



## **6. Public Health, Safety, and Environmental Justice Element**

# INTRODUCTION

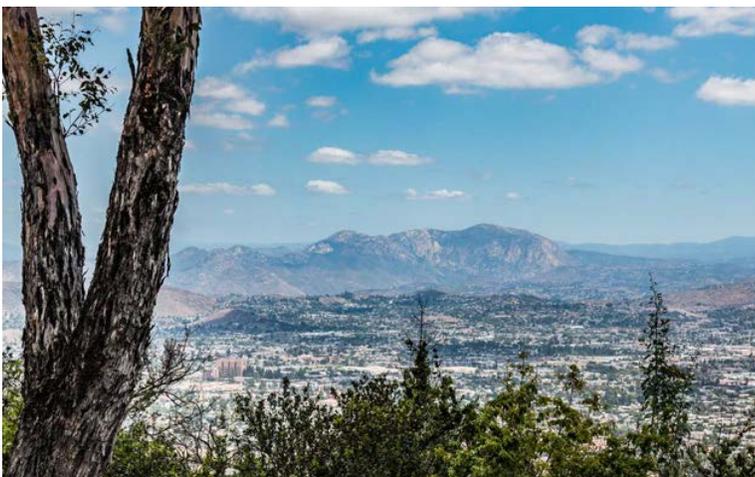
## Introduction

Healthy living, public safety, and emergency response are top priorities for the City of Highland (City), helping to make it a great place to live. The Public Health, Safety, and Environmental Justice Element of the General Plan guides the City in creating a safe and healthy place for everyone. The Public Health, Safety, and Environmental Justice Element combines two required Elements: Safety and Environmental Justice. The Safety Element is a required Element and must be addressed by every city in California. Environmental Justice is a required Element in cities with disadvantaged communities (DACs).

This Element helps prioritize actions that address the greatest health risks to the City in the next 20 years. The Public Health, Safety, and Environmental Justice Element guides how the City is built to ensure that people can access healthy food and places to play, regulates which important buildings and services can be built in hazardous areas, and uses nature to improve the City’s air quality and provide shade on hot days. The Public Health, Safety, and Environmental Justice Element also prioritizes the needs of DACs, and addresses the compounding health concerns in these communities. The Public Health, Safety, and Environmental Justice Element is closely linked to two other Elements of the General Plan: the Land Use Element and the Conservation Element. The Land Use Element regulates where homes, business, and industry can be in Highland and how large they can be, and the Public Health, Safety, and Environmental Justice Element recommends where parks, community gardens, and first responder facilities should be placed. The Conservation Element addresses how the City uses natural resources such as water and trees, and the Public Health, Safety, and Environmental Justice Element addresses how these resources could be affected by hazard events and climate change, and how natural resources can be used to make the community healthier. The Existing Conditions section of this Element outlines each public health concern facing the City, and the Goals, Policies, and Actions section outlines the City’s public health and safety roadmap to 2040.

### DISADVANTAGED COMMUNITIES (DACs)

*“Disadvantaged communities’ means an area identified by the California Environmental Protection Agency Pursuant to Section 39711 of the Health and Safety Code or an area that is a low-income area that is disproportionately affected by environmental pollution and other hazards that can lead to negative health effects, exposure, or environmental degradation.”*



# OUTREACH TO THE ENVIRONMENTAL JUSTICE COMMUNITIES

## Defining Environmental Justice Communities

The Office of Planning and Research requires jurisdictions with census tracts scoring above 75% in **CalEnviroSeen** to address **environmental justice**. Using CalEnviroScreen, seven census tracts in the City score above 75% (see **Figure 1**).

## Summary

Public outreach methods were designed to meet a wide range of community members and generate ideas and feedback representing the broad perspectives of local residents. Due to the global COVID-19 pandemic, virtual outreach was primarily pursued to ensure barriers due to health and technology were not a burden on community members' ability to participate. To achieve this goal, 2 community outreach meetings were held, 5 stakeholder interviews completed, and 131 survey responses collected.

Community members raised safety and environmental justice issues throughout the outreach process, and these are addressed through the goals, policies, and actions found at the end of this Element. Copies of the interviews, presentations, and survey results are included in [Appendix A]. The discussion below briefly summarizes the main topics, issues, and concerns brought forth during these efforts.

## Community Outreach Meetings

Two virtual community meetings were held on November 12, 2020, and July 14, 2021, the latter focusing specifically on environmental justice. Both meetings provided an overview of the project, opportunities for attendees to ask and respond to questions, information about how to get involved, and an overview of next steps. Spanish translation services were offered for both meetings.

The first meeting was noticed on the City's website, in the newspaper, on the Facebook page, and on Nextdoor, and bilingual (English and Spanish) flyers were sent to interested parties and stakeholders.

The list below briefly summarizes key feedback collected during these efforts.

- generally feel safe and happy in Highland, like its slower pace
- there is a lack of amenities and shopping particularly within walking distance
- there is a lack of healthy restaurant options and participants would like to see a variety of new grocery stores
- concerns about fires and homelessness
- interest in the Greenspot Village development, new parks, preserving the historic district, and rebates on bicycles to aid in accessing public transit stops
- value virtual meeting options, support the creation of a digital application to report issues in the City, and value that communication channels (particularly the Facebook page) are in both Spanish and English
- other comments included concerns regarding bicycle infrastructure and safety, earthquakes, air quality, speeding, and illegal trash dumping; interest in pedestrian crosswalks; need for more sidewalks and park maintenance; support for timed stoplights to improve air quality and traffic; support for street sweeping to increase bike lane accessibility; support for tree planting to cool the City; interest in a connector to the rail line; like bike lanes and communal areas

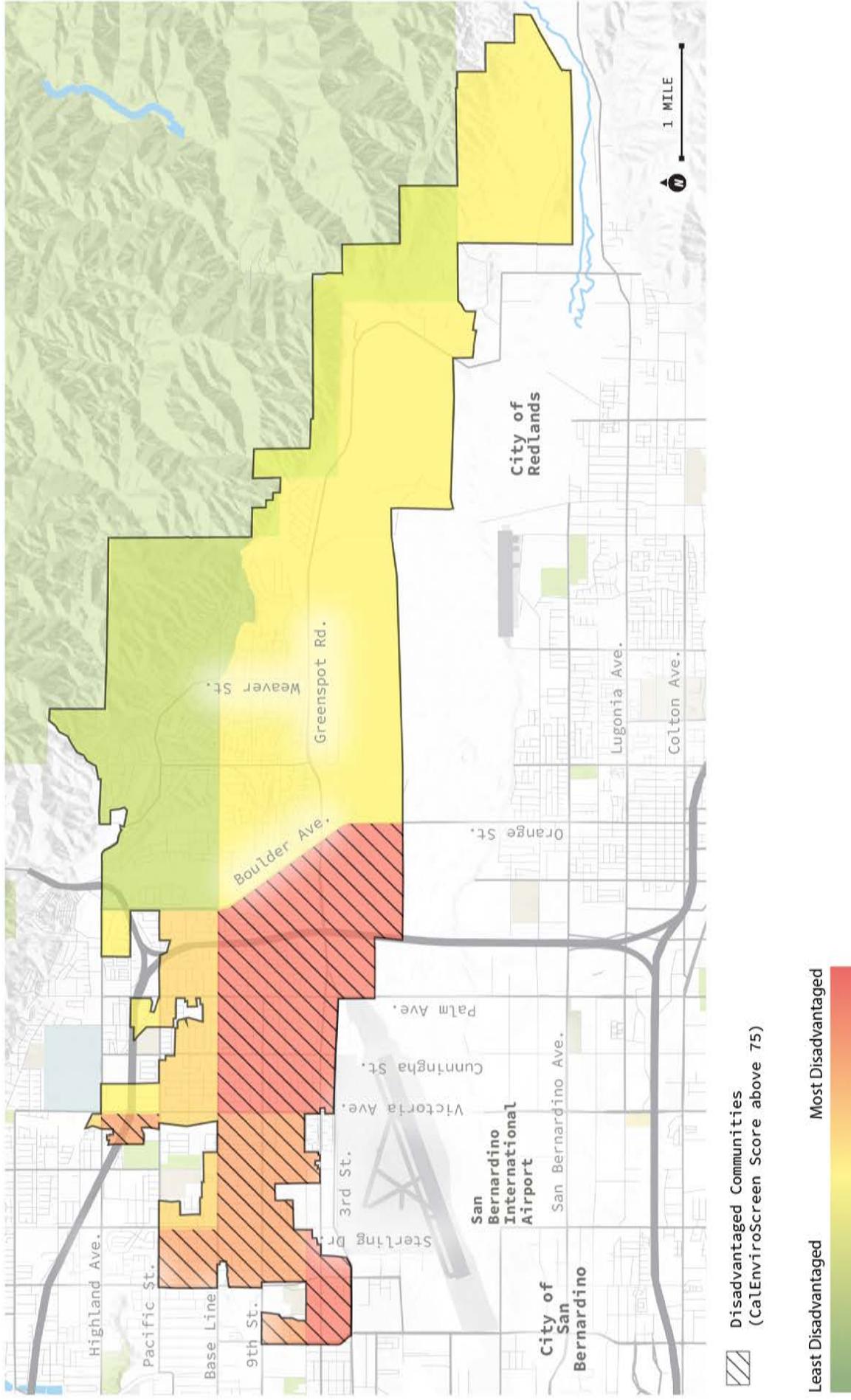
### CALENVIROSCREEN

*A mapping tool that helps identify California communities that are most affected by many sources of pollution, and where people are often especially vulnerable to pollution's effects. CalEnviroScreen ranks communities by census tract based on data that are available from State and Federal government sources. Those census tracts that are above the 75th percentile on CalEnviroScreen are considered disadvantaged and are most vulnerable to climate change. This General Plan uses CalEnviroScreen 3.0, which was updated in June 2018.*

### ENVIRONMENTAL JUSTICE

*Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Environmental justice will be achieved when everyone enjoys the same degree of protection from environmental and health hazards, and equal access to the decision-making process to have a healthy environment in which to live, learn, and work.*

Figure 1 Disadvantaged Communities



**Source:** OEHHA (California Office of Environmental Health Hazard Assessment). 2018. CalEnviroScreen 3.0. Accessed January 2021. <https://oehha.ca.gov/calenviro-screen/report/calenviroscreen-30>

### Joint City Council/Planning Commission Meeting

A joint City Council/Planning Commission Meeting was held on June 8, 2021, which included safety and environmental justice topics. The meeting provided an opportunity for public comment ahead of the presentation, a project overview, next steps, and a discussion in which the City Council and Planning Commission members could both ask and respond to questions. The list below includes feedback collected during this meeting related to safety and environmental justice:

- encourages the consideration of additional risk factors in the Safety Element, such as crime
- air pollution and extreme heat are high-level risks, so hopes the City concentrates more on safe walking and biking, wildfire, and even homelessness since it leads to crime
- people will bike if there are safe streets for biking that were in the Active Transportation Plan (adopted in February 2021)
- concerns raised over multi-family housing particularly noting traffic, crime, and financial resources required to provide services, as well as associated environmental, trash, and social issues

### Survey

An online survey was available the City's website from September 2020 to August 2021. The survey generated 131 individual responses and included safety and environmental justice topics, 53 of which represent the concerns of DACs.<sup>1</sup> A summary of results is available in [Appendix A].

Key results from the survey include:

- DAC residents were less satisfied with their homes condition, and were less likely to rate it in excellent condition and more likely to indicate their home needed at least one major upgrade.
- The top three neighborhood needs selected among those living west of Interstate 210 included sidewalks and bike lanes, street trees, and parks. Other concerns included speeding, road condition, and cars being left on the street.
- DAC residents indicated that areas near the airport, warehouses, and major roads were the most polluted, and suggested more greenery, including planting trees, and fewer warehouses to reduce air pollution.
- Approximately 64% of DAC residents indicated that using social media and virtual meeting options would help them get engaged in the public decision-making process in Highland.
- While most respondents indicated that it is easy for them to access affordable healthy food, approximately 25% of DAC residents felt that there was either no convenient or affordable home near their residence. City-wide, residents felt that supporting new grocery stores, farmer's markets, and transforming vacant lots into urban agriculture would improve access to healthy food.
- Additional concerns of DAC residences included a need to prepare more for hazard events, disparities between east and west sides of Highland, homelessness identified as an issue, need for more amenities such as shopping and restaurants

---

<sup>1</sup> The survey asked respondents if they lived east or west of Highway 210. As shown on Figure 4-1, most of communities west of Highway 210 are designated DACs by CalEnviroScreen, and therefore this delineation was used as a proxy for if a respondent lived in a DAC.

### Interviews

Five interviews were completed in Spring 2021. Key feedback from these interviews is summarized below.

- Limited park space is offset by existing amenities; parks could be further improved by jogging amenities, more community activities at parks, and generally development of more parks and recreation centers for youth in the west side of the City.
- Park accessibility could be improved by ensuring everyone can safely walk or bike to a park, this could include street improvements on routes leading to parks.
- Safety at parks was a concern, including trash, graffiti, drug use, homelessness issues.
- Some residents felt that community facilities were inconvenient to visit; however, were satisfied with the virtual resources.
- Respondents felt safe walking and biking, and noted that there are bus stops throughout the City; however, would like to see better connections to regional destinations and trains.
- One interviewee noted that it can be difficult to get ahold of the City when there are issues.
- Residents expressed an interest quality shopping to be able to spend money locally.
- Respondents expressed a desire for increased neighborhood identify and pride in the DACs.

3

# EXISTING CONDITIONS

This section outlines the current risk and equity concerns the City faces from natural and public health hazards. For each hazard, this assessment explains what the hazard is and what causes it to occur in Highland. Next the assessment maps where in Highland is most affected by this hazard. From there, this assessment explains who is most vulnerable to each hazard. Then, this assessment explains how the City is already addressing this hazard. Finally, for each natural hazard, this assessment addresses when the hazard occurs; this includes if the hazard is seasonal or is forecasted to get worse as a result of climate change.

This section addresses five public health hazards (access to healthy living, pollution exposure, physical activity, public facilities, and safe and sanitary homes) and four natural hazards (extreme heat, flooding, geologic hazards, and wildfires).

**PUBLIC HEALTH AND CHRONIC HAZARDS**

The places where people live can affect their health. In a healthy community, everyone has access to healthy food, parks, and safe streets; however, low-income communities often have fewer of these healthy resources, and have higher rates of chronic diseases and lower lifespans as a result.<sup>1</sup> As shown in **Table 3-1**, Health Indicators, Highland often scores in the lowest health indicator quartile in comparison to all California census tracts.

**Table 3-1. Health Indicators**

Health Indicator	Location		
	DAC	Non-DAC	City-Wide
Asthma <sup>1</sup>	84.77	63.14	72.05
Cardiovascular Disease <sup>2</sup>	11.58	9.85	10.56
Diabetes <sup>3*</sup>	11.56%	12.06%	11.81%
Obesity <sup>4*</sup>	34.92%	27.86%	31.39%
Low Birth Weight <sup>5</sup>	6.13%	6.14%	6.14%

Sources: California Office of Environment Health Hazard Assessment. 2020. "CalEnviroScreen." Accessed July 9, 2020. <https://oehha.ca.gov/calenviroscreen>.

Public Health Alliance. 2020. "The California Healthy Places Index." <https://map.healthyplacesindex.org/>.

Legend: **Quartile 1 = Good**, **Quartile 2 = Moderate**, **Quartile 3 = Poor**, **Quartile 4 = Challenged**

- 1. Asthma emergency department visits per 10,000 people
- 2. Heart attack emergency department visits per 10,000 people
- 3. Percent of adults with diabetes
- 4. Percent of adults with a body mass index over 30 kg/m<sup>2</sup>
- 5. Percent of low-birth-weight infants

\* Multiple census tracts did not have data collected for this statistic.

1 McCullough, M., D. Feskanich, M. Stampfer, E. Giovannucci, E. Rimm, F. Hu, D. Spiegelman, D. Hunter, G. Colditz, and W. Willett. 2002. "Diet Quality and Major Chronic Disease Risk in Men and Women: Moving toward Improved Dietary Guidance." American Journal of Clinical Nutrition 76(6): 1261–1271.

## Healthy Food

### WHAT

Healthy food is essential for all people, but it can be hard to access and afford for some community members. Having access to affordable healthy food can encourage a healthier diet, lower the risk of chronic disease, and reduce food insecurity<sup>2</sup>. Studies have shown that people who live near grocery stores have better health outcomes.<sup>3</sup> For community members without a car, being able to walk or bike to a grocery store or other source of healthy food is imperative.

### WHERE

Highland is well-served by grocery stores. Most of the grocery stores are located west of Interstate 210 in the commercial areas of Highland (see **Figure 2**). Areas of Highland where households are less likely to own a car are generally within walking or biking distance of a grocery store.<sup>4</sup>

Community gardens and farmer’s markets can be important sources of healthy foods in communities without supermarkets. Vacant City-owned parcels in neighborhoods with limited food access should be evaluated for their potential to be converted into community gardens, farmer’s markets, or food distribution locations. **Figure 2** shows vacant parcels in the food deserts in Highland’s DACs.

### WHO

Those most in need of nearby grocery stores include low-income residents and households without access to a car. The majority of low-income residents and households without access to a car are located in Highland’s DACs.<sup>4</sup> The majority of grocery stores in Highland are on the western side, which aligns with the locations of Highland’s DACs. This makes nearly all households located in DACs within **biking distance** to a grocery store, and 42% within walking distance. Access to grocery stores can be seen in Table 4-2, Food Access Vulnerability. Non-DAC households are far less likely to be able to access grocery stores by bike or by walking, but because most households in non-DAC communities have access to a car, there are less health risks to living farther away from a grocery store.

**BIKING DISTANCE**  
*Biking Distance: Biking distance is considered to be within ½ mile in compliance with state standards. This background information is meant to include people of all levels of bicycle use and using state standards allows data to be compared to state percentiles.*

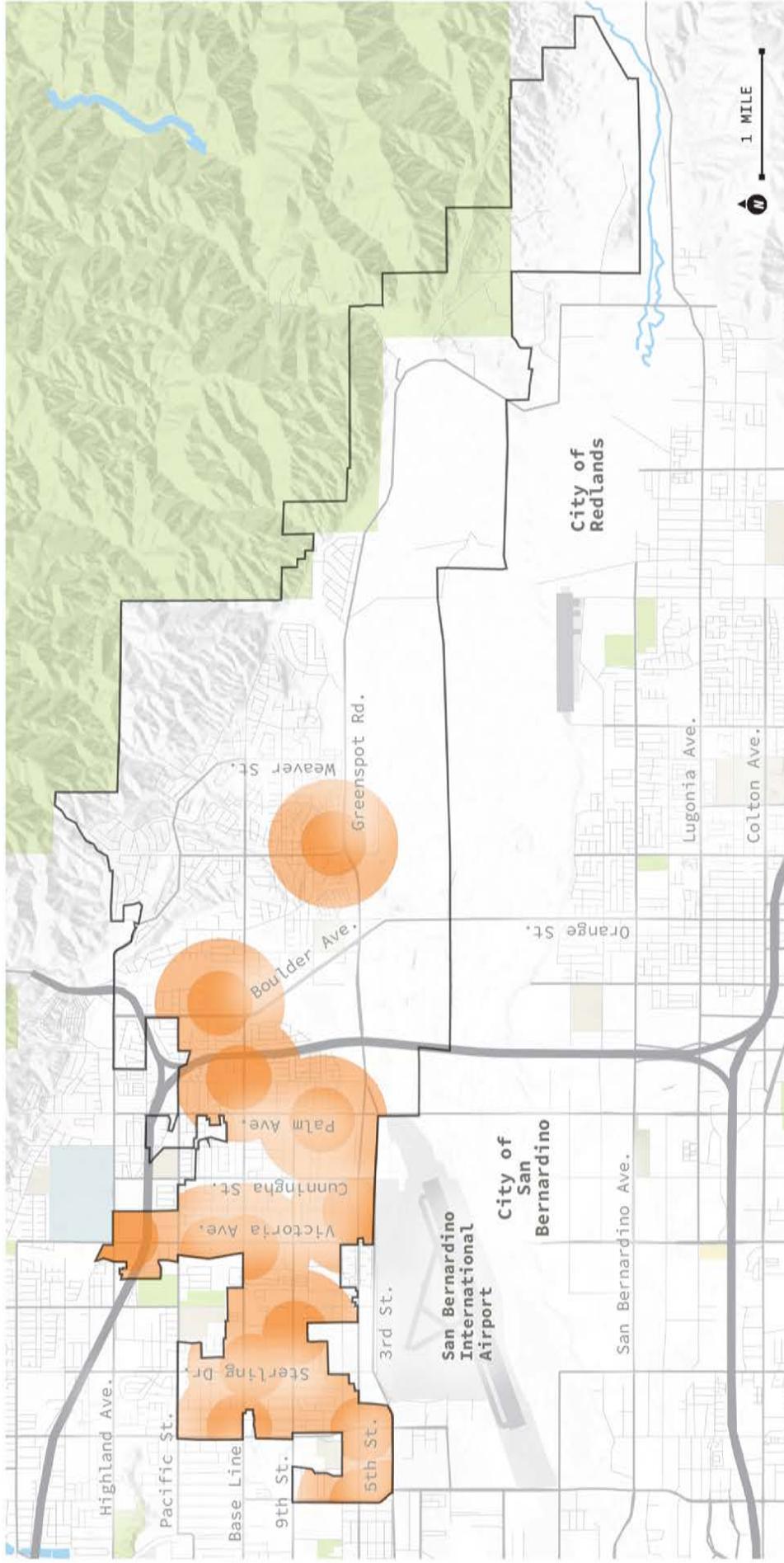
---

2 McCullough, M., D. Feskanich, M. Stampfer, E. Giovannucci, E. Rimm, F. Hu, D. Spiegelman, D. Hunter, G. Colditz, and W. Willett. 2002. “Diet Quality and Major Chronic Disease Risk in Men and Women: Moving toward Improved Dietary Guidance.” *American Journal of Clinical Nutrition* 76 (6): 1261–1271.

3 PolicyLink. 2018. “The Grocery Gap.” [https://healthyplacesindex.org/wp-content/uploads/2018/01/policy\\_link\\_grocery\\_gap.pdf](https://healthyplacesindex.org/wp-content/uploads/2018/01/policy_link_grocery_gap.pdf).

4 Public Health Alliance. 2020. “The California Healthy Places Index.” <https://map.healthyplacesindex.org/>.

Figure 2 Food Access



Source: City of Highland. 2020.

