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To: [Planning Division](#)
Subject: Item 6-2 Leung Properties
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Dear Planning Commissioners:

I would like to see more than 70 percent native plant species, with an emphasis on keystone species, locally native plants, and straight species, incorporated into the Leung Properties project.

A scientific study published by researchers at the University of Delaware found that when at least 70 percent of an area was planted in native plants, birds were able to reproduce and survive. But when an area was planted with less than 70 percent native plants, birds could not reproduce because there wasn't enough food for their young. More information is available at <https://www.udel.edu/udaily/2018/october/non-native-plants-birds-insects-washington-chickadee-desiree-narango-doug-tallamy/>.

The project proposal does not specify which plants will be used in the landscaping. It needs to include that more than 70 percent of the plant biomass in the project is native, and mostly species that are locally native to Antioch and/or keystone species. Also, the landscaping plan for this project should emphasize straight species.

In addition, this proposed development borders Sand Creek. Would it be possible to face many of the buildings toward the creek? The creek is an amenity and should be treated as such. In Brentwood, several new developments were set up to face Marsh Creek and an accompanying trail, and I think this approach would add value here.

I would also like to see more locally native riparian plants planted along Sand Creek, like the restoration projects that were done in Brentwood along sections of Marsh Creek as part of the developments there.

As you know, pollinators are in trouble. And humans need pollinators to provide a lot of the food that we consume.

Wildlife in California has declined by 20 percent, and at least 600 species in California are endangered.

Antioch is home to the Antioch Dunes National Wildlife Refuge. This Antioch refuge was established to protect a species of butterfly, the Lange's metalmark, found locally and nowhere else on earth. Recently, the US Fish and Wildlife Service has not been able to find any Lange's metalmark butterflies, and it's possible that they are now extinct. It might be too late for this butterfly species, but it's not too late for the many other species of native butterflies, bees, birds, and other wildlife that live in Antioch.

Two of the top reasons why pollinators and wildlife in general are in decline are habitat loss and pesticide use.

Keystone native plant species both feed pollinators and other wildlife and beautify an area too. Keystone species are the plant species native to our area that feed the highest number of pollinators, including native butterflies, bees, birds, etc.

More information about keystone native plant species is available at <https://www.bringingbackthenatives.net/keystone-species-signs> and <https://www.bringingbackthenatives.net/douglas-tallamy-resources>.

Straight species means a plant that is not a cultivar nor that has been bred for particular traits. Research shows that cultivars sometimes provide less food and habitat for pollinators.

There are 310 plants that are native to this neighborhood, according to <https://calscape.org>.

Some of these locally native plants that are also keystone species include:

- Coast live oak (*Quercus agrifolia*)
- Blue oak (*Quercus douglasii*)
- Interior live oak (*Quercus wislizeni*)
- Valley oak (*Quercus lobata*)
- Big berry manzanita (*Arctostaphylos glauca*)
- Blue elderberry (*Sambucus mexicana*)
- Silver lupine (*Lupinus albifrons*)
- Coyote bush (*Baccharis pilularis*)
- California rose (*Rosa californica*)

- Yarrow (*Achillea millefolium*)
- Black elderberry (*Sambucus nigra*)
- Nude buckwheat (*Eriogonum nudum*)
- Hooker's evening primrose (*Oenothera elata*)
- One sided blue grass (*Poa secunda*)
- Blue wildrye (*Elymus glaucus*)
- Small flowered melica (*Melica imperfecta*)
- Torrey's melicgrass (*Melica torreyana*)
- Northern California black walnut (*Juglans hindsii*)
- Dune primrose (*Oenothera deltoides*)
- California yerba santa (*Eriodictyon californicum*)

Some of these locally native plants that are also keystone species, and would be good candidates to plant along Sand Creek, include:

- Shining willow (*Salix lasiandra*)
- Red willow (*Salix laevigata*)
- Arroyo willow (*Salix lasiolepis*)
- Gooding's black willow (*Salix goodingii*)
- Sandbar willow (*Salix exigua*)
- Fremont cottonwood (*Populus fremontii*)
- Box elder (*Acer negundo*)
- White alder (*Alnus rhombifolia*)
- Mulefat (*Baccharis salicifolia*)

Many different research studies have shown that when people spend time in nature, their mental and physical health is greatly benefited, and these benefits increase substantially in areas of high biodiversity. Biodiversity is the variety of all living things and their interactions. More information is available at <https://www.nature.com/articles/s41598-019-44097-3> and <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3987044/> and <https://www.sciencedirect.com/science/article/pii/S0169204621000475>.

Biodiversity is also important because we rely on the natural world for so many things: to grow our food, clean our air and water, etc.

By using native plant species in our landscaping, we will increase and protect biodiversity where we live.

Google recently built a new campus in Mountain View. Its Bay View site incorporated 135 native trees of five species, including 84 native oaks. The 88 California native plant species used in the landscaping support birds and other wildlife and are known to host at least 26 locally native butterflies and moths. Its Charleston East site includes 88 percent of new plant species that are native to California, and 73 percent that are native to the local San Francisco Bay region. Once at maturity these plantings are projected to increase the canopy cover of this site from 8 percent to 34 percent. More information is available at <https://www.makingnaturecity.org/precedents/>. It's totally doable to incorporate locally native plants and keystone species into the landscaping in our developments.

Also, I notice that the land that this development is planned for is rated as a 10/10 for extreme fire risk. More information is available at wildfirerisk.org. I urge the Planning Commission to advocate that the buildings use nonflammable materials, such as tile roofs that are light in color.

In addition, when designing the landscaping, the developer should incorporate defensible space recommendations put forward by CalFire. More information is available at <https://www.fire.ca.gov/dspace>. Don't plant anything within five feet of the buildings, plant natives that remain green and not dried out throughout the year, make sure there is enough space between the plants especially the trees, etc.

Thank you.

Laura Kindsvater
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