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**2025 SITE CONDITIONS ADDENDUM**  
For the BIOLOGICAL RESOURCE ASSESSMENT  
WITH BOTANICAL SURVEYS AND DELINEATION OF WATERS OF  
THE U.S. for the  
MATTHES VINEYARDS PROJECT APN 025-070-043 St. Helena,  
CA

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Addendum April 3, 2025

June 23, 2020

*Updated September 22, 2021*

*Updated May 11, 2022*

*Updated December 5, 2022*

*Updated February 15, 2023*

Prepared by  
Northwest Biosurvey



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**Prepared for:** William and Leigh Matthes  
1 Letterman Drive  
San Francisco, CA 94129  
leigh@matthesgroup.com

**Prepared by:** Northwest Biosurvey  
1905 Westlake Drive  
Kelseyville, CA 95451  
(707) 889-1061

## **PURPOSE OF ADDENDUM**

The most recent update for this project, which was completed on February 15, 2023, addressed the vegetation and woodland habitat in a manner consistent with Napa County Ordinance 8.80.130 B. Vegetation at the site was presented as it occurred prior to June 19, 2018, prior to the Glass Fire of 2020. For the purpose of addressing post-fire impacts for the CEQA review, this addendum describes current conditions as they existed at the time of the survey conducted on March 27, 2025.

**This addendum updates Section 3.3 of the February 15, 2023 update report.**

**3.3 Vegetation Types:** The entire parcel was mapped for vegetation during the 2020 survey season in order to provide project context. The project contained five plant communities or vegetation types based on or derived from the "Standardized Classification" scheme described in the California Native Plant Society (CNPS) *A Manual of California Vegetation*. These vegetation types and other cover types are listed in **Table 1**. They are described below and shown in the vegetation map provided in **Figure 1**.

**Note: Post Fire Conditions:** The Glass Fire of 2020 burned through the property as a very hot fire, killing the majority of vegetation. The green polygons in **Figure 2** indicate the few remaining areas where sufficient tree canopy survived to promote the recovery of many of the trees within the indicated areas. This is particularly important with regard to conifers. The basic U.S. Forest Service rule of thumb for survival of conifers is that trees with less than 30-percent of remaining canopy are unlikely to recover. Oaks, on the other-hand, have a much higher rate of survival even when all of the leaves have burned. Even trees with lost or severely damaged trunks may stump sprout.

While chaparral and grassland communities will quickly recover, the recovery of woodlands on the property will take decades. The coast live oak woodland will need to recover first in order to provide the necessary shade for the reestablishment of Douglas fir forest.

In conformance with Napa County Ordinance Code Section 8.80.130, vegetation canopy cover is mapped and assessed as it existed prior to June 19, 2018, and as it existed at the time of the original biological resource assessment in 2020, three months prior to the fire.

3.3.1 Pre-Fire Plant Communities from the February 15, 2023 Update:

TABLE 1. PLANT COMMUNITIES AND OTHER COVER TYPES PRESENT:  
PRIOR TO THE GLASS FIRE

| COVER TYPE                       | Acres of Cover Type on Property | Acres of Cover Type in Potential Vineyard Blocks |             |             |             | Total Acres of Cover Types in Vineyard Blocks | Percent of Total Acres on Property in Vineyard Blocks |
|----------------------------------|---------------------------------|--|-------------|-------------|-------------|---|---|
|                                  |                                 | A  | B1          | B2          | Avenues     |   |   |
| Douglas Fir Forest               | 5.09                            | -  | -           | 0.14        | 0.12        | 0.26  | 5.11  |
| Coast Live Oak Forest            | 15.56                           | 0.84   | 0.23        | 0.49        | 0.61        | 2.17  | 13.95   |
| Blue Oak Woodland                | 0.10                            | -  | -           | -           | -           | 0.00  | 0.00  |
| Mixed Chaparral                  | 15.36                           | 7.28   | 0.46        | -           | 1.05        | 8.79  | 57.23   |
| Wild Oat Grassland               | 3.51                            | 1.76   | 0.01        | -           | 0.17        | 1.94  | 55.27   |
| Vineyard                         | 0.76                            | -  | -           | -           | -           | 0.00  | 0.00  |
| Ruderal                          | 0.14                            | -  | -           | -           | -           | 0.00  | 0.00  |
| <b>Total Acres of Cover Type</b> | <b>40.52</b>                    | <b>9.88</b>                                      | <b>0.70</b> | <b>0.63</b> | <b>1.95</b> | <b>13.16</b>                                  | <b>32.48</b>  |

