic, Valley & foothill grassland
Amorpha californica var. napensis	Napa false indigo	None	None	G4T2	S2	1B.2	Broadleaved upland forest, Chaparral, Cismontane woodland
Amsinckia lunaris	bent-flowered fiddleneck	None	None	G2G3	S2S3	1B.2	Cismontane woodland, Coastal bluff scrub, Valley & foothill grassland
Arctostaphylos manzanita ssp. elegans	Konocti manzanita	None	None	G5T3	S3	1B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest
Arctostaphylos stanfordiana ssp. decumbens	Rincon Ridge manzanita	None	None	G3T1	S1	1B.1	Chaparral, Cismontane woodland
Astragalus claranus	Clara Hunt's milk-vetch	Endangered	Threatened	G1	S1	1B.1	Chaparral, Cismontane woodland, Valley & foothill grassland
Astragalus rattanii var. jepsonianus	Jepson's milk-vetch	None	None	G4T3	S3	1B.2	Cismontane woodland, Ultramafic, Valley & foothill grassland
Brodiaea leptandra	narrow-anthered brodiaea	None	None	G3?	S3?	1B.2	Broadleaved upland forest, Chaparral, Cismontane woodland, Lower

							montane coniferous forest, Valley & foothill grassland
Ceanothus confusus	Rincon Ridge ceanothus	None	None	G1	S1	1B.1	Chaparral, Cismontane woodland, Closed-cone coniferous forest, Ultramafic
Ceanothus divergens	Calistoga ceanothus	None	None	G2	S2	1B.2	Chaparral, Cismontane woodland, Ultramafic
Ceanothus purpureus	holly-leaved ceanothus	None	None	G2	S2	1B.2	Chaparral, Cismontane woodland
Fritillaria pluriflora	adobe-lily	None	None	G2G3	S2S3	1B.2	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Layia septentrionalis	Colusa layia	None	None	G2	S2	1B.2	Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland
Leptosiphon jepsonii	Jepson's leptosiphon	None	None	G3	S3	1B.2	Chaparral, Cismontane woodland, Ultramafic
Limnanthes floccosa ssp. floccosa	woolly meadowfoam	None	None	G4T4	S3	4.2	Chaparral, Cismontane woodland, Valley & foothill grassland, Vernal pool, Wetland
Lupinus sericatus	Cobb Mountain lupine	None	None	G2	S2	1B.2	Broadleaved upland forest, Chaparral, Cismontane woodland, Lower montane coniferous forest, Ultramafic
Navarretia leucocephala ssp. bakeri	Baker's navarretia	None	None	G4T2	S2	1B.1	Cismontane woodland, Lower montane coniferous forest, Meadow & seep, Valley & foothill grassland, Vernal pool, Wetland

Streptanthus hesperidis	green jewelflower	None	None	G2	S2	1B.2	Chaparral, Cismontane woodland, Ultramafic
Trichostema ruygtii	Napa bluecurls	None	None	G1G2	S1S2	1B.2	Chaparral, Cismontane woodland, Lower montane coniferous forest, Valley & foothill grassland, Vernal pool, Wetland
Viburnum ellipticum	oval-leaved viburnum	None	None	G4G5	S3?	2B.3	Chaparral, Cismontane woodland, Lower montane coniferous forest

IPaC **U.S. Fish & Wildlife Service**

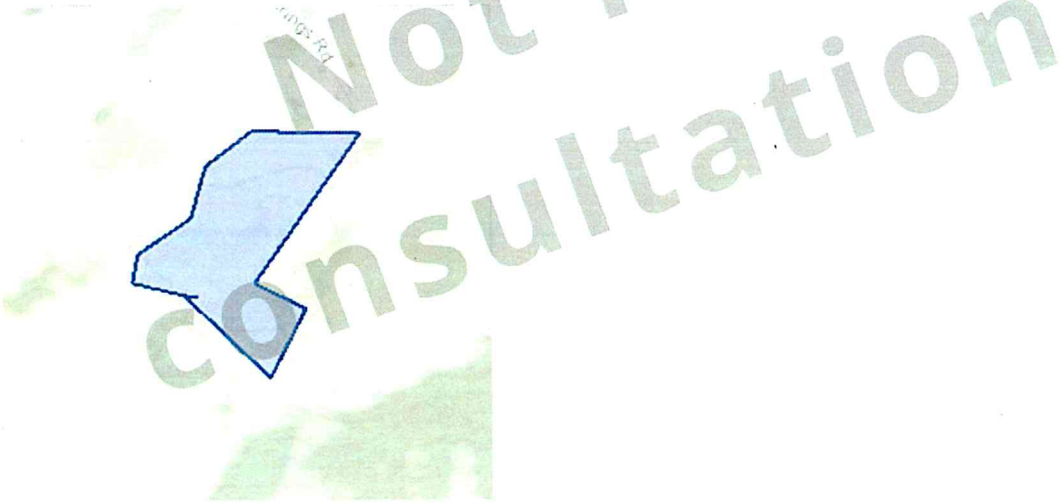
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Napa County, California



Local office

Sacramento Fish And Wildlife Office

(916) 414-6600
(916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population, even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species

[1] are managed by the Endangered Species Program of the U.S. Fish and Wildlife Service.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information.

The following species are potentially affected by activities in this location:

Amphibians

NAME	STATUS
California Red-legged Frog Rana draytonii There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/2891	Threatened

Birds

NAME	STATUS
Northern Spotted Owl Strix occidentalis caurina There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/1123	Threatened

Crustaceans

NAME	STATUS
California Freshwater Shrimp Syncaris pacifica No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/7903	Endangered

Fishes

NAME	STATUS
Delta Smelt Hypomesus transpacificus There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/321	Threatened
Steelhead Oncorhynchus (=Salmo) mykiss There is a **final** critical habitat designated for this species. Your location is outside the designated critical habitat. https://ecos.fws.gov/ecp/species/1007	Threatened

Flowering Plants

NAME	STATUS
Clara Hunt's Milk-vetch Astragalus clarianus No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/3300	Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any activity that results in the take (to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct) of migratory birds or eagles is prohibited unless authorized by the U.S. Fish and Wildlife Service

[3]. There are no provisions for allowing the take of migratory birds that are unintentionally killed or injured.

Any person or organization who plans or conducts activities that may result in the take of migratory birds is responsible for complying with the appropriate regulations and implementing appropriate conservation measures.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

Additional information can be found using the following links:

- Birds of Conservation Concern http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php
- Conservation measures for birds http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php
- Year-round bird occurrence data http://www.birdscanada.org/birdmon/default/datasummaries.jsp

The migratory birds species listed below are species of particular conservation concern (e.g. Birds of Conservation Concern) that may be potentially affected by activities in this location. It is not a list of every bird species you may find in this location, nor a guarantee that all of the bird species on this list will be found on or near this location. Although it is important to try to avoid and minimize impacts to all birds, special attention should be made to avoid and minimize impacts to birds of priority concern. To view available data on other bird species that may occur in your project area, please visit the AKN Histogram Tools and Other Bird Data Resources. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

NAME	SEASON(S)
Allen's Hummingbird Selasphorus sasin https://ecos.fws.gov/ecp/species/9637	Migrating
Bald Eagle Haliaeetus leucocephalus https://ecos.fws.gov/ecp/species/1626	Year-round

Bell's Sparrow Amphispiza belli https://ecos.fws.gov/ecp/species/9303	Year-round
Burrowing Owl Athene cunicularia https://ecos.fws.gov/ecp/species/9737	Year-round
Fox Sparrow Passerella iliaca	Wintering
Least Bittern Ixobrychus exilis https://ecos.fws.gov/ecp/species/6175	Breeding
Lesser Yellowlegs Tringa flavipes https://ecos.fws.gov/ecp/species/9679	Wintering
Lewis's Woodpecker Melanerpes lewis https://ecos.fws.gov/ecp/species/9408	Wintering
Long-billed Curlew Numenius americanus https://ecos.fws.gov/ecp/species/5511	Wintering
Nuttall's Woodpecker Picoides nuttallii https://ecos.fws.gov/ecp/species/9410	Year-round
Oak Titmouse Baeolophus inornatus https://ecos.fws.gov/ecp/species/9656	Year-round
Olive-sided Flycatcher Contopus cooperi https://ecos.fws.gov/ecp/species/3914	Breeding
Peregrine Falcon Falco peregrinus https://ecos.fws.gov/ecp/species/8831	Year-round
Rufous Hummingbird selasphorus rufus https://ecos.fws.gov/ecp/species/8002	Migrating

Short-eared Owl Asio flammeus https://ecos.fws.gov/ecp/species/9295	Wintering
Swainson's Hawk Buteo swainsoni https://ecos.fws.gov/ecp/species/1098	Breeding
Western Grebe aechmophorus occidentalis https://ecos.fws.gov/ecp/species/6743	Year-round

What does IPaC use to generate the list of migratory bird species potentially occurring in my specified location?

Landbirds:

Migratory birds that are displayed on the IPaC species list are based on ranges in the latest edition of the National Geographic Guide, Birds of North America (6th Edition, 2011 by Jon L. Dunn, and Jonathan Alderfer). Although these ranges are coarse in nature, a number of U.S. Fish and Wildlife Service migratory bird biologists agree that these maps are some of the best range maps to date. These ranges were clipped to a specific Bird Conservation Region (BCR) or USFWS Region/Regions, if it was indicated in the 2008 list of Birds of Conservation Concern (BCC) that a species was a BCC species only in a particular Region/Regions. Additional modifications have been made to some ranges based on more local or refined range information and/or information provided by U.S. Fish and Wildlife Service biologists with species expertise. All migratory birds that show in areas on land in IPaC are those that appear in the 2008 Birds of Conservation Concern report.

Atlantic Seabirds:

Ranges in IPaC for birds off the Atlantic coast are derived from species distribution models developed by the National Oceanic and Atmospheric Association (NOAA) National Centers for Coastal Ocean Science (NCCOS) using the best available seabird survey data for the offshore Atlantic Coastal region to date. NOAANCCOS assisted USFWS in developing seasonal species ranges from their models for specific use in IPaC. Some of these birds are not BCC species but were of interest for inclusion because they may occur in high abundance off the coast at different times throughout the year, which potentially makes them more susceptible to certain types of development and activities taking place in that area. For more refined details about the abundance and richness of bird species within your project area off the Atlantic Coast, see the Northeast Ocean Data Portal. The Portal also offers data and information about other types of taxa that may be helpful in your project review.

About the NOAANCCOS models: the models were developed as part of the NOAANCCOS project: Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf. The models resulting from this project are being used in a number of decision-support/mapping products in order to help guide decision-

making on activities off the Atlantic Coast with the goal of reducing impacts to migratory birds. One such product is the Northeast Ocean Data Portal, which can be used to explore details about the relative occurrence and abundance of bird species in a particular area off the Atlantic Coast.

