

Appendix C

Policy Criteria

Fire Management Plan Authorization

The Appendix highlights the fire management directives driving the District's FMP. Authorization is found in the EBWMP, which is cited as follows:

East Bay Municipal Utility District. 1996. East Bay Watershed Master Plan. February 29, 1996. With technical assistance from Jones & Stokes Associates; Brady and Associates; Dillingham Associates; REM & Associates; Merritt Smith Consulting; Reza Ghezelbash, GIS Consultant; and Montgomery Watson. (JSA 94-320.) Oakland, CA. (Pages 62 to 70).

The EBWMP provides fire management direction through seven Fire and Fuel Management objectives and 38 specific guidelines. In addition, fire management direction is contained in selected EBWMP guidelines for water quality, biodiversity, forestry, environmental education, cultural resources, and GIS.

Fire and Fuels

The District's goal for fire and fuel management is to protect human life and property and provide for public safety, and protect and enhance water quality, other natural resources, and watershed land uses.

The fire and fuels management program involves activities conducted to protect lives and property on and adjacent to District lands and to manage natural resources. The District has a wide range of land management responsibilities and must make decisions that balance fire prevention considerations with water quality, natural resource, and recreation program considerations on a case-by-case basis. To ensure regional coordination in fire and fuels management planning, the EBWMP program incorporates those elements of the Vegetation Management Consortium's (VMC's) Fire Hazard Mitigation Program and Fuel Management Plan for the East Bay Hills (Amphion Environmental 1995) that are consistent with the District's water quality and natural resource management goals. Fire management activities include:

- Conducting fire management planning.
- Treating vegetative fuels to reduce fire hazards.
- Conducting fire prevention and suppression activities.
- Using prescribed fire to manage other resources.

Objectives

The seven basic objectives for fire management are presented below.

- Provide an appropriate level of fire protection for all watershed lands, emphasizing protection of life, public safety, and property values in interface areas.
- Implement measures to reduce fire hazard to protect water quality from wildfire-related soil erosion, sedimentation, and nutrient impacts.
- Use a strategic planning approach to fire management that ensures fire and fuels management activities are consistent with the objectives for other resources to the extent practicable.
- Recognize the importance of fire as a natural ecological process, and use prescribed burning and other techniques to reduce hazardous fuel loads under carefully selected conditions to achieve long-term fire safety, water quality protection, and biodiversity management objectives.
- Cooperate with other agencies, adjacent property owners, and homeowner groups and participate actively in planning processes to develop coordinated resource management plans (CRMPS) and other cooperative multi-agency agreements for fire hazard reduction and fire incident management.
- Maintain fire management program funding that supports implementation of adopted plan elements.
- Maintain firefighting capability, equipment, and patrols to retain the basic level of fire safety and initial response necessary.

Guidelines

Prescribed Burning

Fire management guidelines are categorized according to the following: prescribed burning, fuels management, plowed control lines, fire prevention, fire protection, cooperative planning, and fire suppression.

- FF.1** Continue developing and implement appropriate prescribed burning procedures to safely and cost-effectively meet fuel reduction and other management objectives; test approaches such as burning during the growing and nongrowing seasons, varying fire intensities, and using varied prescription cycles; follow CDF regulations and standards for prescribed burning when and where applicable.
- FF.2** Conduct site-specific interdisciplinary resource planning and prepare an environmental analysis document for all prescribed burns; involve appropriate watershed, recreation, and fisheries and wildlife management staff in these planning efforts.
- FF.3** As part of the annual fire management plan update (see FF.32), prepare a description of the annual burn program including individual plans for each proposed prescribed burn.
- FF.4** Comply with federal, state, and local air pollution laws and regulations in developing and implementing fire management plans.
- FF.5** Develop and implement a monitoring program to evaluate impacts of prescribed burning on water quality and other resources.

Fuels Management

- FF.6** Establish FMUs for presuppression fire and fuels management planning; identify strategic fuelbreak networks, firebreaks, road access, and predicted containment areas for wildfires that may ignite in each FMU.
- FF.7** Continue to use livestock in all grassland interface areas where fuel reduction is necessary; in areas of natural resource conflict, construct additional fencing to confine grazing to key fuel reduction areas.

