

H. HAZARDS AND HAZARDOUS MATERIALS

This section provides an overview of the potential presence of hazards and hazardous materials¹ in or near the Study Area of the East Bay Regional Parks District's (EBRPD's) Wildfire Hazard Reduction and Resource Management Plan (Plan). Also included is a discussion of potential impacts from hazards and hazardous materials to public health and safety and the environment that could result from implementation of the Plan.

1. Setting

This section describes the regulatory framework for hazardous materials, wastes, and pesticides; worker health and safety requirements for hazardous materials and pesticides; EBRPD's Integrated Pest Management Program (IPM), including the 1987 IPM Plan; and the latest annual pesticide use report for EBRPD (2007). In addition, hazardous materials contamination and remedial activities completed at Eastshore State Park and the potential for subsurface contamination at other shoreline parks is also discussed.

a. Regulatory Framework. The use, storage, and disposal of hazardous materials, including management of contaminated soils and groundwater, are regulated by numerous local, state, and federal laws and regulations. The U.S. Environmental Protection Agency (U.S. EPA) is the federal agency that administers hazardous materials and hazardous waste regulations. State agencies include the California EPA (Cal/EPA), which includes the California Department of Toxic Substances Control (DTSC); the State Water Resources Control Board (SWRCB); and other offices. The San Francisco Bay Regional Water Quality Control Board (RWQCB), Alameda County Department of Environmental Health (ACDEH), and Contra Costa County Health Services Department (CCHSD) have jurisdiction on a regional or local level.

A description of each agency and its jurisdiction and involvement in the management of hazardous materials and wastes is provided below.

(1) Federal Agencies. The U.S. EPA is responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. The federal regulations are primarily codified in Title 40 of the Code of Federal Regulations (40 CFR). The legislation is outlined in the Resource Conservation and Recovery Act of 1976 (RCRA), the Superfund Amendment and Reauthorization Act of 1986 (SARA), and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA).

(2) State Agencies. The various State agencies regulating hazards and hazardous materials are described below.

Department of Toxic Substances Control (DTSC). In California, DTSC is authorized by U.S. EPA to enforce and implement federal hazardous materials laws and regulations. California

¹ The California Health and Safety Code defines a hazardous material as "...any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety, or to the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, radioactive materials, and any material which a handler or administering agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment." (Health and Safety Code Section 25501).

regulations pertaining to hazardous materials equal or exceed the federal regulations. Most state hazardous materials regulations are contained in Title 22 of the California Code of Regulations (CCR).

State Water Resources Control Board (SWRCB). The SWRCB enforces regulations on how to implement underground storage tank (UST) programs and also aboveground storage of petroleum products. The SWRCB allocates monies to eligible parties who request reimbursement of funds to clean up soil and groundwater pollution from UST leaks. The SWRCB also enforces the Porter-Cologne Water Quality Act through its nine regional boards, including the RWQCB, which is described below.

(3) **Regional/Local Agencies.** The following regional and local agencies are responsible for regulation and oversight of hazards and hazardous materials.

San Francisco Bay Regional Water Quality Control Board. The Study Area is located within the jurisdiction of the RWQCB. The RWQCB enforces the Porter-Cologne Water Quality Act of 1969 for protection of the waters of the state. The RWQCB can act as lead agency to provide oversight for sites where the quality of groundwater or surface waters is threatened, and has the authority to require investigations and remedial actions.

Alameda County Department of Environmental Health and Contra Costa County Health Services Department. The primary agencies for local enforcement of state and federal laws pertaining to hazardous materials management are the Certified Unified Program Agencies (CUPA), including the ACDEH and CCHSD (depending on the regional location). Other CUPAs that may have oversight within EBRPD lands include the City of Berkeley Toxics Management Division and the City of Oakland Fire Department. The CUPAs are the local agencies responsible for coordination of a hazardous waste generator program, underground and aboveground storage tank management, investigation of leaking underground storage tank sites and other contaminated sites, and the Hazardous Materials Business Plan program. Depending on the precise types and quantities of hazardous materials used, stored, and disposed of within EBRPD lands, the applicable hazardous materials requirements as overseen by the CUPA may include the preparation and implementation of the following plans, programs, and permits as well as any associated training that may be required for their successful implementation.

