3.12 SOLID AND HAZARDOUS MATERIALS

This section describes the existing physical and regulatory setting related to solid and hazardous materials and discusses the potential effects of the EIS Alternatives related to solid and hazardous materials. Potential hazardous material exposure and fire hazards are evaluated in this section. Exposure to hazardous air emissions of toxic air contaminants[1] is addressed in Section 3.2, "Air Quality." Other safety hazards, such as earthquakes, are addressed in Section 3.6, "Geology and Soils." Flooding hazards are addressed in Section 3.5, "Floodplains, Wetlands, and Coastal Management," and Section 3.8, "Hydrology and Water Quality." Emergency operations and access issues are addressed in Section 3.3, "Community Services."

3.12.1 Affected Environment

This section describes solid waste services, hazardous materials, and public safety conditions in the immediate vicinity of the existing SFVAMC Fort Miley Campus and in the Mission Bay area. Other public services, including law enforcement, fire protection, and parks/recreation, are discussed in Section 3.3.

Solid Waste

Recology (formerly Norcal Waste Systems, Inc.) handles solid waste collection services, including recycling, for more than 600,000 residential customers and 60,000 commercial customers in more than 50 communities throughout California. Sunset Scavenger Company and Golden Gate Disposal & Recycling Company are subsidiaries of Recology. Sunset Scavenger is San Francisco's authorized collection company serving residences and businesses, including the existing SFVAMC Fort Miley Campus, in numerous neighborhoods stretching from the Golden Gate Bridge to Candlestick Park, such as the Sunset, Mission, and Bayview Districts; Noe Valley; Glen Park; the Presidio; Haight Ashbury; and Cole Valley. Golden Gate Disposal & Recycling is San Francisco's authorized collection company, serving residences and businesses in the Financial District and several contiguous neighborhoods: North Beach, South of Market (including the Mission Bay area), South Beach, Fisherman's Wharf, and the Marina District.

Residential and commercial solid waste, including recycling, collected by Sunset Scavenger and Golden Gate Disposal & Recycling is delivered to San Francisco Recycling and Disposal, Inc. (i.e., the San Francisco Dump), located at 501 Tunnel Avenue in San Francisco's Bayshore District just west of U.S. Highway 101. The maximum permitted throughput is 275 tons per day with a permitted throughput capacity of 54,600 tons per year. Organic waste collected by Golden Gate Disposal & Recycling is sent to the Jepson Prairie composting facility, which has the capacity to process approximately 300 tons per day, or approximately 5,200 tons of food waste (food scraps) from commercial premises and 2,000 tons of green waste per month (CCSF, 2010).

After the solid waste is sorted and recycled (i.e., diverted), the waste that is not diverted is transferred to the Altamont Landfill on Altamont Pass Road in Livermore, approximately 60 miles from San Francisco. Altamont Landfill serves several jurisdictions, including several East Bay cities such as Oakland, Alameda, Emeryville, and Richmond; however, San Francisco is the largest single contributor to the landfill. In 2007, the volume of waste contributed by San Francisco represented approximately 41 percent of the total waste disposed of at this facility.

[1] Sources of hazardous or toxic air emissions include but are not limited to processes (e.g., laboratory fume hood exhaust); vehicle use (diesel particulate emissions from exhaust); and proximity to existing or relocated sources of diesel or other toxic air emissions.

The Altamont Landfill handles construction, demolition, and mixed municipal waste. This landfill comprises approximately 2,130 acres (472 acres of disposal area) and has a maximum permitted intake capacity of 11,150 tons per day and a maximum total permitted intake capacity of 62 million cubic yards, of which 73.7 percent (45.7 million cubic yards) remained as of August 2009 (CIWMB, 2009). The landfill is projected to have sufficient capacity to operate until at least 2025 (CIWMB, 2011), according to the California Integrated Waste Management Board (CIWMB) Solid Waste Information System (SWIS) database, if disposal were to continue at current rates; however, the Altamont Landfill is currently scheduled for closure on January 1, 2029 (SF Redevelopment & SF Planning, 2009). In 1988, the City entered into an agreement with what is now Waste Management of Alameda for the disposal of 15 million tons of solid waste at Altamont. Through August 1, 2009, San Francisco had used 12,579,318 tons of this capacity. San Francisco projects that the remaining capacity will be reached no sooner than August 2014 (assuming an average of 467,000 tons per year disposal for the City) (SF Redevelopment & SF Planning, 2009).

San Francisco issued a request for qualifications soliciting bids for a new contract to accommodate its disposal capacity beyond the expiration of the current agreement. The City identified three landfills that had the capacity to meet its future needs. On July 26, 2011, the San Francisco Board of Supervisors passed Resolution 322-11 and entered into a 10-year landfill disposal agreement with Recology San Francisco for up to 5 million tons of intake capacity, which could represent 20 or more years of capacity for San Francisco's waste (CCSF BOS, 2011).

The San Francisco Department of the Environment (SF Environment) works with residents and businesses to promote waste reduction, reuse, and recycling throughout the city, to conserve valuable resources and reduce the amount of material that is sent to the landfill. In addition to maximizing waste prevention, SF Environment must meet a State-mandated requirement to divert 50 percent of disposed materials from landfills (see "California Solid Waste Reuse and Recycling Access Act" in Section 3.12.2, "Regulatory Framework"). Further, as part of the Zero Waste Goal (Resolution No. 007-02-COE) established in 2002, the San Francisco Commission of the Environment urged the Mayor and the San Francisco Board of Supervisors to adopt a goal for San Francisco of 75 percent waste diversion rate by 2010, with a goal of zero waste by 2020 (SF Environment, 2010). San Francisco has since exceeded this goal by achieving a landfill diversion rate of 77 percent in 2010.

In 2010, the existing SFVAMC Fort Miley Campus generated a total of approximately 2,435 tons of solid waste, composed of approximately 1,445 tons of trash and 990 tons of recycled materials that were diverted from landfills. Additionally, approximately 48.6 tons of medical waste, 8.4 tons of hazardous waste, and 468 cubic feet of radioactive waste were generated at the Campus in 2010.