\* Percent of total property in proposed vineyard blocks

▪ **Douglas Fir Forest:**

This forest is dominated by mature to moderate-aged Douglas firs (*Pseudotsuga menziesii* var. *menziesii*). While many trees reach a width of 20 inches, the average is ~14 inches DBH (diameter at breast height). The canopy cover is approximately 90-percent. The community contains a well-developed understory of coast live oaks (*Quercus agrifolia*). On the more exposed slopes there is a shrub layer of toyon (*Heteromeles arbutifolia*), bush monkeyflower (*Mimulus aurantiacus* ssp. *aurantiacus*), and poison oak (*Toxicodendron diversilobum*).

The ground cover is well-developed with a continuous cover of grasses including California brome (*Bromus carinatus* var. *carinatus*), blue wildrye (*Elymus glaucus* ssp. *glaucus*), hedgehog dogtail (*Cynosurus echinatus*), smooth brome (*Bromus racemosus*), and California melic (*Melica californica*). Forbs include bowl-tubed iris (*Iris macrosiphon*) and field hedge parsley (*Torilis arvensis*). The most densely-shaded areas support a dense layer of leaf litter and duff.

▪ **Coast Live Oak Woodland:**

This community is essentially a variation of the Douglas fir forest where coast live oak becomes dominant and Douglas fir occurs as scattered individuals. The shrub layer is heavily dominated by Douglas fir seedlings and saplings but includes toyon and poison oak. Based on this

community structure, the coast live oak woodland is a seral stage that will give way to a climax community of Douglas fir resembling the community described above. This indicates that a former Douglas fir community existed here but was removed by fire or other means during the past ~50 plus years. The ground cover here is primarily leaf litter and duff.

- **Blue Oak Woodland:**

This is a savannah community consisting of a small number of mature, scattered blue oaks (*Quercus douglasii*) within a matrix of wild oat grassland and mixed chaparral. It occupies an exposed south-facing slope in the southern quarter of the property. The shrub and ground cover layers are mixed chaparral and wild oat grassland.

- **Mixed Chaparral:**

This heterogeneous shrub community occupies the western half of the property on a continuous south-facing slope. The shrubs here are in a clumped distribution over a substrate of exposed bedrock and boulders interspersed with small patches of wild oat grassland.

Chamise (*Adenostoma fasciculatum*) is co-dominant with coyote brush (*Baccharis pilularis*), bush monkeyflower, and poison oak. Small copses of interior live oak woodland or individual interior live oak trees are scattered throughout this shrub community. The ground cover is primarily exposed rock and small patches of wild oat grassland. In less exposed sites the rock substrate supports a heavy growth of Nevada homalothecium moss (*Homalothecium nevadense*) and Emery rock tripe lichen (*Umbilicaria phaea*).

- **Wild Oat Grassland:**

Throughout the property wild oat grassland occupies scattered openings within the woodland and shrub communities. The substrate consists of thin soils supporting grasses and forbs intermixed with exposed bedrock and boulders. Bird's foot fern (*Pellaea mucronata* var. *mucronata*) is widespread within rock crevices and edges. Forbs include Hartweg's fleabane (*Erigeron foliosus* var. *hartwegii*), yarrow-leaved woolly sunflower (*Eriophyllum lanatum* var. *achillaeoides*), gold-wire (*Hypericum concinnum*), and coyote mint (*Monardella villosa*). Slender wild oat (*Avena barbata*) is clearly dominant in this grassland. Other grasses include big squirreltail (*Elymus multisetus*), rattail sixweeks grass (*Festuca myuros*), red brome (*Bromus madritensis* ssp. *rubens*), and soft chess (*Bromus hordeaceus*).

