13.B.3 SAFETY ELEMENT

TOGETHER WE PLAN NATIONAL CITY

SAFETY ELEMENT

FOCUSED GENERAL PLAN UPDATE

CONTENTS

1. INTRODUCTION

2. EXISTING CONDITIONS

2.1. Seismic and Geologic Hazards 3
2.2. Flood Hazards and Inundation 10
2.3. Fire and Emergency Services 15
2.4. Emergency and Disaster Preparedness and Response. 17
2.5. Hazardous Materials, Brownfields and Military Installations 18
2.6. Climate Change, Adaption, and Resiliency 22

3. CITYWIDE GOALS AND POLICIES

3.1. Seismic and Geologic Hazards 29
3.2. Flood Hazards and Inundation 30
3.3. Fire and Emergency Medical Services 31
3.4. Emergency and Pre-Hospital Medical Services. 31
3.5. Emergency Disaster Preparedness and Response 32
3.6. Crime Prevention and Police Protection 33
3.7. Hazardous Materials, Brownfields, and Military Installations 33
3.8. Redevelopment of Brownfields 34
3.9. Climate Change Adaptation and Resiliency. 35

LIST OF FIGURES

Figure SE-1: Earthquake Hazard Map 5
Figure SE-2: Liquefaction Hazard Map 7
Figure SE-3: Soils Map 8
Figure SE-4: Landslide Hazard Map 9
Figure SE-5: Flood Hazard Areas 12
Figure SE-6: Dam Failure and Inundation Hazard Map 13
Figure SE-7:Tsunami Inundation Hazard Map 14
Figure SE-8: Wildfire Risk Map 16
Figure SE-9: Envirostor National City Map (July 2022). 20

LIST OF TABLES

Table SE-1: Crime Incidents in National City (2015-2019) 17
Table SE-2: Actual Average Police Response Times (2017) 18
Table SE-3: Geotracker Records for National City (July 2020) 21
Table SE-4: EnviroStor Records for National City (July 2020) 22

Page Left Intentionally Blank


CALIFORNIA REPUBLIC
ENGINE NO R-1
OVER A CENTURY OF DEDICATED SERVICE
1887
National City
Fire Department Headquarters
Station 34

CITY OF NATIONAL CITY

SAFETY ELEMENT

FEBRUARY 2023

1. INTRODUCTION

The Safety Element establishes goals and policies that work to protect the community from risks of injury, loss of life and property, and environmental damage associated with natural and manmade hazards such as wildfires, geologic and seismic hazards, flooding, hazardous materials, military installations, and brownfields. It includes mapping of known seismic and geologic hazards, along with areas subject to flooding and fire risk. This element also includes methods to reduce criminal behavior through environmental design and response objectives related to police and fire operations and emergency services. Although it is not possible to prevent or mitigate all hazards and safety issues, their destructive effects can be reduced to acceptable levels or avoided through careful planning.

This Safety Element update includes a climate adaptation and resiliency section required by Senate Bill 379. Climate change poses a spectrum of risks to communities; the risks most likely to face National City include an increased number of extreme heat days, an increased frequency and intensity of precipitation, and sea-level rise. The safety element also takes into consideration vulnerable communities (i.e., people with disabilities, seniors, children, those without personal vehicles or access to public transportation, and those with limited English proficiency). It evaluates climate-related hazards, how they affect vulnerable communities and provides a comprehensive strategy to respond and minimize the effects on community members.


NATIONAL CITY FIRE DEPARTMENT
NFD
2333

2. EXISTING CONDITIONS

The Federal Disaster Mitigation Act of 2000 requires all local governments to create a disaster plan in order to qualify for funding for hazard mitigation planning projects. The County of San Diego's Multi-Jurisdiction Hazard Mitigation Plan (October 2017) includes all of the cities in the County, as well as unincorporated areas. The Hazard Mitigation Plan addresses:

- Earthquake;
- Liquefaction;
- Landslide;
- Coastal Storms, Erosion, and Tsunami;
- Dam Failure;
- Flood;
- Wildfire and Structure Fire;
- Hazardous and Nuclear Materials Release;
- Manmade Hazards; and
- Terrorism.

2.1. SEISMIC AND GEOLOGIC HAZARDS

2.1.1. EARTHQUAKE

An earthquake is a sudden motion or trembling that is caused by a release of strain accumulated within or along the edge of the Earth's tectonic plates. Common effects of earthquakes are ground motion and shaking, surface fault ruptures, and ground failure. Earthquakes also can trigger many secondary effects, such as landslides and rock falls, urban fires, building collapse, water tank or dam failures, disruption of essential facilities and systems (water, sewer, gas, electricity, transportation, and communications), and hazardous materials release.[1]

1. County of San Diego. (October 2017). Multi-Jurisdiction Hazard Mitigation Plan.

There are five faults located near the planning area. They are listed below, including the most probable maximum Richter scale magnitude earthquake that each might cause:[2]

» Rose Canyon Fault (6.2-7.0)
» La Nación (6.2-6.6)
» Coronado Bank (6.0-7.7)
» San Diego Trough (6.1-7.7)
» San Clemente (6.6-7.7)

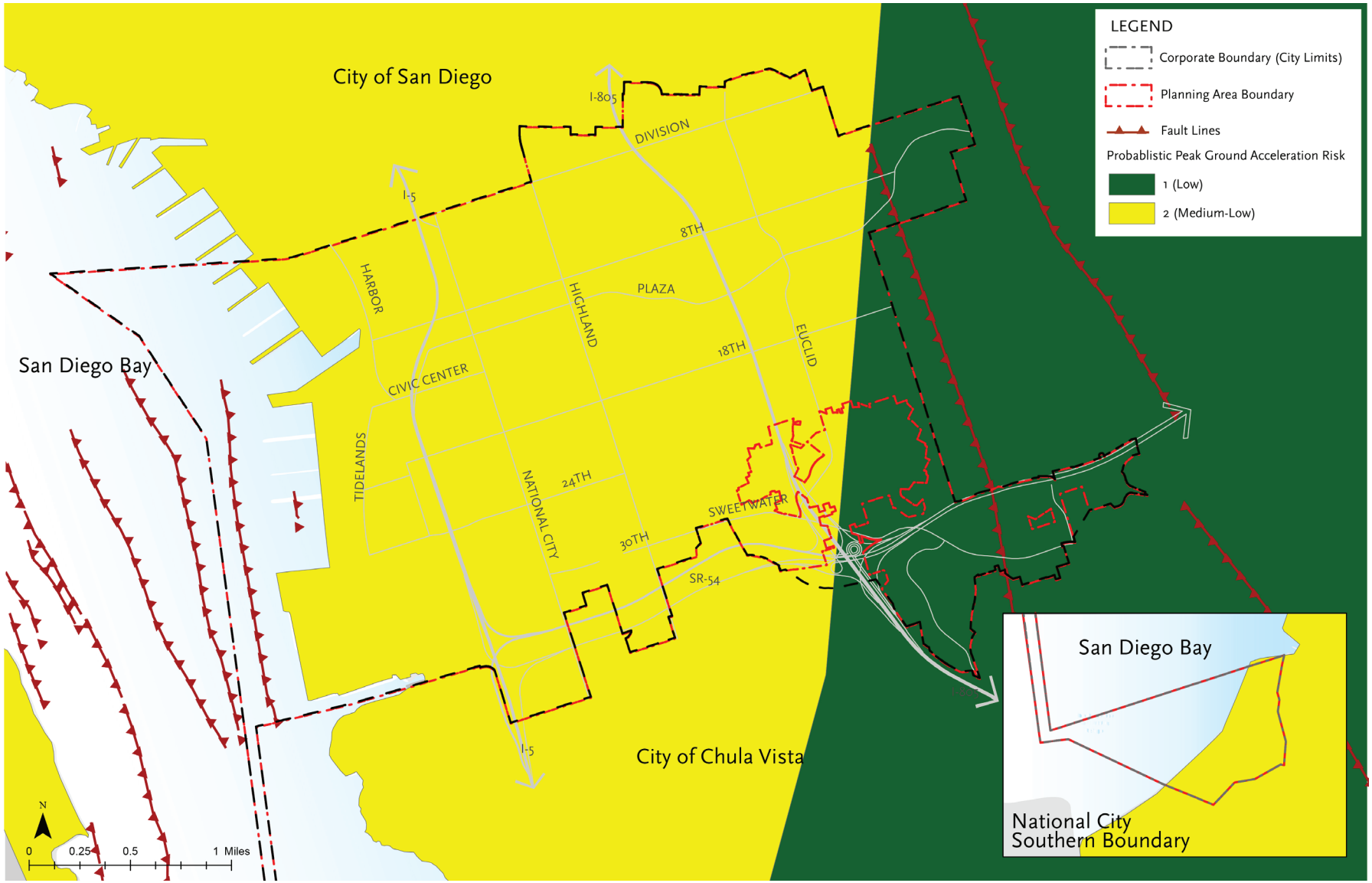
The La Nación Fault Zone poses the greatest potential earthquake threat to the planning area. The Rose Canyon Fault is considered to be the greatest potential threat to the San Diego region as a whole, due to its proximity to areas of high population, but it threatens other parts of the region more than National City.[3]

Figure SE-1 displays the location and extent of the profiled earthquake hazard for the planning area. The earthquake hazard is based on probabilistic peak ground acceleration, which correlates to how hard the earth shakes in a given area. Although located near fault lines, the planning area lies within medium-low to low shake potential zones.

A compounding factor to the risks associated with seismic events within the planning area is the prevalence of unreinforced masonry buildings. Unreinforced masonry buildings are primarily older structures, typically constructed prior to 1973. Approximately 53 percent of structures in National City were constructed prior to 1970, compared to 31 percent in San Diego County overall.[4] Unreinforced masonry buildings, due their construction type and age, are at greater risk for damage or collapse during a seismic event.[5]

2. Thomas A. Deméré, Ph.D. (2009). Faults and earthquakes in San Diego County. San Diego Natural History Museum. Retrieved January 4, 2021 from http://archive.sdnhm.org/research/paleontology/sdfaults.html.
3. County of San Diego. (October 2017). Multi-Jurisdiction Hazard Mitigation Plan.
4. U.S. Census Bureau, American FactFinder. (2000.) Census 2000, Summary File 3. Retrieved May 3, 2010 from: http://factfinder.census.gov/home/en/datanotes/expsf3.htm.
5. County of San Diego. (October 2017). Multi-Jurisdiction Hazard Mitigation Plan.