Hazardous Materials

Hazardous substances are those substances defined as hazardous by the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (42 U.S. Code [USC] 6901 et seq.) and the Resource Conservation and Recovery Act (42 USC 6901 et seq., as amended). Hazardous substances include but are not limited to hazardous materials and hazardous wastes as defined under Section 25501 and Section 24117, respectively, of the California Health and Safety Code. Specifically, materials and waste may be considered hazardous if they are poisonous (toxic), can be ignited by open flame (ignitable), corrode other materials (corrosive), or react violently, explode, or generate vapors when mixed with water (reactive). A hazardous waste, for the purpose of this EIS, is any hazardous material that is to be abandoned, discarded, or recycled. The term "hazardous material" is defined as any material

that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment (California Health and Safety Code, Section 25501[o]). The transportation, use, and disposal of hazardous materials, as well as the potential release of hazardous materials to the environment, are closely regulated by the U.S. Environmental Protection Agency (EPA).

Medical waste is generated or produced as a result of diagnosis, treatment, or immunization of human beings or animals and the production or testing of biologicals.[2] Medical waste is either biohazardous waste or sharps waste.[3] Cultures, blood and blood products, tissues, and body parts are all considered medical waste. The transportation and disposal of medical waste are closely regulated under the California Medical Waste Management Program. The San Francisco Department of Public Health, Hazardous Materials Unified Program Agency (HMUPA) regulates the handling of medical waste for the existing SFVAMC Fort Miley Campus. The HMUPA was established as a Certified Unified Program in 1996 by the California Environmental Protection Agency. The HMUPA issues permits and registrations and inspects regulated businesses. Inspections ensure that businesses are in compliance with applicable regulations, including the Medical Waste Management Act.

This section describes the nature and extent of routine hazardous materials used at the existing SFVAMC Fort Miley Campus and in the Mission Bay area, as well as the potential for upset and accident conditions under which hazardous materials could inadvertently be released.

Existing SFVAMC Fort Miley Campus

To determine the presence or absence of documented soil or groundwater contamination at or near the existing SFVAMC Fort Miley Campus, a comprehensive report was compiled by Environmental Data Resources (EDR), which listed the results of a search of public environmental databases in February 2011. This report is provided in Appendix D, "EDR DataMap Environmental Atlas for the Existing SFVAMC Campus." The report provided information on the project site and nearby properties obtained from federal, State, regional, and local regulatory databases. A set of historical aerial photographs, dating from 1946 to 2005, was also obtained from EDR. As a hospital and health facility, the SFVAMC is permitted to routinely generate, store, and handle hazardous and/or medical waste and is also permitted by the Bay Area Air Quality Management District for air emissions related to various sources on the campus, such as the fuel tanks. Therefore, according to the EDR, the Campus was identified in several government environmental databases:

- *California Environmental Protection Agency "Cortese" Hazardous Waste and Substances Sites List (Cortese List)*—lists sites that are designated by the State Water Resources Control Board (see "Leaking Underground Storage Tank Program [LUST]" below), the Integrated Waste Board (Solid Waste Facilities/Landfill Sites [SWF/LS]), and the California Department of Toxic Substances Control (i.e., Cal-Sites)

- *Material Licensing Tracking System*—lists sites that possess or use radioactive materials that are subject to Nuclear Regulatory Commission licensing requirements

[2] The term "biologicals" means medicinal preparations made from living organisms and their products, including but not limited to serums, vaccines, antigens, and antitoxins (California Medical Waste Management Act, California Health and Safety Code Sections 117600–118360).

[3] The term "sharps waste" refers to any device having acute rigid corners, edges, or protuberances capable of cutting or piercing, including but not limited to hypodermic needles and broken glass items (such as pipettes and vials) contaminated with biohazardous waste (California Medical Waste Management Act, California Health and Safety Code Sections 117600–118360).

- *Federal Insecticide, Fungicide, and Rodenticide Act and Toxic Substance Control Act Tracking System*—tracks administrative cases and pesticide enforcement actions and compliance activities related to the Federal Insecticide, Fungicide, and Rodenticide Act, Toxic Substances Control Act (TSCA), and Emergency Planning and Community Right-to-Know Act (EPCRA)

- *California Hazardous Material Incident Reporting System (CHMIRS)*—contains information on reported hazardous material incidents (accidental releases or spills)

- *Underground Storage Tank (UST) Database*—lists active UST facilities gathered from the local regulatory agencies

- *Hazardous Waste Information System (HAZNET)*—lists facilities that have submitted hazardous waste manifests to the state, and thus has generated and disposed of hazardous waste

- *Facility Index System/Facility Registry System*—contains both facility information and "pointers" to other sources that contain more detail

- *Resource Conservation and Recovery Act Large Quantity Generators (RCRA-LQG)*—contains selective information on sites that generate, transport, store, treat, and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act of 1976 (RCRA). LQGs generate more than 1,000 kilograms (kg) of hazardous waste or more than 1 kg of acutely hazardous waste per month.

- *Resource Conservation and Recovery Act Small Quantity Generators (RCRA-SQG)*—contains selective information on sites that generate, transport, store, treat and/or dispose of hazardous waste as defined by the RCRA. SQGs generate between 100 kg and 1,000 kg of hazardous waste per month.

