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Habitat Restoration Plan



Forest Ecosystem Management, pllc

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In Cooperation with:

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September 11, 2021

This is in response to Napa County Planning, Building & Environmental Services' Email from Trevor Hawkes June 9, 2021 for the Vida Valiente Winery.

This report provides a revegetation plan on the Vida Valiente Winery Property, for areas with slopes up to 50%, stream protection zones, and areas with less than 50% slopes scattered on the hillside: for the vegetation retention mitigation requirements of Napa County (Attachment #1).

Vida Valiente Winery General Information

Project Location: 407 Crystal Springs Road; St. Helena, California (Attachment #2)

Legal of Project Area: Portions of Section 13, T08N, R06W MDB&M

APN: 021-410-013 – 16.92 acres (Ownership, Crystal Vines llc)

021-372-001 – 1.15 acres (Ownership, Drumwright, Hayes & Susana)

A signed agreement with the ownership of parcel 021-372-001 will need to be acquired accepting and made a part of this Restoration Mitigation Plan.

County: Napa County

Proposed Project: Re-Establish canopy in areas that don't have canopy (on slopes less than 50%), enhance canopy in stream setback areas, and maintain 7.1 acres on the steep hillside.

Property Description: The Vida Valiente Winery Project is located at 407 Crystal Springs Road in St. Helena, California. The Property Boundary borders Crystal Springs Road, with a portion of the boundary including Bell Creek (aka Bell Canyon Creek) (Attachment #3). Historically, Bell Creek within the Property Boundary was surrounded by an overstory vegetative strip varying in width from approximately 55' to 150' wide; with open/agricultural and urban structures (buildings, Crystal Springs Road) outside the forested riparian area. This structure is similar to the area surrounding Bell Creek in the immediate vicinity outside the Property Boundary. The vegetation types described by CDFW CalVeg within ¼ mile of the Project Area includes primarily Urban and Agricultural (Vineyards) around Bell Creek throughout

most of this area with Mixed Riparian Hardwoods occurring on the edge of the ¼ mile assessment area (Attachment #4). The riparian habitat within Valiente Property was similar to Mixed Riparian Hardwoods (CalVeg Classification) or Montane Riparian Zones (CWHR Type) which is often quite variable and often structurally diverse. Usually, the montane riparian zone occurs as a narrow, often dense grove of broad-leaved, winter deciduous trees up to 98' tall with a sparse understory. In the southern Coast Range and Transverse and Peninsular ranges, bigleaf maple and California bay are typical dominant trees; however, cottonwood, alder, willow, and dogwood may also be present. The transition between montane riparian zones and adjacent non-riparian vegetation is often abrupt. There is a vineyard at the base of Glass Mountain, with the property continuing up the mountain within a Douglas-fir Forest type with slopes approaching 75%. There is a seasonal watercourse, which appears to have been historically diverted, that flows to the west from the flat near the vineyard. In the early fall of 2020, the Glass Wildfire occurred within Napa Valley and engulfed portions of Napa and Sonoma Counties, including this Property (Attachment #5). This unprecedented event drastically changed the vegetative structure of the area (Attachment #6).

Current Property Description: A site visit was conducted on 28JUL21 by Heather Morrison. The majority of the vegetation (trees, shrubs, and ground cover) burned with only a few trees surviving. There were spots where the fire was in the roots and burned holes in the ground. The soil was burned to grey ash in some areas, with the most intense fire appearing to be on the ridge top in the southwestern corner of the property. The riparian area adjacent to Bell Creek was burned completely, with just a few overstory trees surviving. The hardwood species, including willow, maple, laurel, and ash have resprouted. The upland area was also burned in the fire, with the coniferous species, primarily Douglas-fir with a few knob cone pines, being destroyed (Attachment #7), with only a handful of conifer trees surviving.

The Vida Valiente Winery is proposing to construct a cave and is in the process of going through the appropriate permitting process. The proposed project removes 0.8 acres of woodland canopy and therefore a 3:1 mitigation can be achieved by planting/preserving 2.4 acres, as required by Napa County Ordinance (18.108.020). This retention standard retains 93% of the pre-fire forest canopy (Attachment #1), which exceeds Napa County Ordinance 18.108.020's requirement of 70%. There is 1.0 acre within the stream setback area (shown in orange on Attachment #1), 0.8 acres of upland habitat outside the stream setback on <50% slopes (shown in blue on Attachment #1), and 0.6 acres of less than 50% slope scattered throughout the 7.1 acres of over 50% steep hillside (shown in red cross hatch on Attachment #1) which will be retained. The Stream Setback Areas are further broken down into two distinct rehabilitation areas including an area surrounding Bell Creek (Stream Setback Area #1) and the man-made watercourse (Stream Setback Area #2).

The following discusses how this Project will re-establish canopy in areas that were burned on less than 50% slopes, enhance the canopy in the stream setback areas, and maintain the burned forest on the steep hillside. There is hope that by one landowner improving the highly visible riparian habitat (Crystal Springs Road occurs along Bell Creek) within their property boundary, either seed will become available for downstream riparian areas and/or neighbors will follow their lead. The Mitigation Measures Proposed will be referred to these areas, herein referred to as Stream Set Back Area #1 (along Bell Creek and includes Riparian Area), Stream Set Back Area #2 (along a man-made watercourse), Upland Area #1 (outside the stream setback areas on slopes < 50%), and Upland Area #2 (the 0.6 acres of less than 50% slopes found within the 7.1-acre steep hillside) to help satisfy Napa County's Planning, Building & Environmental Services requirements.

General Criteria for this Project

The overall goals for this project include:

- Re-establish and/or enhance the forest canopy to levels to pre-Glass fire conditions along Bell Creek.
- Achieve a multi-storied vegetative canopy.
- Maintain or increase biodiversity.
- Manage ladder fuels to avoid future devastating wildfire damage.
- Allow for surviving native vegetation to thrive.