All migratory bird range maps within IPaC are continuously being updated as new and better information becomes available.

Can I get additional information about the levels of occurrence in my project area of specific birds or groups of birds listed in IPaC?

Landbirds:

The Avian Knowledge Network (AKN) provides a tool currently called the "Histogram Tool", which draws from the data within the AKN (latest,survey, point count, citizen science datasets) to create a view of relative abundance of species within a particular location over the course of the year. The results of the tool depict the frequency of detection of a species in survey events, averaged between multiple datasets within AKN in a particular week of the year. You may access the histogram tools through the Migratory Bird Programs AKN Histogram Tools webpage.

The tool is currently available for 4 regions (California, Northeast U.S., Southeast U.S. and Midwest), which encompasses the following 32 states: Alabama, Arkansas, California, Connecticut, Delaware, Florida, Georgia, Illinois, Indiana, Iowa, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New York, North, Carolina, Ohio, Pennsylvania, Rhode Island, South Carolina, Tennessee, Vermont, Virginia, West Virginia, and Wisconsin.

In the near future, there are plans to expand this tool nationwide within the AKN, and allow the graphs produced to appear with the list of trust resources generated by IPaC, providing you with an additional level of detail about the level of occurrence of the species of particular concern potentially occurring in your project area throughout the course of the year.

Atlantic Seabirds:

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAANCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Facilities

Wildlife refuges

Any activity proposed on National Wildlife Refuge lands must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGES AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

This location overlaps the following wetlands:

FRESHWATER POND
PUBK

A full description for each wetland code can be found at the National Wetlands Inventory website: https://ecos.fws.gov/ipac/wetlands/decoder

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible

hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

“H”

Biological Studies

Part B
Northern Spotted Owl (NSO)

Forest Ecosystem Management, PLLC

PO Box 455 * Potomac, MT 59823

(406) 490-7427 * cptown@blackfoot.net

July 24, 2018

Scott Butler, RPF
Environmental Resource Management
7000 Leicester CT.
Castle Pines, CO 80180

RE: Aloft Winery Project
Property Section 8 T08N, R05W, MDB&M - Napa County

Scott,

This is an update of the April 28, 2017 assessment for northern spotted owls (*strix occidentalis caurinia*), or NSOs, for the Aloft Winery Project located off Cold Springs Road in Angwin, California. The Project proposed to:

- Relocate their drive-way off Cold Springs Road.
- Widen a portion of the road approximately 10'.
- Remove some trees within an existing vineyard.

Trees were not removed in 2017 as originally anticipated, so this is an update of northern spotted owl information.

Known Northern Spotted Owl Territories:

On 24JUL18, I reviewed the California Department of Fish & Wildlife's spotted owl viewer for the above listed project; there were no changes from the 2017 report (Attachment #1). An assessment area of 1.3 miles from the project area was used. The 1.3 mile assessment area was created by USFWS for a Take Avoidance of northern spotted owls within the California Interior (outside the redwood zone). Although Napa County does have redwoods, the environmental conditions in the area are hotter/drier than the coastal redwood zone; therefore, the 1.3 mile assessment area was used for this Project.

There are two known NSO territories within 1.3 miles of the Project Area (NAP014 & NAP028). The following briefly discusses each of the territories.

> **NAP014**: Located approximately 3,000' southwest of the Project Area, this territory was first identified in 1989. This territory is generally yearly monitored and was found active in 1989 – 1992, 1994, 1989, 2001, 2003, 2005 – 2008, 2010, 2012, and 2013. The

database reports no NSO detections 2015; however, we detected a single NSO in 2015, a pair in 2016, and a single male in 2017. All detections are in the same general area as the mapped activity center. In 2018, the site was monitored by surveying off Howell Mountain Road (as done in the past) and no NSOs were detected.

NAP028: Located approximately 1.1 miles east of the Project Area, this territory was first identified in 1992, when a pair of northern spotted owls was found nesting. Subsequent surveys over the years did not detect any northern spotted owls until 2015, when an unknown sex northern spotted owl was detected during the evening of 09APR15. This detection was an owl moving around the Las Posadas State Forest and surveys after the 09APR15 detection have not detected any NSOs.

Northern Spotted Owl Habitat on Project Site:

The Project Area is located off Cold Springs Roads, and includes three different sites.

Site #1 (Road Relocation): The road is to be relocated through the house and adjacent trees. The trees are primarily Douglas-fir, with an overstory canopy cover exceeding 80%. Technically this area would be identified as nesting/roosting NSO habitat; however, due to numerous houses, Cold Springs Road, surrounding vineyards, and size of forested patch that this Project falls within; I would classify the area as marginal NSO roosting habitat.

Site #2 (Road Widening): The road is to be widened approximately 10' on the right side. There is a pond on the left. The area to be widened is not suitable NSO habitat; however beyond the Project site, the habitat would be classified as marginal foraging habitat.

Site #3 (Winery Location): This site is a patch of trees surrounded by an existing vineyard. This site is unsuitable NSO habitat due to lack of canopy cover, and it is a small forested patch with surrounding vineyards. The forested area adjacent to the vineyard but outside the Project Area, is suitable NSO habitat.

The landscape is a mix of agricultural land, second growth forests, and residential houses. The closest forest that would meet USFWS definitions of suitable northern spotted owl habitat is within ¼ mile from the Project.

Known Northern Spotted Owl Surveys:

There have been northern spotted owl surveys for an adjacent project which covered Site #1 and the habitat near Site #2 since 2014 (reported within the 28APR17 NSO assessment). This site was again surveyed in 2018, see table below.

NSO Updated Surveys

Date	Survey Time	Results
05MAR18	2206 – 2216	N/R – Very Quiet
18MAR18	2204 – 2214	N/R – Saw-whet Owl
01APR18	2308 – 2318	N/R – Quiet
17APR18	2248 – 2258	N/R – Quiet

07MAY18	2340 – 2350	N/R – Saw-whet Owl
15MAY18	2333 – 2343	N/R - Cold

N/R – No Response from Northern Spotted Owls

Scott Butler, RPF, completed the 2018 surveys following USFWS NSO Survey Protocol. The survey station has not move from the 2017 report; therefore, another map is not being submitted. No northern spotted owls have been detected.

Conclusions for Aloft Winery Project:

The closest known northern spotted owl territory is located just over 3,000' from the Project Area (Site #3). Site #1 is within marginal northern spotted owl habitat and has been adequately surveyed through the 2018 NSO breeding season. Site #2 is unsuitable habitat but is within ¼ mile of suitable habitat; however, the area has been adequately surveyed through the 2018 NSO breeding season. Site #3 is within unsuitable habitat but is within ¼ mile of suitable habitat and has not been surveyed; therefore, to meet USFWS Take Avoidance Scenarios, is subject to seasonal restrictions (no operations between 01FEB – 07JUL). At this time, we are outside the seasonal restrictions guidelines; therefore, operations can occur.

In Summary:

- Site #1 – Due to habitat and surveys, as long as tree removal has been completed by 01FEB19, there are no further restrictions recommended. If operations have not been completed by 01FEB19, additional surveys would be required.

- Site #2 – Due to unsuitable habitat within the site, but suitable habitat within ¼ mile but current NSO surveys; as long as tree removal has been completed by 01FEB19, there are no further restrictions recommended. If operations have not been completed by 01FEB19, additional surveys or seasonal restrictions would be required.

- Site #3 – Due to unsuitable habitat within the site; but suitable habitat within ¼ mile and no NSO surveys; seasonal restrictions apply. However, we are outside the seasonal restrictions (01FEB18 – 07JUL18); therefore, there are no further restrictions at this time. If operations have not been completed by 01FEB19, either surveys would be required or seasonal restrictions would apply again.

Operations can be completed at any time from now until February 1, 2019.

If you have questions regarding this information, please feel free to contact me.

Gone Hooting,

Pam Town

Pamela Town
Consulting Wildlife Biologist

Attachments:

1: CA Fish & Wildlife Report #1 & #2 – NSO Database (15 pages)

Data Version Date:
06/28/2018

Report Generation Date:
7/24/2018

Report #1 - Spotted Owl Sites Found
Known Spotted Owl sites having observations within the search area.

Meridian, Township, Range, Section (MTRS) searched:

M_08N_05W Sections(03,04,05,06,07,08,09,10,15,16,17,18,19,20,21,22);

NOTES:

Aloft Winery

Masterowl	*Subspecies*	*LatDD NAD83*	*LonDD NAD83*	*MTRS*	*AC Coordinate Source*
NAP0014	NORTHERN	38.545901	-122.438464	M 08N 05W 17	Contributor
NAP0028	NORTHERN	38.559198	-122.411848	M 08N 05W 09	Contributor
NAP0029	NORTHERN	38.587141	-122.427051	M 09N 05W 33	Contributor

2 Miles

Within 1.3 miles

NAP0014 = 3,018'

NAP0028 - 1.1 Mile

Data Version Date:
06/28/2018

Report Generation Date:
7/24/2018

Report #2 - Observations Reported

List of observations reported by site.

