

OAKLAND'S REVISED Draft VEGETATION MANAGEMENT PLAN (Dudek)
PART ONE: General Comments -- Submitted by Hills Conservation Network
12 December 2019

Hills Conservation Network appreciates the opportunity to provide inputs into the scoping for the City of Oakland's vegetation management EIR. While we are generally encouraged that the revised draft plan appears to be reasonable, these are our concerns and recommendations.

As all involved agree, the purpose of this effort is to reduce the risk of wildfire spreading from City- owned properties into residential areas, causing potential risk to life and property.

GENERAL COMMENTS:

1. A primary concern is that the Plan must be species neutral. The origins, that is, whether they are native or non-native, of any of the species mentioned in treatments for the Plan areas are irrelevant because they are not related to fire safety.
2. The Revised Plan recognizes the importance of retaining healthy, tall trees, native or non-native. We agree on the importance of thinning dense tree stands, but only within defensible space, 200' from a structure and 100' from both sides of a road. It is important that large trees be spaced close enough to provide a shaded fuel break, a closed canopy of shade that will help to prevent the growth of ladder and surface fuels, including highly flammable brush, weeds, and tall grass. We propose that no VM work take place beyond 200' from a structure or 100' from either side of a road.

Wherever thinning is done within 200', large trees need to be preserved to continue the storage of carbon, prevent erosion, develop fog drip, prevent aggressive growth of surface and ladder fuels, and reduce impacts on habitat. Tall trees provide a wind barrier

that slows the progression of a wind-driven fire. In California, research and recent fires have proved that wind is more important than fuel load in spreading wildfire.

Only hazardous trees (diseased or likely to fall over onto the trail) should be removed close to trails. The needs of disabled Oakland residents must always be considered, with trails widened close to entrances to Oakland parks. No smoking rules must be enforced in Oakland parks.

3. It is apparent that portions of this Plan will disturb critical habitat areas for threatened and federally protected species, most likely the Alameda Whip Snake. Because of this, compliance with the Endangered Species Act will be required. It is not apparent from the Plan or scoping documents how the City is planning to comply with the ESA. Please provide detail as to the City's plan to make this happen.

4. There appears to be no mention of flammable native bay trees in the Revised Plan. It is likely that this species exists in many of the Plan areas or will surely exist as a consequence of some of the planned vegetation management activities. Oaks and bays tend to grow in the same area which is often denoted as "oak-bay woodland, or "oak-bay savannah," which is actually mostly tall grass and brush. Bays are a known vector for Sudden Oak Death which has already killed thousands of oak trees that provided tinder for fires in the North Bay. As Sudden Oak Death progresses, strategies need to be employed to cope with this impending disaster to the oak woodland which dominates some of the Oakland-owned properties.

It should be noted that the oil content of bay leaves is higher than the oil content in, for instance, eucalyptus leaves, and bay leaves are easier to ignite because bays grow

closer to the ground for many years. To protect the oaks susceptible to Sudden Oak Death, bay trees should be removed wherever they grow close to oaks.

5. The timeline for this Plan is not clear. While it is described as being a 10 year Plan and there are priorities for different pieces of the Plan, there is nothing in the documentation that would lead the public to understand the implementation timeline. This is a significant omission in that it affects how the public's access to these lands might be impacted and, equally important, whether this Plan complies with BAAQMD carbon emission rules. For the Plan to be valid, it needs to provide a detailed implementation plan and timeline.

6. While removing vegetation (of all species) may reduce fire risk the day after this vegetation is removed, the reality is that new vegetation that is easier to ignite with longer flame lengths will emerge where the previous vegetation no longer exists. Unless this Plan specifies how the City will maintain any treated areas in the condition they were in the day after treatment, then the risk analysis cannot be correct as the conditions will change within a few days, and will continue to change. This Plan must clearly delineate for each area what the City is going to do to maintain these areas in the condition they were in the day after treatment.

For example, if the intent is to remove certain tall trees, to open the canopy, it is clear that the understory will be invaded by weedy, flammable fine fuel vegetation. For example, if mature eucalypts are replaced by chaparral and grasses, or even by bay trees, the fire risk would clearly be GREATER than what it was pre-treatment.

It is for this reason that the Plan must analyze the initial condition (which it has) and the new equilibrium condition that will result from implementing the plan. This "new equilibrium" ecology will in most cases be substantially different from the ecology that resulted

immediately post treatment. To not analyze this condition prevents reviewers of this Revised VMP from understanding whether the Plan will actually achieve its goals.

7. The loss of carbon storage when large, mature trees are removed must also be calculated due to its effect on local and global climate change. Large trees help to cool the air because of the shade they provide and the fog drip that keeps the ground under them moist. Removing a large, healthy tree of any species must be considered carefully and its impact not only on climate, but also on erosion, windspeed, and habitat must be measured.

