



3. Human-Made Hazards

As an urban city, the day-to-day operations of industry and human activity often also mean use, handling, or production of hazardous materials or environments. Human-made hazards discussed in this section include sites affected by hazardous materials and cleanup sites, issues related to climate change, airport hazards, and public safety. Air quality and pollution, including toxic air contaminants, are discussed in the Environmental Justice Element, as the geographic distribution of polluting facilities and inequitable impacts to communities of color and lower-income communities is a distinct environmental justice issue. This section concludes with a discussion of goals and policies intended to equitably address human-made hazards and minimize risks to human health and environmental quality.

3.1 HAZARDOUS MATERIALS

HAZARDOUS SITES/CLEANUP SITES

Exposure to hazardous materials can result in lung damage, cancer, cardiovascular disease, low birth weight infants, and other negative health outcomes that reduce life expectancy. Hazardous sites and materials threaten environmental quality and can result in soil and groundwater contamination. This is especially true of sites that used hazardous materials before adoption of current environmental regulations. Exposure to hazardous materials can also result in lung damage, cancer, cardiovascular disease, low birth weight infants, and other negative health outcomes that reduce life expectancy.¹ A review of the online regulatory databases (EnviroStor and GeoTracker) reveals that there

¹ 2045 general Plan Update: Oakland Map Atlas, 2022 https://cao-94612.s3.amazonaws.com/documents/Map-Atlas_Revised.pdf

are approximately 1,700 documented hazardous materials sites currently identified within the city.^{2,3} As shown in **Figure SAF-8** a vast majority of these sites are concentrated in areas with industrial land uses in East and West Oakland. About 57 percent of sites have been “closed” to indicate that they have completed remediation and/or have demonstrated that existing site uses do not present a significant risk to human health or the environment. Almost a quarter of all sites are actively being remediated and five percent of these sites are operational facilities that are currently certified to handle hazardous materials.⁴

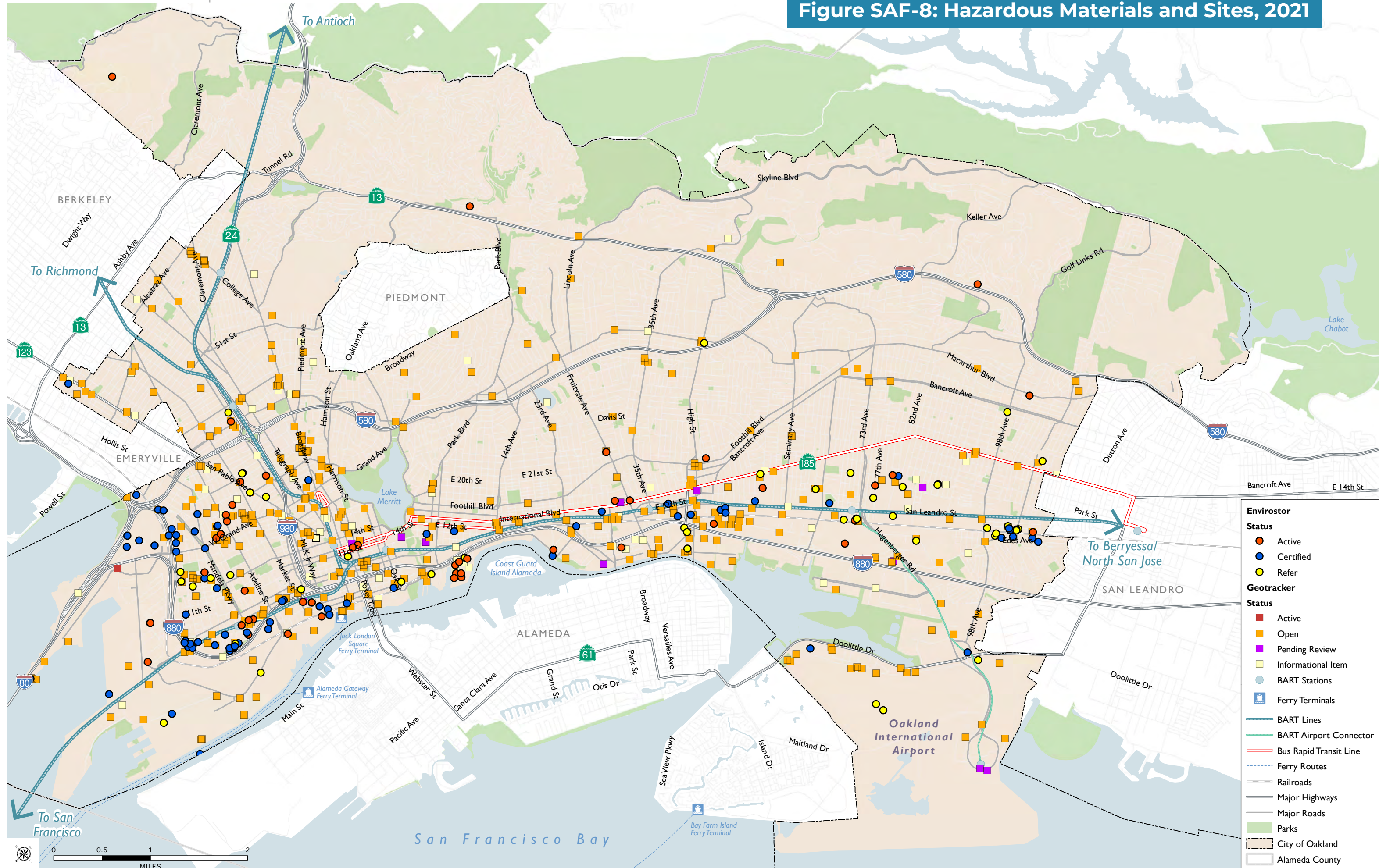
Risks associated with hazardous sites, closed or not, may be worsened by seismic activity, flooding, groundwater intrusion, or new development. Excavation and grading work that occur during construction have the possibility to expose the public to

² More information about CalEnvirostor and hazardous site determinations in Oakland is available in the Oakland Map Atlas.

³ 2045 general Plan Update: Oakland Map Atlas, 2022 https://cao-94612.s3.amazonaws.com/documents/Map-Atlas_Revised.pdf

⁴ Environmental Justice and Racial Equity Baseline. City of Oakland, CA, Mar. 2022, https://cao-94612.s3.amazonaws.com/documents/Equity-Baseline_revised4.15.22.pdf.

Figure SAF-8: Hazardous Materials and Sites, 2021



Envirostor	
●	Active
●	Certified
●	Refer
Geotracker	
■	Active
■	Open
■	Pending Review
■	Informational Item
●	BART Stations
■	Ferry Terminals
—	BART Lines
—	BART Airport Connector
—	Bus Rapid Transit Line
—	Ferry Routes
—	Railroads
—	Major Highways
—	Major Roads
■	Parks
 	City of Oakland
 	Alameda County



SOURCE: ESA, 2022; City of Oakland, 2021; ALAMEDA County GIS, 2021; Dyett & Bhatia, 2022

contaminated materials either through physical contact or hazardous vapors. Mismanagement or mishandling of contaminated groundwater and soil may spread contamination through surface water runoff or airborne dust, increasing the public’s exposure to these hazards.

