



Society of American Foresters

California Society of American Foresters
Bay Area Chapter

January 21, 2021

Horizon Water and Environment, LLC
Attn: Ken Schwarz, Principal, VMP DEIR Comments
266 Grand Avenue, Suite 210
Oakland, CA 94610

Dear Mr. Schwarz:

On behalf of the Bay Area Chapter of California SAF, I appreciate the opportunity to submit the following comments after our review of the revised draft of the City of Oakland's Vegetation Management Plan (VMP) and the associated draft Environmental Impact Report (DEIR). We applaud the City of Oakland's efforts in getting this plan to this point; much good work has gone into it. The plan is generally well-written and informative. We want the City to move ahead on implementation of the VMP, hopefully with some suggested modifications as contained in this letter, but we recognize that doing something to ameliorate the current hazards is immensely better than doing nothing.

To assist you in understanding our concerns, I have attached to this letter several state and national SAF position papers that provide additional background.

We support your choice of the VMP as the environmentally superior alternative, but we believe a more rigorous Alternative 5 is needed for the following reasons:

- Ecological restoration should be a goal of the VMP, including the establishment of native plant species where nonnative species dominate, especially those nonnative species identified as high fire hazard in Appendix D of the VMP.
- Thinning of dense stands of nonnative tree species should only be done as part of an overall strategy of restoration, i.e., the goal of any tree removals should always be to eventually convert these stands to native tree or vegetation cover in order to build greater ecological resiliency. Thinning alone will only lead to a continuing need for entries into these stands as the trees grow and mature, and will not ameliorate the fire risk posed by these species. Budget uncertainties into the future should be a consideration when setting yourselves on this path of continual thinning and understory fuels management. The economic and ecological tradeoffs between thinning versus wholesale conversion of eucalyptus stands should be evaluated,

including maintenance considerations. However, if thinning is kept as the desired practice, we ask that you design each entry to be sufficiently intensive to assure that tree crowns will not close before the next thinning entry (10 years from now?) and indeed is sufficiently thinned to allow work towards establishing native vegetation in these stands.

- There should be a more complete description of follow-on maintenance practices for the life of the VMP, such as the frequency and cost to maintain ground fuels at acceptable levels, to maintain crown separation of nonnative trees, and to maintain separation between ground fuels and tree crowns.
- The nonnative tree stands will continue to be a source of fire brands in future fires. The analysis of fire hazard on the University of California Strawberry Canyon property indicated distribution of fire brands from eucalyptus and Monterey pine stands on ridges under high velocity winds would carry more than 2,000 feet (Rice 2020). Converting these stands of nonnative vegetation to native vegetation would significantly reduce ground fuel loads (Agee et al 1973; Russell and McBride 2003). Reduction in ground fuel amounts would reduce fire intensity and flame length and therefore reduce the production and transport of fire brands. The necessary width of fuel breaks would also be greatly affected by a transition away from these flammable nonnative species.
- The use of prescribed fire as a vegetation maintenance tool should have been considered and included in the VMP especially on ridges where fire moving from adjacent jurisdictions might occur, or along power-line transmission corridors. Prescribed fire use is further rationalized since the native vegetation has evolved with fire and becomes less resilient as fire is withheld. Prescribed fire as a maintenance tool is currently being used to the east in the Moraga-Orinda area. The Governor's recently released 2021-22 budget includes funding for fuel reduction methods, and highlights the need to increase the use of prescribed fire. The Bay Area Air Quality Management District has worked with the Moraga-Orinda Fire District in approving the use of prescribed fire. Prescribed fire is a more viable tool now than at any time in the recent past; its use would result in lower maintenance costs over the life of the VMP as compared to hand and mechanical methods and would prove beneficial to a goal of ecological restoration. If the nonnative tree stands are managed into the future as is currently proposed, prescribed burning would be the most cost-efficient and effective method of managing ground fuels (Agee et al 1973).
- We support the current highest treatment priorities identified in section 9.3.3 of the VMP (those listed as #1, with modifications as described elsewhere in this letter). It was however unclear to us how the fire behavior analysis led to choosing these as the highest priority areas. We ask that once these initial highest priority areas are treated, that the City will use the VMP fire behavior analysis to set the priority of remaining areas to treat. Please continue to use realistic fire weather parameters based on conditions seen during recent destructive fires in the wildland urban interfaces in the Bay Area.
- The vegetation management zones along roadsides, especially along routes of egress, should be modified to extend 100 feet from roadside edges and should include any trees with underlying structural or health conditions that are tall enough

to fall onto streets and roads. This may in some cases require looking outside of the 100-foot roadside clearance.