**Table 3-2. Food Access Vulnerability**

Distance	Percent of Households		
	DAC	Non-DAC	City-Wide
Poverty <sup>1</sup>	70.27%	33.20%	48.46%
Access to a Car <sup>2</sup>	86.47%	95.71%	91.91%
Walking Distance to Grocery Store	42.25%	17.01%	27.29%
Biking Distance to Grocery Store	94.68%	44.42%	64.89%

Source: City of Highland

Legend: **Quartile 1 = Good**, **Quartile 2 = Moderate**, **Quartile 3 = Poor**, **Quartile 4 = Challenged**

1. Percent of the population with incomes less than two times the federal poverty level

2. Percent of households with access to an automobile

Note: Rows without highlighting are unable to be compared to the State due to a lack of available statewide data.

**HOW**

Several non-profit and community-based organizations provide food to families in need at three locations in Highland, helping to close the gap on food access vulnerability. Immanuel Baptist Church, located at 28355 Base Line, provides fresh produce and pantry items once a week to be picked up on site. The Highland Senior Center, located at 3102 E. Highland Avenue, also provides a weekly grocery program offering meats, produce, and non-perishables. The Senior Center serves low- and no-cost lunches on site Monday through Friday, and during COVID-19, packaged lunches and dinners to go to be picked up in a drive-through format. Highland Community Cross Church, at 6955 Palm Avenue, keeps a community pantry that also offers personal hygiene items.

**Parks**

**WHAT**

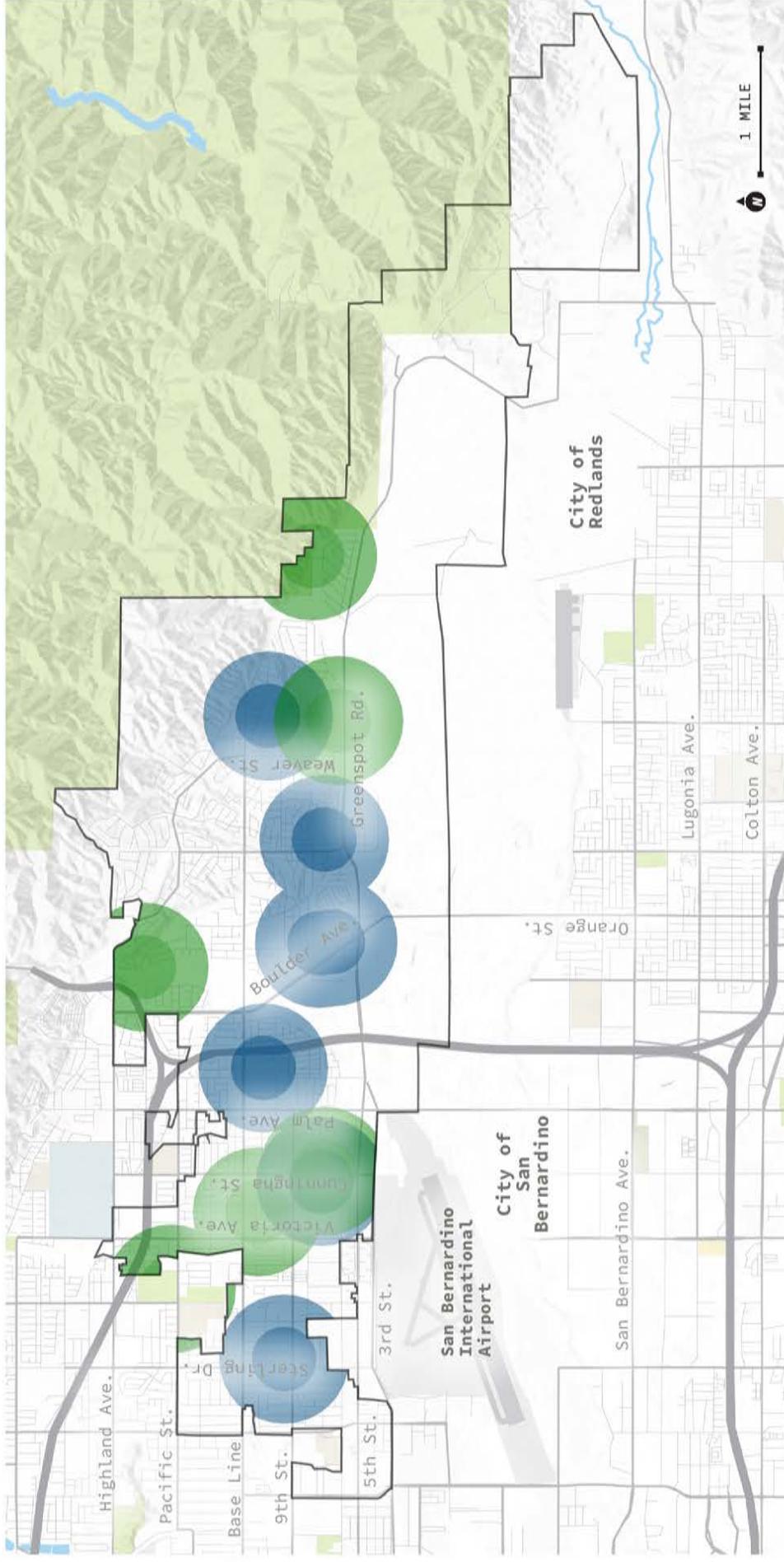
Parks are important gathering spaces for safe and healthy recreation, which is an important aspect to preventing chronic disease.<sup>6</sup> Parks provide places for children to play and adults to walk. Parks, and the trees inside them, can clean the air and cool down hot days.

**WHERE**

Highland has five dedicated parks: Cunningham Park, Canyon Oaks Park, Aurantia Park, Highland Community Park, and Oak Creek Park. Three of these parks are east of Foothill Freeway and two are west of Foothill Freeway. The 17-acre Highland Community Park is the home of Central Little League and multiple recreation organizations. In addition to these parks, the City has an agreement with the following schools for use of their outdoor recreation space as parks when school is not in session: Cypress Elementary School, Warm Springs Elementary School, San Gorgonio High School, Thompson Elementary School, Highland Grove Elementary School, Beattie Middle School, Arroyo Verde Elementary School, and Cram Elementary School. **Figure 3** shows City parks and schools that participate in this agreement.

6 Sherer, P.M. 2006. The Benefits of Parks: Why America Needs More City Parks and Open Space. Trust for Public Land. [http://www.tpl.org/content/documents/parks\\_for\\_people\\_Jul2005.pdf](http://www.tpl.org/content/documents/parks_for_people_Jul2005.pdf).

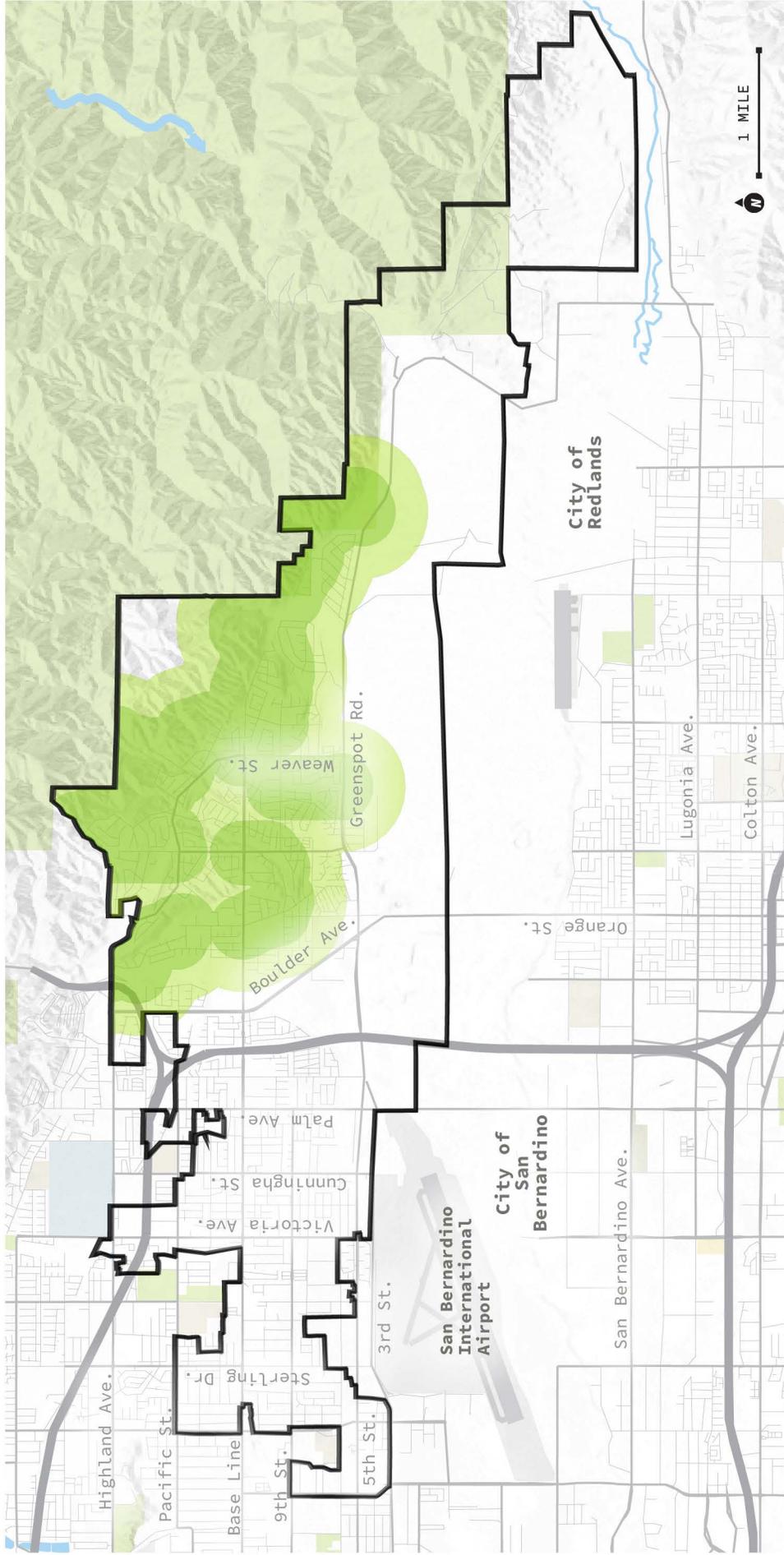
Figure 3 Park Access



- Walking Distance to a City Park (1/4 mile)
- Biking Distance to a City Park (1/2 mile)
- Walking Distance to a School Park (1/4 mile)
- Biking Distance to a School Park (1/2 mile)

Source: City of Highland. 2020.

Figure 4 Access to Trails



Walking Distance to a Trail  
(1/4 mile)

Biking Distance to a Trail  
(1/2 mile)

Source: City of Highland

In addition to parks, the City builds and maintains an extensive network of multi-use trails. The trails connect regional systems, such as the Santa Ana River Trail and City Creek Trail, with schools, parks, neighborhoods, and shopping. The City has developed a close relationship with the San Bernardino County Flood Control District to share facilities and connect various communities via existing roadways. These trails provide alternative routes to schools, shopping, and recreation. **Figure 4** shows the locations of trails in Highland.

**WHO**

As shown in **Table 3-3**, Park Access, Highland’s DACs are more likely to live within walking and biking distance of a park, whereas residents of non-DACs are less likely to live near a park. The percentage of households within walking and biking distance of a park more than doubles when including school parks, which demonstrates the value of these agreements. Sixty-seven percent of Highland residents live within biking distance to a park or school available for recreation.

**Table 3-3. Park Access**

Distance	Percent of Households		
	DAC	Non-DAC	City-Wide
Walking Distance to a City Park	12.81%	5.72%	8.60%
Biking Distance to a City Park	33.93%	29.47%	31.29%
Walking Distance to a City Park or School Park	26.37%	17.36%	22.11%
Biking Distance to a City Park or School Park	74.26%	63.13%	67.67%

Legend: **Quartile 1 = Good**, **Quartile 2 = Moderate**, **Quartile 3 = Poor**, **Quartile 4 = Challenged**

Note: Rows without highlighting are unable to be compared to the State due to a lack of available statewide data.

**HOW**

The City is working to provide parks and recreation facilities to serve its growing population. Efforts include using development impact fees and capital budgeting, and negotiating land acquisition agreements. Concurrently, the City negotiates with individual Planned Development owners to construct public parks that are to be maintained by private development. Examples include the Mediterra Planned Development on Greenspot Road and Mastercraft 46 on Base Line. Policies listed within the City’s Conservation and Open Space Element address the supply of parks, the diverse needs of residents, park design, safety, and park accessibility.

## Public Transportation

### WHAT

People’s ability to get from their home to destinations such as work, a grocery store, or a laundry service is essential for day-to-day life. Without access to a car, active transportation and public transportation are the only options.

### WHERE

Highland is served by public transportation offered by Omnitrans. Four different bus routes run through Highland east/west on Highland Avenue, Baseline Road, and 9th Street. Routes circle around and run north/south on Del Rosa Drive, Central Avenue, Palm Avenue, Boulder Avenue, and Church Street. Eastern Highland is served by bus Omnitrans Route 15 that has stops on Base Line near Church Street and on Church Street near Greenspot Road, adjacent to the Villages at East Highland shopping center. Should development occur at the eastern-most portion of Highland, east of the Greenspot Road Bridge, additional service will likely be added. In the future there is potential for adding another route to serve East Highland on 5th Street/Greenspot Road from Boulder Avenue to Del Rosa Drive, where roadway infrastructure for future stops has already been constructed. Other long-term possibilities for route additions include a north/south route along Palm Avenue from Baseline Road to Pacific Street, and an east/west route from Pacific Street at Palm Avenue to Waterman Avenue.

### WHO

As shown in **Table 3-4**, Public Transportation Access, Highland’s DACs have the highest level of access to all forms of public transportation, which can be attributed to their urban nature and proximity to other urban areas.<sup>7</sup> Residents of the DACs have less access to cars than non-DAC residents, with 86% of households having access to a car. The DACs rank in the lowest health indicator quartile in comparison to all California census tracts.

**Table 3-4. Public Transportation Access**

Distance	Percent of Households		
	DACs	Non-DACs	City-Wide
Access to a Car <sup>1</sup>	86%	96%	91%
Walking to Bus Stop	75%	42%	56%
Biking Distance to Bus Stop	99%	70%	83%

Source: Transitland, Public Health Alliance. 2020. “The California Healthy Places Index.” <https://map.healthyplacesindex.org/>.

Legend: **Quartile 1 = Good**, **Quartile 2 = Moderate**, **Quartile 3 = Poor**, **Quartile 4 = Challenged**

1. Percent of households with access to a car

Note: Rows without highlighting are unable to be compared to the State due to a lack of available statewide data.

7 Transitland, Public Health Alliance. 2020. “The California Healthy Places Index.” <https://map.healthyplacesindex.org/>.

**HOW**

Within the City’s Circulation Element are policies that address public transportation. One goal specifically targets the promotion and improvement of bus service and paratransit. For example, working toward transit service extensions into eastern Highland is included as a policy. Additionally, support for local transit systems for youth and older adults is another policy under this goal. Both of these address current issues with access and circulation for less-mobile individuals.

**Libraries and Community Centers**

**WHAT**

Libraries and community centers provide important community amenities that improve quality of life. Amenities such as community events, Wi-Fi, educational opportunities, air conditioning, technology, and recreation might all be offered in these public spaces.

**WHERE**

There are three community facilities in Highland: the Highland Branch Library, the Sam Racadio Environmental Learning Center, and the Jerry Lewis Community Center. These facilities are located adjacent to each other along Central Avenue in mid-City.

**WHO**

These facilities were strategically located in the center of Highland and adjacent to each other to provide a “one-stop-shop” of community recreation, education, socialization, and services. They are located within the vicinity of Cypress Elementary School, the Highland Police Department, Fire Station #1, Jeffrey Court Senior Apartments, the Highland Senior Center, Highland Head Start Preschool, and San Bernardino International Airport. Because of Highland’s linear shape, there are residents at the east and west ends unable to easily reach these facilities via biking or walking, but it is directly served by an Omnitrans bus stop, and the City Creek Trail is located directly to the south. Central Avenue and nearby 9th Street have been widened and improved to upgrade non-motorized travel (see **Table 3-5**, Community Facilities).

**Table 3-5. Community Facilities**

Distance	Percent of Households		
	DACs	Non-DACs	City-Wide
Walking Distance to Community Facility	5.36%	0%	2.18%
Biking Distance to Community Facility	21.24%	0%	8.65%

Source: City of Highland

**HOW**

The City is committed to adding a cultural facility, as highlighted in the City’s Public Facilities Element. The City is working to create a City of Highland Historic Museum to be located at the corner of Palm Avenue and Main Street, which is in northern-central Highland. The City is also considering a Civic Center in the City’s proposed Town Center. The addition of these two facilities would add access and services to a much greater portion of the community.

## Safe Walking and Biking

### WHAT

Walking and biking around a community offer affordable and healthy ways to get around. Walking and biking also reduce air pollution, traffic, and wear and tear on local roads. Providing safe places to walk and bike are important in a healthy community, especially if community members walk or bike as part of their regular commute to school or work.

### WHERE

Generally, west Highland and the DACs are more walkable than east Highland because there are more commercial uses and it is easier to access daily errands by bike or foot. Residents of these areas are less likely to own a car and less likely to need one due to the walkable design.<sup>8</sup> Many intersections in West Highland, notably along Baseline Road, have been improved with crosswalks, signals, and crossing guards to facilitate safety at highly utilized intersections.

### WHO

Walking and biking can feel or be more unsafe for certain individuals than others. Older adults and people with physical disabilities may be less able to cross an intersection during the time allotted by a stop light. People who are less-frequent bikers may be less comfortable navigating more-trafficked areas of town. However, people who regularly bike or walk to work or other regular errands are most at risk because they are on the street the most. The City has low rates of walkers and bikers getting hit by cars; however, comparatively speaking, it is more common in the DAC communities where people tend to walk and bike more often.<sup>9</sup> Given how many more people walk and bike in the DACs, as demonstrated by the proportion of active commuters, the slight increase in injuries does not indicate that those intersections are more dangerous (see **Table 3-6**, Pedestrian Safety).

**Table 3-6. Pedestrian Safety**

Distance	Location		
	DACs	Non-DACs	City-Wide
Pedestrian Injuries <sup>1</sup>	5.69	4.55	5.12
Active Commuters <sup>2</sup>	6.55%	2.49%	4.16%

Source: Public Health Alliance. 2020. "The California Healthy Places Index." <https://map.healthyplacesindex.org/>.

Legend: **Quartile 1 = Good**, **Quartile 2 = Moderate**, **Quartile 3 = Poor**, **Quartile 4 = Challenged**

1. Annual average rate of severe and fatal pedestrian injuries per 100,000 population
2. Percentage of workers 16 years and older who commute to work by transit, walking, or cycling

Note: Rows without highlighting are unable to be compared to the State due to a lack of available statewide data.

8 Public Health Alliance. 2020. "The California Healthy Places Index." <https://map.healthyplacesindex.org/>.

9 Public Health Alliance. 2020. "The California Healthy Places Index." <https://map.healthyplacesindex.org/>.

#### **HOW**

Within the City's Circulation Element there are policies that address active transportation within the community. Under the goal of providing a safe circulation system, policies have identified multiple ways to improve the safety of walking and biking for residents. Additionally, the protection and encouragement of bike travel is listed as another goal, and it prioritizes infrastructure and major destinations in the community. The expansion of bike and walking paths is part of the Conservation and Open Space Element's goals and policies. The City is also implementing a Safe Routes to School Program to improve conditions and implementing policies identified in the newly adopted Active Transportation Plan.

## **Safe and Sanitary Homes**

#### **WHAT**

Low-income residents are more likely to live in structures built before building standards regulating lead paint, asbestos, and other hazards were adopted. Living in these older homes, without removal of such toxins, can have significant health impacts. Many low-income communities have a higher proportion of old housing stock and are thus disproportionately exposed to these health threats. Older housing stock might also have poor ventilation, leading to uncomfortable indoor temperatures and excessive moisture, which can lead to mold. Other indoor housing conditions that can be common in older and less-expensive housing include pests and vermin. Finally, overcrowding, which often is a result of a lack of affordable housing, is a serious issue that impacts safe and sanitary homes. According to the World Health Organization, overcrowding poses health risks by creating unsanitary conditions that can contribute to the spread of disease.<sup>10</sup>

#### **WHERE**

The City's Community Development Block Grant Target Areas were identified as containing older housing stock and having a significant number of code violations. The Target Areas suffer from blighted conditions such as a lack of property maintenance, substandard living conditions, and illegal and unsafe structures. To halt ongoing deterioration of these neighborhoods, the City implemented a number of programs, including an Enhanced Code Enforcement Program. It reduces the number of property violations, substandard conditions, trash and debris, overgrown vegetation, illegal construction, and inoperative vehicles. While correcting violations, staff assists in the development and administration of housing and economic development programs, assisting disadvantaged families. City staff conduct daily inspections and issue warnings and violations as necessary. They provide residents with referrals to housing advocates, legal aid, and other social services. The City receives assistance from San Bernardino County Animal Control, Weed Abatement, Vector Control, the Sheriff's Office, and homeless advocates. These programs serve families of low, very-low, and extremely-low income. These neighborhoods have the least amount of infrastructure.

Households in the DACs of Highland are more likely to experience housing burden (see **Figure 5**).<sup>11</sup> This means households are more likely to be low income<sup>12</sup> and spend more than 50% of their income on housing. This makes it less likely that they can afford to make improvements to homes they own or move from rental properties that are unsanitary. In an effort to avoid increases in rent, these renters also may be less likely to bring up needed repairs to rental owners.

