4.4 HAZARDS AND HAZARDOUS MATERIALS

This section evaluates the potential impacts of the Miller/Knox Regional Shoreline (Miller/Knox or park) Land Use Plan Amendment (LUPA) related to hazardous materials and public health. The evaluation provided in this section is based on public databases containing lists of known and significant hazardous waste/hazardous material sites, such as records from the State Water Resources Control Board (SWRCB) GeoTracker and Department of Toxic Substances Control (DTSC) EnviroStor.

No scoping comments related to hazards and hazardous materials were received in response to the notice of preparation (NOP).

4.4.1 Environmental Setting

For purposes of this section, the term "hazardous materials" refers to both hazardous substances and hazardous wastes. A "hazardous material" is defined in the Code of Federal Regulations (CFR) as "a substance or material that … is capable of posing an unreasonable risk to health, safety, and property when transported in commerce" (49 CFR 171.8). California Health and Safety Code Section 25501 defines a hazardous material as follows:

> "Hazardous material" means 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 if released into the workplace or the environment. "Hazardous materials" include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment.

"Hazardous wastes" are defined in California Health and Safety Code Section 25141(b) as wastes that:

> … because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

POTENTIAL RECEPTORS/EXPOSURE

The sensitivity of potential receptors in areas of known or potential hazardous materials contamination is dependent on several factors, the primary factor being the potential pathway for human exposure. Exposure pathways include external exposure, inhalation, and ingestion of contaminated soil, air, water, or food. The magnitude, frequency, and duration of human exposure can cause a variety of health effects, from short-term acute symptoms to long-term chronic effects. Potential health effects from exposure can be evaluated in a health risk assessment. The main elements of exposure assessments typically include:

- evaluation of the fate and transport processes for hazardous materials at a given site,
- identification of potential exposure pathways,
- identification of potential exposure scenarios,
- calculation of representative chemical concentrations, and
- estimation of potential chemical uptake.

Sensitive receptors in the area include adjacent residences in the Brickyard Cove development as well as single-family homes in Point Richmond. Additionally, the Washington Elementary School (565 Wine Street, Richmond, CA) is located 0.21 miles north of Miller/Knox. There are no other existing or proposed schools within one-quarter mile of Miller/Knox.

MILLER/KNOX LAND USE HISTORY

In the vicinity of Miller/Knox land uses are characterized by a mix of open space, residential, recreational, and former industrial uses. Historical uses at Miller/Knox involved shipping, rail, and industrial activities dating back to early 1900s. Ferry Point was the western terminus of the Atchinson, Topeka, and Santa Fe, now BNSF railroad, transcontinental railroad system. For more information on the history and historic land uses at Miller/Knox, refer to Subsection 4.5.1 in Section 4.5, "Cultural and Tribal Cultural Resources."

POTENTIAL CONTAMINATION AT MILLER/KNOX

Documented Sites of Contamination

In California, regulatory databases listing hazardous materials sites provided by numerous federal, state, and local agencies are consolidated in the "Cortese List" pursuant to Government Code Section 65962.5. The Cortese List is located on the California Environmental Protection Agency's (Cal EPA) website and is a compilation of the following lists:

- list of Hazardous Waste and Substances sites from DTSC's EnviroStor database;
- list of Leaking Underground Storage Tank (LUST) sites from SWRCB's GeoTracker database;
- list of solid waste disposal sites identified by SWRCB with waste constituents above hazardous waste levels outside the waste management unit;
- list of active Cease and Desist Orders and Cleanup and Abatement Orders from the SWRCB; and
- list of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC and listed in the EnviroStor database.

The SWRCB GeoTracker database includes LUSTs; permitted underground storage tanks; and spills, leaks, investigations, and cleanup database sites. The DTSC EnviroStor database includes federal and state response sites; voluntary, school, and military cleanups and corrective actions; and permitted sites. The five databases cited above identify sites with suspected and confirmed releases of hazardous materials to the subsurface soil and/or groundwater. The statuses of these sites change as identification, monitoring, and clean-up of hazardous materials progress. Typically, a site is closed once it has been demonstrated that existing site uses combined with the levels of identified contamination on-site present no significant risk to human health or the environment.

The lists and databases comprising the Cortese List were reviewed to identify any active clean-up sites at or within 0.25 miles of Miller/Knox. Statuses of Cortese List sites are updated periodically and would need to be revisited before ground disturbing activities associated with the LUPA recommendations. A records search of the SWRCB and DTSC databases identified one site of documented contamination located within Miller/Knox, and 16 sites within 0.25 mile of Miller/Knox, as disclosed in Table 4.4-1 below (SWRCB 2018; DTSC 2018).

Table 4.4-1 Regulatory Hazardous Waste Sites Listed within 0.25-mile of Miller/Knox

Site Name/Address	Chemicals of Concern	Distance from Miller/Knox (miles)	Site Summary
Regulatory Sites Listed within Miller/Knox			
Miller/Knox Park 900 Garrard Boulevard. S. Richmond, CA	Gasoline	0	Case completed and closed as of April 14, 1995. Underground storage tanks were removed.
Regulatory Sites Listed within 0.25 mile of Miller/Knox			
Burmah Castrol, Inc 801 Wharf St. Richmond, CA	Diesel and motor oil	0.23	Certified O&M, land use restrictions only as of August 29, 1997. This site is a petroleum lubricant storage and transfer facility. Volatile organic compounds were found in the shallow groundwater and seeping into the Richmond Channel. A remedial action plan was approved. The site was subsequently certified on February 5, 1988 but was later decertified in May 1996, when high concentrations of 1,2-dichoroethane (1,2-DCA) were found. The contaminated soil was excavated and backfilled with clean fill and bentonite slurry. Annual inspection reports conclude that the implemented remedy for the site continues to be protective of public health, safety, and the environment.
Parr Richmond Terminal #1 Richmond, CA	None specified	0.05	Case completed and closed as of February 12, 2013. Investigation of potential site contamination that may have occurred from activities undertaken under a former Department of Defense (World War II) lease of the site.
Great Western Chemical Co. (Brenntag Pacific) 860 Wharf St. Richmond, CA	Vinyl chloride and 1,2-dichloroethylene (cis)	0.16	The site was used as a major ship construction site during World War II. The primary business of the Great Western Chemical Co. was chemical distribution. Chlorinated solvents were found in shallow groundwater on-site. Groundwater monitoring and remediation activities commenced and approval for groundwater monitoring well removal was issued on November 6, 2017.
Richmond Vehicle Facility – BNSF Railway 861 Wharf St. Richmond, CA	Under investigation	0.16	The site is part of the BNSF Railway system. It is a 36-acre site with 47 rail spots and 3,190 vehicle bays, and railroad switching capability 7 days a week. It is under security and restricted access. A site screening assessment was prepared on April 5, 2012 and it was determined that the site was an unlikely source/contributor to the unknown chlorinated solvent plume to the south. Thus, DTSC recommended no further action at this site.
Seacliff Marina 1312 Canal Blvd. Richmond, CA	Lead, mercury and compounds, asbestos containing materials	0.23	Certified O&M, land use restrictions only as of June 20, 2002. Seacliff Marina is a 12-acre site. In 1942, the site began operating as a shipyard to the Port of Richmond, which was used for ship repair and maintenance, scrap metal and salvage yards, and auto importers. DTSC provided oversight for remedial activities that were performed in 1998 and 2002. Impacted sediments were excavated and encapsulated off site. The site was cleaned up to residential standards for unrestricted use with the exception of a few specific parcels. Covenants to Restrict Use of Property to protect present or future human health or safety or the environment as a result of the presence on the land of hazardous materials were placed and recorded for these parcels.
Canal Boulevard Industrial Parks 999-1007 Canal Blvd. Richmond, CA	Under Investigation	0.06	Three warehouse complexes used by various commercial and light industrial operations. A site screening assessment was prepared on December 23, 2011 and it was determined that there were no records of hazardous substances releases at the site. No further action required as of July 26, 2012.
1003 Canal Boulevard Richmond, CA	Trichloroethylene, vinyl chloride	0.12	A site screening was performed for the industrial properties which recommended further evaluation, including sampling, because of the presence of chlorinated solvent groundwater contamination down-gradient of the site. No further action required as of March 19, 2013.