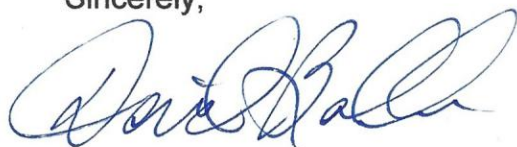
- In concert with the goal of ecological restoration, adaptive management in light of climate change should guide management practices and restoration plans. Adaptive management strategies that incorporate new information and changing conditions will be critical to ecosystem restoration. Annual grasslands may become more dominant, oak woodlands less so in the planning area in the future as climate changes. Management targets in many cases will have to be based on anticipated future conditions (Ackerly et al 2012). One strategy may be to intentionally plant a high diversity of genotypes collected from diverse environments across the range of a species, and allow the most successful genotypes to establish through the process of natural selection.
- Thinning trees by hand and the other proposed methods can have some benefits such as a lower impact on recreation while the work is being completed. However, these methods are time consuming, expensive, and provide only short-term relief to the vegetation management issues described in the plan. We suggest that the City consider mechanical methods of thinning and tree removal to treat more acres quicker and provide longer-term benefits. Logging systems such as self-leveling feller bunchers, forwarders, and winch-assisted logging systems are regularly used for treating vegetation in forested areas with steep slopes. These logging systems have been shown to be an efficient way to treat large areas while increasing safety for operators (Holzfeind et al 2020). While increased erosion can be a concern, operators of logging equipment use best management practices to reduce impacts. California's Forest Practices Act is in place to ensure that all logging operations in California follow best practices for reducing environmental impacts. In addition, the East Bay hills have a significant network of roads which would likely mean that limited new roads would need to be created to successfully implement a mechanized treatment plan. We believe that ecosystem restoration and fire-risk reduction are very important to the long-term health and safety of this area for residents and natural ecosystems alike, and believe that mechanized logging systems could be a better way to achieve these goals long term.
- It is important that the use of triclopyr herbicides is included to treat cut stumps in eucalyptus to prevent sprouting. Glyphosate herbicides will not be effective in treating eucalyptus stumps and will result in resprouts. A more minor herbicide-related issue involves a best management practice for chemical techniques (page 134 of the VMP) which only allows the use of surfactants approved for aquatic use by US EPA. US EPA does not regulate surfactants at all and does not maintain a list of aquatic-use surfactants.
- There should be an Ecological Restoration Guide added to the appendices similar to the Weed Workers' Handbook in appendix F. This new appendix would outline the City of Oakland's current ecological restoration efforts, identify stakeholders (e.g., city departments, Oakland Wildlands Stewards, etc.) and their roles, and outline best management practices for improving ecological resources while reducing fire hazards.
- The city should consider the development of an income-generating processing facility capable of utilizing the tremendous quantity of biomass that will be produced,

such as for power generation, mulch or lumber production, etc. Such a facility might be operable indefinitely given the amount of urban waste produced annually.

The Bay Area Chapter is a chapter of the California Society of American Foresters (Cal SAF), which is a state society of the Society of American Foresters (SAF). The mission of SAF is to advance sustainable management of forest resources through science, education, and technology; to enhance the competency of its members; to establish professional excellence; and to use our knowledge, skills, and conservation ethic to ensure the continued health, integrity, and use of forests to benefit society in perpetuity. Cal SAF represents around 450 foresters in California, including researchers, academics, federal and state government, industry, and consulting foresters in the state. Please visit our website at californiasaf.org for more information.

As stated at the beginning of this letter, we appreciate all the work that has gone into this planning effort. Please feel free to contact me if SAF can be of any further assistance.

Sincerely,



David Bakke, Chair
Bay Area Chapter, California SAF

cc:

John Todd, Chair, California SAF
Tim Robards, Vice-Chair, California SAF

Attachments:

- Forest Management, Carbon, and Climate Change, A Position of the Society of American Foresters, May 2, 2020.
- Nonnative Invasive Forest Species, A Position of the Society of American Foresters, 2017
- California's Wildfire Emergency, A Position of the California Society of American Foresters, May 17, 2019
- The Role of Mechanical Treatments in Reducing Risks of Catastrophic Wildfire in California, A Position of the California Society of American Foresters, May 17, 2019

References (copies available):

Ackerly, David D., Rebecca A. Ryals, Will K. Cornwell, Scott R. Loarie, Sam Veloz, Kelley D. Higgason, Whendee L. Silver, and Todd E. Dawson. 2012. Potential Impacts of Climate Change on Biodiversity and Ecosystem Services in the San Francisco Bay Area. California Energy Commission. Publication number: CEC-500-2012-037. Available on line at <https://uc-ciee.org/ciee-old/climate-change/3/675/101/nested>

Agee, J.K., R.H. Wakimoto, E.F. Darley, H.H. Biswell. 1973. Eucalyptus fuel dynamics, and fire hazard in the Oakland Hills. California Agriculture 27.9 (1973): 13-15.

Holzfeind, T., Visser, R., Chung, W., Holzleitner, F., Erber, G. 2020. Development and Benefits of Winch-Assist Harvesting. Current Forestry Reports 6, 201–209 (2020). <https://doi.org/10.1007/s40725-020-00121-8>

Rice, C. 2020. Wildland Vegetation Fuel Management Plan. University of California, Berkeley. Wildland Resources Management. Prepared for Facilities Services Department. University of California, Berkeley. Available on line at <https://capitalstrategies.berkeley.edu/hill-campus>

Russell, W.H., J. R. McBride. 2003. Landscape scale vegetation-type conversion and fire hazard in the San Francisco bay area open spaces. Landscape and Urban Planning 64(2003): 201-208