# 3.8 - Hazards, Hazardous Materials, and Wildfire

## 3.8.1 - Introduction

This section describes the existing hazards, hazardous materials, and wildfire conditions in the project area as well as the relevant regulatory framework. This section also evaluates the possible impacts related to hazards, hazardous materials, and wildfire that could result from implementation of the proposed project. Information included in this section is based on the City of Antioch General Plan, the City of Antioch General Plan Environmental Impact Report (EIR), the 2006 Phase I Environmental Site Assessment (Phase I ESA) and the 2019 Phase I ESA prepared by ENGEO, Inc., all of which are included as Appendix G. During the EIR scoping period, the following comments were received related to hazards and hazardous materials:

- Recommendation that access to a well located on the property be maintained in the event that re-abandonment of the well becomes necessary in the future;
- States the possibility of a well to leak oil, gas, and/or water after abandonment and acknowledges that there is no guarantee of the adequacy of the on-site well's abandonment or potential need for re-abandonment in the future;
- Recommendation to maintain physical access to any gas well encountered and to ensure that the abandonment of gas wells is consistent with current standards;
- Requests that if it is not ensured that abandonment is up to current standards, the recommendation for physical access to any gas well increases;
- Requests that if recommendation for access of the well cannot be followed, it is advised that the local permitting agency, property owner, and/or developer consider any and all alternatives to proposed construction or development of the site;
- States that California Department of Oil, Gas, and Geothermal Resources (DOGGR) has the authority to order the re-abandonment of any well that is hazardous or poses a danger to life, health, or natural resources;
- States that rig access should be maintained without disturbing the integrity of the surrounding infrastructure;
- Requests that if any unknown well(s) are discovered, DOGGR should be notified immediately so that the wells can be incorporated into records and investigated;
- Recommends that any wells found and any information obtained should be communicated to the appropriate county recorder for inclusion in the title information;
- States that no well work may be performed on any oil or gas well without written approval in the form of an appropriate permit from DOGGR; and
- States that if any wells need to be lowered or raised to meet grade regulations, a permit is required before work can commence.

## 3.8.2 - Environmental Setting

### Fundamentals

#### *Hazards*

This section describes existing conditions and focuses on hazards from underground pipelines, abandoned wells, hazardous materials, wastes, and wildfire. A hazard is a situation that poses a level of threat to life, health, property, or the environment. Hazards can be dormant or have potential, with only a theoretical risk of harm. However, once a hazard becomes active, it can create an emergency. A hazardous situation that has already occurred is called an incident. Emergency response is action taken in response to an unexpected and dangerous occurrence in an attempt to mitigate its impact on people, structures, or the environment. Emergency situations can range from natural disasters to hazardous materials problems and transportation incidents.

#### *Hazards Materials and Wastes*

Hazardous materials include, but are not limited to, hazardous substances, hazardous wastes, and hazardous building materials as defined in Section 25501 and Section 25117, respectively, of the California Health and Safety Code. A hazardous material is 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; and any material that a handler or an administering regulatory agency under Section 25501 has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment. Various properties may cause a substance to be considered hazardous, including:

- Toxicity—causes human health effects;
- Ignitibility—has the ability to burn;
- Corrosivity—causes severe burns or damage to materials; and
- Reactivity—causes explosions or generates toxic gases.

Hazardous waste is any hazardous material that is to be discarded, abandoned, or recycled. The criteria that define a material as hazardous also define a waste as hazardous. 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). Soil or groundwater contaminated with hazardous materials above specified regulatory State or federal thresholds is considered hazardous waste if it is removed from a site for disposal. If handled, disposed, or otherwise handled improperly, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. The California Code of Regulations, Title 22, Sections 66261.20-24 contains technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

*Hazardous Building Materials*

Many older buildings contain building materials that consist of hazardous materials. These materials include lead-based paint, asbestos-containing material, and polychlorinated biphenyls (PCBs).

Prior to the United States Environmental Protection Agency (EPA) ban in 1978, lead-based paint was commonly used on interior and exterior surfaces of buildings. Disturbances such as sanding and scraping activities, renovation work, gradual wear and tear, old peeling paint, and 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 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 EPA in the 1970s. In addition, many types of electrical equipment contained PCBs as an insulator, including transformers and capacitors. After PCBs were determined to be a carcinogen in the mid to late 1970s, the EPA banned PCB use in new equipment and began a program to phase out certain existing PCB-containing equipment. For example, fluorescent lighting ballasts manufactured after January 1, 1978, do not contain PCBs and are required to have a label clearly stating that PCBs are not present in the unit.

*Hazardous Substances*

A hazardous substance can be any biological, natural, or chemical substance, whether solid, liquid, or gas, which may cause harm to human health. Hazardous substances are classified based on their potential health effects, whether acute (immediate) or chronic (long-term). Dangerous goods are classified based on immediate physical or chemical effects, such as fire, explosion, corrosion, and poisoning. An accident involving dangerous goods could seriously harm human health or damage property or the environment. Harm to human health may happen suddenly (acute), such as dizziness, nausea, and itchy eyes or skin; or it may happen gradually over years (chronic), such as dermatitis or cancer. Some people can be more susceptible than others. Hazardous substances and dangerous goods can include antiseptic used for a cut, paint for walls, a cleaning product for the bathroom, chlorine in a pool, carbon monoxide from a motor vehicle, fumes from welding, vapors from adhesives, or dust from cement, stone, or rubber operations. Such hazardous substances can make humans very sick if they are not used properly.

### *Hazardous Materials Listing*

The Cortese List is a list of known hazardous materials or hazardous waste facilities that meet one or more of the provisions of Government Code Section 65962.5, including:

- The list of hazardous waste and substances sites from the California Department of Toxic Substances Control (DTSC) EnviroStor database.[1] The project site is not located on the EnviroStor database.

[1] California Department of Toxic Substances Control (DTSC). DTSC Hazardous Waste and Substances Site List—Site Cleanup (Cortese List). Website: https://dtsc.ca.gov/dtscs-cortese-list/. Accessed: December 11, 2019.

- The list of leaking underground storage tank (LUST) sites by county and fiscal year from the California State Water Resources Control Board (State Water Board) GeoTracker database.[2] No LUST sites are listed in GeoTracker database for the project site.
- The list of solid waste disposal sites identified by the State Water Board with waste constituents exceeding hazardous waste levels outside the waste management unit.[3] No such disposal site exists within the vicinity of the project site.
- The list of active cease-and-desist orders and cleanup and abatement orders from the State Water Board.[4] The project site is not on this list.
- The list of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, as identified by the DTSC.[5] The project site is not on this list.

## Existing Fire Related Conditions and Presence of Hazardous Materials

The hazards in the City of Antioch and the project area discussed in this section are related primarily to fire hazards and hazardous materials. Fire hazards and hazards from hazardous materials are typically site-specific, so existing conditions related to fire hazards and the transport, use, and disposal of hazardous materials are discussed below under "project site."

Fire hazards present a considerable problem to vegetation and wildlife habitats throughout the County. Grassland fires are easily ignited, particularly in dry seasons. These fires are relatively easy to control if they can be reached by fire equipment. The burned slopes, however, are highly subject to erosion and gullying. While brushlands are naturally adapted to frequent light fires, fire protection in recent decades has resulted in heavy fuel accumulation on the ground. Wildfire is a serious hazard in undeveloped areas and on large lot home sites with extensive areas of unirrigated vegetation, particularly near areas of natural vegetation and steep slopes since fires tend to burn more rapidly on steeper terrain.[6] Wildfire is also a serious hazard in areas of high wind, given that fires will travel faster and farther geographically when winds are higher.

### *The City of Antioch*

Hazardous materials and hazardous waste pose potential risks to the health, safety, and welfare of residents and workers, if handled inappropriately. Delta Diablo disposes of hazardous materials within the City of Antioch and operates the Delta Household Hazardous Waste Collection Facility. The facility collects hazardous substances and pollutants such as used oil and filters, anti-freeze, latex and oil-based paints, household batteries, fluorescent and high intensity lamps, cosmetics, pesticides, pool chemicals,

[2] California State Water Resources Control Board (State Water Board). GeoTracker for San Francisco County. Website: https://geotracker.waterboards.ca.gov/search?cmd=search&hidept=True&status=&reporttitle=San+Francisco+County&county=San%20Francisco&excludenc=True. Accessed December 11, 2019.

[3] California Environmental Protection Agency (Cal/EPA). Cortese List Data Resources for Solid Waste Disposal Sites. Website: https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/SiteCleanup-CorteseList-CurrentList.pdf. Accessed December 11, 2019.

[4] California Environmental Protection Agency (Cal/EPA). Cortese List of State Water Board sites with active Cease and Desist Orders or Cleanup Abatement Orders. Website: https://calepa.ca.gov/wp-content/uploads/sites/6/2016/10/SiteCleanup-CorteseList-CDOCAOList.xlsx. Accessed December 11, 2019.

[5] California Environmental Protection Agency (Cal/EPA). Cortese List: Section 65962.5(a) Sites Subject to Corrective Action. Website: https://www.calepa.ca.gov/sitecleanup/corteselist/section-65962-5a/. Accessed December 11, 2019

[6] Contra Costa County General Plan 2025. Section 10.11, Public Protection Services and Disaster Planning. Page 10-42.

and household cleaners for safe disposal at the facility. All hazardous waste must be discharged at a Class I landfill under the Federal Resource Conservation and Recovery Act of 1976 (RCRA).

All pollutants cannot be removed by Delta Diablo's treatment process. To ensure that certain pollutants do not enter the Delta, Delta Diablo has established a Pretreatment Program, which consists of public education and regulation of certain businesses and industries. The Pretreatment Department works closely with commercial and industrial users to ensure that hazardous substances such as solvents, pesticides, metals, grease, petroleum, oil, and paints are not discharged into the stormwater or sewer system.

The City of Antioch has a long history of agricultural production. Agricultural activities typically include the storage and periodic application of pesticides, herbicides, and fertilizers, as well as the storage and use of toxic fuels and solvents. The infiltration of the aforementioned substances may leach into local groundwater supplies, presenting an elevated risk of groundwater contamination. Medical facilities, such as the Kaiser Antioch Medical Center located adjacent to the project site, can generate a wide variety of hazardous substances. Hazardous medical substances may include contaminated medical equipment or supplies, infectious biological matter, prescription medicines, and radioactive materials used in medical procedures. The disposal of medical waste is achieved by on-site autoclaving of red-bagged waste (any medical waste that could possibly transmit a pathogen) and the subsequent transport to a Class III landfill.

Although incidents can happen almost anywhere, certain areas of Antioch are at higher risk for inadvertent release of hazardous materials. Locations near roadways that are frequently used for transporting hazardous materials (e.g., State Route [SR] 4) and locations near industrial facilities that use, store, or dispose of these materials have an increased potential for a release incident, as do locations along the freight railways.

The California DTSC identifies two sites within Antioch where surface and/or sub-surface contamination has occurred due to the release of hazardous materials or wastes. The sites include the GBF/Pittsburg Dumps, located at the intersection of Somersville Road and James Donlon Boulevard, approximately 3 miles northwest of the project site, and the former Hickmott Cannery site, located at the intersection of 6$^{th}$ Street and A Street, approximately 4.2 miles north of the project site.

### *Project Site*

A Phase I ESA was prepared for the proposed project on July 10, 2019, by ENGEO, Inc.[7] (Appendix G).

