The Case for an Updated Fuel Reduction Plan for EBRPD Parks

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Background. In 2009, EBRPD issued a plan for fuel reduction in its parks in the East Bay Hills[1]. At over 400 pages, the report provides a review of historical fires, the relevant ecological setting, and possible treatment scenarios. Most importantly, it provides a detailed treatment plan that consists largely of cutting shaded fire breaks roughly 100 feet wide along the interface been the Park and neighboring cities. After a number of legal challenges and permitting delays, EBRPD began executing the plan in 2018 and rapidly accelerated the process in 2019.

One of the most interesting figures in the 2009 Plan shows pictures of Wildcat Canyon (just east of Berkeley) circa 1900 and 2000 (see below). Trees and brush have proliferated during the 100-year period, much of it highly volatile pines and eucalyptus. The picture illustrates that the natural state of the Canyon was largely grassland. This grass land was maintained by fires occurring every few years which cleared brush and young trees. The larger trees survived in part because the grass fires burnt quickly with limited heat intensity. Frequent fires removed vegetation and kept a natural balance that avoided damaging conflagrations.

Figure taken from 2009 EBRPD Plan showing Wildcat Canyon in 2000 (left) and 1900 (right).

Once EBRPD took control of the land it began suppressing wildfire in accordance with accepted forestry practices of the time. This broke the natural balance so that the vegetation has increased the available fuel (tons of biomass/m^2) by orders of magnitude in the ensuing years. All western forests have experienced a similar imbalance, and this the major contributing factor to the megafires seen in recent years. Of course, the warming climate is the other major contributor but the megafires could not have reached such intensity had the forests not been overgrown.

Limitations of 2009 Plan. While the 2009 EBMUD plan was laudable as far as it went, it primarily worked around the edges of the problem, both literally and figuratively. A look at the treatment map shows that treatment areas represent a small portion of the total acreage. Much of the proposed work focuses on forming narrow shaded fire breaks between the parks and the urban areas and thinning of eucalyptus groves. The firebreaks can stop small local fires, but they cannot stop a large fire starting in the interior of the parks fed by all the other fuels that have built up over the past 100 yrs.

[1] https://www.ebparks.org/about/stewardship/fuelsplan/plan.htm

The total treatment area in 2019 represents about 1% of the total acreage of the park lands being treated[2]. In fact, the percentage of vegetation removed is far smaller because treatment leaves a lot of the larger trees in place including some of the invasive, incendiary species such as eucalyptus. Given this small number of 1%, it is very likely that the amount of fuel being removed in the present treatment effort is orders of magnitude less than the normal annual vegetation growth in the parks. In other words, the overall fuel load in the parks is still increasing. At 1% treatment, EBRPD will never reach any semblance of the balanced natural state that existed before EBRPD took over stewardship of the land. How bad is the imbalance? We don't really know because EBRPD does not routinely track the areal coverage of vegetation in the parks – a basic metric in any well managed forest.

What is needed?

Taming this human-created Frankenstein is not easy. Removing fuel from overgrown forest is expensive and the methods have major limitations. Removing large amounts of vegetation by hand or machine over hundreds of acres would cost many millions of dollars. Controlled burns are cheaper but will face major objections from multiple stakeholders including the AQMD. Given all the constraints it is impractical to think that the parks can ever be returned to their natural state prior to fire suppression. On the other hand, *continuing the present imbalance where vegetation growth outstrips removal ensures that the risk of catastrophic fire worsens over time as the climate warms*. If the present, limited approach for fuel removal continues, it is only a matter of time before a fire erupts in the East Bay parks during Diablo wind conditions and kills dozens of people and consumes hundreds of homes. The recent megafires have clearly demonstrated that these fires will not only affect residents along the wildland interface but can reach deep within the city limits. *EBRPD would clearly hold considerable moral responsibility for such an event and probably substantial legal and financial liability*.

No easy answers exist to bringing the vegetation in the parks back to some semblance of balance and that further study is needed. An obvious vehicle for this is to update the 2009 fuel reduction plan. Many important things have occurred since 2009 and the update should consider the following:

1. *Account for the lesson's learned from the recent megafires.* Probably the most important take-away is that modern fires are far more intense and uncontrollable than in the past thanks to the overgrown forests and a warmer, drier climate. Another important lesson from the Napa fires is that a major wildfire in Tilden, Wildcat, etc. WILL reach far into the interior of the adjacent cities.
2. Develop a strategic plan to bring vegetation growth to some kind of steady state over a multi-decadal period, perhaps 50 years. The plan should consider the latest projections on the warming climate from regional climate models. It should also look closely at the practicality and cost of the various treatment options especially controlled burns. The plan should also establish a large-scale monitoring program that estimates the amount and type of vegetation being added on decadal time scales which is essential data that dictates how much vegetation must be removed in order to maintain a sustainable forest in a warming climate.

We believe that along with earthquakes, the threat of a megafire originating from the East Bay Parks represent the two most serious threats to our communities. Unlike earthquakes, much can be done to lessen the risk of a megafire, but it depends critically on EBRPD developing and implementing an updated, realistic, long-term strategic plan that addresses the overgrown state of its forests.

[2] According to data provided to us the 2019 Plan will treat a total of 56 acres in Wildcat and Tilden which is 1.2% of the total in these parks (4500 acres). Similar numbers apply at the other EBRPD parks.