Hazardous Waste Generator Requirements. Facilities that generate more than 100 kilograms per month of hazardous waste, or more than 1 kilogram per month of acutely hazardous waste, must be registered in accordance with RCRA (Title 42, U.S. Code, Sections 6901 et seq.).

Aboveground Storage Tank (AST) and UST Permits. Facilities with ASTs or USTs must be permitted. Other plans or programs, such as a Spill Prevention Control and Countermeasures (SPCC) Program, may be required due to the size and type of hazardous materials stored in the ASTs. The SPCC Program provides a detailed engineering analysis of the potential for release from oil-filled equipment and describes the measures that will be implemented to reduce the release potential, such as secondary containment and emergency response.

Hazardous Materials Business Plan (Business Plan). Facilities that use, store, or handle hazardous materials in quantities greater than 500 pounds, 55 gallons, or 200 cubic feet are required

to prepare a Business Plan (and any associated permits, as applicable) and comply with Uniform Fire Code requirements for the storage of hazardous materials. The Business Plan would contain facility maps, up-to-date inventories of all hazardous materials for each shop/area, product transfer areas, emergency response procedures, equipment, and a description of hazardous materials-related employee training.

Hazardous Material Release Response Plan (Contingency Plan). All facilities that generate hazardous waste must prepare a Contingency Plan. The Contingency Plan identifies the duties of the facility Emergency Coordinator, the identification and location of emergency equipment, and the necessary reporting procedures for the facility Emergency Coordinator to follow after a hazardous materials incident.

(4) Pesticides. The following sections describe regulatory requirements for the handling, use, and disposal of pesticides as it applies to the Plan.

Federal, State, and Regional/Local Agencies. Pesticides are regulated under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) by the U.S. EPA. This includes labeling and registration of pesticides as to how they may be used. U.S. EPA delegates pesticide enforcement activities in California to the California Department of Pesticide Regulation (DPR), under Title 3 of the California Code of Regulations and the California Food and Agriculture Code. The DPR registers pesticides for use in California and licenses pesticide applicators, pilots, advisors, dealers, brokers, and businesses. In turn, the County Agricultural Commissioner (CAC) acts as the local enforcement for DPR. The CAC registers licensed pest control businesses and agricultural pest control advisors in the County in which they operate; requires permits and advanced notification for buying or using California restricted-use pesticides; and requires the completion of pesticide use reports for pesticides applied in the County. In addition, the CAC investigates pesticide-related injuries and illnesses and oversees enforcement of worker training in pesticide management. Local CACs for the Study Area are located in Alameda and Contra Costa County.

Like hazardous materials, pesticides must be properly stored and transported in accordance with applicable local, state, and federal requirements. Generally, this means that they must be stored in secured locations and warning signs must be posted at storage areas.² Pesticides must also be inventoried as part of the required plans for hazardous materials (see above). For example, pesticides that are stored in quantities exceeding the Business Plan limits (55 gallons of a liquid, 500 pounds of a solid, 200 cubic feet of a compressed gas) must be included in the Business Plan inventory.

Worker Health and Safety. Worker health and safety in California is regulated by the California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA). California standards for workers dealing with hazardous materials (including pesticides

² California Department of Pesticide Regulation, Laws and Regulations Study Guide, 2001 Edition (for the following examinations: Agricultural Pest Control Advisor License, Qualified Applicator Certificate, Qualified Applicator License, Pest Control Aircraft Pilot Certificate, and Pest Control Dealer Designated Agency License), information reviewed on-line, <http://www.cdpr.ca.gov/docs/>, 11 August 2006.

and herbicides) and for preventing workplace injuries³ are contained in CCR Title 8 and include practices for all industries (i.e., General Industrial Safety Orders). Cal/OSHA conducts on-site evaluations and issues notices of violation to enforce necessary improvements to health and safety practices. These may include preparation of applicable plans and programs as well as worker training to implement these plans, as they are described below.

Injury and Illness Prevention Plan. The California General Industry Safety Order requires that all employers in California shall prepare and implement an Injury and Illness Prevention Plan, which should contain a code of safe practice for each job category, methods for informing workers of hazards, and procedures for correcting identified hazards.

Emergency Action Plan. The California General Industry Safety Order requires that all employers in California prepare and implement an Emergency Action Plan. The Emergency Action Plan designates employee responsibilities, evacuation procedures and routes, alarm systems, and training procedures.