Cortese List – DTSC Hazardous Waste and Substance Sites

The California Environmental Protection Agency (CalEPA) is required by State law to maintain an annually updated list of Hazardous Waste and Substances Sites, known as the Cortese List. The Cortese List provides information on the location of hazardous materials release sites, including hazardous waste and substance sites identified by the California Department of Toxic Substances Control (DTSC) Envirostor Database, Leaking Underground Storage Tank Sites (LUSTs) from the California Water Resource Control Board (WRCB), and the list of solid waste disposal sites identified by the WRCB. Within the city, hazardous waste and substances from the DTSC EnviroStor Database are listed in **Table SAF-2**.

Figure SAF-10 shows CalEnviroScreen data for DTSC Cleanup Sites within the city. The data depicted in **Figure SAF-10** represents DTSC EnviroStor records of active hazardous materials sites (represented on the figure as yellow points). Each census tract is assigned a “Cleanup Site Percentile” (a score) based on the amount and types of Cleanup Sites present; each score fits into a range of percentiles. Each range of percentiles is assigned a corresponding color (shade of red), the darkest red representing the highest score (and highest hazard). A high score indicates that a census tract is more vulnerable than one with a lower score. In the case of Cleanup Sites, a high score indicates a census tract is more vulnerable to exposure to hazardous materials that can affect human health and the environment. Areas that are most affected by hazardous sites are shown in **Table SAF-3**. More information on Hazardous materials can also be found in the Environmental Justice Element.

Cortese List - Underground Storage Tanks and Leaking Underground Storage Tanks

Underground storage tanks (USTs) and leaking underground storage tanks (LUSTs) are an additional component of the CalEPA

Table SAF-2: Hazardous Waste and Substances Cortese List Sites

FACILITY NAME	PROGRAM TYPE	STATUS	ADDRESS
Hard Chrome Engineering	State Response	Active	750 107th Avenue
E-D Coat Inc	State Response	Active	715 4th Street
Port Of Oakland, Berth 25 And 26	State Response	Certified / Operation & Maintenance - Land Use Restrictions	2500 7th Street
Dutch Boy #3	State Response	Certified / Operation & Maintenance - Land Use Restrictions	4825 San Leandro Street
Harris Dry Cleaners	State Response	Active	2801 Martin Luther King Jr. Way
Southern Pacific -West Oakland Rail Yard	State Response	Certified / Operation & Maintenance - Land Use Restrictions	Cypress Corridor
General Electric - Oakland	State Response	Active - Land Use Restrictions	5441 International Boulevard
Amco Chemical	Federal Superfund - Listed	Active	1414 Third Street
Port Of Oakland - Embarcadero Cove	State Response	Certified / Operation & Maintenance - Land Use Restrictions	Dennison And Embarcadero Streets
Howard Marine Terminal Site	State Response	Active - Land Use Restrictions	Embarcadero West and Market Streets
Action Plating (2w)	State Response	Certified / Operation & Maintenance - Land Use Restrictions	10132 Edes Avenue
Cal Tech Metal Finishers	State Response	Active	825, 829, 841 31st Street
Commercial Buildings	State Response	Active	1250-1276, 1284 W. Grand & 2232 Poplar

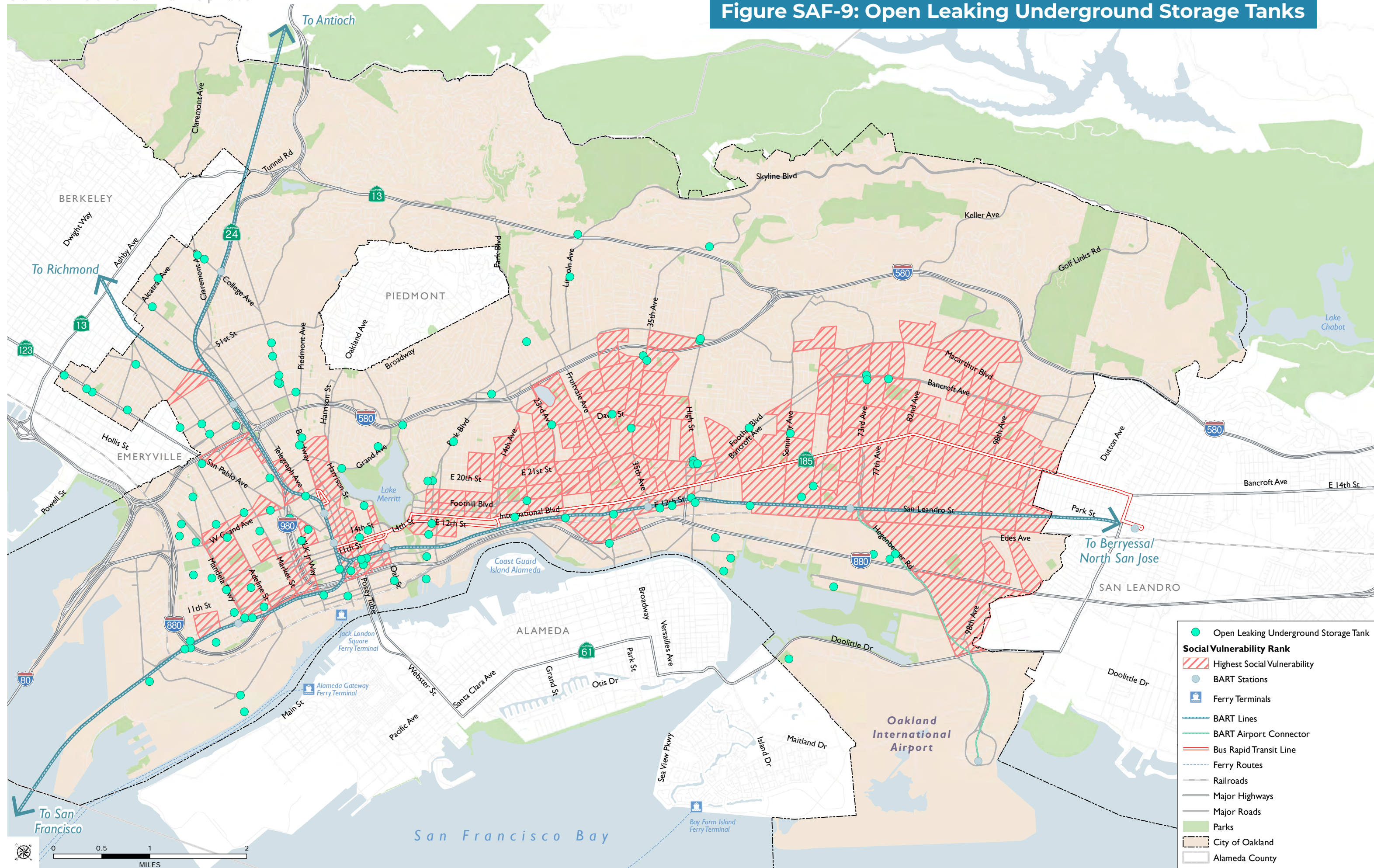
Source: CalEPA Cortese Sites List, Department of Toxic Substances EnviroStor Database

Cortese List. An underground storage tank (UST) is defined by law as “any one or combination of tanks, including pipes connected thereto, that is used for the storage of hazardous substances and that is substantially or totally beneath the surface of the ground.” Leaking underground fuel storage tanks (LUSTs) are a significant source of petroleum impacts to groundwater. USTs may impact health and safety via exposure from impacts to soil and/or groundwater, contaminated drinking water aquifers, contaminated public or private drinking water wells, or vapors

inhalation.⁵ The California Water Resources Control Board administratively categorizes LUSTs by their cleanup status; LUST sites are considered “open” if the site is currently in use and no remediation has taken place while “closed” sites are no longer in use and have gone through environmental remediation. Shown in **Figure SAF-9**, there are currently 114 open LUSTs in Oakland. Many of these sites are concentrated in downtown and West Oakland.

