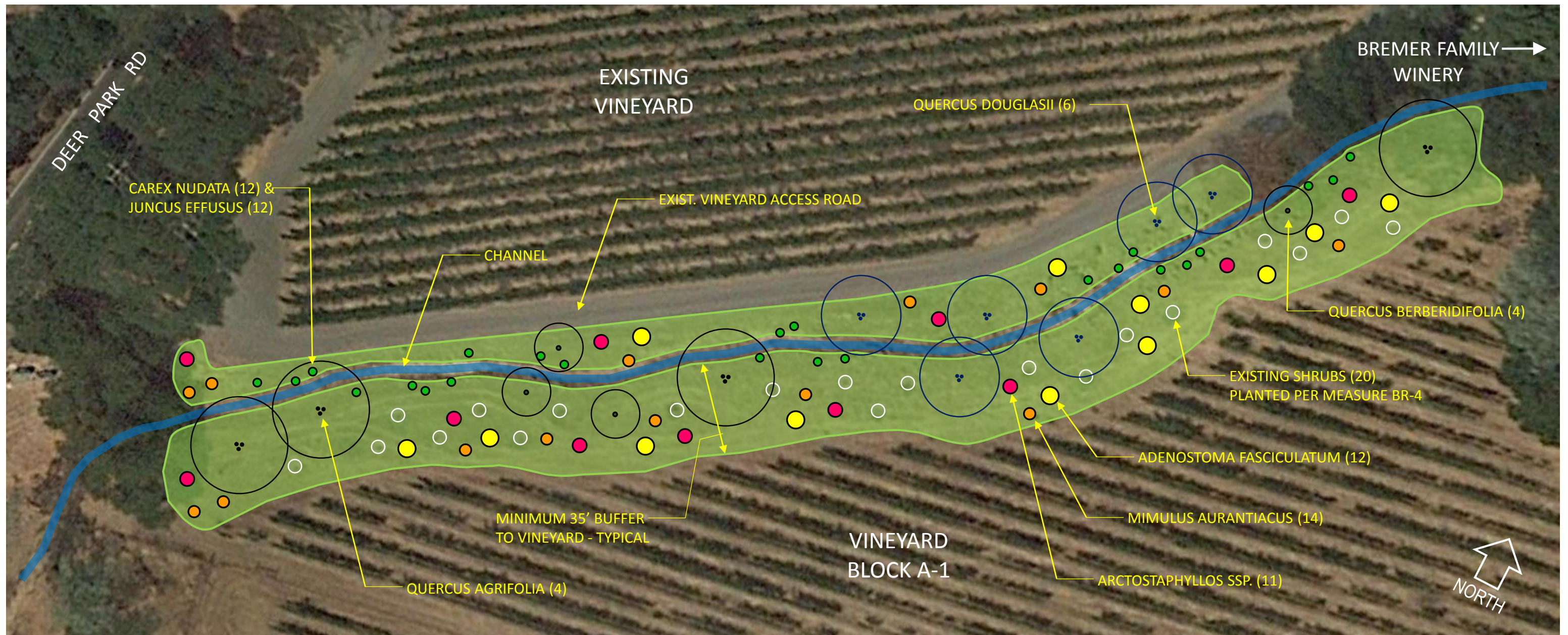


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# Intermittent Channel Enhancement Plan

Use Permit Exception #P19-00153





APPROXIMATE DRAWING SCALE: 1" = 40'



**ENHANCEMENT AREA – 0.328 ACRES TOTAL**

SEEDED WITH NATIVE PLANT SPECIES:  
 BROMIS MOLLIS (BLANDO BROME GRASS)  
 FESTUCA CALIFORNICA (CALIFORNIA FESCUE)  
 LUPINUS LATIFOLIUS (BROAD-LEAF LUPINE)  
 MIMULUS GUTTATAS (COMMON MONKEY FLOWER)  
 NASSELLA LEPIDA (FOOTHILL NEEDLE GRASS)  
 NASSELLA PULCHRA (PURPLE NEEDLE GRASS)

**NATIVE OAK SPECIES**

- QUERCUS AGRIFOLIA (COAST LIVE OAK)
- QUERCUS DOUGLASII (BLUE OAK)

**NATIVE SHRUB SPECIES**

- ADENOSTOMA FASCICULATUM (CHAMISE), 5 GALLON
- ARCTOSTAPHYLLOS SSP. (COMMON MANZANITA), 5 GALLON
- MIMULUS AURANTIACUS (STICKY MONKEY FLOWER), 1 GALLON
- QUERCUS BERBERIDIFOLIA (SCRUB OAK), 5 GALLON
- CAREX NUDDATA (TORRENT SEDGE), 1 GALLON – 50%
- JUNCUS EFFUSUS (COMMON RUSH), 1 GALLON – 50%



### **INTERMITTENT CHANNEL ENHANCEMENT PLAN AND GOALS**

The proposed enhancement area consists of stream terraces adjacent to the intermittent creek reach which is located immediately south of the main winery.

To accomplish the goal of reestablishing native vegetation in the creek setback areas, individual trees and shrubs will be planted, and the complete area over-seeded with native low-growing native grasses and groundcover species.