Meridian, Township, Range, Section (MTRS) searched:

M_08N_05W Sections(03,04,05,06,07,08,09,10,15,16,17,18,19,20,21,22);

NOTES:

Aloft Winery

* Nothing New Reported since 2015

NAP014

2015 - Single N30
2016 - Pair
2017 - Single Male
2018 - none

NAP228

Nothing new known

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
Masterowl: NAP0014 Subspecies: NORTHERN											
POS	1989-11-24	1425	1	UM				38.548502	-122.443344	M 08N 05W 17	Quarter-section centroid
NEG	1990		0					38.545218	-122.457840	M 08N 05W 18	Section centroid
AC	1990-03-10	2315	2	UMUF	Y			38.545901	-122.438464	M 08N 05W 17	Contributor
NEG	1990-11-16		0					38.544840	-122.438863	M 08N 05W 17	Section centroid
POS	1990-12-06	1856	1	UF				38.548682	-122.452799	M 08N 05W 18	Quarter-section centroid
POS	1992		1	UF				38.548323	-122.434337	M 08N 05W 17	Quarter-section centroid
NEG	1993-11-07	1816	0					38.545149	-122.452883	M 08N 05W 18	Half-section centroid
POS	1994-01-02	0345	1	UF				38.548809	-122.462702	M 08N 05W 18	Quarter-section centroid
NEG	1995-06-24	2142	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
POS	1998	0500	1	UU				38.548682	-122.452799	M 08N 05W 18	Quarter-section centroid
NEG	2000-03-11	1845	0					38.545218	-122.457840	M 08N 05W 18	Section centroid
NEG	2000-03-11	1900	0					38.541626	-122.452967	M 08N 05W 18	Quarter-section centroid
NEG	2000-04-12	2026	0					38.545218	-122.457840	M 08N 05W 18	Section centroid
NEG	2000-04-12	2030	0					38.541626	-122.452967	M 08N 05W 18	Quarter-section centroid
NEG	2000-04-24	2045	0					38.541626	-122.452967	M 08N 05W 18	Quarter-section centroid
NEG	2000-04-24	2035	0					38.545218	-122.457840	M 08N 05W 18	Section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2000-04-25	2200	0					38.541626	-122.452967	M 08N 05W 18	Quarter-section centroid
NEG	2000-05-09	2300	0					38.541626	-122.452967	M 08N 05W 18	Quarter-section centroid
NEG	2000-05-15	2019	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2000-06-22		0					38.559582	-122.457674	M 08N 05W 07	Section centroid
POS	2001-01-01	0353	1	UM				38.544840	-122.438863	M 08N 05W 17	Section centroid
POS	2001-02-01	1928	1	UM				38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2001-02-01		0					38.559656	-122.439000	M 08N 05W 08	Section centroid
NEG	2001-03-05		0					38.559656	-122.439000	M 08N 05W 08	Section centroid
POS	2001-03-16	2143	1	UU				38.544840	-122.438863	M 08N 05W 17	Section centroid
POS	2001-04-05	2030	1	UM				38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2001-04-05		0					38.559656	-122.439000	M 08N 05W 08	Section centroid
POS	2001-05-26	2221	1	UM				38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-02-02	2400	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-02-14	1200	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-02-26	2400	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-03-10	2400	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-04-20	2015	0					38.544840	-122.438863	M 08N 05W 17	Section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2002-04-28	2400	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-04-28		0					38.545901	-122.438464	M 08N 05W 17	Activity center
NEG	2002-05-09		0					38.545901	-122.438464	M 08N 05W 17	Activity center
NEG	2002-05-09	2400	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-05-12	2400	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-05-12		0					38.545901	-122.438464	M 08N 05W 17	Activity center
NEG	2002-05-30	2400	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-05-30		0					38.545901	-122.438464	M 08N 05W 17	Activity center
NEG	2002-06-29	2400	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-06-29	2400	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-06-29		0					38.545901	-122.438464	M 08N 05W 17	Activity center
NEG	2003-02-07	2203	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
POS	2003-03-12	2042	1	UM				38.541464	-122.443468	M 08N 05W 17	Quarter-section centroid
NEG	2003-04-07	2116	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2003-04-14	2100	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2003-04-22	1944	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
NEG	2003-04-23	2214	0					38.544840	-122.438863	M 08N 05W 17	Section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2003-05-12	2234	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2003-05-12	2147	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2003-05-13	2015	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
NEG	2003-06-06	2103	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
POS	2003-06-07	0019	1	UM				38.541626	-122.452967	M 08N 05W 18	Quarter-section centroid
NEG	2003-06-13	2044	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
NEG	2003-06-19	2103	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
NEG	2003-06-21	2105	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2004-02-08	1937	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
NEG	2004-02-29	1729	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
NEG	2004-02-29	1901	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2004-03-29	2132	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
NEG	2004-03-29	2018	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2004-04-04	1931	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
NEG	2004-04-04	2026	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2004-05-08	2253	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2004-05-13	2213	0					38.544840	-122.438863	M 08N 05W 17	Section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2004-05-15	2318	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2004-05-15	2225	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
POS	2005-02-05	1821	1	UM				38.545218	-122.457840	M 08N 05W 18	Section centroid
NEG	2005-02-24	1754	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2005-03-11	1833	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2005-04-02	1859	0					38.545218	-122.457840	M 08N 05W 18	Section centroid
NEG	2005-04-11	1930	0					38.545218	-122.457840	M 08N 05W 18	Section centroid
NEG	2005-05-11	2056	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2005-05-19	2106	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2005-05-19	2106	0					38.545218	-122.457840	M 08N 05W 18	Section centroid
NEG	2006-02-12	1941	0					38.545218	-122.457840	M 08N 05W 18	Section centroid
NEG	2006-02-15	1131-1421	0					38.555762	-122.434404	M 08N 05W 08	Quarter-section centroid
NEG	2006-02-16	1827	0					38.545218	-122.457840	M 08N 05W 18	Section centroid
POS	2006-02-21	1918	1	UM				38.545218	-122.457840	M 08N 05W 18	Section centroid
NEG	2006-05-18	2125	0					38.545218	-122.457840	M 08N 05W 18	Section centroid
POS	2007-02-06	2004	1	UF				38.544840	-122.438863	M 08N 05W 17	Section centroid
POS	2007-02-06	2014	1	UM				38.548502	-122.443344	M 08N 05W 17	Quarter-section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
POS	2007-03-06	1944	1	UU				38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2007-04-07	2020	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
POS	2007-05-25	2259	1	UM				38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2008-02-09	2032-2042	0					38.541222	-122.450583	M 08N 05W 18	Contributor
NEG	2008-02-09	2047-2057	0					38.549222	-122.452361	M 08N 05W 18	Contributor
NEG	2008-02-16	2035-2045	0					38.549222	-122.452361	M 08N 05W 18	Contributor
NEG	2008-02-16	2020-2030	0					38.541222	-122.450583	M 08N 05W 18	Contributor
NEG	2008-02-27	1923-1933	0					38.549222	-122.452361	M 08N 05W 18	Contributor
POS	2008-02-27	1946	1	UU				38.549222	-122.452361	M 08N 05W 18	Contributor
NEG	2010-01-02	0722-0732	0					38.547277	-122.452083	M 08N 05W 18	Contributor
NEG	2010-01-02	0736-0746	0					38.541222	-122.450528	M 08N 05W 18	Contributor
NEG	2010-01-02	0709-0719	0					38.547141	-122.451622	M 08N 05W 18	Contributor
NEG	2010-02-03	1944-1954	0					38.515666	-122.438360	M 08N 05W 29	Contributor
NEG	2010-02-03	1855-1905	0					38.547141	-122.451622	M 08N 05W 18	Contributor
POS	2010-02-03	1907	1	UM				38.547259	-122.443938	M 08N 05W 17	Contributor
NEG	2010-03-27	2055-2105	0					38.541222	-122.450528	M 08N 05W 18	Contributor
NEG	2010-03-27	2109-2119	0					38.515666	-122.438360	M 08N 05W 29	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2010-03-27	2041-2051	0					38.547141	-122.451622	M 08N 05W 18	Contributor
NEG	2010-04-23	2102-2112	0					38.515666	-122.438360	M 08N 05W 29	Contributor
POS	2010-04-23	2031-2045	1	UM				38.541124	-122.451622	M 08N 05W 18	Contributor
NEG	2010-04-23	2013-2023	0					38.547141	-122.451622	M 08N 05W 18	Contributor
NEG	2010-05-18	2143-2153	0					38.546266	-122.451500	M 08N 05W 18	Contributor
NEG	2010-05-18	2127-2137	0					38.541200	-122.450583	M 08N 05W 18	Contributor
NEG	2010-05-18	2107-2117	0					38.516482	-122.438653	M 08N 05W 29	Contributor
NEG	2010-05-18	2035-2045	0					38.521266	-122.404900	M 08N 05W 27	Contributor
NEG	2010-05-18	2052-2102	0					38.518766	-122.409366	M 08N 05W 27	Contributor
NEG	2010-05-29	2127-2137	0					38.546266	-122.451500	M 08N 05W 18	Contributor
NEG	2010-05-29	2022-2032	0					38.521266	-122.404900	M 08N 05W 27	Contributor
NEG	2010-05-29	2052-2102	0					38.516482	-122.438653	M 08N 05W 29	Contributor
NEG	2010-05-29	2036-2046	0					38.518766	-122.409366	M 08N 05W 27	Contributor
NEG	2010-05-29	2112-2123	0					38.541200	-122.450583	M 08N 05W 18	Contributor
NEG	2011-02-06	1921-1931	0					38.522300	-122.404900	M 08N 05W 27	Contributor
NEG	2011-02-06	1935-1945	0					38.519216	-122.406049	M 08N 05W 27	Contributor
NEG	2011-02-06	1857-1907	0					38.515683	-122.438533	M 08N 05W 29	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2011-02-06	1804-1814	0					38.549183	-122.452366	M 08N 05W 18	Contributor
NEG	2011-02-06	1948-1958	0					38.518200	-122.410283	M 08N 05W 27	Contributor
NEG	2011-02-06	1820-1840	0					38.541283	-122.450533	M 08N 05W 18	Contributor
NEG	2011-03-04	2029-2039	0					38.541266	-122.450550	M 08N 05W 18	Contributor
NEG	2011-03-04	2002-2012	0					38.549183	-122.452366	M 08N 05W 18	Contributor
NEG	2011-03-04	2014-2024	0					38.547933	-122.451899	M 08N 05W 18	Contributor
NEG	2011-12-30	1150-1203	0					38.541166	-122.450583	M 08N 05W 18	Contributor
NEG	2011-12-30	1131-1144	0					38.547968	-122.451816	M 08N 05W 18	Contributor
NEG	2012-01-30	1754-1804	0					38.541167	-122.450583	M 08N 05W 18	Contributor
NEG	2012-01-30	1736-1747	0					38.547967	-122.451817	M 08N 05W 18	Contributor
POS	2012-03-09	1841	2	UMUF	Y			38.548950	-122.452083	M 08N 05W 18	Contributor
POS	2012-04-18	2035	2	UMUF	Y			38.549000	-122.452133	M 08N 05W 18	Contributor
POS	2012-05-07	2116	1	UU				38.548950	-122.452084	M 08N 05W 18	Contributor
POS	2012-05-21	2121	1	UU				38.548933	-122.452100	M 08N 05W 18	Contributor
POS	2013-04-28	2213	1	UF				38.545345	-122.444046	M 08N 05W 17	Contributor
NEG	2014-03-19	1955-2005	0					38.548480	-122.451830	M 08N 05W 18	Contributor
NEG	2014-03-19	2011-2021	0					38.541233	-122.450450	M 08N 05W 18	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2014-09-29	1948-1958	0					38.541233	-122.450450	M 08N 05W 18	Contributor
NEG	2014-09-29	1929-1944	0					38.548950	-122.452017	M 08N 05W 18	Contributor
NEG	2014-10-29	1835-1849	0					38.548480	-122.451830	M 08N 05W 18	Contributor
NEG	2014-10-29	1900-1912	0					38.541233	-122.450450	M 08N 05W 18	Contributor
NEG	2015-02-04	1845-1855	0					38.548930	-122.452020	M 08N 05W 18	Contributor
NEG	2015-02-04	1804-1816	0					38.555806	-122.438920	M 08N 05W 08	Half-section centroid
NEG	2015-02-04	1905-1915	0					38.541222	-122.450528	M 08N 05W 18	Contributor
NEG	2015-03-17	2133-2143	0					38.541222	-122.450528	M 08N 05W 18	Contributor
NEG	2015-03-17	2120-2130	0					38.548930	-122.452020	M 08N 05W 18	Contributor
NEG	2015-04-16	2017-2037	0					38.548870	-122.452000	M 08N 05W 18	Contributor
Masterowl: NAP0028 Subspecies: NORTHERN											
NEG	1990-03-10	1930	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	1990-12-04		0					38.544590	-122.383922	M 08N 05W 14	Section centroid
POS	1992-02-09	1410	2	UMUF				38.559198	-122.411848	M 08N 05W 09	Contributor
POS	1992-03-01	1618	1	UU				38.559198	-122.411848	M 08N 05W 09	Contributor
POS	1992-03-11	1530	2	UMUF				38.559198	-122.411848	M 08N 05W 09	Contributor
AC	1992-04-08	1100	2	UMUF	Y	Y		38.559198	-122.411848	M 08N 05W 09	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
POS	1992-05-10	1145	1	UM				38.559198	-122.411848	M 08N 05W 09	Contributor
POS	1992-06-24	1719	2	UMUF	Y		1	38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	1992-07-26	1127	0					38.559930	-122.406884	M 08N 05W 10	Half-section centroid
NEG	1992-08-26	1406	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	1993-04-04	1533	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	1993-05-16	0536	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	1994-04-01	2008	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2001-02-01	2004	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2003-04-07	2013	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2003-04-14	2006	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2003-04-22	2117	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2003-05-12	2031	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2003-06-06	2234	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2004-02-18	1835	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2004-05-08	2031	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2004-05-23	2155	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2007-03-22	2100	0					38.559961	-122.402350	M 08N 05W 10	Section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2007-04-07	2059	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2007-05-25	2055	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2008-02-27	1902-1912	0					38.569205	-122.423655	M 08N 05W 04	Contributor
NEG	2008-03-31	2125-2135	0					38.569205	-122.423655	M 08N 05W 04	Contributor
NEG	2008-05-20	2149-2159	0					38.569205	-122.423655	M 08N 05W 04	Contributor
NEG	2009	2400	0					38.564123	-122.415923	M 08N 05W 09	Contributor
NEG	2009	2400	0					38.562446	-122.418248	M 08N 05W 09	Contributor
NEG	2011	2400	0					38.560415	-122.413951	M 08N 05W 09	Contributor
NEG	2011	2400	0					38.559003	-122.410302	M 08N 05W 10	Contributor
NEG	2011	2400	0					38.562446	-122.418248	M 08N 05W 09	Contributor
NEG	2011	2400	0					38.564123	-122.415923	M 08N 05W 09	Contributor
NEG	2011	2400	0					38.564624	-122.411155	M 08N 05W 10	Contributor
NEG	2012	2400	0					38.564624	-122.411155	M 08N 05W 10	Contributor
NEG	2012	2400	0					38.559003	-122.410302	M 08N 05W 10	Contributor
NEG	2012	2400	0					38.564123	-122.415923	M 08N 05W 09	Contributor
NEG	2012	2400	0					38.560415	-122.413951	M 08N 05W 09	Contributor
NEG	2012	2400	0					38.562446	-122.418248	M 08N 05W 09	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2012-05-07	2010-2020	0					38.569283	-122.423667	M 08N 05W 04	Contributor
NEG	2012-05-07	1953-2003	0					38.561734	-122.419483	M 08N 05W 09	Contributor
NEG	2012-05-14	2251-2301	0					38.569283	-122.423667	M 08N 05W 04	Contributor
NEG	2012-05-14	2238-2248	0					38.561633	-122.419450	M 08N 05W 09	Contributor
NEG	2012-05-21	2003-2013	0					38.561633	-122.419450	M 08N 05W 09	Contributor
NEG	2012-05-21	2018-2028	0					38.569283	-122.423667	M 08N 05W 04	Contributor
NEG	2013	2400	0					38.559003	-122.410302	M 08N 05W 10	Contributor
NEG	2013	2400	0					38.564624	-122.411155	M 08N 05W 10	Contributor
NEG	2013	2400	0					38.562446	-122.418248	M 08N 05W 09	Contributor
NEG	2013	2400	0					38.564123	-122.415923	M 08N 05W 09	Contributor
NEG	2013	2400	0					38.560415	-122.413951	M 08N 05W 09	Contributor
NEG	2014	2400	0					38.564123	-122.415923	M 08N 05W 09	Contributor
NEG	2014	2400	0					38.559003	-122.410302	M 08N 05W 10	Contributor
NEG	2014	2400	0					38.560415	-122.413951	M 08N 05W 09	Contributor
NEG	2014	2400	0					38.564624	-122.411155	M 08N 05W 10	Contributor
NEG	2014	2400	0					38.562446	-122.418248	M 08N 05W 09	Contributor
NEG	2015	2400	0					38.560415	-122.413951	M 08N 05W 09	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2015	2400	0					38.564123	-122.415923	M 08N 05W 09	Contributor
NEG	2015	2400	0					38.562446	-122.418248	M 08N 05W 09	Contributor
POS	2015-04-09	2340	1	UU				38.568979	-122.420543	M 08N 05W 04	Contributor
POS	2015-04-09	2238	1	UU				38.564624	-122.411155	M 08N 05W 10	Contributor
POS	2015-04-09	1940	1	UU				38.559003	-122.410302	M 08N 05W 10	Contributor
NEG	2015-04-28	2400	0					38.559003	-122.410302	M 08N 05W 10	Contributor
NEG	2015-04-28	2400	0					38.564624	-122.411155	M 08N 05W 10	Contributor
NEG	2015-06-11	2400	0					38.559003	-122.410302	M 08N 05W 10	Contributor
NEG	2015-06-11	2400	0					38.564624	-122.411155	M 08N 05W 10	Contributor
NEG	2015-07-02	2400	0					38.559003	-122.410302	M 08N 05W 10	Contributor
NEG	2015-07-02	2400	0					38.564624	-122.411155	M 08N 05W 10	Contributor
NEG	2015-07-23	2400	0					38.564624	-122.411155	M 08N 05W 10	Contributor
NEG	2015-07-23	2400	0					38.559003	-122.410302	M 08N 05W 10	Contributor
Masterowl: NAP0029 Subspecies: NORTHERN											
POS	1993		1	UU				38.590036	-122.433642	M 09N 05W 32	Contributor
NEG	1993-05-16	0713	0					38.589320	-122.434773	M 09N 05W 32	Half-section centroid
POS	1995-06-04		2	UMUF	Y			38.590036	-122.433642	M 09N 05W 32	Contributor