- *Facility Inventory Database*—contains a historical listing of active and inactive underground storage tank locations from the State Water Resources Control Board

- *Hazardous Substance Storage Container Database*—provides a historical listing of UST sites

- *Statewide Environmental Evaluation and Planning System, UST Listing*—provides an UST listing (updated and maintained in the early 1990s)

- *Leaking Underground Storage Tank Information System (LUST)*—contains an inventory of reported leaking UST incidents

- *California Air Resources Board Emissions Inventory Data (EMI)*—provides toxics and criteria pollutant emissions data collected by the California Air Resources Board and local air pollution agencies

- *California Department of Toxic Substances Control EnviroStor Database (EnviroStor)*—identifies sites that have known contamination or sites for which there may be reasons to investigate further

Of these database listings, only two incidents listed involved the accidental release or exposure of hazardous materials, thereby posing a health risk to the public and environment. The first incident was caused by the

structural failure of an underground leaking diesel tank on the SFVAMC Fort Miley Campus, with potential contamination of adjacent soil. A report was opened on February 24, 1994, with the San Francisco County LUST database. This incident was listed in the EnviroStor, LUST, HAZNET, and EMI databases. An investigation of the underground leaking diesel tank incident was performed and no remedial action was taken. The case was subsequently closed by the County of San Francisco Local Oversight Program on April 28, 1994.

The second incident occurred on September 19, 2007, during which sludge containing polychlorinated biphenyls (PCBs) from an unknown source was discovered approximately 12–15 feet below ground between Buildings 2 and 200 of the SFVAMC Fort Miley Campus during drilling operations. This incident was listed in the CHMIRS database. The incident involved the discovery of sludge containing PCBs between Buildings 2 and 200 during drilling operations associated with the construction of the Building 200 Annex. The SFVAMC, working in close coordination with EPA Region 9, performed extensive corrective actions and cleanup to the maximum extent practicable to protect human health and the environment. VA also conducted five phases of site characterization and remediation actions. A total of approximately 1,688 tons of PCB-contaminated soil was excavated and approximately 11 tons of wall coating and concrete wall paint wastes were generated from the concrete wall mitigation. As a result, only residual amounts of PCB contamination remained in the subsurface soil and wall and the case was subsequently closed. There is no indication that the current soil or groundwater at the Campus is affected by these previous incidents.

Mission Bay Area

A search of available environmental records in the Mission Bay area was also conducted by EDR to determine the presence or absence of hazardous materials in the Mission Bay area. In total, 5,241 sites were identified in various environmental governmental databases for the study area,[4] the locations of which are illustrated in the Key Map located in Section 1 of Appendix D, “EDR DataMap Environmental Atlas for the Potential New SFVAMC Mission Bay Campus.” Table 3.12-1 summarizes the number of listings from each database.

Hazards and Public Safety

Existing SFVAMC Fort Miley Campus

Fire response services to the existing SFVAMC Fort Miley Campus are provided by the San Francisco Fire Department (see Section 3.3, “Community Services,” for additional information regarding fire response services). According to the Association of Bay Area Governments (ABAG), the Campus is not designated as a “Community at Risk” because it is an urbanized area; therefore, the Campus is not considered susceptible to wildland fires (ABAG, 2011a). In addition, the California Department of Forestry and Fire Protection ranked the Campus as having “little to no threat” of fire susceptibility, based on expected fire behavior and according to site-specific topography and vegetation (ABAG, 2011b). Furthermore, the California Department of Forestry and Fire Protection has no record of any wildfire in San Francisco (CCSF, 2009).

[4] The study area for the EDR Radius Map Report extends up to 1 mile beyond the boundary of the 2.5-square-mile area for the potential Mission Bay Campus.

Table 3.12-1: Environmental Governmental Database Listings for the Mission Bay Area

Database	No. of Sites
Federal Records	
CERCLIS	1
CERCLIS–No Further Remedial Action Planned Report	16
CORRACTS	2
RCRA–Treatment, Storage, and Disposal Facility	2
RCRA-LQG	39
RCRA-SQG	254
RCRA–Conditionally Exempt Small Quantity Generators	2
RCRA-Nongenerators	56
Emergency Response Notification System	55
Hazardous Materials Incident Report System	143
U.S. Brownfields	3
Formerly Used Defense Sites	2
Toxic Chemical Release Inventory System	3
FTTS	19
HIST FTTS	19
Section Seven Tracking System	6
Integrated Compliance Information System	6
FINDS	459
RCRA Administration Action Tracking System	2
State and Local Records	
HIST Cal-Sites	6
School Property Evaluation Program	2
Solid Waste Facilities/Landfill Sites	1
California Water Resources Control Board—Waste Discharge System	10
National Pollutant Discharge Elimination System Permits	21
Waste Management Unit Database System	3
Cortese	2
HIST Cortese	489
Solid Waste Recycling Sites	4
LUST	648
Facility Inventory Database UST	333
Statewide Spills, Leaks, Investigations and Cleanup Cases	12
UST	159
HIST UST	237

Table 3.12-1: Environmental Governmental Database Listings for the Mission Bay Area

Database	No. of Sites
SWEEPS UST	348
CHMIRS	45
Land Disposal System	1
Aboveground Petroleum Storage Tank Facilities	8
Proposition 65 Records	19
Deed Restriction Listing	8
Voluntary Cleanup Program Properties	12
Dry Cleaner Facilities	21
State Response Sites	7
HAZNET	1465
EMI	220
EnviroStor	60
Registered Waste Tire Haulers Listing	1
EnviroStor Permitted Facilities Listing	2
Clandestine Drug Labs	1
EDR Proprietary Records	
Manufactured Gas Plants	7

Notes: CERCLIS = Comprehensive Environmental Response, Compensation and Liability Information System; CHMIRS = California Hazardous Material Incident Reporting System; CORRACTS = Resource Conservation and Recovery Act Corrective Action Sites; Cortese = California Environmental Protection Agency "Cortese" Hazardous Waste and Substances Sites List; EDR = Environmental Data Resources; EMI = California Air Resources Board Emissions Inventory Data; EnviroStor = California Department of Toxic Substances Control EnviroStor Database; FINDS = Facility Index System/Facility Registry System; FTTS = Federal Insecticide, Fungicide, and Rodenticide Act and Toxic Substance Control Act Tracking System; HAZNET = Hazardous Waste Information System; HIST UST = Hazardous Substance Storage Container Database; LUST = Leaking Underground Storage Tank Information System; RCRA = Resource Conservation and Recovery Act; RCRA-LQG = Resource Conservation and Recovery Act Large Quantity Generators; RCRA-SQG = Resource Conservation and Recovery Act Small Quantity Generators; SWEEPS UST = Statewide Environmental Evaluation and Planning System, Underground Storage Tank Listing; UST = Underground Storage Tank
Sources: EDR, 2011a and 2011b

Mission Bay Area

Fire response services to the Mission Bay area is provided by the San Francisco Fire Department. According to ABAG, the Mission Bay area is designated as an urbanized area; therefore, the area is not considered to be susceptible to wildland fires (ABAG, 2011a). In addition, the California Department of Forestry and Fire Protection ranked the area as having "little to no threat" of fire susceptibility, based on expected fire behavior and according to site-specific topography and vegetation (ABAG, 2011b).