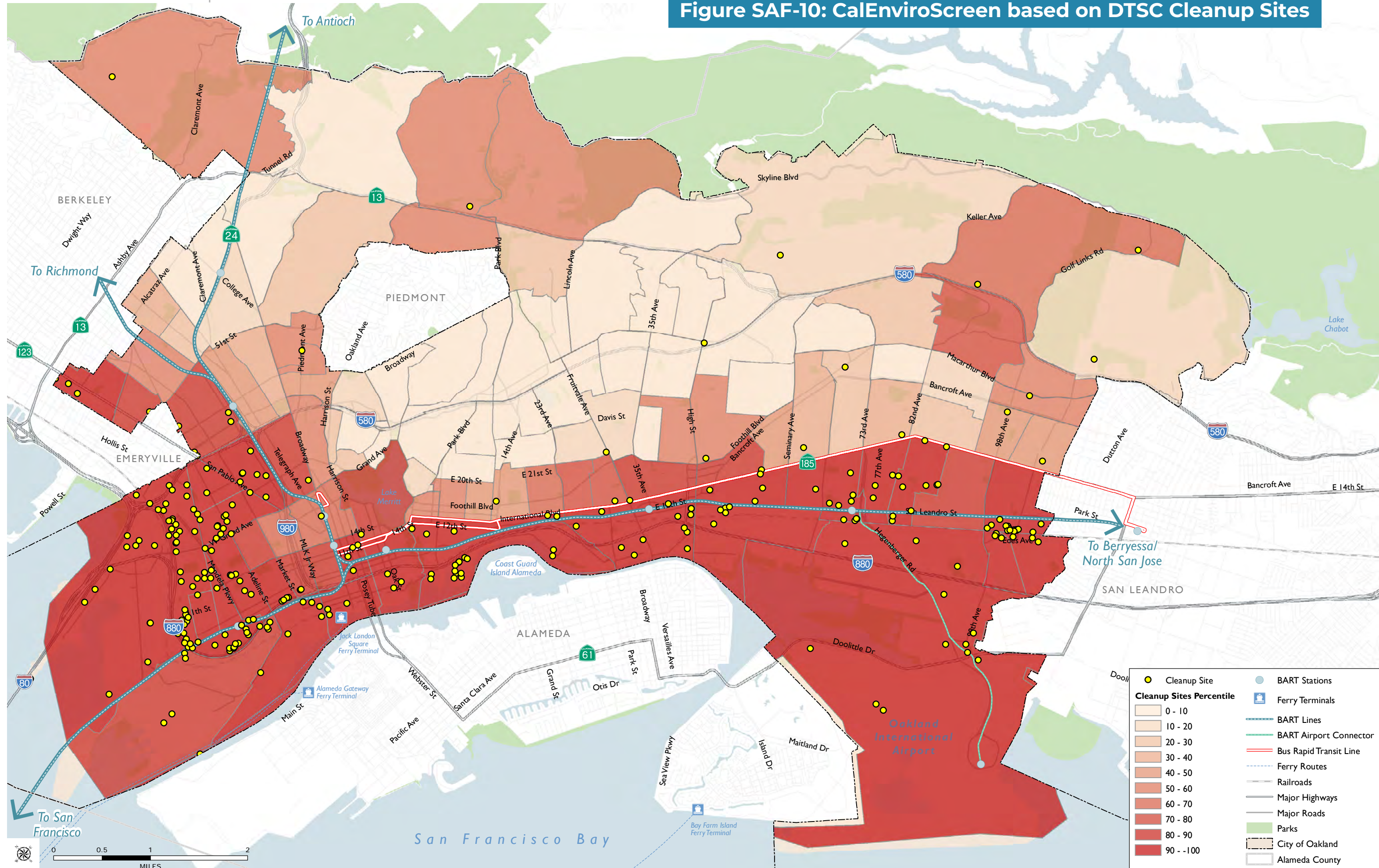
⁵ Underground Storage Tank Program - Cleanup | California State Water Resources Control Board. <https://www.waterboards.ca.gov/ust/cleanup/>. Accessed 9 Sept. 2022.

Figure SAF-9: Open Leaking Underground Storage Tanks



- Open Leaking Underground Storage Tank
- Social Vulnerability Rank**
- Highest Social Vulnerability
- BART Stations
- Ferry Terminals
- BART Lines
- BART Airport Connector
- Bus Rapid Transit Line
- Ferry Routes
- Railroads
- Major Highways
- Major Roads
- Parks
- City of Oakland
- Alameda County

Figure SAF-10: CalEnviroScreen based on DTSC Cleanup Sites



● Cleanup Site	● BART Stations
■ Ferry Terminals	— BART Lines
 0 - 10	— BART Airport Connector
 10 - 20	— Bus Rapid Transit Line
 20 - 30	— Ferry Routes
 30 - 40	— Railroads
 40 - 50	— Major Highways
 50 - 60	— Major Roads
 60 - 70	■ Parks
 70 - 80	 City of Oakland
 80 - 90	 Alameda County
 90 - 100	



SOURCE: ESA, 2022; City of Oakland, 2021; ALAMEDA County GIS, 2021; Dyett & Bhatia, 2022