To achieve these goals, over the next several decades:

- There should be no removing, downgrading, or alteration of the existing live native riparian vegetation.
- There will be no new road crossings installed or completed as a result of this Project.
- There should be no heavy equipment operating in the Riparian area.
- There should be no new water withdrawal from Bell Creek as a result of this Project.
- There will be no livestock grazing on the property, without proper fencing to keep livestock outside the riparian area. Livestock grazing is not anticipated.

When planting new vegetation:

- Trees/shrubs need to be suited to the soil and hydrology of the site.
- Plant and encourage tree and shrub species that are native and noninvasive. Substitution with locally adapted species, or with species suited for a specific purpose is allowed.
- Favor tree and shrub species that have multiple values, such as those suited for nuts, fruit, florals, browse, nesting, timber, and aesthetics.

Stream Setback Area #1

Stream Setback Area #1 is located along Crystal Springs Road (orange polygon on Attachment #1) and includes a 650' long segment of Bell Creek that runs along the property boundary, the riparian area of Bell Creek, as well as the plateau located above the creek. Bell Creek is a class 1 stream that supports fisheries, including Central California Coast steelhead (*Oncorhynchus mykiss*) as well as Sacramento suckers (*Catostomus occidentalis*), California Roach (*Hesperoleucus symmetricus*), threespine stickleback (*Gasterosteus aculeatus*), Sacramento pikeminnow (*Ptychocheilus grandis*), bluegill sunfish (*Lepomis macrochirus*), and sculpins (*Cottus sp.*). Even within this drought year, water is flowing with duckweed (*Lemna spp*) and water cress (*Nasturtium officinale*) noted within the water channel. Rocks have been stacked along the edge, above the creek, likely sourced from the flat area where the vineyard is now located. There are a few surviving overstory trees with the hardwoods sprouting. Most of the ground cover was burned with Himalayan berry quickly recolonizing the area.

Stream Setback Area #1



Willow (*Salix spp.*) resprouting in Bell Creek



Riparian Area Benefits: Historically, dense riparian vegetation grew along virtually all of Napa County's rivers, creeks, and streams; however, they have declined significantly due to human land-use activities. Today they cover a relatively small portion of Napa County's watersheds, but their ecosystem functions are important to maintaining biological diversity, water quality, and water reliability.

Riparian areas are distinctly different from surrounding lands because of unique soil and vegetation characteristics that are strongly influenced by the presence of water. Riparian habitat can range from dense thickets of shrubs to a closed canopy of large mature trees, while providing riverbank protection, erosion control and improved water quality, recreational and aesthetic values, as well as provide wildlife habitat. The riparian vegetation stabilizes streambanks and resists the flow of floodwaters, while increasing the time available for water to infiltrate into the soil recharging groundwater and alluvial aquifers.

The signs of a healthy riparian area include a well-vegetated, multi-storied canopy area with a diversity of native plants over-hanging water channels. Other indications include stable streambanks, well-defined stream channels, and a high diversity and abundance of wildlife. Unhealthy riparian areas are characterized by sparse vegetation, infestations of invasive plant species, eroded banks, poorly defined stream channels, and low wildlife diversity and abundance. All riparian habitats have an exceptionally high value for many wildlife species. These areas provide water, thermal cover, migratory corridors, as well as diverse nesting and foraging opportunities.

There is not a single figure of how wide the Riparian zone needs to be to keep water clean, stabilize banks, protect fish and wildlife, and satisfy human demands. Widths can range from 35' to well over 300' depending on slopes, surrounding land-use, and type of vegetation (vertical structure and density). Wider widths are needed for wildlife habitat than for erosion control and water quality purposes. The

overall width of the riparian vegetation in this area is between 60' to 150' wide and currently the surrounding area is urbanized and/or agriculture; therefore, species using the vegetated area, either as a corridor or residential home were adapted to disturbance.

There is an additional upland area outside of this stream setback (shown in blue on Attachment #1) with slopes less than 50% immediately adjacent to the stream setback which, when restored, will help improve the riparian zone along Bell Creek through a wider native vegetative area.

Removal of Exotic/Invasive Plants:

Exotic/Invasive plants are spreading into riparian and upland areas to the detriment of native vegetation. In general, to decrease this potential:

- Avoid planting invasive non-native plants. Non-native plants that particularly threaten areas in Napa County include: giant reed; Himalayan blackberry; periwinkle; German and English ivy; black locust; French, Scotch and Spanish broom; tamarisk; acacia; eucalyptus; and tree of heaven. **Planting of local, native vegetation is encouraged.**
- Remove invasive non-native plants. If riparian area is infested with invasive weeds, they should be removed.

Project Area: Prior to the fire, Himalayan Berry (*Rubus armeniacus*), a non-native invasive plant, was present within the creek and stream setback area in almost total groundcover. One of the beneficial effects of the fire was removal of this shrub, albeit temporarily. Himalayan berry quickly recolonizes sites through resprouting and thus follow-up is required until the plants are completely eradicated.

Himalayan Berry Reinfesting the Area



Other invasive species encountered were sweet fennel (*Foeniculum vulgare*), star thistle (*Centaurea solstitialis*) and French broom (*Genista monspessulana*). Sweet fennel was located near the fence line. Star thistle was seen. Within the creek itself, 2 French broom plants were established and subsequently removed during the field visit. The broom likely established from seed flowing down the creek from upstream sources. Caper spurge (*Euphorbia lathyris*) was seen as well; this plant is considered to be a high risk for invasiveness.

Monitoring on a regular basis (1x per year) and subsequent removal of reinfestation is critical to the success of the restoration project.