3.12.2 Regulatory Framework

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) (also known as Superfund) provides EPA with the regulatory authority to seek out parties responsible for any uncontrolled or abandoned hazardous-waste sites, as well as accidents, spills, and other emergency releases of pollutants and contaminants into the environment, and ensure their cooperation in cleanup efforts. Identification, monitoring, and response activities for Superfund sites are coordinated between EPA and state environmental protection or waste management agencies. Construction and operation of the Proposed Action and alternatives would involve the handling, transport, and storage of hazardous wastes; therefore, the Proposed Action and alternatives would be subject to the regulations set forth under CERCLA.

Superfund Amendments and Reauthorization Act of 1986

The Superfund Amendments and Reauthorization Act (SARA) reauthorized CERCLA to continue cleanup activities around the country. Several site-specific amendments, definitions clarifications, and technical requirements were added to the legislation, including additional enforcement authorities. Also, Title III of SARA authorized the Emergency Planning and Community Right-to-Know Act (EPCRA). As a facility that would contain hazardous waste, the SFVAMC would be required to conform with the regulations set forth under SARA regarding hazardous waste site remediation.

Resource Conservation and Recovery Act of 1976

Under RCRA, EPA regulates hazardous waste from the “cradle to grave,” which includes the generation, transportation, treatment, storage, and disposal of hazardous waste. RCRA also provides a framework for the management of nonhazardous solid wastes. Construction and operation of the Proposed Action and alternatives would involve the generation, transportation, treatment, storage, and disposal of hazardous wastes, as well as the generation, transportation, and disposal of nonhazardous solid wastes. Therefore, the Proposed Action and alternatives would be required to adhere to the regulations set forth under RCRA.

Hazardous and Solid Waste Amendments

The Hazardous and Solid Waste Amendments (HSWA) amended RCRA in 1984, affirming and extending the “cradle to grave” system of regulating hazardous wastes. The amendments specifically prohibited the use of certain techniques for the disposal of some hazardous wastes, focusing on waste minimization and phasing out land disposal of hazardous wastes, as well as providing corrective action for releases. Additional HSWA mandates included enhanced enforcement authority for EPA, stricter hazardous waste management standards, and a comprehensive UST program. As discussed under RCRA, the Proposed Action and alternatives would be subject to the regulations set forth by HSWA because it would involve the generation, transportation, treatment, storage, and disposal of hazardous wastes, as well as the generation, transportation, and disposal of nonhazardous solid wastes.

Title 49 of the Code of Federal Regulations

Under Title 49 of the Code of Federal Regulations (CFR), the U.S. Department of Transportation has the regulatory responsibility for the safe transportation of hazardous materials. U.S. Department of Transportation regulations govern all means of transportation, except packages shipped by mail. Construction and operation of the EIS Alternatives would the transportation of hazardous materials to and from the project site. As such, the EIS Alternatives would be required to conform with all of the regulations set forth under CFR Title 49.

Atomic Energy Act of 1954

The Atomic Energy Act regulates both civilian and the military uses of nuclear materials. Specifically, it provides for both the development and the regulation of nuclear material uses and facilities, stating that "the development, use, and control of atomic energy shall be directed so as to promote world peace, improve the general welfare, increase the standard of living, and strengthen free competition in private enterprise." The Atomic Energy Act also empowers the Nuclear Regulatory Commission to establish by rule or order and to enforce such standards to govern these uses. The Nuclear Regulatory Commission must conform with the Atomic Energy Act's procedural requirements, which provide an opportunity for hearings and federal judicial review. As a medical facility, the SFVAMC may use nuclear materials for medical imaging or research purposes; therefore, the Proposed Action and alternatives would be subject to the regulations set forth under the Atomic Energy Act.

Emergency Planning and Community Right-to-Know Act

Enacted in 1986, EPCRA, also known as SARA Title III, provides state- and local-level infrastructure to plan for chemical emergencies. Under EPCRA, facilities that store, use, or release certain chemicals may be subject to several reporting requirements. Facility-reported information is then made publicly available to ensure that interested parties have access to this information and may become more informed about potentially deleterious chemicals present in their communities. The EIS Alternatives may involve the storage and use of chemicals regulated under EPCRA. As such, the EIS Alternatives would be required to adhere to the regulations set forth under EPCRA, including notifying the surrounding communities regarding potentially deleterious chemicals present at the project site.

Toxic Substances Control Act of 1976

TSCA provides EPA with the regulatory authority to implement requirements for reporting, recordkeeping, testing, and restrictions associated with chemical substances and/or mixtures. Specifically, under TSCA, EPA regulates the production, importation, use, and disposal of specific chemicals, such as PCBs, asbestos, radon, and lead-based paint. Demolition and construction activities associated with the EIS Alternatives may require the disposal of chemicals, such as PCBs, asbestos, or lead-based paint. Therefore, the EIS Alternatives would be subject to the regulations set forth under TSCA.