- **Vineyard:**

An existing vineyard occupies  $\frac{3}{4}$  acre in the northeast corner of the property.

- **Ruderal:**

Ruderal on this parcel consists of an existing ranch road in the eastern third of the property.

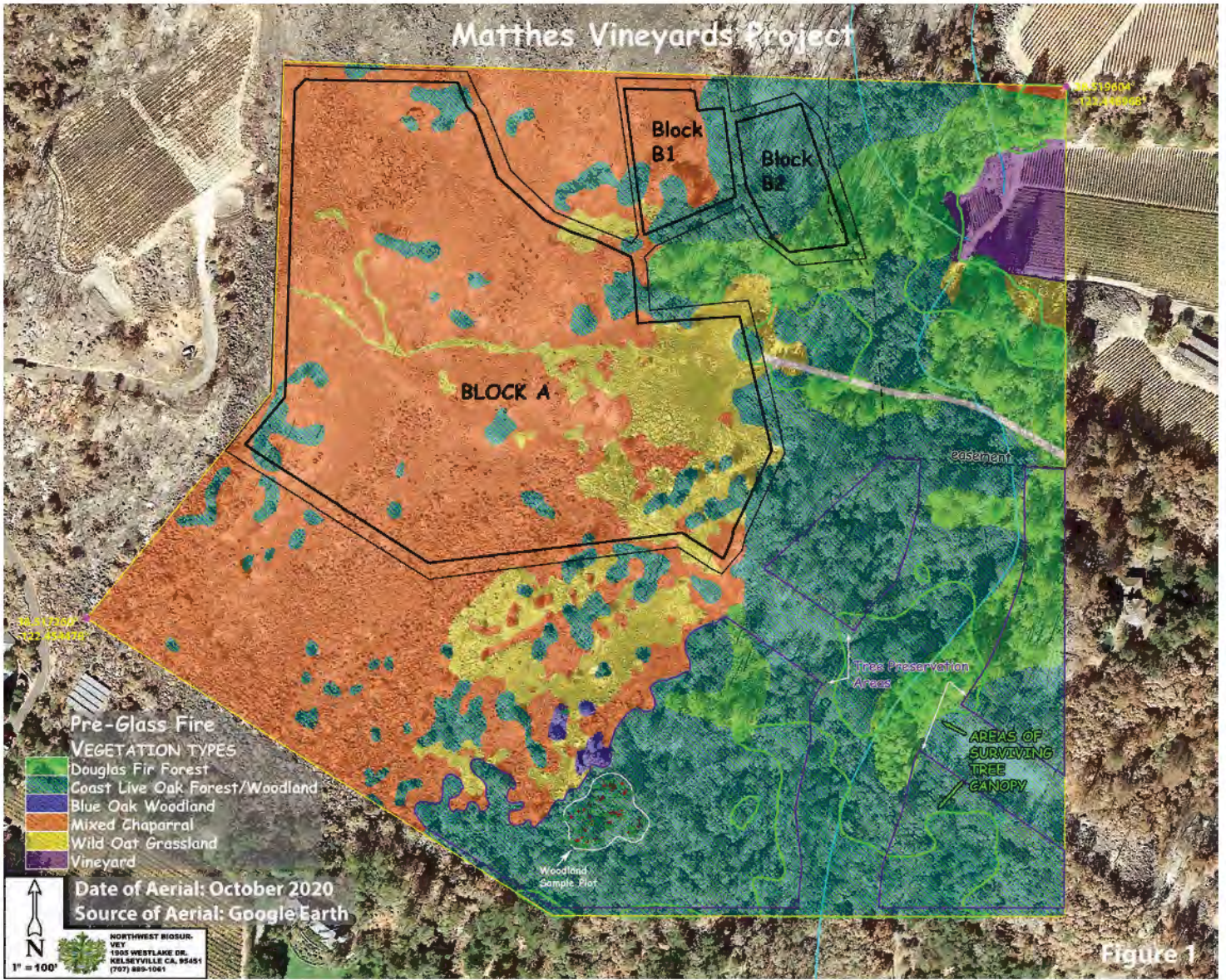


Figure 1

3.3.2 Post-Fire Plant Communities as of March 27, 2025

TABLE 2. PLANT COMMUNITIES AND OTHER COVER TYPES PRESENT:  
POST-GLASS FIRE

| COVER TYPE                                     | Acres of Cover Type on Property | Pre-fire Acres of Cover Type | Acres of Cover Type in Potential Vineyard Blocks |             |             |             | Total Acres of Cover Types in Vineyard Blocks | Percent of Total Acres on Property in Vineyard Blocks |
|--|---------------------------------|------------------------------|--|-------------|-------------|-------------|---|---|
|  |                                 |                              | A  | B1          | B2          | Avenues     |   |   |
| Douglas Fir Forest                             | 0.72                            | 5.09                         | 0.00   | 0.00        | 0.00        | 0.00        | 0.00  | 0.00  |
| Coast Live Oak Forest                          | 6.27                            | 15.56                        | 0.06   | 0.05        | 0.13        | 0.25        | 0.49  | 7.81  |
| Blue Oak Woodland                              | 0.00                            | 0.10                         | 0.00   | 0.00        | 0.00        | 0.00        | 0.00  | 0.00  |
| Mixed Chaparral                                | 0.11                            | 15.36                        | 0.00   | 0.00        | 0.00        | 0.00        | 0.00  | 0.00  |
| Wild Oat Grassland                             | 3.52                            | 3.51                         | 1.77   | 0.01        | 0.00        | 0.18        | 1.96  | 55.68   |
| Wild Oat Grassland/Recovering Mixed Chaparral  | 15.10                           | None                         | 7.32   | 0.47        | 0.00        | 1.05        | 8.84  | 58.54   |