Table SAF-3 Top 10th Percentile Tracts by Indicator — Hazardous Materials

CLEANUP SITES		HAZARDOUS WASTE SITES		TOXIC RELEASES		SOLID WASTE SITES ¹		PROXIMITY TO INDUSTRIAL ZONES ²	
Tract Name	Score	Tract Name	Score	Tract Name	Score	Tract Name	Score	Tract Name	Score
Port Upper	1.00	Acorn Industrial*	1.00	Fitchburg	1.00	Melrose	1.00	Melrose	0.92
Prescott/Mandela Peralta	0.99	Jack London Square	0.99	Lockwood/Coliseum/Rudsdale	0.99	Port Upper	0.99	Port Upper	0.92
Oakland Estuary	0.98	Paradise Park/Golden Gate	0.98	Paradise Park/ Golden Gate	0.98	Lockwood/Coliseum/Rudsdale	0.98	Brookfield Village/Hegenberger	0.92
Acorn Industrial*	0.97	Piedmont Ave South	0.97	Bushrod/North Oakland	0.97	Brookfield Village/Hegenberger	0.97	Fitchburg	0.92
DeFremery/Oak Center	0.96	Brookfield Village/Hegenberger	0.96	Panoramic Hill	0.96	Prescott	0.96	Sobrante Park	0.92
McClymonds	0.96	New Highland	0.96	Brookfield Village/Hegenberger	0.96	Chabot Park	0.95	McClymonds	0.92
Clawson/Dogtown	0.95	Oakland/Harrison West	0.95	Santa Fe/North Oakland	0.95	Sequoyah	0.95	DeFremery/Oak Center	0.92
Prescott	0.94	Acorn	0.94	Upper Telegraph/Fairview Park	0.94	Fitchburg	0.94	Jack London Square	0.92
Melrose	0.93	Port Upper	0.93	New Highland	0.93	Prescott/Mandela Peralta	0.93	Port Lower	0.92
Jingletown/ Kennedy	0.92	Pill Hill	0.92	Bushrod/Children's Hospital	0.92	Jingletown/Kennedy	0.92	Acorn Industrial*	0.92
Hoover/Foster	0.91	Jack London Gateway	0.91	Sobrante Park	0.91	New Highland	0.91	Prescott/Mandela Peralta	0.91
Jack London Square	0.90	Downtown/Old Oakland	0.90	Rockridge	0.90			Jingletown/ Kennedy	0.90

Note: Bolded census tracts in green are EJ Communities. * Indicates census tract with low population.

1. Only includes 11 tracts in top decile due to ties. Next highest score is 0.88.

2. Maximum score is 0.92 due to ties.

SOCIAL VULNERABILITY

Many of the most vulnerable census tracts in Oakland are also in areas with the highest density of hazardous materials sites. CalEnviroScreen 4.0 identifies higher concentrations of BIPOC communities in Oakland living in tracts that have higher pollution burden scores, meaning that they are more at risk than white populations. Alameda County of Public Health (ACPHD) data show that average life expectancy can vary by as much as 15 years across one mile, from Oakland's flatlands to Oakland's Hills, depending on race.⁶

⁶ Oakland 2030 Equitable Climate Action Plan (ECAP). City of Oakland. (n.d.). <https://www.oaklandca.gov/projects/2030ecap>

The density of chemical and fuel release sites in high-poverty neighborhoods is four times higher than in affluent neighborhoods. Oakland's Department of Race and Equity (DRE) found in 2018 that Black children in Oakland were 10 times more likely than white children to be admitted to the emergency department for asthma-related conditions.⁷ Contaminants and corresponding public health hazards are particularly prevalent from West to East Oakland along the I-880 freeway. Environmental Justice Communities are also often found closest to Oakland's shoreline, placing them at increased risk of groundwater intrusion and flooding.⁸

⁷ Ibid.

⁸ See the Climate Change Vulnerability Assessment for the City of Oakland for further discussion of the cascading impacts of flooding and groundwater intrusion.

It is no accident that Environmental Justice Communities in East and West Oakland are most exposed to hazardous sites and bear the greatest pollution burdens; decades of racialized land-use decisions systematically concentrated industrial uses and pollution hazards in BIPOC communities. Because of these discriminatory practices, Oaklanders with the least ability to pay for and recover from environmental health threats are also the most impacted.

Goals and policies developed by the City will work to mitigate the effects of pollution and hazardous materials while prioritizing adaptation for socially vulnerable groups through compliance with state laws, pollution regulations, and local policies and programs.

INSTITUTIONAL AND REGULATORY FRAMEWORK

Interagency coordination and collaboration will be essential to address the complex and frequently cascading challenges presented by human-made hazards. Though state and federal agencies are often responsible for establishing pollution standards, regional and local agencies may implement more context-specific regulations that reflect the needs and priorities of local communities. This Element emphasizes interagency coordination and planning efforts between the City of Oakland and the following agencies to best minimize risk from human-made hazards.

Responsible Agencies

The following is a review of relevant agencies with the capacity to address human-made hazards presented in this section. It lists federal, state, regional and local agencies and also describes programs, plans, and tools provided at the state and federal level that the City can leverage to address human-made hazards. In addition, the City aims to closely consult and coordinate with community-based organizations in order to best engage residents about hazardous materials and other environmental justice issues. Such community groups may include the West Oakland Environmental Indicators Project, Communities for a Better Environment, Trees for Oakland, and the East Oakland Collective.

The United States Environmental Protection Agency (EPA) tracks six common air pollutants, called “criteria air pollutants” that are found all over the U.S. and have been shown to harm human and environmental health as well as cause property damage. These include ground-level ozone, particulate matter, carbon monoxide (CO), lead, sulfur dioxide (SO₂), and nitrogen dioxide (NO₂). EPA calls these pollutants “criteria” air pollutants because it sets National Ambient Air Quality Standards (NAAQS) for them based on the latest scientific information regarding their effects on human health or welfare.

California Air Resources Board (CARB) is a state agency that establishes emission standards for mobile air pollution sources in conjunction with federal agencies such as the EPA. CARB has developed statewide programs to encourage cleaner cars and cleaner fuels such as California’s cleaner-burning gasoline

regulation, which has reduced smog-forming emissions from motor vehicles by 15 percent and cancer risk from exposure to motor vehicle toxics by about 40 percent since the regulation was implemented in 1996.⁹

CARB also maintains California’s air toxics program, which is based on state legislation that requires CARB to identify and control toxic air pollutants. On February 10, 2022, the California Air Resources Board designated East Oakland for the development of an AB 617 Community Emission Reduction Plan which began in September 2022 and continues for a year-long planning process followed by implementation. As the Environmental Justice Element describes, AB 617 builds off the groundwork laid by East Oakland community leaders, who have urged attention towards air pollution issues in their communities for decades.

California’s Department of Resources Recycling and Recovery (CalRecycle) is a department within the California Environmental Protection Agency (EPA) that coordinates the state’s recycling and waste management programs. CalRecycle maintains the Solid Waste Information System (SWIS), a database containing information on solid waste facilities, operations, and disposal sites throughout the State of California.

The Department of Toxic Substances Control (DTSC) tracks facilities that are authorized to handle hazardous waste through the EnviroStor database and includes sites such as Federal Superfund (National Priority List) and State Superfund sites, military facilities, voluntary cleanup sites, and school sites being evaluated for possible contamination. The State Water Resources Control Board (SWRCB) maintains the GeoTracker database to regulate leaking underground storage tanks (LUSTs), Department of Defense facilities, spills-leaks-investigations-cleanups, and landfills.

The California Office of Environmental Health Hazard Assessment (OEHHA) is the lead State agency for the assessment of health risks posed by environmental contaminants. It assesses the health effects of toxic air contaminants and conducts

research tracking the impacts of climate change on California’s weather, water, ecosystems, agriculture, and public health. The office developed and updates CalEnviroScreen, a screening methodology that can be used to help identify California communities that are disproportionately burdened by multiple sources of pollution.

The State Water Resources Control Board (SWRCB) has regulatory responsibility for protecting the water quality of nearly 1.6 million acres of lakes, 1.3 million acres of bays and estuaries, 211,000 miles of rivers and streams, and about 1,100 miles of California coastline. “GeoTracker” is the State Water Board’s Internet-accessible database system used to track and archive compliance data related to authorized and unauthorized discharges. The GeoTracker online database contains regulatory data about leaking underground storage tanks (LUST), Department of Defense, Cleanup Program Sites, spills-leaks-investigations, cleanups, and landfill sites. The GeoTracker database also contains information about public drinking water wells.