The assessment included a review of local, State, tribal, and federal environmental record sources, standard historical sources, aerial photographs, fire insurance maps and physical setting sources. A reconnaissance of the project site was conducted to review site use and current conditions to check for the storage, use, production or disposal of hazardous or potentially hazardous materials and interviews with persons knowledgeable about current and past site use. The site reconnaissance and records review did not find documentation or physical evidence of significant soil, soil gas, or groundwater impairments associated with the use or past use of the site. A review of regulatory

[7] ENGEO, Inc. 2006. Modified Phase One Environmental Site Assessment. Sand Creek Ranch Active Adult Community. July.

databases maintained by county, State, tribal, and federal agencies found no documentation of hazardous materials violations or discharge on the project site and did not identify contaminated facilities within the appropriate American Society for Testing and Materials (ASTM) search distances that would reasonably be expected to impact the project site.

A site reconnaissance was conducted on July 2, 2019. The project site was viewed for hazardous materials storage, superficial staining or discoloration, debris, stressed vegetation, or other conditions that may be indicative of potential sources of soil or groundwater contamination. The project site was also checked for evidence of fill/ventilation pipes, ground subsidence, or other evidence of existing or preexisting underground storage tanks.

The predominantly undeveloped site consists of sparsely vegetated rolling hills and a relatively level grass-covered valley with occasional groves of trees. Sand Creek is an intermittent, deeply incised creek that traverses the site from west to east. Several unpaved roads/trails cross the site, and the site is bordered by wire fencing. Wire fencing also separates interior fields and corrals. The majority of the project site is currently in use for cattle grazing, although an equipment storage area containing various well-drilling equipment is located adjacent to the existing residential compound, located in the central area of Assessor's Parcel Number (APN) 057-021-003. The compound includes a mobile home trailer, two large barns, several sheds, and an equipment storage area containing well-drilling supplies and equipment, animal pens and corrals, and various agricultural equipment and supplies. The residence area is accessed from Deer Valley Road via an unpaved road, Snodgrass Lane. The on-site mobile home is inhabited and the interior was not viewed during the site visit.

Review of historical records indicates that initial site development predates 1896, where the earliest available topographic map indicates a settlement in the western portion of the project site. This settlement, known as "Judsonville," once existed in APN 057-010-002, east of Empire Mine Road. The remains of this town include a sandstone cave and some evidence of building foundations. A windmill and various water tanks are currently within this area. Two orchards were planted in the northwestern portion of APN 057-010-003 and the central portion of APN 057-021-003. The orchard areas are apparent from at least the late 1930s until the 1970s. There is also evidence of dry hay farming occurring on-site.

In addition to the past settlement and agricultural activities, there are also past activities associated with the Brentwood Oil and Gas Field. Two dry and abandoned gas/oil exploration wells were drilled on the site in 1962 and 2013. In addition, an inactive/abandoned petroleum product pipeline crosses the site oriented northwest-southeast. During the site reconnaissance, the petroleum pipeline and evidence of one of the two former oil/gas wells were observed.

Based on findings of the Phase I ESA, one Recognized Environmental Conditions (REC) was identified for the project site. However, no historical RECs or controlled RECs were identified for the project site. The REC consists of a former dry oil/gas exploration well in the western area of the Property (Well No. 1), which was not properly abandoned in accordance with current DOGGR regulations. The well was not completely grouted and cut off to 5 feet below the surface. The well casing was left in place about the surface for use as a water well. This well will require proper abandonment in accordance with current DOGGR regulations.

ENGEO, Inc. presented the following features of potential environmental concern that were either contained in the databases or observed on the site. These features were not considered to be RECs. Each are briefly discussed below.

- An apparently inactive, northwest-trending, petroleum product pipeline crosses the western portion on APN 057-021-003 and the northeastern portion of APN 057-010-003.
- A second abandoned oil/gas well site is located south of the residence area (Well No. 1-8).
- Due to the age of the structures within the former ranch site, lead-based paint, asbestos-containing materials, and/or organochlorine pesticides may be present within the building perimeters.
- Several aboveground storage tanks and drums containing potentially hazardous materials and numerous abandoned or discarded tanks and drums are present on-site. Previous reports indicate that both aboveground and underground storage tanks have been in use on APN 057-021-003 since at least 1965. Although no releases were documented on-site, it is conceivable that contamination may be uncovered upon removal of the storage tanks.
- Two orchards were planted in limited areas of the northwestern portion of APN 057-010-003 and the central portion of APN 057-021-003. The orchard areas are apparent from at least the late 1930s until the 1970s. It is conceivable that detectable concentrations of residual agrichemicals may exist in site soils.

A previous Phase I ESA was prepared for the proposed project on July 7, 2006 (Appendix G).[8] The findings and conclusions of the report included the following:

- An underground fuel storage tank (UST) is apparently located adjacent to the feed lot buildings on APN 057-060-006. The likelihood of the UST has been confirmed by the presence of a fuel pump on the southwest corner of the main process building on this parcel. Therefore, due to the uncertainty of the tank's condition and the propensity for USTs to result in the release of petroleum hydrocarbons to the soil and/or groundwater, the UST is considered a (REC and should be investigated further.
- One, apparently inactive, northwest-trending, petroleum product pipeline crosses the western portion of APN 057-021-003 and the northeastern portion of APN 057-010-003. Environmental sampling along the pipeline was not included in the original scope of services for this assessment. Other sites in the area have revealed petroleum hydrocarbon releases associated with these types of pipelines, regardless of their current status (e.g., operational or abandoned). Although the pipeline operator may be responsible for cleanup of any potential petroleum releases, such releases can become a nuisance with respect to site development; therefore, the pipeline is considered a REC and further subsurface exploration shall be conducted along the pipeline easement to better understand the potential impacts to the site soil.
- Two empty, conventional-style aboveground storage tanks (ASTs) were observed during the reconnaissance at a location north of the largest storage shed in the yard of the residence at

[8] ENGEO, Inc. 2006. Modified Phase One Environmental Site Assessment. Sand Creek Ranch Active Adult Community. July.

APN 057-021-003. Staining of the soil below the ASTs was not noted during the reconnaissance. Two trailer-mounted diesel ASTs were observed during the site reconnaissance just north of the conventional-style ASTs. The current resident used the ASTs for diesel storage used for fueling farm equipment on the property. A small patch of stained soil about 12 inches in diameter was observed below one of the trailer-mounted ASTs. The current resident had knowledge of six additional ASTs in an area on the north side of the ranch buildings on his parcel. The current resident also noted that two ASTs north of the same shed and north of the gravel road were formerly used for diesel storage, but were currently empty. According to the current resident, a former UST existed on the north side of the ranch as well, but was removed in approximately 1971. The current resident stated that gross evidence of petroleum hydrocarbon releases from the UST was not noted during the removal and that local oversight by environmental agencies was not provided during the removal.

- One half-full, 55-gallon drum was observed east of Empire Mine Road on APN 057-010-002, just north of where Sand Creek crosses onto the site. Stained vegetation was evident beneath the opening of this drum suggestive of hazardous materials. Several rusty drums were located in and around the abandoned structures on APN 057-060-006. Two empty, 55-gallon drums were observed next to the large storage shed on APN 057-021-003. The owner noted that they were once used to store lubricants. Two, rusty 55-gallon drums were also observed in the work yard at that location. They appeared to have been used as garbage containers. One highly-decomposed paper drum of water softener chemicals was noted in the boiler room for the grain processing facility at the feed lot on APN 057-060-006. The contents of this paper drum were released onto the concrete floor of the boiler room.
- Pipeline Easement: An inactive, northwest trending petroleum product pipeline was determined to cross the western portion of APN 057-021-003 and the northeastern portion of APN 057-010-003 as evidenced during the reconnaissance of the site by the line's exposure in a narrow ravine adjacent to Sand Creek and immediately west of the ranch. Because petroleum releases related to similar types of pipelines in the area have occurred, the pipeline is considered a potential REC. The pipeline is owned and was previously operated by PG&E. Signs of leakage or associated contamination was not observed, however, testing was not conducted as part of the Phase I. It should be noted that per the City's Municipal Code Section 9-5.3734(3), Specific Requirements for APN 057-021-003, oil/gas wells are allowed on APN 057-021-003 as a temporary use, subject to the approval of a use permit, but are not allowed on any other properties within the Sand Creek Focus Area. However, oil or gas wells do not currently occur on the project site and are not proposed as part of the proposed project.

*Asbestos-containing Materials and Lead-based Paint*

ENGEO, Inc. did not conduct an asbestos and lead-based paint survey as part of the Phase I ESA. Given the estimated age of the structures, the Phase I ESA concluded that asbestos-containing materials (ACMs) and lead-based paint (LBP) may have been used in the construction of the existing on-site ranch and associated structures.

## Wildfire Hazard Area Designations

### *The City of Antioch/Project Site*

According to the United States Forest Service Wildland Fire Assessment System, the City of Antioch, including the project site, is within an area designated as moderate for fire danger.[9] According to the California Department of Forestry and Fire Protection (CAL FIRE), the project site is located in an incorporated local responsibility area and the area just south of the project site is designated as a moderate fire hazard severity zone.[10] According to the General Plan EIR, areas of potential wildland fire hazard exist within the southern, mostly unincorporated portions of the General Plan study area, including rural, hilly terrain, as well as areas adjacent to or covered by natural grassland or brush. New development within or near such areas are more likely to be subject to wildfire hazards.

## Wildfire-conducive Conditions

Grassland or other vegetation in California is easily ignited, particularly in dry seasons. Wildfire is a serious hazard in high dry fuel load areas, particularly near areas of natural vegetation and steep slopes, since fires tend to burn more rapidly on steeper terrain. Wildfire is also a serious hazard in areas of high wind, given that fires will travel faster and farther geographically when winds are higher. Furthermore, wildfire is more likely in areas where electric power lines are located above ground where they can come into contact with either vegetation or building materials.

Within the City of Antioch, areas of potential wildfire hazards exist in the southern predominantly unincorporated areas of the City, including rural, hilly areas and areas adjacent to or covered by natural grassland or brush. Development within those areas may expose individuals to hazardous conditions. Additionally, there is the potential for an increase in the occurrence of fire in these areas due to increasing population and the fact that a majority of wildland fires are caused by human carelessness.[11]

### *Project Site*

According to the CAL FIRE Hazard Severity Zone Map, the project site is not located within a designated "Fire Hazard Severity Zone in a State Responsibility Area" or "Very High Fire Hazard Severity Zone in a Local Responsibility Area."[12] However, as the project site consists of grasslands and the surrounding area is comprised of wildland and brush, wildfire hazards do exist within the site.

## Emergency and Evacuation Routes/Access

### *The City of Antioch*

There are no specific emergency evacuation routes listed for the City of Antioch. However, it is expected that major arterials, such as A Street and Lone Tree Way, Deer Valley Road, Hillcrest Avenue, L Street and Contra Loma Boulevard, Somersville Road, 18th Street, James Donlon Boulevard, West 4th Street and the

[9] United States Forest Service. Wildlife Fire Assessment System. 2014. Website: http://www.wfas.net/index.php/fire-danger-rating-fire-potential--danger-32/fire-danger-subsets-fire-potential--danger-55. Accessed December 11, 2019.
[10] California Department of Forestry and Fire Protection (CAL FIRE). Contra Costa County Fire Hazard Severity Zones. Website: https://frap.fire.ca.gov/media/6195/fhszs_map7.pdf. Accessed December 11, 2019.
[11] City of Antioch. 2003. City of Antioch General Plan EIR.
[12] California Department of Forestry and Fire Protection (CAL FIRE). Contra Costa County Fire Hazard Severity Zones. Website: https://frap.fire.ca.gov/media/6195/fhszs_map7.pdf. Accessed December 11, 2019.

A Street Extension, West 10th Street, Wilbur Avenue, Dallas Ranch Road, Buchanan Road, and Davidson Drive[13] would be used in the event of an emergency to provide access to SR-4 and SR-160.