Forest Ecosystem Management, PLLC

PO Box 455 * Potomac, MT 59823

(406) 490-7427 * cptown@blackfoot.net

April 28, 2017

Scott Butler, RPF
Environmental Resource Management
7000 Leicester CT.
Castle Pines, CO 80180

RE: Aloft Winery Project
Property Section 8 T08N, R05W, MDB&M - Napa County

Scott,

This is an assessment for northern spotted owls (*strix occidentalis caurinia*), or NSOs, for the Aloft Winery Project located off Cold Springs Road in Angwin, California. The Project proposes to:

- Relocate their drive-way off Cold Springs Road, which will remove approximately 18 trees.
- Widen a portion of the road approximately 10', which will remove approximately 15 trees and brush.
- Remove some trees within an existing vineyard, which will remove approximately 14 trees.

Known Northern Spotted Owl Territories:

On 28APR17, I ran a California Department of Fish & Wildlife's spotted owl viewer for the above listed project (Attachment #1). An assessment area of 1.3 miles from the project area was used. The 1.3 mile assessment area was created by USFWS for a Take Avoidance of northern spotted owls within the California Interior (outside the redwood zone). Although Napa County does have redwoods, the environmental conditions in the area are hotter/drier than the coastal redwood zone; therefore, the 1.3 mile assessment area was used for this Project (Attachment #2). A summary of the report includes:

There are two known NSO territories within 1.3 miles of the Project Area (NAP014 & NAP028). The following briefly discusses each of the territories.

> **NAP014**: Located approximately 3,000' southwest of the Project Area, this territory was first identified in 1989. This territory is generally yearly monitored and was found active in 1989 – 1992, 1994, 1989, 2001, 2003, 2005 – 2008, 2010, 2012, 2013, and 2016.

Due to private property and lack of access, the owl is monitored by evening surveys only, but is usually located near Conn Creek by surveying off Howell Mountain Road.

NAP018: Located approximately 1.1 miles east of the Project Area, this territory was first identified in 1992, when a pair of northern spotted owls was found nesting. Subsequent surveys over the years did not detect any northern spotted owls until 2015, when an unknown sex northern spotted owl was detected during the evening of 09APR15. This detection was an owl moving around the Las Posadas State Forest and surveys after the 09APR15 detection have not located any NSOs.

Northern Spotted Owl Habitat:

The attributes for northern spotted owl habitat includes a forest with:

- Dense, multi-layered canopy of several trees species.
- Trees of varying sizes and ages.
- Abundant logs, snags/cavity trees, and trees with broken tops or platform-like substrates (i.e. broken tops, mistletoe, debris piles, or old raptor/squirrel nests).
- Open spaces among lower branches to allow flight under the canopy.

USFWS more specifically defines northern spotted owl habitat within the California Interior as follows:

- High Quality Nesting/Roosting Habitat: Mixed tree species with basal area of 210+ ft2 and ≥ 15" quadratic mean diameter, and ≥ 8 trees per acre of trees ≥ 26" in diameter at breast height, and ≥ 60% canopy closure.
- Suitable Nesting/Roosting Habitat: Mixed tree species with basal area ranging from 150 - 180+ ft2 and ≥ 15" quadratic mean diameter, and ≥ 8 trees per acre of trees ≥ 26" in diameter at breast height, and ≥ 60% canopy closure.
- Suitable Forging Habitat: Mixed tree species with basal area ranging from 120 - 180+ ft2 and ≥ 13" quadratic mean diameter, and ≥ 5 trees per acre of trees ≥ 26" in diameter at breast height, and a mix of ≥ 40% to 100% canopy closure.
- Low Quality Foraging Habitat: Mixed tree species with basal area ranging from 80 - 120+ ft2 and ≥ 11" quadratic mean diameter, and ≥ 40% canopy closure.

Project Area & Landscape:

The Project Area is located off Cold Springs Roads, and includes three different sites.