Table 4.4-1 Regulatory Hazardous Waste Sites Listed within 0.25-mile of Miller/Knox

Site Name/Address	Chemicals of Concern	Distance from Miller/Knox (miles)	Site Summary
Ferry Point Dornan Drive Richmond, CA	Solvents	0.03	Case completed and closed as of August 13, 2010. The property was purchased in 1899 by the Santa Fe Railway Company and has since been leased to a number of companies. Historical records and photographs indicate that at least 10 aboveground and underground storage tanks existed on the site at one time or another. In 1990 Levine-Fricke conducted a reconnaissance level soil and groundwater sampling program. The investigation sampled 21targeted areas of concern and 17 random areas on the site. A number of samples were taken from locations bordering the adjacent property owned by Bray Oil. Petroleum hydrocarbons, pollutant metals and a variety of VOCs were discovered throughout the site.
Seacliff Estates Construction Project Brickyard Cove Road Richmond, CA	None specified	0.07	Open and inactive as of October 28, 2004.
Seacliff Marina Brickyard Cove Road Richmond, CA	None specified	0.13	Case completed and closed as of June 3, 2009.
Seacliff Villas Seacliff Drive and Brickyard Cove Road Richmond, CA	None specified	0.1	Case completed and closed as of June 3, 2009.
Richmond Terminal 1 1500 Dornan Drive Richmond, CA	Diesel, polynuclear aromatic hydrocarbons, tetrachloroethylene, vinyl chloride	0.01	Assessment and interim remedial action as of February 2, 2005. Terminal One was developed between 1915 and 1918 as a port facility for shipping and industrial activities until the late 1980s. It was mainly used as a storage facility, cargo and bulk liquids were transferred from ships to trucks and rail cars on the site. There is a proposed redevelopment consisting of combined multi-family residential and recreational area, and some recent sampling work has been performed.
Safety Kleen (Formerly BP Lubricants) 801 Wharf Street Richmond, CA	Benzene, diesel, heating oil/fuel oil, other solvent or non-petroleum hydrocarbon, vinyl chloride	0.09	Case open. In the World War II era the site was a shipyard. The docks were backfilled with fill. Between 1971 and 1981, the property was used for the storage and distribution of petrochemicals by Kodak. In 1981, BCI purchased the facility to use as a bulk oil storage, blending and packaging facility. BCI changed its name to Castrol, and is now BP Lubricants. The site is currently in the monitoring phase for historic hydrocarbon and solvent releases. There is a deed restriction on the site. A Revised Groundwater Toxicity Work Plan was submitted on November 15, 2017 to comply with the Site Cleanup Requirements (SCR) Order Number R2-2017-0038, which requires Safety Kleen to evaluate the risk to ecological receptors from oil seeps discharging to surface water in the Santa Fe Channel. The Work Plan was reviewed on January 8, 2018 by the RWQCB and concurrence was recommended.
Santa Fe Railway Richmond YD#2 810 Wharf Street Richmond, CA	Diesel	0.16	Case completed and closed as of September 7, 1999.

Sources: SWRCB 2018, DTSC 2018

HAZARDOUS BUILDING MATERIALS

Many older buildings contain building materials that can be hazardous to people and the environment once disturbed. These materials include lead-based paint, asbestos-containing materials (ACM), and polychlorinated biphenyls (PCBs). Before the U.S. Environmental Protection Agency (EPA) ban in 1978, lead-based paint was commonly used on interior and exterior surfaces of buildings. Through such disturbances as sanding and scraping activities, renovation work, or gradual wear and tear, old peeling paint, or paint dust particulates have been found to contaminate surface soils or cause lead dust to migrate and affect indoor air quality. Exposure to residual lead can cause severe adverse health effects, especially in children.

Asbestos is a naturally-occurring fibrous material that was extensively used as a fireproofing and insulating agent in building construction materials before such uses were banned by the U.S. EPA in the 1970s. ACM were commonly used for insulation of heating ducts as well as ceiling and floor tiles. Similar to lead-based paint, ACM contained within building materials presents no significant health risk because there is no exposure pathway. However, once these tiny fibers are disturbed, they can become airborne and become a respiratory hazard. Once they are inhaled, they can become lodged in the lung potentially causing lung disease or other pulmonary complications. State laws and regulations prohibit emissions of asbestos from asbestos-related manufacturing, demolition, or construction activities; require medical examinations and monitoring of employees engaged in activities that could disturb asbestos; specify precautions and safe work practices that must be followed to minimize the potential for release of asbestos fibers; and require notice to federal and local governmental agencies before beginning renovation or demolition that could disturb asbestos. The San Francisco Bay Area Air Quality Management District (BAAQMD) has the authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and is to be notified ten days in advance of any proposed demolition or abatement work. See Regulatory Setting, below, for further regulations regarding asbestos removal.

PCBs are organic oils that were formerly used primarily as insulators in many types of electrical equipment including transformers and capacitors. After PCBs were determined to be a carcinogen in the mid to late 1970s, the U.S. EPA banned PCB use in most new equipment and began a program to phase out certain existing PCB-containing equipment. Fluorescent lighting ballasts manufactured after January 1, 1978 do not contain PCBs. Spent fluorescent light tubes, thermostats, and other electrical equipment contain heavy metals such as mercury that, if disposed of in landfills, can leach into soil or groundwater. Lighting tubes typically contain concentrations of mercury that may exceed regulatory thresholds for hazardous waste and, as such, must be managed in accordance with hazardous waste regulations. Elemental mercury waste is considered hazardous. Mercury can also be present in the plumbing of older buildings in which mercury-containing equipment has been used.