### *Project Site*

Major arterials near the project site that would likely be used as emergency evacuation routes include Deer Valley Road and a future extension of Sand Creek Road through the project site. In addition, as mentioned in Section 3.13, Transportation, a secondary emergency access connection through Village 9 is proposed.

### Post-fire Slope Instability and Drainage Pattern Changes

Slope instability from wildfire scarring of the landscape can result in slope instability in the form of more intensive flooding and landslides. Post-fire soils and altered drainage patterns can more easily creep away from downslope sides of foundations and thereby reduce lateral support.

### *The City of Antioch*

The City of Antioch General Plan states that landslide hazards exist primarily in the southwest area of the City, in the hilly areas of Antioch. Most of the slopes in the southwest area are considered to be moderately unstable.[14] In addition, according to the California Department of Conservation, the southern portion of the City contains areas susceptible to liquefaction and landslides.[15]

### *Project Site*

Because of the relatively flat topography of Lone Tree Valley, the focus of development upon slopes lower than 25 percent, and the characterization of soils as summarized in the Geotechnical Exploration Report, the potential for landslides to occur on the project site is low to negligible.[16] As mentioned above, the California Department of Conservation's Earthquake Zones of Required Investigation Map identifies the project site as located within a liquefaction zone.[17]

## 3.8.3 - Regulatory Framework

### *Occupational Health and Safety Act*

The Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor is responsible for implementing and enforcing federal laws and regulations that address worker health and safety. OSHA requires specific training for hazardous materials users and handlers, provision of information (procedures for personal safety, hazardous-materials storage and handling, and emergency response) to employees who may be exposed to hazardous materials, and acquisition of material safety data sheets from materials manufacturers. Material safety data sheets describe the risks, as well as proper handling and procedures, related to particular hazardous materials. Employee training must include response and remediation procedures for hazardous materials releases and

[13] City of Antioch. 2003. General Plan EIR. Section 4.13, Traffic and Circulation. Page 4.13-1.
[14] City of Antioch. 2003. City of Antioch General Plan. Environmental Hazards. Website: https://www.antiochca.gov/fc/community-development/planning/Antioch_Adopted_General_Plan.pdf. Accessed July 17, 2019.
[15] California Department of Conservation. Seismic Hazards and Zones of Required Investigation. Website: https://maps.conservation.ca.gov/cgs/EQZApp/app/. Accessed February 25, 2020.
[16] ENGEO, Inc. 2018. The Ranch at Antioch. Geotechnical Exploration. September.
[17] California Department of Conservation. Seismic Hazards and Zones of Required Investigation. Website: https://www.conservation.ca.gov/cgs/Pages/Program-SHP/regulatory-hazard-zones.aspx. Accessed December 11, 2019.

exposures. Construction workers and operational employees at the project site would be subject to these requirements.

### *Residential Lead-Based Paint Reduction Act (Lead-based Paint)*

The Residential Lead-Based Paint Hazard Reduction Act of 1992, also known as Title X, was passed by Congress to protect families from exposure to lead from paint, soil, and dust. Under Section 1018 of the law, the United States Department of Housing and Urban Development (HUD), in addition to the EPA, are required to disclose known information on lead-based paints and lead-based paint hazards before the lease or sale of most homes built before 1978. Sellers, landlords, and real estate agents are responsible for compliance to this rule.

The law also requires that buyer and renter-specific information about lead-based paint in the housing be provided in addition to a federal pamphlet with tips to identify and control lead-based paint related hazards. This information is to be given to the buyer or renter before the sale or lease of the home.

### *Toxic Substances Control Act (Asbestos Containing Materials)*

The EPA prohibited the use of polychlorinated biphenyls (PCBs) in the majority of new electrical equipment starting in 1979 and initiated a phase-out for much of the existing PCB-containing equipment. The inclusion of PCBs in electrical equipment and the handling of those PCBs are regulated by the provisions of the Toxic Substances Control Act, 15 United States Code Section 2601, *et seq*.

Relevant regulations include labeling and periodic inspection requirements for certain types of PCB-containing equipment and outline highly specific safety procedures for their disposal. Likewise, the State of California regulates PCB-laden electrical equipment and materials contaminated above a certain threshold as hazardous waste. These regulations require that such materials be treated, transported, and disposed accordingly. At lower concentrations for non-liquids, RWQCBs may exercise discretion over the classification of such wastes.

### *Code of Federal Regulations, Titles 29 and 40*

Regulations in Code of Federal Regulations Title 29 include requirements to manage and control exposure to lead-based paint and ACM. In California, these requirements are implemented by the California Occupational Safety and Health Administration (Cal/OSHA) under California Code of Regulations Title 8 (see further discussion of California Code of Regulations Title 8 below). The removal and handling of asbestos-containing materials is governed primarily by EPA regulations under California Code of Regulations Title 40. The regulations require that the appropriate State agency be notified before any demolition, or before any renovations, of buildings that could contain asbestos or asbestos-containing materials above a specified threshold.

### *Resource Conservation and Recovery Act and Comprehensive Environmental Response, Compensation, and Liability Act*

The EPA is responsible for implementing and enforcing federal laws and regulations pertaining to hazardous materials. The primary legislation includes RCRA and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended by the Superfund Amendments and Reauthorization Act (SARA) and the Emergency Planning and Community Right-to-Know Act (known as SARA Title III). RCRA and the 1984 RCRA Amendments regulate the treatment,

storage, and disposal of hazardous and non-hazardous wastes and mandate that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment, including detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities. As permitted by RCRA, in 1992, the EPA approved California's program called the Hazardous Waste Control Law (HWCL), administered by the DTSC, to regulate hazardous wastes in California, as discussed further below. The purpose of CERCLA is to identify and clean up chemically contaminated sites that pose a significant environmental health threat, and the Hazard Ranking System is used to determine whether a site should be placed on the National Priorities List for cleanup activities. SARA relates primarily to emergency management of accidental releases and requires annual reporting of continuous emissions and accidental releases of specified compounds that are compiled into a nationwide Toxics Release Inventory. Finally, SARA Title III requires formation of state and local emergency planning committees that are responsible for collecting material handling and transportation data for use as a basis for planning and provision of chemical inventory data to the community at large under the "right-to-know" provision of the law.

### *Hazardous Materials Transportation Act*

Under the Hazardous Materials Transportation Act of 1975, the United States Department of Transportation (USDOT), Office of Hazardous Materials Safety regulates the transportation of hazardous materials on water, rail, highways, through air, or in pipelines, and enforces guidelines created to protect human health and the environment and reduce potential impacts by creating hazardous-material packaging and transportation requirements. It also includes provisions for material classification, packaging, marking, labeling, placarding, and shipping documentation. The USDOT provides hazardous-materials safety training programs and supervises activities involving hazardous materials. In addition, the USDOT develops and recommends regulations governing the multimodal transportation of hazardous materials.

### *Aboveground Petroleum Storage Act, and Spill Prevention, Control, and Countermeasure Rule*

The Aboveground Petroleum Storage Act of 1990, and the Spill Prevention, Control, and Countermeasure (SPCC) Rule (amended 2010) of the Oil Pollution Prevention regulation (40 Code of Federal Regulations [CFR] 112) require the owner or operator of a tank facility with an aggregate storage capacity greater than 1,320 gallons to notify the local Certified Unified Program Agency (CUPA) and prepare an SPCC plan. The SPCC plan must identify appropriate spill containment measures and equipment for diverting spills from sensitive areas, and must discuss facility-specific requirements for the storage system, inspections, recordkeeping, security, and training.

### *Clean Water Act*

The Clean Water Act (CWA) (Title 33 § 1251 *et seq*. of the United States Code [33 USC 1251, *et seq*.]) is the major federal legislation governing water quality. The CWA established the basic structure for regulating discharges of pollutants into waters of the United States (not including groundwater). The objective of the act is "to restore and maintain the chemical, physical, and biological integrity of the nation's waters." The CWA establishes the basic structure for regulating the discharge of pollutants into waters of the United States. Responsibility for administering the CWA resides with the State Water Board and nine Regional Water Quality Control Boards (RWQCBs); the Central Valley RWQCB administers the CWA in the City of Antioch area. Section 404 of the CWA regulates temporary and

permanent fill and disturbance of waters of the United States, including wetlands. The United States Army Corps of Engineers (USACE) requires that a permit be obtained if a project proposes to place fill in navigable waters and/or to alter waters of the United States below the ordinary high-water mark in non-tidal waters. Compliance with the water quality standards required under Section 401 is a condition for issuance of a Section 404 permit. Under Section 401 of the CWA, every applicant for a federal permit or license for any activity that may result in a discharge to a water body must obtain a state water quality certification from the RWQCB to demonstrate that the proposed activity would comply with state water quality standards.

## State

### *Cortese List*

The provisions in Government Code Section 65962.5 are commonly referred to as the "Cortese List." The Cortese List, or a site's presence on the list, has bearing on the local permitting process as well as on compliance with the California Environmental Quality Act (CEQA). While Government Code Section 65962.5 refers to the preparation of a 'list,' many changes have occurred related to web-based information access since 1992 and this information is now largely available on the State Water Board websites of GeoTracker and EnviroStor. Those requesting a copy of the Cortese "list" are now referred directly to the appropriate information resources contained on the Internet websites (e.g., GeoTracker and EnviroStor).

### *California Unified Hazardous Waste and Hazardous Materials Management Regulatory Program*

The Unified Hazardous Waste and Hazardous Materials Management Regulatory Program, also known as the Unified Program, protects residents of California from hazardous materials and hazardous waste by ensuring consistency throughout the state of implementation of administrative requirements, inspections, permits, and enforcement at the regulatory level. The California Environmental Protection Agency (Cal/EPA) has 81 certified local agencies, known as Certified Unified Program Agencies (CUPAs), which assist in overseeing statewide implementation of the Unified Program. CUPAs implement regulatory standards established by the DTSC, the Governor's Office of Emergency Services (Cal/OES), the State Water Board, and the Office of the State Fire Marshal (OSFM), and Cal/EPA. Each CUPA is periodically evaluated to ensure adequate and effective implementation of the Unified Program.

### *California Uniform Fire Code (Hazardous Materials Storage in Buildings and Tanks)*

California Code of Regulations, Title 24, also known as the California Building Standards Code, contains the California Fire Code, included as Part 9 of that title. Updated every 3 years, the California Fire Code includes provisions and standards for emergency planning and preparedness, fire service features, fire protection systems, hazardous materials, fire flow requirements, fire hydrant locations and distribution, and the clearance of debris and vegetation within a prescribed distance from occupied structures in wildlife hazard areas.

### *California Public Resources Code Section 3229, Division 3 (Abandoned Wells)*

Public Resources Code Section 3229, Division 3, states that prior to commencement of work to abandon a well, the operator or owner is required to file with the supervisor or district deputy a

written notice of intention to abandon the well. Abandonment of a well shall not occur until supervisor or district deputy approval is given. If notice is not given by the supervisor or district deputy within 10 working days, the requested abandonment of the well shall be deemed approved and the notice of intention shall be deemed a written report of the supervisor. If abandonment operations have not commenced within one year of receipt of the notice of intention, the notice of intention shall be deemed cancelled.

### *California Emergency Services Act, Chapter 7, Division I, Title 2 of the California Government Code*

The California Emergency Services Act confers emergency powers to the Governor and establishes the California Emergency Management Agency. The California Emergency Services Act also delineates emergency responsibilities of State agencies and establishes the State mutual aid system.