Site #1 (Road Relocation): The road is to be relocated through the house and adjacent trees. The trees are primarily Douglas-fir, with an overstory canopy cover exceeding 80%. Technically this area would be identified as nesting/roosting NSO habitat; however, due to numerous houses, Cold Springs Road, surrounding vineyards, and size of forested patch that this Project falls within; I would classify the area as marginal NSO roosting habitat.

Site #1 – Road Relocation

Site #2 (Road Widening): The road is to be widened approximately 10' on the right side. There is a pond on the left. Approximately 15 trees, will be removed as well as brush. The 10' area to be widened is not suitable NSO habitat; however beyond the Project site, the habitat would be classified as marginal foraging habitat.

Site #2 – Road Widening

Site #3 (Winery Location): This site is a patch of trees surrounded by an existing vineyard. Approximately 14 trees will be removed. This site is unsuitable NSO habitat due to lack of canopy cover, small forested patch with surrounding vineyards. However, beyond the vineyard, as shown further back in this pictures, there is suitable NSO habitat within ¼ mile of this site.

Site #3 – Winery Location

The landscape is a mix of agricultural land, second growth forests, and residential houses. The closest forest that would meet USFWS definitions of suitable northern spotted owl habitat is within ¼ mile from the Project (Attachment #3).

Known Northern Spotted Owl Surveys:

There have been northern spotted owl surveys for an adjacent project, with the survey station shown as NSO sta #4 on Attachment #3. The survey information includes:

Date	Survey Time	Results
03APR17	2220 – 2230	N/R (dogs)
21MAR17	2237 – 2247	N/R (dog)
02MAR17	1820 – 1830	N/R
05APR16	2030 – 2040	N/R
17MAR16	2010 – 2020	N/R
01MAR16	1856 - 1906	N/R
19MAY15	2250 – 2300	N/R
06MAY15	2220 – 2230	N/R
17APR15	2142 – 2152	N/R (people talking)
05APR15	2131 – 2141	N/R
18MAR15	2131 – 2141	N/R
10MAR15	1953 – 2003	N/R
14JUL14	2300 – 2310	N/R
29JUN14	2210 – 2220	N/R
11JUN14	2158 – 2208	N/R
02JUN14	2355 – 0005	N/R (car)
15MAY14	2253 – 2303	N/R (cars)
15APR14	2037 – 2047	N/R (wind machine)

N/R – No Response from Northern Spotted Owls

The above listed survey station and data cover Site #1 and the habitat near Site #2 according to USFWS Protocol through the 2017 breeding season. No northern spotted owls have been detected.

Conclusions for Aloft Winery Project:

The closest known northern spotted owl territory is located just over 3,000' from the Project Area (Site #3). Site #1 is within marginal northern spotted owl habitat but has been adequately surveyed through the 2017 NSO breeding season. Site #2 is unsuitable habitat but is within ¼ mile of suitable habitat; however, the area has been adequately surveyed through the 2017 NSO breeding season. Site #3 is within unsuitable habitat but is within ¼ mile of suitable habitat; therefore, to meet USFWS Take Avoidance Scenarios is subject to seasonal restrictions or the surveying of the habitat within ¼ mile of the Site #3 Project Area. In summary:

- Site #1 – Due to habitat and surveys, as long as tree removal has been completed by 01FEB18, there are no further restrictions recommended. If operations have not been completed by 01FEB18, additional surveys would be required.
- Site #2 – Due to habitat and surveys, as long as tree removal has been completed by 01FEB18, there are no further restrictions recommended. If operations have not been completed by 01FEB18, additional surveys would be required.
- Site #3 – Due to habitat within ¼ mile of Project Site – Either remove trees between 07JUL17 – 01FEB18 (seasonal restrictions) or survey the habitat within ¼ mile prior to tree removal.

This is a general assessment of northern spotted owls for the above listed project area. This is not a complete Biological Assessment for all listed species for an EIR/EIA.

If you have questions regarding this information, please feel free to contact me.

Gone Hooting,

Pam Town

Pamela Town
Consulting Wildlife Biologist

Attachments:

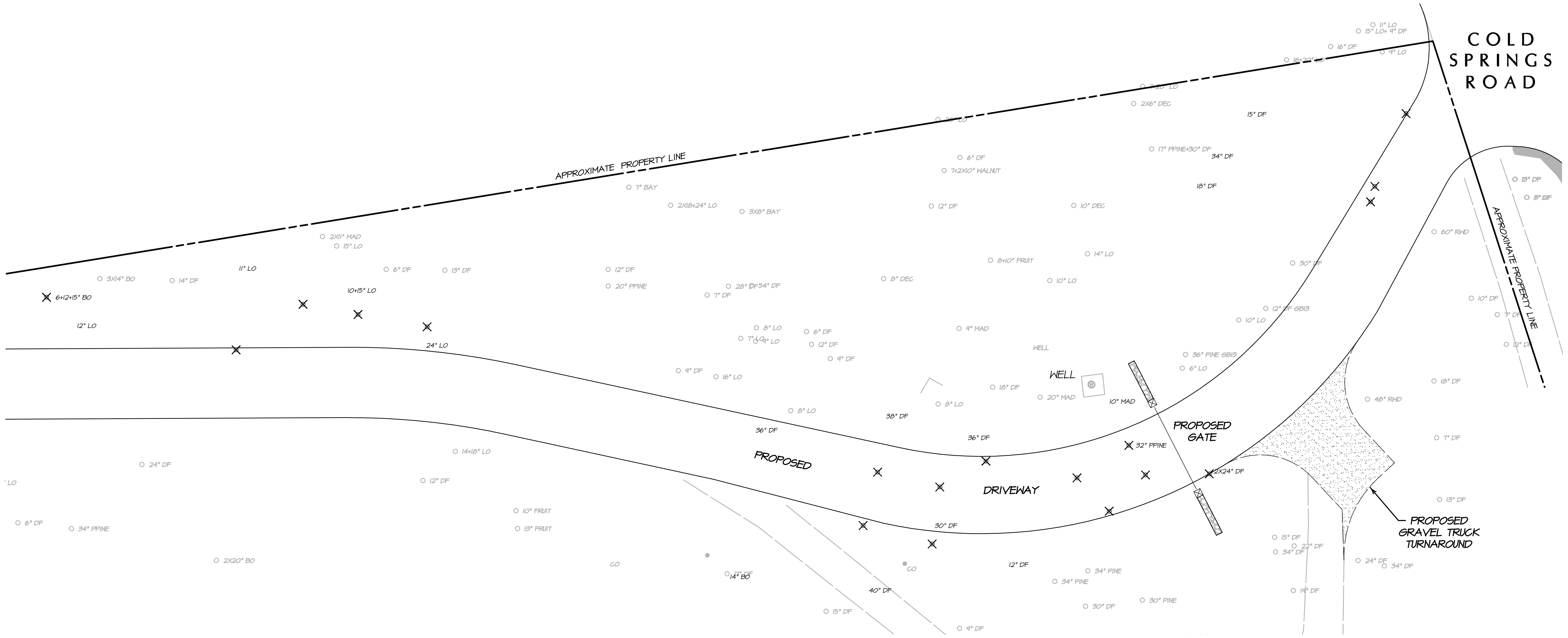
1: CA Fish & Wildlife Report #1 & #2 – NSO Database (15 pages)
2: Topographical Map of NSOs within 1.3 Miles of Aloft Project (1 page)
3: Aerial Photo of Landscape (1 pages)

References:

Protocol for Surveying Proposed Management Activities That May Impact Northern Spotted Owls. Endorsed by the U.S. Fish & Wildlife Service. February 2, 2011 and Revised January 9, 2012.

Important Information for Timber Operations Proposed within the Range of the Northern Spotted Owl. California Department of Forestry & Fire Protection. February 2008.

Northern Spotted Owl Viewer (BIOS CA Natural Diversity Database). Managed by California Department of Fish & Wildlife. Filtered by Section number, Township, and Range around specific project area.



DRIVEWAY ENTRANCE AREA

SCALE: 1" = 20'

SCALE: 1" = 20'

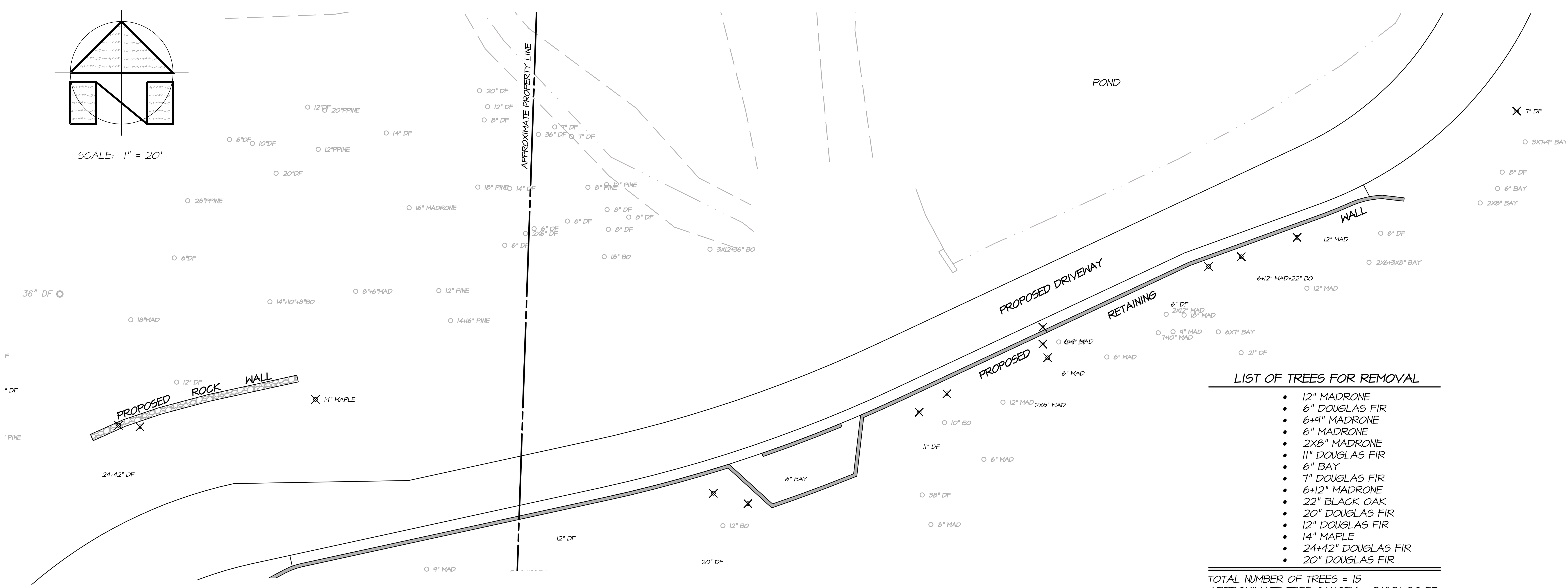
LIST OF TREES FOR REMOVAL

- 15" DOUGLAS FIR
- 34" DOUGLAS FIR
- 18" DOUGLAS FIR
- 2X24" DOUGLAS FIR
- 32" PONDEROSA PINE
- 10" MADRONE
- 12" DOUGLAS FIR
- 36" DOUGLAS FIR
- 38" DOUGLAS FIR
- 30" DOUGLAS FIR
- 40" DOUGLAS FIR
- 36" DOUGLAS FIR
- 14" BLACK OAK
- 12" LIVE OAK
- 6+12+15" BLACK OAK
- 11" LIVE OAK
- 10+15" LIVE OAK
- 24" LIVE OAK