DREDGED MATERIALS

Dredged sediments from the San Francisco Bay can be contaminated with a variety of pollutants, such as mercury other metals, PCBs, Polycyclic aromatic hydrocarbons, and compounds found in pesticides and herbicides (SFEI 2018). These pollutants are introduced to waterways from point sources such as sewer overflows, municipal and industrial discharges, and spills; or may be introduced from nonpoint sources such as surface runoff and atmospheric deposition.

WILDLAND FIRE

Miller/Knox is composed of vegetated open space areas that can get very dry during summer months, and is surrounded by urban areas to the north and south/southeast. Factors that contribute to the risk of fire include dense and fire-prone vegetation, poor access to fire-fighting equipment in the Ridgeland Planning Area, because of slopes or inadequate roads, lack of adequate water pressure and service in fire-prone locations, and seasonal atmospheric conditions that result in warm, dry fire seasons with strong afternoon winds. Wildfire hazard maps from the California Department of Forestry and Fire Protection (CAL FIRE) and compiled by the Association of Bay Area Governments show Miller/Knox as being within an area that is

considered a fire threatened community (ABAG 2017). The CAL FIRE Fire Hazard Severity Zones (FHSZ) maps rank land under local and state responsibility for wildland fire hazard. Miller/Knox is designated a Local Responsibility Area (Incorporated) and is not considered a very high FHSZ (CAL FIRE 2009). While these maps are not intended for site specific planning, they do indicate potential risks based on existing conditions. The District developed a Wildfire Hazard Reduction and Resource Management Plan (WHRRMP) in 2009, which is discussed in more detail in Section 4.4.2, "Regulatory Setting."

ROAD AND RAILWAY HAZARDS

Transportation corridors present potential health and safety hazards related to contamination in the rights-of-way, accidental release of materials being transported, and air emissions generated by vehicles. Potential health risks associated with toxic air contaminants are discussed in Subsection 4.9.1 of Section 4.9, "Air Quality."

Leaded gasoline was used as a vehicle fuel in the United States from the 1920s until the late 1980s. Although lead is no longer used in gasoline formulations, lead emissions from automobiles are a recognized source of contamination in soils along roadways (i.e., aerially-deposited lead). Surface and near-surface soils along heavily-used roadways have the potential to contain elevated concentrations of lead. Studies by the California Department of Transportation (Caltrans) suggest that hazardous waste levels of lead, if present, are generally found in soils within 30 feet of the edge of the pavement (DTSC 2009).

Contaminants common in railway corridors include wood preservatives (e.g., creosote and arsenic) and heavy metals in ballast rock. Ballast rock and soils associated with railroad tracks may also contain naturally-occurring asbestos. In addition, soils in and adjacent to these corridors might contain herbicide residues as a result of historical and ongoing weed-abatement practices.

AIRPORTS AND AIR HAZARDS

Airport influence areas are used in land use planning to identify areas commonly overflown by aircraft as they approach and depart an airport, or as they fly within established airport traffic patterns. Miller/Knox is not within an airport influence area. The nearest airport, Oakland International Airport, is located approximately 16 miles south of Miller/Knox.

4.4.2 Regulatory Setting

FEDERAL

Management of Hazardous Materials

Various federal laws address the proper handling, use, storage, and disposal of hazardous materials, as well as require measures to prevent or mitigate injury to health or the environment if such materials are accidentally released. The U.S. EPA is the agency primarily responsible for enforcement and implementation of federal laws and regulations pertaining to hazardous materials. Applicable federal regulations pertaining to hazardous materials are primarily contained in CFR Titles 29, 40, and 49. Hazardous materials, as defined in the Code, are listed in 49 CFR 172.101. Management of hazardous materials is governed by the following laws.

- The Toxic Substances Control Act of 1976 (15 U.S. Code [USC] Section 2601 et seq.) regulates the manufacturing, inventory, and disposition of industrial chemicals, including hazardous materials. Section 403 of the Toxic Substances Control Act establishes standards for lead-based paint hazards in paint, dust, and soil.

- The Resource Conservation and Recovery Act of 1976 (42 USC 6901 et seq.) is the law under which U.S. EPA regulates hazardous waste from the time the waste is generated until its final disposal ("cradle to grave").

- The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (also called the Superfund Act or CERCLA) (42 USC 9601 et seq.) gives U.S. EPA authority to seek out parties responsible for releases of hazardous substances and ensure their cooperation in site remediation.

- The Superfund Amendments and Reauthorization Act of 1986 (Public Law 99-499; USC Title 42, Chapter 116), also known as SARA Title III or the Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA), imposes hazardous materials planning requirements to help protect local communities in the event of accidental release.

Transport of Hazardous Materials

The U.S. Department of Transportation (DOT) regulates interstate, intrastate, and foreign carriers of hazardous materials and is responsible for protecting the public from dangers associated with such transport. The federal hazardous materials transportation law, 49 USC 5101 et seq. (formerly the Hazardous Materials Transportation Act 49 USC 1801 et seq.) is the basic statute regulating transport of hazardous materials in the United States. Hazardous materials transport regulations are enforced by the Federal Highway Administration, the U.S. Coast Guard, the Federal Railroad Administration, and the Federal Aviation Administration.

U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers (USACE) regulates water quality and potentially hazardous discharges through the Clean Water Act (33 U.S.C. § 1257, et seq.), the provisions of which are described in Subsection 4.3.2 of Section 4.3, "Hydrology and Water Quality."

Worker Safety

The federal Occupational Safety and Health Administration (OSHA) is the agency responsible for assuring worker safety in the handling and use of chemicals identified in the Occupational Safety and Health Act of 1970 (Public Law 91-596, 9 USC 651 et seq.). OSHA has adopted numerous regulations pertaining to worker safety, contained in CFR Title 29. These regulations set standards for safe workplaces and work practices, including standards relating to the handling of hazardous materials and those required for excavation and trenching.

STATE

Management of Hazardous Materials

In California, both federal and state community right-to-know laws are coordinated through the Governor's Office of Emergency Services. The federal law, SARA Title III or EPCRA, described above, encourages and supports emergency planning efforts at the state and local levels and to provide local governments and the public with information about potential chemical hazards in their communities. Because of the community right-to-know laws, information is collected from facilities that handle (produce, use, and store) hazardous materials above certain quantities. The provisions of EPCRA apply to four major categories:

- emergency planning,
- emergency release notification,
- reporting of hazardous chemical storage, and
- inventory of toxic chemical releases.