| Standing Deadwood/Wild Oat Grassland/Chaparral | 12.85                           | None                         | 0.81   | 0.18        | 0.50        | 0.50        | 1.99  | 15.49   |
| Vineyard                                       | 0.77                            | 0.76                         | 0.00   | 0.00        | 0.00        | 0.00        | 0.00  | 0.00  |
| Ruderal  | 1.18                            | 0.14                         | 0.00   | 0.00        | 0.00        | 0.00        | 0.00  | 0.00  |
| <b>Total Acres of Cover Type</b>               | <b>40.52</b>                    | <b>40.52</b>                 | <b>9.96</b>                                      | <b>0.71</b> | <b>0.63</b> | <b>1.98</b> | <b>13.28</b>                                  | <b>32.77</b>  |

- **Douglas Fir Forest:**

This forest is one of the communities most heavily impacted by the Glass Fire. The loss of forest canopy approaches 86-percent. While small plots of this community persist along the eastern property line, the majority of the community consists of standing deadwood within a scattered matrix of bush monkeyflower, poison oak, scotch broom and shrubby coast live oak saplings. The ground cover consists of wild oat grassland which, like the shrub layer, has benefitted from the lack of shading tree canopy. Recovery of this community will take many decades and will require prior development of a coast live oak seral stage to provide shade before Douglas fir becomes established. The burned community is shown in **Photo 4**, the location of which is shown in **Figure 2**.

- **Coast Live Oak Forest:**

This forest fared better than the Douglas fir forest with as much as 40-percent canopy survival in a band extending from north to south in the eastern third of the property. Additional recovery may still occur through stump sprouting and natural reseeding. The remaining forest is far more open than under pre-fire conditions with loss of the shrub layer and loss of many of the pre-fire coast live oaks. The loss of canopy has promoted the growth of chamise from the adjacent

community and a cover of wild oat grassland. The current community is shown in **Photo 2**, the location of which is shown in **Figure 2**.