Department of Veterans Affairs Strategic Sustainability Performance Plan

The *Department of Veterans Affairs Strategic Sustainability Performance Plan* (VA SSPP) was prepared in response to Section 8 of Executive Order 13514, "Federal Leadership in Environmental, Energy, and Economic Performance," which requires federal agencies to "develop, implement, and annually update an integrated

Strategic Sustainability Performance Plan that will prioritize agency actions" to meet sustainability objectives identified in statutes, regulations, and executive orders. The VA SSPP provides approaches to addressing sustainability goals for a variety of resource areas, including the management and reduction of solid and hazardous wastes, for VA facilities. The VA SSPP lists pollution prevention and waste elimination goals and subgoals, summarizes current challenges that existing for VA facilities in accomplishing sustainability goals, and identifies implementation methods and programs for pollution prevention and waste elimination. The VA SSPP also identifies a diversion target of 50 percent for nonhazardous solid waste and construction and demolition material and debris by 2015. Because a VA facility is involved, the EIS Alternatives would be subject to the performance goals established in the SSPP.

Medical Waste Management Act of 2007

The Medical Waste Management Act authorizes a local governing body to implement and enforce a medical waste management program by the adopting an ordinance or resolution. A medical waste management program involves processing and reviewing medical waste management plans, inspecting on-site treatment facilities, conducting an evaluation, or reviewing records for all facilities issued a large-quantity medical waste registration or permit. Medical waste generators must be inspected in response to complaints or emergency incidents; their medical waste permits issued by the local agency may be either suspended or revoked accordingly. As a medical facility routinely handling medical waste, the SFVAMC must conform with the policies set forth by the Medical Waste Management Act.

3.12.3 Environmental Consequences

Significance Criteria

A NEPA evaluation must consider the context and intensity of the environmental effects that would be caused by, or result from, the EIS Alternatives. There are no standard federal policies applicable to solid and hazardous materials. Therefore, other environmental assessment documents were reviewed and the following criteria were selected for the evaluation.

An alternative would be considered to result in an adverse impact related to solid and hazardous materials if it would:

- be served by a landfill whose permitted capacity would be exceeded by accommodating the project's solid waste disposal needs;
- create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or
- create a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment and exposing the public to unhealthy levels of hazardous materials.

Assessment Methodology

The evaluation of potential impacts related to solid waste was based on a review of existing information for solid waste landfills serving the project area, such as capacity and daily intake volumes, to determine whether existing facilities could accommodate the waste likely to be generated by the project. Waste generation projections were based on solid-waste generation rates of "Medical Office Building/Hospital" facilities as estimated by the California Department of Resources Recycling and Recovery (CalRecycle). For the purposes of this analysis, impacts related to solid waste are considered adverse if the project would cause a permitted landfill to exceed its permitted capacity.

To enable assessment of potential impacts associated with hazardous materials, a comprehensive report was compiled by EDR to obtain information about sites near the project area that may be contaminated by hazardous materials, thereby exposing such materials. Additionally, an inventory of hazardous materials that could be used during project construction and operation was conducted to assess the potential for the project to create a hazard to the public or environment through the transport, use, or disposal of hazardous materials. For the purposes of this analysis, impacts associated with hazardous waste are considered adverse if the project would expose the public or the environment to unhealthy levels of hazardous materials.

Alternative 1: SFVAMC Fort Miley Campus Buildout Alternative

Near-Term Projects

Construction

Solid Waste Generation

Constructing Alternative 1 near-term projects would result in a short-term increase in construction waste generation because it would require disposal of solid waste generated from tree removal, as well as demolition of existing facilities, excess unsatisfactory soil from excavation activities, and trash and scrap materials. The majority of construction waste is anticipated to be generated by the demolition of existing buildings, which would generate approximately 56,000 cubic feet of construction waste.[5] The VA SSPP has a nonhazardous solid waste diversion target of 50 percent by 2015. Should this target be achieved, approximately 28,000 cubic feet of construction waste would be transported to landfills over the 7½-year construction period for Alternative 1 near-term projects. City and County of San Francisco Ordinance No. 27-06, the Construction and Demolition Debris Recovery Ordinance, requires that all mixed construction and demolition debris be transported by a registered transporter and be taken to a registered facility that can process and divert a minimum of 65 percent from landfills. However, the project is not required to comply with Ordinance No. 27-06 (Williams, pers. comm., 2012).

The project's anticipated volume of solid waste could be accommodated by landfills located in the region, including Altamont Landfill (Livermore), where the SFVAMC's solid waste is currently disposed of. The Altamont facility had 73.7 percent remaining capacity as of August 2009 and is anticipated to be in operation until approximately 2029. This facility is also permitted to take construction/demolition waste.

[5] The volume of demolition waste generated was calculated based on the size of the building footprint of all buildings proposed for demolition (4,000 square feet total) multiplied by the estimated height of each building. The height of each building story was assumed to be 14 feet.

Further, the construction contractor would be required to prepare and submit an environmental protection plan pursuant to VHA Master Specifications Section 015719. This plan requires the contractor to specify controls to be taken to manage environmental pollution, which includes the handling and disposal of solid waste. The construction contractor also must manage nonhazardous building construction and demolition waste in accordance with VA Specifications Section 017419, which requires efficient waste management and removal and legal disposal of materials. During demolition and construction, hazardous waste would be disposed of in a manner consistent with federal, State, and local regulations. Therefore, impacts associated with construction-related solid waste from Alternative 1 near-term projects would be minor.

Hazardous Materials Exposure

The existing SFVAMC Fort Miley Campus and the surrounding area are occupied by structures of various uses that either are known to or presumably manage hazardous materials, medical chemicals, and petroleum products. Further, the Campus is in an area of possible serpentinitic bedrock; therefore, naturally occurring asbestos may be present in the soil. Various construction activities, such as grading, trenching, compacting, and excavating soils, under Alternative 1 near-term projects would result in the handling and moving of soil. Movement of soil that contains hazardous materials could expose workers and the public to chemicals in the soil from dust, and impacts on water quality and the environment could result if hazardous constituents were to migrate off-site. In addition, should construction require dewatering of groundwater, hazardous materials could be released, potentially resulting in exposure to the public and the environment if contaminated groundwater were discharged to the sanitary sewer system, causing a potentially adverse impact.