The Bay Area Air Quality Management District (BAAQMD or “Air District”) regulates toxic air contaminants (TACs) by using a risk-based approach as opposed to establishing a concentrations standard. This risk-based approach utilizes a health risk assessment to determine the specific sources and TACs to control as well as the level of control necessary to reduce risk to acceptable levels. A health risk assessment analyzes exposure to toxic substances and human health risks based on the dose and potency of the toxic substances. In 2000, CARB approved a comprehensive Diesel Risk Reduction Plan to reduce diesel emissions from both new and existing diesel-fueled vehicles and engines (CARB, 2000). Subsequent regulations apply to new trucks and diesel fuel.

The UST Cleanup Fund (Fund) reimburses responsible parties for expenses associated with cleanup of leaking underground storage tanks (USTs), with over 72% of open UST cleanup cases currently receiving financial assistance through the Fund. The Fund also provides money to the Regional Water Boards and local regulatory agencies to abate emergency situations or to cleanup abandoned sites that pose a threat to human health, safety, and the environment, as a result of a UST petroleum release.

⁹ California Air Resources Board (CARB), 2019. Cleaner Burning Gasoline: An Update, 2019. Available at <https://ww2.arb.ca.gov/resources/fact-sheets/cleaner-burning-gasoline-update/printable/print>.

San Francisco Bay Regional Water Quality Control Board enforces waterway protection and pollution control regulations in Oakland. The primary goal of enforcement is to stop on-going problems and cleanup as necessary to preserve the beneficial uses of the Bay Area's water resources. The SF Regional Water Quality Board operates many programs related to water quality, including a UST cleanup program, to monitor, investigate, and remove pollutant sources.

The Alameda County Waste Management Authority provides refuse and recycling collection services for the County of Alameda and is responsible for preparation of the Alameda County Integrated Waste Management Plan and Alameda County Hazardous Waste Management Plan. The Authority manages a long-range program for development of solid waste facilities and offers many programs in the areas of source reduction and recycling, market development, technical assistance, and public education. Funding is provided by per-ton disposal and waste import mitigation fees.

The Alameda County Department of Environmental Health (ACDEH) Certified Unified Program Agency (CUPA) coordinates and enforces numerous local, state, and federal hazardous materials management and environmental protection programs in the county. The California Environmental Protection Agency (CalEPA) has designated ACDEH as the CUPA for the City of Oakland. All CUPA programs within the City of Oakland that were previously under the jurisdiction of the City of Oakland have been transferred to ACDEH.

CUPA is the lead program for permitting installations of new UST systems, UST repairs, and UST piping removals within its jurisdiction. ACDEH CUPA inspects over 250 UST facilities annually.¹⁰ ACDEH CUPA ensures that businesses and facilities with ongoing UST operations are properly permitted and meet the monitoring requirements applicable to their type of equipment. ACDEH CUPA staff inspect businesses for compliance with the Hazardous Waste Control Act and applicable regulations and issue permits and inspect businesses that treat hazardous waste.

In addition, businesses storing hazardous materials (including hazardous waste) or extremely hazardous substances at reportable quantities, are required to prepare and electronically submit a Hazardous Materials Business Plan (HMBP). The purpose of the HMBP is to prevent or minimize harm to public health and the environment from a release or threatened release of a hazardous material. Finally, when a facility is closing or ceasing to generate waste, they must notify ACDEH 30 days before the final closure. Large quantity Generators and Tiered Permitting Facilities are required to submit a closure plan for approval.

¹⁰ "Underground Storage Tank Program: Environmental Health Department: Alameda County." Alameda County Department of Environmental Health, <https://deh.acgov.org/hazmat/ust.page>.



GOALS AND POLICIES

GOAL SAF-5: MINIMIZE HEALTH AND SAFETY IMPACTS RELATED TO THE USE, STORAGE, MANUFACTURE, AND TRANSPORT OF HAZARDOUS MATERIALS.

SAF-5.1 Risks from Hazardous Materials Facilities.

Review proposed facilities that would produce or store hazardous materials, gas, natural gas, or other fuels to identify, and require feasible mitigation for, any significant risks. The review shall consider, at a minimum, the following:

- Presence of seismic or geologic hazards;
- Presence of other hazardous materials;
- Proximity to residential development and areas in which substantial concentrations of people exist, particularly environmental justice communities already overburdened by pollution, including toxic releases from facilities, cleanup sites, groundwater threats/threats from sea level rise, and other sources; and
- Nature and level of risk and hazard associated with the proposed project.

SAF-5.2 Hazardous Materials. Through partnerships, programs, and regulations, minimize the potential risks to human and environmental health and safety associated with the past and present use, handling, storage and disposal of hazardous materials.

SAF-5.3 Site Contamination. Through enforcement of standard conditions of approval, ensure buildings and sites are or have been investigated for the presence of hazardous materials and/or waste contamination prior to development or if there is reason to believe an existing building or site may contain hazardous materials that pose a threat to possible users. Continue to require remediation and construction techniques for adequate protection of construction workers, future occupants, adjacent residents, and the environment are adequately protected from hazards associated with contamination.

SAF-5.4 Hazardous Materials Accidents. Seek to prevent industrial and transportation accidents involving hazardous materials, and enhance the City's capacity to respond to such incidents. Continue to enforce regulations limiting truck travel through certain areas of the city to designated routes, and consider updating OMC 10.52.010 to establish time-based restrictions on truck travel on certain routes to reduce the risk and potential impact of accidents during peak traffic hours.

SAF-5.5 Study Options to Provide Financing for the Remediation of Environmentally Contaminated Sites, with Priority for Affordable Projects. As grant and loan funding sources are secured, support property owners through technical assistance and financing of characterization and/or remediation of environmentally contaminated sites.



3.2 OTHER PUBLIC SAFETY AND HAZARD ISSUES

AIRPORT HAZARDS

The Oakland International Airport (OAK) is owned by the Port of Oakland and is located along the San Francisco Bay, just 10 miles south of downtown Oakland. The Airport is 2,600 acres, including 327 acres of wetlands under jurisdiction of the U.S. Army Corps of Engineers. OAK is a primary commercial service airport with four runways: one primary air carrier runway at South Field and three runways at North Field. The Airport is served by several passenger and cargo airlines. In 2021, Oakland International Airport accommodated 8,142,320 passengers. This is an increase of 76.2 percent from 2020 and a decrease of 39.1 percent from 2019 due to the Covid-19 pandemic.¹¹

In 1971, the Alameda County Airport Land Use Commission (ALUC) was created to protect the public health, safety, and welfare by promoting the orderly expansion of airports and adoption of land use measures by local public agencies to minimize exposure to excessive noise and safety hazards near airports. The 2010 Oakland International Airport Land Use Compatibility Plan (ALUCP) is the primary document used by the Alameda County ALUC to help promote land use compatibility between Oakland International Airport (OAK) and its surrounding environments.