- FF.8** Identify barriers (e.g., reservoirs, grazed areas, greenbelts, roadways, trails, oak woodlands, and riparian areas) that help retard wildfire spread and use them as baselines in establishing a strategic fuelbreak network to protect water quality and reduce environmental impacts and fuel treatment costs. Incorporate information in the GIS database.
- FF.9** Design and construct new fuel modification areas of the strategic fuelbreak network to meet other resource constraints.
- FF.10** Recognize prescribed fire, vegetation management, grazing, manual and mechanical fuels treatments, and possibly minimal or limited chemical treatment of vegetation as effective tools for reducing fire hazards. The most appropriate method, or combination of methods, will be selected based on consistency with public safety, natural resource management objectives, priorities for each land management zone, and cost. Utilize appropriate guidelines from the VMC's Fuel Management Plan (Amphion Environmental 1995).
- FF.11** Maintain strategic fuel treatment areas, fuelbreaks, firebreaks, and other vegetative manipulations in high-risk areas where funding is available.
- FF.12** Identify environmentally sensitive areas and develop site-specific fuel treatments to address fire hazard and wildfire risk in these areas; identify areas where mechanical treatments (e.g., bulldozing, plowing, disking, and mowing) are inappropriate.
- FF.13** Based on the fire management strategy presented in the EBWMP, modify or seek a variance from the Contra Costa County Fire Protection District's 5-acre firebreak grid pattern concept for all grassland and light brush areas not currently being grazed. Work with the Contra Costa County Board of Supervisors to modify the 5-acre plowing requirements. Implement a strategic grazing and plowing program that addresses the need to protect sensitive wetlands and wildlife refugia.

Plowed Control Lines

- FF.14** Evaluate the strategic value of plowed control lines and firebreaks for fire suppression activity and fire control. Strategic value is higher when plowed control lines are linked with the fuelbreak network and areas with firesafe road access. Balance strategic value with environmental sensitivity of the surrounding area in determining use of this technique.
- FF.15** Locate plowed control lines where they can function effectively in fire control and reduce surface disturbance and erosion potential. Existing plowed control lines should be retained unless substantial water quality or other resource damage is occurring.
- FF.16** Existing trails and fire roads should be maintained and used as control lines whenever possible to reduce the need for additional site disturbance.
- FF.17** Coordinate with the District's Fisheries and Wildlife Division and other qualified District staff for sensitive species before constructing and maintaining plowed fire lines within 300 feet of sensitive habitats or species.
- FF.18** Avoid locating plowed fire lines within cultural or archeological sites. Relocate plowed lines outside designated sites or use alternative methods of securing control (e.g., hand-line construction or hose lays).
- FF.19** Locate plowed fire lines outside riparian buffer zones around streams, wetlands, or springs and seeps unless connecting to such areas at designated points is essential and can be done with minimal disturbance.

Fire Prevention

- FF.20** Actively address arson on watershed lands (through direct District watershed fire patrols) and continued coordination with the East Bay Fire Chiefs' Consortium.
- FF.21** Implement strategic firesafe treatments along roadways, public access routes, and trails in areas of high fuel hazard to reduce the potential for wildfires to ignite and spread.

- FF.22** Develop and adopt a fire danger rating system (based on weather and fuel moisture conditions) and implement use restrictions on roadways, trails, and other District facilities during extreme hazard conditions. Work with adjacent jurisdictions to plan strategic closures of public roadways and trails during periods of extreme fire hazard.

Fire Protection

- FF.23** Participate in cooperative multi-agency education programs (with EBRPD, local fire departments and districts, and homeowner associations) to educate homeowners in the urban/wildland interface on how to reduce fire hazard and risk in those areas. Provide the District’s booklet “Firescape Landscaping to Reduce Fire Hazard” to interested landowners.
- FF.24** In conjunction with the Water Planning Department, evaluate the feasibility of developing dedicated water supply systems for fire suppression in urban/ watershed interface areas.
- FF.25** Continue annual maintenance of all necessary fire roads (refer also to guideline FF.6). Assign strategic values to roads based on linkage with the strategic fuelbreak network, and base the annual road maintenance schedule on these strategic values. Consider firesafe vegetation treatments along the highest priority fire roads.
- FF.26** Annually assess the safety program for staff participating in prescribed burning and wildland fire suppression, and revise as necessary.

Cooperative Fire Protection and Presuppression Planning

- FF.27** Coordinate with other local fire suppression organizations, especially in areas of mutual jurisdiction. Continue District participation in the Hills Emergency Forum, VMC, and East Bay Fire Chiefs’ Consortium.

POLICY CRITERIA

- FF.28** Review and update, as necessary, memoranda of agreement for cooperative wildland fire suppression with CDF and local fire control agencies.
- FF.29** Annually review the training program for the District's Natural Resource Department field staff regarding response to wildland fire incidents, and continue active participation in emergency interagency wildfire suppression assistance (mutual aid).
- FF.30** Continue to develop and implement cross-training with cooperative fire suppression organizations (i.e., CDF, EBRPD, and local fire control agencies).
- FF.31** Annually provide a fire response plan for all East Bay watershed lands and operational units. Coordinate with participating fire suppression organizations to select and adopt design criteria, standards, and BMPs for strategic fuelbreak networks, firebreaks, road access, and predicted containment areas for wildfire to minimize erosion and protect water quality.