- **Blue Oak Woodland (Extirpated):**

This community was eliminated by the Glass Fire. A photo of its pre-fire location is provided in **Photo 3**, the location of which is shown in **Figure 2**.

- **Mixed Chaparral:**

This community was the most heavily impacted by the Glass Fire with less than 1-percent survival of the top-growth (above ground plant). It now survives intact as a small community in the southwest corner of the property. This heavy impact was almost certainly due to the high oil content of these drought resistant shrubs. It appears, however, that recovery will be relatively rapid. As shown in **Photo 1** (location shown in **Figure 2**), the community is extensively regrowing from surviving roots, but as a far less dense community than prior to the fire. It is represented here (**Table 2** and **Figure 2**) as two separate temporary communities: surviving mixed chaparral, and "wild oat grassland/recovering mixed chaparral (described below).

- **Wild Oat Grassland:**

As is common with introduced grasslands, this seasonal wild oat grassland was only briefly impacted by the Glass Fire. It fully recovered the following spring and completely invaded the former mixed chaparral community. It has had 100-percent recovery.

- **Wild Oat Grassland/Recovering Mixed Chaparral:**

As noted under the discussion for mixed chaparral, 99-percent of the former mixed chaparral community now consists of this recovering mix of mixed chaparral (as described for pre-fire conditions) within a broad matrix of wild oat grassland. This temporary "new" community now accounts for 15.10 acres of the property. The mixed chaparral community should fully recover within the next decade or sooner. It is shown in **Photo 1**, the location of which is mapped in **Figure 2**.

- **Standing Deadwood/Wild Oat Grassland/Chaparral:**

The vast majority of woodlands and forest (coast live oak forest and Douglas fir forest) were killed during the Glass Fire. As a result of the fire, only 34-percent of woodland and forest cover survived. Standing deadwood now covers 12.85 acres of the property. This "community" consists of standing and fallen dead trunks within a matrix of emergent and invading shrubs from the adjacent mixed chaparral community and wild oat grassland. Both of these structural layers have benefitted from the loss of shading tree canopy. A moderate amount of stump sprouting has occurred among the oaks; however, it will still be decades before this community recovers. As discussed for Douglas fir, recovery of this community will take far longer due to the need for the prior establishment of a seral stage of oak woodland to provide the required shade for establishment of the fir forest.

- **Vineyard:**

As is common throughout the region, the vineyard was little affected by the fire. Damage typically occurs in the outer rows which generally survive and resprout the following spring. The vineyard had 100-percent survival.

- **Ruderal (disturbed areas):**

This is not a community and continues as it did prior to the fire.