Stream Setback Area #1 Restoration Recommendations (Exotic/Invasive Plants):

- 1) Remove Himalayan Berry within the stream and within the stream set back area. Plants can be manually removed.
 - Mechanical removal – this plant will continue to re-sprout unless the root ball is removed. Every effort should be made to remove the root ball.
 - Chemical control – chemical control is not recommended due to presence of Bell Creek.
 - Animal control – Goats/sheep are effective at removing invasive plants, though they are non-discriminatory and will also remove desirables. Animal control is not recommended due to the presence of Bell Creek and streamside restoration efforts.

- 2) Remove Sweet Fennel.
 - Mechanical removal – Remove before seed sets. Remove root ball. Alternatively, plant can be continuously cut down to deplete root reserves, although this will take many years to accomplish. Monitor for new starts.
 - Chemical control – chemical control is not recommended due to presence of Bell Creek.
 - Animal control – Goats/sheep are effective at removing invasive plants, though they are non-discriminatory and will also remove desirables. Animal control is not recommended due to the presence of Bell Creek and streamside restoration efforts.



Sweet Fennel within Setback Area #1

- 3) Remove French Broom. It is critical to remove plants prior to seed set. Viable seed is generally produced 2-3 years after establishment.
- Mechanical removal – Pull all plants when ground is wet. If soils are dry, incomplete removal is likely and the process is ineffective.
 - Chemical control – chemical control is not recommended due to presence of Bell Creek.
 - Animal control – Goats/sheep are effective at removing invasive plants, though they are non-discriminatory and will also remove desirables. Animal control is not recommended due to the presence of Bell Creek and streamside restoration efforts.



French Broom in Setback Area #1

- 4) Remove Star Thistle. Star Thistle was seen during the survey. It is critical to remove plants prior to seed set.
- Mechanical removal – Pull plants when ground is moist before flower set.
 - Chemical control – Chemical control is not recommended due to presence of Bell Creek.
 - Animal control – Goats/sheep are effective at removing invasive plants, though they are non-discriminatory and will also remove desirables. Animal control is not recommended due to the presence of Bell Creek and streamside restoration efforts.

5) Remove Caper Spurge.

- Mechanical removal – Pull plants when ground is moist before flower set.
- Chemical control – Chemical control is not recommended due to presence of Bell Creek.
- Animal control – Goats/sheep are effective at removing invasive plants, though they are non-discriminatory and will also remove desirables. Animal control is not recommended due to the presence of Bell Creek and streamside restoration efforts.



Caper Spurge

6) Remove Giant Reed Grass.

- Mechanical removal – In order to be effective, the plant must be cut down and biomass removed. This will make removal of the rhizome easier, though care should be taken to not leave any rhizome material behind (as it can resprout). Removal should occur before seeds are produced to further decrease population spread.

Planting:

Hardwoods are currently resprouting a year after the Glass Fire; however, due to lack of seed source and competition from invasive weeds, planting is an effective tool to revegetate an area faster. In general, to assist in a successful planting:

- Perform necessary site preparation and planting (late winter – February/March – coincide with rain forecasts) at a time and manner that ensures the survival.
- Mulching fabrics should not be used due to surrounding native plants. Within the plateau area outside the riparian zone, mulching planted trees and shrubs may be required to suppress competing vegetation (annual grasses) and facilitate moisture retention. Competing vegetation can be control through mowing or gas-powered weed-eaters. Cutting back the weeds will provide the new trees with more access to sun, nutrients, and water.
- Irrigation may be required during the dry months of the first year after installation. If irrigation is necessary, sprinklers or hand watering should be used over drip systems. In dry years, drip tubing is often eaten by wildlife.

Project Area: Willows (*Salix spp.*) are resprouting within Bell Creek. Ash, laurel, and bigleaf maple were also found resprouting, and should be allowed to do so unmolested.

Stream Setback Area #1 Restoration Recommendations (Planting):

- 1) Plant white oak (*Quercus garryana*) or black oak (*Quercus kelloggii*) on the plateau above the watercourse, midway between the edge of the vineyard (fence) and the creek. Plant on a 50' spacing, up to a maximum of 3 trees.
- 2) Plant redwood (*Sequoia sempervirens*) along Bell Creek. Plant on a 50' spacing, up to a maximum of 10 trees.
- 3) Plant native blackberry (*Rubus ursinus*) along Bell Creek. Plant on a 3' spacing in areas cleared of the invasive Himalayan berry. Up to a maximum of 50 plants.
- 4) Plant leafy buckwheat (*Eriogonum fasciculatum*) along the upland fence. Plant on a 4' spacing. Up to a maximum of 30 plants.

Protection of Existing “Legacy Trees”:

Legacy Trees – encroachment may pose a threat to the larger trees (particularly oaks) that survived the Glass Fire. In an effort to increase the “hang time” of the legacy trees that are serving an important ecological function for both the aquatic and terrestrial system, any small encroaching tree stems should be removed. Legacy tree release prescription calls for thinning trees less than 10” dbh in a radius of twice the dripline. At this time, the majority of the vegetation around live trees was removed by the fire.

Stream Setback Area #2

Stream Setback Area #2 is along an approximately 240’ man-made rock lined ditch skirting the edge of the vineyard (shown as orange polygon on the west side of the property within Attachment #1). This



rock lined ditch does not meet the definition of any Napa County stream designations; however, does meet CalFire’s Class 4 watercourse classification. This area has no live vegetation immediately around the watercourse. There is a live, Live Oak along the property boundary and a few surviving fruit trees within this area. All vegetation under these trees was burned during the fire.

Removal of Exotic/Invasive Plants:

Exotic/Invasive plants are spreading into upland areas to the detriment of native vegetation. In general, to decrease this potential:

- Avoid planting invasive non-native plants. Non-native plants that particularly threaten areas in Napa County include: giant reed; Himalayan blackberry; periwinkle; German and English ivy; black locust; French, Scotch and Spanish broom; tamarisk; acacia; eucalyptus; and tree of heaven. **Planting of local, native vegetation is encouraged.**
- Remove invasive non-native plants.

Project Area: No invasive/exotic plants were noted.