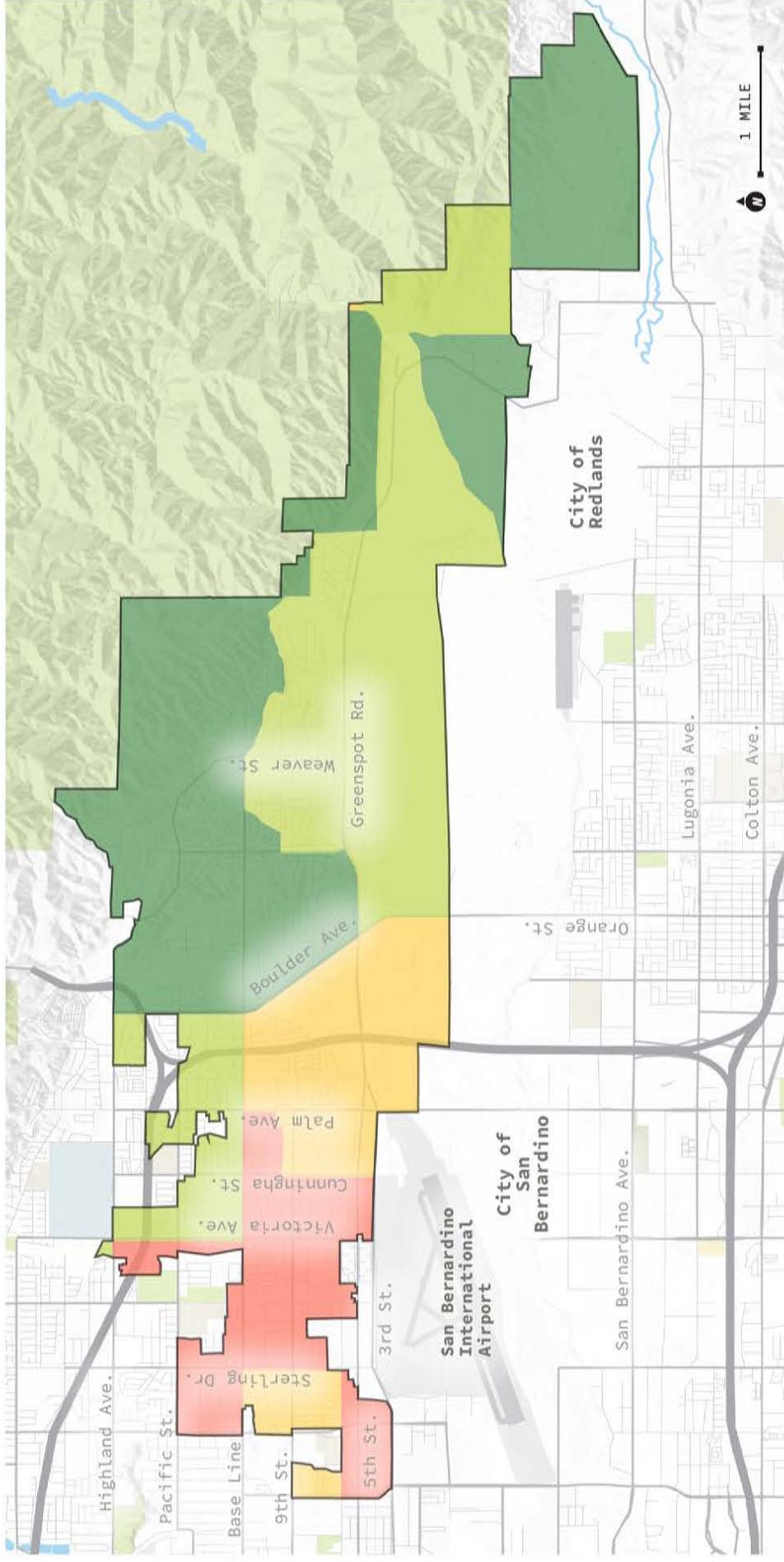
---

10 WHO (World Health Organization). 2021. "What are the health risks related to overcrowding?" [https://www.who.int/water\\_sanitation\\_health/emergencies/qa/emergencies\\_qa9/en/#:~:text=For%20communities%2C%20inadequate%20shelter%20and,the%20population%20density%20is%20high.](https://www.who.int/water_sanitation_health/emergencies/qa/emergencies_qa9/en/#:~:text=For%20communities%2C%20inadequate%20shelter%20and,the%20population%20density%20is%20high.)

11 OEHHA (California Office of Environmental Health Hazard Assessment). 2018. CalEnviroScreen 3.0 "Housing Burden." Accessed January 2021. [https://oehha.maps.arcgis.com/apps/webappviewer/index.html?id=aade7e52ae014d8cb7682bb57466eacb.](https://oehha.maps.arcgis.com/apps/webappviewer/index.html?id=aade7e52ae014d8cb7682bb57466eacb)

12 Households are considered low income if they earn less than 8% of the State-wide median income.

Figure 5 Housing Burden



- Challenged (bottom 25% of the State)
- Poor (50-75% of the State)
- Moderate (25-50 % of the State)
- Good (top 25% of the State)

**Source:** OEHA (California Office of Environmental Health Hazard Assessment). CalEnviroScreen 3.0. Accessed January 2021. <https://oehha.ca.gov/calenviro-screen/report/calenviroscreen-30>

**WHO**

There is a large disparity in the cost and quality of housing between the DACs and non-DACs in Highland. There are far more renters within Highland’s DACs than non-DACs, and there is also a higher proportion of people with severe housing cost burdens, meaning they pay more than 50% of their income on housing costs. Overcrowding and renters with severe housing cost burdens in Highland’s DACs rank in the lowest health indicator quartile in comparison to California census tracts (see **Table 3-7**, Housing Indicators).

**Table 3-7. Housing Indicators**

Housing Indicator	Locations		
	DACs	Non-DACs	City-Wide
Homeowners <sup>1</sup>	37.09%	70.08%	55.8%
Homeowner Cost Burden <sup>2</sup>	13.74%	8.84%	11.3%
Renters Cost Burden <sup>3</sup>	34.57%	26.3%	31.13%
Overcrowding <sup>4</sup>	22.04%	6.65%	12.47%

Source: Public Health Alliance. 2020. "The California Healthy Places Index." <https://map.healthyplacesindex.org/>.

Legend: **Quartile 1 = Good**, **Quartile 2 = Moderate**, **Quartile 3 = Poor**, **Quartile 4 = Challenged**

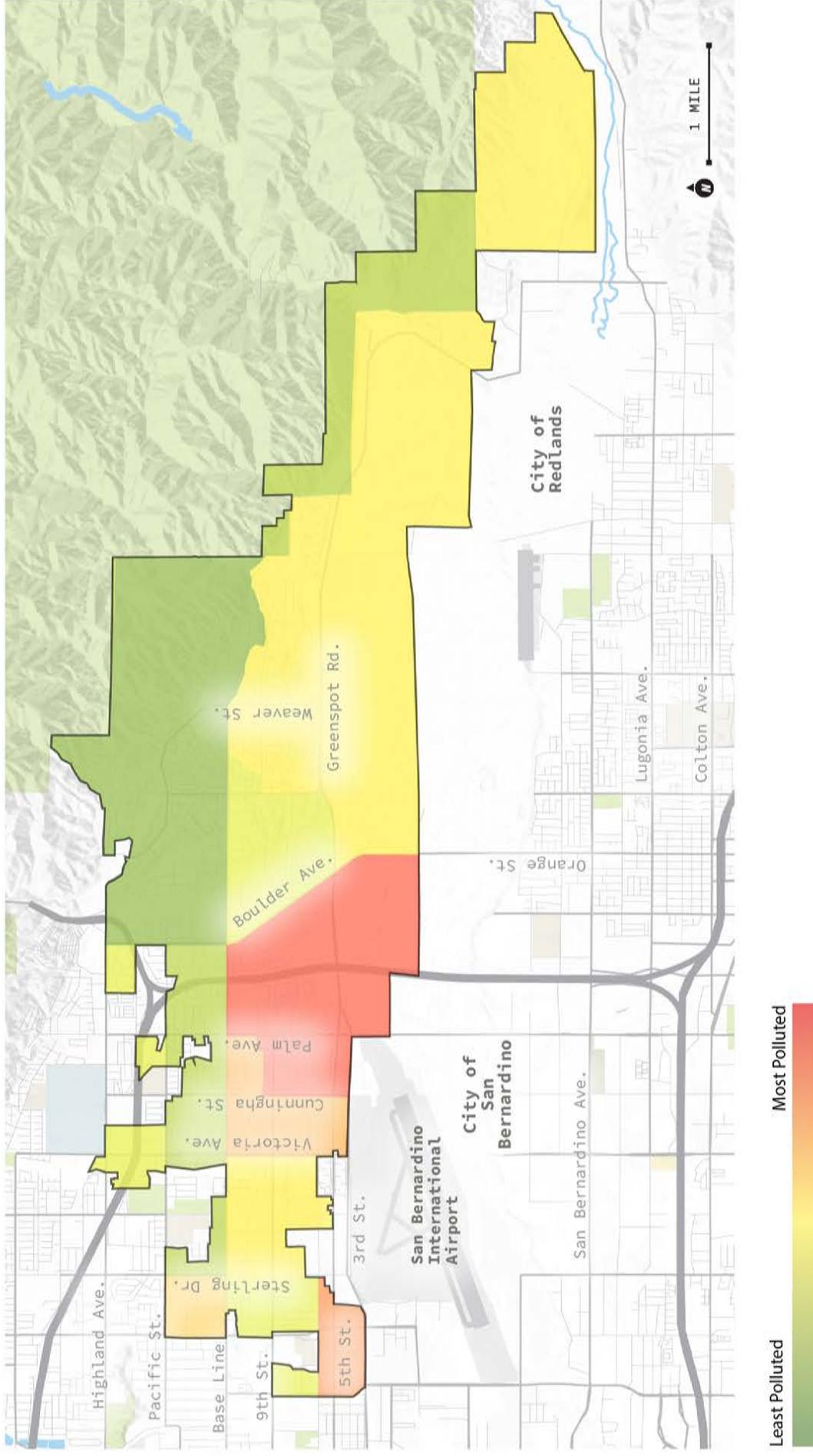
1. Percent homeowners
2. Percent of low-income homeowners who pay more than 50% of their income on housing costs
3. Percent of low-income renters who pay more than 50% of their income on housing costs
4. Percent of households with more than 1 occupant per room

**Pollution Exposure**

People are exposed every day to pollution from air, food, water, and soil, often from living near industrial land uses that produce hazardous waste, such as car repair centers, gas stations, dry cleaners, manufacturing businesses, and recycling centers. Chemicals from these businesses can get into the soil, water, and air and affect nearby residents. Because these land uses are often grouped together, low-income residences are often in proximity to many polluting businesses, and higher-income areas often do not face the same level of pollution exposure. This combination of limited financial resources and exposure to pollution is the essence of environmental justice.

As shown in **Figure 6**, pollution levels from a range of sources are concentrated in the business park district in the southwestern portion of Highland, especially around the San Bernardino Airport. Similar to many communities, the pollution exposure in Highland is higher in the lower-income areas.

Figure 6 Pollution Exposure



**Source:** OEHHA (California Office of Environmental Health Hazard Assessment). 2018. CalEnviroScreen 3.0. Accessed January 2021. <https://oehha.ca.gov/calenviro-screen/report/calenviro-screen-30>

## Air Pollution

### WHAT

Ten air pollutants are measured by the State of California. These pollutants are measured separately and compared to healthy levels determined by the State. Air is considered polluted when it does not meet the standards set by the State and Federal governments. Highland is located within the South Coast Air Basin. Air basins were created by the State of California based on where air naturally stagnates. The South Coast Air Basin is a coastal plain with connecting, broad valleys and low hills that extend across Los Angeles and Orange Counties, as well as the western portions of Riverside and San Bernardino Counties. The Pacific Ocean forms the southwestern border, and high mountains surround the rest of the air basin. Currently the South Coast Air Basin is not in attainment for ozone or particulate matter (PM<sub>2.5</sub>) standards.<sup>13</sup>

The South Coast Air Quality Management District (SCAQMD) is the air pollution control agency that provides direction regarding the management of air quality within the region, which includes Orange County and the urban portions of Los Angeles, Riverside, and San Bernardino Counties. The SCAQMD is responsible for controlling air pollution mainly from stationary sources such as large power plants, refineries, gas stations, and some consumer products.

Air pollution varies locally as it moves away from the source. The two air pollution monitoring sites closest to Highland are 4th Street and Anderson Elementary School in San Bernardino, and the intersection of North Dearborn Street and Independence Avenue in Redlands. Air pollution is likely worse in communities closer to Interstate 210 and State Route 330, as well as the San Bernardino International Airport.

### Ozone

Ground-level ozone is most commonly known as smog. Smog is caused by a chemical reaction when sunlight interacts with nitrogen oxides (NO<sub>x</sub>) and volatile organic compounds, which are emitted from cars. As temperatures increase, it is anticipated that the amount of ground-level ozone will also increase if the amount of car traffic and other sources of NO<sub>x</sub> and volatile organic compounds do not decrease. At the Redlands-Dearborn station, ozone exceeded the 8-hour Federal standard 305 times, and exceeded the State and Federal 1-hour standard 16 times in the past 3 three years measured (2016–2018). At the 4th Street station in San Bernardino, ozone exceeded the 8-hour Federal standard 320 times, and exceeded the State and Federal 1-hour standard 31 times in the past 3 years measured (2016–2018).<sup>14</sup>

Some main contributors to the pollutants that form ground-level ozone in Highland are vehicle emissions and industrial processes, specifically near the San Bernardino Airport. Ground-level ozone can cause health issues, including difficulty breathing, coughing, inflamed airways, asthma attacks, and heart disease.

### Particulate Matter

Particulate matter is made of microscopic solid and liquids in the air that are small enough to breathe. PM<sub>2.5</sub> is 2.5 microns or less in diameter, or 1/28th the thickness of human hair. PM<sub>2.5</sub> results from burning fuel for cars, trucks, and industrial processes. PM<sub>2.5</sub> is small enough to get into the human bloodstream and can pose a high risk to human health. Similar to ozone, particulate matter causes asthma and heart

---

13 South Coast Air Quality Management District. 2016. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) Attainment Status for South Coast Air Basin. <http://www.aqmd.gov/docs/default-source/clean-air-plans/air-quality-management-plans/naaqs-caaqs-feb2016.pdf>.

14 California Air Resources Board. 2018. Air Quality Data Statistics. Accessed August 6, 2020. <https://www.arb.ca.gov/adam>.

disease.<sup>15</sup> From 2016 through 2018, PM2.5 exceeded 24-hour standards twice at the San Bernardino 4th Street station.<sup>16</sup>

#### **WHERE**

Air pollution is often higher in communities with low tree cover, limited park access, and high levels of traffic.<sup>17</sup> In Highland, these communities are located in the west, as shown in **Figure 7**.

#### **WHO**

People with existing health conditions, such as asthma and heart disease, are more sensitive to air pollution. These conditions are also often caused by living near sources of air pollution in **fenceline communities**. The average rate of asthma hospitalization is much higher in Highland's DACs than non-DACs.<sup>18</sup>

Additionally, people who spend more time outdoors, including young children, people who work outdoors, and people who get to work without a car, are often exposed to polluted air at higher rates.

#### **HOW**

SCAQMD develops and adopts an Air Quality Management Plan every 3 years in compliance with Federal and State clean air standards. Primarily, Air Quality Management Plans provide municipalities in the region with policy and program options to improve local and regional air quality. Goal 5.19 of the City's Conservation and Open Space Element states, "Continue to support air quality planning through land use policies, outreach efforts and coordination with regional air quality agencies." Related policies involve reducing vehicle miles traveled, more efficiently locating land uses, collaborating with the SCAQMD, community outreach, and other policies focused on improving air quality.

#### **WHEN**

Highland's levels of air pollution will increase as a result of climate change and will likely have the greatest impact in summer months when temperatures are highest. Longer warm seasons can contribute to longer pollen seasons, which can increase allergies and asthma episodes.<sup>19</sup>

---

#### **FENCELINE COMMUNITIES**

*Fenceline communities are neighborhoods near sources of industrial pollution, such as ports, refineries, and major transportation routes.*

---

---

15 Pope, C.A., R.T. Burnett, M.J. Thun, E.E. Calle, D. Krewski, K. Ito, and G.D. Thurston. 2002. "Lung Cancer, Cardiopulmonary Mortality, and Long-Term Exposure to Fine Particulate Air Pollution." *JAMA* 287: 1132–1141.

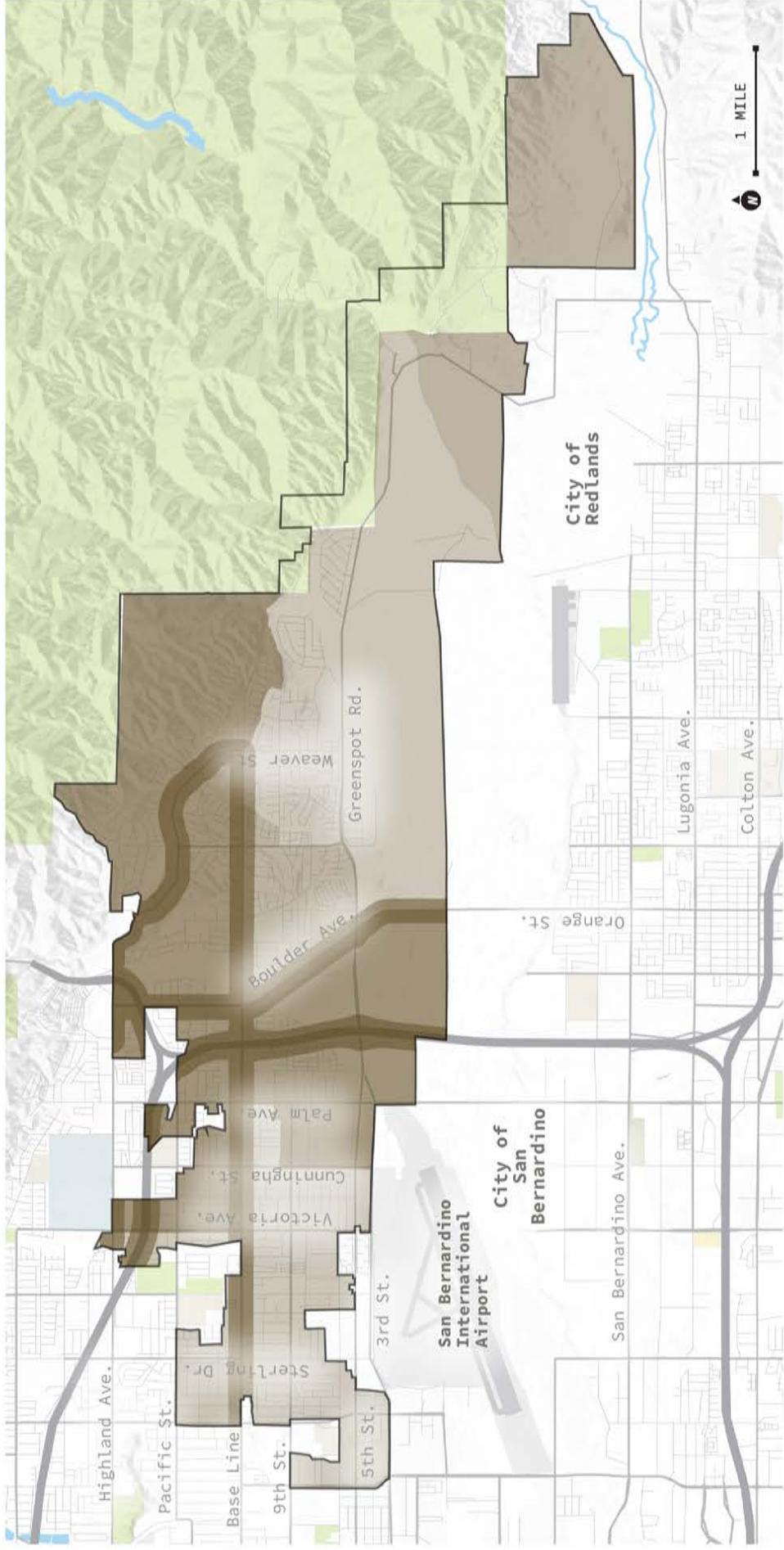
16 California Air Resources Board. 2018. Air Quality Data Statistics. Accessed August 6, 2020. <https://www.arb.ca.gov/adam>.

17 Frumkin, H., L.D. Frank, and R.J. Jackson. 2004. *Urban Sprawl and Public Health: Designing, Planning, and Building for Healthy Communities*. Washington, DC: Island Press.

18 California Office of Environment Health Hazard Assessment. 2020. "Asthma." Accessed April 13, 2021. <https://oehha.ca.gov/calenviroscreen/indicator/asthma>.

19 Hall, A., N. Berg, and K. Reich. 2018. Los Angeles Summary Report. California's Fourth Climate Change Assessment. University of California, Los Angeles. Publication number: SUM-CCCA4-2018-007.

Figure 7 Air Pollution Exposure



Least Air Pollution      Most Air Pollution



**Source:** PHASC (Public Health Alliance of Southern California) and VCUCSH (Virginia Commonwealth University Center on Society and Health). "HPI Map." California Health Places Index. 2019. Accessed August 14, 2019. <https://healthplacesindex.org/map/>.

Open Street Map. "OSM Road Network." 2019. <https://www.openstreetmap.org/#map=4/38.01/-95.84>

Higher temperatures associated with climate change can also lead to an increase in ozone. Although the future level of air pollution will depend, in part, on State laws mandating standards such as fuel efficiency and potential electrification of cars and trucks, the current air quality in San Bernardino County does not meet State standards and receives an “F” from the American Lung Association.<sup>20</sup>

## Hazardous Materials

### WHAT

Hazardous materials are substances that can cause death, serious illness, or hazard to human health or the environment when not properly treated, stored, transported, or disposed of. Many household substances are considered hazardous, including gasoline, refrigerants, paint, and some gardening supplies. Nearly all households and businesses have some amount of hazardous waste. Certain businesses, such as gas stations, auto repair, and dry cleaners, generate greater amounts of hazardous waste. Hospitals, clinics, and laboratories generate medical waste, which can also be hazardous. Hazardous wastes are hazardous materials that no longer have practical use but have not yet properly been disposed of.

### WHERE

Hazardous materials can potentially be found anywhere as a result of improper disposal or storage, but sites with large concentrations of hazardous materials are catalogued by EnviroStor. EnviroStor is a data management program operated by the Department of Toxic Substances Control that is used to monitor, investigate, permit, and clean up sites with known contaminants.

Highland contains six EnviroStor sites with hazardous materials that require cleanup.<sup>21</sup> Of these EnviroStor sites, four are within areas identified as DACs in CalEnviroScreen 3.0, or areas disproportionately impacted by multiple sources of pollution. A majority of these sites are clustered in the western portion of Highland. Active hazardous waste cleanup sites can be seen in **Figure 8**.

Geotracker is another database which contains records for sites that have potential to impact groundwater. All Geotracker sites in Highland are inactive, though there are sites outside of Highland. During project review, staff consider available information from multiple sources, such as EnviroStor and Geotracker.