Fire Prevention Plan. The California General Industry Safety Order requires that all employers in California prepare and implement a Fire Prevention Plan. The Fire Prevention Plan specifies areas of potential hazard, persons responsible for maintaining fire prevention equipment or systems, fire prevention housekeeping procedures, and fire hazard training procedures.

Hazard Communication Plan/Pesticide Safety Information System. Facilities involved in the use, storage, and handling of hazardous materials are required to prepare a Hazard Communication plan. The purpose of the Hazard Communication plan is to provide methods on safe handling practices for hazardous materials, ensure proper labeling of hazardous materials containers, and ensure employee access to Material Safety Data Sheets (MSDSs).

A similar program for workers using pesticides in non-crop settings (such as those included in the Study Area) is required by DPR in accordance with the Pesticide Safety Information Series (PSIS).⁴ Training in hazard communication, medical supervision, pesticide handler safety, pesticide storage and transportation, first aid, personal protective equipment, engineering controls, and other applicable elements are required. The PSIS program was developed by DPR with local enforcement by the CAC.

b. Wildfire Hazards. As described in Section III, Project Description, of this EIR the purpose of the Plan is to reduce the risks from wildfires in identified high hazard areas on EBRPD parklands through fuel reduction actions that are conducted in a manner that mitigates adverse environmental effects and implements resource and habitat management goals. State policies regarding wildland fire safety are administered by the State Office of the Fire Marshall and the California Department of Forestry (CalFire).

³ The type of workplace injuries that may be associated with mechanical and hand methods for controlling unwanted vegetation may include: slip, trip, and falls, power tool and hand injuries, muscle strain, cuts, or other related injuries. Dost, Frank N., ATS, Consulting Toxicologist, 1993, Injuries Resulting from Employment in Forest Vegetation Management Using Manual Methods. A Progress Report, 8 February. Prevention of these types of injuries should be covered by the employer's Injury and Illness Prevention Plan.

⁴ California Environmental Protection Agency, Department of Pesticide Regulation, 2005. Pesticide Safety Information Series Index, HS-641, Revised May.

Contractors are required to comply with the following legal requirements at sites classified by CalFire as a “wildland area that may contain substantial forest fire risks and hazards” or a “very high fire hazard severity zone”, which designations would apply to the Plan’s Study Area:⁵

- Earthmoving and portable equipment with internal combustion engines would be equipped with a spark arrestor to reduce the potential for igniting a wildland fire (PRC Section 4442).
- Appropriate fire suppression equipment would be maintained during the highest fire danger period – from April 1 to December 1 (PRC Section 4428).
- On days when a burning permit is required, flammable materials would be removed to a distance of 10 feet from any equipment that could produce a spark, fire, or flame, and the construction contractor would maintain the appropriate fire suppression equipment (PRC Section 4427).
- On days when a burning permit is required, portable tools powered by gasoline-fueled internal combustion engines would not be used within 25 feet of any flammable materials (PRC Section 4431).

New buildings located in any Fire Hazard Severity Zone within state responsibility areas, any Very High Fire Hazard Severity Zone within local responsibility areas, or any Wildland-Urban Interface Fire Area must comply with the California Building Code (CBC) minimum requirements for building materials and construction methods to improve exterior wildfire exposure protection (CBC, 2007). Fire Hazard Severity Zones are classified by the CalFire Director in accordance with California Public Resource Code (PRC) sections 4201 through 4204 for state responsibility areas and in accordance with Government Code sections 51176 through 51189 in local responsibility areas.

The Public Resources Code (PRC) requires anyone who owns, leases, controls, operates, or maintains any building or structure in or adjoining wildlands must comply with the following:

- Maintain a 30-foot wide firebreak around each building or structure.
- Remove all brush, flammable vegetation, or combustible brush within 100 feet of buildings or structures.
- Remove any portion of any tree that extends within 10 feet of a chimney or stovepipe.
- Maintain any tree adjacent to or overhanging a structure to keep it free of dead or dying wood.
- Remove leaves, needles, or other vegetative material from roof.
- Provide and maintain screens over every chimney or stovepipe (PRC Section 4291).

c. EBRPD Integrated Pest Management Program. Beginning in the 1970s, EBRPD has attempted to limit the use of toxic chemicals on its park lands. The 1987 EBRPD Pest Management Policies and Practices included a policy stating: “In accordance with the accepted principals of ecology, the District will strive to implement an integrated pest management program which eliminates the use of chemicals as much as feasible whenever alternative methods are effective.”⁶

⁵ CalFire Fire Hazard Severity Maps can be found at <http://frap.cdf.ca.gov/data/frapgismaps/download.asp>.