Stream Setback Area #2 Restoration Recommendations (Exotic/Invasive Plants):

1. Monitor the site of establishment of exotic/invasive plants.

Planting:

Hardwoods are currently resprouting a year after the Glass Fire, however, due to lack of seed source and competition from grasses, planting is an effective tool to revegetate an area faster. In general, to assist in a successful planting:

- Perform necessary site preparation and planting (late winter – February/March – coincide with rain forecasts) at a time and manner that ensures the survival.
- Mulching fabrics should not be used due to surrounding native plants. Mulching planted trees and shrubs may be required to suppress competing vegetation (annual grasses) and facilitate moisture retention. Competing vegetation can be control through mowing or gas-powered weed-eaters. Cutting back the weeds will provide the new trees with more access to sun, nutrients, and water.
- Irrigation may be required during the dry months of the first year after installation. If irrigation is necessary, sprinklers or hand watering should be used over drip systems. In dry years, drip tubing is often eaten by wildlife.

Project Area: Existing live trees should be left unmolested.

Stream Setback Area #2 Restoration Recommendations (Planting):

- 1) Plant white oak (*Quercus garryana*) or black oak (*Quercus kelloggii*) on the south side of ditch, along the entire length. Plant on a 50' spacing up to a maximum of 5 trees.
- 2) Plant California Fescue (*Festuca California*) plants between the oak seedlings.

Protection of Existing “Legacy Trees”:

Legacy Trees – encroachment may pose a threat to the larger trees (particularly oaks) that survived the Glass Fire. In an effort to increase the “hang time” of the legacy trees that are serving an important ecological function for both the aquatic and terrestrial system, any small encroaching tree

stems should be removed. Legacy tree release prescription calls for thinning trees less than 10" dbh in a radius of twice the dripline. At this time, the vegetation around live trees was removed by the fire.

Upland Area #1

Upland Area #1: This area is located above the flats, at the base of Glass Mountain (shown in blue in Attachment #1). It is outside of the fence perimeter. Prior to the Glass Fire, the area had ladder fuels (hardwoods and conifers) removed in order to provide a 150' fire clearance around a residence. The Glass Fire destroyed this residence, as well as all the remaining vegetation. Hardwoods have resprouted. The upland area to be restored occurs on slopes less than 50%.



Removal of Exotic/Invasive Plants:

Exotic/Invasive plants are spreading into upland areas to the detriment of native vegetation. In general, to decrease this potential:

- Avoid planting invasive non-native plants. Non-native plants that particularly threaten areas in Napa County include: giant reed; Himalayan blackberry; periwinkle; German and English ivy; black locust; French, Scotch and Spanish broom; tamarisk; acacia; eucalyptus; and tree of heaven. **Planting of local, native vegetation is encouraged.**
- Remove invasive non-native plants.

Project Area: Black Locust (*Robinia pseudoacacia*) has established itself within the upland area and is quickly colonizing the area as well as encroaching into the vineyard fence. Black Locust can alter soil chemistry through nitrogen fixation and is also toxic to livestock.

Upland Area #1 Restoration Recommendations (Exotic/Invasive Plants):

- 1) Remove Black Locust.
 - Mechanical control – If young, plants may be removed with entire root system. If root system is left intact it will continue to resprout so constant removal will be necessary.

- Chemical control – chemical control is not recommended due to Bell Creek and restoration efforts.

Planting:

Hardwoods are currently resprouting a year after the Glass Fire; however, due to lack of seed source and competition from earlier succession species (i.e., grasses) or invasive weeds, planting is an effective tool to revegetate an area faster. In general, to assist in a successful planting:

- Perform necessary site preparation and planting (late winter – February/March – coincide with rain forecasts) at a time and manner that ensures the survival.
- Mulching fabrics should not be used due to surrounding native plants. Mulching planted trees and shrubs may be required to suppress competing vegetation (annual grasses) and facilitate moisture retention. Competing vegetation can be control through mowing or gas-powered weed-eaters. Cutting back the weeds will provide the new trees with more access to sun, nutrients, and water.
- Irrigation may be required during the dry months of the first year after installation. If irrigation is necessary, sprinklers or hand watering should be used over drip systems. In dry years, drip tubing is often eaten by wildlife.

Project Area: Except for Black Locust, addressed above, sprouting hardwoods should be left alone and allowed to establish.

Upland Area #1 Restoration Recommendations (Planting):

- 1) The Glass Mountain hillside has a few Douglas-fir trees that should be capable of providing a seed source for the lower slopes.
- 2) Plant redwood (*Sequoia sempervirens*) at a 50' spacing from each other and existing sprouting hardwoods, up to a maximum of 35 trees.
- 3) Allow hardwoods to resprout with a preference of for the oaks.
- 4) California Fescue (*Festuca California*) seed should be distributed within the areas with bare mineral soil or rocky soil in the Fall of 2021 (October – November). Seeding this fall prior to other grasses/vegetation moving in will help this native species become established.

Protection of Existing “Legacy Trees”:

Legacy Trees – encroachment may pose a threat to the larger trees (particularly oaks) that survived the Glass Fire. In an effort to increase the “hang time” of the legacy trees that are serving an important ecological function for both the aquatic and terrestrial system, any small encroaching tree stems should be removed. Legacy tree release prescription calls for thinning trees less than 10” dbh in a radius of twice the dripline. At this time, the majority of the vegetation around live trees was removed by the fire.

Upland Area #2



Upland Area #2: This area is located on the steep hillside above Upland Area #1. Due to the steep nature of this area, 50% to 75% slopes, no burned vegetation has been removed. Within this 7.1-acre Upland Area #2, there are scattered areas with less than 50% slopes (for a total of 0.6 acres of such areas). It is these small, scattered areas that represent the area needed for mitigation. In order to accumulate this 0.6 acres, all of the 7.1 acres will be included in this mitigation.