### WHO

Although it is not good for anyone to be exposed to hazardous waste near their place of residence, people more vulnerable to toxic chemicals include infants and children. Infants and children have a greater pound-for-pound exposure, and less ability to detoxify and excrete these chemical toxins. Additionally, older adults and those with pre-existing conditions might be more vulnerable to toxic chemicals due to compromised immune systems.<sup>22</sup> Highland’s DACs, which house the majority of cleanup sites, have considerably more children, at 9.18% of their population under 5, whereas non-DACs only have 5.85% of their population under 5.<sup>23</sup>

---

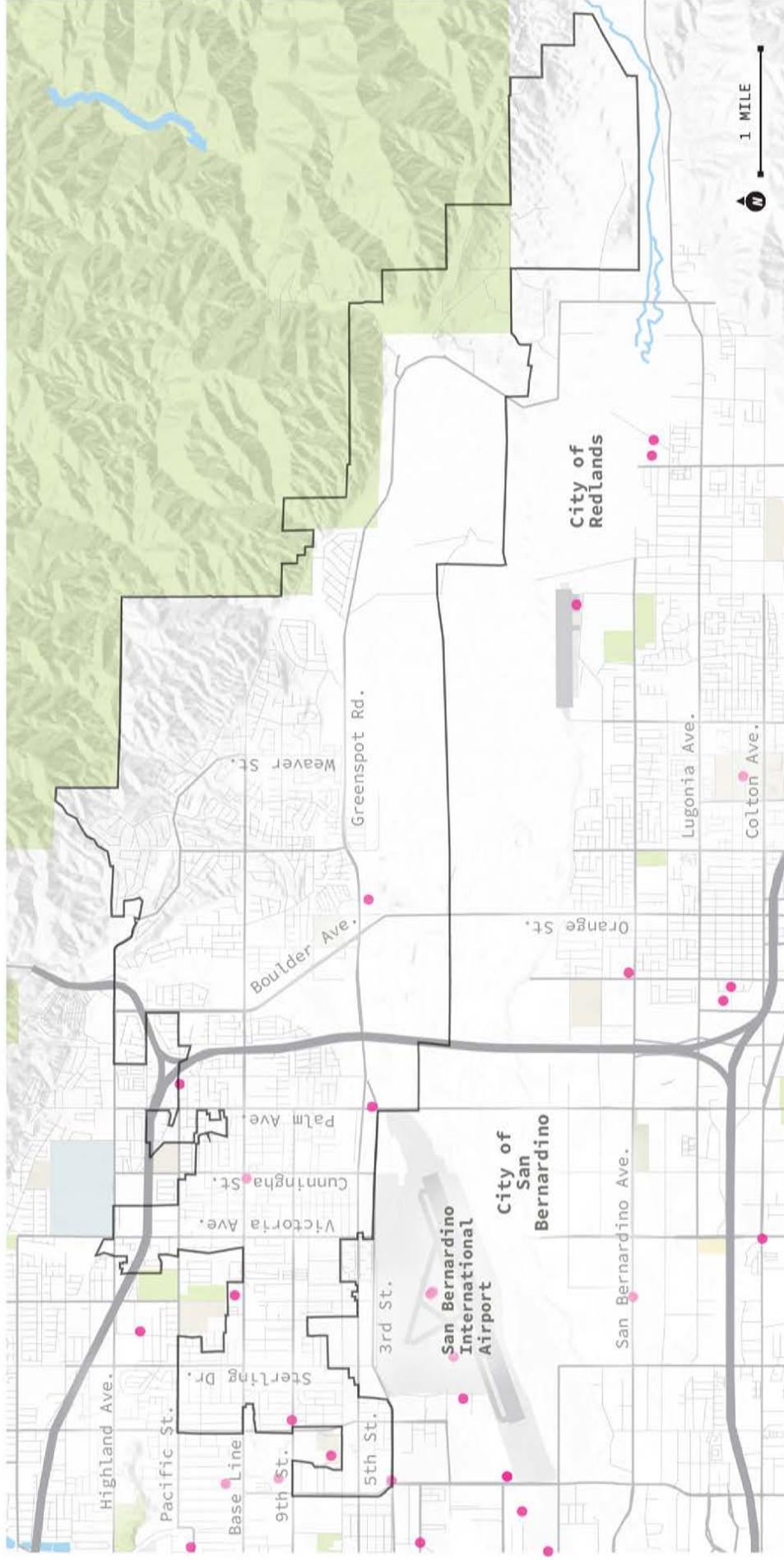
20 American Lung Association. 2020. California State of the Air. Accessed August 6, 2020. <http://www.stateofheair.org/city-rankings/states/california/>.

21 California Department of Toxic Substance Control. “EnviroStor.” 2018. [https://www.envirostor.dtsc.ca.gov/public/data\\_download](https://www.envirostor.dtsc.ca.gov/public/data_download).

22 U.S. Environmental Protection Agency. 2020. “Exposure Assessment Tools by Lifestages and Populations - Highly Exposed or Other Susceptible Population Groups.” April 29, 2020. Accessed August 19, 2020. <https://www.epa.gov/expobox/exposure-assessment-tools-lifestages-and-populations-highly-exposed-or-other-susceptible>.

23 California Office of Environment Health Hazard Assessment. 2020. “CalEnviroScreen.” Accessed July 9, 2020. <https://oehha.ca.gov/calenviroscreen>.

Figure 8 Hazardous Waste Cleanup Sites



● Envirostar Hazardous Waste Sites

**Source:** California Department of Toxic Substance Control. "EnviroStar". 2018. [https://www.envirostar.dtsc.ca.gov/public/-/data\\_download](https://www.envirostar.dtsc.ca.gov/public/-/data_download)

## Airport Land Use Compatibility and Safety

### WHAT

Air transportation provides exceptionally fast transportation for residents and goods. This makes it important not only for ease of travel, but also for the local economy.

### WHERE

The closest airports to Highland are the Rialto Municipal Airport, Redlands Municipal Airport, and the San Bernardino International Airport. The Rialto Municipal Airport west of Highland and the Redlands Municipal Airport southeast of Highland are general aviation airports. The San Bernardino International Airport, located just outside of Highland's southern boundary, has the capacity to provide regional air traffic for domestic and international service, both commercial and cargo, along with the necessary support facilities for major and smaller airlines. In addition, the Ontario International Airport, located approximately 30 miles west of Highland, serves as the nearest commercial airport providing air carrier and air cargo operations.

### WHO

Airports create noise and safety hazards that can be detrimental for residents, businesses, and property owners. The San Bernardino International Airport has an influence area over the western and southern portions of Highland. In addition, the Redlands Municipal Airport's influence area and an area of special compatibility concern is present in the southern portion of Highland. These areas can be seen in **Figure 9**.

### HOW

To reduce the noise incompatibility and safety risks associated with airports, the City has used careful land use planning relative to adjacent land. Goal 6.7 of the Public Health, Safety, and Environmental Justice Element and its related policies specifically look to reduce land use types and development intensity and to inform residents of aircraft activities in aircraft potential zones and overflight areas. Airport overlay zones, specified within the Municipal Code, provide greater safety by establishing requirements for land use compatibility reviews within designated areas close to airports.

## Extreme Heat

### WHAT

Extreme heat is defined as hot days, warm nights, or heat waves that can result in heat-related illness and hospitalization. Extreme heat is measured locally because communities are acclimatized to their historic environment. An extreme heat day is one that is in the hottest 2% of days observed from 1960 through 1990. In Highland, an extreme heat event is a day hotter than 103°F.<sup>24</sup>

### WHEN

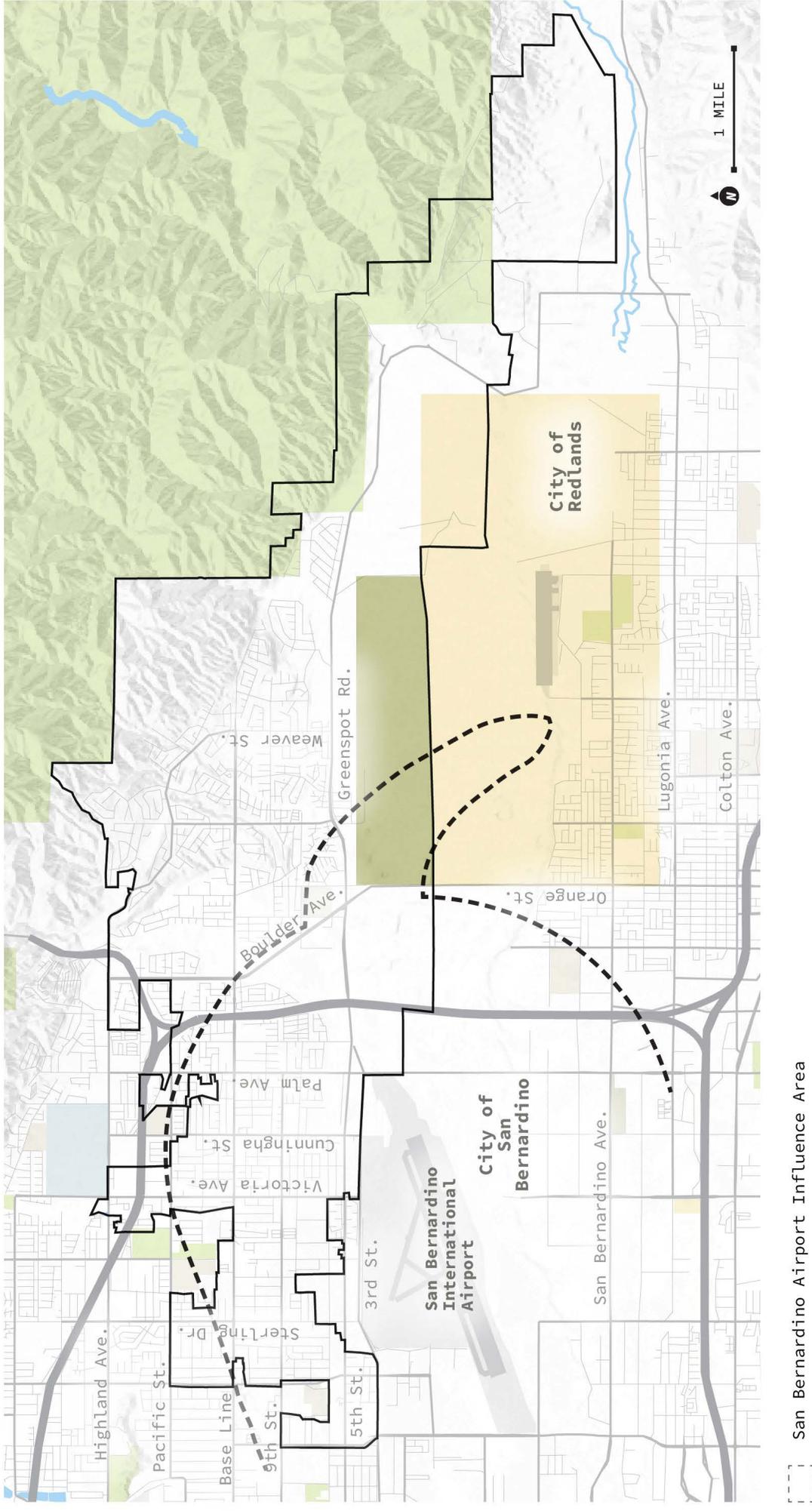
Extreme heat typically occurs within Highland during the summer and early fall.<sup>25</sup> Climate change is expected to increase the average temperature year-round, including the frequency of extreme heat days. Historically, Highland has had four extreme heat days per year; it is projected to experience 28 extreme

---

24 Cal-Adapt. 2020. Accessed July 30, 2020. <https://cal-adapt.org/tools/extreme-heat/>.

25 Hall, A., N. Berg, and K. Reich. 2018. Los Angeles Summary Report. California's Fourth Climate Change Assessment. University of California, Los Angeles. Publication number: SUM-CCCA4-2018-007.

Figure 9 Airport Influence Areas



San Bernardino Airport Influence Area

Redlands Municipal Airport Influence Area

Area of Special Compatibility Concern

Source: City of Highland

heat days per year by 2050. Historically, heat waves typically last 2.2 days, but they are projected to increase to 5.8 days between 2020 and 2050.<sup>26</sup>

#### **WHERE**

Heat waves and extreme heat days are exacerbated by the urban heat island effect. The urban heat island effect occurs when dark urban surfaces, such as roofs and roads, absorb heat and slowly release the heat over time. At night these surfaces slowly transfer heat to the air, creating warm nights, which do not allow people to cool off, making heat waves more dangerous.

The urban heat island effect inflates average annual urban air temperatures 1.8°F–5.4°F warmer than other areas. Heat islands also increase energy demand for air conditioning. The urban heat island effect is visualized in **Figure 10**.

Due to the role of dark urban surfaces and tree cover, the ambient temperature and experience of heat can change within one city block, making it difficult to accurately map communities in Highland that experience greater exposure to the urban heat island effect. In general, residential areas with larger lots, yard area, and trees tend to be cooler than commercial areas with less shade and greenspace.

#### **WHO**

People can be adversely affected by extreme heat if they have existing health conditions or spend increased time outdoors working, commuting, or playing. People who depend on walking, biking, or transit to get around; older adults; and young children are at risk for heat stroke. Specifically, residents of DACs are less likely to own a car and are more likely to walk, bike, or take public transportation to work. This means they often cannot avoid time outdoors during heat waves when doing important daily errands. Additionally, households in Highland's DACs also have lower incomes and may not have access to air conditioning or may not be able to afford increased air conditioning during heat waves.

#### **HOW**

There are many cooling centers across Highland, including the library, senior center, YMCA, and places of worship. Cooling centers are free spaces where people can go and access air conditioning. All but two of these cooling centers are located west of Foothill Freeway, closer to or within DACs, which, as noted above, are more at risk from extreme heat.

### **EMERGENCY EVENTS**

Emergency events are natural hazards that happen suddenly and often cause evacuation or shelter-in-place orders. Emergency hazards cannot be precisely predicted, but hazard zones, developed by studying past events and landcover and topography, can show where hazards are likely to occur in the future. Both flooding events and wildfires are forecasted to increase in intensity and frequency between 2020 and 2050 as a result of climate change. This may mean that hazards will spread beyond their previous zones, and that large events that only occurred once in the 20th century will occur multiple times before 2050.<sup>27</sup>

---

26 Cal-Adapt. 2020. Accessed July 30, 2020. <https://cal-adapt.org/tools/extreme-heat/>.

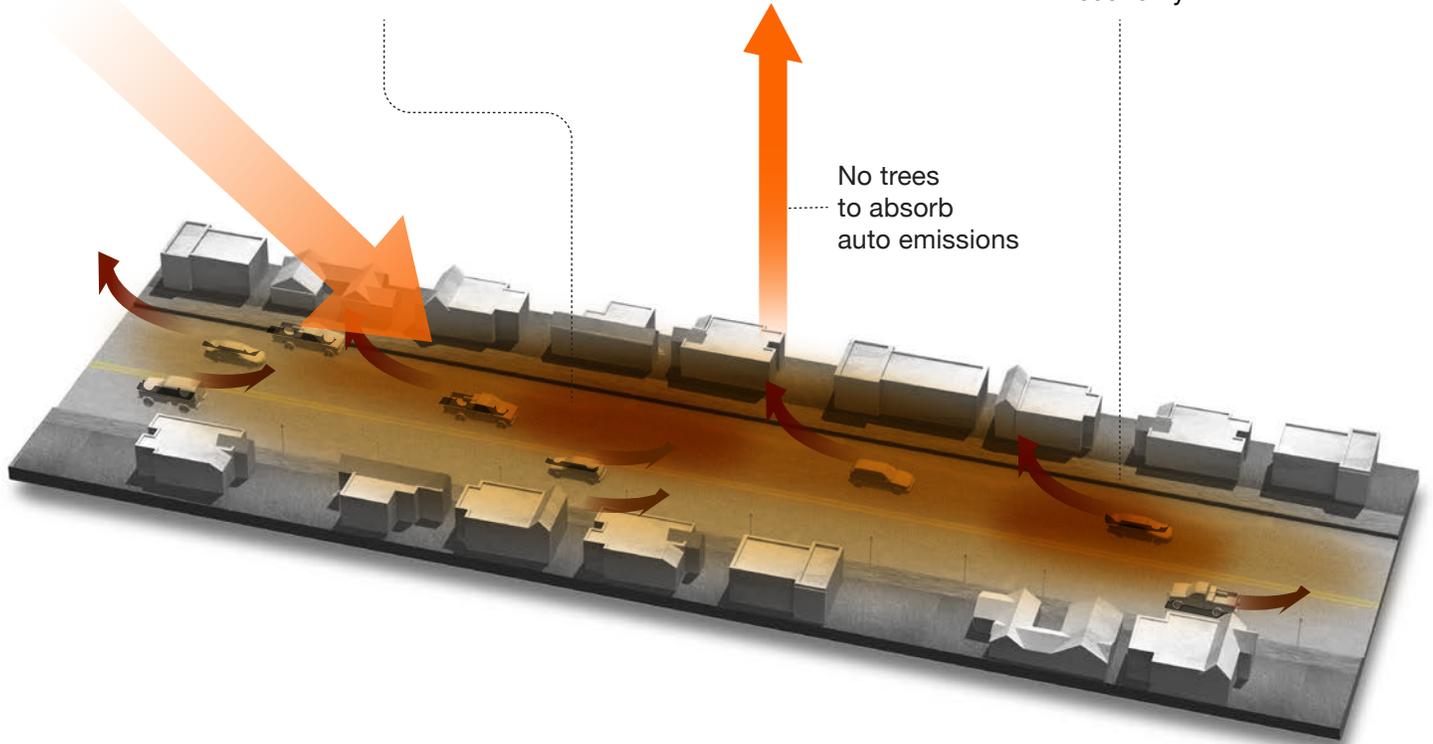
27 Hall, A., N. Berg, and K. Reich. 2018. Los Angeles Summary Report. California's Fourth Climate Change Assessment. University of California, Los Angeles. Publication number: SUM-CCCA4-2018-007.

**Figure 10 Urban Heat Island Effect**

# Greenery and the urban heat island effect

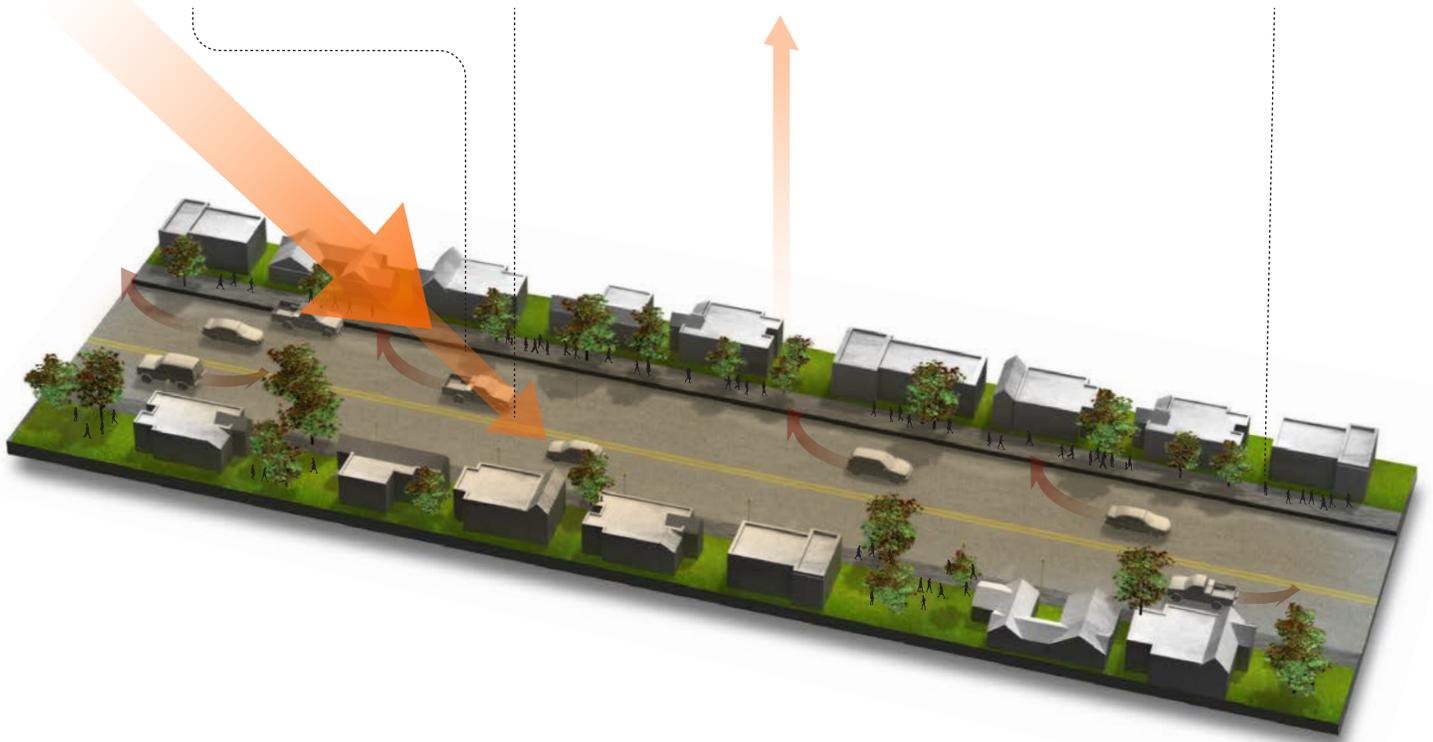
## No Greenery

- 1** Solar energy is emitted by the sun.
- 2** Heat is absorbed and retained by dark, urban surfaces.
- 3** Heat is slowly emitted throughout the day and evening, increasing temperatures.
- 4** Increased temperatures discourage pedestrian traffic, negatively impacting local economy.



## With Greenery

- 1** Solar energy emitted by the sun partially absorbed by trees.
- 2** Light surfaces absorb, retain less heat.
- 3** Auto emissions partially absorbed by trees.
- 4** Cleaner air, cooler weather creates a pedestrian-friendly environment positively impacting local businesses.



## Flooding

### WHAT

Flooding is caused by increased rain causing rivers and urban drainage basins to fill and overflow. Increased flooding occurs when rain occurs over a shorter period of time, even if there is less overall rain, because the soil does not have enough time to absorb the rainfall. Flooding most often occurs in low-lying areas near creeks and other waterways; this area adjacent to a river or stream is the floodplain. Generally, the floodplain most often refers to the area that would be inundated by a 100-year flood, or the flood that has a 1% chance of occurring in any year. The 500-year floodplain is the area that has a 0.2% chance of being flooded in any year. These estimates are based on historic observations, but these flood events are projected to happen more frequently as climate change causes more intense rainfall and increased **urbanization** covers natural areas with **impervious surfaces**, which cause even small amounts of rain to run off and potentially cause flooding.