The corresponding State law is Chapter 6.95 of the California Health and Safety Code (Hazardous Materials Release Response Plans and Inventory). DTSC, a division of Cal EPA, has primary regulatory responsibility over hazardous materials in California, working in conjunction with U.S. EPA to enforce and implement

hazardous materials laws and regulations. As required by Section 65962.5 of the California Government Code, DTSC maintains a hazardous waste and substances site list for the State, known as the Cortese List. Individual regional water quality control boards (RWQCBs) are the lead agencies responsible for identifying, monitoring, and cleaning up LUSTs. The San Francisco RWQCB has jurisdiction over Miller/Knox.

Transport of Hazardous Materials and Hazardous Materials Emergency Response Plan

The State of California has adopted U.S. DOT regulations for the movement of hazardous materials originating within the state and passing through the state; state regulations are contained in 26 California Code of Regulations (CCR). State agencies with primary responsibility for enforcing state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol and Caltrans. Together, these agencies determine container types used and license hazardous waste haulers to transport hazardous waste on public roads.

California has developed an emergency response plan to coordinate emergency services provided by federal, state, and local governments and private agencies. Response to hazardous materials incidents is one part of the plan. The plan is managed by the Governor's Office of Emergency Services, which coordinates the responses of other agencies in the Miller/Knox area.

Management of Construction Activities

Through the Porter-Cologne Water Quality Act and the National Pollution Discharge Elimination System (NPDES) program, RWQCBs have the authority to require proper management of hazardous materials during construction. For a detailed description of the Porter-Cologne Water Quality Act, the NPDES program, and the role of the San Francisco Bay RWQCB, see Subsection 4.3.2 of Section 4.3, "Hydrology and Water Quality."

The SWRCB adopted the statewide NPDES General Permit in August 1999. The state requires that projects disturbing more than one acre of land during construction file a Notice of Intent with the RWQCB to be covered under this permit. Construction activities subject to the General Permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters. A stormwater pollution prevention plan (SWPPP) must be developed and implemented for each site covered by the permit. The SWPPP must include best management plans (BMPs) designed to prevent construction pollutants from contacting stormwater and keep products of erosion from moving off-site into receiving waters throughout the construction and life of a project; the BMPs must address source control and, if necessary, pollutant control.

Worker Safety

The California Occupational Safety and Health Administration (Cal/OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations within the state. Cal/OSHA standards are typically more stringent than federal OSHA regulations and are presented in Title 8 of the CCR. Cal/OSHA conducts on-site evaluations and issues notices of violation to enforce necessary improvements to health and safety practices.

REGIONAL/LOCAL

East Bay Regional Park District Master Plan

The District Master Plan (2013) defines the overall mission and vision for the District and includes policies to preserve the natural, cultural, and scenic values of parks and trails. The following polices are relevant to hazards and hazardous materials:

- **Policy KEP 4:** The District will participate in efforts to protect scenic or cultural resources, develop larger, multi-agency open space preserves, provide recreational opportunities, protect agricultural use, avoid hazards, and plan for appropriate urban growth boundaries. The District will work with other jurisdictions to develop open space preservation plans and policies that recognize the District's public interests in open space preservation and that are consistent with Board policy.

- **Policy RM 1:** Climate change is expected to affect these resources in various ways. Changes in the ranges of various species, increased potential for wildfires and pests are anticipated with this change in the weather. In a manner consistent with the desire to conserve and enhance" its resources, the District must closely track the impact of this phenomenon and if necessary, act to relocate or protect in-situ resources that are being degraded or potentially lost by this change.

- **Policy NRM 6:** The District will evaluate exotic eucalyptus, Monterey pine and cypress plantations, shrubland or woodland areas occurring along the wildland/urban interface on a case-by-case basis for thinning, removal and/or conversion to a less fire-prone condition, following the methods laid out in the Fuels Management Plan. The District will minimize the widespread encroachment of exotic and/or invasive species such as coyote brush, poison oak, and broom, etc. on parkland and work to preserve native plants where feasible.

East Bay Regional Park District General Conditions

The District's General Conditions contain the following rules regarding hazards and hazardous materials:

- **Article 22(b) Dust Control.** Dust resulting from the Contractor's performance of the work shall be controlled by the Contractor either by applying water or a dust palliative without additional costs to the District. The District Inspector has full authority to suspend work wholly or in part should the Contractor fail to perform to the satisfaction of the District Inspector.

- **Article 24 Hazardous Materials.**

  (a) Definition. As used herein, hazardous materials shall include all items listed in any statute, ordinance or publication defining hazardous materials including, but not limited to, common household items containing substances now or subsequently listed as a hazardous material or substance, chemicals, drugs, any materials used for laboratory analysis, nuclear and/or radioactive materials, toxic substances, hazardous substances, hazardous wastes, contaminated or polluting substances, materials or waste toxic, caustic, corrosive, gaseous or flammable substances that may cause injury, illness or death to living organisms.

  (b) Approval. The Contractor shall not use any hazardous material in connection with this project without the prior written approval of the District Representative. Ten (10) working days prior to using a hazardous material, the Contractor shall submit to the District Representative complete Material Safety Data Sheet (MSDS) information, product specifications, and a document stating the application rate and method and including the name of the manufacturer's local representative and emergency telephone numbers. All materials shall be properly labeled in accordance with applicable laws. The District Representative's response to the Contractor's request for approval of hazardous materials use shall not affect the Contractor's obligation to comply with the provisions of this section.

  (c) Application. In using hazardous materials, the Contractor shall:

  1. Notify the District Inspector of the application schedule at least five (5) working days in advance.

  2. Comply with all applicable federal, state, and local laws, regulations, and ordinances relating to the use and disposal of hazardous materials and containers, environmental protection, industrial hygiene, worker and public safety.

  3. Supply protective clothing or equipment as required by applicable federal or state law for all persons handling hazardous materials, and for the District Inspector as required for inspection of the work.

  4. Be responsible for the notification of all concerned parties adjacent to or affected by said hazardous material and as directed by the District Inspector.

(d) Special Situations. In the event the Contractor encounters material on the site reasonably believed to be asbestos, polychlorinated biphenyl (PCB) or any other hazardous or toxic substance, the Contractor shall immediately stop work in the areas affected and report the condition to the District Representative. If in fact the material is asbestos, polychlorinated biphenyl (PCB) or any other hazardous or toxic substance which has not been rendered harmless, the work in the affected area shall not be resumed except by written agreement between the District Representative and the Contractor. The work in the affected area otherwise shall only be resumed when asbestos, polychlorinated biphenyl (PCB) and other hazardous or toxic substances have been removed or rendered harmless.

Article 25. Safety and Public Convenience.