Due to safety issues and accessibility, no removal of burned material is proposed. The existing burned canopy will be retained. The burned forest is primarily composed of the same species found in Upland Area #1, which is primarily Douglas-fir and madrone and some California laurel. The hardwoods are sprouting and will eventually be a significant part of the forest canopy. There are a few Douglas-Fir that were not killed in the fire. These Douglas-Fir trees will provide a seed source in the coming years.

Upland Area #2 Restoration Recommendations:

- 1) Maintain the existing forest canopy. No removal of burned material is proposed.



Monitoring

Adaptive Management Practices should be utilized. The Landowner should monitor the Vegetation within these Rehabilitation Areas at least twice a year for at least 5 years to ensure successful growth. Photographs can help monitoring efforts by showing changes over time. Some issues that may need addressing include:

- Vineyard workers should be educated on the importance of these rehabilitated areas and not dump debris into or around them.
- Caging of newly planted trees may be required if wildlife damage is noted.
- Irrigation may be required particularly in dry years.
- Mowing or mulching may have to be completed around newly established trees to reduce competitive grasses.
- Invasive plant eradication may have to be completed in multiple years to remove reinfestation.
- Observe whether streambanks along Bell Creek are stable or washing away.
- Note what wildlife is using the area.

Attachments:

Attachment #1 = Vegetation Retention Analysis Map (Supplied by Applied Civil Engineering)

Attachment #2 = Topographic Vicinity Map

Attachment #3 = Aerial Project Area – Pre-Wildfire

Attachment #4 = Vegetation Types Around Project Area (CalVeg)

Attachment #5 = Wildfire Perimeter Map

Attachment #6 = Aerial Project Area – Post Wildfire

Attachment #7 = Project Area Pictures

This Report was prepared by:

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References:

California Department Fish & Wildlife. California Natural Diversity Database (CNDDDB). California Department of Fish and Wildlife, Biogeographic Data Branch. RareFind Version 5. Accessed 2021.

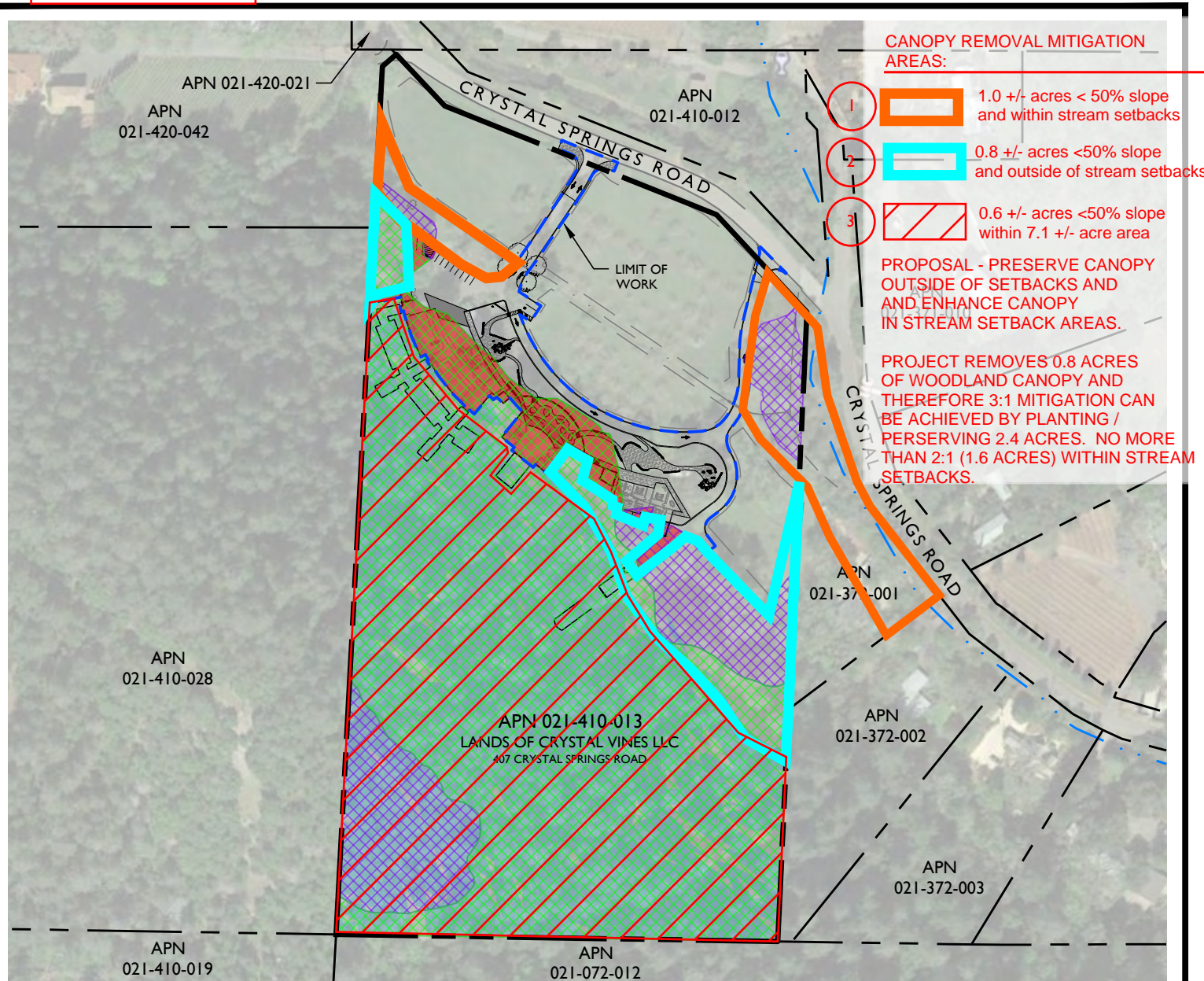
California Department Fish & Wildlife. California Vegetation Classification and Mapping Program (vegCAMP). California Department of Fish and Wildlife. Accessed 2021.