Figure SE-1: Earthquake Hazard Map



Data sources: Earthquake Hazards [National City, Fault Lines, July 2020; Probabilistic Peak Ground Acceleration, July 2020], Basemap [LAFCO, Planning Area Boundary, July 2020; National City, City Boundary, April 2020; SANGIS, Roads, April 2020]

2.1.2. LIQUEFACTION

Liquefaction is a phenomenon in which ground shaking triggered by an earthquake causes loose soils to lose strength and take on the consistency of a heavy liquid. When the soils supporting structures liquefy, bearing strength is lost, and structures collapse. Historically, seismic shaking levels in the San Diego region have not been sufficient to trigger liquefaction.[6]

Figure SE-2 displays the location and extent of areas with a risk of liquefaction within the planning area, based on probabilistic ground acceleration data from the United States Geological Survey (USGS) and a Scenario Earthquake Shake map for Rose Canyon from the California Integrated Seismic Network (CISN). National City has a low to medium liquefaction risk. However, per Figure SE-3, which shows the soil classes of the National Earthquake Hazards Reduction Program (NEHRP), there are some soil types in the western portion of the planning area which can amplify the risk of liquefaction due to NEHRP Soil Class D (stiff soil, stiff clay, and some gravel).[7] Hydric soils, or soils that are often saturated or characteristic of wetlands, can increase the potential for liquefaction.[8] The planning area contains a few hydric soils, including CkA Chino silt loam saline, Rm Riverwash, Tf Tidal flats, and TuB Tujunga sand, per Figure SE-3. However, according to the 2006 United States Department of Agriculture (USDA) Soil Survey, there are very few areas in the City that contain these soil types (See Figure SE-3).

2.1.3. LANDSLIDES

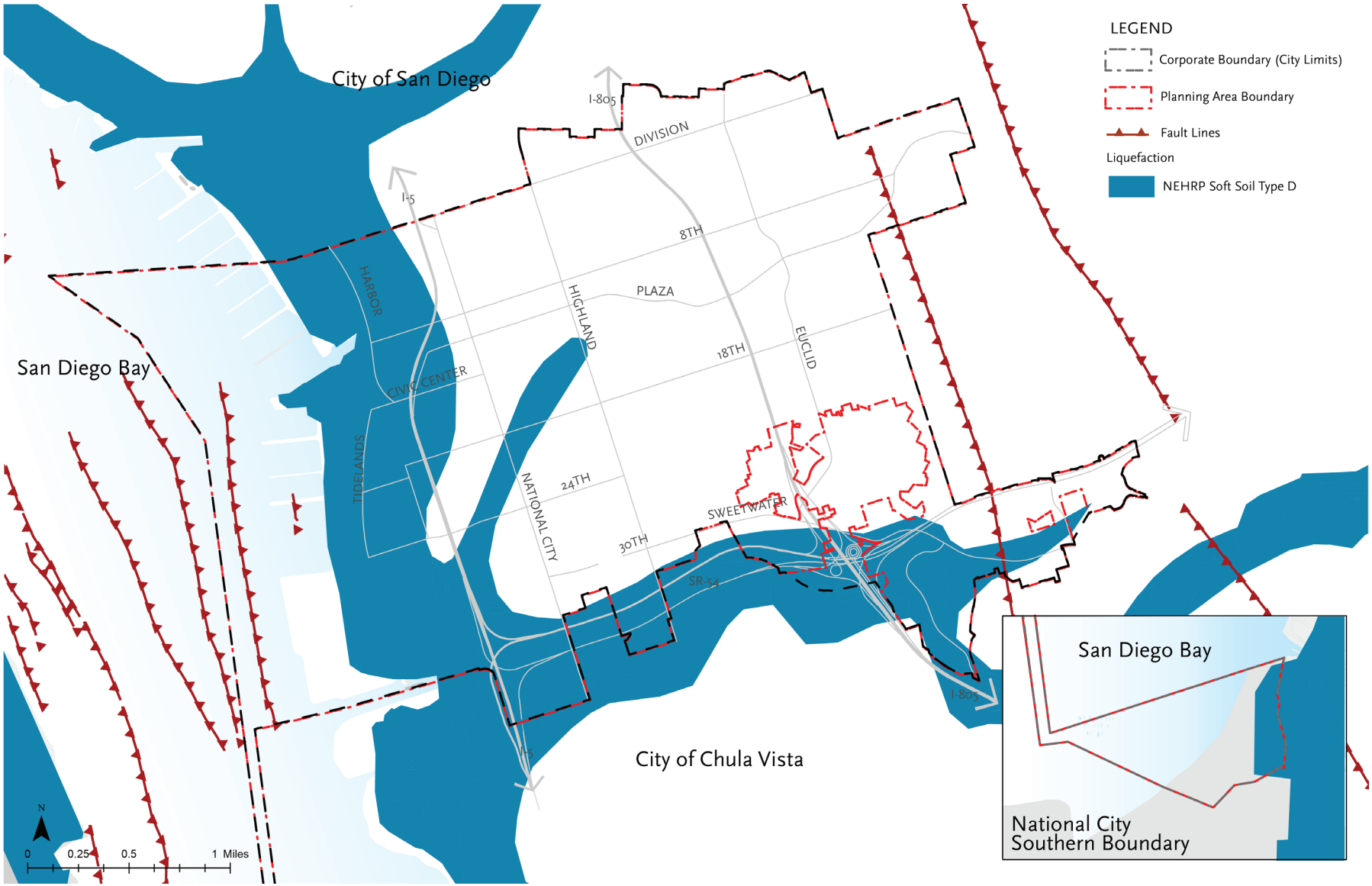
Landslides occur when masses of rock, earth, or other material move down a slope. They are influenced by human activity such as mining and construction, and natural factors, such as rain and topography. Landslides frequently accompany floods and earthquakes. Landslide risk is determined by steep slopes that have 25 percent or greater incline, soil type, and soil-slip susceptibility as defined by the USGS.[9]

National City is not identified as an area where significant landslides have occurred in the past. It is a highly urbanized area with very few slopes exceeding a 25 percent grade.

Figure SE-4 displays landslide hazards. The risk of landslides is low within the planning area.

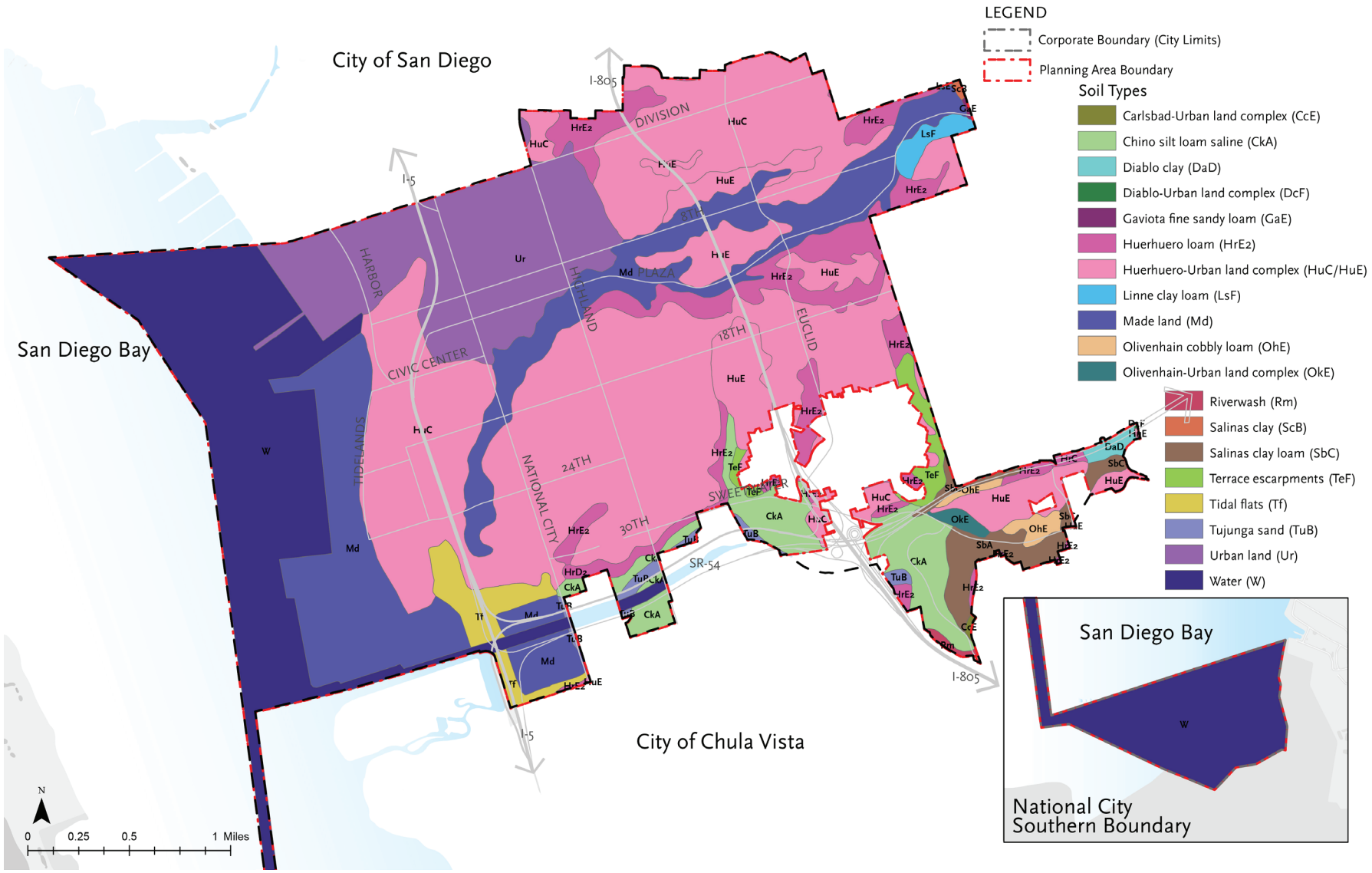
6. County of San Diego. (October 2017). Multi-Jurisdiction Hazard Mitigation Plan.
7. Indiana Geological Survey, (2011), Liquefaction Potential of Surficial Materials, 2011
8. County of San Diego (2007, July). Guidelines for determining significance – Geologic hazards.
9. County of San Diego. (October 2017). Multi-Jurisdiction Hazard Mitigation Plan.