### *California Emergency Plan*

In 2009, the California State Emergency Plan was adopted to address the State's response to extraordinary emergency situations associated with natural disasters or human-caused emergencies. The State Emergency Plan describes the methods for carrying out emergency operations, the process for rendering mutual aid, the emergency services of governmental agencies, and how the public will be informed during an emergency or disaster.

### *California Connelly Act (Asbestos-containing Buildings)*

Assembly Bill 3713 (AB 3713), known as the Connelly Bill, requires building owners to disclose the presence of any known asbestos containing materials to employees. An owner who intentionally fails to disclose the presence of asbestos containing materials and comply with this law may be found guilty of a misdemeanor and subject to penalty.

### *California Health and Safety Code (Hazardous Materials Release and Response Plan and Inventory)*

California Health and Safety Code Chapter 6.95, Hazardous Materials Release Response Plans and Inventory, requires the establishment of business and area plans related to the handling and release or threatened release of hazardous materials. The establishment of a statewide environmental reporting system for these plans is required.

Additionally, information on type, location, quantity, and health risks of hazardous materials that are handled, used, stored, and disposed of within the State, which would be accidentally released into the environment is required to be submitted to health officials, planners, firefighters, health care providers, regulatory agencies, and other interested persons. Information provided by business and area plans is necessary to prevent or mitigate the damage to the health and safety of persons and the environment related to the release or threatened release of hazardous materials into the workplace and environment.

A CUPA in consultation with local emergency response agencies, shall establish an area plan for emergency response to a release or threatened release of hazardous materials within its jurisdiction. Area plans shall include procedures and protocols for emergency response personnel, including the health and safety of those personnel, pre-emergency planning, training of appropriate employees,

notification and coordination of on-site activates with State, local, and federal agencies, responsible parties, and special districts, on-site public safety information, required supplies and equipment, access to emergency response contractors and hazardous waste disposal sites, incident critique and follow up, and requirements for notification to the office of reports made pursuant to Section 25510.

### *California Safe Drinking Water and Toxic Enforcement Act*

The California Safe Drinking Water and Toxic Enforcement Act of 1986 prohibits the contamination of drinking water with chemicals that are known to cause cancer or reproductive toxicity. Furthermore, no person in the course of doing business shall knowingly discharge or release a chemical known to the State to cause cancer or reproductive toxicity onto water or into land where such chemical passes or probably will pass into any source of drinking water. In addition, no person in the course of doing business shall knowingly and intentionally expose any individual to a chemical known to the State to cause cancer or reproductive toxicity without first giving a clear and reasonable warning to such individual.

### *Standardized Emergency Management System Chapter 1, Division 2, Title 21 of the California Code of Regulations*

The Standardized Emergency Management System (SEMS) is intended to standardize response to emergencies involving multiple jurisdictions or multiple agencies. SEMS requires emergency response agencies use basic principles and components of emergency management, multi-agency or inter-agency coordination, the operational area concept, and established mutual aid systems. As of December 1, 1996, local government must use SEMS in order to be eligible for State funding of response-related personnel costs.

### *California Public Resources Code Fire Hazard Severity Zones*

California Public Resources Code 4290 states that minimum fire safety standards related to state responsibility areas lands and lands designated as very high fire hazard severity zones as defined in subdivision (i) of Section 51177 of the Government Code must be implemented. These regulations apply to perimeters and access to all commercial, residential, and industrial building construction within state responsibility areas approved after January 1, 2021.

In addition to fire safety standards, the State Fire Marshal has the authority to adopt regulations for openings into attic areas and roof coverings of buildings specific in Section 13108.5 of the Health and Safety Code. Regulations shall include road standards for fire equipment aces, minimum private water supply reserves for emergency fire use, standards for signs identifying streets, buildings, and roads, and fuel breaks and greenbelts.

Regulations shall be updated periodically on and after July 1, 2021, for fuel breaks and greenbelts near communities to provide for greater fire safety for the perimeters of all industrial, commercial, and residential building construction within state responsibility areas and lands designated as very

high fire hazard severity zones. Measures to preserve undeveloped ridgelines to reduce fire risk and improve fire protection shall also be included in the regulations.[18]

### *California Hazardous Waste Control Law*

The Hazardous Waste Control Law is the primary hazardous waste statute in the State of California, and implements RCRA as a "cradle-to-grave" waste management system for handling hazardous wastes in a manner that protects human health and the environment and would reduce potential resulting impacts. The law specifies that generators have the primary duty to determine whether their waste is hazardous and to ensure proper management. The Hazardous Waste Control Law also establishes criteria for the reuse and recycling of hazardous waste used or reused as raw materials. The law exceeds federal requirements by mandating source reduction planning, and a much broader requirement for permitting facilities that treat hazardous waste. It also regulates a number of types of waste and waste management activities that are not covered by federal law.

### *California Health and Safety Code*

The California Health and Safety Code (HSC § 25141) defines hazardous waste as a waste or combination of waste that may:

> . . . because of its quantity, concentration, or physical, chemical, or infection characteristics:
> (1) Cause or significantly contribute to an increase in mortality or an increase in serious irreversible or incapacitation-reversible illness.
> (2) Pose a substantial present or potential hazard to human health or the environment, due to factors including, but not limited to, carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties, or persistence in the environment, when improperly treated, stored, transported, or disposed of or otherwise managed.

These regulations establish criteria for identifying, packaging, and labeling hazardous wastes; prescribe management practices for hazardous wastes; establish permit requirements for hazardous-waste treatment, storage, disposal, and transportation; and identify hazardous waste that commonly would be disposed of in landfills.

Under both the RCRA and the HWCL, hazardous-waste manifests must be retained by the generator for a minimum of 3 years. The generator must match copies of the manifests with copies of manifest receipts from the treatment, disposal, or recycling facility.

In accordance with Chapter 6.11 of the California Health and Safety Code (HSC § 25404, *et seq*.), local regulatory agencies enforce many federal and State regulatory programs through the CUPA program, including:

- Hazardous Materials Business Plans (HSC § 25501, *et seq*.);

[18] California Legislative Information. Public Resources Code 4290. Website: http://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=4290.&lawCode=PRC.

- State Uniform Fire Code (UFC) requirements (UFC § 80.103, as adopted by the State Fire Marshal pursuant to HSC § 13143.9);
- Underground Storage Tanks (HSC § 25280, *et seq*.);
- Aboveground Storage Tanks (HSC § 25270.5(c)); and
- Hazardous-waste-generator requirements (HSC § 25100, *et seq*.).

Contra Costa Health Services Hazardous Materials Division is the CUPA for Contra Costa County. As the CUPA, Contra Costa Health Services enforces State statutes and regulations through the Hazardous Materials Unified Program Agency, which oversees aboveground petroleum tanks; generation of hazardous materials; storage and treatment; USTs; generation of medical waste; the accidental-release prevention program; and the Local Oversight Program that interfaces with the State Water Board and the Central Valley RWQCB on LUSTs and UST release sites. A Hazardous Materials Business Plan must be submitted if a facility ever handles any individual hazardous material in an aggregate amount equal to or greater than 55 gallons (liquids), 500 pounds (solids), or 200 cubic feet (gases), and must include the following:

- Details that include facility floor plans and identify the business conducted at the site;
- An inventory of hazardous materials handled or stored on the site;
- An emergency response plan; and
- A training program in safety procedures and emergency response for new employees who may handle hazardous materials, with an annual refresher course in the same topics for those same employees.

### *California Code of Regulations, Title 8*

Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations. These regulations concern the use of hazardous materials in the workplace, including requirements for employee safety training; availability of safety equipment; accident and illness prevention programs; hazardous-substance exposure warnings, and preparation of emergency action and fire prevention plans.

Cal/OSHA also enforces hazard communication program regulations, including procedures for identifying and labeling hazardous substances, and requires that safety data sheets (formerly known as Material Safety Data Sheets [MSDS]) be available for employee information and training programs. Cal/OSHA standards are generally more stringent than federal regulations. Construction workers and operational employees at the project site would be subject to these requirements.

California Code of Regulations, Title 8, Section 1529 authorizes Cal/OSHA to implement the survey requirements of Code of Federal Regulations Title 29 relating to asbestos. These federal and State regulations require facilities to take all necessary precautions to protect employees and the public from exposure to asbestos. Workers who conduct asbestos abatement must be trained in accordance with federal and State OSHA requirements. The Bay Area Air Quality Management District (BAAQMD) oversees the removal of regulated asbestos-containing materials (see “Asbestos Demolition, Renovation, and Manufacturing Rule” below).

California Code of Regulations, Title 8, Section 1532.1 includes requirements to manage and control exposure to lead-based paint. These regulations cover the demolition, removal, cleanup, transportation, storage, and disposal of lead-containing material. The regulations outline the permissible exposure limit, protective measures, monitoring, and compliance to ensure the safety of construction workers exposed to lead-based material. Loose and peeling lead-based paint must be disposed of as a State and/or federal hazardous waste if the concentration of lead equals or exceeds applicable hazardous waste thresholds. Federal and State OSHA regulations require a supervisor who is certified with respect to identifying existing and predictable lead hazards to oversee air monitoring and other protective measures during demolition activities in areas where lead-based paint may be present. Special protective measures and notification of Cal/OSHA are required for highly hazardous construction tasks related to lead, such as manual demolition, abrasive blasting, welding, cutting, or torch burning of structures, where lead-based paint is present.

### *California Code of Regulations Title 22, Division 4.5*

California Code of Regulations, Title 22, Division 4.5, contains the Environmental Health Standards for the Management of Hazardous Waste, which includes California waste identification and classification regulations. California Code of Regulations, Title 22, Chapter 11, Article 3, "Soluble Threshold Limits Concentrations/Total Threshold Limits Concentration Regulatory Limits," identifies the concentrations at which soil is determined to be a California hazardous waste. California's Universal Waste Rule (22 California Code of Regulations [CCR] § 66273) provides an alternative set of management standards in lieu of regulation as hazardous wastes for certain common hazardous wastes, as defined in California Code of Regulations, Title 22, Section 66261.9. Universal wastes include fluorescent lamps, mercury thermostats, and other mercury-containing equipment. Existing structures may contain fluorescent light ballasts that could contain mercury or lead. The Alternative Management Standards for Treated Wood Waste (22 CCR § 67386) were developed by the DTSC to allow for disposal of treated wood as a nonhazardous waste, to simplify and facilitate the safe and economical disposal of such waste. Chemically treated wood can contain elevated levels of hazardous chemicals (e.g., arsenic, chromium, copper, pentachlorophenol, or creosote) that equal or exceed applicable hazardous waste thresholds. The Alternative Management Standards provide for less stringent storage requirements and extended accumulation periods, allow shipments without a hazardous waste manifest and a hazardous waste hauler, and allow disposal at specific nonhazardous waste landfills.

### *Porter-Cologne Act*

The Porter-Cologne Water Quality Control Act of 1969 (Porter-Cologne Act) is California's statutory authority for the protection of water quality. Under the Porter-Cologne Act, the State must adopt water quality policies, plans, and objectives that protect the State's waters for the use and enjoyment of the people. Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The RWQCBs are required to formulate and adopt water quality control plans (also known as Basin Plans) for all areas of the region and establish water quality objectives in the plans. The Porter-Cologne Act sets forth the obligations of State Water Board and RWQCBs to adopt and periodically update water quality control plans that recognize and reflect the differences in existing water quality, the beneficial uses of the region's groundwater and surface water, and local water quality conditions and problems. It also authorizes the State Water Board and RWQCBs to

issue and enforce waste discharge requirements and to implement programs for controlling pollution in State waters. Finally, the Porter-Cologne Act also authorizes the State Water Board and RWQCBs to oversee site investigation and cleanup for unauthorized releases of pollutants to soils and groundwater and in some cases to surface waters or sediments. The Sacramento-San Joaquin Rivers Basin Plan governs Sand Creek and the Delta.