The Airport Influence Area (AIA) is defined by the ALUC based on political boundaries, noise contours, and flight tracks. The northernmost boundary of OAK's AIA begins at High Street in the City of Alameda and extends eastward to San Leandro Street. The AIA follows San Leandro Street south until it reaches Lewelling Boulevard in the City of Hayward, where it turns west. The AIA continues to follow Lewelling Boulevard westward until it reaches the Union Pacific Railroad tracks and turns south. The AIA boundary follows the tracks until it turns east on West Winton Avenue, and continues south on Hesperian Boulevard. The AIA turns west on

¹¹ Oakland International Airport, Press Releases, 2022, <https://www.oaklandairport.com/oak-airport-2021-statistics-release/#:~:text=Annually%2C%20passenger%20traffic%20at%20OAK,8.7%20percent%20from%20last%20year.&text=In%202021%2C%20Oakland%20International%20Airport,of%2039.1%20percent%20from%202019.>

HWY 92 to the San Francisco Bay. The AIA includes portions of the cities of Oakland, San Leandro, Alameda, Hayward, and small unincorporated areas of Alameda County in the vicinity of the Airport, including San Lorenzo, located southeast of the Airport.

The ALUCP establishes a total of seven different safety compatibility zones around the airport, which delineate acceptable land uses in order to minimize the risks to people and property on the ground as well as those people in an aircraft in the event of an accident or emergency landing occurring outside the airport boundary. These zones are:

4. **Zone 1:** Runway Protection Zones
5. **Zone 2:** Inner Approach / Departure Zones
6. **Zone 3:** Inner Turning Zones
7. **Zone 4:** Outer Approach / Departure Zones
8. **Zone 5:** Sideline Zones
9. **Zone 6:** Traffic Pattern Zone
10. **Zone 7:** Other Airport Environs

Each of these zones imposes different development conditions and prohibits certain land uses based on the individual zone's proximity to the airport. The closer the zone is to the airport, the stricter the development conditions are due to the greater the risk of accident and increased noise impacts. For the purposes of the ALUCP, the primary measure of risk exposure for people on the ground in the event of an aircraft accident is based in the number of people concentrated in areas most susceptible to the risk of aircraft accidents.

For new residential land uses, no new dwellings shall be constructed in Safety Zone 1. In Safety Zones 2, 3, 4, and 5, new dwellings are not recommended within the zone boundaries. However, due to the existing urban nature of the surrounding environments and the existing residential land use, infill may be allowed up to an average of the surrounding residential use (except for high density residential), provided that other safety criteria are satisfied. In Safety Zones 6 and 7, residential development is not restricted. These zones are shown in **Figure SAF-11**.

Land uses which pose the greatest concern are those in which the occupants have reduced effective mobility or are unable to respond in emergency situations. Children's schools, day care centers, hospitals, nursing homes, and other uses in which the majority of occupants are children, elderly, and/or people with disabilities shall be prohibited within Zones 1 through 5.¹² See the Oakland International Airport Land Use Compatibility Plan for a full list of compatible land uses within each safety zone.

PUBLIC SAFETY

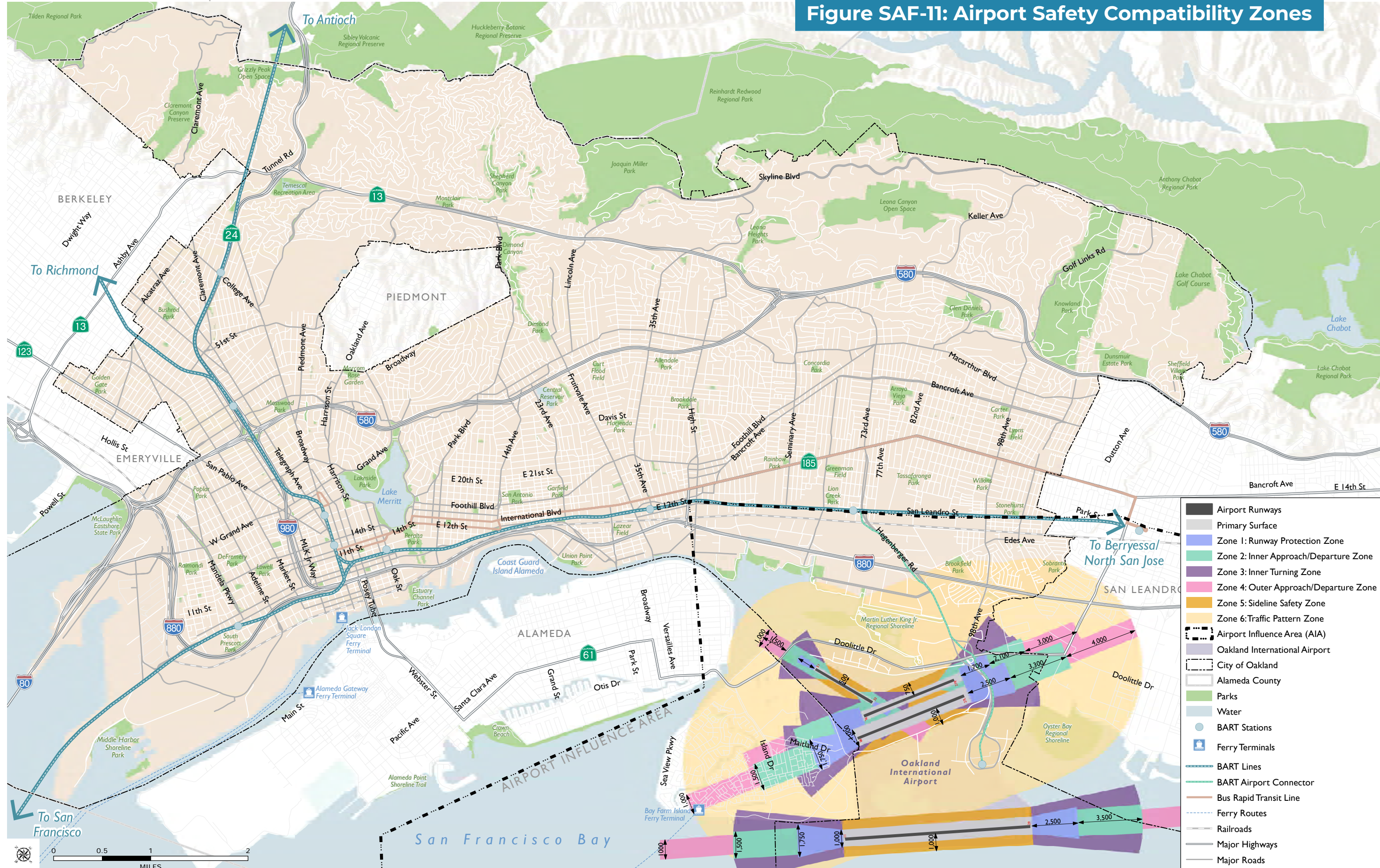
Public safety, perception of safety, and response to crime are complex issues. For example, public safety and crime reduction can be a health issue, with ample evidence showing that access to healthcare, public services, and community violence intervention programs can help reduce crime. Youth who may be at risk of violence are often those who are most disconnected from school, employment, or social connection. Many institutions that are supposed to keep people safe are underlain by systemic racism or may be inherently violent to begin with and have resulted in inequitable or harmful outcomes, especially for Black Oaklanders and people of color.