Alternative 1 near-term projects may also require the demolition of existing structures. Existing building materials could include asbestos-containing materials, lead-based paint, PCBs, and fluorescent lights containing mercury vapors. Demolition or renovation of existing structures without proper abatement procedures could expose workers or the community to hazardous building materials during construction, and future building occupants could be exposed if hazardous building materials were left in place and not properly contained. Soil around a structure could also become contaminated by hazardous building materials if these materials were inadvertently released to the environment, resulting in a potentially adverse impact.

Further, construction activities would require the construction contractor to transport hazardous materials (e.g., fuels, lubricants, paints, adhesives, contaminated soil) to and from the SFVAMC Fort Miley Campus and to use such materials. In addition, construction vehicles require the use of hazardous materials, such as oils, grease, and fuels. The contractor would likely store these hazardous materials and vehicles on-site. Hazardous materials could be released accidentally if not properly stored or transported, which could degrade soil and/or groundwater quality, potentially resulting in adverse health effects on construction workers, the public, and the environment.

As discussed previously, two incidents on the existing SFVAMC Fort Miley Campus involved the accidental release of hazardous materials. Both incidents were investigated and closed based on a determination that no any additional remedial action was required. There is no indication that current soil or groundwater at the existing Campus was affected by these previous incidents; however, construction workers could still be potentially exposed to naturally occurring asbestos during soil movement activities.

To minimize construction risks associated with hazardous materials exposure, all hazardous materials would be stored, used, transported, and disposed of in strict accordance with all local, State, and federal hazardous waste

regulations. Further, the construction contractor would be required to submit an environmental protection plan in accordance with VHA Environmental Protection Specifications Section 015719. This plan would describe the best management practices (BMPs) that would be implemented to minimize the risks associated with the use, storage, handling, and transport of hazardous materials and the contingency protocols to be implemented in the event of an accidental release or exposure during construction. Compliance with the environmental protection plan would ensure that impacts associated with potential hazardous materials exposure would be minor.

Additionally, the construction contractor would be required to comply with the National Pollutant Discharge Elimination System General Permit by preparing and implementing a storm water pollution prevention plan (SWPPP) for the Proposed Action. The SWPPP would identify the sources of sediment and other pollutants and describe BMPs to eliminate these materials from stormwater and nonstormwater discharges. For a discussion of SWPPPs, see Section 3.8, "Hydrology and Water Quality." Compliance with the SWPPP would further reduce the potential for releases from the transport, use, or disposal of hazardous materials required during construction activities. Therefore, impacts associated with hazardous wastes, substances, or materials during construction of Alternative 1 near-term projects would be minor.

Federal hazardous materials guidelines regulate exposure to and disposal of hazardous building materials, including lead, PCBs, and mercury, as described above in Section 3.12.2, "Regulatory Framework." The SFVAMC would be required to adhere to the regulations and standards for inspection, abatement, exposure, and disposal of these hazardous building materials.[6] Adherence to these requirements would ensure that potential health and environmental hazards of asbestos, lead, or PCBs in buildings and structures to be demolished would be minimized to the extent required by law. Thus, this impact would be minor.

Hazards and Public Safety

Certain construction equipment, materials, and activities, such as welding, may increase the risk of fire on the existing SFVAMC Fort Miley Campus during construction of Alternative 1 near-term projects. This would be a potentially adverse impact. However, in accordance with VHA Specification Section 010000, "General Requirements," the construction contractor would be required to prepare a fire safety plan (prepared in accordance with 29 CFR 1926) before the initiation of work. The plan would provide detailed project-specific fire safety measures. In addition, all workers would be required to undergo a safety briefing in accordance with Occupational Safety and Health Administration requirements. Compliance with the Fire Safety Plan and safety measures conveyed at the worker safety briefing would ensure that the potential impacts associated with fire during construction would be minor.

Construction activities, such as trenching and operation of large construction equipment, may also pose a risk to public safety, such as accidental injury. However, the construction contractor would erect exclusion fencing around active construction zones to prevent the public from accessing areas immediately adjacent to or within the construction zone, as part of standard BMPs during construction. Thus, impacts on public safety during construction activities would be minor.

Construction-related impacts related to toxic air contaminants are identified in Section 3.2, "Air Quality." Safety hazards such as earthquakes are addressed in Section 3.6, "Geology and Soils." Flooding hazards are addressed in

[6] These regulations include VHA Specification Section 028333.13, "Lead-Based Paint Removal and Disposal," and TSCA.

Section 3.5, "Floodplains, Wetlands, and Coastal Management," and Section 3.8, "Hydrology and Water Quality." Emergency operations and access issues are addressed in Section 3.3, "Community Services."

Operation

Solid Waste Generation

Implementing Alternative 1 near-term projects would expand the facilities of the existing SFVAMC Fort Miley Campus and the SFVAMC's staffing capacities; therefore, the generation of solid waste would likely increase during operation of the Proposed Action. CalRecycle estimates that medical office building/hospital land uses have a solid-waste generation rate of approximately 0.0108 ton per square foot per year; therefore, with the addition of the near-term projects, the SFVAMC is estimated to generate an additional 586 tons of waste per year, for a total estimate of 3,021 tons of waste per year through 2015.[7] The VA SSPP has a nonhazardous solid waste diversion target of 50 percent by 2015. Should this target be achieved, operation of the SFVAMC is estimated to generate 1,511 tons of waste per year, which represents a 924-ton reduction in solid waste generation relative to current generation rates. The anticipated volume of solid waste could be accommodated by landfills located in the region, including Altamont, with approximately 73.7 percent remaining capacity. Therefore, impacts of the operation of Alternative 1 near-term projects related to solid waste generation would be minor.