8. Terms like “pyrophytic,” “pyrophytes,” and “hazardous trees” should be eliminated because these terms are too vague and subject to interpretation. To allow an implementer in the field to make a subjective assessment as to which species are “fire prone” is to allow opinions to replace science. This sort of subjectivity has no place in a plan document that is intended to provide a roadmap to many persons over many years.

9. Flame lengths should be considered in the deciding which vegetation should be preserved. Many “native” species that some advocates would like to encourage actually have higher flame lengths than the “non-natives” they would like to eliminate. Mixed hardwoods such as oaks and bays have an average flame length of 17.5 feet, while eucalyptus have an average flame length of 13.5 feet. Trunks of eucalypts are difficult to ignite and typically survive fires. As HCN stated in its comments on the original VMP, strategies that target eucalyptus and pines will result in replacing vegetation with relatively low flame lengths with vegetation such as oak-bay woodland, brush, weeds and grass that has far greater fire risk potential. Recent tragic fires in the North Bay and

Southern California, from 2017-2019, have been mostly fires in “native” chaparral, brush and grassland.

10. Appendix F --The Weed Whackers' Handbook should be deleted from this Plan. It is simply a guide to restoring native plants and trees. It has nothing to do with mitigating fire risk.

11. This Plan recommends additional use of pesticides in parks and other Oakland-owned areas where the use of pesticides has previously been illegal. That is a dangerous recommendation: the poison will find its way into the ground water and, ultimately, into the Bay. We propose that no pesticides be used in Oakland parks and other Oakland-owned areas. This Plan should remove all consideration of pesticides as a means to prevent regrowth of cut vegetation or to kill brush and weeds. Since the primary goal of this Plan is to enhance the safety of Oakland residents, the widespread application of known carcinogens is in direct contradiction to this objective. Other communities and agencies, including EBMUD in our area, have demonstrated for over a decade their ability to maintain their hill properties without the use of pesticides. There is simply no excuse for the inclusion of pesticide application as part of the VMP. Oakland should be a leader in valuing the lives of the animals, insects, and especially the health and lives of residents who use its parks.

12. In several cases the Plan calls for removal of vegetation for no obvious fire risk mitigation benefit. An example of this is what is proposed for Garber Park, an area that is all but irrelevant from a fire risk mitigation perspective. The notion that a handful of large 150+ year old eucalyptus trees that survived the 1991 fire is an unacceptable risk while

there are tons of highly flammable natives immediately beneath them is borderline ludicrous. This is a clear example of nativist zeal replacing fire risk mitigation and is unacceptable in a Plan that uses public money to enhance public safety on public land.

The diseased oaks in Garber Park need to be removed, and the oaks in the park need to be carefully monitored for Sudden Oak Death which could spread to the many oaks in the neighborhood on Evergreen Road.

We also disagree with the treatment of Caldecott Field (North Oakland Regional Sports Field). This Plan suggests thinning some trees (probably the right thing to do in this case), but it allows some other species to continue to exist there. We think this is folly as these other species are still a fire risk – fuel is fuel. The treatment plan for this area, as currently described, will not achieve the stated objective of the Plan. It could achieve that objective with the creation of a wide, vegetation-free zone, a real fuel break, between trees above Caldecott Field and homes along Skyline and Mountain Blvd.

As has been demonstrated by those who manage critical installations at Lawrence Berkeley Lab (and numerous other similar locations), defensible space is key to fire safety for structures. Jack Cohen has conducted many experiments and has written extensively about defensible space. While it would be ideal if all WUI and adjacent homes in Oakland had adequate setbacks and separation between them to enable to create defensible space, the reality is that the size and location of the homes make this impossible. What we propose is that the Plan examine each subject City property and ensure that it is difficult for a fire to move into the adjacent neighborhood. Instead of focusing on

defensible space between homes (infeasible due to close spacing), the focus instead should be on protecting clusters of structures, ie, neighborhoods.

PART TWO: HCN's Proposed Alternative Plan, and discussion.

The Hills Conservation Network (HCN), composed of Oakland hills residents, has reviewed Dudek's VMP, and has a series of comments which, if incorporated in the final plan, would improve our chances of avoiding or surviving a future fire in the hills.

The explicit purpose of the VMP is to mitigate the risk of fire, and the proposed primary methodology is to reduce the amount of vegetative fuel where it poses a threat to structures and people. **Note that the type of fire being discussed is a vegetation fire, not a structure fire.** That is to say that once a fire enters a built environment, it becomes a very different situation, and the treatments proposed in Dudek's VMP become largely irrelevant. (Note that the 1991 fire was a vegetation fire for only its first three minutes; after that, for the next two days, it was a structure fire.)