Violent crime, gun violence, and homicides are particularly impacting the lives of people of color in Oakland, whether they are directly harmed or their ability to feel safe going to school or a park or walking down the street. Of the 12 indicators with the greatest level of racial disparity in the City of Oakland Equity Indicators Report, six were in the category of public safety. With national, state, and local attention on police reform, Oakland communities and City departments are exploring other ways to reimagine and reconstruct the public safety system in Oakland by developing recommendations to increase community safety through alternative responses to calls for assistance, and investments in programs that address the root causes of violence and crime.¹³

¹² Alameda County, Oakland International Airport Land Use Compatibility Plan, December 2010, https://www.acgov.org/cda/planning/generalplans/documents/OAK_ALUCP_122010_FULL.pdf.

¹³ See Oakland's Reimagining Public Safety page: <https://www.oaklandca.gov/topics/reimagining-public-safety> and the Mobile Assistance Community Responders of Oakland (MACRO) Program at <https://www.oaklandca.gov/projects/macro-mobile-assistance-community-responders-of-oakland>

Figure SAF-11: Airport Safety Compatibility Zones



- Airport Runways
- Primary Surface
- Zone 1: Runway Protection Zone
- Zone 2: Inner Approach/Departure Zone
- Zone 3: Inner Turning Zone
- Zone 4: Outer Approach/Departure Zone
- Zone 5: Sideline Safety Zone
- Zone 6: Traffic Pattern Zone
- Airport Influence Area (AIA)
- Oakland International Airport
- City of Oakland
- Alameda County
- Parks
- Water
- BART Stations
- Ferry Terminals
- BART Lines
- BART Airport Connector
- Bus Rapid Transit Line
- Ferry Routes
- Railroads
- Major Highways
- Major Roads

SOURCE: City of Oakland, 2021; ALAMEDA County GIS, 2021; Dyett & Bhatia, 2021

The prevalence of violent and property crime, including assault (misdemeanors and felonies), homicide, rape, other sex offenses, burglary, or theft, also negatively impacts the perception of public safety and impedes community connection. Homicides have a devastating effect that extends beyond just the victim to the victim's family, friends, and broader community. As stark racial disparities in violent crimes demonstrate, these effects are not felt evenly across Oakland communities. Residents in majority Hispanic/Latinx tracts experienced the greatest rate of violent crimes per 1,000 people over the five-year period from 2016 to 2020, nearly double the overall average. Moreover, all other racial groups were under the average, with majority white tracts having the lowest rate.

While other documents address issues like safety programming and crime response, the General Plan focuses on the ways that city land use, environments, and community services can create neighborhood environments that feel safe. The General Plan also addresses other contributing factors to safety, including housing and job stability, economic opportunity, access to healthy food, a neighborhood's social connections, and the physical structure/location of health-promoting resources in a community.

Crime Prevention Through Environmental Design

Crime Prevention Through Environmental Design (CPTED) is a crime prevention philosophy based on the theory that the proper design and effective use of the built environment, can lead to a reduction in the fear of crime as well as an improvement in the quality of life. CPTED works by decreasing a criminal's ability to commit a crime and increasing the chances that the crime will be seen and reported. CPTED goes beyond traditional security



methods by naturally integrating security measures into the community. The goal of all CPTED applications is to increase the quality of life, decrease the fear of crime, and decrease crime.¹⁴ Because different people or groups may have varying perceptions of what makes a community feel safe, CPTED guidelines should be tailored to response to a community's context, diversity and unique safety issues. CPTED principles should also be coupled with acknowledgement of racial profiling that results in disproportionate harm and violence to Black, Indigenous, Latinx, and Asian communities.

The City of Oakland has released guidelines for CPTED in the form of checklists for residential, commercial, and civic projects.¹⁵ Specific criteria include reference to lighting, line of sight, and other visibility issues; clearly defined spaces; and access. For example, building exteriors, parking lots, and parking garages should be well lit. Property lines and private areas should be defined with plantings, pavement treatments, short walls, or fences. Further, landscaping should be maintained and trimmed to avoid creating blind spots or hiding spots. The City of Oakland will continue to apply these CPTED principles in the design of new development in order to enhance public safety and reduce calls for service and will explore opportunities to more intentionally integrate context-specific recommendations in partnership with community.

¹⁴ City of Oakland, 2021. Crime Prevention Through Environmental Design (CPTED). Available at <https://www.oaklandca.gov/resources/crime-prevention-through-environmental-design-cpted>.

¹⁵ Ibid.



Interagency Coordination, Social Determinants of Health and Crime

Health inequities are differences in health outcomes “that are a result of systemic, avoidable, and unjust social and economic policies and practices that create barriers to opportunities.”¹⁶ Environments where real or perceived violence and crime also affect health. For example, those who grow up and live in environments with limited social, educational, and economic opportunities and where violence, racism, and community and domestic instability are daily stressors are at increased risk of multiple forms of violence.¹⁷ Therefore, in order to prevent violent crime, the City of Oakland needs to address the root causes of social and economic inequalities, as well as the underlying social determinants of health.

In response to systemic inequities that contribute to the underlying causes of public safety issues and crime, the City of Oakland developed the Reimagining Public Safety Taskforce in September 2020. The purpose of the Reimagining Public Safety Taskforce (active from September 2020 through March 2021) is to rapidly reimagine and reconstruct the public safety system in Oakland by developing recommendations for Council consideration to increase community safety through alternative responses to calls for assistance, and investments in programs that address the root causes of violence and crime (such as housing, jobs, etc.) The final report emphasized investment in alternatives in policing through other governmental and community-based organizations. Further, recommendations address the immediate and urgent need to signal to the community and members of the Oakland Police Department (OPD) that, even amidst the consideration of significant organizational change, there will be a doubling down on the commitment to officer accountability, ground zero for public trust and confidence in the Department.

¹⁶ Rudolph, L., Caplan, J., Ben-Moshe, K., & Dillon, L. (2013). *Health in All Policies: A Guide for State and Local Governments*. Washington, DC and Oakland, CA: American Public Health Association and Public Health Institute.

¹⁷ California Department of Public Health, 2020. *Violence and Social Determinants of Health*. Available at <https://www.cdph.ca.gov/Programs/CCDC/DCDC/SACB/Pages/Violence%20Prevention%20Initiative/ViolenceandSocialDeterminantofHealth.aspx>.

Department of Violence Prevention (Formerly the ‘Oakland Unite’ division of the City of Oakland’s Human Services Department)

In 2017, the City Council approved the creation of the Department of Violence Prevention (DVP) with the desire to better align, amplify and elevate Oakland’s violence prevention efforts (Ordinance No. 13451 C.M.S.). The DVP focuses on the three forms of violence named in the Safety and Services Act: gun violence, family/domestic violence, and commercial sexual exploitation. The DVP’s public health approach focuses on the root causes of violence -at the individual, peer, family, and community levels- and uses data to understand how frequently violence occurs, when and where it occurs most, and who is most vulnerable of being impacted (both those harmed and those causing harm) and then engages community leaders in the collaborative development of community solutions to prevent violence, promote healing, and restore communities.

