## The Experiment

Before settlers came to the San Francisco Bay, the East Bay Hills were composed of forest and woodlands. The northern part included the majestic redwoods while the southern part was dominated by oaks, buckeyes, sycamores, and big leaf maples. The colors were spectacular especially when the poppies were in full bloom.

Masonic Homes of California is located in the southern part of the East Bay and is part of a very important environmental experiment. The Masonic Homes, Tri-Ced Community Recycling , and Math Science Nucleus are working together to turn food waste (1-2 tons per week) into compost, using an in-vessel composter. As we are transforming 200 acres, we will also train youth for career skills in restoration and agriculture through a grant called "The Collaborative." Our first experiments will look at ratios of compost; how the trees, shrubs, and flowers react to compost; and how to protect vegetation from native grazers.

### For more information:


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Masonic Homes of California

# Live Oak Series Restoration Project

(forest, woodlands,riparian)

*Masonic Homes/Acacia Creek*
*Tri-Ced Community Recycling*
*Math Science Nucleus*

Masonic home 1893

## Trees

### Coast Live Oak
*Quercus agrifolia*

An evergreen tree which grows to 10-25 meters tall. It has a broad, dense crown and spreading branches. The acorns are eaten and stored by many animals.

### Valley Oak
*Quercus lobata*

The largest of North American oaks, can live up to 600 years. Leaves are deciduous with deep lobes. The bark is thick and ridged on mature species. Acorns larger than the coast live oak.

### Black Oak
*Quercus kelloggii*

Leaves are deciduous, alternate, with 7-9 lobes. Bark is thick, furrowed and blackish. Grows up to 9-24 meters and can live up to 500 years.

### Blue Oak
*Quercus douglasii*

A slow growing oak that can live to 400 years with a thick grayish flaky bark. Leaves are deciduous, simple 4-10 cm with 5-7 irregular lobes.

### Black Walnut
*Juglans californica var. hindsii*

This tree is considered rare and endangered. Compound leaves have numerous leaflets that are alternate (about 12-21). The bark is deeply ridged and grows up to 60 feet tall.

### Big-leave Maple
*Acer macrophyllum*

Maples are easily recognized by their large 3 to 5 palmately lobed deciduous leaves that are arranged opposite to each other. It produces double winged fruits, resembling helicopter blades.

### California Bay Laurel
*Umbellularia californica*

This evergreen bay tree has simple leathery lance-shaped leaves. When crushed, the leaves produce a pungent odor which were used by Native Americans for medicine and cooking.

### Western Sycamore
*Platanus racemosa*

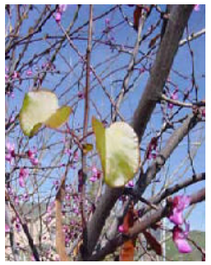
This large tree grows along creek beds. It has peeling bark that is smooth and ashy-white with greenish-gray and tan patches. The light green palmate leaves are very soft.

## Trees

### Fremont Cottonwood

*Populus fremontii*

Cottonwoods are common trees found in local creeks within Alameda County. The deciduous leaves are spade-shaped and become golden in fall.



### Red Bud

*Cercis occidentalis*

Flower is very showy, light to dark pink in color, ½ inch long, appearing in clusters in March to May before the leaves. Bark is dark in color, smooth, later scaly with faint ridges. Fruits are flattened, dry, brown, pea-like pods.

### Blue Elderberry

*Sambucus mexicana*

Elderberry stems have a soft white central pith that can be removed. Blue berries can be used for wine and jams. The leaves are compound and young trees usually have several trunks.

### Hollyleaf Cherry

*Prunus ilicifolia*

Dense, evergreen that is uniformly branched. Leaves are ovate to round, thick, glossy, rich, bright green, with spine-toothed extensions on margins.

## Shrubs

### California Lilac

*Ceanothus thyrsiflorus*

This shrub has purplish-blue flowers that are small but showy and attract butterflies, bees and hummingbirds. The early Indians would use the flowers as soap.

### Coyote Brush

*Baccharis pilularis*

This is an evergreen shrub growing up to 4 meters. Male and female flowers are borne on separate plants in late fall. It is an important pioneer species in the process of plant succession.

### Black Sage

*Salvia mellifera*

A 1-2 meter high, erect, open branched perennial shrub, with elliptical oblong leaves with fine hairs. Foliage has a distinct aromatic fragrance that gives a minty smell when crushed.

*** Use of naturalized and non native species**

Grazers (i.e. deer) can create a problem during the restoration process. We will be incorporating a few naturalized plants that may be more deer resistant. Non native species will be used in some places to help attract native butterflies to the area, but their use will be in limited areas until we fully understand the process of reforestation in this area.

## Shrubs

### Toyon

*Heteromeles arbutifolia*

This is a large evergreen shrub or small tree up to 3 meters tall. Leaves are dark green, serrated with flat clusters of small white flowers turning to brilliant red berries in the winter.

### Coffeeberry

*Rhamnus californica*

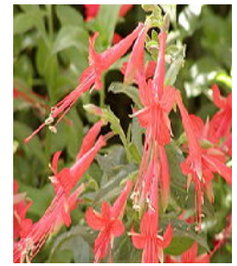
This is a medium to large evergreen shrub which bears black fruit that gives the name of coffee berry. Clusters of berries are green, changing colors from red-orange to black.

## Flowers

### California Poppy

*Eschscholzia californica*

An upright, compact perennial plant that is drought tolerant. The flowers are a brilliant orange and cup-shaped. The flowers are borne individually on long stalks turning to long, narrow seed heads in summer.



### California Fushia

*Epilobium canum*

This perennial plant has red flowers in late summer and autumn. Also known as a hummingbird flower. Leaves are ovate and light green.

DEMONSTRATION AREA

This brochure depicts some of the plants that are being used for our initial experiment. This experiment will document the various methods used to reforest this area using food waste generated on site. Food waste, wood chips, and horse manure will be converted to compost using an in-vessel composter. Native plants from the Math Science Nucleus will be used. We will experiment with different compost mixtures with native soil to see if generating trees from seed will accelerate the growth process. (Drawing by Manuel Fernandez, Landscape Architect)