California Department of Fish & Wildlife. California Interagency Wildlife Task Group. 2014. CWHR Version 9.0 personal computer program. Sacramento, CA.

California Natural Diversity Database (cnddb). April 2021. Special Animal List. California Department of Fish & Wildlife. Sacramento, CA.

San Francisco Estuary Institute (SFEI). 2017. California Aquatic Resource Inventory (CARI). Version 0.3. Accessed July 2021. <https://www.sfei.org/data/california-aquatic-resource-inventory-cari>

United States Department of Agriculture. October 2020. Natural Resources Conservation Service. Conservation Practice Standard Riparian Forest Buffer. Code 391 (391-CPS-1)



RETENTION SUMMARY

| (E) VEGETATION CANOPY COVER | TOTAL |
|----------------------------------|-------------|
| DOUGLAS FIR FOREST | 9.5 ± ACRES |
| DOUGLAS FIR FOREST TO BE REMOVED | 0.7 ± ACRES |
| MIXED OAK WOODLAND | 2.2 ± ACRES |
| MIXED OAK WOODLAND TO BE REMOVED | 0.1 ± ACRES |
| PERCENTAGE RETAINED | 93% ± |

AERIAL PHOTO SOURCE:

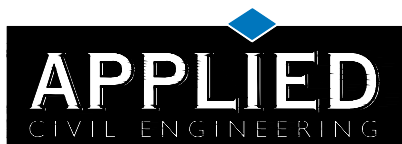
AERIAL PHOTOGRAPHS WERE OBTAINED FROM GOOGLE EARTH, DATED MARCH 2016 AND MAY NOT REPRESENT CURRENT CONDITIONS.

SLOPES OVER 50% IN THE VEGETATION CANOPY COVER AREA

* VEGETATION CANOPY COVER BASED ON ANALYSIS OF OAK WOODLAND AND DOUGLAS FIR FOREST BY NW BIOSURVEY.

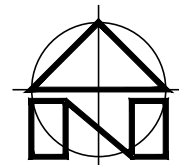
VEGETATION RETENTION ANALYSIS EXHIBIT

SCALE: 1" = 200'



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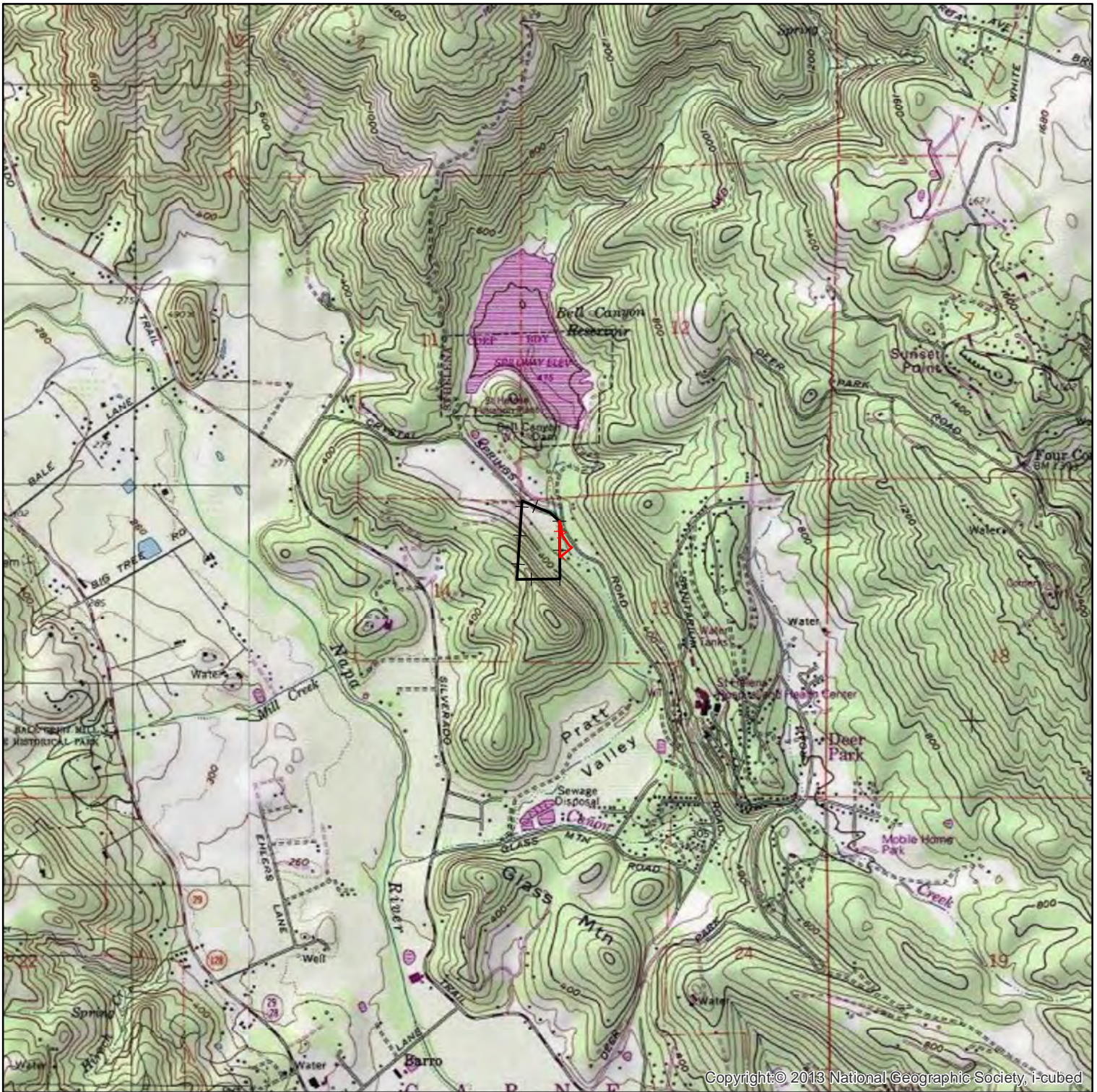