Hazardous Waste Generation

Operation of Alternative 1 near-term projects would generate hazardous wastes similar to those currently permitted to be generated, stored, and/or released on the existing SFVAMC Fort Miley Campus by State and federal agencies. Because Alternative 1 near-term projects would involve expanding the existing SFVAMC Campus, an increase in the generation of hazardous wastes may result. However, the VA SSPP includes the implementation of environmental management action plans. These action plans provide guidance on reducing the use and disposal of hazardous materials, implementing integrated pest management and landscape management practices that reduce the use of hazardous chemicals, and increasing the use of alternative chemicals and processes. Therefore, compliance with the VA SSPP and the acquisition and/or maintenance of the appropriate permits from agencies (such as a Hazardous Material Registration, Hazardous Materials Certificate of Registration, and Large Quantity Generator permit for medical waste from the HMUPA) for the operation of Alternative 1 near-term projects would ensure that impacts associated with hazardous waste generation would be minor.

Hazards and Public Safety

The majority of the existing SFVAMC Fort Miley Campus is more than 75 years old and consists of aging buildings and infrastructure. Alternative 1 near-term projects would involve seismic, structural, mechanical, and electrical reconstruction activities that would have a long-term beneficial effect on public safety by structurally stabilizing deteriorating buildings and infrastructure.

As described previously, the existing SFVAMC Fort Miley Campus is located in an urbanized area with no or low wildland fire threat according to the California Department of Forestry and Fire Protection. Alternative 1 near-term projects would operate on the Campus and would maintain existing urbanized land uses; therefore, the wildland fire threat would not increase.

[7] This is based on habitable area and does not include parking structure square footage.

Furthermore, to ensure public safety, the SFVAMC establishes and regularly updates hazards emergency protocols in its *All-Hazards Emergency Operations Plan* (SFVAMC, 2009). This emergency operations plan identifies an organized process to initiate, manage, and recover from various types of emergencies that may potentially occur at the SFVAMC Fort Miley Campus. The plan also addresses emergency situations related to fire, hazardous materials/radiological/decontamination, utilities, bomb threats, behavioral emergencies, external emergencies, earthquakes, national disaster medical systems, VA/U.S. Department of Defense contingency hospitals, the national response framework, medical equipment, an infectious diseases/pandemic influx, a 96-hour plan, and medical surges. This emergency operations plan also includes detailed emergency operations procedures for staff and departmental response and communication, recovery procedures, communication procedures, resource and asset management, and security and safety operations. Through continued compliance with the SFVAMC's *All-Hazards Emergency Operations Plan* at the Campus, impacts associated with hazards and public safety would be minor.

Long-Term Projects

Construction

Solid Waste Generation

The impacts of construction of Alternative 1 long-term projects related to solid waste would be similar to those of construction of Alternative 1 near-term projects. The majority of construction waste is anticipated to be generated by the demolition of existing buildings, which would generate approximately 2,210,600 cubic feet of construction waste.[8] The VA SSPP has a nonhazardous solid waste diversion target of 50 percent. Should this target be achieved, approximately 1,105,300 cubic feet of construction waste would be transported to landfills over an 8-year construction period for Alternative 1 long-term projects. City and County of San Francisco Ordinance No. 27-06, the Construction and Demolition Debris Recovery Ordinance, requires that all mixed construction and demolition debris be transported by a registered transporter and taken to a registered facility that can process and divert a minimum of 65 percent from landfills. However, the project is not required to comply with Ordinance No. 27-06 (Williams, pers. comm., 2012). The measures to reduce impacts of solid waste generation during construction of Alternative 1 long-term projects would be the same as those for construction of Alternative 1 near-term projects. Therefore, for the same reasons as described for construction impacts of near-term projects, construction impacts associated with solid waste generation by Alternative 1 long-term projects would be minor.

Hazardous Materials Exposure

The impacts of construction of Alternative 1 long-term projects associated with hazardous materials would be similar to the construction impacts of Alternative 1 near-term projects identified above. Therefore, for the same reasons described for the construction impacts of near-term projects, construction impacts of Alternative 1 long-term projects associated with potential hazardous materials exposure would be minor.

[8] The volume of demolition waste generated was calculated based on the size of the building footprint of all buildings proposed for demolition (57,600 square feet total) multiplied by the estimated height of each building. The height of each building story was assumed to be 14 feet.

Hazards and Public Safety

The impacts of construction of Alternative 1 long-term projects associated with hazards and public safety would be similar to the construction impacts of Alternative 1 near-term projects identified above. Therefore, for the same reasons described for the construction impacts of near-term projects, construction impacts of Alternative 1 long-term projects associated with hazards and public safety would be minor.

Operation

Solid Waste Generation

Operation of Alternative 1 long-term projects would result in impacts related to solid waste generation similar to those identified above for operation of Alternative 1 near-term projects. Based on CalRecycle estimates for solid waste generation for medical office buildings/hospitals, the projected increase in solid waste generation for operation of the long-term projects is estimated to be an additional 2,049 tons per year, for a total estimate for the SFVAMC Fort Miley Campus of 4,484 tons of waste per year through 2023.[9] Should the 2015 VA SSPP's nonhazardous solid-waste diversion target of 50 percent be achieved and maintained through 2023, operation of Alternative 1 near-term projects is estimated to generate 2,242 tons of waste per year. For the same reasons described above for operation of near-term projects, impacts of operation of Alternative 1 long-term projects related to solid waste generation would be minor.

Hazardous Waste Generation

Operation of Alternative 1 long-term projects would result in impacts related to hazardous waste generation similar to those identified above for operation of Alternative 1 near-term projects. Therefore, for the same reasons described above for operation of near-term projects, impacts of operation of Alternative 1 long-term projects related to hazardous waste generation would be minor.

Hazards and Public Safety

Operation of Alternative 1 long-term projects would result in impacts related to hazards and public safety similar to those identified above for operation of Alternative 1 near-term projects. Therefore, for the same reasons described above for operation of near-term projects, impacts of operation of Alternative 1 long-term projects related to hazards and public safety would be minor.