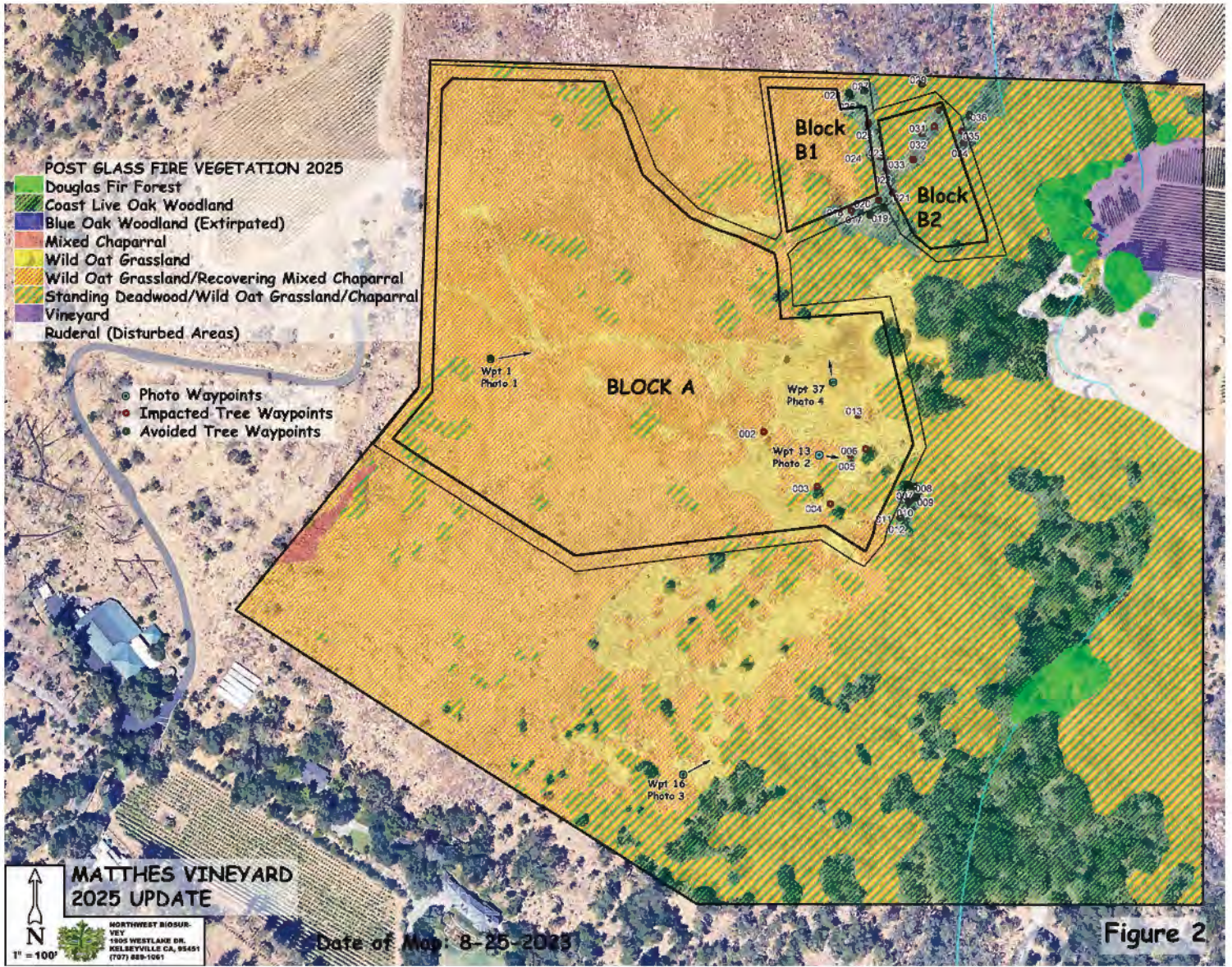


**Wild Oat Grassland with Emergent Mixed Chaparral  
Photo 1**



**Post Fire Coast Live Oak Woodland With Surrounding  
Wild Oat Grassland/Standing Deadwood/Emergent  
Mixed Chaparral  
Photo 2**





### 3.3.3 Post Fire Woodland Assessment as of March 27, 2025

Due to the small number of trees within the proposed vineyard blocks and vineyard avenue, each tree was mapped with a waypoint, identified to species, and the diameter at breast-height (DBH) was measured. They are mapped in **Figure 2** with red waypoints. The data is provided below in **Table 3**. Trees mapped and recorded during field work that were outside of the impact area are shown with green waypoints in **Figure 2**. Trees Identified outside of the blocks and avenue include the following waypoints: 7-11, 26-29, 36, 17 & 19.

It should be noted that many of these trees were burned but are undergoing moderate re-budding with new limbs and foliage. The total post-fire coast live oak canopy within the vineyard blocks represents 8-percent of the remaining community.