### *California Emergency Response Plan*

California has developed an emergency response plan to coordinate emergency services provided by federal, State, and local governments and private agencies. Responding to hazardous-materials incidents is one part of this plan. The plan is administered by the California Governor's Office of Emergency Services, which coordinates the responses of other agencies. When the City of Antioch experiences an emergency, the Contra Costa County Office of Sherriff's Emergency Service Division coordinates response to such emergencies. Emergency response team members respond and work with local fire and police agencies, emergency medical providers, the California Highway Patrol, CAL FIRE, California Department of Fish and Wildlife, and California Department of Transportation (Caltrans).

### *California Department of Forestry and Fire Protection*

CAL FIRE has mapped fire threat potential throughout California. CAL FIRE maps fire threat based on the availability of fuel and the likelihood of an area burning (based on topography, fire history, and climate). The threat levels include no fire threat, moderate, high, and very high fire threat. Further, the maps designate the City of Antioch as the Local Responsibility Area (LRA) for the project site. Additionally, CAL FIRE produced a 2010 Strategic Fire Plan for California, which contains goals, objectives, and policies to prepare for and mitigate the effects of fire on California's natural and built environments. CAL FIRE's Office of the State Fire Marshal provides oversight of enforcement of the California Fire Code as well as overseeing hazardous liquid pipeline safety.

### *California Building Code*

The State of California provided a minimum standard for building design through the 2016 California Building Standards Code (CBC), which is located in Part 2 of Title 24 of the California Code of Regulations. The 2016 CBC is based on the 2015 International Building Code, but has been modified for California conditions. It is generally adopted on a jurisdiction by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local City and County building officials for compliance with the CBC. Typical fire safety requirements of the CBC include the installation of sprinklers in all new high-rise buildings and residential buildings; the establishment of fire resistance standards for fire doors, building material; and particular types of construction. The 2019 CBC was published on July 1, 2019, and became effective January 1, 2020.

### *California Public Resources Code*

The California Public Resources Code includes fire safety regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors[19] on construction equipment that use an internal combustion engine; specify requirements for the safe

[19] A spark arrestor is a device that prohibits exhaust gases from an internal combustion engine from passing through the impeller blades where they could cause a spark. A carbon trap is commonly used to retain carbon particles from the exhaust.

use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided on-site for various types of work in fire-prone areas.

These regulations include the following:

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

## Regional

### *BAAQMD Asbestos Demolition, Renovation and Manufacturing Rule*

The removal of asbestos-containing building materials is subject to the limitations of BAAQMD Regulation 11, Rule 2, "Hazardous Materials; Asbestos Demolition, Renovation and Manufacturing." This rule prohibits visible emissions to outside air from any operation involving the demolition of any structure containing asbestos, and sets out requirements for demolition of such structures, including a pre-demolition survey conducted by a certified professional. All friable (i.e., crushable by hand) asbestos-containing materials or non-friable asbestos-containing materials that may be damaged must be abated before demolition in accordance with applicable requirements. Friable asbestos-containing materials must be disposed of as asbestos waste at an approved facility. Non-friable asbestos-containing materials may be disposed of as nonhazardous waste at landfills that accept such wastes.

### *Association of Bay Area Governments Hazard Mitigation Plan*

The Association of Bay Area Governments' multijurisdictional Local Hazard Mitigation Plan for the San Francisco Bay area was updated in 2010 in partnership with the Bay Conservation and Development Commission (BCDC) Adapting to Rising Tides Program to support local governments in the regional plan for existing and future hazards of climate change. This detailed 5-year plan identifies potential natural and human-made hazards, assesses their potential risks, and includes mitigation methods to reduce risks. The potential hazards identified in the Plan include earthquakes and liquefaction, wildfires, floods, drought, solar storms, dam or levee failure, disease outbreak, freezes, wind, heat, thunder and lightning storms, siltation, tornadoes, hazardous materials, slope failure and mudflows, and other hazards. Similarly, mitigation measures include hazard event planning, emergency preparedness coordination, education, facility upgrades, and monitoring actions.

### *Contra Costa County Hazard Mitigation Plan*

The Contra Costa County Hazard Mitigation Plan (HMP) contains goals and objectives that are intended to reduce loss of life and property from natural disasters.[20,21] During the planning process, this plan used Federal Emergency Management Agency (FEMA) tools to determine the most likely possible threats would be earthquakes, flooding, landslides, tsunamis, and wildfires in urban interface zones. The Contra Costa County HMP identifies mitigation action items that aim to meet objectives and reduce the impacts of these hazards. The Contra Costa County Office of Emergency Services and Contra Costa County Department of Conservation and Development share the lead responsibility for overseeing the plan implementation and maintenance strategy. Plan implementation and evaluation will be a shared responsibility among all planning partnership members and agencies identified as lead agencies in the mitigation action plans. The HMP contains the following Goals aimed at reducing the vulnerability from natural hazards within the County in a cost-effective manner:

- **Goal 1:** Save, or protect lives and reduce injury.
- **Goal 2:** Increase resilience of infrastructure and critical facilities.
- **Goal 3:** Avoid, minimize, or reduce damage to property.
- **Goal 4:** Encourage the development and implementation of long-term, cost-effective, and environmentally sound mitigation projects.
- **Goal 5:** Build and support capacity to enable local government and the public to prepare, respond, and recover from the impact of natural hazards.

### *Contra Costa County Emergency Operations Plan*

The purpose of the Emergency Operations Plan is to provide the basis for a coordinated response before, during and after an emergency affecting Contra Costa County.[22] The Emergency Operations Plan identifies and facilitates inter-agency coordination in emergency operations. The Plan applies to all emergencies in unincorporated areas of Contra Costa County and within incorporated areas when those emergencies require multi-agency coordination at the operational area level.

## Local

### *City of Antioch General Plan*

The following City of Antioch General Plan objectives and policies are related to hazards, hazardous materials, and wildfire:

[20] Tetra Tech, Inc. 2018. Contra Costa County Hazard Mitigation Plan. Volume 1—Planning Area-Wide Elements. Website: https://contracosta.ca.gov/DocumentCenter/View/48893/Contra-Costa-County-Draft-Local-Hazard-Mitigation-Plan-Volume-1-January-31-2018?bidId=. Accessed December 11, 2019.

[21] Tetra Tech, Inc. 2018. Contra Costa County Hazard Mitigation Plan. Volume 2—Planning Partner Annexes. Website: https://contracosta.ca.gov/DocumentCenter/View/48894/Contra-Costa-County-Draft-Local-Hazard-Mitigation-Plan-Volume-2-January-31-2018?bidId=. Accessed December 11, 2019.

[22] Contra Costa County. 2015. Emergency Operations Plan. Website: https://www.contracosta.ca.gov/DocumentCenter/View/37349/Contra-Costa-Emergency-Operations-Plan-2015?bidId=. Accessed December 11, 2019.

*Fire Protection*

- **Objective 8.10.1:** Provision of an adequate number of fire stations, along with firefighting personnel and equipment to protect Antioch residents and businesses.
- **Policy 8.10.2a:** Work with the Contra Costa County Fire Protection District to provide high quality fire protection services to area residents and businesses. The City's role should include, but not be limited to:
  - Determining the appropriateness of station location sites;
  - Enforcement of building codes to reduce fire hazards;
  - Collection of mitigation fees established by the fire district to construct needed additional stations within the Antioch Planning Area.
  - Support the District in providing funding for personnel costs to staff stations within the City;
  - Support the District in establishing fees that are adequate to mitigate the impacts of new development and income to support operation of new stations whose construction is financed with development fees; and
  - Requiring reasonable reservation of appropriate sites as part of new development.
- **Policy 8.10.2b:** In cooperation with the Contra Costa County Fire Protection District, conduct an annual assessment of the of the adequacy of facilities and services serving Antioch, personnel and staffing needs, and capital needs, based on anticipated growth and the level of service standard set forth in the Growth Management Element. This assessment should be undertaken as part of the annual review of proposed capital projects required by the California Government code (see Chapter 12, Implementation, Section 12.4b).
- **Policy 8.10.2c:** Provide the Contra Costa County Fire Protection District with timely information on development proposals and projected levels of future growth so that it can maintain appropriate long-term master plans and refine the delivery of service and facilities to maintain the performance standards set forth in the Growth Management Element.
- **Policy 8.10.2d:** Involve the Fire Protection District in the development review process by referring development requests to the Police Department for review and comment.

*Wildland Fires*

- **Objective 11.5.1:** Minimize the potential for loss of life, physical injury, property damage, and social disruption resulting from wildland fires.
- **Policy 11.5.2a:** Where new development borders wildland areas, require appropriate fuel modification and use of fire retardant building materials per the requirements of the Contra Costa County Fire Protection District. Fuel modification may be permitted to extend beyond the boundaries of the site for which wildland fire protection is being provided only if the adjacent owner provides written permission, the proposed fuel modification is consistent with the management practices of the agency controlling such land (if it is in permanent open space), and the off-site fuel modification activity will not significantly impact sensitive habitat areas.
- **Policy 11.5.2b:** Require that adequate fire protection be available at initial project occupancy, whenever feasible. Thus, stations should be constructed and manned at the outset of new development. If the Contra Costa Fire Protection District finds that a lag time between initial occupancy and operation of new stations cannot be avoided, the City may consider requiring sprinklers in new homes as an alternative.

*Hazards and Hazardous Materials*

- **Objective 11.7.1:** Minimize the negative impacts associated with the storage, use, generation, transport, and disposal of hazardous materials.
- **Policy 11.7.2n:** Require appropriate design features be incorporated into each facility's layout to increase safety and minimize potential adverse effects on public health.
  - Require the provision of spill containment facilities and monitoring devices in all facilities.
  - Ensure that pipelines and other hazardous waste channels are properly designed to minimize leakage and require above ground pipelines to be surrounded by spill containment basins.
  - Give priority to underground storage of hazardous materials, unless this method is shown to be infeasible.
  - Require hazardous materials storage areas to be located as far from existing pipelines and electrical transmission lines as possible.
- **Policy 11.7.2q:** Facilitate public awareness of hazardous materials by preparing and distributing in conjunction with Contra Costa Health Services public information regarding uniform symbols used to identify hazardous wastes, Antioch's household hazardous waste collection programs, and hazardous waste source reduction programs.
- **Policy 11.7.2r:** Monitor the progress and success of hazardous materials efforts, and modify these efforts as needed.
- **Objective 11.8.1:** Maintain a level of preparedness to adequately respond to emergency situations to save lives, protect property, and facilitate recovery with minimal disruption.
- **Policy 11.8.2b:** Disseminate disaster preparedness information to local residents and businesses, describing how emergency response will be coordinated, how evacuation, if needed, will proceed, and what residents and businesses can do to prepare for emergency situations. Provide information to the public about:
  - Environmental hazards existing in Antioch;
  - The costs of doing nothing to mitigate these hazards;
  - Why governmental agencies cannot eliminate all hazards;
  - What the City does to assist;
  - What the City cannot do; and
  - What the public can do to protect itself.
- **Policy 11.8.2c:** Maintain an effective and properly equipped emergency operations center, along with trained personnel, for receiving emergency calls, providing initial response and key support to major incidents, meeting the demands of automatic and mutual aid programs, and maintaining emergency incident statistical data.
- **Policy 11.8.2d:** Maintain ongoing emergency response coordination with surrounding jurisdictions.
- **Policy 11.8.2e:** Encourage private businesses and industrial uses to be self-sufficient in an emergency by:
  - maintaining a fire control plan, including on-site firefighting capabilities and volunteer response teams to respond and extinguish small fires; and
  - identifying personnel who are capable and certified in first aid and CPR.
- **Policy 11.8.2f:** Regularly review and clarify emergency evacuation plans for dam failure, fire, and hazardous materials releases.