(a) Responsibility for Safety. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs. All work shall conform to the requirements of the California Administrative Code, Title 8, Industrial Relations, Division of Industrial Safety. The Contractor alone shall be responsible for responding to and for the final satisfaction of any and all claims of personal injury or property damage.

(b) Safety Equipment and Workers. The Contractor shall take all reasonable measures as required by existing conditions and performance of the Contract to protect the public and their property. The Contractor shall provide adequate barricades, fences, signs, warning lights, watchpersons, flag persons, etc., to protect the public and their property. Safety devices and workers shall comply with the current State of California "Manual for Warning Signs, Lights and Devices for Use in Performing Work Upon Highways," as a minimum standard. All lighting shall be electric powered and left on from sunset to sunrise.

(c) Trench and Excavation Safety. As required by the California Labor Code §6705, whenever any portion of the work involves excavating or trenching five feet or deeper, the Contractor shall submit for acceptance by the District, a detailed plan showing the design of shoring, bracing, sloping, etc., to protect the Contractor's workers, District personnel, and the public at large. If the plan varies from standard shoring systems established by the Construction Safety Orders of the Division of Industrial Safety, the plan shall be prepared by a registered civil or structural engineer employed by the Contractor. All costs for trenching, excavation safety, including engineering, shall be included within the Contract Bid.

(d) Unauthorized Vehicles. When required by this Contract or the District Inspector, the Contractor shall take measures to prevent unauthorized vehicular traffic.

(e) Material and Equipment Transportation. Trucks hauling material or equipment shall not exceed vehicle or posted load and speed limits.

(f) Public Convenience. The Contractor shall conduct the work so as to ensure the least possible obstruction to traffic or inconvenience to the general public.

(g) Failure to Provide for Safety. If in the opinion of the District Inspector, the Contractor fails to adequately provide for safety, the District Inspector may:

1. Suspend construction within the area.

2. Order and/or place any additional warning devices, barriers, or protective equipment deemed necessary.

3. Do both 1 and 2.

The District shall not assume the Contractor's responsibilities by this action and does not release the Contractor's obligations. The Contractor will be liable for all costs the District incurs in acting under this section and shall reimburse the District for double the District's costs. This action shall not become a basis for any claim for time or money against the District.

- Article 26 Fire Hazards and Preventions.

(a) The Contractor will be held responsible for fire ignited by the Contractor's employees, subcontractors, or equipment. Employees shall not be allowed to start fires. No open flames shall be permitted.

(b) The Contractor shall take necessary precautions to guard against and eliminate fire hazards that may cause damage to construction work, building materials, equipment, public, and private property, including grassland, brush, and trees.

(c) Flammable materials shall not be poured into drain lines, but shall be disposed of in a legal manner.

(d) Fire hydrants shall be kept accessible to fire-fighting equipment at all times.

(e) Contractors shall comply with state law requirements for burning and use of combustion engines including but not limited to Public Resources Code sections 4427, 4431, 4435, and 4442.

East Bay Regional Park District Wildfire Hazard Reduction and Resource Management Plan

The District's WHRRMP provides long-term strategies for reducing fuel loads and managing vegetation within District lands. The plan identifies and describes the vegetation types and their associated fuel characteristics and identifies potential fuel treatment methods. Specific recommendations and guidelines for reducing fuel loads and managing vegetation at recommended treatment areas are also provided. Recommendations include types and frequency of fuel treatment actions, considerations for selecting treatments, suggested end-state vegetation types, and concerns regarding plant and animal species and other site-specific features that could potentially be affected by fuel treatment activities (District 2009).

Bay Area Air Quality Management District

BAAQMD is vested by the California legislature with authority to regulate airborne pollutants, including asbestos, through both inspection and law enforcement, and is to be notified ten (10) days in advance of any proposed demolition or abatement work. Cal/OSHA regulates asbestos removal to ensure the health and safety of workers removing asbestos containing materials and also must be notified of asbestos abatement activities.

Emergency Operations and Local Hazard Mitigation Plans

The *Contra Costa County Hazard Mitigation Plan Update* (2011) and the *Contra Costa County Emergency Operations Plan* (2015) were developed through a partnership of local governments in Contra Costa County, including the City as a municipal planning partner. The *Contra Costa County Hazard Mitigation Plan Update* is intended to reduce vulnerability from natural hazards within the county and includes a county-wide hazard risk assessment and mitigation strategies to increase the resilience of infrastructure and critical facilities. The *Contra Costa County Emergency Operations Plan* provides the basis for a coordinated response before, during, and after an emergency affecting the County.

City of Richmond General Plan 2030

The City of Richmond General Plan 2030 identifies goals, policies, and actions that address hazards and hazardous materials. Goals and policies presented in the Public Safety and Noise and Conservation, Natural Resources, and Open Space elements of the General Plan applicable to the LUPA recommendations on City property upon which the District does not have a lease agreement or easement are as follows (City of Richmond 2012a; 2012b):

Goal SN1: Risk Management of Natural and Human-Caused Disasters

Minimize the risk of injury, loss of life, property damage and environmental degradation from seismic activity, geologic hazards, flooding and fire and the storage, use and transport of hazardous materials and operations. Promote a sustainable approach to reduce impacts of natural disasters such as flooding and fire.

- **Policy SN1.3: Hazardous Materials Operations**. Require safe production, transportation, handling, use and disposal of hazardous materials that may cause air, water or soil contamination. Encourage best practices in hazardous waste management and ensure consistency with City, West Contra Costa County and OSHA guidelines, standards and requirements. Protect Richmond's shoreline and other natural resources from accidental occurrences by controlling the location of new hazardous waste facilities and by limiting the expansion of existing hazardous waste facilities adjacent to the shoreline and along streams or creeks. Coordinate with federal, state and local agencies and law enforcement to prevent the illegal transportation and disposal of hazardous waste.

Goal SN2: High Levels of Police and Fire Service

Provide a high level of security in the community to prevent and reduce crime, and minimize risks to people, property and the environment from fire.

- **Policy SN2.3: Fire Safety**. Regularly update policies that will protect the community and its urban and natural areas from fire hazards. Emphasize prevention and awareness of fire safety guidelines to minimize risk and potential damage to life, property and the environment. In areas designated by the Richmond Fire Department as having a high fire hazard, ensure adequate fire equipment, personnel, firebreaks, facilities, water and access for a quick and efficient response in any area.

Goal SN3: Emergency Preparedness

Develop effective mechanisms for a coordinated response to emergencies and natural disasters to best protect residents, businesses and the environment.

- **Policy SN3.1: Emergency and Disaster Preparedness**. Maintain staff and facilities that will continue to support a coordinated and effective response to emergencies and natural disasters throughout the City. Coordinate with neighboring jurisdictions, local employers and industries to make sure that emergency preparedness and disaster response programs equitably serve all parts of the City. Continue to maintain adequate police and fire staffing, facilities, equipment and maintenance in order to protect the community.