TOTAL NUMBER OF TREES = 18
APPROXIMATE TREE CANOPY = 4,840± SQ FT

LEGEND:

☒ TREE 6/15	EXISTING TREE OR STUMP TO BE REMOVED AND DISPOSED OF PROPERLY OFFSITE



SCALE: 1" = 20'

POND AREA

SCALE: 1" = 20'

LIST OF TREES FOR REMOVAL

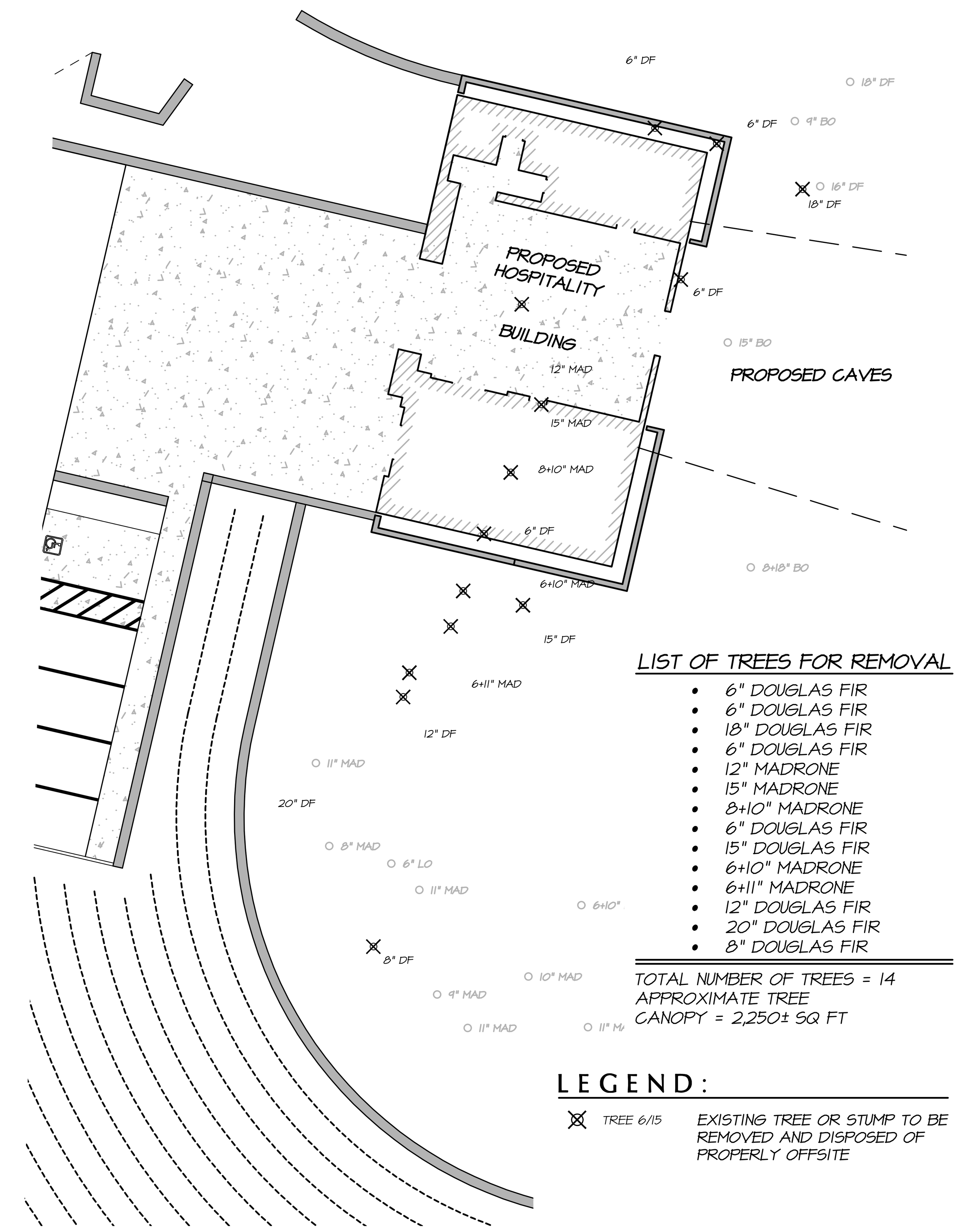
- 12" MADRONE
- 6" DOUGLAS FIR
- 6+9" MADRONE
- 6" MADRONE
- 2X8" MADRONE
- 11" DOUGLAS FIR
- 6" BAY
- 7" DOUGLAS FIR
- 6+12" MADRONE
- 22" BLACK OAK
- 20" DOUGLAS FIR
- 12" DOUGLAS FIR
- 14" MAPLE
- 24+42" DOUGLAS FIR
- 20" DOUGLAS FIR

TOTAL NUMBER OF TREES = 15
APPROXIMATE TREE CANOPY = 2,182± SQ FT

LEGEND:

☒ TREE 6/15	EXISTING TREE OR STUMP TO BE REMOVED AND DISPOSED OF PROPERLY OFFSITE

SCALE: 1" = 20'



LIST OF TREES FOR REMOVAL

- 6" DOUGLAS FIR
- 6" DOUGLAS FIR
- 18" DOUGLAS FIR
- 6" DOUGLAS FIR
- 12" MADRONE
- 15" MADRONE
- 8+10" MADRONE
- 6" DOUGLAS FIR
- 15" DOUGLAS FIR
- 6+10" MADRONE
- 6+11" MADRONE
- 12" DOUGLAS FIR
- 20" DOUGLAS FIR
- 8" DOUGLAS FIR

TOTAL NUMBER OF TREES = 14
APPROXIMATE TREE CANOPY = 2,250± SQ FT

LEGEND:

☒ TREE 6/15	EXISTING TREE OR STUMP TO BE REMOVED AND DISPOSED OF PROPERLY OFFSITE

HOSPITALITY BUILDING AREA

SCALE: 1" = 20'

REGISTERED PROFESSIONAL ENGINEER
PAUL NATHAN BARTELT
No. 45102
CIVIL
STATE OF CALIFORNIA

PREPARED UNDER THE DIRECTION OF

PAUL N. BARTELT R.C.E. 45102

ALOFT WINERY
TREE REMOVAL EXHIBIT

COUNTY OF NAPA CALIFORNIA

BARTELT ENGINEERING
CIVIL ENGINEERING · LAND PLANNING
1303 Jefferson Street, 200 B, Napa, CA 94559
www.barteltengineering.com
· Telephone: 707-258-1301 ·

DES:	CGN
DRWN:	CGN
CHKD:	PNB

DATE:	NOVEMBER 2017
FILE NO:	1426-6040.DWG
JOB NO:	14-26
SHEET NO:	3 OF 3

Attachment #1

Data Version Date:
03/30/2017

Report Generation Date:
4/28/2017

Report #1 - Spotted Owl Sites Found
Known Spotted Owl sites having observations within the search area.

Meridian, Township, Range, Section (MTRS) searched:

M_08N_05W Sections(03,04,05,06,07,08,09,10,15,16,17,18,19,20,21,22);

NOTES:

Aloft Winery

Masterowl	*Subspecies*	*LatDD NAD83*	*LonDD NAD83*	*MTRS*	*AC Coordinate Source*
NAP0014	NORTHERN	38.545901	-122.438464	M 08N 05W 17	Contributor
NAP0028	NORTHERN	38.559198	-122.411848	M 08N 05W 09	Contributor
NAP0029	NORTHERN	38.587141	-122.427051	M 09N 05W 33	Contributor

Closest to Project

NAP0014 = 3,018'

NAP0028 = 1.1 Mile

NAP0029 = 2 Miles

Within 1.3 Miles

Data Version Date:
03/30/2017

Report Generation Date:
4/28/2017

Report #2 - Observations Reported
List of observations reported by site.

Meridian, Township, Range, Section (MTRS) searched:

M_08N_05W Sections(03,04,05,06,07,08,09,10,15,16,17,18,19,20,21,22);

NOTES:

Aloft Winery

Only Relevant Pages Submitted

NAPO14 =

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
Masterowl: NAP0014 Subspecies: NORTHERN											
POS	1989-11-24	1425	1	UM				38.548502	-122.443344	M 08N 05W 17	Quarter-section centroid
NEG	1990		0					38.545218	-122.457840	M 08N 05W 18	Section centroid
AC	1990-03-10	2315	2	UMUF	Y			38.545901	-122.438464	M 08N 05W 17	Contributor
NEG	1990-11-16		0					38.544840	-122.438863	M 08N 05W 17	Section centroid
POS	1990-12-06	1856	1	UF				38.548682	-122.452799	M 08N 05W 18	Quarter-section centroid
POS	1992		1	UF				38.548323	-122.434337	M 08N 05W 17	Quarter-section centroid
NEG	1993-11-07	1816	0					38.545149	-122.452883	M 08N 05W 18	Half-section centroid
POS	1994-01-02	0345	1	UF				38.548809	-122.462702	M 08N 05W 18	Quarter-section centroid
NEG	1995-06-24	2142	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
POS	1998	0500	1	UU				38.548682	-122.452799	M 08N 05W 18	Quarter-section centroid
NEG	2000-03-11	1900	0					38.541626	-122.452967	M 08N 05W 18	Quarter-section centroid
NEG	2000-03-11	1845	0					38.545218	-122.457840	M 08N 05W 18	Section centroid
NEG	2000-04-12	2030	0					38.541626	-122.452967	M 08N 05W 18	Quarter-section centroid
NEG	2000-04-12	2026	0					38.545218	-122.457840	M 08N 05W 18	Section centroid
NEG	2000-04-24	2045	0					38.541626	-122.452967	M 08N 05W 18	Quarter-section centroid
NEG	2000-04-24	2035	0					38.545218	-122.457840	M 08N 05W 18	Section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2000-04-25	2200	0					38.541626	-122.452967	M 08N 05W 18	Quarter-section centroid
NEG	2000-05-09	2300	0					38.541626	-122.452967	M 08N 05W 18	Quarter-section centroid
NEG	2000-05-15	2019	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2000-06-22		0					38.559582	-122.457674	M 08N 05W 07	Section centroid
POS	2001-01-01	0353	1	UM				38.544840	-122.438863	M 08N 05W 17	Section centroid
POS	2001-02-01	1928	1	UM				38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2001-02-01		0					38.559656	-122.439000	M 08N 05W 08	Section centroid
NEG	2001-03-05		0					38.559656	-122.439000	M 08N 05W 08	Section centroid
POS	2001-03-16	2143	1	UU				38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2001-04-05		0					38.559656	-122.439000	M 08N 05W 08	Section centroid
POS	2001-04-05	2030	1	UM				38.544840	-122.438863	M 08N 05W 17	Section centroid
POS	2001-05-26	2221	1	UM				38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-02-02	2400	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-02-14	1200	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-02-26	2400	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-03-10	2400	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-04-20	2015	0					38.544840	-122.438863	M 08N 05W 17	Section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2002-04-28	2400	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-04-28		0					38.545901	-122.438464	M 08N 05W 17	Activity center
NEG	2002-05-09	2400	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-05-09		0					38.545901	-122.438464	M 08N 05W 17	Activity center
NEG	2002-05-12		0					38.545901	-122.438464	M 08N 05W 17	Activity center
NEG	2002-05-12	2400	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-05-30		0					38.545901	-122.438464	M 08N 05W 17	Activity center
NEG	2002-05-30	2400	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-06-29	2400	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-06-29	2400	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2002-06-29		0					38.545901	-122.438464	M 08N 05W 17	Activity center
NEG	2003-02-07	2203	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
POS	2003-03-12	2042	1	UM				38.541464	-122.443468	M 08N 05W 17	Quarter-section centroid
NEG	2003-04-07	2116	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2003-04-14	2100	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2003-04-22	1944	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
NEG	2003-04-23	2214	0					38.544840	-122.438863	M 08N 05W 17	Section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2003-05-12	2234	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2003-05-12	2147	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2003-05-13	2015	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
NEG	2003-06-06	2103	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
POS	2003-06-07	0019	1	UM				38.541626	-122.452967	M 08N 05W 18	Quarter-section centroid
NEG	2003-06-13	2044	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
NEG	2003-06-19	2103	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
NEG	2003-06-21	2105	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2004-02-08	1937	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
NEG	2004-02-29	1729	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
NEG	2004-02-29	1901	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2004-03-29	2132	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
NEG	2004-03-29	2018	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2004-04-04	1931	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
NEG	2004-04-04	2026	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2004-05-08	2253	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2004-05-13	2213	0					38.544840	-122.438863	M 08N 05W 17	Section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2004-05-15	2318	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2004-05-15	2225	0					38.544768	-122.420595	M 08N 05W 16	Section centroid
POS	2005-02-05	1821	1	UM				38.545218	-122.457840	M 08N 05W 18	Section centroid
NEG	2005-02-24	1754	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2005-03-11	1833	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2005-04-02	1859	0					38.545218	-122.457840	M 08N 05W 18	Section centroid
NEG	2005-04-11	1930	0					38.545218	-122.457840	M 08N 05W 18	Section centroid
NEG	2005-05-11	2056	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2005-05-19	2106	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2005-05-19	2106	0					38.545218	-122.457840	M 08N 05W 18	Section centroid
NEG	2006-02-12	1941	0					38.545218	-122.457840	M 08N 05W 18	Section centroid
NEG	2006-02-15	1131-1421	0					38.555762	-122.434404	M 08N 05W 08	Quarter-section centroid
NEG	2006-02-16	1827	0					38.545218	-122.457840	M 08N 05W 18	Section centroid
POS	2006-02-21	1918	1	UM				38.545218	-122.457840	M 08N 05W 18	Section centroid
NEG	2006-05-18	2125	0					38.545218	-122.457840	M 08N 05W 18	Section centroid
POS	2007-02-06	2004	1	UF				38.544840	-122.438863	M 08N 05W 17	Section centroid
POS	2007-02-06	2014	1	UM				38.548502	-122.443344	M 08N 05W 17	Quarter-section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
POS	2007-03-06	1944	1	UU				38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2007-04-07	2020	0					38.544840	-122.438863	M 08N 05W 17	Section centroid
POS	2007-05-25	2259	1	UM				38.544840	-122.438863	M 08N 05W 17	Section centroid
NEG	2008-02-09	2032-2042	0					38.541222	-122.450583	M 08N 05W 18	Contributor
NEG	2008-02-09	2047-2057	0					38.549222	-122.452361	M 08N 05W 18	Contributor
NEG	2008-02-16	2020-2030	0					38.541222	-122.450583	M 08N 05W 18	Contributor
NEG	2008-02-16	2035-2045	0					38.549222	-122.452361	M 08N 05W 18	Contributor
NEG	2008-02-27	1923-1933	0					38.549222	-122.452361	M 08N 05W 18	Contributor
POS	2008-02-27	1946	1	UU				38.549222	-122.452361	M 08N 05W 18	Contributor
NEG	2010-01-02	0722-0732	0					38.547277	-122.452083	M 08N 05W 18	Contributor
NEG	2010-01-02	0736-0746	0					38.541222	-122.450528	M 08N 05W 18	Contributor
NEG	2010-01-02	0709-0719	0					38.547141	-122.451622	M 08N 05W 18	Contributor
NEG	2010-02-03	1855-1905	0					38.547141	-122.451622	M 08N 05W 18	Contributor
NEG	2010-02-03	1944-1954	0					38.515666	-122.438360	M 08N 05W 29	Contributor
POS	2010-02-03	1907	1	UM				38.547259	-122.443938	M 08N 05W 17	Contributor
NEG	2010-03-27	2055-2105	0					38.541222	-122.450528	M 08N 05W 18	Contributor
NEG	2010-03-27	2041-2051	0					38.547141	-122.451622	M 08N 05W 18	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2010-03-27	2109-2119	0					38.515666	-122.438360	M 08N 05W 29	Contributor
NEG	2010-04-23	2013-2023	0					38.547141	-122.451622	M 08N 05W 18	Contributor
NEG	2010-04-23	2102-2112	0					38.515666	-122.438360	M 08N 05W 29	Contributor
POS	2010-04-23	2031-2045	1	UM				38.541124	-122.451622	M 08N 05W 18	Contributor
NEG	2010-05-18	2107-2117	0					38.516482	-122.438653	M 08N 05W 29	Contributor
NEG	2010-05-18	2035-2045	0					38.521266	-122.404900	M 08N 05W 27	Contributor
NEG	2010-05-18	2127-2137	0					38.541200	-122.450583	M 08N 05W 18	Contributor
NEG	2010-05-18	2143-2153	0					38.546266	-122.451500	M 08N 05W 18	Contributor
NEG	2010-05-18	2052-2102	0					38.518766	-122.409366	M 08N 05W 27	Contributor
NEG	2010-05-29	2036-2046	0					38.518766	-122.409366	M 08N 05W 27	Contributor
NEG	2010-05-29	2052-2102	0					38.516482	-122.438653	M 08N 05W 29	Contributor
NEG	2010-05-29	2127-2137	0					38.546266	-122.451500	M 08N 05W 18	Contributor
NEG	2010-05-29	2022-2032	0					38.521266	-122.404900	M 08N 05W 27	Contributor
NEG	2010-05-29	2112-2123	0					38.541200	-122.450583	M 08N 05W 18	Contributor
NEG	2011-02-06	1857-1907	0					38.515683	-122.438533	M 08N 05W 29	Contributor
NEG	2011-02-06	1935-1945	0					38.519216	-122.406049	M 08N 05W 27	Contributor
NEG	2011-02-06	1820-1840	0					38.541283	-122.450533	M 08N 05W 18	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2011-02-06	1804-1814	0					38.549183	-122.452366	M 08N 05W 18	Contributor
NEG	2011-02-06	1921-1931	0					38.522300	-122.404900	M 08N 05W 27	Contributor
NEG	2011-02-06	1948-1958	0					38.518200	-122.410283	M 08N 05W 27	Contributor
NEG	2011-03-04	2029-2039	0					38.541266	-122.450550	M 08N 05W 18	Contributor
NEG	2011-03-04	2002-2012	0					38.549183	-122.452366	M 08N 05W 18	Contributor
NEG	2011-03-04	2014-2024	0					38.547933	-122.451899	M 08N 05W 18	Contributor
NEG	2011-12-30	1150-1203	0					38.541166	-122.450583	M 08N 05W 18	Contributor
NEG	2011-12-30	1131-1144	0					38.547968	-122.451816	M 08N 05W 18	Contributor
NEG	2012-01-30	1736-1747	0					38.547967	-122.451817	M 08N 05W 18	Contributor
NEG	2012-01-30	1754-1804	0					38.541167	-122.450583	M 08N 05W 18	Contributor
POS	2012-03-09	1841	2	UMUF	Y			38.548950	-122.452083	M 08N 05W 18	Contributor
POS	2012-04-18	2035	2	UMUF	Y			38.549000	-122.452133	M 08N 05W 18	Contributor
POS	2012-05-07	2116	1	UU				38.548950	-122.452084	M 08N 05W 18	Contributor
POS	2012-05-21	2121	1	UU				38.548933	-122.452100	M 08N 05W 18	Contributor
POS	2013-04-28	2213	1	UF				38.545345	-122.444046	M 08N 05W 17	Contributor
NEG	2014-03-19	2011-2021	0					38.541233	-122.450450	M 08N 05W 18	Contributor
NEG	2014-03-19	1955-2005	0					38.548480	-122.451830	M 08N 05W 18	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2014-09-29	1929-1944	0					38.548950	-122.452017	M 08N 05W 18	Contributor
NEG	2014-09-29	1948-1958	0					38.541233	-122.450450	M 08N 05W 18	Contributor
NEG	2014-10-29	1900-1912	0					38.541233	-122.450450	M 08N 05W 18	Contributor
NEG	2014-10-29	1835-1849	0					38.548480	-122.451830	M 08N 05W 18	Contributor
NEG	2015-02-04	1804-1816	0					38.555806	-122.438920	M 08N 05W 08	Half-section centroid
NEG	2015-02-04	1845-1855	0					38.548930	-122.452020	M 08N 05W 18	Contributor
NEG	2015-02-04	1905-1915	0					38.541222	-122.450528	M 08N 05W 18	Contributor
NEG	2015-03-17	2133-2143	0					38.541222	-122.450528	M 08N 05W 18	Contributor
NEG	2015-03-17	2120-2130	0					38.548930	-122.452020	M 08N 05W 18	Contributor
NEG	2015-04-16	2017-2037	0					38.548870	-122.452000	M 08N 05W 18	Contributor
Masterowl: NAP0028 Subspecies: NORTHERN											
NEG	1990-03-10	1930	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	1990-12-04		0					38.544590	-122.383922	M 08N 05W 14	Section centroid
POS	1992-02-09	1410	2	UMUF				38.559198	-122.411848	M 08N 05W 09	Contributor
POS	1992-03-01	1618	1	UU				38.559198	-122.411848	M 08N 05W 09	Contributor
POS	1992-03-11	1530	2	UMUF				38.559198	-122.411848	M 08N 05W 09	Contributor
AC	1992-04-08	1100	2	UMUF	Y	Y		38.559198	-122.411848	M 08N 05W 09	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
POS	1992-05-10	1145	1	UM				38.559198	-122.411848	M 08N 05W 09	Contributor
POS	1992-06-24	1719	2	UMUF	Y		1	38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	1992-07-26	1127	0					38.559930	-122.406884	M 08N 05W 10	Half-section centroid
NEG	1992-08-26	1406	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	1993-04-04	1533	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	1993-05-16	0536	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	1994-04-01	2008	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2001-02-01	2004	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2003-04-07	2013	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2003-04-14	2006	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2003-04-22	2117	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2003-05-12	2031	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2003-06-06	2234	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2004-02-18	1835	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2004-05-08	2031	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2004-05-23	2155	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2007-03-22	2100	0					38.559961	-122.402350	M 08N 05W 10	Section centroid

