

V. ALTERNATIVES

The CEQA Guidelines require an analysis of a range of reasonable alternatives to the proposed project, or the location of the proposed project, which could feasibly attain most of the project's basic objectives and avoid or substantially lessen any of the significant effects of the proposed project. The range of alternatives required in an EIR is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.¹

The Wildfire Hazard Reduction and Resource Management Plan (Plan) has been described and analyzed in the previous chapters with an emphasis on potentially significant impacts and the guidelines, best management practices and performance standards included in the Plan and recommended mitigation measures to avoid these impacts. The following discussion is intended to inform the public and decision-makers of the potentially feasible alternatives to the proposed project.

This chapter is divided into three sections. The first section provides a brief discussion concerning alternatives that were considered but rejected. The second section briefly describes the principal characteristics of the alternatives considered in this section (i.e., the No Project alternative and the Mitigated alternative) and provides a qualitative comparison to the project. The last section discusses the environmentally-superior alternative.

Chapter III of this EIR describes the proposed Plan and identifies its purpose and lists the goals and objectives contained within the Plan. The Plan goals are listed below.

- Reduce fire hazards on District-owned lands in the East Bay's wildland-urban interface to an acceptable level.
- Maintain and enhance ecological values for plant and wildlife habitat consistent with fire reduction goals.
- Preserve aesthetic landscape values for park users and neighboring communities.
- Provide a vegetation management plan which is cost-effective and both financially and environmentally sustainable to EBRPD on an on-going basis.

The 12 Plan objectives (listed in Chapter III, Project Description) serve to more specifically direct wildfire hazard reduction and vegetation management actions. The purpose of these objectives and the policies and guidelines within the Plan is to provide guidance to District staff that will make a variety of informed, adaptive decisions according to site-specific information and will prepare annual fuel treatment plans that identify individual projects designed to meet the Plan goals over time (see Plan Chapter VI, Plan Implementation). The management goals and treatment recommendations included in the Plan focus on specific high wildfire hazard treatment areas and vegetation types. The treatment recommendations in the Plan are intended to be flexible and adaptable and provide guidance to the District as they prepare specific treatment prescriptions for individual areas in order to address changing needs and conditions over time. The individual fuel treatment plans will be based

¹ *CEQA Guidelines*, 2008. Section 15126.6.

on site specific assessments and available information, including this EIR, background studies and the District's GIS database. Specific treatment guidelines, best management practices, and mitigations are included in the Plan and this EIR to address the fuel reduction methods, vegetation types, and environmental conditions likely to be encountered during implementation of the Plan recommendations (see Table III-2 in Chapter III. Project Description) and the vegetation management program. The vegetation management program (VMP) identifies and describes the various vegetation types found within the East Bay parklands, including their associated fuel characteristics; describes treatment considerations for invasive plants; outlines goals and objectives of vegetation management activities within the EBRPD's jurisdiction; and delineates recommended treatment performance standards for each vegetation type to meet EBRPD's vegetation management goals. Coupled with the information presented in Chapter IV. Fuel Reduction Methods, the VMP provides information to enable the District to determine and prepare the annual fuels treatment plan.

The evaluation of environmental topics contained in Chapter IV of this EIR assesses the potential impacts that could occur with implementation of the Plan. Based on the analyses, all potential impacts but one associated with implementation of the Plan can be reduced to less-than-significant levels with the implementation of Plan guidelines and the mitigation measures identified in this EIR. One significant and unavoidable impact associated with short term substantial adverse visual impacts to the scenic character of the Study Area was identified.

A. ALTERNATIVES THAT WERE CONSIDERED BUT REJECTED

The following section describes five alternatives to the proposed project that were considered but rejected for the reason(s) provided.