## 3.8.4 - Impacts and Mitigation Measures

### Significance Criteria

According to the 2019 CEQA Guidelines Appendix G, to determine whether impacts related to hazards and hazardous materials have significant environmental effects, the following questions are analyzed and evaluated. Would the proposed project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) 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?

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

e) 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, would the project result in a safety hazard or excessive noise for people residing or working the project area?

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

g) Expose people or structures, either directly or indirectly to a significant risk of loss, injury, or death involving wildland fires?

According to the 2019 CEQA Guidelines Appendix G, to determine whether impacts related to wildfire have significant environmental effects, the following questions are analyzed and evaluated. Would the proposed project:

If located in or near SRAs or lands classified as Very High Fire Hazard Severity Zones, would the project:

h) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

i) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

j) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

## Approach to Analysis

This evaluation focuses on whether the proposed project would result in changes to the physical environment that would cause or exacerbate adverse effects related to the use, transportation, disposal, accidental release, or emission of hazardous materials. The evaluation also includes a determination of whether the changes to the physical environment caused by the proposed project or variant would impair or interfere with emergency response plans, or expose people or structures to increased wildfire hazards or dangers from abandoned wells or pipelines. For the evaluation of potential construction-related and operational impacts from existing hazardous materials in project site soils, sediments, groundwater, surface water, and structures, the results of environmental sampling are compared to identified screening levels. The following analysis is based, in part, on information provided by the City of Antioch General Plan, City of Antioch General Plan EIR, the Phase I ESA, and State of California websites.

Additional analyses regarding hazards and health risks are discussed as follows. Emissions of toxic air contaminants (TACs) are addressed in Section 3.2, Air Quality. Flooding and inundation hazards, including those related to erosion and mudflow, are addressed in Section 3.8, Hydrology and Water Quality. Traffic-related safety hazards are addressed in Section 3.13, Transportation. Other geotechnical-related safety hazards, such as earthquakes, are addressed in Section 3.5, Geology and Soils.

## Specific Thresholds of Significance

For purposes of this analysis, the following thresholds are used to evaluate the significance of hazards and hazardous materials impacts resulting from implementation of the proposed project.

- Routine transport, use, and/or disposal of hazardous materials.
- Regular transport of hazardous materials to/from the project site on an unsuitable road or use of highly volatile hazardous materials.
- Location within 0.25-mile of an existing or proposed school in conjunction with hazardous emissions or handle hazardous materials, waste, or substances.
- Listing on hazardous materials site list and distance of project site to listed hazardous material sites. These lists include the following:
  - The California Environmental Protection Agency (Cal/EPA)
  - California Facility Inventory Database (CA FID) UST and State Water Efficiency and Enhancement Program (SWEEP)
  - Hazardous Waste Tracking System (HAZNET)
  - California Department of Toxic Substance Control (DTSC EnviroStor and BAAQMD)
  - State Water Board GeoTracker regulated facilities databases for files related to possible RECs
- Location proximate to an airport and reduction of safety of people working or residing in the area.
- Impairing implementation of or interference with an adopted emergency response plan or emergency evacuation plan via blockage of an evacuation route or provision of only one access point for emergency vehicles.

- Placement of housing or offices in a designated wildland fire urban interface zone or proximate to unmanaged open space area that is susceptible to wildfires.

## Impact Evaluation

### *Routine Transport, Use, or Disposal of Hazardous Materials*

**Impact HAZ-1: The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.**

#### *Construction*

Construction activities would involve the use of heavy equipment, which would contain fuels, oils, and various other products such as concrete, paints, and adhesives that could be considered hazardous. However, the project contractor would be required to comply with all local, State, and federal laws regulating the handling, storage, and transportation of hazardous and toxic materials, as overseen by Cal/EPA, the Central Valley RWQCB, and the DTSC.

#### *Operation*

The proposed project would include residential development, parks, open space and trails, the dedication of future a fire station site, and a Village Center that would include commercial, office, and retail space. Residential and general commercial land uses do not typically involve the routine transport, use, disposal, or generation of substantial amounts of hazardous materials. During project operation, hazardous materials use would be limited to landscaping products such as fertilizer, pesticides, as well as typical commercial and household-type maintenance products (cleaning agents, degreasers, paints, batteries, and motor oil). Proper handling and usage of such materials in accordance with label instructions would ensure that adverse impacts to human health or the environment would not occur.

#### *Level of Significance*

Less Than Significant

### *Hazardous Materials Upset Risk*

**Impact HAZ-2: The project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment.**

#### *Construction*

During construction, the proposed project would be expected to involve the transport, use, and disposal of hazardous materials, such as diesel fuels, aerosols, and paints. However, the duration of these actions would only be temporary and limited to the period of construction. Furthermore, the proposed project would be subject to the Hazardous Materials Transportation Act, California Public Resources Code, the Clean Water Act, and other local, State, and federal regulations that would reduce and limit the associated risks. Any handling, transporting, use, or disposal would comply with applicable laws, policies, and programs set forth by various federal, state, and local agencies and regulations, including the EPA, RCRA, Caltrans, and the Contra Costa Hazardous Materials Program.

Required compliance with applicable hazardous material laws and regulations would ensure that construction-related hazardous material use would not result in significant impacts.

Existing structures would be removed as part of project construction. For buildings constructed prior to 1980, the Code of Federal Regulations (29 CFR § 1926.1101) states that all thermal system insulation and surface materials must be designated as "presumed asbestos-containing material" unless proven otherwise through sampling in accordance with the standards of the Asbestos Hazard Emergency Response Act. ACMs were banned in the mid-1970s. ACMs could include, but are not limited to resilient floor coverings, drywall joint compounds, and acoustic ceiling tiles, piping insulation, electrical insulation, and fireproofing materials. Furthermore, the use of lead-based paint was not banned until 1978 by the Federal Government. Typically, exposure to lead from older vintage paint is possible when the paint is in poor condition or is being removed. Lead-based paints were phased out of production in the early 1970s. Although the exact construction date of the existing ranch located on APN 057-021-003 of the project site is unknown, the Phase I ESA approximated construction between 1953 and 1968. Therefore, given the age of the structures, ACMs and lead-based paint may be present within the structures. Because implementation of the proposed project would include demolition of the existing on-site structures, exposure of workers to ACMs or lead-based paint could occur. This represents a potentially significant impact. Implementation of Mitigation Measure (MM) HAZ-2a, which requires the Applicant to conduct hazardous materials surveys and abatement of on-site structures prior to demolition, would reduce potential impacts to a less than significant level.

Two orchards that were planted in limited areas of the site appear to be utilized from the late 1930s until the 1970s. Detectable concentrations of residual agricultural chemicals may exist within on-site soils. Implementation of MM HAZ-2b, which requires a limited agrichemical soil assessment to be conducted within the areas where the two orchards are located on-site, would reduce potential impacts to soils to a less than significant level.

It was also noted that the two on-site wells pose a potential hazard, as one was not properly abandoned according to DOGGR regulations. Unused groundwater wells that are not properly abandoned could potentially carry bacteria, sediment, fertilizer, pesticides, or other pollutants as a result of runoff flowing into the wells. Contaminated flow into the open wells could potentially contribute to contamination of the underlying groundwater or aquifer. As outlined in MM HAZ-2c, an abandonment permit is required prior to any ground disturbance activities within 50 feet of a well on the project site. As outlined in MM HAZ-2d, proper abandonment of Well No. 1 in accordance with current DOGGR regulations is required prior to construction of the proposed project.

Several aboveground storage tanks and drums containing hazardous materials and numerous abandoned or discarded tanks and drums were also found throughout the property. Records indicate that the above and underground storage tanks were used on-site since at least 1965. While no releases were documented on-site, contamination may be uncovered upon removal of the storage tanks. All hazardous materials containers and storage tanks shall be removed prior to construction, as outlined in MM HAZ 2e. Additionally, MM HAZ-2f requires a Soil Management Plan (SMP) to be prepared to address potential impacted soil within the single-family residence structure, former UST area, and debris/fill area.

The project site contains an inactive and abandoned petroleum product pipeline that traverses the western portion and the northeastern portion of the site. The pipeline traverses the middle of the proposed project site and the development of the proposed project would include mass grading and soil disturbance, as well as development near the pipeline, which may cause workers to be exposed to soil contamination. Accurate depths and alignment of the pipelines could only be determined by field checking and potholing the pipeline, which is recommended to be accomplished prior to completion of construction plans in order to avoid conflicts between the proposed development and the existing pipeline. As a result, construction and development activities related to the proposed project near the pipeline easement could cause a potentially significant impact.

Extreme caution should be used when excavating, drilling, or grading around the former petroleum product pipeline. All excavating, drilling, or grading must comply with all applicable federal and state standards and regulations associated with development near petroleum pipelines. According to the USDOT Pipeline and Hazardous Materials Safety Administration, any project involving digging near a pipeline is required to call prior to commencement of digging in order to notify companies that may operate underground utilities in the area. In addition, the proposed project would be required to comply with Section 195.210 of the Code of Federal Regulations, which requires that the pipeline must avoid and must not be located within 50 feet of any private dwelling, industrial building, or public assembly where people work, unless it is provided with at least 12 inches of cover. The proposed project must also comply with Section 192.325 of the Code of Federal Regulations, which states each transmission line must be installed with at least 12 inches of clearance from any other underground structure and the transmission line must be protected from damage. Without compliance with the above actions, impacts are potentially significant. MM HAZ-2g, which requires proper abandonment of the petroleum pipeline on-site and preparation of an SMP, and MM HAZ-2h, which requires development of construction guidelines shall be implemented to reduce impacts related to pipeline removal to a less than significant level.

It is also important to note that construction activities would involve the use of heavy equipment, which would contain fuels and oils, and various other products such as concrete, paints, and adhesives. There is potential for fuels and oils to spill onto the project site. However, the project contractor would be required to comply with all federal, State, and local ordinances regulating the handling, storage, and transportation of hazardous and toxic materials, as overseen by Cal/EPA and the DTSC. Thus, the on-site construction activities would not create a significant hazard to the public or the environment. Based on the above, implementation of the proposed project could create a significant hazard to the public or the environment through reasonably foreseeable upset and accidental conditions involving the release of hazardous materials into the environment, specifically related to asbestos-containing materials and lead-based paint associated with the existing on-site structures, on-site orchards, existing petroleum pipeline, and existing water wells. As a result, impacts are considered to be potentially significant. Implementation of MM HAZ-2a, MM HAZ-2b, MM HAZ-2c, MM HAZ-2d, MM HAZ-2e, MM HAZ-2f, and MM HAZ-2h would reduce construction impacts to a less than significant level.

### *Operation*

During project operation, hazardous materials use would be limited to landscaping products and typical commercial and household-type maintenance products. Proper handling and usage of such

materials in accordance with label instructions would ensure that adverse impacts to human health or the environment would not occur. Therefore, operational impacts related to hazardous materials upset risk would be less than significant.

### *Level of Significance Before Mitigation*

Potentially Significant (construction only)

### *Mitigation Measures*

The following mitigation measures shall be implemented:

**MM HAZ-2a Performance of Pre-Construction Hazardous Materials Surveys**

Prior to the issuance of a demolition permit for each of the structures on-site, the Applicant shall hire a California Registered Asbestos Abatement Contractor to inspect, and if necessary, remove all asbestos containing materials, and conduct final clearance inspections (visual) to document the completion of the action. All demolition activities shall be completed in accordance with California Code of Regulations Title 17, Division 1, Chapter 8, Article 1. All construction work where an employee may be occupationally exposed to lead-containing paint, including demolition, must comply with Occupational and Safety Health Administration (OSHA) Regulation 29 Code of Federal Regulations 1926.62, and California Occupational and Safety Health Administration (Cal/OSHA) Title 8 California Code of Regulations 1523.1.