SCALE: 1" = 225'

JOB NO. 19-123

MAY 2021

Vita Valiente Vicinity Map



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Section 13 T08N, R06W MDB&M
APN: 021-410-013
APN: 021-372-001
Napa County



1 in = 2,917 ft

Date: 8/3/2021

Legend

-  Property Boundary
-  Added Parcel

Vita Valiente Project Area - Pre-Wildfire



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Legend

- Property Boundary
- Added Parcel
- Watercourse

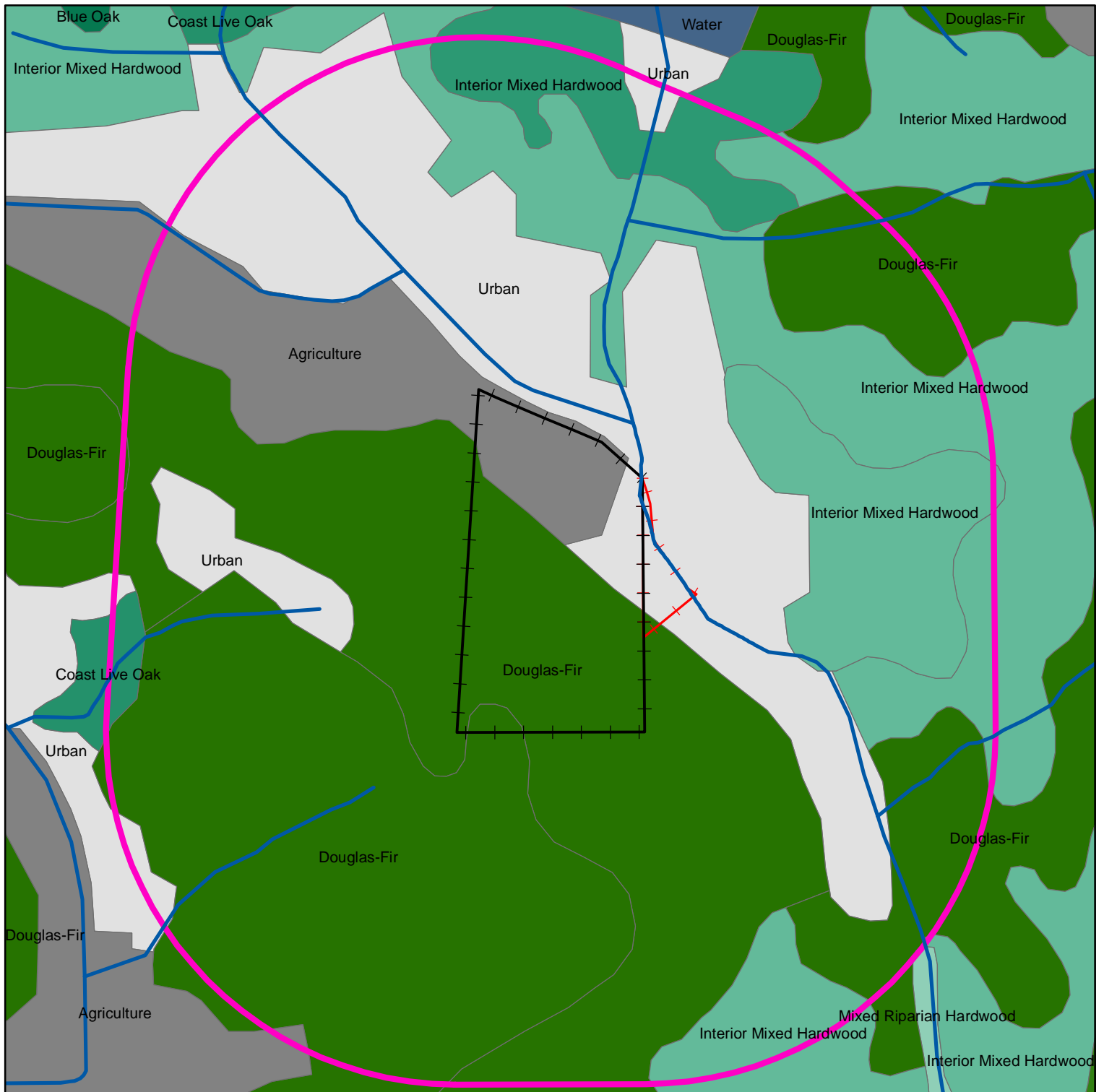
Section 13 T08N, R06W MDB&M
APN: 021-410-013
APN: 021-372-001
Napa County