The proposed native plant species have been observed in undisturbed creek setback areas on other parts of the subject property. Most of these species are also listed as appropriate for riparian planting adjacent to vineyards in the Information Manual: Riparian Vegetation Management for Pierce's Disease in North Coast Vineyards (these species have been found to not host Pierce's Disease).

In selecting native vegetation species for inclusion in the enhancement plan, recent historical photographs were referenced regarding the relative abundance of each of these species within the Canon Creek watershed, as well as species-specific information from the biological report on the Bremer vineyard development performed by Kjeldsen Biological Consulting in November, 2011. According to the biological report, shrub constituents of Chaparral/Scrub can contain: Chemise (*Adenostoma fasciculatum*), Sticky Monkey Flower (*Mimulus aurantiacus*), Common Manzanita (*Arctostaphylos* ssp.), and Scrub Oak (*Quercus berberidifolia*) (Kjeldsen, 2011). Additionally, riparian grasses to be planted near the edges of the channel will be *Carex nudata* (Torrent Sedge) and *Juncus effusus* (Common Rush).

Coast Live Oak (*Quercus agrifolia*) and Blue Oak (*Quercus kelloggii*) have been selected as the species of larger trees for planting.

### **IMPLEMENTATION & PLANTING**

To the extent practicable, on-site colonies of the plants noted above will be used for collection of specimens for planting. Container sizes are indicated on the Plan for reference to approximate size at time of planting. If on-site collection is not practicable for some or all species, container-grown plants shall be obtained from a reputable local California native plant nursery, using locally collected seeds or clipping, or from local ecotypes where available. Use of these local specimens assures that the plants will be acclimated to the soil and microclimate, and the best possible long-term survival rate. This methodology also reduces concern over soil-borne diseases from commercially-grown stock that may affect the future health of the vineyards.

All shrub species except the Scrub Oaks will be planted in small copses (mixture of several species of shrubs in a small area). The Scrub Oaks will be planted individually, as was observed at the project site and in the biological report. All shrubs will be planted with a minimum one foot spacing between their projected maximum canopy extents.

Acorns collected from beneath local on-site specimens will be used for new Oak tree establishment. Three (3) acorns will be buried at each tree location shown on the Plan. All acorn clusters will be buried at a minimum distance of 30 feet from each other, and no shrubs will be planted underneath their projected maximum canopy area.

The areas identified in the Plan to be revegetated shall be clearly marked in the field with flagging and approved by County staff prior to implementation of the Plan.

Wire mesh cages will be installed around the buried acorns and planted shrubs to protect against future deer browse.

Tree and shrub plantings will be installed in Fall or during the Winter, depending on extant conditions, i.e. rainfall availability. Native erosion control seeding (see Plan for species of seeds) will be done in the Fall and should be conducted within 2 weeks of the first soaking rain.

### **SUPPLEMENTAL IRRIGATION DURING ESTABLISHMENT**

Irrigation shall be provided to each acorn cluster and individual shrub by drip irrigation lines and low-volume (GPH) emitters for a minimum of 3 years or until established. The irrigation system should run at regular intervals, and be monitored to ensure each plant is getting sufficient water. The Project Landscape Architect will prescribe initial irrigation rates for the plantings. Irrigation rates should be reviewed after the first 2 months of watering to determine whether the irrigation rate or frequency needs to be adjusted due to signs of plant stress.

The Oaks and shrub plantings should be irrigated during the first three dry seasons after planting. The plantings may also require supplemental wet season irrigation if prolonged drought conditions occur. The Project Landscape Architect shall evaluate the necessity for irrigation at the end of Year 3, and then, if an extended period is deemed necessary, at the end of Year 5. Irrigation of shrubs is unlikely to be required beyond Year 3, whereas some of the trees may require a full five years of dry season irrigation.

### **MAINTENANCE OF PLANTINGS AND INVASIVES CONTROL**

The Owner will conduct, at a minimum, annual weeding and removal of invasives in the areas covered by the Plan. Special attention should be applied to weeding in the immediate vicinity of planted trees and shrubs.

In the enhancement area, the percent cover occupied by invasive plants should be maintained at no more than 10 percent at all times during the entirety of the monitoring period. Thus, hand-weeding of non-native invasives, including Himalayan Blackberry, Broom, various varieties of non-native Thistle, and other invasive species should be conducted at least once a year. If the above performance criteria are not met at any of the annual monitoring inspections, the Owner shall immediately remove the invasives and re-seed those areas with the same Native Erosion Control Mix specified by the Plan or an approved equivalent seed mix. Straw cover protection will be applied at the time of seeding. Re-seeding will be continued annually until the cover criteria are met, or another approach to revegetation is presented to the County and approved.

### **ESTABLISHMENT GOALS AND MONITORING / REPORTING PROGRAM**

A monitoring report shall be provided to the County annually.

Successful establishment of the Plan shall require a minimum 80% survival rate for the shrubs and 33% for the Oaks after the first 3-5 years. The 33% survival rate for Oak acorns implies that at least one acorn in each planting site must survive.

In the event that more than 20% of the shrubs should die during the establishment period, additional shrubs shall be planted and monitored for an additional 3-5 years to ensure long-term survivability at a rate of no less than 80%. Plantings that do not survive due to deer browse or inadequate or malfunctioning irrigation will be replaced as required to achieve the target survival rate.