Goal CN6: A Healthy Urban Environment

Elevate the quality of urban areas to support human development and provide residents with a healthy urban environment. Remediate contaminated soil and brownfield sites and properly manage mineral resource sites in order to contribute to improved public health and maximize opportunities to develop new uses. Enhance the natural beauty of the area by promoting design that respects landscape context, restoration of urban creeks, creation of green streets and stewardship of the urban forest.

- **Policy CN6.1: Toxic and Contaminated Sites**. Continue to work with the appropriate local, state, and federal agencies to promote the clean-up and reuse of contaminated sites to protect human and environmental health. Work with property owners and regional agencies to prevent, reduce or eliminate soil and water contamination from industrial operations, the Port and other activities that use, produce or dispose of hazardous or toxic substances. Implement appropriate mitigation measures and clean-up of sites that are known to contain toxic materials as a condition of reuse. Support the remediation and reuse of large, disturbed sites, such as the Winehaven complex at Point Molate and the Terminal 4 site at Point San Pablo, into mixed-use centers that provide the maximum benefit to the community without compromising the integrity of the surrounding natural areas.

City of Richmond Code of Ordinances

Chapter 8.16 - Fire Prevention Code, of the City's code of ordinances governs conditions hazardous to life and property from fire, and explosion. It adopts the text of the International Fire Code and the California Fire

Code, 2016 Edition with several changes, additions, and amendments. Section 8.16.040 – Amendments to the California Fire Code, includes the following provision: whenever any land is to be developed or a building is to be constructed, before undertaking any construction or development, applicants shall submit building plans and specifications to the Richmond Fire Department which includes an aerial pre-fire plan for said Department's retention and review for compliance with this ordinance and other applicable regulations.

4.4.3 Impacts and Mitigation Measures

METHODOLOGY

This impact analysis is based on a review of applicable laws, plans and policies, permits, and legal requirements pertaining to hazards and hazardous materials. Existing on-site hazardous materials and the potential for other safety or hazardous conditions were identified based on publicly available hazardous materials information and clean-up status from SWRCB's GeoTracker and DTSC's EnviroStor databases. Proposed LUPA recommendations are evaluated against the hazardous materials information gathered from these sources to determine whether any risks to public health and safety or other conflicts would occur. Construction-related impacts generally include temporary effects, such as the transport, storage, and use of potentially hazardous chemicals and the potential to encounter hazardous wastes during construction. Operations-related impacts generally include permanent impacts associated with use of the roads at Miller/Knox for the transport of hazardous material as well as the storage and use of hazardous material within Miller/Knox.

The analysis below has been written recognizing the direction from a recent California Environmental Quality Act (CEQA) California Supreme Court decision addressing the scope of analysis required in environmental impact reports for potential impacts resulting from existing environmental hazards in the vicinity of a site for a proposed project. In *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, 377 ("CBIA"), the Court held that:

> "In light of CEQA's text, statutory structure, and purpose, we conclude that agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents. But when a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users." (*Id*. at pp. 377-378).

The court directed that CEQA does not routinely require in all circumstances the consideration of the effects of existing environmental conditions on the future occupants or users of a proposed project site. But if the project might exacerbate an existing hazard, the lead agency must then analyze the exposure of future residents and users to the hazard. Also, the court did not prohibit an agency from considering how existing hazards might impact a project's future users, so for publicly sponsored and implemented projects, the lead agency retains this discretion. For the Miller/Knox PEIR, the District is addressing the potential for exposure of park users to existing and reasonably foreseeable future environmental hazards.

These principles are relevant to the discussion below of wildland fire hazards. On that issue, the appropriate analysis is whether the proposed LUPA recommendations risk exacerbating the extent of existing fire hazards, and if so, what would be the potential for exposure to the hazard. The impacts of exposure to sea level rise-induced flooding is evaluated in Impact 4.10-3 of Section 4.10, "Greenhouse Gas Emissions and Climate Change."

THRESHOLDS OF SIGNIFICANCE

An impact related to hazardous materials and public health is considered significant if implementation of the Miller/Knox LUPA recommendations would do any of the following:

- create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- be located on 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 create a significant hazard to the public or the environment;
- for a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard for people residing or working in the project area;
- for a project within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area;
- impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan; and
- expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

ISSUES NOT DISCUSSED FURTHER

Potential safety hazards related to public or private airports are not evaluated as Miller/Knox is neither in an area with an adopted airport land use plan nor within two miles of an airport or airstrip. This issue is not discussed further.

IMPACTS AND MITIGATION MEASURES

Impact 4.4-1: Routine Transport, Use, or Disposal of Hazardous Materials

The proposed LUPA recommendations would involve some routine transport, use, and disposal of hazardous materials during vehicle maintenance; vegetation management; demolition; and dredging of the lagoon. Compliance with existing regulations would maintain impacts associated with the routine transport, use, and disposal of hazardous materials at a less-than-significant level. However, sediments excavated during lagoon dredging may contain hazardous materials, which could expose workers and park visitors to health and safety risks. This would be a **potentially significant** impact. Implementation of Mitigation Measure 4.3-3b would reduce the potential for contaminated dredge sediments to create a health and safety risk to a **less-than-significant** level.

Proposed LUPA recommendations that would involve the routine transport, use, and disposal of hazardous materials include vehicle maintenance; vegetation management; partial demolition of a historic building; removal of abandoned railroad tracks; and dredging of the lagoon. Potentially hazardous materials such as fuels, lubricants, solvents, cleaning products, herbicides, hazardous building materials, such as asbestos

and PCBs; contaminated soils in railway corridors, such as wood preservatives, heavy metals, and naturally-occurring asbestos; and contaminated dredged material may be used and/or disturbed if present. These materials could present health and safety risks if mishandled, inadvertently spilled, or disposed of incorrectly. In addition to potential on-site accidents that may expose workers, staff, and park visitors to hazardous materials; off-site accidents during transport of hazardous materials and waste to or from Miller/Knox could expose the public and the environment to additional risks.

The Lagoon Enhancement Project would involve the comprehensive dredging of up to 10,000 cubic yards of sediment. Continuation of annual lagoon maintenance dredging consists of up to 200 cubic yards of sediment per year consistent with the District's existing Routine Maintenance Agreement permit. Sediments in the lagoon are from the San Francisco Bay and are pumped into the lagoon by the intake system. As described in Section 4.4.1, "Environmental Setting," dredged sediments from the San Francisco Bay have the potential to contain hazardous materials. Thus, sediments excavated during the Lagoon Enhancement Project or annual maintenance dredging may contain hazardous materials, which could expose workers and park visitors to health and safety risks. Furthermore, as discussed in Impact 4.3-3 of Section 4.3, "Hydrology and Water Quality," because high groundwater levels have been reported in the Bray Planning Area, where the dredged materials would be disposed of, it is possible that contaminated leachate from dredged materials could contact and degrade groundwater.