Figure SE-2: Liquefaction Hazard Map



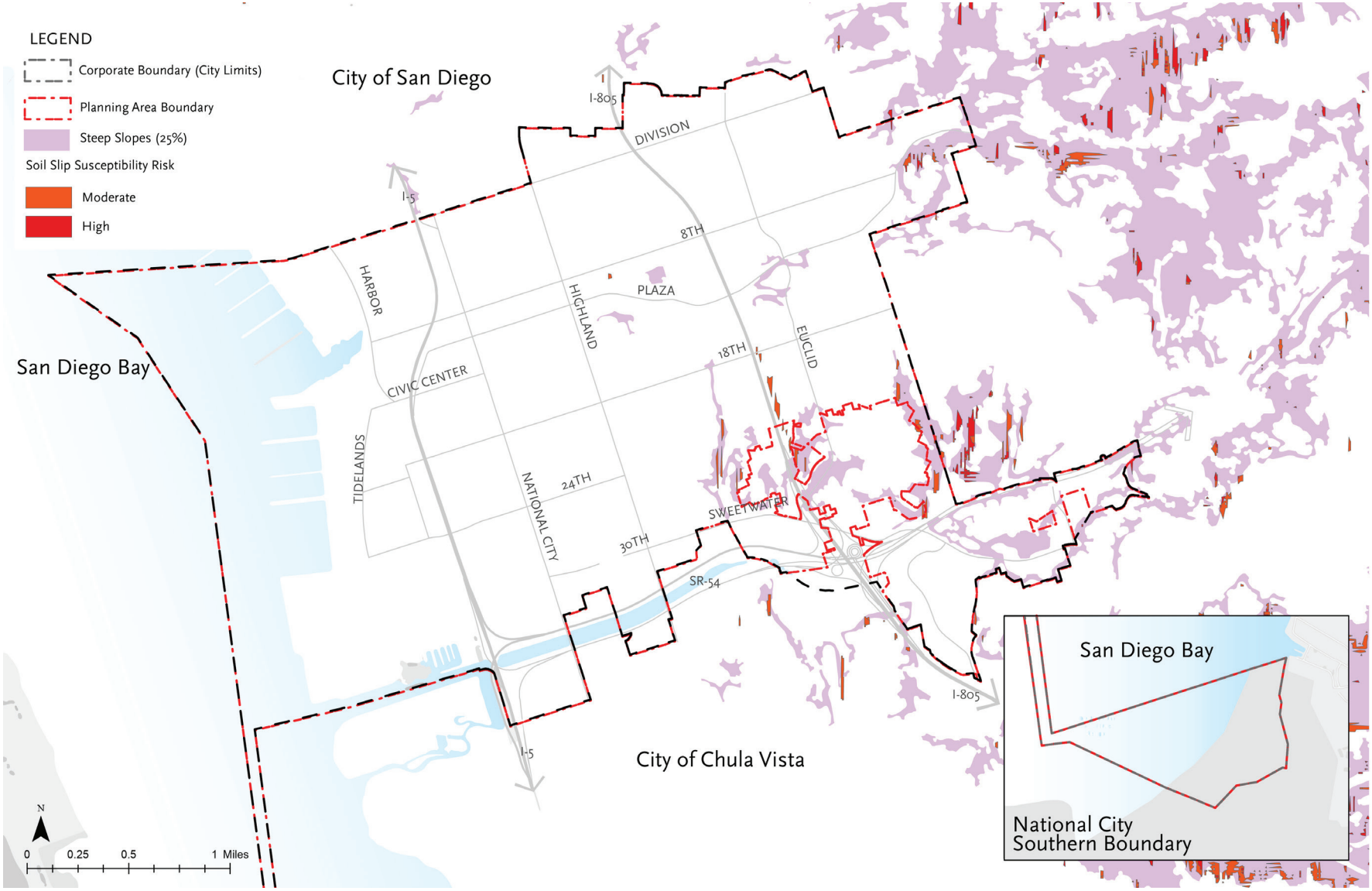
Data sources: Liquefaction [National City, Fault Lines, July 2020 SANGIS, Potential Liquefaction, June 2017)], Basemap [LAFCO, Planning Area Boundary, July 2020; National City, City Boundary, April 2020; SANGIS, Roads, April 2020]

Figure SE-3: Soils Map



Data sources: Soil Types [SANGIS, Soils, April 2015)], Basemap [LAFCO, Planning Area Boundary, July 2020; National City, City Boundary, April 2020; SANGIS, Roads, April 2020]

Figure SE-4: Landslide Hazard Map



Data sources: Soil Types [SANGIS, Soils, April 2015)], Basemap [LAFCO, Planning Area Boundary, July 2020; National City, City Boundary, April 2020; SANGIS, Roads, April 2020]

2.2. FLOOD HAZARDS AND INUNDATION

A flood occurs when excess water from snowmelt, rainfall, or storm surge accumulates and overflows onto a river's bank or to adjacent floodplains. Floodplains are lowlands adjacent to rivers, lakes, and oceans that are subject to recurring floods. Several factors contribute to the severity of floods including rainfall intensity and duration.[10]

2.2.1. HISTORIC FLOODING

Due to the city's close proximity to the Bay and its relatively flat topography, the city has experienced flood damage from historical flooding events. The Sweetwater River drainage area comprises approximately 219 square miles, and according to historical floodplain maps, consisted of a poorly defined channel in a very broad floodplain. In 1968, Congress authorized the construction of the Sweetwater Flood Control Channel and the associated SR-54 construction.[11] Circa 1976, the Unites States Army Corps of Engineers (ACOE) started building the Sweetwater Channelization project (including widening the channel and the construction of levees) to reduce the limits of the existing floodplain. The ACOE project was designed to convey the 500-year flood within the channel in order to considerably reduce the overflow of the Sweetwater River.[12] The project included the construction of levees on both the north and south sides of the channel, which extend from I-5 to I-805. The Sweetwater River Channel protects historically flood-prone areas in National City, Chula Vista, and the unincorporated area of San Diego County.

10. County of San Diego. (October 2017). Multi-Jurisdiction Hazard Mitigation Plan.
11. US Army Corps of Engineers, Sweetwater River Final Environmental Impact Statement, March 1982, p.1
12. FEMA, San Diego County Flood Insurance Study, last revised September 29, 2006, p. 44

2.2.2. FLOOD HAZARD AREAS

The potential for flood hazards in the planning area generally exists along the entire bayfront, as well as the three major drainage basins: Sweetwater River, Paradise Creek, and Las Puleta Creek.

To prepare and mitigate hazards from flooding, National City participates in the National Flood Insurance Program. Potential flood zones are identified on flood insurance rate maps (FIRMs) that are supplied by FEMA. The maps are based on hydrologic (the distribution of water on the surface) analysis, and hydraulic (the movement of water) analysis. Data used in preparing the FIRMs includes information on historical storm systems, tides, waves, beach profiles, topography, and drainage patterns.

FEMA designates flood hazard areas in a 100-year flood category and a 500-year flood category. The 100-year flood zone indicates the flood elevation that has a one percent chance of being equaled or exceeded each year. The 500-year flood zone indicates that the flood elevation has a 0.2 percent chance of exceedance each year. Figure SE-5 Flood Hazard Zones, identify the floodplain areas within the planning area, along with the locations of critical public facilities (e.g., fire stations, police stations, schools, and government buildings). Figure SE-5 also illustrates the streams and creeks and floodplain limits as depicted on the 2020 FIRM maps as well as the floodplain and levee protection zones as a result of the ACOE channelization improvements (constructed year 1997).

In addition to the riverine flood-prone areas identified on the FEMA FIRM panels, the planning area also may experience flooding within low-lying coastal areas due to tidal surges and in scattered areas throughout the city along smaller tributaries.

2.2.3. DAM FAILURES

Dam failure can cause a significant amount of loss of life and structures due to flash flooding occurring soon after the initial break. Dam failure is usually the result of age, poor design, or structural damage caused by a major event, such as an earthquake or flood. Dam failures are considered low probability, high-loss events.

Two major dam failures have been recorded in San Diego County. They both occurred as a result of the Hatfield Flood of 1916, which caused the failure of both the Sweetwater and Lower Otay Dams, resulting in 22 deaths and $4.5 million in damages.[13]

The three closest dams to National City are the:

» Sweetwater Dam (5.33 miles away);
» Bonita Long Canyon Dam (4 miles away); and
» Eastlake Dam (9.5 miles away).

Figure SE-6 illustrates the dam failure hazard for the planning area. As shown on the map, there are some parts of the planning area, primarily along the southern boundary, that would be subject to inundation if the Sweetwater Dam failed.

2.2.4. COASTAL STORMS, COASTAL EROSION, AND TSUNAMIS

Coastal storms, coastal erosion, and tsunamis are mapped and profiled as a group since many of the same factors and risks are involved. Coastal storms can cause increases in tidal elevations, wind speed, and erosion. There were 11 Proclaimed States of Emergency for Weather/Storms in San Diego County between 1950 and 2017. In January and February 1983, the strongest-ever El Niño-driven coastal storms caused over 116 million dollars in beach and coastal damage. Thirty-three homes were destroyed, and 3,900 homes and businesses were damaged. Other coastal storms that caused notable damage were during the El Niño winters of 1977-1978, 1997-1998, and 2003-2004. Other Proclamations occurred in December 2010, July 2015, and February 2017.[14]

Coastal erosion is the gradual wearing away of coastal land and occurs when more sediment is lost along a particular shoreline than is redeposited by the water body. The risk of damage due to coastal erosion in National City is very low because there are no steep cliffs along the shoreline.

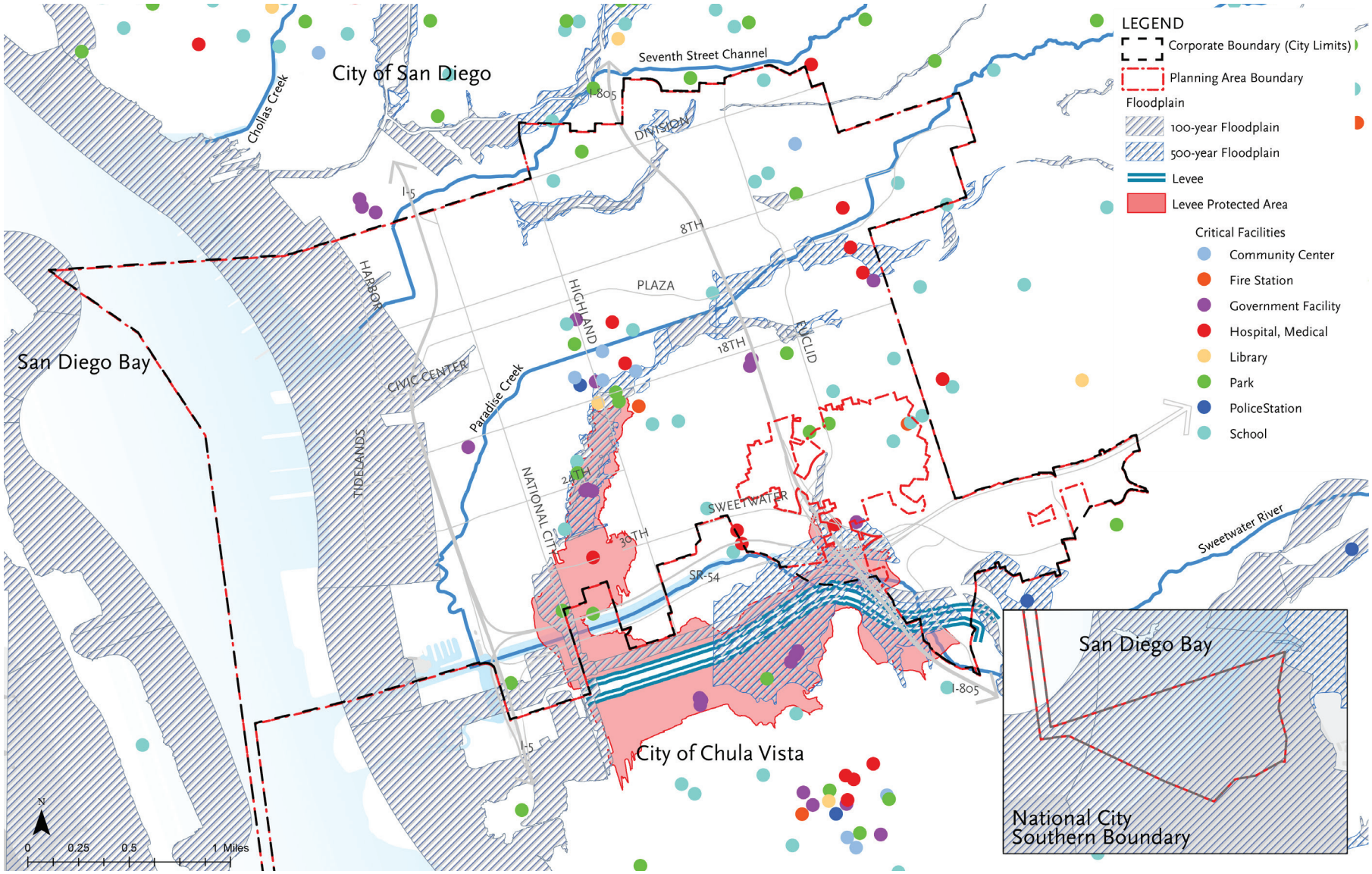
Tsunamis are waves caused by fault disturbances along the ocean floor. They travel at very fast speeds until they reach the coastline, where their speed and wavelength decrease, and their height increase greatly. The largest tsunami effect recorded in San Diego occurred on May 22, 1960, and had a maximum wave height of 2.1 feet. In this event, 80 meters of dock were destroyed, and a barge sunk in Quivera Basin in Mission Bay. Damage does not necessarily occur in direct relationship to wave height. Other tsunamis have occurred in San Diego County with higher wave heights, but did not cause as much damage as the 1960 tsunami.