### WHEN

Flooding in Highland generally occurs in the winter months when the region receives the most rain, but climate change may extend the flood hazard season.<sup>28</sup> Climate change is also predicted to increase the number of annual extreme rain events, when large amounts of rain falls over a short period of time. These events often do not allow the rain to soak into the ground and they overwhelm stormwater infrastructure.

### WHERE

As shown in **Figure 11**, flood risk is dispersed across Highland but is most centralized in the southern portion of east Highlands, just south of Greenspot Road. This area has a 1% chance of flooding annually, which is also known as a 100-year flood zone. Much of the area south of Greenspot Road has been left as open space. This aids in allowing for natural drainage during extreme rain events.

### WHO

People can be more vulnerable to flooding due to factors such as social isolation, language barriers, or physical disabilities, thereby causing evacuation challenges during a flood event. Additionally, low-income renters often face increased challenges in recovering from flood events because they are less likely to have renter's insurance and often face higher levels of displacement and homelessness if their residence is damaged during a flood event. Residents within Highland's DACs are

### URBANIZATION

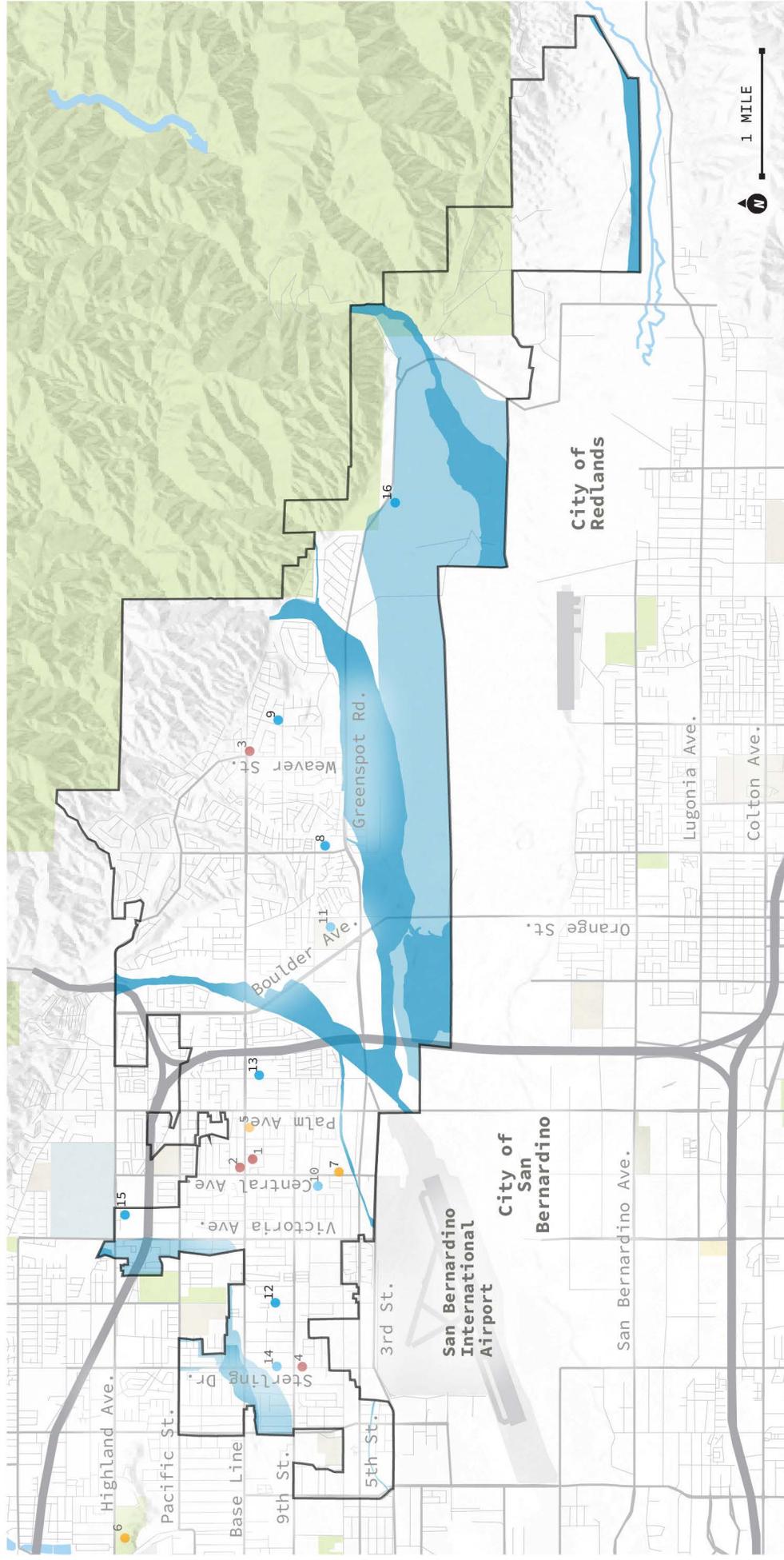
*Urbanization is an increased density of people becoming concentrated in small areas, creating cities. These dense areas are called urban areas, and historically have large amounts of gray infrastructure.*

### IMPERVIOUS SURFACES

*Impervious surfaces, such as asphalt and concrete, hinder or completely prevent natural runoff of water and can cause it to pool in unwanted places.*

<sup>28</sup> Hall, A., N. Berg, and K. Reich. 2018. Los Angeles Summary Report. California's Fourth Climate Change Assessment. University of California, Los Angeles. Publication number: SUM-CCCA4-2018-007.

Figure 11 Flood Risk



100-year Flood Zone

500-year Flood Zone

**Emergency Response Facilities**

- 1. Highland Police Station & EOC
- 2. Highland Fire Station
- 3. East Highland Fire Station
- 4. West Highland Fire Station

**Critical Facilities**

- 5. City Hall
- 6. Jerry Lewis Community Center
- 7. Sam J. Racadio Branch Library

**Non-Critical Public Facilities**

- 8. Arroyo Verde Elementary
- 9. Cram Elementary
- 10. Cypress Elementary
- 11. Highland Grove Elementary/Beattie Middle School
- 12. Lankershim Elementary
- 13. Thompson Elementary
- 14. Warm Springs Elementary
- 15. Real Journey Entrepreneur Jr High & High School
- 16. East Valley Water District Corporate Center

**Source:** Federal Emergency Management Agency (FEMA). 2020. Flood Hazard Layer Areas. <https://www.floodmaps.fema.gov/NFHL/status.shtml>

more likely to be renters than the rest of Highland residents, and are therefore more vulnerable to flooding. More than one-third of the renters in Highland’s DACs spend more than one-half of their income on rent, meaning these community members might have difficulty recovering from a flood event.<sup>29</sup>

#### **HOW**

The City addresses flooding and stormwater within the Public Facilities Element of the General Plan. For example, Goal 4.4 of the Public Facilities Element is to “Maintain an effective drainage system that protects people and property from overflows and flood disasters.” Related policies involve improving deficiencies in the City’s drainage system, and minimizing impervious surfaces associated with new development.

### **Geologic Hazards**

Geologic hazards are natural geologic processes with the ability to impact life, health, and property. Highland is vulnerable to geologic and seismic hazards that include landslides and slope instability, earthquakes, and liquefaction.

### **Landslides/Slope Instability**

Landslides are a geological hazard caused by disturbances in the natural stability of a slope. Different types of landslides vary in speed, as do the possible effects of the landslide. Although slower-moving landslides can cause gradual damage to structures, rapid landslides, such as mudslides, can quickly destroy property and become life-threatening. This means that landslides must be planned for on multiple time scales regarding response times.

#### **WHEN**

Landslides can be triggered by numerous, often interconnected, factors, such as droughts, heavy rain, soil erosion, earthquakes, and/or human activities. For example, surface runoff may be intensified by paved roads and parking lots in urban areas due to the surface material’s inability to naturally drain. This can cause a heavier load to be placed on potential landslide zones and amplifies risk of a landslide event. Landslides are often unpredictable and pose a threat because of their capacity to occur without warning and quickly destroy structures and threaten lives.

#### **WHERE**

Historically, significant landslides have occurred in the San Bernardino region and have potential to occur in portions of Highland.<sup>30</sup> Areas at high risk of landslides include the northern and eastern areas due to their proximity to steep slopes and the rock strength in these areas. These factors, compounded with the proximity to the San Andreas Fault and the risk of fire in these areas, create an even higher risk of landslide.

**Figure 12** displays the areas in Highland at risk of a landslide.

#### **WHO**

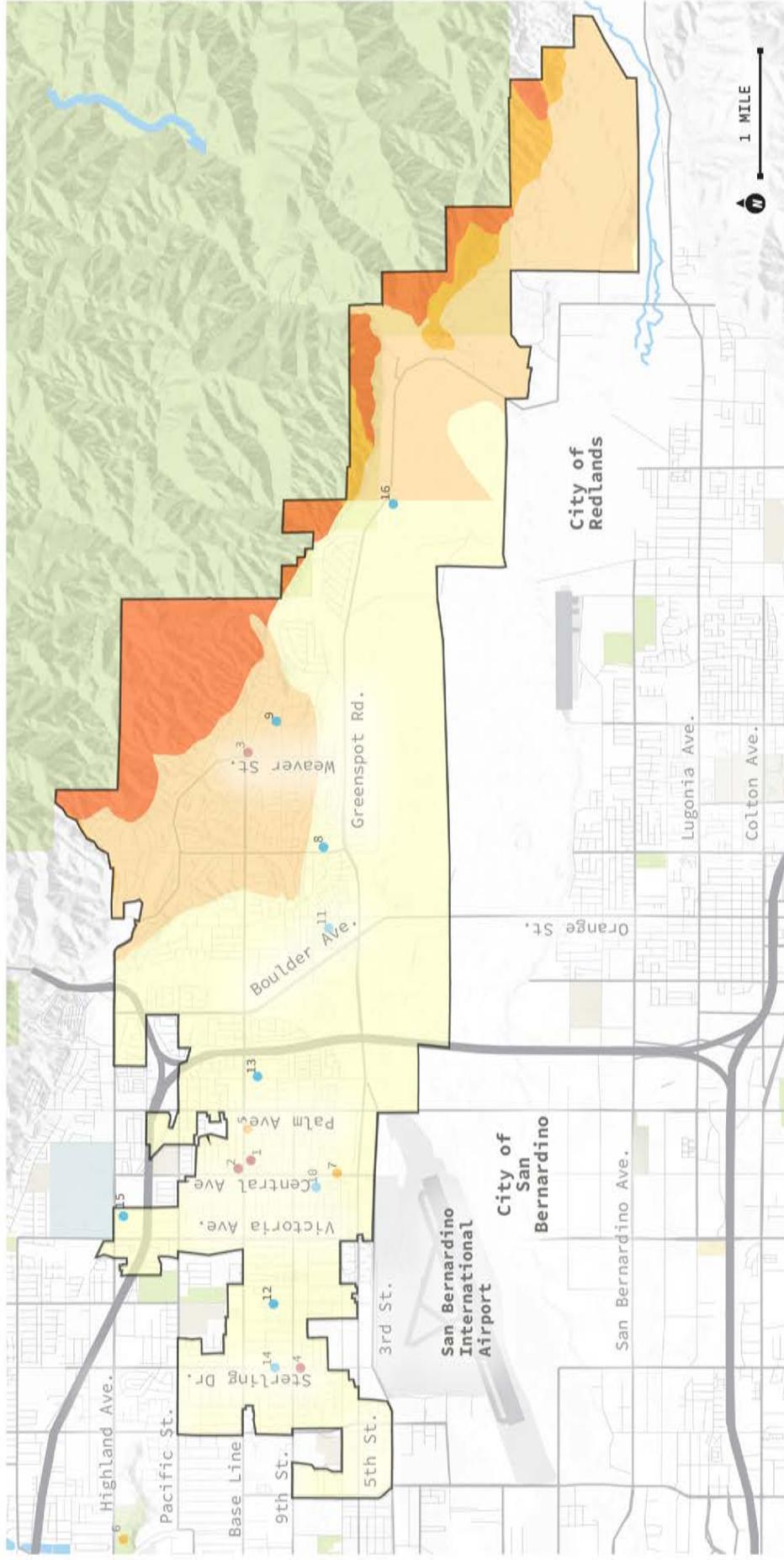
Those most vulnerable to landslides are people who have difficulty responding quickly to protect themselves. This may include members of the community who are socially isolated due to language barriers, or those unable to quickly respond to changing environments due to things like physical disabilities.

---

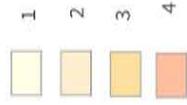
29 Public Health Alliance. 2020. “The California Healthy Places Index.” <https://map.healthyplacesindex.org/>.

30 San Bernardino County. 2017. Multi-Jurisdictional Hazard Mitigation Plan (San Bernardino County). July 13, 2017. Accessed August 6, 2020. [http://cms.sbcounty.gov/portals/58/Documents/Emergency\\_Services/Hazard-Mitigation-Plan.pdf](http://cms.sbcounty.gov/portals/58/Documents/Emergency_Services/Hazard-Mitigation-Plan.pdf).

Figure 12 Landslides



**Landslide Susceptibility**



**Emergency Response Facilities**

- 1. Highland Police Station & EOC
- 2. Highland Fire Station
- 3. East Highland Fire Station
- 4. West Highland Fire Station

**Critical Facilities**

- 5. City Hall
- 6. Jerry Lewis Community Center
- 7. Sam J. Racadio Branch Library

**Non-Critical Public Facilities**

- 8. Arroyo Verde Elementary
- 9. Cram Elementary
- 10. Cypress Elementary
- 11. Highland Grove Elementary/Beattie Middle School
- 12. Lankershim Elementary
- 13. Thompson Elementary
- 14. Warm Springs Elementary
- 15. Real Journey Entrepreneur Jr High & High School
- 16. East Valley Water District Corporate Center

Source: Dudek

In addition, those with difficulty paying for repairs, should they be necessary, are more vulnerable to landslides. In Highland, most of the landslide susceptibility areas are in non-DACs within City limits. Overall, non-DAC residents are more equipped to pay for repairs to damages caused by landslides.

#### **HOW**

Landslides and slope instability are addressed through proper engineering and infrastructure improvements. The City enforces hillside development guidelines and structural design measures during development proposals.

#### **EARTHQUAKES AND SEISMIC HAZARDS**

##### **WHAT**

Earthquakes are sudden ground-shaking events caused by the release of pressure in the earth. This quick release of pressure poses a safety risk to people and structures due to the unpredictability of both magnitude and timing.

##### **WHEN**

Earthquakes can occur without warning. There are no U.S. Geological Survey–approved methods of predicting a major earthquake before the event occurs, and therefore earthquake events pose a major threat to structures and people. It is currently only possible to calculate the probability that a major earthquake event will occur in an area in a given number of years, making long-term earthquake forecasts unreliable and often incorrect.

##### **WHERE**

Highland encompasses north and south branches of the San Andreas Fault. As recently as 1857, the south branch of the San Andreas Fault had an 8.0-plus magnitude earthquake. This fault is capable of generating up to an 8.3 magnitude earthquake, which would cause significant ground shaking and have the potential for surface ruptures and ground failures within City limits.

Another major nearby fault is the San Jacinto Fault, which is approximately 4.5 miles southwest of Highland. This fault is capable of generating an 8.5 magnitude earthquake, which would cause significant ground shaking.

Active faults are identified by the U.S. Department of Conservation, and a zone around them is disallowed from construction of new developments to prevent repetitive loss of structures and threats to safety of occupants. The unsafe areas around active faults are regulatory zones referred to as Alquist-Priolo Earthquake Fault Zones. The Alquist-Priolo Special Studies Zone Act (1994) defines an active fault as one that has ruptured in the last 11,000 years, and provides mapping resources for the public to strengthen awareness and prevent unsafe construction in these areas.<sup>31</sup> As can be seen in **Figure 13**, there are Alquist-Priolo Earthquake Fault Zones that cross through the northeastern portion of Highland.

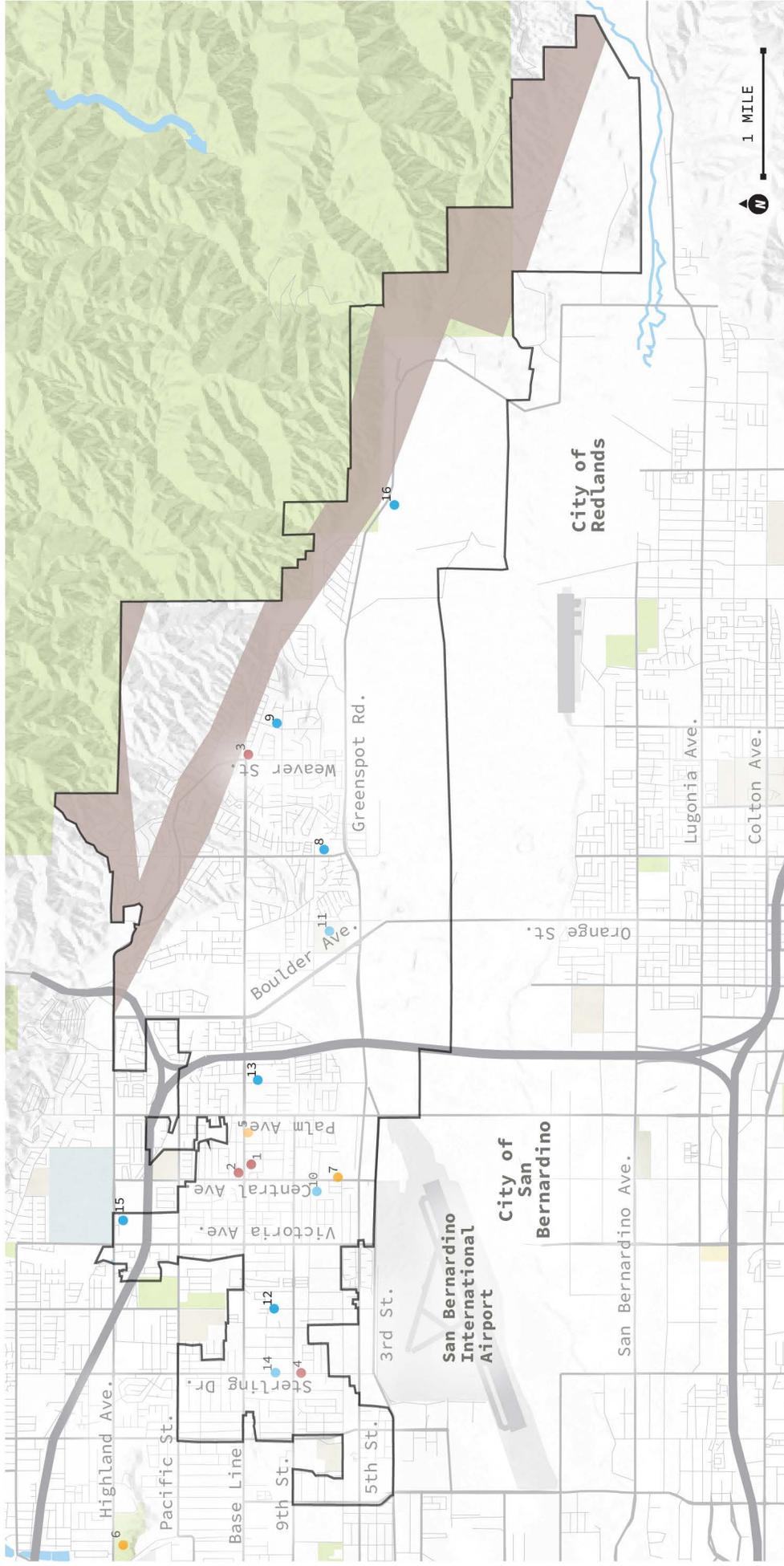
##### **WHO**

Residents located in fault zones are at higher risk of their homes being damaged by earthquakes. Additionally, groups vulnerable to earthquakes are those that have difficulty responding to the impacts of

---

31 U.S. Department of Conservation. 2019. "Alquist-Priolo Earthquake Fault Zones." <https://www.conservation.ca.gov/cgs/alquist-priolo>.

Figure 13 Alquist-Priolo Earthquake Fault Zones



**Alquist-Priolo Earthquake Fault Zones**

**Source:** California Department of Conservation. 2015. Regulatory Maps. <https://maps.conservation.ca.gov/cgs/informationwarehouse/index.html?map=regulatorymaps>

**Emergency Response Facilities**

- 1. Highland Police Station & EOC
- 2. Highland Fire Station
- 3. East Highland Fire Station
- 4. West Highland Fire Station

**Critical Facilities**

- 5. City Hall
- 6. Jerry Lewis Community Center
- 7. Sam J. Racadio Branch Library

**Non-Critical Public Facilities**

- 8. Arroyo Verde Elementary
- 9. Cram Elementary
- 10. Cypress Elementary
- 11. Highland Grove Elementary/Beattie Middle School
- 12. Lankershim Elementary
- 13. Thompson Elementary
- 14. Warm Springs Elementary
- 15. Real Journey Entrepreneur Jr High & High School
- 16. East Valley Water District Corporate Center

the earthquake. For example, lower-income homeowners, especially those who are housing burdened, may have difficulty paying for repairs and may not have earthquake insurance.

## Peakload Water Requirements

The City is a part of the East Valley Water District (EVWD). EVWD's current water demand is 31,609 acre-feet per year (which is equal to an average day demand of 28.2 million gallons per day). Future water demands are expected to increase over time, reaching 36,203 acre-feet per year (32.3 million gallons per day) by buildout in 2040. Demands are typically evaluated using three primary scenarios: average day demand, maximum day demand, and peak-hour demand. Using 2004 through 2008 water consumption and production records, the 2015 San Bernardino Valley Regional Urban Water Management Plan found the average day demand for EVWD to be 209 gallons per-capita per day.<sup>32</sup>

The EVWD's existing water supply comes from a combination of groundwater, surface water, and the State Water Project. It is important to identify peak-load water supply when discussing seismic risks because large seismic events have the potential to destroy or incapacitate the normal water supply. If a local earthquake occurs, local water piping would be at risk. Earthquakes farther away could also impact the State Water Project.

It is also important to mention trends surrounding water supply. The State Water Project provides 23% of EVWD's water, 76% of the water supply is from local groundwater wells, and 1% of the water is from the Santa Ana River.<sup>33</sup> With climate change projected to increase the frequency and severity of droughts, it is likely that water supplied by these sources will be reduced.<sup>34</sup> Additionally, the vulnerability of levees protecting the State Water Project must be considered.