The proposed LUPA would be subject to standard regulations that control the transport, use, and disposal of hazardous materials and minimize the potential for an accidental release of hazardous materials. As described in Title 49 of the CFR and implemented by Title 13 of the CCR, the U.S. DOT Office of Hazardous Materials Safety has established strict regulations for the safe transportation of hazardous materials. Hazardous wastes produced on-site are subject to requirements associated with accumulation time limits, proper storage locations and containers, and proper labeling. For removal of hazardous waste from the site, hazardous waste generators are required to use a certified hazardous waste transportation company, which must ship hazardous waste to a permitted facility for treatment, storage, recycling, or disposal. Furthermore, in accordance with the NPDES program, a SWPPP would be prepared and would include BMPs designed to prevent project-generated pollutants from entering stormwater and moving off-site into receiving waters throughout the implementation and life of the proposed LUPA. BMPs may include silt fencing, limiting use of hazardous materials to areas distant from surface water, and developing and implementing a spill prevention and emergency response plan to handle potential fuel and/or hazardous material spills.

Compliance with existing state and federal regulations such as those contained in Chapter 6.95 of the California Health and Safety Code, CCR Title 26, NPDES, and federal regulations contained in CFR Titles 29, 40, and 49, would reduce impacts associated with the routine transport, use, and disposal of hazardous materials to less than significant. However, sediments excavated during lagoon dredging may contain hazardous materials, which could expose workers and park visitors to health and safety risks. This would be a **potentially significant** impact.

Mitigation Measure

Implement Mitigation Measure 4.3-3b: Sediment analysis plan and reporting, as described in Impact 4.3.3 of Section 4.3, "Hydrology and Water Quality."

Significance after Mitigation

Implementation of Mitigation Measure 4.3-3b would require the District to prepare a sediment analysis plan and complete sediment testing to determine the levels of pollutants of concern within the dredged sediments. If hazardous materials are present, the District would consult with the RWQCB to determine what protective measures, if any, are required and contaminated sediments would be handled and disposed of in accordance with applicable permits as well as federal and state laws that are effective in reducing or eliminating hazards related to hazardous materials. Human health and safety impacts would be avoided through adherence to these procedures, conditions, and regulations. Therefore, impacts would be **less than significant with mitigation incorporated**.

Impact 4.4-2: Accidental Exposure to Contaminated Soil or Groundwater

Implementation of the LUPA recommendations would involve grading, excavation, and other ground-disturbing activities which could result in accidental exposure of workers and the public to contaminated soil or groundwater. A records search of the SWRCB and DTSC databases identified one site of documented contamination located within Miller/Knox, which has since been remediated, and 16 sites within 0.25 mile of Miller/Knox, which would not be affected by ground-disturbing LUPA activities. However, it is a reasonable risk to recognize that construction at Miller/Knox could encounter previously undocumented underground contamination due to the historical uses of the park. Therefore, impacts would be **potentially significant**. Implementation of Mitigation Measure 4.4-2 would reduce the risks associated with encountering contaminated materials to a **less-than-significant** level.

The removal of abandoned railroad tracks; trail improvement and decommissioning; construction of the recreational programs and storage building; and establishment of new, formalized, and expanded staging areas would involve ground-disturbing activities. Ground-disturbing activities such as grading and excavation could result in the accidental exposure of workers and the public to contaminated soil or groundwater if encountered. As discussed in Section 4.4.1, "Environmental Setting," a records search of the SWRCB and DTSC databases identified one site of documented contamination located within Miller/Knox and 16 sites within 0.25 mile of Miller/Knox. For the one site located on-site, a hazardous material spill was discovered on May 20, 1987 at a petroleum storage facility on the Bray property, likely caused during removal of an on-site storage tank. It was determined that no further action was required, and the case was completed and closed as of April 14, 1995. Because this site was remediated, and the remaining 16 sites are located outside of Miller/Knox, implementation of the LUPA recommendations would not result in the release of hazardous materials from any of these sites. However, given the historical uses of Miller/Knox and the proximity of several documented sites of contamination, it is a reasonable risk to recognize that construction at Miller/Knox could encounter previously undocumented underground contamination, which could be exposed during ground-disturbing activities, creating a **potentially significant** hazard to the public or the environment.

Mitigation Measure 4.4-2: Prepare and Implement a Management Plan for Accidental Exposure to Underground Contamination

Before issuance of grading permits, a management plan for accidental exposure to underground contamination shall be prepared by the District or the District's contractor or construction manager. The plan shall be reviewed and approved by Contra Costa Health Services (CCHS) before any ground disturbing activities. The management plan shall include measures to reduce potential hazards to workers, the public, and the environment associated with exposure to contaminated soil or groundwater during construction-related activities. The management plan shall include provisions for halting work, agency notification, managing impacted materials, sampling and analytical requirements, and disposal procedures. Specifically, the construction hazardous materials management plan shall:

- describe the necessary actions to be taken if evidence of contaminated soil or groundwater is encountered during any construction-type activities;
- describe the types of evidence that could indicate potential hazardous materials contamination, such as soil discoloration, petroleum or chemical odors, or buried building materials;
- include measures to protect worker safety if signs of contamination are encountered;
- identify sampling and analysis protocols for various substances that might be encountered;
- list required regulatory agency contacts if contamination is found;
- include recommendations on soil management in the event that aerially deposited lead is discovered in existing road right-of-way;

- identify legal and regulatory processes and thresholds for cleanup of contamination;
- include provisions for delineation, removal, and disposal of any contaminants identified as exceeding human health risk levels; and
- require that the project contractor follow all procedural direction given by CCHS to ensure that suspect soils are isolated, protected from runoff, and disposed of in accordance with the requirements of the licensed receiving facility.

Significance after Mitigation

Implementation of Mitigation Measure 4.4-2 would require a construction hazardous materials management plan which would contain provisions for halting work, agency notification, managing impacted materials, sampling and analytical requirements and disposal procedures. These measures would reduce potential hazards to workers, the public, and the environment associated with exposure to previously unknown hazardous materials during ground disturbing activities. Thus, impacts would be **less than significant with mitigation incorporated**.

Impact 4.4-3: Exposure of Schools to Hazardous or Acutely Hazardous Materials

Of the five planning areas, only the Ridgeland Planning Area is within one quarter-mile of an existing school, the Washington Elementary School. Hazardous materials that could be used within the Ridgeland Planning Area include the use of vehicle fuels and fluids and herbicides. The emission of air pollutants from vehicles and mechanical equipment is discussed in Impact 4.9-2 of Section 4.9, "Air Quality." Compliance with applicable federal, state, and District regulations would minimize the risk of public exposure to the routine use of hazardous materials to a less-than-significant level.