National City is relatively well protected from coastal storms and erosion because of its position within the San Diego Bay behind Coronado Island and the Silver Strand, an isthmus that connects Coronado to the mainland. The tsunami risk primarily occurs along most of the coast and the mouths of Paradise Creek and Sweetwater River, as shown on Figure SE-7.

13. County of San Diego (2007, August). Floodplain Management Plan.

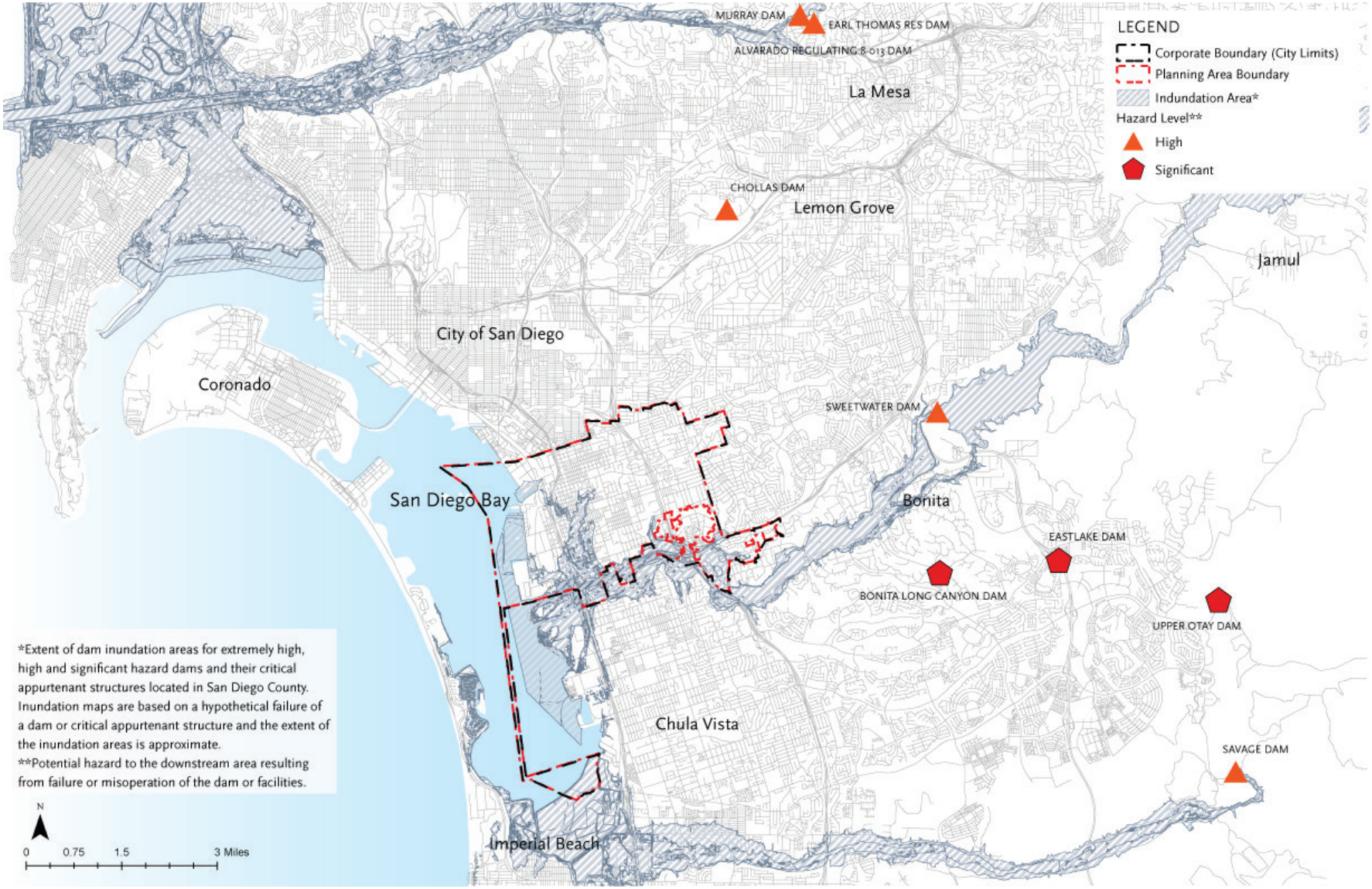
14. County of San Diego (2007, August). Floodplain Management Plan.

Figure SE-5: Flood Hazard Area Map



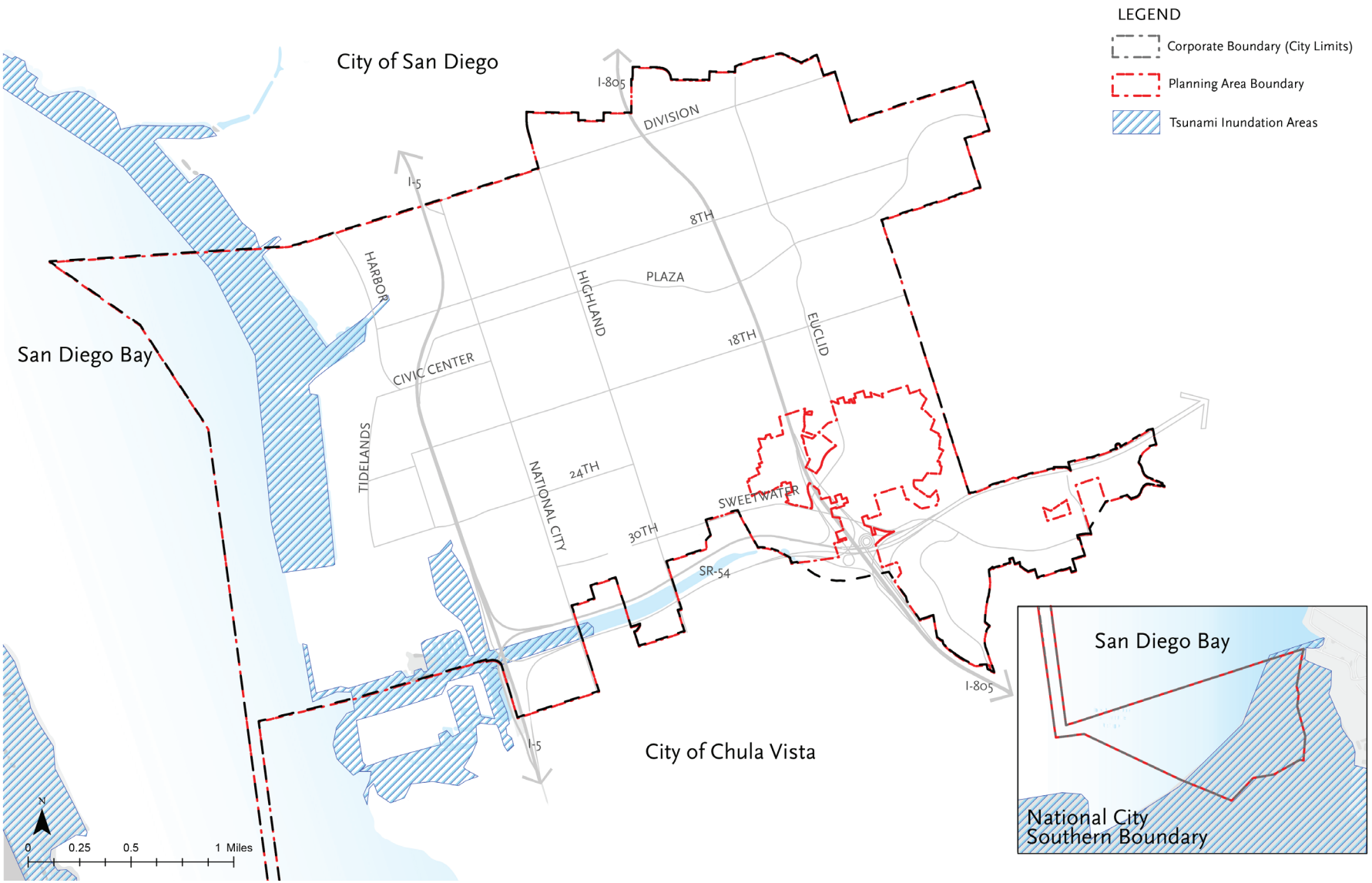
Data sources: Flood Hazard Zones [SANGIS, Floodplain, June 2020 (As derived from the National Flood Hazard Layer (NFHL) data which incorporates all Flood Insurance Rate Map (FIRM) databases published by the Federal Emergency Management Agency (FEMA), and any Letters Of Map Revision (LOMRs) that have been issued against those databases since their publication date. Latest Study Effective Date 12/20/2019, Latest LOMR Effective Date 06/22/2020); Places, June 2020; U.S. Army Corp of Engineers, National Levee Database, Accessed July 2020], Basemap [LAFCO, Planning Area Boundary, July 2020; National City, City Boundary, April 2020; SANGIS, Roads, April 2020]

Figure SE-6: Dam Failure and Inundation Hazard Map



Data sources: Dam Failure Hazards [SANGIS, Dams, May 2016; Dam Inundation Areas, June 2020] Basemap [LAFCO, Planning Area Boundary, July 2020; National City, City Boundary, April 2020; SANGIS, Roads, April 2020]

Figure SE-7: Tsunami Inundation Hazard Map



Data sources: Dam Failure Hazards [SANGIS, Dams, May 2016; Dam Inundation Areas, June 2020] Basemap [LAFCO, Planning Area Boundary, July 2020; National City, City Boundary, April 2020; SANGIS, Roads, April 2020]

2.3. FIRE AND EMERGENCY SERVICES

2.3.1. STRUCTURE FIRES AND WILDFIRE

There are several fire risk factors affecting the planning area. An increase in the population of minors and seniors has caused greater dependence issues, as seniors and children require more assistance when evacuating a structure; the high cost of housing has led to the overcrowding of homes; and approximately 92 percent of the homes in National City are over 30 years old, and approximately 52 percent are over 50 years old, as compared to approximately 84 percent and 31 percent of homes in San Diego County, respectively.[15] This is the age at which electrical and heating systems are more likely to cause fires, if not properly maintained.[16]

The planning area has pockets of grass, brush, and trees in between developed areas and in the hills located to the east. However, the planning area is identified as urban unzoned and does not pose a severe wildfire threat, as illustrated on Figure SE-8. The greatest risk for wildfires is east of the planning area near Bonita.