1. No Action Alternative

Under the No Action alternative, the District would not undertake any existing or new fuel reduction activities to either maintain the existing fuel reduction zone or to complete projects that have been authorized under the FEMA Environmental Assessment.² In the short term, no potential adverse effects associated with vegetation management activities and related to biological resources, soil loss, erosion, compaction, potential landslides, water resources, air quality, cultural resources, and visual resources would occur. However, none of the beneficial impacts of the Plan would occur, including: reducing the threat of property damage, personal injury, and other impacts to public health and safety caused by future fires; removing non-native, highly flammable, invasive plants, and ultimately converting park vegetation to low fire hazard primarily native plant species and habitat types. Additionally, this alternative would not meet the goals and objectives of the Plan or the District's Master Plan objectives and policies, and has been removed from further consideration.

2. Maximum Fuel Reduction Activities

Under the Maximum Fuel Reduction Activities alternative, the entire Study Area (approximately 19,000 acres) both within and outside the recommended treatment areas described in the Plan would be within the "area of impact" and considered and prioritized for fuel reduction activities. Under this

² URS Corporation, 2003. Final Environmental Assessment for the East Bay Regional Park District Vegetation Management Projects, Alameda and Contra Costa Counties, California. HMGP #919-515-24. Prepared for the Federal Emergency Management Agency. April.

alternative, the District would first treat all areas of high hazard fuels (as determined through the wildfire hazard assessment and FlamMap modeling, see Appendix C of the Plan) regardless of whether they were adjacent to homes and facilities outside of the parklands.

This alternative would ensure that the most hazardous fuels were treated within each park unit, environmental resources within the parks were considered, and park facilities at risk were protected. However, this alternative would not meet the primary objective of protecting life and property, nor would it meet the goal of providing a cost-effective vegetation management plan that is both economically and environmentally sustainable on an on-going basis. For these reasons, this alternative was considered but rejected for not meeting the basic goals and objectives of the project.

3. No Tree Removal

Under the No Tree Removal alternative, the fuel reduction and vegetation management activities identified in the Plan would be fully implemented, except that no trees would be removed as part of any fuel reduction activities. While this alternative would maintain ecological and landscape aesthetic values within the Study Area over the short-term, the increasing number of trees and overall density within tree stands of all types would contribute to increased wildfire hazards and would promote the spread of diseases within and across stands, such as sudden oak death and pine pitch canker. Furthermore, mature and young eucalyptus and Monterey pine forests are non-native plant species that were widely introduced in large plantations and pose significant fire hazards within the Study Area. Non-native eucalyptus and pine are some of the most dense and flammable plant communities in the hills. Unmaintained eucalyptus groves can have 400 to 900 trees per acre with fuel ladders into the canopy and 50 to 100 tons of flammable fuel on the ground.³ Wind driven wildfire in these groves can be expected to produce flame lengths and ember throws that will quickly overcome firefighters and significantly reduce evacuation time for homeowners. Unmaintained pine groves are also extremely flammable with deep needle duff on the ground and dense pine seedling growth within and around the grove. Additionally, eucalyptus re-growth through stump sprouting of previously cut mature eucalyptus is a significant issue and fire hazard in the Study Area. The young eucalyptus forest (one to ten years of age) is dominated by trees with multiple trunks and a large amount of leaves at the lower levels, and is more hazardous than mature eucalyptus forest due to high tree density and the presence of multiple stems, which can suspend dead leaves and branches within these stems that act as an additional ladder fuel. It should be noted that selective thinning, pruning and removal of ground and ladder fuels are the recommended actions for the majority of the approximately 1,360 acres of eucalyptus stands within the identified treatment areas (see Table III-2 in the Project Description chapter of this EIR.) Removal of eucalyptus or pine stands is the recommended action when the eucalyptus or pines: (1) are located along a ridgeline close to homes to minimize ember production and distribution during a wildfire under Diablo wind conditions; (2) have heavy concentrations of understory fuels and are located adjacent to designated strategic fire routes or major roadways used for evacuation and emergency access; and (3) are located above a well-developed understory of native plant communities (e.g., oak-bay woodland). Even if most of the eucalyptus forests within the recommended treatment areas were removed (approximately 1,360 acres of eucalyptus), there would still be thousands of acres of eucalyptus and Monterey Pine forests remaining within the 19,000-acre Study Area.