⁶ EBRPD, 1987. Pest Management Policies and Practices, Resolution Number 1987-11-325, October.

EBRPD identified a number of wildland management issues in the 1997 Master Plan,⁷ as follows: management of wildland areas may require the use of IPM⁸ practices for the control of plant and animal pests. Agricultural sites and cultivated areas within EBRPD jurisdiction may also be managed in accordance with IPM methods to control noxious weed infestations, brooms, and other invasive non-native plants. The use of IPM methods by EBRPD is to minimize the impact of undesirable species on natural resources and to reduce pest-related health and safety risks to the public within developed facilities and/or high-use recreational areas.

The first Proposed Pest Species Management Program was initiated by EBRPD in 1982.⁹ By 1987, a more comprehensive IPM Plan was prepared, which underwent CEQA review.¹⁰ The 1987 IPM Plan was implemented beginning in 1988;¹¹ a summary of the Plan follows. As required by State and local requirements, EBRPD analyzes the annual amount of pesticide usage through the areas under its jurisdiction. The latest pesticide use report available for review as the writing of this EIR was for the year 2007 (see below).¹²

(1) 1987 Integrated Pest Management Plan. The 1987 Pest Management Policies and Practices for EBRPD, Resolution Number 1987-11-325 (1987 IPM Plan) was prepared to consolidate all relevant EBRPD Board-adopted policies, administrative directives, and “state of the art” pest management practices pertaining to agricultural and structural uses on EBRPD lands. The Plan is supported by the EBRPD Board of Directors and staff, an IPM Specialist, and two advisory Committees: the Pest Management Advisory Committee (PMAC)¹³ and the Ecology Committee.¹⁴

The major implementation components of the Plan include: 1) Monitoring Program for Pests; 2) Use of Pesticides Only with Prior Authorization (by the IPM Specialist or PMAC); 3) Completion of an IPM Checklist and Pesticide Use Report; 4) Notification and Posting; 5) General Chemical Safety and Environmental Concerns, where records of pesticide use are periodically reviewed by the PMAC to

⁷ East Bay Regional Park District, 1996 (adopted). Master Plan 1997, Resolution No. 1996-12-349, December 17.

⁸ The EBRPD definition of IPM is that IPM is “a strategic approach for preventing and suppressing pest problems before they reach unacceptable levels. Using IPM means selecting and integrating the most appropriate combinations of available pest control methods (including cultural, mechanical, chemical, and biological) for a given site/pest occurrence in ways that minimize risk to public safety, health and the environment. While the goal of IPM programs is the same—long-term resolution to pest problems—the actual specific set of strategies selected will vary by park location, the season, type of pest, habitat considerations, level of desired control and cost factors. Additional, current practices will change as new information and new technologies are developed.” EBRPD, 2005, op. cit.

⁹ East Bay Regional Park District, 1982. Proposed Pest Species Management Program for East Bay Regional Park District, February.

¹⁰ A Negative Declaration was prepared on the 1987 IPM Plan (not available for review).

¹¹ EBRPD, 1987. Pest Management Policies and Practices for East Bay Regional Park District, Resolution Number 1987-11-325, prepared by Nancy Brownfield, IPM Specialist and Dale Sanders, IPM Coordinator for EBRPD Board of Directors, October and EBRPD, 2005, op. cit.

¹² East Bay Regional Park District, 2008. The 2007 Annual Report of Pesticide Use Report, September 2008.

¹³ The Pest Management Advisory Committee (PMAC) is a five-member professional advisory committee appointed by the Board that oversees the IPM program effectiveness, develops long-term pest management programs, among other tasks.

¹⁴ The Ecology Committee is a joint union-management committee with two union representatives and two representatives appointed by District management staff and at least two Board of Directors members. The function is advisory through recommendations to the District Board, PMAC or staff.

ensure compliance with applicable rules and regulations; and 6) IPM Training Program for Workers. The Plan was prepared to set a framework for the use of IPM methods within EBRPD lands and to comply with local, state, and federal requirements for pesticide management.