Fire Suppression

- FF.32** Maintain District watershed headquarters access to regional fire information sources; annually review and update, as needed, a comprehensive fire management plan including the procedures for red flag operation and fire response. Annually review and update, if needed, a comprehensive FMP.
- FF.33** Use contain-and-control strategies to suppress wildfires consistent with personnel safety, land and resource management objectives, and fire and fuels management objectives.
- FF.34** During fire suppression activities, emphasize indirect attack strategies that use existing breaks, barriers, and burnout procedures when feasible. Use automatic, direct attack, and plow operations for fire suppression when required by specific burning conditions.

- FF.35** Achieve appropriate mop-up standards and patrol procedures as established by the Incident Commander before a wildfire is declared out and suppression crews are permitted to leave the site.
- FF.36** Coordinate with other resource programs to ensure that fire and fuels management program direction is achieved during project work (e.g., fuels treatment in forest management, achieving required fuels reduction through livestock grazing).
- FF.37** Coordinate closely with District resource staff to ensure that water quality and resource values are protected during planning and implementation of fire and fuels management strategies.
- FF.38** Review any chemicals used in fire suppression for ultimate impacts on water quality. Substitute fire suppression chemicals that minimize water quality impacts, if possible.

Water Quality

The EBWMP has 37 water quality guidelines. Those related to fire management are presented below.

General Guidelines

- WQ.4** Develop design criteria, standard plans and specifications, and best management practices (BMPs) as appropriate for land uses, activities, and District watershed control and management techniques that provide water quality protection guidelines for livestock grazing, equestrian stables, and other concentrated animal facilities, fishing, boating, and marina management, golf courses, residential neighborhoods, onsite waste systems, stormwater runoff from roads and parking lots, commercial zones, hazardous materials storage and transfer facilities, erosion control, fire road and hiking trail routing, construction, and maintenance, vegetation management, forestry, and fire fuels management.

Erosion Control

- WQ.7** Develop and implement erosion control standards and BMPs to reduce soil erosion, sedimentation, and nutrient impacts throughout the watershed. Standards and BMPs should be adhered to by all staff, contractors, researchers, recreationists, visitors, and others performing construction, maintenance, or other activities on watershed lands.
- WQ.8** Conduct erosion control analysis and planning before initiating construction or other land disturbance activities.
- WQ.11** Prevent construction-related water quality impacts such as erosion from exposed soil and pollutants from equipment.

Nonpoint-Source Pollution Control

- WQ.15** Evaluate the potential for surface water and groundwater pollution from developed areas within the watershed and implement pollution control measures.

Fire and Fuels

- WQ.21** Evaluate water quality impacts of fire and fuels management practices such as prescribed burning, equipment use, and firebreaks. Identify BMPs to minimize and mitigate water quality impacts. Prioritize and implement selected measures and include a water quality specialist in fire and fuels management planning.
- WQ.22** Consider alternatives to plowing firebreaks, including use of existing roads, mowing, spot-grazing, controlled burning, or natural firebreaks. Firebreak lines will be plowed along, rather than across, contour lines where feasible, and drainage structures will be installed where necessary to prevent gully formation.
- WQ.23** Restore vegetation (using native vegetation where feasible) whenever possible in burn areas and timber harvest areas throughout the reservoir watershed to provide erosion control and habitat enhancement.

Buffer Areas

- WQ.35** Protect riparian corridors from direct and indirect water quality impacts. Direct impacts include cattle access, trail crossings, and loss of vegetation. Indirect impacts may include overgrazing, runoff from prescribed burns, animal waste, and runoff from trails and roads.

Biodiversity

The EBWMP has 24 biodiversity guidelines. Those related to fire management are presented below.

Habitats and Vegetation Types of High Biological Value

- BIO.4** Design and control management activities to limit fragmentation of common vegetation types.
- BIO.6** Maintain and, where necessary, enhance habitat suitability for wildlife movement in key corridors.
- BIO.7** Participate in coordinated resource management planning efforts with other local land management agencies to conserve regional biodiversity by maintaining regional movement corridors (e.g., the Caldecott Tunnel corridor) and management of large landscape units. Include a water quality specialist during coordinated resource management planning.
- BIO.11** Where annual grazing has been eliminated from grassland habitats and grassland retention is a biodiversity priority, use prescribed fire, periodic grazing, or other means to discourage shrub encroachment and maintain grassland conditions.
- BIO.12** Introduce prescribed fire under carefully controlled conditions to maintain and enhance biodiversity values in fire-dependent plant communities (e.g., knobcone pine, chamise-black sage chaparral, and manzanita chaparral).

BIO.13 During revegetation of areas burned by wildfire or prescribed fire, emphasize maintenance and enhancement of biodiversity, commensurate with other critical resource needs (e.g., water quality protection).