2.3.2. FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

The City's Fire Department provides fire protection and emergency medical services in National City and the Lower Sweetwater Fire Protection District covers the unincorporated area of Lincoln Acres. There are three fire stations serving the planning area. Station 34 is located at 343 East 16th Street, Station 33 is located at 2005 East 4th Street, and Station 31 is located at 2333 Euclid Avenue in unincorporated Lincoln Acres. The administration office is located at 1243 National City Boulevard. The Fire Department is comprised of three divisions: Administration, Fire Prevention, and Operations, and maintains a staff of 46 personnel that provide fire control, emergency medical service, rescue, and fire prevention and education.

The Fire Department is dependent on automatic aid and mutual aid partners, typically from San Diego, Chula Vista, Federal Fire, and the Bonita Fire Protection District. The National City Fire Department had a response time of six minutes thirty-four seconds 90 percent of the time for 911-emergency calls.[17]

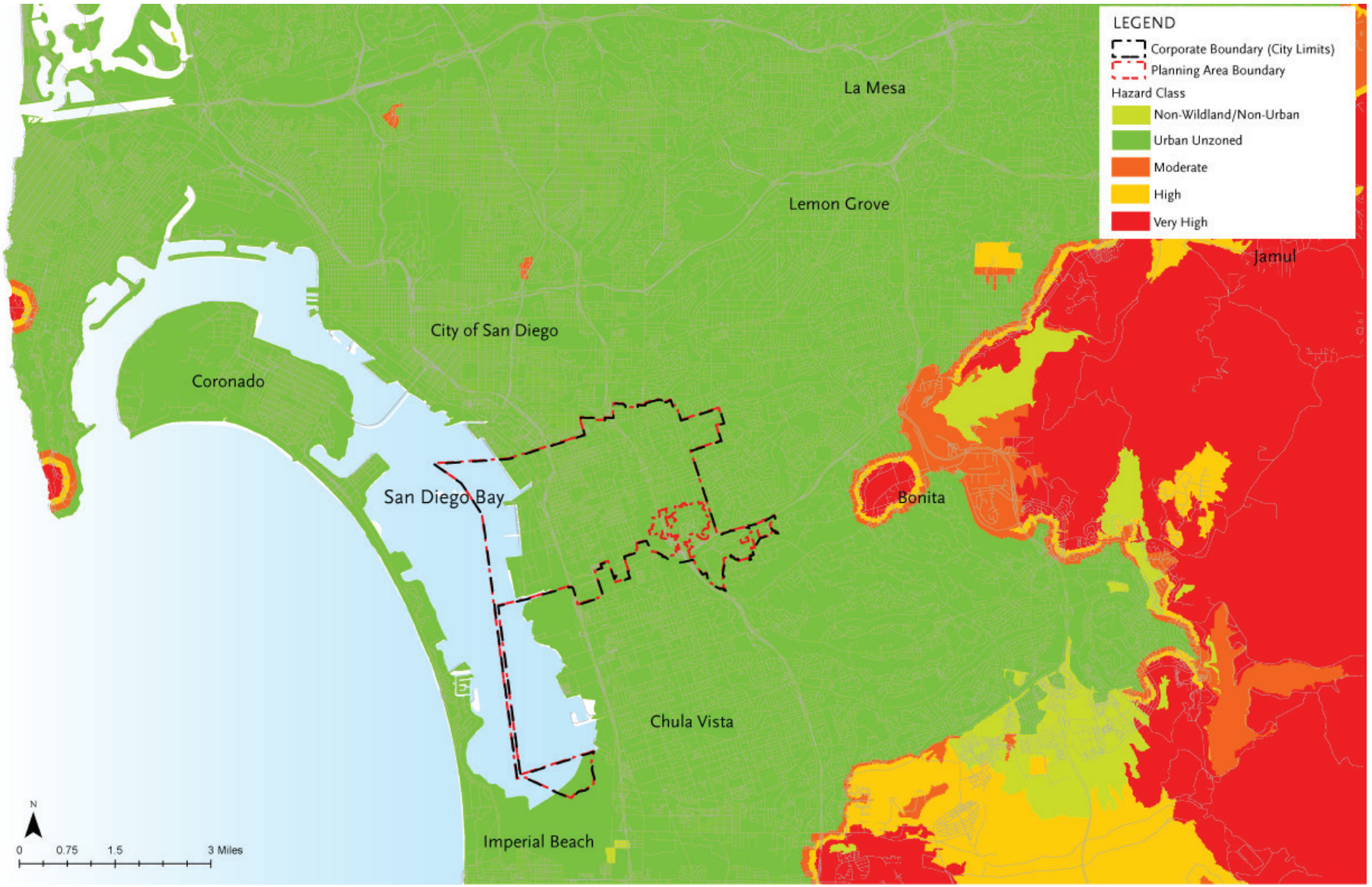
Prior to approval of a development project or issuance of a building permit, the City of National City Fire Department and the Sweetwater Authority verify that the peak load water supply requirement can be met. Fire flow requirements vary depending on a number of factors, such as a building's use, size, type of construction, building material, and density. The National City Fire Department issues fire flow requirement letters to building contractors identifying the fire flow requirements for specific building types, and the Sweetwater Authority reviews and comments on those letters to ensure that its water mains have the capability to handle those requirements.[18]

The National City Fire Department contracts with a private ambulance provider, to provide emergency medical services to the planning area. Fire department personnel typically arrive on scene first and provide basic and advanced life support services. When paramedic ambulance crews arrive to provide advanced life support services, fire department personnel regularly assist.

In most instances, depending on staffing levels, the Fire Department provides a paramedic on Truck 34, Engine 34, Engine 31, and Squad 33 in addition to paramedic services on ambulances provided by the ambulance provider.

15. U.S. Census Bureau,2018 American Community Survey 1-Year Estimates, Table ID: B25034, Housing units, Year Structure Built for San Diego County and National City
16. Citygate Associates, LLC (2009, January). Fire Response Study for the National City Fire Department.
17. Amedee, Walter (2020, August 3). National City Fire Department. Personal communication.
18. Hernandez, Robert. (2009, February 9). National City Fire Department. Personal Communication.

Figure SE-8: Wildfire Risk Map



Data sources: Wildfire Risk [SANGIS, Fire Hazard Severity Zones, April 2015] Basemap [LAFCO, Planning Area Boundary, July 2020; National City, City Boundary, April 2020; SANGIS, Roads, April 2020]

2.4. EMERGENCY AND DISASTER PREPAREDNESS AND RESPONSE

During fiscal year 2005-2006, the President directed the Secretary of the Department of Homeland Security to develop and administer a National Incident Management System (NIMS), which provides a consistent nationwide approach for federal, state, local, and tribal governments to work together more effectively and efficiently to prevent, prepare for, respond to, and recover from disasters. National City has integrated NIMS into the emergency management system by providing all Emergency Operations Center (EOC) staff members with appropriate NIMS training. EOC staff members may perform multiple functions when the EOC is activated. Each City Department has assigned functions and positions. The goal is to have three individuals trained for each EOC position to allow for sustained 24 hour, seven day-a-week EOC operations. The EOC manages the Department Operations Centers (DOCs), when they are activated, who in turn manage the field operations. The EOC requests additional resources from the County EOC when necessary.[19]

The City adopted an updated Emergency Operations Plan in October 2020. The plan describes a comprehensive emergency management system which provides for a planned response to disaster situations associated with natural disasters, technological incidents, and nuclear-related incidents. It describes the overall responsibilities for protecting life and property and assuring the overall wellbeing of the population. The plan also identifies the sources of outside support that might be provided by other jurisdictions as well as the private sector.[20]

19. Amedee, Walter (2009, October 14). National City Fire Department. Personal communication.
20. City of National City. (2000). Emergency Plan.

2.4.1. CRIME PREVENTION AND POLICE PROTECTION

According to the National City Police Department, the total violent and property crime incidents in the City increased by an incremental amount between 2018 and 2019 (see Table SE-1, below).

The National City Police Department considers gang activity to be one of the root causes of violent crime problems in National City. There are four gangs and approximately 300 known gang members in National City . It is noted that the Old Town National City (OTNC) gang, has several subsets. Furthermore, to the known gang members, there are approximately 100 gang associates. In addition, tagging crews in National City are also known to commit violent acts, similar to known gang member activities.

CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN

Crime Prevention through Environmental Design (CPTED) is a multi-disciplinary approach to reducing crime and increasing perceived safety. It seeks to dissuade offenders from committing crimes by manipulating the physical environment in which those crimes

Table SE-1: Crime Incidents in National City (2015-2019)

Offense	2015	2016	2017	2018	2019
Violent Crime					
Homicide	2	3	3	2	0
Rape	17	13	23	22	25
Robbery	142	108	109	101	128
Aggravated Assult	163	143	161	180	204
Total Violent Crime	**324**	**267**	**296**	**305**	**357**

Offense	2015	2016	2017	2018	2019
Property Crime					
Burglary	183	182	132	127	115
Larceny	942	734	667	748	735
Motor Vehicle Theft	324	460	358	292	274
Arson	14	5	11	8	5
Total Property Crime	**1,643**	**1,638**	**1,168**	**1,175**	**1,129**

Source: Cekander, Lauren. (August 6, 2020). National City Police Department.
NR = Not Reported

occur.[21] The three most common built environment strategies applied in CPTED are natural surveillance, natural access control, and natural territorial reinforcement. Natural surveillance increases the perceived threat of apprehension to a criminal, who believes he can be seen. Natural surveillance can be implemented by designing sites in such a way as to maximize visibility and foster social interaction among legitimate users of both private and public space. Natural access control attempts to limit the opportunity for crime by taking steps to clearly differentiate between public space and private space. It is accomplished through the conscientious placement of entrances and exits, fencing, lighting, and landscaping, as to limit access or control the flow of ingress and egress to an area. Finally, territorial reinforcement promotes social control through a heightened definition of space and ownership. An environment designed to clearly delineate private space creates a sense of ownership. "Owners" typically have a vested interest and are more likely to challenge intruders. This also creates an environment where "strangers" or "intruders" stand out and are more easily identified.

21. International Clearinghouse on Crime Prevention through Environmental Design. (n.d.) FAQs. Retrieved April 8, 2010 from http://www.thecptedpage.wsu.edu/.

2.4.2. POLICE PROTECTION

The National City Police Department employs 92 officers and 43 professional staff members. The police station is located at 1200 National City Boulevard. The Department's actual average response times are divided into five categories (see Table SE-2). The Department seeks to maintain a response time of less than six minutes for Priority 1 calls. Presently, this response time is being met.