(2) **EBRPD Annual Pesticide Use, 2007.** The 2007 Pesticide Use Report for EBRPD¹⁵ includes pest management needs and practices within the properties owned and managed by EBRPD. The EBRPD list of approved pesticides in 2007 included Roundup (glyphosate), Surflan (oryzalin), Banvel (dicamba), copper sulfate, Garlon (triclopyr), Casoron (dichobenil), and Chlorophacinone (inadandione). All of these pesticides are considered U.S. EPA Category III and IV pesticides, “use with caution.”^{16, 17} No category I (danger) or category II (warning) herbicides are on the Board-approved list of herbicides for EBRPD.

The amount of each pesticide used by EBRPD is tracked and accounted for on an annual basis. In addition, the office of the IPM Specialist advises EBRPD park supervisors and concessionaires (including golf courses) on how to work toward the goal of reducing the need and number of annual pesticide applications. Prior authorization by the IPM Specialist is required before purchase and/or use of a pesticide is permitted for accountability and to ensure compliance with requirements for worker training.

The overall usage in 2007 of Board-approved pesticides (Roundup, Surflan, Banvel, Garlon, Casoron, and Chlorophacinone) was similar to that recorded in 2006, with a slight increase of 1.5 percent in Roundup use for park operations and a decrease in use of 6.5 percent used in resource management projects.

d. Subsurface Contamination, Shoreline Parks. Seven shoreline parks are located within the Study Area, including the Point Pinole Regional Shoreline, Miller/Knox Regional Shoreline, Brooks Island Regional Shoreline, Eastshore State Park, Miller Harbor Shoreline Park, Robert W. Crown Memorial State Beach, and Martin Luther King Jr. Regional Shoreline.¹⁸ The shoreline parks are located at or within proximity to land uses that may have current or historical hazardous materials uses and may contain varying amounts of imported fill (of unknown origin) overlying Bay Mud.¹⁹ The hillside parks within the Study Area are generally not located in areas with historic filling activities, or within proximity to industrial land uses that may use hazardous materials.

¹⁵ EBRPD, 2008, op. cit.

¹⁶ This material is subject to revision pending compilation of an IPM Golf Course Plan. The EBRPD IPM policy permits exemption to the Board-approved list of pesticides with the approval of the IPM Specialist; this provides a measure of flexibility in the program to be able to respond to specific and limited in purpose pest control with the use of non-approved pesticides. EBRPD, 2005, op. cit.

¹⁷ U.S Environmental Protection Agency, 2007. Label Review Manual, Chapter 7 – Precautionary Statements. Available at <http://www.epa.gov/oppfead1/labeling/lrm/2007-lrm-chap-07.pdf>.

¹⁸ Wildfire hazards are very low and fuel modification activities are not expected to be undertaken at some of these shoreline parks including Middle Harbor Shoreline Park; Robert W. Crown Memorial State Beach; and Martin Luther King Jr. Regional Shoreline. Additionally, Brooks Island Regional Shoreline is isolated from developed areas and fuel modification activities are not anticipated for the park as it does not present a fire danger. LSA Associates, Inc., 2007 Land Use Setting, 15 November. These parks are therefore not discussed further.

¹⁹ Subsurface Consultants, Inc., 2001. Environmental Conditions, Hazardous Materials, Eastshore Park Project Site, September.

A railroad line forms the eastern boundary of Point Pinole Regional Shoreline, and the park contains a remnant facility including a dynamite blast and burning bunker and black powder press from a former explosives manufacturing company. Miller/Knox Regional Shoreline contains a landfill area, and is bounded by a railroad right-of-way and industrial uses to the east, including a wastewater treatment plant.²⁰ Eastshore State Park lies within the cities of Richmond, Albany, Berkeley, Emeryville, and Oakland, and is located within proximity to freeway and transportation uses (where deposition from vehicular emissions of leaded gas may have occurred), and commercial and industrial uses. Residual soil and/or groundwater contamination associated with these land uses may be present. Areas within Eastshore State Park including Point Isabel, the Albany Plateau, Berkeley Meadow and North Basin, and Emeryville Crescent are the locations of completed remedial actions as required by RWQCB Orders, due to the presence of chemicals of potential concern (COPCs) found in excess of site-specific action levels for proposed park land uses.²¹