³ Kent, Jerry. 2009. Non-published Draft Wildfire Discussion Paper to EBRPD and LSA Associates, Inc. January 21.

This alternative would not meet the primary objectives of protecting life and property, maintaining a network of strategic fire routes for evacuation and emergency access; and reducing and removing non-native invasive plants and converting park lands to viable, sustainable, and low hazard ecosystems. This alternative also would fail to meet both the goals and objectives of the project over the long-term. Because of this reason, this alternative was considered but rejected.

4. Wildland-Urban Interface Management Only

To maximize the protection of homes and buildings outside of the parks, under the Wildland-Urban Interface Management Only alternative, the fuel reduction and vegetation management activities identified in the Plan would be fully implemented only on park lands within treatment areas that are within 200 feet of homes and other structures outside of the parks and along strategic fire routes. The eucalyptus stands that represent significant threats from torching and crown fires that can cause ember flight under a Diablo wind condition would not be treated, nor would any developed facility or facility at risk as defined in the Plan (see Table III-1 in Chapter III, Project Description). Similar to the No Tree Removal alternative, implementation of this alternative would not meet the Plan objectives of protecting life and property as the fire threat associated with eucalyptus and Monterey pine on ridges producing embers and quickly spreading fire under a Diablo wind condition wildfire is significant. Additionally, not managing vegetation to protect facilities at risk, some of which are cultural resources, could create new significant impacts associated with this alternative. Because this alternative would fail to meet the basic objectives of the Plan, it was removed from further consideration.

5. No Chemical Use Alternative

The No Chemical Use alternative proposes that all fuel treatment methods except chemical treatments would be included for consideration as part of fuel reduction and vegetation management activities covered under this EIR. The reader should note that no significant potential impacts related to the use of chemicals for vegetation management activities were identified as a result of the analyses in this EIR. The goals and objectives of the Plan would generally be achievable, under this alternative with the exception that, where chemical treatments would otherwise be the most economic and effective means of treatment, other treatment methods would be required and so may not provide the most cost-effective or financially sustainable vegetation management plan possible.

The Plan proposes that the primary use of chemical treatment is to prevent the re-growth of cut vegetation, particularly in areas which are inaccessible to heavy equipment and where soil disturbance is to be avoided, and to control invasive non-native plant species that exacerbate wildfire risk (e.g., broom and eucalyptus resprouts). Per the Plan and as evaluated in Section IV.H, Hazards and Hazardous Materials of this EIR, chemical use is an efficient and cost-effective method that the District uses under the auspices of EBRPD's IPM policies and practices and in combination with other treatment measures (e.g., mowing, burning and hand removal). Recent studies conducted by the Marin Municipal Water District (MMWD) confirm this approach; the results of their studies on the use of non-chemical control methods for the control of invasive non-native plants indicated that non-chemical alternatives are ineffective for large-scale vegetation management projects. (see Appendix

H of the Plan for additional information on these studies).⁴ The Plan contains guidelines and best management practices that would reduce potential adverse impacts related to chemical use to a less-than-significant level. The No Chemical Use alternative would, however, remove from consideration chemical treatments approved by the State and currently used by EBRPD to treat vegetation in an economic and environmentally sustainable manner, resulting in additional, potentially more-costly treatments being used. This change, over time, could result in some treatment actions being delayed or removed from consideration due to lack of funding, which in turn would result in increased wildfire hazards as areas are left untreated. Because this alternative would not achieve the basic goals and objectives of the project and would not result in the creation of a vegetation management plan which is cost-effective and financially and environmentally sustainable to EBRPD on an on-going basis, it was removed from further consideration.

B. ALTERNATIVES TO THE PLAN

This section analyzes the following two alternatives:

- The CEQA-required **No Project alternative** assumes that the Plan would not be adopted or implemented and that existing conditions would remain.
- The **Mitigated alternative** assumes that the Plan would be revised to include additional guidelines and mitigation measures to mitigate the potential significant impacts identified in this EIR.

For each alternative, a brief discussion of its principal characteristic(s) is followed by an analysis of the alternative. The emphasis of the analysis is on the alternative's relative adverse effects compared to the proposed project and a determination of whether or not the alternative would reduce, eliminate, or create new significant impacts.