State Water Project water is more expensive than local water, and thus is used more sparingly than local sources. But State Water Project water is available for use during emergencies and drought situations, providing security for the water district and the City. In the event of a loss of water sources, EVWD has a storage capacity of 27.6 million gallons, which would supply potable water for 2 to 3 days.<sup>35</sup> EVWD also is a participant in ERNIE, a mutual aid network within San Bernardino and Riverside Counties. Additional measures are in place to provide safe water to the public and an efficient repair of damages.

In addition to these sources, EVWD is working to make the water supply more sustainable. The Sterling Natural Resource Center Project is a new wastewater treatment facility that will treat 8 million gallons of water per day to be recharged back into the groundwater basin for domestic reuse.<sup>36</sup> This amount will be expandable up to 10 million gallons per day. The project is expected to be completed by March 2022. Water supply needs for future development and fire suppression will also be addressed in the California Fire Code and the City Municipal Code with amendments.

---

32 Water Systems Consulting. 2016. 2015 San Bernardino Valley Regional Urban Water Management Plan. June 2016. Accessed August 7, 2020. <http://www.sbvmd.com/home/showdocument?id=4196>.

33 East Valley Water District. 2018. "Groundwater Resources." Accessed August 6, 2020. <https://www.eastvalley.org/121/Groundwater-Resources>.

34 Hall, A., N. Berg, and K. Reich. 2018. Los Angeles Summary Report. California's Fourth Climate Change Assessment. University of California, Los Angeles. Publication number: SUM-CCCA4-2018-007.

35 Water Systems Consulting. 2016. 2015 San Bernardino Valley Regional Urban Water Management Plan. June 2016. Accessed August 7, 2020. <http://www.sbvmd.com/home/showdocument?id=4196>.

36 East Valley Water District. n.d. "Capital Improvement Program." <https://www.eastvalley.org/118/Capital-Projects>.

## Liquefaction

### **WHAT**

Liquefaction occurs when soil is saturated with water and is subject to a destabilizing force, such as an earthquake, resulting in the soil losing the ability to support its own weight. This event causes the soil to behave as a fluid, potentially destroying structures built upon it and threatening the safety of people in a liquefaction zone.

### **WHEN**

Liquefaction generally occurs during significant earthquake activity and has been a major cause of earthquake damage in Southern California. The duration and magnitude of an earthquake are important factors in causing liquefaction; ground-shaking events continually build pressure in saturated soil, and if that pressure exceeds the bond between soil materials, it will collapse and behave as a liquid. Soils that are saturated and fine-grained, such as silt or sand, can be at risk of liquefaction due to the decreased amount of pressure required to destroy the bond in fine soil material.

### **WHERE**

Liquefaction may damage structures on saturated, granular soils such as silt or sand, during an earthquake. These geologic conditions are typical in valley regions within Highland. Areas at risk of liquefaction due to soil composition and heightened exposure to runoff cover nearly all of southeastern Highland, as well as western Highland. A map of these liquefaction zones can be seen in **Figure 14**.

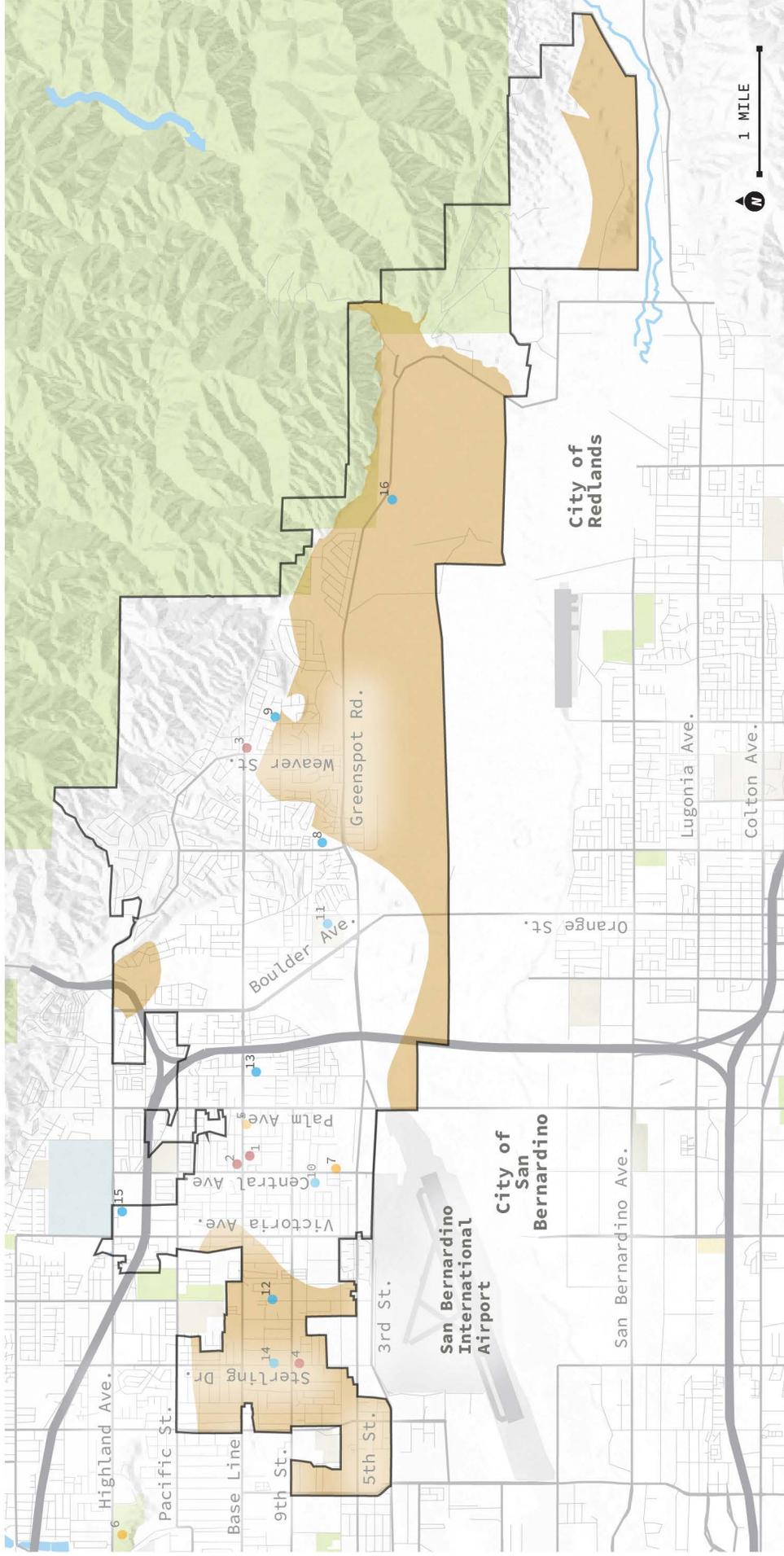
### **WHO**

Older adults living alone and people with disabilities may be more prone to evacuation challenges during a liquefaction event.

### **HOW**

To reduce the chance of liquefaction causing damages to structures or injuries to residents, the City has developed a goal, and associated policies, within its General Plan. Goal 6.1 of the Public Health, Safety, and Environmental Justice Element focuses on minimizing disruptions to the social, economic, and environmental welfare of residents caused by seismic and geologic activities. A development review policy specifically related to liquefaction risk and land use is one of the policies related to Goal 6.1.

Figure 14 Liquefaction



High Risk Liquefaction Zones

- **Emergency Response Facilities**
  1. Highland Police Station & EOC
  2. Highland Fire Station
  3. East Highland Fire Station
  4. West Highland Fire Station
- **Critical Facilities**
  5. City Hall
  6. Jerry Lewis Community Center
  7. Sam J. Racadio Branch Library

- **Non-Critical Public Facilities**
  8. Arroyo Verde Elementary
  9. Cram Elementary
  10. Cypress Elementary
  11. Highland Grove Elementary/Beattie Middle School
  12. Lankershim Elementary
  13. Thompson Elementary
  14. Warm Springs Elementary
  15. Real Journey Entrepreneur Jr High & High School
  16. East Valley Water District Corporate Center

**Source:** OEHA (California Office of Environmental Health Hazard Assessment). 2018. CalEnviroScreen 3.0. Accessed January 2021. <https://oeha.ca.gov/calenviro-screen/report/calenviroscreen-30>

## Wildfire

### WHAT

Wildfires are most commonly caused by humans and lightning. Human-caused fires result from campfires left unattended, the burning of debris, electrical equipment use and malfunctions, negligently discarded cigarettes, and intentional acts of arson.<sup>37</sup> Wildfires are known to spread more quickly on dry, windy days, and move more easily in an uphill direction, particularly in areas with a higher density of vegetation. Wildfires are a natural and important part of the ecosystem, but can become more intense and dangerous as a result of climate change and land management.

### WHEN

Small fires should occur regularly in the San Bernardino region's natural chaparral landscape, but years of fire suppression can create a dangerous buildup of fuel. Climate change is likely to intensify the fall fire season by extending the dry season further into the Santa Ana wind season, which drives most wildfires in the San Bernardino region.<sup>38</sup> Fires in the area that threaten Highland are not new or uncommon. In 2003 the Old Fire burned more than 90,000 acres of land in and around Highland, destroyed nearly 1,000 homes, and took six lives. Five other fires have occurred in Highland from 2008 to 2018 (see **Figure 15**).

### WHERE

Most of northern and eastern Highland is built in fire-risk areas due to the proximity to forest land north and east of the City limits. Wildfires can start outside Highland and spread into it, or create dangerous air pollution by blowing ash into Highland. These natural lands east and north of Highland pose the greatest risk to Highland residents and structures. The most northeastern portions of Highland are located in very high fire risk areas, as well as everything east of Weaver Street and north of Greenspot Road. Land use management in these very high fire hazard severity zones is important to ensure safety and resiliency for community members. Highland's Land Use Element specifies the majority of this space as planned development, and portions as agriculture/equestrian, low-density residential, and open space, with one parcel listed as medium-density residential. There is also a radio broadcasting station located in the very high fire hazard severity zone. Additionally, an electric transmission line (between 33 and 92 kilovolts) cuts through a portion of Highland within the very high fire hazard severity zone along Greenspot Road and Morton Front Line.<sup>39</sup> There are also a number of roads within Highland's very high fire hazard severity zones. Highland Avenue is the only arterial that runs through this zone, and the Steve Faris Memorial Highway also has a small portion within City limits that is in the very high fire hazard severity zone. A number of local roads are within this zone. The fire hazard zones can be seen in **Figure 16**.

### WHO

Similar to flooding, certain members of the community may be more vulnerable to wildfires due to social isolation as a result of language barriers, or physical disabilities leading to difficulty evacuating during a wildfire. An inability to quickly evacuate can also be caused by a lack of access to a car, which is more prevalent in DACs.

---

37 National Park Service. 2021. "Wildfire Causes and Evaluations." [https://www.nps.gov/articles/wildfire-causes-and-evaluation.htm#:~:text=Nearly%2085%20percent\\*%20of%20wildland,and%20intentional%20acts%20of%20arson.&text=Lightning%20is%20one%20of%20the%20two%20natural%20causes%20of%20fires](https://www.nps.gov/articles/wildfire-causes-and-evaluation.htm#:~:text=Nearly%2085%20percent*%20of%20wildland,and%20intentional%20acts%20of%20arson.&text=Lightning%20is%20one%20of%20the%20two%20natural%20causes%20of%20fires).

38 Hall, Alex, Neil Berg, and Katharine Reich (University of California, Los Angeles). 2018. Los Angeles Summary Report. California's Fourth Climate Change Assessment. Publication number: SUM-CCCA4-2018-007.

39 California Energy Commission. 2020. "Electric Transmission Lines." May 11, 2020. <https://map.dfg.ca.gov/metadata/ds1198.html>.

Low-income renters may face increased challenges recovering from fire events because they are less likely to have renter's insurance and therefore may face higher levels of displacement and homelessness if their residence is damaged. DAC residents in Highland are much more likely to be renters than other residents, and are therefore more vulnerable to fires. More than one-third of the renters in Highland's DACs spend more than one-half of their income on rent, meaning these community members might have difficulty recovering from a wildfire.

#### **HOW**

To protect residents and their property from wildfire, the City uses multiple policies within its General Plan. These policies include development review within fire hazard areas, fire safety standards within the Municipal Code, education on wildfire, and enforcement of standards related to emergency water service and fire sprinklers. The City has adopted the 2019 California Building Code within the Municipal Code, as well as the California Fire Code. These codes require home hardening and defensible space in accordance with state standards within very high fire hazard severity zones. The City does not have a Local Hazard Mitigation Plan, which is another form of hazard planning document. San Bernardino County developed a Multi-Jurisdictional Hazard Mitigation Plan, but this plan does not cover the City of Highland.

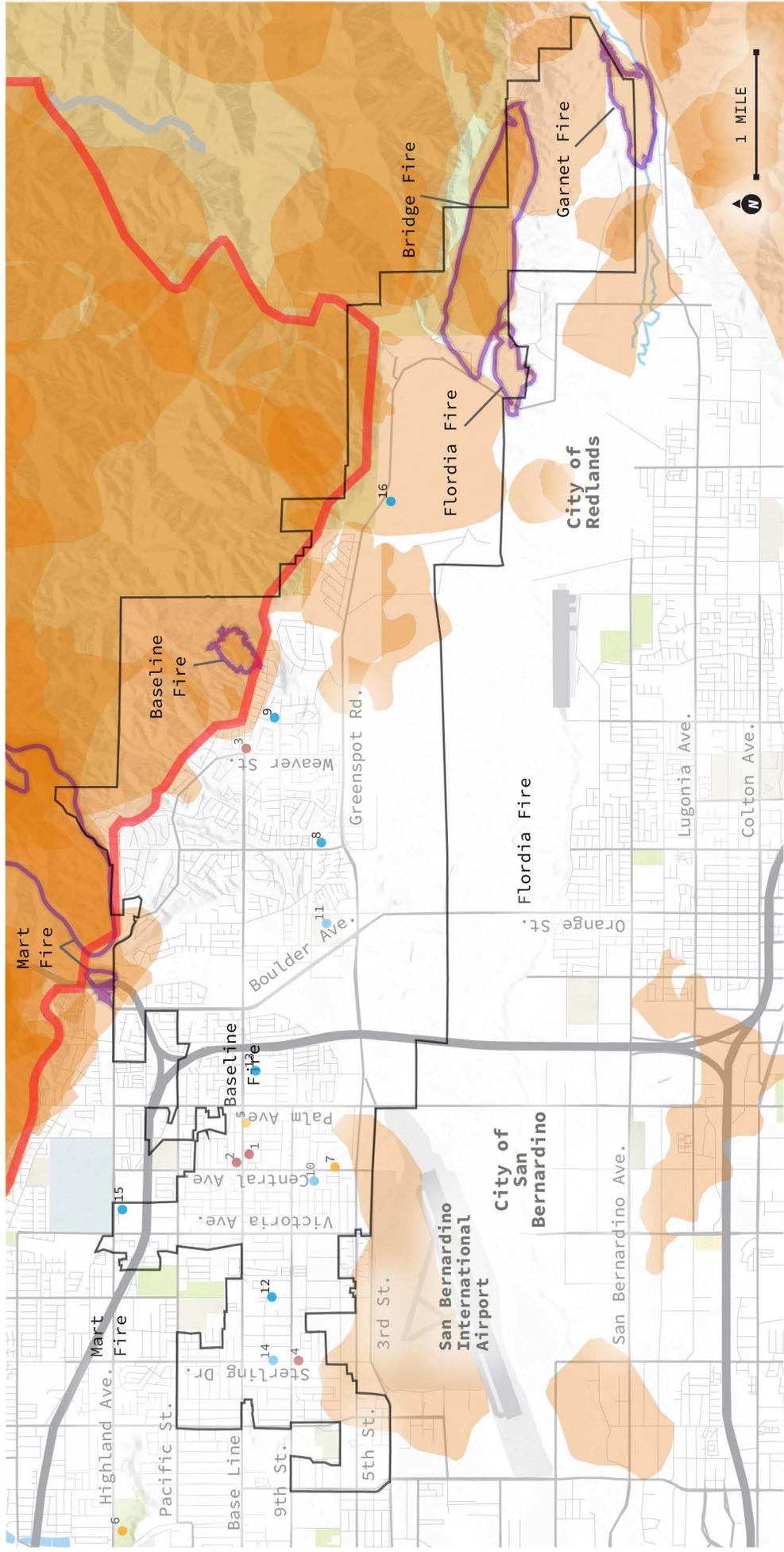
Another way that fire hazards are often planned for and mitigated is through community organizations called fire safe councils. Highland does not have a fire safe council, but there are three within 10 miles of Highland to the north and east. There is also the Inland Empire Fire Safe Alliance, which acts as a way to establish efficient, consistent, collaborative actions and messaging among the different fire safe councils, jurisdictions, and organizational partners.<sup>40</sup> Community Wildfire Protection Plans (CWPPs) are a planning document used by Fire Safe Councils to plan for fire. The nearest CWPP covers land directly north of Highland in the San Bernardino Mountains and was developed by the Mountain Rim Fire Safe Council. There are several pre-fire measures discussed within the California Department of Forestry and Fire Protection's (CAL FIRE) Strategic Fire Plan for the San Bernardino Unit, including fire prevention measures, engineering and structural measures, educational efforts, and vegetation management programs.<sup>41</sup> The Fenner Canyon Fire Crew provides maintenance services that reduce fire risk to general City facilities. No fire breaks are within City limits, but CAL FIRE's fire crews have created fire breaks elsewhere in San Bernardino County.

---

40 Mountain Rim Fire Safe Council. 2020. "Inland Empire Fire Safe Alliance." <https://www.mountainrimfsc.org/inland-empire-fire-safe-alliance>.

41 California Department of Forestry and Fire Protection. 2020. 2020/2021 Strategic Fire Plan for the San Bernardino Unit. May 6, 2020. <https://osfm.fire.ca.gov/media/ixcfaefc/2020-bdu-fire-plan.pdf>.

Figure 15 Historic Wildfires



 Recent Fires (2008-2018)

 Old Fire

**Frequency of Past Fires**  
 Less More

**Emergency Response Facilities**

1. Highland Police Station & EOC
2. Highland Fire Station
3. East Highland Fire Station
4. West Highland Fire Station

**Critical Facilities**

5. City Hall
6. Jerry Lewis Community Center
7. Sam J. Racadio Branch Library

**Non-Critical Public Facilities**

8. Arroyo Verde Elementary
9. Cram Elementary
10. Cypress Elementary
11. Highland Grove Elementary/Beattie Middle School
12. Lankershim Elementary
13. Thompson Elementary
14. Warm Springs Elementary
15. Real Journey Entrepreneur Jr High & High School
16. East Valley Water District Corporate Center

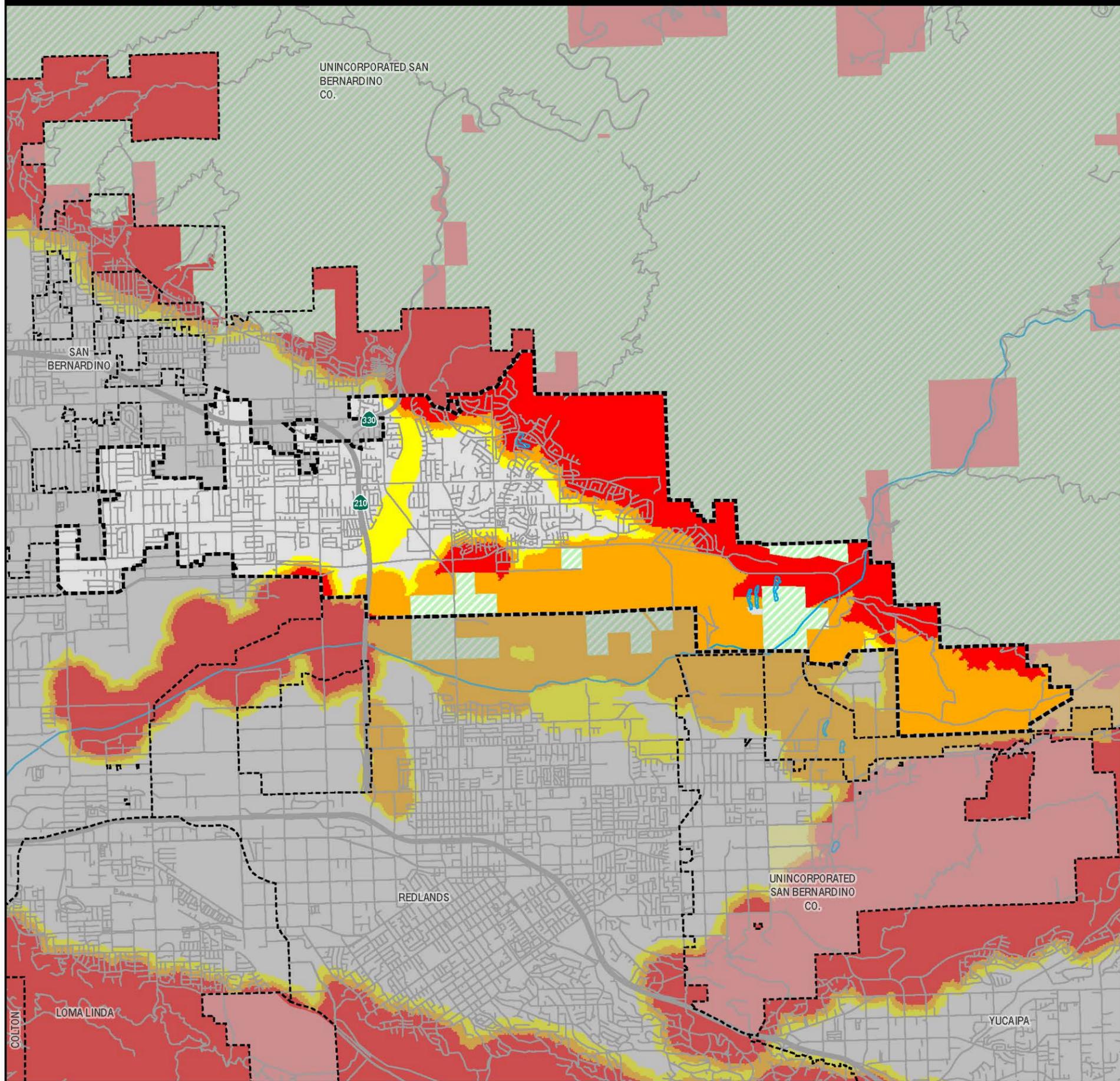
**Source:** Cal FIRE. 2019. Fire Perimeters. <https://frap.fire.ca.gov/frap-projects/-fire-perimeters/>



# Local Responsibility Area Fire Hazard Severity Zones

As Identified by the  
State Fire Marshal

March 24, 2025

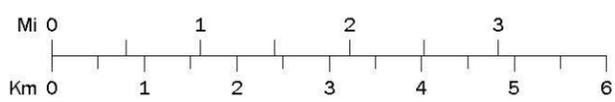


**Fire Hazard Severity Zones (FHSZ) in Local Responsibility Area (LRA), as Identified by the State Fire Marshal**

- Very High
- High
- Moderate

**Fire Hazard Severity Zones in State Responsibility Area (SRA), Effective April 1, 2024**

- Very High
- High
- Moderate



Projection: NAD 83 California Teale Albers  
Scale: 1:78,000 at 11" x 17"

- Incorporated City
- Waterbody
- Unzoned LRA
- Federal Responsibility Area (FRA)

Government Code section 51178 requires the State Fire Marshal to identify areas in the state as moderate, high, and very high fire hazard severity zones based on consistent

statewide criteria and based on the severity of fire hazard that is expected to prevail in those areas. Moderate, high, and very high fire hazard severity zones shall be based on fuel loading, slope, fire weather,

and other relevant factors including areas where winds have been identified by the Office of the State Fire Marshal as a major cause of wildfire spread.