Table SE-2: Actual Average Police Response Times (2017)

Category	Time
Priority 1 - Emergency	5:15
Priority 2 - Urgent	8:36
Priority 3 - Serious	18:56
Priority 4 - Non-Urgent	32:00
Priority 5 - Self-Initiated/Other	4:07

Note: Priority-5 usually occurs when an officer makes his own stop and it is called into dispatch for accountability purposes; therefore, it has a fast response time.Source: Cekander, Lauren. (August 6, 2020). National City Police Department.

2.5. HAZARDOUS MATERIALS, BROWNFIELDS AND MILITARY INSTALLATIONS

2.5.1. HAZARDOUS MATERIALS FACILITIES AND TRANSPORT

Hazardous materials include a wide variety of substances commonly used in households and businesses. Used motor oil, paint, solvents, lawn care and gardening products, household cleaners, gasoline, and refrigerants are among the diverse range of substances classified as

hazardous materials. Nearly all businesses and residences generate some amount of hazardous waste. Certain businesses and industries generate larger amounts of such substances including gas stations, automobile service and repair shops, printers, dry cleaners, and photo processors. Hospitals, clinics, and laboratories generate medical waste, which is also potentially hazardous.

Health and environmental risks associated with hazardous materials are related to releases that can occur at facilities (fixed site) or along transportation routes (off-site). Releases can occur as a result of human carelessness, technological failure, intentional acts, and natural hazards. Hazardous materials releases, depending on the substance involved and type of release, can directly cause injuries and death and/or contaminate air, water, and soils.[22]

Figure SE-9 illustrates the Department of Toxic Substances Control (DTSC)'s EnviroStor online data management system for tracking cleanup, permitting, enforcement, and investigation efforts at hazardous waste facilities and sites with known or suspected contamination issues, as well as the State Water Resources Control Board (SWRCB)'s Geotracker database for sites that impact, or have the potential to impact, water quality in California, with emphasis on groundwater within the planning area.[23]

Hazardous materials facilities are regulated by the San Diego County Department of Environmental Health's (DEH) Hazardous Material Division (HMD). HMD's primary goal is the protection of human health and the environment by ensuring that hazardous materials, hazardous waste, medical waste, and underground storage tanks are properly managed. There are a total of 12,747 sites with permits to store and maintain chemical, biological, and radiological agents, and explosives in the County (permitted sites).[24]

According to data compiled by the Environmental Health Coalition (EHC), National City has a greater number of hazardous materials facilities per square mile than the incorporated areas of San Diego County, particularly within the Westside (Old Town) neighborhood where some of these facilities are within close proximity to residential uses. Through implementation of National City's Westside Specific Plan, the City is in the process of addressing this mix of land uses that are part of the Westside neighborhood.

Additionally, three freeways (i.e., I-5, I-805, and SR-54) and freight rail lines pass through the city, making it susceptible to hazardous spills, releases, or accidents. The major transit corridors of I-5 and I-805 have been the locations of the majority of incidents that the County's Hazardous Incident Response Team (HIRT) has responded to in recent years.

22. County of San Diego. (October 2017). Multi-Jurisdiction Hazard Mitigation Plan.
23. County of San Diego. (October 2017). Multi-Jurisdiction Hazard Mitigation Plan.
24. County of San Diego. (October 2017). Multi-Jurisdiction Hazard Mitigation Plan.

2.5.2. BROWNFIELDS

A brownfield site is real property that may include the presence of a hazardous substance, pollutant, or contaminant. In addition to being contaminated, or thought to be contaminated, brownfields are generally underutilized due to perceived remediation costs and liability concerns. Due to National City's industrial and shipping-based history, a substantial amount of the acreage west of I-805 contains brownfields.

The GeoTracker database reports 41 Active sites with potential contamination issues to water quality and groundwater resources, illustrated in Figure SE-9 and summarized in Table SE-3.

Sites with potential contamination issues for National City are illustrated in Figure SE-9 as Envirostor sites and statuses. Table SE-4 summarizes the clean-up records for National City. The remediation, or clean-up, of a brownfield site depends on its planned future use and the type and extent of contamination. Once contamination issues are addressed, however, the site can be redeveloped to a productive use (such as housing) and support economic development goals. The repurposing of brownfield sites is important, given the limited availability of vacant land in the City.

Figure SE-9: Envirostor National City Map (December 2022)

Data sources: Department of Toxic Substances Control's EnviroStor online data management system (July 2022)

Table SE-3: Geotracker Records for National City (July 2020)

Site/Facility Type (1)	Active/Open (7)	Closed (8)
Cleanup Progam Site (2)	9	78
Leaking Underground Storage Tank (LUST) Cleanup Sites (3)	8	92
Land Disposal Site (4)	2	1
Permitted Underground Storage Tank (UST)	22	N/A
Total	**41**	**171**

(1) Geotracker definitions: https://geotracker.waterboards.ca.gov/site_type_definitions

(2) Cleanup Program Site: Includes all "non-federally owned" sites that are regulated under the State Water Resources Control Board's Site Cleanup Program and/or similar programs conducted by each of the nine Regional Water Quality Control Boards. Cleanup Program Sites are also commonly referred to as "Site Cleanup Program sites". Cleanup Program Sites are varied and include but are not limited to pesticide and fertilizer facilities, rail yards, ports, equipment supply facilities, metals facilities, industrial manufacturing and maintenance sites, dry cleaners, bulk transfer facilities, refineries, mine sites, landfills, RCRA/CERCLA cleanups, and some brownfields. Unauthorized releases detected at Cleanup Program Sites are highly variable and include but are not limited to hydrocarbon solvents, pesticides, perchlorate, nitrate, heavy metals, and petroleum constituents, to name a few.

(3) LUST Cleanup Site: includes all Underground Storage Tank (UST) sites that have had an unauthorized release (i.e. leak or spill) of a hazardous substance, usually fuel hydrocarbons, and are being (or have been) cleaned up. In GeoTracker, Leaking Underground Storage Tank (LUST) sites consist almost entirely of fuel-contaminated LUST sites (also known as "Leaking Underground Fuel Tank", or "LUFT" sites) which are regulated pursuant to Title 23 of the California Code of Regulations, Chapter 16, Article 11.

(4) Land Disposal Site: Includes sites with solid and/or liquid wastes discharged to land such as landfills, mines, surface impoundments, waste piles, and land treatment facilities. These may be regulated pursuant to the California Code of Regulations (Chapter 15 of Title 23, or Title 27), or regulated pursuant to the California Water Code. Land disposal sites regulated pursuant to the California Water Code include composting facilities. Wastes contained at land disposal sites are characterized as Class I (hazardous), Class II (designated), Class III (non-hazardous), or Unclassified (inert) pursuant to the California Code of Regulations, Title 22.

(5) Permitted UST: includes facilities at which the owner or operator has been issued a permit to operate one or more USTs by the local permitting agency. Permitted UST Facilities are imported weekly from the California Environmental Reporting System (CERS).

(6) Source: State Water Resources Control Board, Geotracker, Project Search Results for National City, CA. Accessed July 29,2020. https://geotracker.waterboards.ca.gov/search?CMD=search&case_number=&business_name=&main_street_name=&city=National+City&zip=&county=San+Diego&SITE_TYPE=LUFT&SITE_TYPE=SLIC&SITE_TYPE=LANDFILL&SITE_TYPE=DOD%2C+DODPRIV%2C+DODUST&SITE_TYPE=WDR&SITE_TYPE=IRRIGATED_LANDS&SITE_TYPE=SAMPPOINTPUBLIC&SITE_TYPE=UST&SITE_TYPE=NONCLEANUP&SITE_TYPE=PROJECT&SITE_TYPE=CAF&SITE_TYPE=WATERPONDS&SITE_TYPE=INJECTION&SITE_TYPE=GWMPLAN&SITE_TYPE=GWMPEX&SITE_TYPE=OTHEROILGAS&oilfield=&STATUS=&BRANCH=&MASTER_BASE=&Search=Search

(7) Open = investigation is underway

(8) Closed = investigated and meets regulatory cleanup requirements

Table SE-4: EnviroStor Records for National City (July 2020)

Project Type	Active/ Certified/ Refer to other Agency	Closed/Inactive
Voluntary Cleanup	1	0
Tiered Permit	4	3
Corrective Action	2	0
State Response	4	0
Military Evaluation	1	4
Non-Operating	0	1
School Investigation	0	4
Operating Permit	1	0
Evaluation – 1248 Local Agency	8	0

Source: Department of Toxic Substances Control, Envirostor database, Search: National City, CA, Accessed July 2020

2.5.3. MILITARY INSTALLATIONS

The military utilizes hazardous materials in its operations, including the powering of large ships and submarines. The U.S. Navy's Safety Department at Naval Base San Diego has responsibilities that include mishap investigation, reporting and recordkeeping, workplace inspections, hazardous material control and management, employee reports of unsafe/unhealthful working conditions, relations with federal Occupational Safety and Health Administration (OSHA) officials, and training.[25]

25. Naval Base San Diego (n.d.). Safety. Retrieved February 12, 2010 from https://www.cnic.navy.mil/sandiego/Programs/Operations/Safety/index.htm.

2.6. CLIMATE CHANGE, ADAPTION, AND RESILIENCY

Climate change is already affecting the City of National City and is projected to do so well into the foreseeable future. Current and projected climate change impacts as discussed in California's Fourth Climate Change Assessment: San Diego Region Report (2018), includes increased temperatures, changes in precipitation patterns, increased wildfires, increased flooding, and sea-level rise. These changes have the potential to have widespread impacts ranging from flooding risks, extreme heat, public health and safety, ecosystem function, and economic continuity. This section of the Safety Element evaluates climate related risks and its potential impacts to National City, and strategies to address or reduce the impacts of climate change.

2.6.1. REGULATORY FRAMEWORK

California Senate Bill 379 will require cities and counties within California to integrate climate adaptation into their general plans by January 1, 2017 or January 21,2022, depending on whether that city or county has adopted a local hazard mitigation plan. This requires the safety element to be updated to address climate adaptation and resilience strategies applicable to the city or county based on a vulnerability assessment, a set of adaptation and resiliency goals or policies, and a set of feasible implementation measures.

2.6.2. CLIMATE CHANGE RISK IN NATIONAL CITY

By understanding trends, identifying vulnerabilities, developing adaptation strategies, and monitoring results, National City can move towards a more equitable, secure, and resilient future. This section identifies historic, current, and anticipated trends of climate change risks in National City.