Metals, petroleum hydrocarbons and associated volatile organics, and in some cases other COPCs (such as landfill gases and polychlorinated biphenyls) were identified at locations within Eastshore State Park. Certain contaminated soils in the upper 12 to 16 inches below ground surface were off-hauled and a 24-inch cap placed to reduce potential exposures to future park users. In some areas, more extensive remediation was completed. A certificate of completion was issued by the RWQCB following completion of these remediation activities. The RWQCB's certification is subject to ongoing risk management activities, including annual post-closure monitoring and site inspections of remediation areas.²² However, residual contamination may be present in soil and/or groundwater within Eastshore State Park.

2. Impacts and Mitigation Measures

This section discusses the potential impacts of hazardous materials use with implementation of the proposed Plan, based on the significance criteria presented below and mitigation measures are identified as necessary.

a. Significance Criteria. A significant impact from hazards and hazardous materials would occur if the project would:

- Create a significant hazard to the public or environment through the routine transport, use, or disposal of hazardous materials.
- Create a significant hazard to the public or environment through reasonably foreseeable upset or accident conditions involving the release of hazardous materials into the environment.
- Create a significant hazard to the public or environment through exposure to hazardous materials present in soils, surface water, ground water, and/or building materials as a result of historical land uses in the project vicinity.
- Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 miles of an existing or proposed school.

²⁰ LSA, 2007, op. cit.

²¹ Ibid.

²² Subsurface Consultants, 2001, op. cit.

- Be located on or adjacent to a site that is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would result in a safety hazard for people residing or working in the area.
- Impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan.
- Result in an increased risk of exposure to wildland or urban fire hazards.

b. Less-than-Significant Hazardous Materials Impacts. Less-than-significant impacts related to hazardous materials are discussed below.

(1) Use of Hazardous Materials. Implementation of the vegetation management activities proposed in the Plan would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or through a reasonably foreseeable upset or accident involving hazardous materials. The proposed Plan has specific implementation measures that would reduce potentially significant impacts related to handling hazardous materials during fuel reduction actions to a less-than-significant level through implementation of best management practices and by compliance with applicable regulations for the storage, use, and disposal of hazardous materials. Specifically, the proposed Plan implementation measures include:

Plan Chapter IV. Fuel Treatment Methods Best Management Practices – Hand Labor

Personnel Safety

- Use OSHA-compliant equipment, including personal protection equipment and hand tools.
- Provide or contract for adequate training and oversight of hand labor activities to ensure that hand labor personnel are familiar with safety requirements, equipment use, and any topographic or site-specific conditions.

Water Quality

- Hand labor personnel will take care to handle fuels and lubricants such that spilling and runoff of these substances does not occur.

Plan Chapter IV. Fuel Treatment Methods Best Management Practices – Mechanical Treatment

Water Quality

- Refueling areas will be designated for larger projects requiring mechanical treatment actions. Fuel tanks and refueling areas will be provided with secondary containment, where feasible. Materials and supplies needed to promptly clean up spills will be adequately maintained and located onsite, and personnel will be familiar with proper cleanup and disposal techniques. Examples of containment and cleanup methods and materials include using drip pans and absorbent pads for all vehicle and equipment fueling; equipping all fuel nozzles with automatic shut-off capability to contain fuel dripping and leakage; ensuring all vehicle fueling operations are not left unattended; inspecting vehicles and equipment each day to identify any fuel, oil, or hydraulic leaks; and repairing any identified leaks immediately prior to further use or storage of the leaking equipment to minimize further impact to the site. Vehicles with persistent or recurring leaks will be removed from the site until such leaks are properly repaired. Onsite fueling of vehicles and equipment will only be performed when offsite fueling is determined by EBRPD to be impractical.

Wildfire Precautions

- No mechanical treatment actions will take place during Red Flag warnings; machinery has the potential to start fires during periods of high fire danger. The fire department may specify extra precautions to allow continued equipment activity.