**MM HAZ-2b Agrichemical Soil Assessment**

The Applicant shall conduct a limited agrichemical soil assessment within the areas where the two orchards were located on-site to determine if residual agrichemicals are present within on-site soils in excess of applicable limits. If found to be present in excess of applicable limits, the Applicant shall have a remedial action plan developed and implemented to ensure that all residual soils are removed to the satisfaction of the Department of Toxic Substance Control (DTSC) and City of Antioch prior the issuance of a grading permit.

**MM HAZ-2c Obtain an Abandonment Permit**

Prior to any ground disturbance activities within 50 feet of any water well or septic tank on the project site, the Applicant shall hire a licensed contractor to obtain an abandonment permit from the Contra Costa County Environmental Management Department, and properly abandon the on-site well(s) and/or septic tank, pursuant to review and approval by the City Engineer.

**MM HAZ-2d Well Abandonment**

Proper abandonment of Well No. 1 is required in accordance with current California Department Division of Oil, Gas, and Geothermal Resources (DOGGR) regulations to address past oil and gas exploration and production activities.

Prior to final map approval, the Applicant shall submit to the City of Antioch Engineering Department, for review and approval, plans which show that future inhabited structures will not be located over the two abandoned oil/gas wells. The plans shall be completed in compliance with the DOGGR Construction Site Review Program, which includes guidelines and recommendations for setbacks and mitigation measures for venting systems.

If grading is proposed proximate to the two abandoned well locations, DOGGR shall be consulted to determine if the wells will require modification in casing height. A Soil Management Plan (SMP) shall be prepared to address potential impacted soil that may be encountered during grading activities within the area of the two abandoned wells.

**MM HAZ-2e Removal of Hazardous Material Containers**

Prior to site grading, the Applicant shall cause all noted potentially hazardous material containers and tanks to be removed from the parcel.

**MM HAZ-2f Conduct a Phase II Environmental Site Assessment**

Prior to issuance of a grading permit, the Applicant shall hire a certified Soils Engineer to prepare a Phase II Environmental Site Assessment (Phase II ESA) to address all concerns identified in the Phase I ESAs. The Applicant shall comply with all Phase II recommendations.

**MM HAZ-2g Petroleum Pipeline Abandonment/Removal**

Prior to commencement of residential construction, the Applicant shall ensure that all petroleum pipelines within the areas of the project site planned for development shall be abandoned and/or removed in accordance with applicable federal, state, and/or local standards to the satisfaction of the Contra Costa Environmental Health Department and the City Engineer. If any indicators of apparent soil contamination (soil staining, odors, debris fill material, etc.) are found at the project site associated with the petroleum pipelines, the impacted area shall be isolated from surrounding, non-impacted areas. The project environmental professional shall obtain samples of the potentially impacted soil for analysis of the contaminants of concern and comparison with applicable regulatory residential screening levels (i.e., Environmental Screening Levels, California Human Health Screening Levels, Regional Screening Levels, etc.). Where the soil contaminant concentrations exceed the applicable regulatory residential screening levels, the impacted soil shall be excavated and disposed of off-site at a licensed landfill facility to the satisfaction of the Contra Costa Environmental Health Department. If soil contaminants do not exceed the applicable regulatory residential screening levels, further action is not required.

**MM HAZ-2h Preparation of Safety Guidelines**

In the event the pipelines are abandoned and not removed, prior to commencement of grading, the construction contractor, the pipeline operator, and a representative from the City's Engineering Department shall meet on the project site and prepare site-specific safety guidelines for construction in the field to the satisfaction of the City Engineer. The safety guidelines and field-verified location of the pipelines shall be noted on the improvement plans and be included in all construction contracts involving the project site.

### *Level of Significance After Mitigation*

Less Than Significant

### *Hazardous Emissions Proximate to a School*

**Impact HAZ-3: The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.**

### *Construction/Operation*

The nearest schools to the project site are Diablo Vista Elementary School, located 0.79-mile northeast of the proposed project site, and Dozier-Libbey Medical High School, located 0.86-mile southeast of the project site. As such, the project site is not located within 0.25-mile of a school and project construction would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25-mile of an existing or proposed school.

### *Level of Significance*

Less Than Significant

### *Government Code Section 65962.5 Sites*

**Impact HAZ-4: The project would not be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would not create a significant hazard to the public or the environment.**

### *Construction/Operation*

According to the Geotracker and EnviroStor websites, the project site is not included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. Therefore, impacts would be less than significant.

### *Level of Significance*

Less Than Significant

## Proximity to Public Airport Safety Hazard

**Impact HAZ-5: 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, the project would not result in a safety hazard or excessive noise for people residing or working the project area.**

### *Construction/Operation*

The project site is not located within an airport land use plan, nor within 2 miles of a public airport or private airstrip. The nearest major airport is the Byron Airport, which is located over 10 miles southeast of the project site. According to the Contra Costa County Airport Land Use Commission, the project site is not within the ALUCP area or the area of influence of the nearest airport; therefore, the project site is not within an area of influence identified for the Byron Airport. Thus, the project site would not be subject to any safety hazards associated with an airport, and no impact would occur.

### *Level of Significance*

No Impact

### *Emergency Response and Evacuation*

**Impact HAZ-6: The project could impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.**

### *Construction*

During construction, it is expected that construction equipment and vehicles would be accessing and leaving the project site, which in turn could potentially impede evacuation or emergency vehicle access. Implementation of MM TRANS-7 would reduce construction impacts to a less than significant level by ensuring that adequate vehicle access is provided during construction. Additionally, the proposed project would be required to comply with the Contra Costa County Emergency Operations Plan. Although the Contra Costa County Emergency Operations Plan does not identify specific emergency evacuation routes, compliance would ensure efficient response to emergency incidents within Contra Costa County and the City of Antioch. As such, construction impacts related to emergency response and evacuation would be less than significant after the implementation of mitigation.

### *Operation*

As mentioned above, the proposed project would be required to comply with the Contra Costa County Emergency Operations Plan, which does not identify specific emergency evacuation routes. Implementation of the proposed project would not result in any adverse modifications to the existing roadway system and, thus, would not physically interfere with any existing emergency routes. Instead, the proposed project would expand the existing roadway network to include connection of Dallas Ranch Road and Deer Valley Road by way of an extension of Sand Creek Road and the proposed Street A. The extension of Sand Creek Road would provide increased roadway connectivity within the City. In addition to providing the extension of Sand Creek Road, which would serve as the primary Emergency Vehicle Access (EVA) route to the project site. A secondary EVA would be provided from the southern development area through Village 9 along Street C. EVA routes are shown in Exhibit 2-14. In addition, the proposed project involves the dedication of a 2.00-acre site for construction and operation of a

future fire station on-site. Upon buildout of the future fire station, emergency services would be readily available on-site. Emergency access would be maximized through the provision of proposed roads and multiple connection points between proposed neighborhoods. The proposed project would be required to comply with the City of Antioch General Plan Policy 11.7.2n, which requires new developments to incorporate appropriate design features to increase safety and minimize potential adverse effects on public health. In addition, Policy 11.8.2f requires that the City review and clarify emergency evacuation plans for dam failure, fire, and hazardous materials releases.

As mentioned in Section 3.13, Transportation, development of one or two-family dwellings where the number of dwelling units exceed 30 shall be provided with two separate and approved fire apparatus access roads; where there are more than 30 dwelling units on a single public or private fire apparatus access road and all dwelling units are equipped throughout with an approved automatic sprinkler system in accordance with Section 903.3.1.1, 903.3.1.2 or 903.3.1.3 of the California Fire Code, access from two directions shall not be required (D107.1.)[23]

Access to the proposed project would be provided from new roadway connections from Deer Valley Road via Street A and an extension of Sand Creek Road connecting to Dallas Ranch Road. Access to Villages 1 through 8 would be provided from multiple locations, meeting or exceeding the fire code requirements. Access to Villages 9, 10, 11, and 12 with a total of 555 units would be restricted to a single public access roadway (Street C).

MM TRANS-7 requires the emergency access points for Villages 9, 10, 11, and 12 to be reviewed and approved by the City of Antioch and Contra Costa County Fire Protection District to ensure that adequate access for large emergency vehicles is provided.

The proposed project includes dedication of land for the construction and operation of a fire station on a 2.00-acre parcel within the southeastern portion of the project site, adjacent to Deer Valley Road. Construction of the fire station would enhance emergency response capabilities for the project site and the City of Antioch generally.

Cross-sections for the proposed streets within the project site were reviewed. All street sections provide a minimum of 20-feet of clearway (meaning no obstructions in terms of parked vehicles, landscaping, etc.), such that sufficient width is provided for emergency vehicle access and circulation. In addition, the proposed project would be required to comply with the City of Antioch General Plan Policy 11.7.2n, which requires new developments to incorporate appropriate design features to increase safety and minimize potential adverse effects on public health. In addition, Policy 11.8.2f requires that the City review and clarify emergency evacuation plans for dam failure, fire, and hazardous materials releases. Therefore, the proposed project would not be expected to interfere with an adopted emergency response or emergency evacuation plan, and impacts would be less than significant with implementation of mitigation and adherence to 2015 Contra Costa Emergency Operations Plan and City of Antioch General Plan policies. With implementation of MM TRANS-7 and compliance with the Contra Costa County Emergency Operations Plan and City of Antioch General Plan, the proposed project would not conflict with impair implementation of

[23] California Fire Code. 2016. Appendix D—Fire Apparatus Access Roads. Amendment to Section D107—One- or Two-Family Residential Developments. Website: https://www.codepublishing.com/CA/Galt/html/Galt15/Galt1528.html. Accessed December 13, 2019.

physically interfere with an adopted emergency response plan or emergency evacuation plan. Therefore, the proposed project would be consistent with an adopted emergency response or emergency evacuation plan, and impacts would be less than significant.

### *Level of Significance Before Mitigation*

Potentially Significant

### *Mitigation Measures*

The Applicant shall implement MM TRANS-7.

**MM TRANS-7** Prior to recordation of the final map, the City of Antioch and Contra Costa County Fire Protection District shall review and approve the proposed emergency access points for Villages 9, 10, 11, and 12 to ensure that adequate access is provided for large emergency vehicles in accordance with the California Fire Code.

### *Level of Significance After Mitigation*

Less Than Significant

## Wildland Fires

| **Impact HAZ-7:** | **The project would not expose people or structures, either directly or indirectly to a significant risk of loss, injury or death involving wildland fires.** |
|---|---|

### *Construction*

The potential for construction activities to result in wildland fires is present. The Applicant and construction contractor would be required to work closely with Contra Costa County Fire Protection District to establish Best Management Practices (BMPs) and specific safety precautions to reduce potential wildfire impacts during construction, and to ensure that any wildfire hazards that occur are contained to minimize the potential for significant risk of loss, injury, or death involving wildland fires. As such, impacts would be less than significant.

### *Operation*

The majority of the project site currently consists of undeveloped grassland, and the proposed project would preserve the existing Sand Creek corridor, in addition to various hills and ridgeline areas in the northwestern and southwestern portions of the project site, as open space. Landscaping placed between open spaces and developed areas of the project site would have the potential to transfer wildland fires to the developed areas of the project site. However, landscaping within the proposed project would be required to adhere to City of Antioch Municipal Code Section 9-5.1003, which advises that landscaping plantings be selected for fire resistance, where appropriate. Wildland fires in the immediate vicinity of the proposed project would be ground fires (i.e., grass fires versus large stand-replacing crown fires in heavily wooded areas). The maintenance of fire resistant landscaping adjacent to exposed structures would reduce the likelihood that fires would spread from wildlands to adjacent developed areas.