1 in = 417 ft

Date: 8/3/2021

Vita Valiente CalVeg Map



Legend

- Property Boundary
- Added Parcel
- 1/4 Mile Assessment Area
- Watercourse

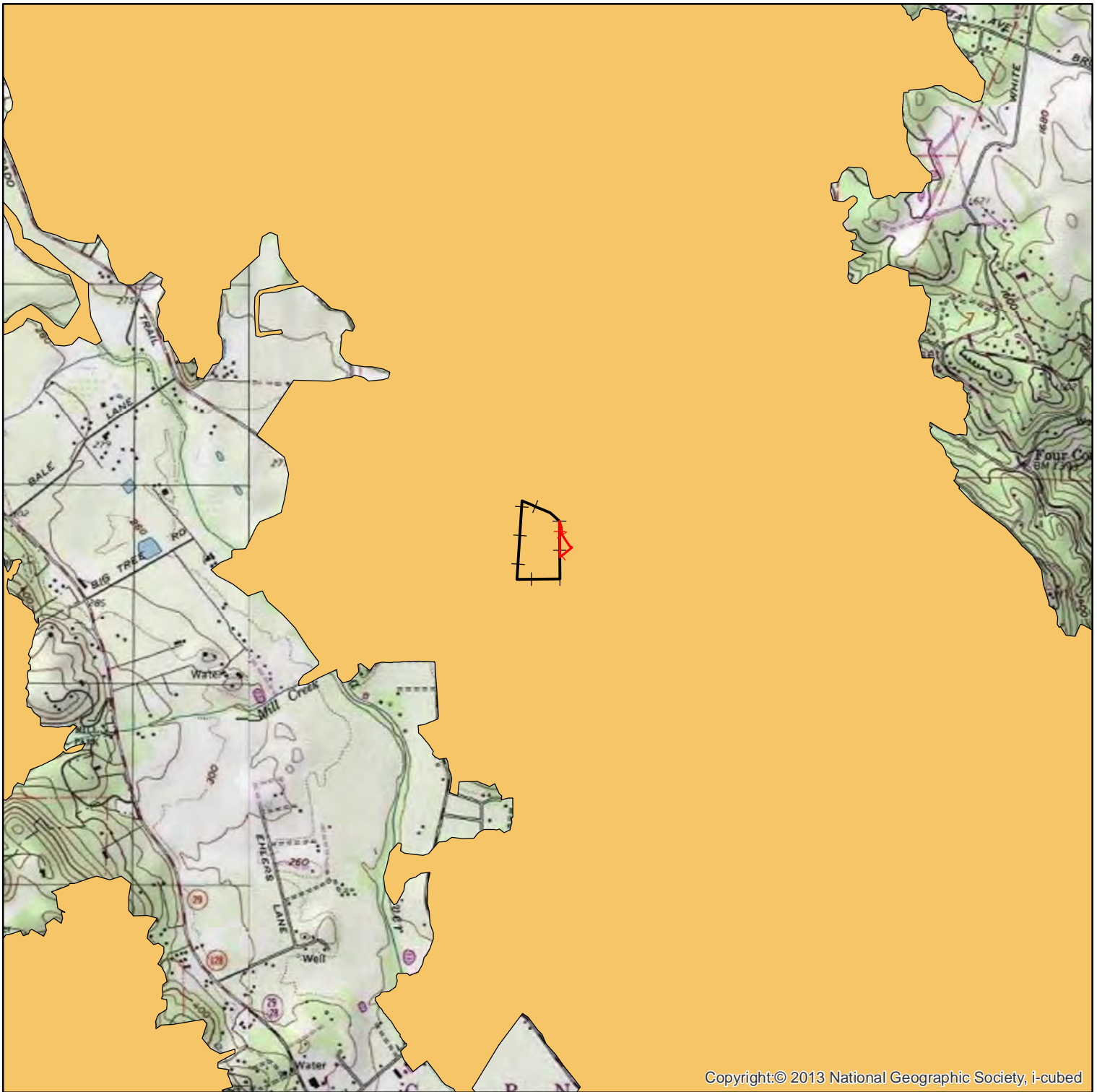
Section 13 T08N, R06W MDB&M
APN: 021-410-013
APN: 021-372-001
Napa County



1 in = 667 ft

Date: 8/3/2021

Vita Valiente Wildfire Perimeter Map



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Legend

- Property Boundary
- Added Parcel
- 2020 Glass Wildfire Perimeter

Section 13 T08N, R06W MDB&M
APN: 021-410-013
APN: 021-372-001
Napa County



1 in = 2,917 ft

Date: 8/3/2021



Vita Valiente Post Fire

Section 13 T08N, R06W MDB&M

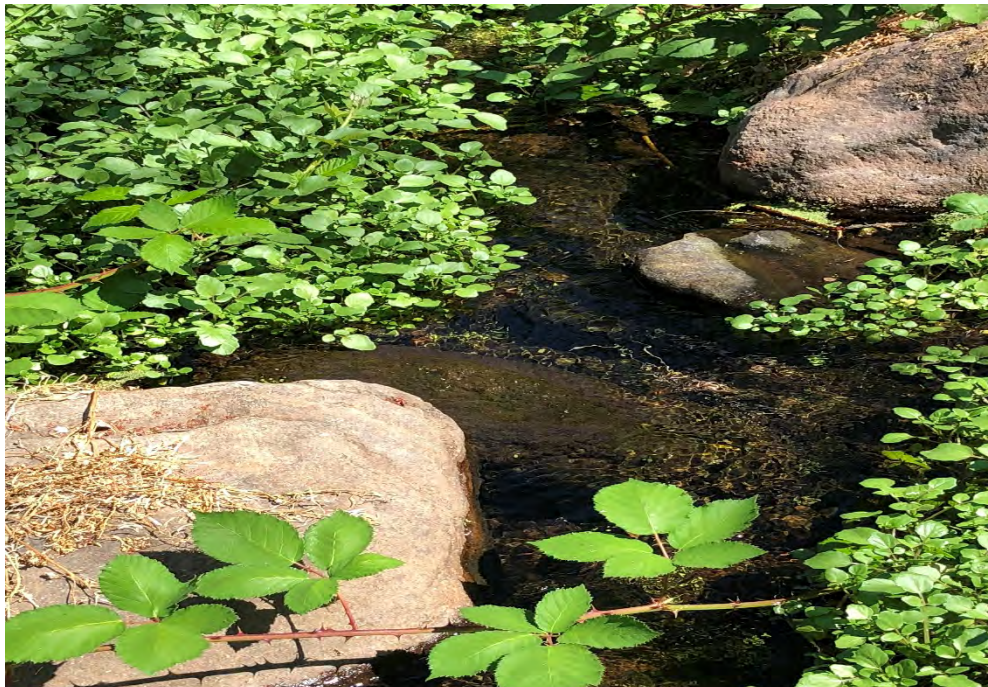
Attachment #7

Pictures from Vida Valiente Property
Pictures Taken July 2021

Looking South from Crystal Springs Road into Stream Setback Area (left) and Vineyard



Bell Creek



Stump Sprouting on Hardwoods on Vida