- The requirements listed in California Public Resources Code (PRC) sections 4431, 4435, 4442, and 4437 must be followed where any mechanical treatment action is planned. Weed-eaters, chain saws, small mowers, and other internal combustion engine-powered equipment must comply with these regulations, including that they must be equipped with approved spark arrestors. Equipment powered by properly-maintained exhaust-driven, turbo-charged engines as well as those equipped with scrubbers at properly-maintained water levels do not require spark arrestors. Motor vehicles, if equipped with approved and properly-installed and routed muffler systems (as described in the California Motor Vehicle Code) do not require spark arrestors.
- The following fire suppression equipment must always be available and in adequate working condition at the treatment site, as well as on all mowers, per PRC section 4427(b):
 - One (1) round-pointed shovel with overall length not less than 46 inches
 - One (1) 5-gallon backpack water pump to serve as a fire extinguisher
 - One (1) fully-charged fire extinguisher, UL-rated at 4-BC or more, per truck, tractor, grader, or other heavy equipment located onsite
 - One (1) two-way radio or mobile telephone or pager equipped with “walkie-talkie” capabilities to enable reporting of fires or emergencies from the scene or when in an area of potential ignition.

Plan Chapter IV. Fuel Treatment Methods Best Management Practices – Chemical Treatment

General Practices

- Information concerning the timing, location, and approximate amounts and types of pesticides or other chemicals to be applied during a chemical treatment action must be posted onsite to inform the public at least 24 hours in advance of such treatment. Signs containing this information must adhere to an EBRPD-approved format and posted in a prominent location for at least 12 hours per manufacturers’ instructions.
- When applying herbicides or other chemicals on cut stumps, onsite personnel will ensure that stumps are cut such that not more than 4 inches are left above ground, level from the uphill side of the stump. Stump cuts should be smooth, with a cleanly-cut surface, and with no projecting splinters.

Water Quality

- EBRPD and its contractors will ensure that any pesticide or other chemical applications are performed only by licensed or certified pest control operators registered to perform such services in the County where the treatment is to take place, and only under a prescription prepared by a licensed pesticide advisor. The pest control operator must record and provide written accounts of the total amount of pesticides and other chemicals applied each month, as well as type(s) of pesticides or chemicals used and total areas treated with each pesticide or other chemical. These data must be reported to the County Agricultural Commissioner as well as to EBRPD’s IPM Program. Operators must maintain accurate and calibrated application equipment to ensure correct amounts of pesticides and other chemicals are applied.
- Any chemical treatment actions must be performed according to EBRPD integrated pest management (IPM) policies and practices; pest control operators selected by EBRPD or its contractors will be required to consult and use the advice and recommendations of EBRPD integrated pest management specialists and adhere to EBRPD pest management guidelines. For example, dyes with the least potential environmental impacts and species-specific herbicides (in place of broad-spectrum herbicides) should be used to avoid injury to non-target plants.
- EBRPD IPM specialists will oversee chemical application practices to ensure compliance with state and federal regulations and EBRPD IPM policies. Pesticide application prescriptions will include suitable distances from wetlands and water bodies, in compliance with the California Department of Food and Agriculture Regulations and state-approved product labeling. EBRPD IPM specialists will review application data to ensure the minimum amount of suitable chemicals are used during treatment actions to achieve the desired results.

(2) Historical Land Use. Implementation of the proposed Plan would not result in a significant hazard to the public or the environment through exposure to hazardous materials present in soils, surface water, and/or buildings as a result of historical land uses. The proposed Plan pertains to wildfire reduction on park lands and would not include intrusive work into the subsurface in areas

where historical land uses may have resulted in residual contamination remaining in the subsurface; therefore this would be a less-than-significant impact.

(3) Proximity to Schools. There are approximately 13 educational facilities (colleges, high schools, elementary schools, pre-schools, and nursery schools) within one-quarter mile of the Study Area. Implementation of the proposed Plan would include application of pesticides in accordance with the EBRPD IPM program. Applications of pesticides, when deemed appropriate, would occur primarily by hand methods, but could also be applied by trucks spraying along roadways within park lands. Spraying would be avoided during windy conditions (sustained winds above 5-10 miles per hour). Because pesticide applications would be either by hand or applied by spraying during low-wind conditions, effects of pesticide applications are considered a less-than-significant impact to school populations within a one-quarter mile radius.

(4) Cortese List Sites. There are approximately nine sites identified on the Cortese list in the Study Area.²³ One site is located in Miller/Knox Regional Shoreline; this site was a former UST site, which had a gasoline release in 1987. This site has been closed (i.e., remediation complete or no remediation needed as determined by regulatory agency). Four UST sites were located at Lake Chabot, but those sites have all been closed. One UST site is located in Redwood Park and is currently under active remediation.