Noxious Weeds, Invasive Plants, and Feral Animals

BIO.19 Avoid use of non-native species for erosion control and other revegetation that are invasive or that inhibit recovery of native habitats.

Management Coordination Procedures

BIO.21 While planning and implementing resource management actions, apply the following coordination guidelines to meet state and federal legal requirements for threatened and endangered species:

P if listed species are likely to be affected, consult with the U.S. Fish and Wildlife Service (USFWS) and the California Department of Fish and Game (DFG) as required; and

P implement measures required by USFWS and DFG to avoid take and other financially feasible measures to protect other special-status species.

BIO.22 In conducting management activities, evaluate effects on species (prioritized according to guideline BIO.1) of proposed management activities (e.g., changes to water system operations, watershed management activities, construction of new facilities and public access) according to the following guidelines:

P query GIS for information on known occurrences of listed and other special-status species and special communities and general habitat types in the project area;

P identify potential species that could be affected by the proposed action based on known species' occurrences, the habitat type within which the project occurs, and the habitats used by the species (see Table 2-3 for habitat occurrences of species);

P assess impact occurrence using the District's Biological Survey Studies protocols (Stebbins 1996); and

P evaluate project impacts and identify opportunities to avoid, mitigate, or compensate for impacts, including species- and project-specific buffers to protect plant and animal species from adverse effects of management activities; evaluate consistency with other EBWMP direction.

BIO.23 Ensure that all District projects that affect wetlands or waters of the United States as defined under Section 404 of the Clean Water Act receive appropriate permits prior to disturbance.

BIO.24 Ensure that all District projects that directly impinge on blue line streams, as defined under California Fish and Game Code Sections 1601 and 1603, receive appropriate permits from DFG prior to disturbance.

Forestry

The EBWMP has 13 forestry guidelines.

FOR.11 Requires that prior to any harvest activities, that adequate stump-sprouting control methods must be available to reduce fire hazards and protect water quality.

Environmental Education

Of the eight EBWMP guidelines for environmental education, the following two require coordination with the FMP.

EE.6 Prepare public information materials on special management issues facing the District (e.g., urban runoff and sewage overflow problems, soil erosion, the encroachment of development into view sheds, and the impacts of development on wildfire and risks of wildfire), and use this information in public outreach, especially in communities that share these management challenges because of their urban/wildland interface with District lands.

- EE.7** Prepare public information materials on gains made and agreements reached with surrounding communities on special management issues facing the District, and use these materials for public outreach, especially within communities that share these issues because of their location near District lands.

Cultural Resources

Of the eight EBWMP guidelines for cultural resources, the following relate to fire management.

- CR.5** Avoid disturbing significant cultural resource sites and sites of unknown significance, where feasible. Require fire management and other watershed personnel to protect known cultural resource sites during management activities.
- CR.6** Follow the requirements of CEQA Section 21083.2 when undertaking or approving watershed activities.
- CR.7** Conduct records searches and surveys before beginning ground-disturbing activities.
- CR.10** Designate areas that are sensitive because of their potential to contain buried cultural resources and ensure that these areas are monitored during surface-disturbing activities.
- CR.11** If sites cannot be avoided or if the boundaries of a site are unknown, consult a qualified archaeologist (including tribal experts designated by the tribe) for recommendations. Recommendations may include covering or “capping” sites with a protective layer of material, recovering data through research and excavation, performing subsurface testing to determine the extent of a site, and relocating or reconstructing historic structures.

Visual Resources

Of the nine EBWMP guidelines for visual resources, the following relate to fire management.

- VR.1** Review new land use proposals to ensure that they are consistent with the watershed’s visual character, outside of important viewing areas, or screened from important views from reservoir surfaces, shoreline locations, public trails, roads, and key public viewing areas.

- VR.7** Coordinate with fire management personnel to ensure, to the extent practicable, that fire management needs (e.g., pruning and clearing) and fire management patterns are consistent with visual management guidelines. Avoid the use of “vista pruning” along trails and public roads and around use areas, and avoid the use of firebreaks or the establishment of “fuel cells” as wildfire management techniques except where other mitigation measures are not effective and as a last resort.

- VR.8** Avoid controlled burns in developed public use areas during peak use periods (generally June through September). Coordinate the timing of controlled burns with recreation staff.

- VR.9** Coordinate with EBRPD, Alameda and Contra Costa Counties, and other adjacent jurisdictions that have significant open space resources to develop common goals and guidelines for preserving and strengthening the regional visual landscape.

GIS

Of the four EBWMP guidelines for GIS, the following guideline requires coordination with fire management activities.

- GIS.4** Requires the use of GIS to assess the appropriateness of proposed management programs or land-disturbing actions on portions of the watershed that could affect reservoir water quality, reservoir operations, sensitive habitat or wildlife areas, cultural resources, established watershed land uses, and land uses immediately adjacent to District-owned lands.