The State of California and the Department of Forestry and Fire Protection make no representations or warranties regarding the accuracy of data or maps. Neither the State nor the Department shall be liable under any circumstances for any direct, special, incidental, or consequential damages with respect to any claim by any user or third party on account of, or arising from, the use of data or maps.

Gavin Newsom, Governor, State of California  
Wade Crowfoot, Secretary for Natural Resources, CA Natural Resources Agency  
Joe Tyler, Director/Fire Chief, CA Department of Forestry and Fire Protection  
Daniel Berlant, State Fire Marshal, CA Department of Forestry and Fire Protection

Data Sources:  
CAL FIRE Fire Hazard Severity Zones (FHSZSRA23\_3, FHSZLRA\_25\_1)  
CAL FIRE State Responsibility Areas (SRA25\_1)  
City and County boundaries as of 10/22/24 (CA Board of Equalization)

## EMERGENCY PREPARATION AND RESPONSE

Emergency preparation and response are important components in ensuring residents are ready for hazards and first responders can adequately serve residents in the event of a hazard.

The City of Highland's fire department serves the City with three fire stations. Divisions 2 and 3 of CAL FIRE's San Bernardino County Fire Protection District provide fire protection and emergency medical services in the region surrounding Highland, including the wildland urban interface to the east and north, and the City of San Bernardino to the west. CAL FIRE may also provide fire protection and emergency medical services to the City of Highland through a cooperative agreement. All CAL FIRE units participate in annual wildfire training prior to fire season and throughout the year. The San Bernardino County Sheriff's Department provides police and emergency response for the City of Highland. The City also is involved in a Statewide Master Mutual Aid Agreement with the City of San Bernardino, and automatic aid agreements with Redlands, Yucaipa, and the U.S. Forest Service. Additionally, the American Red Cross provides a variety of disaster relief support services.

The City's Municipal Code addresses fire access roads, including maintenance, and states, "Access roads, private roadways, and public roadways shall be provided and maintained in a passable condition at all times. Any obstruction or impedance to reasonable access may be removed by any public safety agency with the expense of such removal to be borne by the owner of the roadway, or in the case of an obstructing vehicle or object, by the owner of said vehicle or object." Similarly, Highland's Circulation Element includes a goal to "Provide a well-maintained roadway system."

To aid in emergency response and evacuation, proper and visible addresses are necessary on streets and buildings. The Municipal Code requires all streets to have noncombustible and reflective street name signs visible at all intersections for new developments. Additionally, according to the California Fire Code, all new structures must provide address identification with illumination during the hours of darkness.

Population impacts on emergency response services are currently evaluated on a project-by-project basis through the development review process.

### Emergency Response Facilities

Emergency response facilities are those activated during an emergency and used to respond to hazards. There are three fire stations spread across Highland, as shown in **Table 3-8**, Assets in Highland. The East Highland Fire Station (Fire Station #2) is located within a very high fire hazard severity zone.

#### **CRITICAL FACILITIES**

Critical assets are pieces of infrastructure that are important to the regular functioning and emergency response services for a community. These can include important community buildings that are used during a hazard event or are necessary for regular City functioning. These assets need to be protected from hazards to ensure people can evacuate, find shelter, and recover from hazards. Highland has multiple critical assets, including City Hall, the senior center, and the library, as shown in **Table 3-8**. There are no hospitals in Highland, but the Dignity Health Community Hospital of San Bernardino is just west of Highland.

**NON-CRITICAL PUBLIC FACILITIES**

Non-critical facilities are those that can be used in hazard recovery to gather resources, distribute information, or serve as shelters. These are generally flexible facilities that can be activated and would likely not all be used at once during a hazard event. Non-critical facilities can also serve as cooling facilities that provide air condition during extreme heat events. Highland's non-critical public facilities include Highland's nine schools and the YMCA/community center, as shown in **Table 3-8**. It should be noted that religious organizations have historically offered facilities and services during hazard recovery. These facilities are not included in this assessment because they are private in nature and may choose their own level of involvement in recovery efforts.

**Table 3-8. Assets in Highland**

Asset Type	Asset Name	Relevant Hazards
Emergency Response Facilities	Highland Police Station & EOC	None
	Highland Fire Station (Station 1)	None
	East Highland Fire Station (Station 2)	Wildfire
	West Highland Fire Station (Station 3)	None
Critical Facilities	City Hall	None
	Jerry Lewis Community Center	None
	Sam J. Racadio Branch Library	None
Non-Critical Public Facilities	Arroyo Verde Elementary	None
	Cram Elementary	Wildfire
	Cypress Elementary	None
	Highland Grove Elementary/Beattie Middle School	None
	Lankershim Elementary	None
	Thompson Elementary	None
	Warm Springs Elementary	None
	Real Journey Entrepreneur Jr High & High School	Wildfire
	East Valley Water District Corporate Center	None

**Evacuation Routes**

In the event of an extreme fire, flood, or other circumstances, evacuation may be necessary. To preserve the lives of Highland residents, it is important to ensure that the routes used for evacuation are unobstructed and in good condition. Depending on the hazard, evacuation routes in Highland may involve a variety of highways and arterials. Interstates and highways that could be used by residents to evacuate the area include Interstates 10, 15, and 215, as well as State Routes 30, 31, 38, 60, 66, and 210. Major east/west roads within Highland that could be used for evacuation include Greenspot Road, Base Line Street, East Highland Avenue, and Pacific Street.

# FINDINGS

## PUBLIC HEALTH AND CHRONIC HAZARDS

Based on the above analysis of each hazard, Highland's public health concerns were categorized into three categories from high to low priority: critical, important, and marginal. This was determined by comparing the relevant **vulnerable populations** and **built environment** to the State. Each public health concern was assessed using unique and relevant vulnerable populations and built-environment factors. Where there was a high proportion of vulnerable people in Highland and the relevant built-environment factors scored low, that public health concern was ranked as a priority.

### Critical

Highland's critical public health and chronic hazards are access to parks, safe and sanitary housing, and air pollution. These hazards rank critical because there is both a high number of vulnerable people and the built environment does not adequately address the hazard. Each is described in detail below.

#### ACCESS TO PARKS

Highland residents face many health challenges compared to the State averages. This includes elevated rates of asthma, cardiovascular disease, and obesity. This is true City-wide, and is more pronounced for DAC residents.<sup>1</sup> Compared to the State, very few Highland residents live within **one-half mile** of a City park. School parks and joint-use facilities after school hours play an important role in increasing park access, but when considering both City and school parks, fewer Highland households live within one-half mile of a park compared to the State average.<sup>2</sup> Parks and trees were also highlighted as priority needs. For these reasons, access to parks is a critical public health focus of this Public Health, Safety, and Environmental Justice Element.

#### AIR POLLUTION

Residents of Highland are exposed to chronic air pollution on a daily basis from adjacent freeways, and could be exposed to hazardous smoke events from wildfire in nearby wildfire risk areas. As discussed above, air pollution in the entire Inland Empire is a public health concern. Highland's DACs have a higher proportion of people who work outdoors and children compared to the State. Both of these populations are considered to be more sensitive to air pollution, as people who work outdoors breathe unfiltered air more often, and children's lungs are still developing. Highland does not have a high proportion of people who walk, bike, or take the bus to work, or older adults, populations also considered vulnerable to air pollution.<sup>3</sup> For these reasons, air pollution is a critical public health focus of this Element.

#### VULNERABLE POPULATIONS

*Vulnerable populations are those people who are sensitive to a public health issue due to a socio-economic or physiological concern. For example, households without cars are more sensitive to not having parks or grocery stores in walking distance, while older adults are more likely to be hospitalized from extreme heat.*

#### BUILT ENVIRONMENT

*The built environment is the physical parts of cities including streets, parks, and homes.*

#### ONE-HALF MILE

*A half mile is used because it is considered biking distance.*

1 Public Health Alliance. 2020. "The California Healthy Places Index." <https://map.healthyplacesindex.org/>.

2 Public Health Alliance. 2020. "The California Healthy Places Index." <https://map.healthyplacesindex.org/>.

3 Public Health Alliance. 2020. "The California Healthy Places Index." <https://map.healthyplacesindex.org/>.

### **SAFE & SANITARY HOUSING**

Residents of Highland’s DACs are more likely to be renters than the average resident of the State. Additionally, of those renters, they are much more likely than the average Californian to pay more than one-half their income on housing costs.<sup>4</sup> Highland DACs are more likely to experience **overcrowding**, and most neighborhoods have higher than average habitability, indicating that housing is primarily an issue of cost. Households spending large proportions of their income on housing are less likely to repair their residence or relocate for health and safety concerns. For these reasons, safe and sanitary housing is a critical public health focus of this Element.

#### **OVERCROWDING**

*Overcrowding is measures as more than one person per room. Uncrowded housing can improve mental health including stress and depression, decrease the spread of communicable diseases, and improve children’s wellbeing and educational outcomes.*

### **Important**

Highland’s important public health and chronic hazards are access to healthy food, libraries and community centers, extreme heat, and hazardous materials. These hazards rank important because there are a high number of vulnerable people and the built environment does not adequately address the hazard. Each is described in detail below.

### **ACCESS TO HEALTHY FOOD**

Highland residents are more likely to be diagnosed with obesity and diabetes than State averages. This is true City-wide, and is more pronounced for DAC residents.<sup>5</sup> Residents of Highland’s DACs are also more likely to be low income and not have access to a car, making walking or biking access to affordable healthy food important. Almost all residents of Highland’s DACs communities live within a half mile of a grocery store. For this reason, maintaining access to healthy food and ensuring it is affordable is important.

### **LIBRARIES AND COMMUNITY CENTERS**

All members of a community can benefit from having safe public spaces to gather, use free Wi-Fi, and access information, but this is especially true for low-income residents and those in over-crowded housing, both populations that are more common in Highland’s DAC communities than the State. More than 75% of Highland’s DAC households and none of the households outside the DACs live within a half mile of a library or community facility. There are multiple planned community facilities, and for these reasons, access to such facilities is considered important.

---

4 Public Health Alliance. 2020. “The California Healthy Places Index.” <https://map.healthyplacesindex.org/>.

5 Public Health Alliance. 2020. “The California Healthy Places Index.” <https://map.healthyplacesindex.org/>.

### **EXTREME HEAT**

Older adults and outdoor workers are the most likely to be hospitalized during heat waves. This is because the bodies of older adults are more sensitive to heat waves and outdoor workers spend more time being exposed to heat and have a difficult time adapting during heat events without sacrificing income. Highland does not have a high proportion of older adults, but does have a higher than average number of outdoor workers.<sup>6</sup> Additionally, Highland has a lower proportion of **impervious surfaces**, but lower than average tree cover. Highland is forecasted to experience seven times more extreme heat days by 2050, and therefore extreme heat is considered important.<sup>7</sup>

### **HAZARDOUS MATERIALS**

There are no populations that are considered more vulnerable to hazardous materials, and therefore risk is assessed by how close people live to cleanup sites and routes where hazardous materials are transported. There are multiple hazardous waste sites in or near Highland's DAC's, the highest concentration of which is located at the San Bernardino Airport. Therefore, hazardous materials are considered important.

### **Marginal**

Highland's marginal public health and chronic hazards are public transportation and safe walking and biking (see **Figure 17**). These hazards rank marginal because Highland does not have vulnerable populations and/or the built environment addresses this concern well. These concerns should not be ignored, however, and existing success should be celebrated and replicated throughout the community.

### **PUBLIC TRANSPORTATION**

Highland's DAC households have lower than average access to a personal vehicle, but Highland does not have a high proportion of people who walk, bike, or take the bus to work. DAC residents live within proximity to public transit, as 75% of DAC residents live within one-quarter mile (walking distance) and virtually all residents live within one-half mile (biking distance) of a bus stop. Therefore, public transportation is considered marginal.<sup>8</sup>

### **SAFE WALKING AND BIKING**

Similar to public transportation, Highland does not have a high proportion of residents who depend on walking or biking to get to work. Highland does have a high proportion of children who require additional

### **IMPERVIOUS SURFACES**

*Impervious surfaces are non-natural urban surfaces, such as asphalt or concrete. These surfaces promote the urban heat island effect by absorbing heat and slowly releasing it. This is why it is cooler in a park – even outside of the shade – than a city street.*

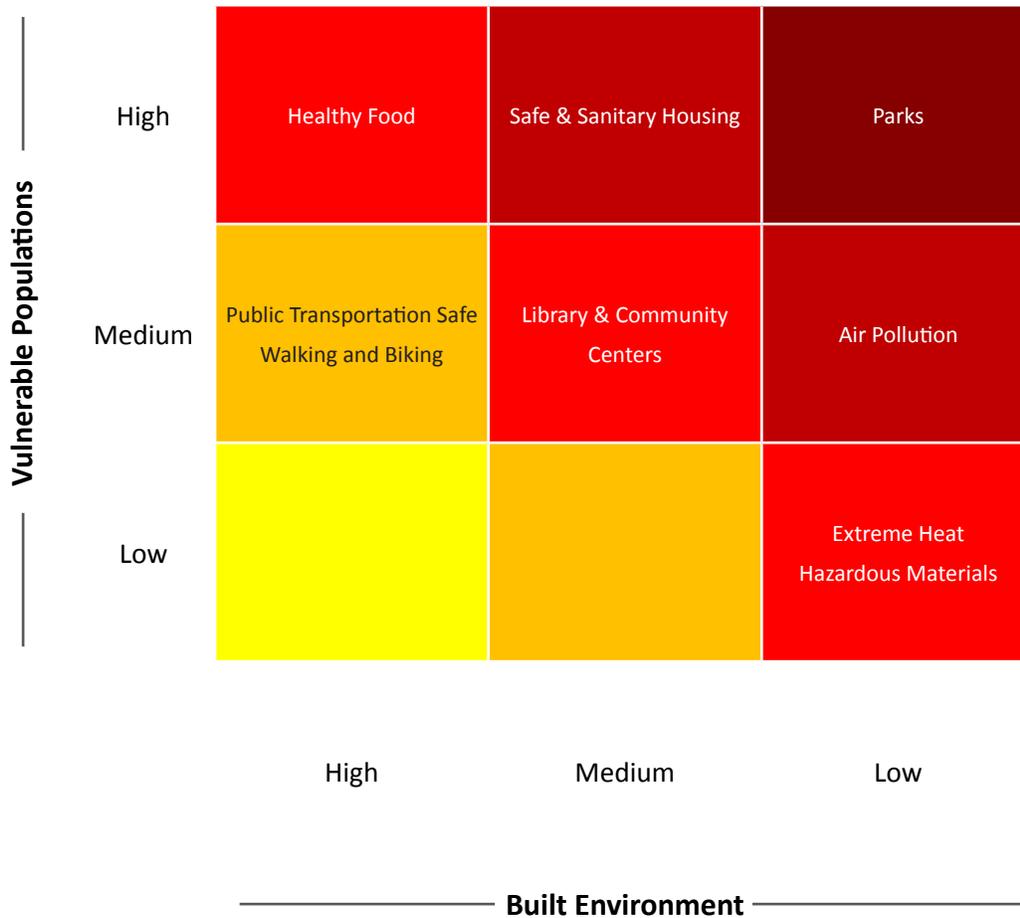
6 Public Health Alliance. 2020. "The California Healthy Places Index." <https://map.healthyplacesindex.org/>.

7 Cal-Adapt. 2020. Accessed July 30, 2020. <https://cal-adapt.org/tools/extreme-heat/>.

8 Public Health Alliance. 2020. "The California Healthy Places Index." <https://map.healthyplacesindex.org/>.

safety measures to feel safe walking and biking.<sup>9</sup> Many busy intersections in Highland have been improved, including with crossing guards during school hours. Therefore safe walking and biking is well addressed currently and considered marginal.

**Figure 17. Public Health and Chronic Hazard Prioritization**



**EMERGENCY EVENTS**

Based on the above analysis of each hazard, Highland’s public health concerns were categorized into three categories from high to low priority: critical, important, and marginal. The risk level for each hazard was determined by looking at the potential impact for each hazard in the next 20 years (high, medium, low) and the City’s current **adaptive capacity (high, medium, low)** (see **Figure 18**). The potential

**ADAPTIVE CAPACITY**  
*Adaptive capacity is the City’s current capacity to respond to a hazard. This is determined by how well the City’s plans and programs mitigate or prepare for a hazard.*

<sup>9</sup> Public Health Alliance. 2020. “The California Healthy Places Index.” <https://map.healthyplacesindex.org/>.

impact is determined by how likely a hazard is to occur and how deadly and or damaging it could be. This is generally assessed by whether there are hazard zones in or near a community (such as a fire hazard or flood zone), if there are large populations or important facilities in those zones, the historic impact of that hazard, and/or the potential role of climate change. The adaptive capacity is assessed by how well the public is educated and prepared for a hazard, if there are a high number of vulnerable people, emergency alert and evacuation capacity, and if important facilities (including homes) meet hazard reduction standards through building materials and structural requirements.

### **Critical**

Wildfire is Highland’s only critical emergency event due to the likelihood of the hazard, probability of impact, and adaptive capacity.

#### **WILDFIRE**

Much of the eastern side of Highland is within a very high wildfire severity zone. Historic wildfires have occurred in these areas, as well as southeast of Highland. It is extremely likely that wildfires will occur in these areas between 2020 and 2050. Additionally, these areas include existing and planned land uses. The City currently requires many best practices for building, but these standards should be strengthened to meet the latest CAL FIRE guidance. For these reasons, wildfire is considered critical.

### **Important**

Flooding and seismic hazards may occur in Highland between 2020 and 2050. The City currently has relevant policies and programs to ensure that new development minimizes the risk from these hazards, but older infrastructure and buildings are vulnerable to both hazards, and therefore they are considered important.

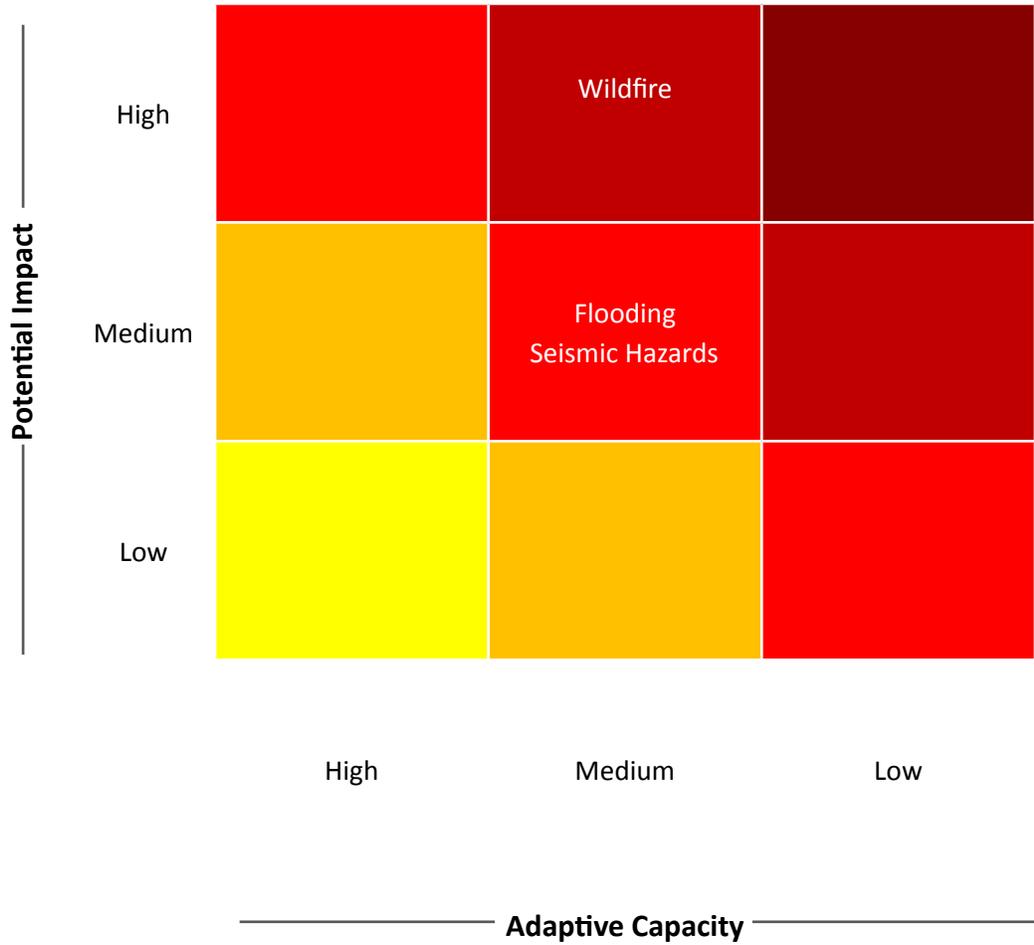
#### **FLOODING**

Large portions of undeveloped land, mostly concentrated in eastern Highland, are within the 100-year flood zone, where it is likely to flood between 2020 and 2050. There are some developed areas within the 500-year flood zone, where development standards protect homes and businesses. For these reasons flooding is considered important.