EXTREME HEAT

National City will likely experience an increase in the frequency and duration of extreme heat events due to climate change, impacting community health and the viability of transportation networks. Temperature is projected to increase substantially, by 5˚F to 10 ˚F by the end of the 21st century. Along with mean temperature, heat wave frequency will increase, with more intensity and longer duration. Marine layer clouds can help to mitigate the impacts of temperature change in the coastal regions, though these clouds are not well represented in climate models requiring further research.[26]

DROUGHT

The Mediterranean character of wet winters and dry summers in National City is projected to continue and possibly intensify with wetter winters and drier shoulder seasons (spring and autumn). Changes in annual total precipitation are uncertain but most climate models indicate that there will be fewer wet days, but more intense precipitation received when wet days do occur. The reduction in the number of wet days leads to more variable yearly precipitation and consequently, more frequent and intense drought. Longer dry, warm seasons and increasing evapotranspiration due to higher temperature and lower daytime relative humidity will cause stronger seasonal dryness of San Diego County landscapes.[27]

WILDFIRE

Climate change is expected to increase the frequency, intensity, and duration of wildfire events impacting National City. The largest fires occur during strong, Santa Ana winds, which occur within a broad season from September through May but most intensely in December and January. Increased drought, deficit moisture for vegetation, and dead fuels are likely to increase wildfire risk during fire weather extremes caused by Santa Ana Winds.[28]

Wildfires claim lives, destroy property, forces mass evacuations, and exposes large populations to unhealthy levels of smoke for days to weeks at a time. These events test the capacity of local emergency response resources, and in too many cases can overwhelm communities in preparing for and responding to such events.

PRECIPITATION

Precipitation will remain highly variable but will change in character, with wetter winters, drier springs, and more frequent and severe droughts punctuated by more intense individual precipitation events. An alteration of precipitation will likely affect water demand and supply, water quality, and flooding emergencies.

SEA LEVEL RISE

Although sea level rise may seem to be occurring at a relatively low rate, this rate is expected to accelerate. It is presently affecting coastlines and over time it will affect the frequency and extent of coastal flooding and shoreline erosion.[29] Sea level rise projections under all greenhouse gas emissions scenarios predict accelerating sea level rise. Sea level along the San Diego County coast is expected to rise approximately one foot by mid-21st century, and three feet or potentially much higher by 2100.[30] Portions of National City are within the coastal zone, and impacts from sea level rise may include flooding, storm surge, and erosion.

26. https://www.energy.ca.gov/sites/default/files/2019-11/Reg_Report-SUM-CCCA4-2018-009_SanDiego_ADA.pdf
27. https://www.energy.ca.gov/sites/default/files/2019-11/Reg_Report-SUM-CCCA4-2018-009_SanDiego_ADA.pdf
28. https://www.energy.ca.gov/sites/default/files/2019-11/Reg_Report-SUM-CCCA4-2018-009_SanDiego_ADA.pdf
29. https://www.oceansciencetrust.org/wp-content/uploads/2019/08/OceanCoast_v3.MR_10.25.18_FINAL.pdf
30. https://www.energy.ca.gov/sites/default/files/2019-11/Reg_Report-SUM-CCCA4-2018-009_SanDiego_ADA.pdf

2.6.3. VULNERABILITY ASSESSMENT

EXTREME HEAT

Recent research indicates that heat-related human health impacts may be felt at lower temperatures at the coast than in the inland and desert regions as coastal residents are not acclimated to heat and humidity and are less likely to have air conditioning. A study of hospitalizations and emergency room visits suggests that the definition of hazardous temperatures is not one-size-fits-all and is dependent on background climatology and sociodemographic composition. Populations that are particularly vulnerable to climate change include those with preexisting or underlying health conditions, with chronic illnesses (e.g., asthma), the elderly, and the uninsured. To help vulnerable communities, Public Health Services has joined the Office of Emergency Management in a Partner Relay effort to disseminate messages to vulnerable communities in the event of a natural disaster or public health emergency.

Extreme Heat Impacts on Transportation

Future heat risks can potentially impact and disrupt transportation infrastructure, public services, resources for socially vulnerable populations, and decrease the reliability of energy infrastructure. Sustained periods of extreme heat can lead to the softening and expansion of asphalt services, resulting in potholes and rutted roads. Sustained temperatures above 100°F may cause train tracks to expand, leading to the buckling of rail lines and the derailing of trains. These impacts can lead to closures and traffic delays in the short-term and accelerate the degradation of infrastructure in the long-term.

Extreme Heat Impacts on Vulnerable Communities

Heat will likely affect the entire San Diego region with the coastal population experiencing a higher level of vulnerability due to lack of air conditioning while the inland population will be vulnerable through exposure to dangerously hot temperatures. Generally, the most vulnerable populations from extreme events are those who lack resources, are socially isolated, or whose health is already compromised.

Extreme Heat Impacts on Public Health

Although warmer temperatures are likely to impact a wide range of populations, the most vulnerable high-risk subgroups in National City includes groups that may be socially, linguistically, and politically isolated (homeless, migrants, refugees, women and girls), and those who lack resources or opportunities to prepare and adapt to these challenges making them more vulnerable to the impacts of climate change and natural disasters.

Preparing for these extreme heat events will require a combination of strengthening National City's preparedness for extreme heat events and adaptation by modifying and cooling the built environment in which we live.

DROUGHT

In future decades, National City will be confronted with, among other cities, more intense droughts. Drought impacts can include water restrictions associated with domestic supplies, economic impacts to tourism and recreation, increased firefighting costs, and increased costs for water.

Drought Impacts on Transportation

Climate changes, including drought, may result in increased maintenance and repair expenditures, disruptions of economic activity, and interruptions of critical lifelines.

Drought Impacts on Vulnerable Communities

Approximately 13 percent of National City's population is over 65 years old.[31] Populations that are socially isolated, dependent on caretakers, and people aged 65 or older are especially vulnerable to the health impacts of climate change. With general trends towards drier conditions, dust storms present air quality and health concerns.

Drought Impacts on Public Health

National City is home to populations that could lack access to medical services, threatening the public health of the community.

National City's ability to adapt to drought is limited due to resources and funding, but necessary to protect the economy and vulnerable populations. Preparing for drought events will require a combination of strengthening the City's preparedness for reduced water supplies and better water management practices, including more efficient water use and investment in new technologies- such as wastewater recycling systems.

WILDFIRE

Climate change, including increased heat and extended droughts, has been a key driver in increasing the risk and extent of wildfires in the western United States over the last two decades. It is expected that changes in climate create warmer, drier conditions, leading to longer and more active fire seasons.[32] Wildfire events test the capacity of local emergency response resources, and in many cases can overwhelm communities in preparing for and responding to such events. While National City has an urban unzoned wildfire risk threat, community members may experience indirect impacts from wildfires in neighboring jurisdictions.

Wildfire Impacts on Transportation

Wildfire events can threaten the safety of those using nearby roadways and transportation facilities. Low visibility from smoke and ash can result in road and facility closures. The need to evacuate communities, while providing access for firefighters, can also lead to roadway restrictions as first responders limit traffic. The logistics of quickly evacuating large populations is difficult and may overload the capacity of the road systems.

Wildfire Impacts on Vulnerable Communities

Wildfire events disproportionately impact socially vulnerable communities, exposing them to greater health and safety risks, costs, and barriers to evacuate. These impacts may include lack of access to emergency notifications (due to lack of phone or internet service, or language barriers), lack of personal vehicle, and lack of access to temporary housing or the ability to relocate.

Wildfire Impacts on Public Health

The projected increase in wildfire risk directly relates to an increase health risk from the fires and the smoke produced. Smoke contains particulate matter, ozone, carbon monoxide, and nitrogen dioxide, all of which are associated with respiratory and cardiovascular negative health impacts. As smoke can travel large distances from the fires, the health impacts of smoke is a vulnerability to National City.

31. U.S. Census Bureau, American FactFinder. Census 2019, TableID: S0101. Retrieved January 6, 2021 from: https://data.census.gov/cedsci/table?q=national%20city%20&tid=ACSST5Y2019.S0101&hidePreview=false

32. National Oceanic and Atmopsheric Administration. Wildfire Climate Connections, July 18, 2022. Retrieved July 20, 2022 from: https://www.noaa.gov/noaa-wildfire/wildfire-climate-connection#:~:text=Research%20shows%20that%20changes%20in,these%20increases%20in%20wildfire%20risk.

PRECIPITATION

Flooding is a highly variable threat in National City and can be expected to increase as a result of climate change. The higher probability of extreme flooding may produce poor water quality, erosion and sediment transport, and loss of habitats.[33] Socially vulnerable populations that cannot afford to retrofit their homes and businesses or move are the most vulnerable to flood events.

Precipitation Impacts on Transportation

Increased extreme precipitation events lead to greater flooding and erosion, impacting surface water quality, transportation, and surrounding habitats. Heavier rainfall events are also likely to cause periodic flooding of roadways, and in some cases, erosion or mudslides. In addition to flooding and damages to transportation corridors, transmission lines, wastewater treatment facilities, culverts, canals, tunnels, runways, and railways are likely to be challenged, with associated service and business interruptions. Bus stops and sidewalks may be flooded, challenging the ability of public transit and active transportation users to access employment, education, or healthcare.

Flooding also increases moisture content of streets, weakening the pavement base and ground below, which can cause increased cracking and rutting of the pavement. A significant flooding event can also cause failure or washout.[34]

33. https://www.energy.ca.gov/sites/default/files/2019-11/Reg_Report-SUM-CCCA4-2018-009_SanDiego_ADA.pdf
34. Sias-Daniel, J., Jacobs, J. M., Douglas, E., Mallick, R. B., & Hayhoe, K. (2014, May 3). Impact of Climate Change on Pavement Performance: Preliminary Lessons Learned through the Infrastructure and Climate Network (ICNet). Climatic Efects on Pavement and Geotechnical Infrastructure.

Precipitation Impacts on Vulnerable Communities

Socially vulnerable communities include residents living in floodplains as well as community members who do not own cars, have limited evacuation routes, and renters without flood insurance. Socially vulnerable populations are less likely to be able to retrofit their home to be flood-resistant (e.g., elevate or fortify) due to lack of resources or their status as renters.

Precipitation Impacts on Public Health

The increased occurrence of flood events may compromise sewer systems, resulting in a greater likelihood for transmission of water-borne diseases for individuals who are exposed to contaminated water. Flooding of transportation infrastructure may limit access to healthcare facilities or limit the ability of these facilities to function (e.g., limit the operation of electrically powered medical devices or refrigerators for medicine).

SEA LEVEL RISE

Rising sea levels are generally associated with a number of different impacts, including flooding, inundation, erosion, saltwater intrusion, and water table rise. Because the San Diego region is defined by its relationship with the coast and has heavily invested in its coastal communities, it is critical to consider impacts associated with sea level rise. Therefore, a Public Agency Steering Committee, comprised of staff from five bayfront cities (including National City), the Unified Port District, and the San Diego County Regional Airport Authority collaborated to develop a Sea Level Rise Adaptation Strategy for San Diego Bay in 2012 (Adaptation Strategy). The Adaptation Strategy consists of two primary components: a vulnerability assessment that evaluates how community assets could be impacted by sea level rise, and recommendations for building the resilience of those community assets.

Sea Level Rise Impacts on Transportation

The Adaptation Strategy identified 18th and 24th Streets at Paradise Creek as having the potential to experience flood-related impacts by 2050.[35] Transportation facilities are sensitive to flood related impacts, as the access function of roads would be impaired if exposed to flooding. They also do not have significant capacity to cope with flooding and inundation when they are exposed because local access streets cannot be relocated; by their nature they must be located to service development where it exists, even if in flood-prone areas.