**TABLE 3. POST-FIRE TREES WITHIN PROPOSED VINEYARD BLOCKS AND VINEYARD AVENUE**

| Block A  |         |            |
|----------|---------|------------|
| Wpt#     | Species | DBH Inches |
| 2        | PP      | 8          |
| 3        | CLO     | 11         |
| 4        | CLO     | 14         |
| 5        | CLO     | 7          |
| 6        | CLO     | 15         |
| Block B1 |         |            |
| 24       | CLO     | 21         |
| Block B2 |         |            |
| 30       | CLO     | 12         |
| 31       | CLO     | 12         |
| 32       | CLO     | 14         |
| 33       | CLO     | 9          |
| Avenue   |         |            |
| 18       | CLO     | 16         |
| 20       | CLO     | 12         |
| 21       | CLO     | 22         |
| 22       | CLO     | 20         |
| 23       | CLO     | 22         |
| 25       | CLO     | 17,15,12*  |
| 34       | CLO     | 16         |
| 35       | CLO     | 17         |

\*Multi-trunk  
 PP: Ponderosa Pine  
 CLO: Coast Live Oak



## NORTHWEST BIOSURVEY

Environmental & Planning Services  
1905 Westlake Drive, Kelseyville CA 95451  
Phone (707) 889-1061  
nwbio98@gmail.com

June 5, 2025

Mr. Steven Carter  
Assistant Engineer  
Bartelt Engineering  
1303 Jefferson Street, 200B  
Napa, CA 94559

**RE: Request to Assess the Proposed Canopy Preservation Area for the Proposed Matthes Vineyard Project (2025 Site Conditions Addendum Matthes Vineyard Update June 5, 2025)**

Dear Mr. Carter,

You have requested that Northwest Biosurvey review a proposed Canopy Preservation area that was not available to us during the preparation of our April 3, 2025, Addendum to the above-referenced project. In your email dated May 22, 2025, you provided us with the following description of the proposed “revegetation summary” accompanied by a map of the proposed canopy preservation area:

### ***“Revegetation Summary***

*The proposed canopy mitigation consists of 7.30± acres on the subject parcel. Based on the pre-Glass Fire Biological Assessment performed on June 23, 2020, of the subject parcel, the proposed mitigation area consists of 2.0± acres of Coast Live Oak and 0.4± acres of Coniferous (Douglas Fir) Forest retention area on developable land under 30% slopes and outside of stream setbacks. 4.36± acres of Coast Live Oak and 0.54± acres of Coniferous (Douglas Fir) Forest retention are on undevelopable land between 30% and 50% slopes and outside of stream setbacks. Based on the post-Glass Fire plant communities survey performed on March 27, 2025, the proposed mitigation area is primarily located in areas that consist of standing deadwood, wild oat grass land, and chaparral with a small portion of the mitigation area consisting of the surviving Coast Live Oak woodland that was not destroyed by the Glass Fire. The proposed mitigation area will result in the highest ecological benefit for the parcel as the Coast Live Oak woodland areas that existed prior to the Glass Fire may take decades to recover. The intact surviving woodland/forest within the mitigation area will support natural regeneration of the vegetation as it was prior to the Glass Fire. The proposed mitigation areas are adjacent to the drainage course and outside the setbacks that crosses the parcel. Based on the topographic features of the parcel, the mitigation areas provide an additional buffer for stormwater runoff into the drainage course and provides slope stabilization and soil protection that will provide water quality benefits. The proposed mitigation areas maintain diversity of vegetative type and wildlife habitat near the existing drainage course.”*



## ASSESSMENT

We compared your proposed canopy preservation area to Figure 2 of our previous addendum, which provided a map of post-Glass Fire vegetation as of 2025. Your preservation area aligns with remaining coast live oak woodland and recovering “standing deadwood/wild oat grassland/chaparral.” The proposed preservation area would conserve the majority of remaining woodland on the parcel which also includes the highest value wildlife habitat and movement corridor along the ephemeral drainage in the southeast corner of the property.

We concur that this conservation area represents the best and highest value site for conserving woodland canopy.

Sincerely,



Steve Zalusky  
Principal Biologist  
Northwest Biosurvey