#### **SEISMIC HAZARDS**

Similar to many Southern California communities, an earthquake could occur in Highland at any time. There are active faults on the east side of Highland at the base of the mountains. Many older buildings do not meet the current seismic standards. Additionally, more than 300 buildings in the City were built before 1930, when unreinforced masonry buildings were banned. Highland was built west to east, so most vulnerable buildings are on the west side. For these reasons, seismic hazards are considered important.

**Figure 18. Emergency Events Prioritization**



# GOALS, POLICIES, AND ACTIONS

**Goal 1: Protect the health of community members by improving air quality.**

**Policy 1.1: Reduce air pollution from mobile sources.**

Action 1.1a: Electric Vehicle Charging Stations. Promote the installation of electric vehicle charging stations at important destinations such as civic buildings, parks, and commercial hubs.

Action 1.1b: Fleet Management. Develop a fleet management program to increase the fuel efficiency and reduce emission of municipal vehicles.

Action 1.1c: Preferential Parking. Amend the zoning code to identify preferred locations for clean air vehicle parking required for new development.

Action 1.1d: Warehouse Standards. Include air quality and vegetation buffer standards for new warehouses uses and loading docks.

**Policy 1.2: Reduce localized air pollution exposure near major roads.**

Action 1.2a: Air Filters in Existing Buildings. Pursue grant funding to install air condition with HEPA filters in homes and schools within 1,000 feet of a major road.

Action 1.2b: Clean Air Development. Create a clean air checklist for new development of sensitive land uses within 1,000 feet of a major road. This checklist should include landscaping, ventilation systems, double-paned windows, setbacks, and barriers.

**Goal 2: Promote a built environment that stays cool.**

**Policy 2.1: Promote a healthy urban forest to reduce air pollution and extreme heat.**

Action 2.1a: Climate-Appropriate Trees. Develop a new street tree species palette that prioritizes trees based on having low water needs and adaptability to climate change and future environmental conditions.

Action 2.1b: Diverse Urban Forest. Maintain a healthy urban forest by ensuring a diversity of tree species.

Action 2.1c: Increase the Tree Canopy. Identify grant funding to develop a program to install additional street trees or provide canopy trees to residents for planting.

Action 2.1d: Street Tree Prioritization. Prioritize tree planting from approved street tree list based on the existing tree canopy and the population's vulnerability to extreme heat. Where possible, integrate shade trees with bike and pedestrian infrastructure.

Action 2.1e: Tree Planting in DACs. Prioritize tree planting in the DACs to reduce residents' vulnerability to extreme heat. Focus efforts on shade trees along sidewalks, at transit stops, schools, bike lanes, and within parks in the DACs.

**Policy 2.2: Adopt policies and standards for the built environment that reduce urban heat island.**

Action 2.2a: Green Development. Encourage cool or green roofs for new commercial buildings.

Action 2.2b: Cool Zones. Investigate the use of additional City facilities, such as recreation centers, to serve as cool zones.

Action 2.2c: Low-Income Weatherization Programs. Continue prioritize funding for efforts to repair and rehabilitate housing in disadvantaged communities, including programs and grants to weatherize houses for extreme heat and air pollution.

**Goal 3: Minimize risks, such as loss of life, injury, property damage, and natural resource destruction from natural and human-caused hazards.**

**Policy 3.1: Minimize flooding risks through appropriate siting and protection of structures and occupants.**

Action 3.1a: Flood Elevations. Continue to ensure finish floor elevations of new development are above the 100-year floodplain.

Action 3.1b: Development in the Floodway. Continue to limit uses in floodways to those tolerant of occasional flooding.

Action 3.1c: Flood-Resistant Critical Facilities. Continue to design new critical facilities to minimize potential flood damage. Such facilities include those that provide emergency response like hospitals, fire stations, police stations, utility lifelines, and ambulance services. Such facilities also include those that do not provide emergency response but attract large numbers of people, such as schools, theaters, and other public assembly facilities with capacities greater than 100.

**Policy 3.2: Build and maintain public infrastructure that collects and conveys stormwater and enhances water quality.**

Action 3.2a: Flood Channel Maintenance. Continue to maintain flood control channels and storm drains in accordance with habitat preservation policies through periodic dredging, repair, desilting, and clearing to prevent any loss in their effective use.

Action 3.2b: Stormwater Quality. Identify streets and intersections and other infrastructure that would be candidates for stormwater quality enhancement features.

Action 3.2c: Flood Control Funding. Continue to pursue funding opportunities for flood control projects, including collaboration with Federal, State, and local flood management agencies and other interested parties.

Action 3.2d: Drainage Master Plan. The City will consider adding a Work Program item to update the City's Master Drainage Plan.

**Policy 3.3: Implement programs and standards to mitigate wildfire risk in high wildfire hazard severity zones.**

Action 3.3a: New **Development**. All development shall be required to meet the minimum standards for adequate fire protection. The most restrictive law, regulation, or ordinance regarding fire safety applicable to development in Highland will take precedence, including compliance with the most current SRA Fire Safe Regulations and Fire Hazard Reduction Around Buildings and Structures Regulations if applicable.

**DEVELOPMENT**

*Development refers to any alterations to the natural land, residential or otherwise. Types of development are referenced to make policies more specific and can include existing development, new development, residential development and more.*

Action 3.3b: New Residential Development in Areas Designated Very High Fire Hazard Severity Zone (VHFHSZ). Residential development within areas designated as VHFHSZs should be avoided or risks mitigated through compliance with applicable codes and standards, including compliance with the most current SRA Fire Safe Regulations and Fire Hazard Reduction around Buildings and Structures Regulations. If residential development occurs within VHFHSZ, a Fire Protection Plan that describes project specific fuel modification shall be required.

Action 3.3c: Home Improvements for Vulnerable Populations. For qualifying households, promote the use of local, county, and state rehabilitation programs and defensible space assistance, and provide information to vulnerable residents to assist with efforts to improve fire safety.

Action 3.3d: Wildfire Retrofits. Encourage structural hardening retrofits for existing structures in the VHFHSZ, consistent with the current standards.

Action 3.3e: New and Existing Public Facilities. The construction of new public facilities should occur outside of areas designated VHFHSZ when feasible. Existing public facilities in the High Fire Hazard Area shall be retrofitted to be consistent with the current standards.

Action 3.3f: Maintain Emergency Evacuation Routes. Ensure that the entity charged with maintenance of the road complies with the requirements of the State Fire Code and San Bernardino Consolidated Fire Codes regarding street width, surface, grade, radius, turnarounds, turnouts, bridge construction, and lengths of fire apparatus access roads. All requirements and any deviations will be at the discretion of the Fire Code Official. Enforce these standards on new development in VHFHSZ through development review, and on existing development through code enforcement. Work with the City's Geographic Information Systems (GIS) mapping services to identify any residential areas that do not have at least two emergency evacuation routes or are otherwise inadequate due to access or timeliness of evacuation. Develop an evacuation route improvement plan upon identification of evacuation route inadequacies.

Action 3.3g: Recover from Large Fires Safely. Perform an evaluation of fire-related development standards should a major wildfire require large portions of the City be rebuilt to ensure that redevelopment standards are as fire-safe as reasonably possible.

Action 3.3h: Adequate Peakload Water Supply will be Supported. The City will coordinate with the East Valley Water District to maintain long-term integrity of peakload water supply for structural fire-fighting and wildland fire-fighting and ensure new construction is serviceable by water supply.

**Policy 3.4: Ensure that public facilities and infrastructure have adequate capacity to respond to wildfires and other relevant hazard events.**

Action 3.4a: Performance Standards. Apply fire unit deployment performance measures with future planning of fire stations.

Action 3.4b: Emergency Equipment. Consider the long-term maintenance needs of emergency equipment and facilities when developing the annual budget.

Action 3.4c: Storm Drain Capacity. Continue to ensure that existing and new storm drain and street capacities are adequate to manage a 100-year flood event.

Action 3.4d: New Public Facilities. The construction of new public facilities should occur outside of areas designated VHFHSZ when feasible. Existing public facilities in the VHFHSZ shall be retrofitted to be consistent with the current standards.

**Policy 3.5: Enforce development standards to reduce geologic risk.**

Action 3.5a: Soil Reports in Liquefaction Zones. When applicable, continue to require soil reports and implement recommendations for projects in identified areas where liquefaction or other soil issues exist.

Action 3.5b: Soil Reports for Projects on Fill. When applicable, continue to require a preliminary soil report and a report of satisfactory placement of fill prepared by a licensed geotechnical engineer or civil engineer for all buildings and structures supported on fill.

Action 3.5c: Foundation Reports. When applicable, continue to require a preliminary report for all buildings and structures supported on natural ground unless the foundations have been designed in accordance with current standards.

Action 3.5d: Renovations. Continue to require seismic retrofits for major renovations in accordance with Historic and Building Code provisions.

**Policy 3.6: Prioritize seismic retrofits of buildings that pose the greatest risk.**

Action 3.6a: Unreinforced Masonry Structures. Consistent with State law and when applicable, require the retrofitting of unreinforced masonry structures to minimize damage in the event of seismic or geologic hazards. Incentivize seismic retrofits through permit fee waiver or other city incentive.

Action 3.6b: Retrofitting of Essential Facilities. When feasible, seismic retrofit essential facilities to minimize damage in the event of seismic or geologic hazards.

**Policy 3.7: Limit the potential hazards from the transportation and disposal of hazardous waste.**

Action 3.7a: Hazardous Materials Storage and Transport. Continue to require businesses that store or transport hazardous materials to prepare a Hazardous Materials Business Plan for review and approval by the Lead Environmental Agency.

Action 3.7b: Hazardous Materials Studies. When appropriate, require new development to prepare a hazardous materials inventory and/or prepare Phase I or Phase II hazardous materials studies, including any required cleanup measures.

Action 3.7c: Household Education. Educate the public on household hazardous wastes and the proper methods of disposal.

**Goal 4: Maintain adequate emergency preparedness and response capabilities.**

**Policy 4.1: Create culturally appropriate hazard preparation and education.**

Action 4.1a: Emergency Alerts for Air Pollution. Use the emergency alert systems and other standard City communications to alert the public when local air quality reaches “Very Unhealthy” levels.

Action 4.1b: Neighborhood-Based Preparedness. Convene and regularly train neighborhood-based emergency response teams (e.g., CERT) and explore incorporating climate change response and recovery. Ensure CERT recruiting includes a diverse set of community members and leaders.

Action 4.1c: Disaster Kits. Work with local places of worship and community organizations to provide disaster kits to vulnerable populations.

**Policy 4.2: Create resilience centers throughout highland.**

Action 4.2a: Back Up Power. Continue to ensure that critical City facilities have back up energy sources such as battery storage. Prioritize clean energy sources, such as solar, where feasible.

Action 4.2b: Refrigeration. Install refrigerators at resilience centers, such as existing cooling centers and emergency shelter locations, to provide storage for medication in black out or other hazard events.

Action 4.2c: Audit Emergency Childcare. Work with non-profit organizations, such as the Red Cross, to offer emergency childcare for frontline workers in the event that schools are closed in a hazard event.

Action 4.2d: Food Distribution. Work with local foodbanks to distribute food and pop-up food pantries during hazard events.

Action 4.2e: Advertise Regional Programs. Include information on regional assistance programs in appropriate languages during a hazard event.

**Policy 4.3: Prepare residential areas for flooding and wildfire.**

Action 4.3a: Elevate and Anchor. Educate and encourage property owners in flood zones to elevate and anchor critical utilities, including electrical panels, propane tanks, sockets, wiring, appliances, and heating systems.

Action 4.3b: Sandbags. Implement a sandbag program available for residents in flood zones prior to heavy storms.

Action 4.3c: Fire Safe Communications. Prior to fire season, use outreach events and City communication resources to educate the public on how they can create a defensible space around their place of residence and evacuate in case of fire.

Action 4.3d: Require evacuation assessments on residential projects requiring an Environmental Impact Report in designated wildfire hazard severity zones.

**Policy 4.4: Ensure the Emergency Operations Center (EOC) has adequate capacity to respond to hazard events.**

Action 4.4a: EOC Technology. Continue to conduct a periodic review of technology used to support the EOC to ensure systems are updated and effective, including City GIS.

Action 4.4b: EOC Equipment. When feasible, update EOC equipment and supplies as necessary to ensure effectiveness.

Action 4.4c: Staff Training. Continue EOC training and exercise plan for the City staff with EOC responsibilities, and cross train city staff at various EOC positions.

Action 4.4d: Online Training. Expand staff training by conducting quarterly online WebEOC training for EOC staff. Include extended training formats as applicable.

Action 4.4e: Mutual Aid Participation. Continue to participate in Statewide Master Mutual Aid Agreements and local automatic aid agreements.

**Goal 5: Improve the quality of the built and natural environments to reduce disparate health and environmental impacts.**

**Policy 5.1: Adopt land use regulations that protect residential and park uses from the impacts of industrial and roadway pollution.**

Action 5.1a: Land Use Review. Conduct a review of existing Municipal Code to determine where existing legislation encourages or allows land uses and programs that are detrimental to the health of residents in DACs.

Action 5.1b: Monitor Industrial Areas. Establish a monitoring program to periodically evaluate and report the immediate and long-term health and environmental impacts of the proximity of residential and park uses to industrial areas in DACs.

Action 5.1c: Siting Industrial Uses. Disallow siting and construction of new industrial uses that could impact the health of residents in the DACs.

**Policy 5.2: Remediate and prevent pollution arising from industrial and household sources.**

Action 5.2a: Pollution Review. Conduct a review to determine where existing pollution sources are impacting residents in the DACs.

Action 5.2b: Hazards Cleanup. In conjunction with other local and regional agencies, ensure the cleanup of contaminated surface water, groundwater, and soils in affected DACs.

Action 5.2c: Green Streets. Prevent future groundwater pollution by implementing green street strategies to support a sustainable approach to stormwater, drainage, groundwater recharge, and landscaping, and incorporating green streets standard and guidelines in all streetscape improvements where feasible.

**Goal 6: Ensure access to healthy food.**

**Policy 6.1: Promote the growing of fruits and vegetables by local residents.**

Action 6.1a: School Gardens. Permit and promote “edible school yards” that provide gardens and gardening programs on school property.

Action 6.1b: Urban Agriculture. Amend the Zoning Code to allow privately owned vacant property to be used for urban agriculture.

Action 6.1c: Local Healthy Food. Encourage, through a public information campaign, street vendors, convenient stores, and other food outlets, to sell fresh produce and to reduce unhealthy food options.

**Policy 6.2: Use City resources to publicize healthy food and food assistance programs.**

Action 6.2a: Healthy Food at Public Events. Require that all City-sponsored events and City facilities provide healthy food options.

Action 6.2b: Food Assistance Programs. Advertise food assistance programs in City marketing materials and distribute information on food assistance programs including food pantries and banks.

**Goal 7: Ensure safe and sanitary housing for DAC residents.**

**Policy 7.1: Promote improvements and rehabilitation of unsafe housing in DACs, while actively preventing displacement.**

Action 7.1a: Rental Rehab. Develop a program to assist owners of rental units to rehabilitate their properties, especially those with affordable units and housing in the DACs, to meet current building standards in tandem with affirmatively furthering fair housing policies.

Action 7.1b: Low Income Weatherization. Explore administering Community Development Block Grant programs and other grants to provide free or reduced-cost weatherization for extreme heat and air pollution.

Action 7.1c: Lead Paint Testing. Include mandatory lead-based-paint testing as part of any City-funded housing rehabilitation and other housing assistance programs that may be offered.

**Policy 7.2: Adopt standards and policies that maintain safe and sanitary housing.**

Action 7.2a: Code Enforcement. Focus code enforcement efforts in DACs to improve unsafe and unsanitary conditions, focusing on trash and dumping, overcrowding, illegal home businesses, illegal garage conversions, graffiti, unpermitted plumbing and electrical, and lack of building and yard maintenance. Have code enforcement officers distribute information on tenant rights and owner and landlord responsibilities when conducting site visits. Distributed information should be translated into all relevant languages

Action 7.2b: Tenant Rights. Distribute tenant rights information and ensure that renters are not penalized for reporting on dwelling units that do not meet health and safety standards. All written outreach efforts should be translated into all relevant languages.

Action 7.2c: Crime-Free Multi-Housing Program. Encourage all apartment building owners to participate in the Crime-Free Multi-Housing Program operated by the City Police Department to reduce crime, drugs, and gangs on apartment properties.

Action 7.2d: Home Assistance. Continue to provide support for programs and facilities that provide homes for those without shelter and focus future efforts on specifically addressing the issues that arise on streets and in parks in the DACs.

**Goal 8: Ensure that parks, public facilities and services are equitably located and distributed throughout DACs, allowing easy access for residents.**

**Policy 8.1: Improve existing park quality by providing amenities and programs for play, exercise, and enhanced safety. Prioritize efforts that can be deployed quickly in under-parked communities.**

Action 8.1a: Park Access. Seek to increase the current percentage of residents within a 10-minute walk of a park, by using underused or vacant land as open space or parks.

Action 8.1b: Park Activation. Activate existing parks with permanent work out infrastructure for all ages and repair and maintain existing facilities.

Action 8.1c: Park Programs. Expand and tailor recreational and park programs, facilities, and services to meet evolving community needs. Programs and services should remain accessible and relevant to today's residents, responding to unique cultural, historic, and social needs, as well as changing demographics and income levels.

Action 8.1d: Community Events. Create a simple, accessible, and affordable process for requesting street closures and park permits for public and neighborhood events of all sizes. All forms should be translated into all relevant languages.

**Policy 8.2: Expand park availability by converting underutilized land.**

Action 8.2a: Vacant Lot Conversions. Offer fee reductions and other incentives to convert vacant lots or underutilized public rights-of-way into small parks, community gardens, or open spaces.

Action 8.2b: Linear Parks and Trails. Seek opportunities to convert public easements, such as utility corridors and parkway vistas, into parks and trails.

Action 8.2c: Parks Partnerships. Partner with schools, places of worship, and businesses to expand access to green spaces and recreation areas, especially in DACs with less accessibility to green spaces and recreation areas.

Action 8.2d: Safe Routes to Parks. Develop a Safe Routes to Parks and Schools program to promote safe, active, and engaging ways to access parks and schools.

**Policy 8.3: Create inviting public spaces in DACs where people feel safe during the day and night for everyday play, family gatherings, and community events.**

Action 8.3a: Public Art. Develop more public art, fountains, and other streetscape improvements that beautify Highland’s streets and provide a collection of permanent outdoor artwork throughout the City. Identify opportunities to support and fund local artists and students to create public art in the City.

Action 8.3b: Crime Prevention. Adopt Crime Prevention Through Environmental Design (CPTED) guidelines that deter criminal activity in neighborhoods, streets, and public areas. Include guidelines for the design of play areas, parks, sports facilities, streets and sidewalks, plazas and urban pocket parks, and housing and commercial sites, among others.

Action 8.3c: Virtual Community Resources. Provide virtual resources through the library, such as e-book services and virtual programs for those who do not have easy access to community facilities.

**Goal 9: Promote and ensure meaningful and effective participation and community capacity building in DACs, especially when developing, adopting, implementing, and enforcing plans and policies related to public health and environmental issues.**

**Policy 9.1: Create transparent City processes and forms accessible to all residents.**

Action 9.1a: City Contacts. Distribute, house-to-house in DACs, City information on all programs and City events, including phone numbers and contact information, especially for call enforcement and housing needs. All information to be translated in all relevant languages.

Action 9.1b: Meeting Advertisements. Install signage at neighborhood markets in DACs to promote and advertise City meetings and other public announcements.

Action 9.1c: Civic Engagement. To promote civic engagement, partner with appropriate organizations (e.g., community-based, faith-based, advocacy, and service) that have built relationships and trust within DACs to conduct meaningful outreach.

Action 9.1d: Virtual Meetings. Provide virtual participation options for in-person public hearings.

**Policy 9.2: Host City Council events focused on the issues facing DACs and encouraging additional community involvement.**

Action 9.2a: Open Houses. Invite residents of DACs for City Hall open houses and tours.

Action 9.2b: DAC Tours. Conduct City Councilmember visits to DACs to encourage discussion on items that affect the residents and businesses. Have City Council accompanied by representatives from the Police, Code Enforcement, Development and Community Services, and other departments. Host an annual community walk with the Mayor and other City Council members.

Action 9.2c: DAC Meetings. Dedicate one City Council meeting per year to DACs, having staff update the Council on improvements made and further needs of the residents and business owners in those communities. Provide translation headsets at all City Council meetings so that residents can engage firsthand with the content of the meetings.

**Policy 9.3: Support equitable and inclusive opportunities to build capacity and leadership skills for residents and organizations in DACs through continued civic engagement.**

Action 9.3a: Youth Engagement. Partner with school districts, community colleges, and continuing education institutions to promote civic engagement opportunities.

Action 9.3b: Community Leaders. Support and expand opportunities to build and sustain capacity among residents to advocate and engage for community and systems improvements to develop their skill sets as community leaders and to advance their roles as trusted messengers.

Action 9.3c: Board Memberships. Specifically invite residents from DACs to become board, commission, and task force members as openings occur.

Action 9.3d: Community Driven Initiatives. Support community-driven initiatives in DACs to address priorities and needs through technical assistance, data sources, meeting spaces, support services, and other staff resources.

**Goal 10: Prioritize improvements and programs that address the needs of residents in DACs.**

**Policy 10.1: Support and expand programs and services to prioritize those that identify DACs, address environmental justice issues, and foster partnerships with countywide partnerships and programs.**

Action 10.1a: Ongoing Engagement. Provide ongoing engagement with residents and stakeholders to evaluate additional criteria for the inclusion of communities not currently identified as DACs.

Action 10.1b: Funding Priorities. Prioritize funding and fiscal decisions for recreation, air quality and other environmental improvements, public infrastructure investments, community programming, and engagement opportunities in DACs.

Action 10.1c: Monitoring. Monitor progress of the goals, policies, and actions from this Element.

Action 10.1d: Annual Review. Conduct an annual review of the implementation of the goals, policies, and action of the Public Health, Safety, and Environmental Justice Element to monitor progress on goals, policies, and implementation of programs and actions and provide this information to environmental justice communities. Present this annual review to City Council on a regularly scheduled agenda and invite residents and businesses of the DACs to attend and provide input.

Action 10.1e: Plan Integration. Examine existing processes and practices for ways to embed environmental justice goals, policies, and actions throughout future updates to General Plan Elements, sustainability plans, Municipal Code, and other City-initiated planning efforts.