1. No Project Alternative

The following provides a brief description and analysis of the CEQA-required No Project alternative.

a. Principal Characteristics. The No Project alternative assumes that the Plan would neither be adopted nor implemented and that existing conditions would remain in effect throughout the Study Area. Only those fuel reduction or vegetation management actions covered under the existing FEMA Environmental Assessment and ongoing maintenance activities would be conducted (i.e., no actions identified as Initial Treatments in Table III-1 of the Project Description would occur.)

b. Analysis of No Project Alternative. Under this alternative, none of the potential impacts identified in Chapter IV of this EIR would occur because no additional fuel treatment or vegetation management activities would occur outside those already covered under the FEMA Environmental Assessment or already being conducted as maintenance activities. While some potential impacts would be avoided, the goals and objectives of the proposed project would not be achieved.

⁴ The MMWD Board of Directors suspended the use of herbicides on their lands in August 2005. Since that time, the watershed staff has been "losing the battle against these non-native plants that exacerbate wildfire risk." MMWD estimates that 1,000 acres representing 5 percent of their watershed is seriously infested with invasive plants, primarily broom (www.marinwater.org). The other alternative methods tested by MMWD include: mechanical removal, hand removal, controlled burning, grazing, high intensity heat/flame, biological control, and water or foam (soap-based).

Additionally, mitigation measures have been identified for all but one of the potential impacts associated with implementation of the Plan. The potential for increased catastrophic wildfire hazards within the Study Area and, specifically, within the wildland-urban interface would increase substantially over time under this alternative, which would be a new significant impact. The increasing rate in home losses in California from wildfires makes it clear that a dramatic change in fire-safe construction, combined with improved vegetation management practices to reduce available fuels for wildfires, should be made to protect human health and property from wildfire risks. East Bay communities have made some improvements since 2001 in residential and neighborhood safety and fire fighting capability; however the continued increase in development along the wildland-urban interface, sustained encroachment of communities into wildland areas, and the effects of global climate change put an ever-increasing number of people at risk from wildfires. In spite of concerted efforts at wildland vegetation management on public lands, fuel loads remain high and the most cost-effective ways for dealing with severe Diablo wind-related wildfires remains elusive. Under this alternative, the beneficial impacts of the Plan would not occur, including management programs undertaken in concert with fuel reduction actions that are focused on restoring and maintaining wildlife habitat and native plant communities would not be conducted, and invasive and non-native species would continue to spread into native plant communities and increase wildfire hazards.

2. Mitigated Alternative

The following provides a brief description of the Mitigated alternative and potential impacts associated with its implementation.

a. Principal Characteristics. The focus of the Mitigated alternative is to revise the Plan to include the additional mitigation measures identified in this EIR.

b. Analysis of Mitigated Alternative. Under this alternative, only the significant and unavoidable impact associated with short-term adverse impacts to the visual character of the Study Area would occur, and none of the other potentially significant impacts identified in Chapter IV of this EIR would occur because the mitigation measures proposed in this EIR would be included as required mitigations in the Plan. This alternative would enable the goals and objectives of the Plan to be achieved, and would further support implementation of the identified fuel treatment and vegetation management activities included in the Plan.

C. ENVIRONMENTALLY-SUPERIOR ALTERNATIVE

CEQA requires that an environmentally-superior alternative be identified in the EIR. Based on the analysis provided above, the Mitigated alternative is considered the environmentally-superior alternative because it would incorporate into the Plan the additional mitigation measures included in this EIR to reduce impacts to a less-than-significant level, except for the one significant and unavoidable impact related to visual resources.

Both the proposed project and the Mitigated alternative would provide the least amount of potentially-significant impacts resulting from fuel treatment and vegetation management activities within the Study Area. Both the proposed project and the Mitigated alternative would also provide sufficient guidelines, recommendations, and mitigation measures necessary to reduce potential impacts. Therefore, the Mitigated alternative is the environmentally-superior alternative.