The DVP applies this public health approach to:

1. Focus on **specific places** in Oakland **with underlying conditions** that generate the highest rates of violence;
2. Support **specific people** determined to be: at the center of violence, in-risk or at-risk for violence, and exposed/adjacent to violence;
3. Direct interventions to the **individual, peer, family, and community levels**; and
4. Provide services at the **times and days of the week when violence occurs most.**

The DVP focuses efforts with those at the center of violence- who have been harmed and have caused harm- to reduce gun/group/gang and gender-based violence and to support healing in communities exposed to violence to end the cycle of trauma. DVP coordinates with other city departments and the community to apply a citywide, comprehensive strategy to the City’s shared safety approach to violence intervention and prevention. Guided by an explicit equity framework, the DVP prioritizes individuals and communities most impacted by violence and trauma. DVP programs primarily serve the African American and Latinx community between 14-35 years old. The DVP’s strategic interventions

are framed within a trauma-informed approach that focuses on healing and deep, long-term relationships with trusted service providers and advocates.

Additionally, the DVP and its funded agencies respond to all shootings and gun-related homicides across the city (Triangle Incident Response) to provide support to victims, families, and community members. Beginning in Spring 2021, the Triangle Incident Response is a 24/7 real-time, coordinated crime scene response that aims to reduce retaliatory group/gang related violence, reduce the levels of trauma experienced by individuals, families, and impacted community members, and improve police-community relationships. The triangle partners, staffed by professionals with different orientations and responsibilities, include: a) violence interrupters, b) DVP Crime-scene Response Advocates with expertise in crisis intervention principles, and c) law enforcement with knowledge of the geographic areas in which the triangle is implemented. The expertise of all three partners is equally valued. Crime-scene Response Advocates are DVP staff members who provide immediate support for family and peers, as well as communication and coordination of DVP Violent Incident Crisis Response efforts.

The DVP also hosts community Town Nights events at parks across the city in areas that experience a high level of violence. Town Nights is a community-driven, multi-generational violence prevention and intervention strategy that involves outreach to community members, employment opportunities, free recreational activities and food, and violence interruption dialogues facilitated by violence interrupters and community engagement teams, those with lived experience and familiarity in neighborhoods of focus that share outreach messages and service connections. Though not causal, analysis indicates that there may be a relationship between days when Town Nights events occur and a reduced number of shootings with injury.

At the June 29, 2022 City Council meeting, Council approved approximately 60 grant agreements with over 30 non-profit and public agencies for Fiscal Year 2022-2023 to serve an estimated 11,775 people at the center of, at risk, and exposed to violence in Oakland. **Table SAF-4** describes the strategies, sub-strategies, and activities funded for Fiscal Year 2022-2023, including the number of awards and the amount of funding allocated.

Responsible Agencies

There are several other agencies responsible for public health and public safety in the Bay Area. This Element emphasizes interagency coordination and planning efforts between the City of Oakland and the following agencies to best prioritize public health and safety in the face of environmental inequities, airport

Table SAF-4: DVP Grant Awards Fiscal Year 2022-2023

STRATEGY AREA/ SUB-STRATEGY	# AWARDS	FUNDING
Gun/Group/Gang Violence Response		
Violent Incident Crisis Response	8	\$3.1 million
Youth Diversion And Youth And Adult Life Coaching	11	\$3.2 million
Youth And Adult Employment & Education Support Services	7	\$1.8 million
School-Site Violence Intervention And Prevention Teams	7	\$2.4 million
Subtotal	33	\$10.5 million
Gender-Based Violence Response		
Crisis Response	3	\$900,000
Housing	4	\$1.1 million
Wraparound Services	8	\$2.4 million
Subtotal	15	\$4.4 million
Community Healing And Restoration		
Neighborhood And Community Teams With Town Nights	6	\$2.4 million
Healing/Restorative Activities	4	\$1 million
Therapeutic Supports	1	\$200,000
Community Capacity-Building And Mini-Grants	2	\$850,000
Subtotal	13	\$4.5 million
Grand Total	61	\$19.4 million

hazards, crime, and other community stressors. In addition, the City aims to closely consult and coordinate with community-based organizations in order to best engage residents about public health and safety measures. Such community groups may include the West Oakland Environmental Indicators Project, Oakland Climate Action Coalition, HOPE Collaborative, East Oakland Collective, Communities United for Restorative Youth Justice, and Youth UpRising.

The California Department of Public Health contains the Emergency Preparedness Office, which maintains and manages the Medical and Health Coordination Center, distributes funds to local health departments for disaster planning, and operates the California Health Alert Network. The Department also manages the Climate Change & Health Equity Program, whose goal is to systematically integrate work from climate change planning and public health planning with policies and principles that promote equity. The Department works with local, State, and national partners to assure that climate change mitigation and adaptation activities have beneficial effects on health while not exacerbating preexisting health disparities.

The Alameda County Sheriff's Office is a full-service law enforcement agency accredited through the Commission on

Accreditation for Law Enforcement Agencies (CALEA) and the American Correctional Association (ACA). The mission of the Sheriff's Office is to enforce the law fairly without bias, commit to professionalism, service the community with integrity and trust, and oblige to duty with honor and pride.

The BART Police Department is actively focused on implementing progressive and equitable policing practices. Their mission is to ensure a safe environment within our transit system, reduce crime through a highly visible police presence, and proactive enforcement of the law, and to promote public confidence by working in partnership with stakeholders and the communities they serve.

The Port of Oakland owns the Oakland International Airport. Under the direction of the Port Commission, the Port has broad regulatory authority over trust lands granted pursuant to the Burton Act. The Port has its own land use and development code and oversees the permitting of new construction and rehabilitation projects in its jurisdiction. Jurisdictional authority of the Port includes 20 miles of waterfront, and includes ground, commercial, retail, office, industrial, and maritime industrial leases, and landmarks such as Jack London Square.

GOALS AND POLICIES

GOAL SAF-6: PROTECT OAKLANDERS FROM AIRPORT LAND USE HAZARDS.

SAF-6.1 ALUCP Updates. Periodically review and coordinate with the Oakland Airport Land Use Commission on updates and modifications to ALUCPs conducted for airport facilities within Alameda County.

SAF-6.2 Land Use Compatibility. Require land uses surrounding the Oakland International Airport to be compatible with the operation of the airport and restrict development of potentially hazardous obstructions or other hazards to flight. Discourage uses that may impact airport operations or do not meet Federal or State aviation standards.

GOAL SAF-7: FOSTER FEELINGS OF SAFETY IN ALL OAKLAND NEIGHBORHOODS.

SAF-7.1 Reimagining Public Safety. Support recommendations made in Oakland's Reimagining Public Safety program, including through land use policies that promote more housing, living wage jobs, revitalization of commercial corridors, improved access to healthy food facilities, restorative justice centers, civic engagement, and arts and culture.

SAF-7.2 Crime Prevention Through Environmental Design. Continue to apply Crime Prevention through Environmental Design principles in the design of new development and encourage the provision of adequate public lighting; windows overlooking streets or parking lots; and paths to increase pedestrian activity within private development projects and public facilities in order to enhance public safety and reduce calls for service.