However, given the historical uses of Miller/Knox there is a reasonable risk to recognize that construction could encounter previously undocumented underground contamination, which could be excavated during ground disturbing activities, exposing nearby schools to hazardous materials. This impact would be **potentially significant.** Implementation of Mitigation Measure 4.4-2 would reduce potential hazards to nearby schools associated with exposure to previously undocumented underground contamination to a **less-than-significant** level.

The nearest school to Miller/Knox is the Washington Elementary School, located 0.21 miles north of the park boundary. The school site is separated from the park by a hill as well as several roads and a single-family residential development. Of the five planning areas, only the Ridgeland Planning Area is within one quarter-mile of the Washington Elementary School. Hazardous materials that could be used within the Ridgeland Planning Area include the temporary use of vehicle fuels and fluids during implementation of trail and vegetation management recommendations and limited amounts of vehicle fuels and fluids and herbicides during the operational phase of the proposed LUPA. These potentially hazardous materials would be used in small quantities and their use would be limited to specific on-site areas. The emission of air pollutants from vehicles and mechanical equipment is discussed in Impact 4.9.2 of Section 4.9, "Air Quality."

As discussed under Impact 4.4-1 and 4.4-2, compliance with applicable federal, state, and local regulations would minimize impacts associated with the routine transport, use, and disposal of hazardous materials. Furthermore, because of the intervening topography of the area and the school and limited use of vehicle fluids and herbicides, it is unlikely that hazardous materials used on site would result in a spill that would contaminate off-site areas. Therefore, this impact would be less than significant.

However, given the historical uses of Miller/Knox it is a reasonable risk to recognize that construction could encounter previously undocumented underground contamination, which could be excavated during ground disturbing activities, exposing nearby schools to hazardous materials. Therefore, impacts would be **potentially significant**.

Mitigation Measures

Implement Mitigation Measure 4.4-2: Prepare and implement management plan for accidental exposure to underground contamination.

Significance after Mitigation

Implementation of Mitigation Measure 4.4-2 would require a management plan for accidental exposure to underground contamination which would contain provisions for halting work, agency notification, managing impacted materials, sampling and analytical requirements and disposal procedures. These measures would reduce potential hazards to nearby schools associated with exposure to previously undocumented underground contamination during ground disturbance activities. Thus, impacts would be **less than significant with mitigation incorporated**.

Impact 4.4-4: Emergency Response or Evacuation Plans

Implementation of the proposed LUPA recommendations would not result in the permanent modification of existing roadway alignments and includes features which would result in long-term improvements to park emergency access. Areas of Miller/Knox would be closed to visitors during construction-type activities, such as the Lagoon Enhancement Project and building work at Ferry Point. In the case temporary lane closures are required, the District would provide temporary traffic controls as appropriate to facilitate traffic flow and to permit the movement of emergency vehicles. Therefore, implementation of the proposed LUPA recommendations would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. This impact would be **less than significant**.

Implementation of the proposed LUPA recommendations would not result in the permanent modification of existing roadway alignments. Several LUPA recommendations would improve access to the area, such as a vehicle turn-around area and expansion of the Ferry Point staging area, the development of one new staging area, and one formalized staging area, and thus would result in long-term improvements to park emergency access. In the event that temporary lane closures on Dornan Drive are required, such as during implementation of the Lagoon Enhancement Project, the District would notify the City of Richmond Police and Fire Departments and provide temporary traffic controls as appropriate to facilitate traffic flow and to permit the movement of emergency vehicles. As specified by District General Condition Article 25(f), all work would be conducted so as to ensure the least possible obstruction to traffic or inconvenience to the general public. Temporary traffic controls would abide by District General Condition Article 25(b), and could include measures such as signage, physical barriers and channelizing devices, reduced speed limit, detours, and flaggers. Furthermore, the length of Dornan Drive that would be used would be short, up to 0.5 miles of Dornan Drive would be used to accommodate haul trucks. Therefore, implementation of the proposed LUPA recommendations would not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 4.4-5: Wildland Fire Hazard

Although Miller/Knox is not designated a very high FHSZ, it is within an area that is considered a fire threatened community. Sources of ignition could include the temporary and periodic use of vehicles and mechanical equipment within vegetated areas. The proposed LUPA recommendations include the establishment of one new parking area, one formalized parking area, expanded parking at the Ferry Point staging area, and a new recreational programs and storage building; however, implementation of the LUPA recommendations would not introduce new permanent residents or significant numbers of new park visitors to a fire prone area. Given compliance with the District's General Conditions associated with fire hazards and prevention; on-going implementation of the District's WHRRMP; implementation of the City's Fire Prevention Code and General Plan policies SN 2.3 and SN3.1; and improved site emergency access that would be provided with implementation of the LUPA recommendations, the proposed LUPA would not expose people or structures to a significant change in the risk of exposure to wildland fires. Impacts would be **less than significant**.

Although Miller/Knox is not designated a very high FHSZ, it is within an area that is considered a fire threatened community. The site is composed of vegetated open space areas that can get very dry during summer months and is surrounded by residential areas. While LUPA recommendations would include construction of additional parking and a new recreational programs and storage building, the proposed LUPA recommendations would not introduce new permanent residents or significant numbers of new park visitors to a very high FHSZ or fire prone area. Implementation of the proposed LUPA recommendations would require the temporary and periodic use of vehicles and mechanical equipment within vegetated areas. Heat or sparks from vehicles or equipment activity could ignite dry vegetation and cause a fire, exposing people or structures in the vicinity to risk.

The new recreational programs and storage building would comply with the City's Fire Prevention Code which includes measures such as ignition-resistant construction, automatic interior fire sprinklers, and adequate emergency and fire apparatus access. Furthermore, Section 8.16.040 of the City's code of ordinances requires applicants to submit building plans and specifications to the Richmond Fire Department for review and approval to ensure that development and construction activities incorporate measures to reduce fire risk. One of the LUPA recommendations is to implement the District's WHRRMP, as well as the integrated pest management, vegetation management, and grazing recommendations. These recommendations would reduce fuel loads, provide defensible space along the wildland-urban interface, and minimize the risk of wind-driven, catastrophic wildfire. Lastly, LUPA recommendations such as a vehicle turn-around and the development of staging areas would improve traffic flow within the park, and thus would result in long-term improvements to park emergency access. Given compliance with the City's Fire Prevention Code and General Plan policies SN 2.3 and SN3.1; implementation of the District's WHRRMP; and improved emergency access, the proposed LUPA would not expose people or structures to a significant change in the risk of loss, injury, or death involving wildland fires. Therefore, this impact is considered **less than significant**.

Mitigation Measures

No mitigation is required.

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