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2007-04-07	2059	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2007-05-25	2055	0					38.559961	-122.402350	M 08N 05W 10	Section centroid
NEG	2008-02-27	1902-1912	0					38.569205	-122.423655	M 08N 05W 04	Contributor
NEG	2008-03-31	2125-2135	0					38.569205	-122.423655	M 08N 05W 04	Contributor
NEG	2008-05-20	2149-2159	0					38.569205	-122.423655	M 08N 05W 04	Contributor
NEG	2009	2400	0					38.564123	-122.415923	M 08N 05W 09	Contributor
NEG	2009	2400	0					38.562446	-122.418248	M 08N 05W 09	Contributor
NEG	2011	2400	0					38.560415	-122.413951	M 08N 05W 09	Contributor
NEG	2011	2400	0					38.564123	-122.415923	M 08N 05W 09	Contributor
NEG	2011	2400	0					38.562446	-122.418248	M 08N 05W 09	Contributor
NEG	2011	2400	0					38.564624	-122.411155	M 08N 05W 10	Contributor
NEG	2011	2400	0					38.559003	-122.410302	M 08N 05W 10	Contributor
NEG	2012	2400	0					38.562446	-122.418248	M 08N 05W 09	Contributor
NEG	2012	2400	0					38.564123	-122.415923	M 08N 05W 09	Contributor
NEG	2012	2400	0					38.560415	-122.413951	M 08N 05W 09	Contributor
NEG	2012	2400	0					38.564624	-122.411155	M 08N 05W 10	Contributor
NEG	2012	2400	0					38.559003	-122.410302	M 08N 05W 10	Contributor

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2012-05-07	1953-2003	0					38.561734	-122.419483	M 08N 05W 09	Contributor
NEG	2012-05-07	2010-2020	0					38.569283	-122.423667	M 08N 05W 04	Contributor
NEG	2012-05-14	2238-2248	0					38.561633	-122.419450	M 08N 05W 09	Contributor
NEG	2012-05-14	2251-2301	0					38.569283	-122.423667	M 08N 05W 04	Contributor
NEG	2012-05-21	2003-2013	0					38.561633	-122.419450	M 08N 05W 09	Contributor
NEG	2012-05-21	2018-2028	0					38.569283	-122.423667	M 08N 05W 04	Contributor
NEG	2013	2400	0					38.564123	-122.415923	M 08N 05W 09	Contributor
NEG	2013	2400	0					38.562446	-122.418248	M 08N 05W 09	Contributor
NEG	2013	2400	0					38.560415	-122.413951	M 08N 05W 09	Contributor
NEG	2013	2400	0					38.559003	-122.410302	M 08N 05W 10	Contributor
NEG	2013	2400	0					38.564624	-122.411155	M 08N 05W 10	Contributor
NEG	2014	2400	0					38.564123	-122.415923	M 08N 05W 09	Contributor
NEG	2014	2400	0					38.562446	-122.418248	M 08N 05W 09	Contributor
NEG	2014	2400	0					38.559003	-122.410302	M 08N 05W 10	Contributor
NEG	2014	2400	0					38.560415	-122.413951	M 08N 05W 09	Contributor
NEG	2014	2400	0					38.564624	-122.411155	M 08N 05W 10	Contributor
NEG	2015	2400	0					38.562446	-122.418248	M 08N 05W 09	Contributor

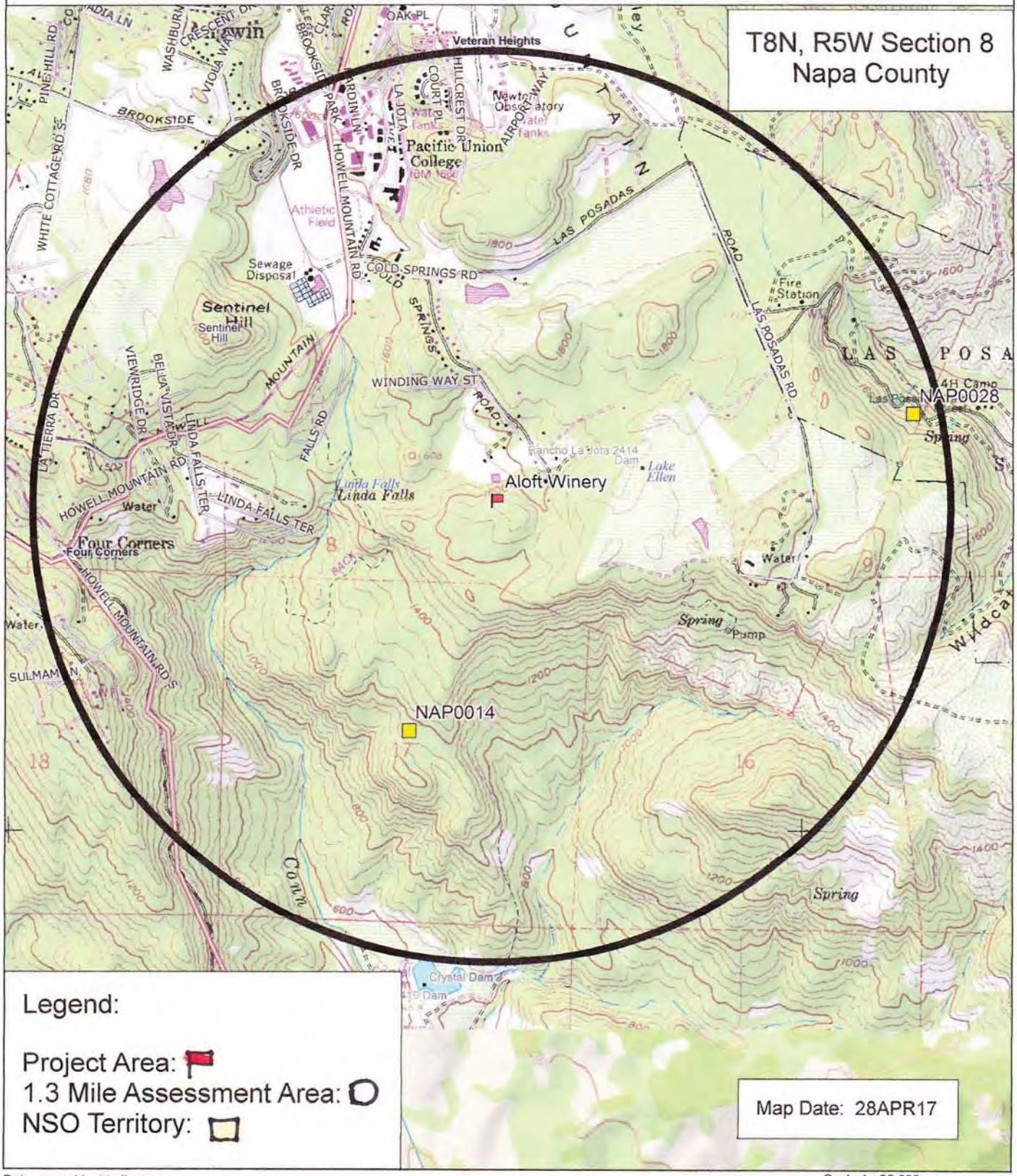
Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
NEG	2015	2400	0					38.564123	-122.415923	M 08N 05W 09	Contributor
NEG	2015	2400	0					38.560415	-122.413951	M 08N 05W 09	Contributor
POS	2015-04-09	2340	1	UU				38.568979	-122.420543	M 08N 05W 04	Contributor
POS	2015-04-09	2238	1	UU				38.564624	-122.411155	M 08N 05W 10	Contributor
POS	2015-04-09	1940	1	UU				38.559003	-122.410302	M 08N 05W 10	Contributor
NEG	2015-04-28	2400	0					38.559003	-122.410302	M 08N 05W 10	Contributor
NEG	2015-04-28	2400	0					38.564624	-122.411155	M 08N 05W 10	Contributor
NEG	2015-06-11	2400	0					38.559003	-122.410302	M 08N 05W 10	Contributor
NEG	2015-06-11	2400	0					38.564624	-122.411155	M 08N 05W 10	Contributor
NEG	2015-07-02	2400	0					38.559003	-122.410302	M 08N 05W 10	Contributor
NEG	2015-07-02	2400	0					38.564624	-122.411155	M 08N 05W 10	Contributor
NEG	2015-07-23	2400	0					38.559003	-122.410302	M 08N 05W 10	Contributor
NEG	2015-07-23	2400	0					38.564624	-122.411155	M 08N 05W 10	Contributor
Masterowl: NAP0029 Subspecies: NORTHERN											
POS	1993		1	UU				38.590036	-122.433642	M 09N 05W 32	Contributor
NEG	1993-05-16	0713	0					38.589320	-122.434773	M 09N 05W 32	Half-section centroid
POS	1995-06-04		2	UMUF	Y			38.590036	-122.433642	M 09N 05W 32	Contributor

Attachment #2

DeLORME

Topo USA® 6.0

Northern Spotted Owl Territories within 1.3 miles of Aloft Winery Project



TN
MN (13.7°E)

Scale 1 : 25,000

1" = 2,083.3 ft

Data Zoom 13-0

Attachment #3