Clearly, the focus of VM is to reduce the potential for ignition; if there is no ignition, there is no fire. Therefore the highest priority for fuel reduction should be fine fuel, cured fuel, and – since most fires in the hills are human-caused – fuel in proximity to human activity.

The second priority should be fuel that spreads the fire, and increases the intensity of the fire. Studies of actual vegetation fires have demonstrated that ground fuel (including litter) and near-ground fuel most determines spread and intensity. Refer to the research of Project Vesta.

Third priority should be creating or maintaining a fire-resistive environment where potential fuel exists. This would include lowering the temperature (by shading), increasing moisture (by catching fog drip), reducing wind speed (with wind breaks), discouraging the succession of weedy, flammable fine fuel (by shading), and avoiding the creation of more fuel (by leaving behind chips, slash, or rotting logs).

*Dudek's proposed VMP might accomplish these priorities, if interpreted and implemented narrowly but, as written, there are too many inconsistencies and vague directions that could defeat the purpose of the Plan. Dudek's Plan also incorporates unsupported claims and assumptions that are counterproductive and must be deleted. As an informed and active stakeholder, HCN has repeatedly and consistently provided comments that address these issues, but we believe our input has been ignored, and instead the authors of the Plan have tailored the VM to satisfy other stakeholders -- **whose objectives are other than reducing the risk of fire**, such as converting or restoring the hills landscape into an "all-native" environment. It is important that the VMP is clear and accurate so that*

individuals who actually implement the work do not have the latitude or opportunity to modify the intent.

Therefore, HCN's Alternate Plan is simple and direct:

1. VM consists of removing litter, ground fuel and near-ground fuel, focusing on vegetation that is less than 3" diameter, and dead or cured. This includes removal of tree limbs up to 8' above the ground level. VM applies to the area within 200' of structures, and 200' along major (evacuation) roadways (100' each side of road), and within 200' of public use spaces such as viewing turn-outs. Beyond 200', no treatment is required.
2. Dead trees are removed. No live trees exceeding 18" diameter at breast height shall be removed unless they are spaced less than 25' oc. Tree canopy is to be preserved.
3. All VM shall be species neutral. No species shall be targeted for eradication. Considering the long-term condition, and considering the continued increase of sudden oak death, Bay trees that threaten oak survival should be removed.
4. At the interface with multiple developed properties, create a perimeter fuel break 200' wide.

Discussion:

- A. Note that ridgelines are not treated unless they fall within the 200' boundary. The rationale for fuel reduction along ridgelines was that tall ridgeline trees might generate flying embers, spreading the fire downwind. There is no evidence that occurred in past fires, and maintaining ridgeline trees provides a windbreak, mitigates the Diablo wind.
- B. Concerning flying embers ("spotting"), it is important to note that, in order to spread the firefront, **the burn duration of the airborne fuel must exceed its flight time**, or else it becomes merely flying trash. Research in Project Vesta demonstrated that eucalyptus embers (bits of bark) fly "a few tens of meters," and were either burned out or overtaken by the firefront by the time they landed. The burn duration of eucalyptus leaves is measured in a few seconds, and once burned, the leaves are completely consumed and incapable of flying anywhere.
- C. Dudek's VMP mentions torching, or crown fire, frequently, as if it is a major risk. If the understory fuel and lowhanging limbs are removed, the "ladder" to the canopies is removed, and the surface fire typically does not remain under the trees long enough to ignite the crown.
- D. The key question for the VMP is: is the post-treatment vegetation environment less ignition- and fire-prone than the untreated condition? If not (as the US Forest Service commented) **it would be better to do nothing**. The most ignition-prone vegetation is grass and brush, and the flame lengths in a mature eucalyptus environment are shorter than most other categories of fuel, so it makes no sense to convert eucalyptus stands to a so-called "oak-bay savannah," which is actually primarily grass and brush.

- E. Dudek's VMP fails to address the fuel environment beyond the day after treatment. To be realistic, the Plan should consider what exists one year, and five or ten years, later. Experience has shown that weedy, flammable fine fuel tends to invade treated areas, so the Plan should include repeated, long-term maintenance.
- F. Dudek's VMP mentions re-planting in the treated areas. Since the objective is to reduce the vegetative fuel load, it makes no sense to be adding fuel.
- G. Dudek's VMP includes the application of herbicides to discourage plant growth and re-sprouting. This is unnecessary, counterproductive and unhealthy. Adequate VM is possible without the use of herbicides; EBMUD's treatments of its forested acres in the hills is the example.
- H. Dudek's VMP should delete references to "native," "hazardous trees," "pyrophytic" vegetation, specific species, etc, since these terms are ambiguous, and thereby open the door to counterproductive, subjective decisions during implementation. All fuel is fuel, and ultimately all of it will potentially ignite and burn. The key is to reduce the risk of ignition by reducing or eliminating fine, dried-out fuel, especially in the vicinity of humans.