According to CAL FIRE, the project site is not located within a fire hazard severity zone. The General Plan EIR determined that new development within the rural, hilly terrain included in the Sand Creek Focus Area could expose persons to hazardous conditions associated with wildland fires. However, the General Plan EIR concluded that impacts related to wildland fire hazards resulting from buildout of the General Plan would be less than significant with implementation of the fire protection policies in the General Plan.

The proposed project plan includes a 2.00-acre parcel within the southeastern portion of the project site, adjacent to Deer Valley Road, for the construction by Contra Costa County Fire Protection District of a fire station. Construction of the fire station would enhance emergency response capabilities for the project site and the City of Antioch generally.

The proposed project would be required to comply with all applicable fire protection policies, such as Policy 8.10.2a, which includes enforcement of building codes to reduce fire hazards, and Policy 8.10.2d, which includes involvement of Contra Costa County Fire Protection District in the development review process. In addition, development of the proposed project would include the installation of fire suppression systems (e.g., fire hydrants, automatic fire sprinklers, smoke detectors), would be designed in accordance with the latest requirements of the California Fire Code, and would improve emergency access by way of the extension of Sand Creek Road through the project site. The extension of Sand Creek Road would be the primary EVA route to the project site. A secondary EVA would be provided through Village 9. (See Exhibit 2-14.)

In accordance with State standards, the proposed project would be required to maintain defensible space to provide a firebreak that would prevent the spread of ground fires and protect on-site structures. Project plans would be routed to Contra Costa County Fire Protection District for review and approval. Contra Costa County Fire Protection District provides fire prevention services to the City of Antioch through inspections, code enforcement, plan review and engineering services, public education, fire investigations, and exterior hazard control, and review by Contra Costa County Fire Protection District would ensure that any potential hazards associated with wildland fires to the proposed buildings and structures would be appropriately reduced. Therefore, impacts of the proposed project related to exposure of people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands, would be less than significant.

### *Level of Significance*

Less Than Significant

## Wildfire

### *Expose Project Occupants to Pollutant Concentrations from Wildfire*

**Impact WILD-1: Due to slope, prevailing winds, and other factors, the project would not exacerbate wildfire risks and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire.**

#### *Construction/Operation*

The proposed project is located within the Sand Creek Focus Area in the City of Antioch, west of Deer Valley Road. According to CAL FIRE, the project is not located within a State Responsibility Area (SRA) Very High Fire Hazard Severity Zone.[24] However, the property immediately south of the project site is designated high fire hazard zone. While the site itself is not within an SRA, it is located adjacent to a site that is.

The BAAQMD monitors the Bay Area's air quality at a number of stations. The closest air quality data monitoring station to the project site is located in the City of Bethel Island, approximately 8.80 miles to the northeast. According to the BAAQMD, the average wind speed for Bethel Island varies month to month and ranges from 19 to 31 mph. Wind direction also varies from month to month and ranges from 356 to 360 degrees from the monitoring location.[25]

The project site would be developed with buffers between the grasslands to the west and south. Furthermore, no homes will be constructed along ridgelines or slopes of 25 percent or steeper, which reduces wildfire risk. The proposed project also includes the reservation of land for construction of a fire station on a 2.00-acre parcel within the southeastern portion of the project site, adjacent to Deer Valley Road. Construction of the fire station would enhance emergency response times for the project site and the City of Antioch generally. As mentioned in Section 3.13, Public Services, the proposed project would be required to pay a one-time fire impact fee per single-family home of $951 to assist with costs of constructing a new fire station.[26] Similar construction impact fees would be assessed for multi-family residential, commercial, office, and industrial buildings. In addition, the Applicant will work with the City to create a community facilities district (CFD) to fund its fair share portion of the operation of the fire station. Payment of impact fees and operational costs would ensure that the proposed project would be adequately served by existing Contra Costa County Fire Protection District facilities.

Slopes and areas prone to vegetation/grass fires are present within the project site. However, development along slopes within the site would not occur, and the proposed project would incorporate fire resistant landscaping and building materials to reduce potential wildfire impacts to a less than significant level. Furthermore, proposed project structures would be required to comply with the California Fire Code with regard to emergency/fire access and use of building materials that would limit the spread of wildfire to the greatest extent possible. Therefore, impacts related to

[24] California Department of Forestry and Fire Protection (CAL FIRE). 2012. State Responsibility Area Viewer. State of California. Website: http://www.fire.ca.gov/fireprevention fee/sraviewer_launch. Accessed May 30, 2019.

[25] Bay Area Air Quality Management District (BAAQMD). Air Monitoring Data. Website: http://www.baaqmd.gov/about-air-quality/current-air-quality/air-monitoring-data?DataViewFormat=yearly&DataView=met&StartDate=12/11/2017&ParameterId=203&StationId=4902. Accessed November 1, 2019.

[26] City of Antioch. Antioch Municipal Code. Title 3, Chapter 7.05: Fee Schedule. Amended September 24, 2019. Accessed November 22, 2019.

exposure of project occupants to pollutant concentrations from a wildfire or uncontrolled spread of wildfire would be less than significant.

### *Level of Significance*

Less Than Significant

### *Infrastructure That Exacerbates Fire Risk*

**Impact WILD-2:** **The project would not require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment.**

### *Construction/Operation*

The proposed project consists of a master planned community located within the western portion of the Sand Creek Focus Area in the City of Antioch. Because the existing project site is undeveloped, electrical power lines would be required to develop the proposed project. However, all electricity infrastructure would be located underground and tie in to existing infrastructure located at Dallas Ranch Road and an existing substation located approximately 0.50-mile south of the Hillcrest/Prewett Drive intersection. This would minimize risk of potential ignition and related fire risk above ground. Additionally, natural gas would be provided via a joint trench and connected to existing gas lines on the project site. The proposed project would not require installation of emergency water sources as an existing water tank is located just north of the project site.

Furthermore, the proposed project includes a 2.00-acre fire station site within the southeastern portion of the project site, adjacent to Deer Valley Road, upon which Contra Costa County Fire Protection District will construct a new fire station to serve the project and surrounding areas. Construction of the fire station would enhance emergency response capabilities for the project site and the City of Antioch generally.

The proposed project has been designed to include wildfire buffers and to keep development off of ridgelines and hilltops to reduce risk of wildfires. At least two bridges will be installed connecting the southern development area to the northern development area to ensure sufficient access in the event of an emergency.

As such, none of the proposed infrastructure would exacerbate fire risk; thus, this impact would be less than significant.

### *Level of Significance*

Less Than Significant

### *Flooding and Landslide Hazards Due to Post-Fire Slope Instability/Drainage Changes*

**Impact WILD-3: The project would not expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.**

#### *Construction/Operation*

The project site is located within the western portion of Sand Creek Focus Area, and is not susceptible to landslides or downstream flooding. While the portion of the site traversed by Sand Creek is within Zone A (a flood zone), the remaining and developable project area is within Zone X. In addition, the proposed project is not located within an area that is susceptible to landslides, as noted in Section 3.6, Geology and Soils. Therefore, the proposed project would not expose people or structures to significant risks and impacts related to flooding and landslide hazards due to post-fire slope instability or drainage changes would be less than significant.

#### *Level of Significance*

Less Than Significant

## 3.8.5 - Cumulative Impacts

As defined in Section 15355 of the CEQA Guidelines, "cumulative impacts" refers to two or more individual effects which, when considered together, are considerable, or increase other environmental impacts. The individual effects may be changes resulting from a single project or a number of separate projects. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the proposed project when added to other closely related past, present, and reasonably foreseeable probable future projects.

Hazardous materials and other public health and safety issues are generally site-specific and/or project-specific, and would not be significantly affected by other development inside or outside of the City. The following discussion of cumulative impacts is based on the implementation of the proposed project in combination with other proposed and pending projects in the region. Other proposed and pending projects in the region under the cumulative context would include buildout of the City of Antioch General Plan, as well as development of the most recent planned uses within the vicinity of the project area.

### Hazardous Materials Exposure Risk

Impacts associated with hazardous materials are site-specific and generally do not affect, or are not affected by, cumulative development. Cumulative effects could be considered if the proposed project was, for example, part of a larger development in which industrial processes that would use hazardous materials are proposed. However, the proposed project is a residential and commercial development and, thus, does not involve industrial processes or any operations that would involve the routine use of hazardous materials. Furthermore, any future proposed development project would be subject to the same federal, State, and local hazardous materials management requirements as the proposed project. Therefore, potential risks associated with increased hazardous materials use in the community, including potential effects, if any, on the proposed project, would not cumulate to become a significant impact.

## Wildfire Hazards and Emergency Response

The proposed project would introduce new people and structures to the area, which would create additional wildland urban interface areas within the City. Although the proposed project would add people and structures to the area, the proposed project would be required to comply with all applicable standards and regulations related to fire suppression, including General Plan Policies 11.8.2.e and 11.8.2.f, which would ensure private businesses and industrial uses would be self-sufficient in an emergency by maintaining a fire control plan, identifying personnel who are capable and certified in the first aid and CPR, as well as regular review of emergency evacuation plans for fire and hazardous materials.

Similar to the proposed project, all other projects in the City would be subject to the same regulations and standards required to ensure a less-than-significant impact related to hazards and hazardous materials. In addition, evacuation procedures in the event of an emergency, such as during a wildfire, are related to circulation and emergency access.

The City of Antioch contains main arterial streets that would act as the most likely routes of the City and provide access to SR-4 and SR-160.

The project vicinity is characterized by urban development and undeveloped wildlands within the Sand Creek Focus Area. The cumulative projects, listed in Table 3-1, would result in predominantly residential development, which would increase emergency situations, including wildfires and thus increase the need for emergency services. Payment of impact development fees would ensure that the proposed project would have adequate fire protection services and emergency access would reduce potential impacts to hazards and emergency response to a less than significant level. Further discussion regarding the potential impacts related to evacuation circulation is included in Chapter 3.14, Transportation and Circulation, of this EIR. In addition, all construction would adhere to the City Building Codes that are designed to minimize the potential for uncontrolled fires. Once development is proposed, the City assesses the needs for fire protection services and informs efforts to improve or expand needed facilities.

As listed in Chapter 3, Environmental Impact Analysis, Table 3-1, Cumulative Projects, development in the City would result in predominantly residential development. These developments would increase population in the City of Antioch. The City of Antioch 2003 General Plan EIR acknowledges that future development in the southeast area of Antioch would result in increased population and would alter the existing street network. All development would, however, comply with emergency access requirements as a condition of construction.

Furthermore, the proposed project includes dedication of land for the construction and operation of a future fire station on a 2.00-acre parcel within the southeastern portion of the project site, adjacent to Deer Valley Road. Construction of the fire station would enhance emergency response capabilities for the project site and the City of Antioch generally.

As such, cumulative impacts related to wildfire hazards and emergency response would be less than significant with mitigation.

## Overall

With the implementation of policy provisions, regulatory requirements, and mitigation outlined within this section the proposed project would not have any potentially significant impacts on hazards or emergency response/access. Furthermore, any future proposed development would be subject to the same federal and State requirements as the proposed project, which would ensure the safe transport, storage, use, and disposal of hazardous materials and wastes for the protection of human health and the environment. Therefore, the proposed project would not have a significant cumulative impact on hazards or emergency response/access.

### *Level of Cumulative Significance*

Less Than Significant