Alternative 2: SFVAMC Fort Miley Campus Plus Mission Bay Campus Alternative

Near-Term Projects

Alternative 2 near-term projects (both construction and operation) would be the same as Alternative 1 near-term projects (see Tables 2-1 and 2-2 and Figures 2-1 and 2-2). Therefore, the impacts of Alternative 2 near-term projects would be the same as the impacts of Alternative 1 near-term projects. These impacts would be minor.

[9] This is based on habitable area and does not include parking structure square footage.

Long-Term Projects

Alternative 2 long-term projects (both construction and operation) at the existing SFVAMC Fort Miley Campus would be the same as Alternative 1 long-term projects, except that the ambulatory care center would be located at the potential new SFVAMC Mission Bay Campus under Alternative 2 (see Tables 2-1 and 2-2 and Figures 2-1 and 2-2). Therefore, the impacts of Alternative 2 long-term projects at the existing Campus would be the same as or less than the impacts of Alternative 1 long-term projects. The impact discussion below focuses primarily on the impacts that may result from construction and operation of the ambulatory care center, research building, and associated parking structures at the potential new Campus, as proposed as part of Alternative 2, Phase 2.

Construction

Solid Waste Generation

Alternative 2 long-term projects would involve new construction at a potential new SFVAMC Mission Bay Campus. It is unknown whether any demolition would be required to construct a potential new Campus. The measures to reduce impacts of solid waste generation during construction of Alternative 2 long-term projects would be the same as those described for Alternative 1 near-term projects. Therefore, the impact related to a long-term increase in construction waste generation from Alternative 2 long-term projects would be similar to that of construction of Alternative 1 near-term projects. Impacts would be minor.

Hazardous Materials Exposure

Alternative 2 long-term projects would involve new construction at a potential new SFVAMC Mission Bay Campus. The measures to reduce impacts of hazardous materials exposure during construction of Alternative 2 long-term projects would be the same as those described for Alternative 1 near-term projects, and the potential impacts of hazardous materials during construction of Alternative 2 long-term projects would be similar to those addressed for construction of Alternative 1 near-term projects. As such, impacts would be minor.

Hazards and Public Safety

Alternative 2 long-term projects would involve new construction at a potential new SFVAMC Mission Bay Campus. The measures to reduce impacts related to hazards and public safety during construction of Alternative 2 long-term projects would be the same as those described for Alternative 1 near-term projects, and the potential impacts related to hazards and public safety during construction of Alternative 2 long-term projects would be similar to those addressed for construction of Alternative 1 near-term projects. As such, impacts would be minor.

Operation

Solid Waste Generation

Based on CalRecycle estimates for solid waste generation for medical office buildings/hospitals, the potential new SFVAMC Mission Bay Campus would generate approximately 3,780 tons of waste per year,[10] an estimate of

[10] This is based on habitable area and does not include parking structure square footage. The calculation is based on 350,000 square feet of habitable space, not including the 270,000 square feet of parking proposed at the Mission Bay Campus.

1,345 tons more waste generated per year than the existing SFVAMC Fort Miley Campus. Should the VA SSPP nonhazardous solid-waste diversion target of 50 percent be achieved and maintained through 2028, operation of the long-term projects is estimated to generate 1,890 tons of waste per year. Operation of Alternative 2 long-term projects at the existing Campus would generate an estimated 753 tons of waste per year, for a total Campus estimate of 3,188 tons of waste per year through 2023. Should the VA SSPP nonhazardous solid-waste diversion target of 50 percent be achieved and maintained through 2023, operation of Alternative 2 long-term projects would generate an estimated 377 tons of waste per year. Between the potential new Campus and the existing Campus, a total of 4,533 net new tons of waste would be generated per year, or 2,267 tons of waste per year with the 50 percent solid-waste diversion target. Operation of Alternative 2 long-term projects would ultimately result in solid waste impacts similar to those associated with operation of Alternative 1 near-term and long-term projects. As such, impacts would be minor.

Hazardous Materials Exposure

Operation of the potential new SVAMC Mission Bay Campus would require the handling, storage, use, and/or disposal of hazardous waste typically generated by medical facilities; therefore, the SFVAMC would obtain all necessary permits (such as a Hazardous Material Registration, Hazardous Materials Certificate of Registration, and Large Quantity Generator permit for medical waste from the HMUPA) to perform these activities for the potential new Campus, once its location has been identified. As a result, impacts would be minor.

Hazards and Public Safety

The Mission Bay area is characterized as an urbanized area with no or low wildland fire threat, according to the California Department of Forestry and Fire Protection. Operation of Alternative 2 long-term projects would be consistent with existing urbanized land uses and the wildland fire threat would not increase.

The potential new SFVAMC Mission Bay Campus would be composed of new, structurally sound and retrofitted facilities that would have a long-term benefit on public safety. Furthermore, similar to operation of Alternative 1 near-term projects, the potential new Campus would adhere to the emergency protocols in the SFVAMC's *All-Hazards Emergency Operations Plan*. Therefore, operation of Alternative 2 long-term projects would result in impacts related to hazards and public safety similar to those for operation of long-term projects under Alternative 1. Impacts would be minor.

Alternative 3: No Action Alternative

Near-Term and Long-Term Projects

Construction

Under Alternative 3, there would be no new construction and no retrofitting of existing buildings. Therefore, no construction-related impacts related to solid waste, hazardous waste, wildland fire risk, or public safety would occur.

Operation

Under Alternative 3, the LRDP would not be implemented. Therefore, no project-related impacts related to solid waste, hazardous waste, or wildland fire risk would occur. However, because retrofitting of existing SFVAMC buildings would not occur under this alternative, continued operation of the existing SFVAMC Fort Miley Campus could have an adverse impact on public safety because deteriorating buildings and infrastructure would not be structurally stabilized.

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