There are three Department of Defense (DoD) Formerly Used Defense Sites in Tilden and Wildcat Canyon Parks: 1) SF AAA Battery 12; 2) San Francisco Nike Battery 08-09; and 3) Grizzly Peak VHF Station. The Cortese List identifies SF AAA Battery 12 as potentially containing military munitions; however, a DoD contractor, in 1988, inspected the site and no evidence of hazardous substances or munitions were identified (see Appendix D for site survey summary sheets).²⁴ The remaining two DoD sites were also evaluated and found to contain no evidence of hazardous substances.²⁵ All but one of the sites on the Cortese list have been closed or determined not contain hazardous substances or munitions; the UST site currently undergoing active remediation in Redwood Park contains subsurface contamination that would not be accessible to personnel implementing the proposed Plan; therefore impacts associated with implementation of the proposed Plan would be less than significant.

(5) Emergency Response Plans. Implementation of the proposed Plan would also not interfere with an adopted emergency response or evacuation plan since the activities undertaken under the Plan would only include fuel reduction and resource management actions on EBRPD lands; one of the objectives of the proposed Plan is to reduce emergencies associated with wildfires, which would improve rather than interfere with emergency response plans for the area. Additionally, the Plan includes the identification of a network of Strategic Fire Routes to allow for improved emergency evacuation, access and fire suppression capabilities.

²³ Department of Toxic Substances Control (DTSC), 2008, ENVIROSTOR database with maps of DTSC; Department of Defense; UST; and Spills, Leaks, Investigations, and Cleanup sites.

²⁴ U.S. Corps of Engineers, 1994. Site Survey Summary Sheet, DERP-FUDS Site No J09CA093300, 3 October.

²⁵ U.S. Corps of Engineers, 1992. Site Survey Summary Sheet, DERP-FUDS Site No. J09CA081600, 18 February. General Accounting Office report GAO-01-557, 2001. Environmental Contamination Cleanup Actions at Formerly Used Defense Sites, August, accessed at <http://www.gao.gov/gao-01-1012sp/>.

(6) **Increased Risk of Wildfire.** Implementation of the proposed Plan would not result in an increased risk of exposure to wildland or urban fires, since the proposed Plan aims to reduce fuels in high hazard areas to reduce the threat of wildfires. The Plan includes the following implementation measures for prescribed burning activities that would further reduce this less-than-significant impact, as follows:

Plan Chapter IV. Fuel Treatment Methods Best Management Practices – Prescribed Burning

Erosion Control

- Torch fuels will be mixed, and torches filled, only in designated fueling areas to isolate potential areas that could be affected by hazardous materials spills.

Public Safety

- EBRPD or its contractors will prepare and disseminate press releases to local media informing the public of the prescribed fire.
- Patrol and signage levels around the area identified for the prescribed burn will be adequate to keep the public away from prescribed burn areas. Signs advising the public that a burn is in progress should be posted, at a minimum, along highways and major roadways in areas where smoke will be visible or could potentially pose a visibility concern. Signs should also be posted warning drivers about potentially-reduced visibility in advance of where these areas are determined to potentially occur.
- Patrols will be scheduled at regular intervals for both daylight and nighttime hours to monitor highway and primary road visibility. Personnel conducting such patrols will be sufficiently trained to identify and have knowledge of conditions in which reduced visibility could exist.
- EBRPD or its contractors will complete an escaped fire contingency plan for all burn units. Suppression actions will be taken on any prescribed fire according to the requirements set forth in this contingency plan if one or more of the following conditions exist:
 - o People, facilities, and/or personal property are threatened
 - o Prescription limits are likely to be exceeded, the resulting burn is expected to be of a higher intensity than desirable, and/or unacceptable tree mortality, scorch, or other resource damages may occur.
 - o Fire threatens to spread beyond prescribed boundaries or beyond EBRPD jurisdictional boundaries.
 - o Smoke poses a hazard or is determined to be an unacceptable nuisance.

c. **Potentially Significant Hazardous Materials Impacts.** No significant impacts from hazards or hazardous substances resulting from implementation of the Plan have been identified .