Sea Level Rise Impacts on Vulnerable Communities

National City's single-family neighborhood west of Paradise Creek is likely to be exposed to flooding impacts by year 2100. Vulnerable communities (i.e., low-income, elderly, ethnic minorities) will remain vulnerable in the face of flooding impacts and some new populations – those working in specific job sectors – could become more vulnerable to flooding impacts.[36]

Sea Level Rise Impacts on Public Health

Flooding and inundation as a result of sea level rise may impact storm sewers when drains are obstructed by inundated outfalls, resulting in backwater flooding. This may increase the likelihood for transmission of water-borne diseases for individuals who are exposed to contaminated water.

35. https://icleiusa.org/wp-content/uploads/2016/08/San_Diego_Bay_SLR_Adaptation_Strategy_Complete.pdf
36. https://icleiusa.org/wp-content/uploads/2016/08/San_Diego_Bay_SLR_Adaptation_Strategy_Complete.pdf


SIMON & SIMON
JEWELRY & LOAN

3. CITYWIDE GOALS AND POLICIES

3.1. SEISMIC AND GEOLOGIC HAZARDS

GOAL SE-1: MINIMIZE RISK TO COMMUNITY FROM EARTHQUAKES, SEISMIC, AND GEOLOGIC HAZARDS.

Policy SE-1.1: Enforce development standards and building restrictions as a means to limit seismic-related risks to acceptable levels.

Policy SE-1.2: Require new development and redevelopment to comply with recognized standards for geologic hazards, soils (including but not limited to subsidence and liquefaction), and seismic hazards to ensure public safety.

Policy SE-1.3: Control site preparation procedures and construction phasing to reduce erosion and exposure of soils to the maximum extent possible.

Policy SE-1.4: Minimize potential safety hazards (such as slope instability, mudslides, and land slides) and disturbance of the natural terrain through specific development regulations for hillsides with steep slopes (greater than 25 percent grade).

Policy SE-1.5: Encourage the removal or retrofitting of unreinforced masonry buildings and other structures that would be at risk of collapse during seismic events, as deemed appropriate.

Policy SE-1.6: Encourage earthquake preparedness within the community.

WHY IS THIS IMPORTANT?

Approximately 15,776 homes and 892 businesses in National City have the potential to be affected by earthquakes or other seismic hazards, including shaking, liquefaction and landslides.[37] Identifying the risks, implementing prevention measures, and preparing for seismic events will help to minimize losses associated with these hazards.

37. County of San Diego. (October 2017). Multi-Jurisdiction Hazard Mitigation Plan.

3.2. FLOOD HAZARDS AND INUNDATION

GOAL SE-2: MINIMIZE HAZARDS RELATING TO FLOODING AND INUNDATION.

Policy SE-2.1: Prioritize funding and implementation of needed flood control and drainage improvements as well as help vulnerable populations elevate or adapt homes, buildings, and businesses in flood-prone areas.

Policy SE-2.2: Ensure that new development adequately provides for on- and off-site mitigation of potential flood hazards and drainage problems.

Policy SE-2.3: Locate new infrastructure and essential public facilities, including hospitals and healthcare facilities, outside of flood hazard zones, when feasible, or ensure that construction and other development methods are utilized, which minimize potential damage to such facilities, so as to maintain the structural and operational integrity of essential public facilities during flooding.

Policy SE-2.4: Ensure that all future adopted regulations limit the risk of loss to reasonable levels within mapped floodplain hazard areas or areas subject to potential inundation by levee failure, dam failure, or as the result of a tsunami.

Policy SE-2.5: Encourage modifications to floodways to restore creek capacity, stabilize creek banks, and restore habitat or water quality, where feasible.

Policy SE-2.6: Allow for modification of the land within the 100-year flood zone where necessary to protect the safety of existing and future developments.

Policy SE-2.7: Require new development and significant redevelopment projects to assess stormwater runoff impacts on the local and regional storm drain and flood control system, and to develop detention and drainage facilities to ensure that increased risks of flooding do not result from development.

Policy SE-2.8: Promote the use of bioswales, rain gardens, green roofs, and other infiltration mechanisms to reduce of the volume of stormwater runoff.

Policy SE-2.9: Prohibit the construction of flood barriers within the 100-year flood zone which would divert flood water or increase flooding in other areas.

Policy SE-2.10: Consult with other responsible agencies to construct creek improvements necessary to protect public health and safety while maintaining or restoring creeks to their natural state, where feasible.

Policy SE-2.11: Continue coordination among responsible agencies (e.g., U.S. Army Corps of Engineers, U.S. Bureau of Reclamation, California Department of Water Resources) to support existing efforts for mitigating floods.

Policy SE-2.12: Encourage the installation of porous roadways or other means to decrease pervious surfaces and increase water infiltration.

WHY IS THIS IMPORTANT?

Approximately 1,067 homes, 4,047 businesses, and 79 critical facilities in National City are located within either the 100-year or 500-year floodplain and are; therefore, at risk for flooding. An additional 457 residential buildings, 6,649 commercial buildings, and 74 critical facilities within the city are at risk for inundation due to dam failure. Regulating development in areas at risk for flooding and inundation reduces potential damage and loss of life and property.

Tsunami risk exists primarily along the city's waterfront, most of which is under Port or Navy jurisdiction. Approximately, 1,300 people, five commercial buildings and five critical facilities are located within an area subject to tsunami risk, as illustrated on Figure SE-7. A tsunami could potentially have deleterious effects on the maritime industry, which is concentrated in this area.

3.3. FIRE AND EMERGENCY MEDICAL SERVICES

GOAL SE-3: MINIMIZE WILDLAND AND URBAN STRUCTURAL FIRE RISKS AND INCREASE PROTECTION OF LIVES AND PROPERTY.

Policy SE-3.1: Consult with neighboring jurisdiction's fire response services, San Diego County, and the American Red Cross to ensure adequate fire and emergency response coverage, daily staffing needs are met, and public safety facilities and services are being efficiently utilized.

Policy SE-3.2: Consult with the Sweetwater Authority to upgrade water mains and install fire hydrants as necessary.

Policy SE-3.3: Continue collaborating with Fire Prevention Services, Inc. to enforce National City's Municipal Code for weed and brush abatement in order to provide clearances around structures and minimize fire hazard risk.

Policy SE-3.4: Enforce the City's fire code including minimum road width standards for fire equipment access.

Policy SE-3.5: Support housing rehabilitation programs that reduce structural fire risks due to heating or electrical problems.

Policy SE-3.6: Promote fire prevention through public education programs.

3.4. EMERGENCY AND PRE-HOSPITAL MEDICAL SERVICES

GOAL SE-4: PROVIDE HIGH-QUALITY EMERGENCY AND PRE-HOSPITAL MEDICAL SERVICES FOR NATIONAL CITY RESIDENTS.

Policy SE-4.1: Participate in regional planning efforts to ensure that quality emergency and pre-hospital medical care is available to National City residents.

Policy SE-4.2: Continue collaborating with the Regional Cooperative Care Partnership JPA (RCCP) to improve the quality of patient care through standardization of high-quality training and establishment of unified quality assurance and improvement programs.

Policy SE-4.3: Maintain a standard response time for the first-due unit of arriving within seven minutes 90 percent of the time from the receipt of a 911 emergency call for medical patients and/or small fires, as well as maintaining at least 14 personnel arriving within 11 minutes 90 percent of the time from the receipt of a 911 emergency call for a multi-unit response.

Policy SE-4.4: Encourage the evaluation and prioritization of potential traffic calming measures to improve emergency response times.

Policy SE-4.5: Maintain the National City Fire Department requirement to have at least one paramedic on the two fire engines and fire truck every day. This includes adding a paramedic to the Squad.

WHY IS THIS IMPORTANT?

Approximately 15,144 homes, 9,300 businesses, and 242 critical facilities are at moderate to high risk from wildfire in National City.[38] San Diego County has experienced serious losses due to wildfires in the past, especially in 2003 and 2007, when multiple wildfires simultaneously burned through the county and resulted in the destruction of thousands of residential and commercial buildings. Fires also contribute to respiratory ailments, as they generate and disperse fine particulate matter, carbon monoxide, and other irritants. Due to the large proportion of older buildings in National City, there is a higher risk for structure fires. Reducing fire hazards, maintaining appropriate fire services, and providing fire prevention information will help to reduce the risk of loss from fires.

In addition, the sooner a seriously injured or sick person receives help, the more likely he or she is to survive. Emergency medical personnel can mean the difference between life and death by offering several immediate medical services, depending on a patient's condition. Paramedics also monitor and care for a patient in the ambulance while transporting him or her to the hospital.

38. https://www.sandiegocounty.gov/content/dam/sdc/oes/emergency_management/HazMit/2017/City-of-National-City-HazMit-Section-5.pdf

3.5. EMERGENCY DISASTER PREPAREDNESS AND RESPONSE

GOAL SE-5: MINIMIZE THE LOSS OF LIFE, PROPERTY, DISRUPTIONS IN THE DELIVERY OF VITAL SERVICES DURING AND FOLLOWING EMERGENCY DISASTERS.

Policy SE-5.1: Improve emergency communication and outreach planning through establishing partnerships with San Diego County, the U.S. Navy, other appropriate agencies and trusted community organizations to maintain a communication plan and warning system that includes multiple or tiered approaches designed to reach diverse populations and those with language or other access barriers.

Policy SE-5.2: Continue improving emergency preparedness through consultation with San Diego County, the U.S. Navy, and other appropriate agencies and trusted community organizations to ensure the health and safety of residents during an emergency.

Policy SE-5.3: Continue to strengthen disaster planning and training activities by City departments.

Policy SE-5.4: Coordinate with the County of San Diego each time the Multi-Jurisdictional Hazard Mitigation Plan is revised and updated, as staffing and fiscal resources allow.

Policy SE-5.5: Promote public safety through community education programs, such as the Community Emergency Response Teams (CERT) and LISTOS[39].

Policy SE-5.6: Support a Seismic Retrofitting Program focused on assisting with fixing homes damaged by earthquake events, with an emphasis on homes with cripple wall construction and soft story multifamily housing."

39. https://www.nationalcityca.gov/government/fire/fire-administration/join-listos

WHY IS THIS IMPORTANT?

In the event that a crisis occurs, a prompt and effective response from emergency personnel can reduce trauma, bring order to chaos, and can be the determining factor between life and death.

3.6. CRIME PREVENTION AND POLICE PROTECTION

GOAL SE-6: MINIMIZE THREATS TO PUBLIC SAFETY FROM CRIMINAL ACTIVITIES.

Policy SE-6.1: Promote the use of Crime Prevention through Environmental Design (CPTED) concepts, including, but not limited to:

- Establishing public spaces that encourage activity, site cleanliness, rapid repair, and removal or refurbishment of decayed physical elements.
- Providing for natural surveillance of outdoor spaces through proper placement of windows in surrounding buildings, lighting, and landscaping.
- Establishing natural access controls into and around private property through the use of doors, shrubs, fences, and gates.
- Distinguishing between private and public space through the use of landscaping, front porches, and other design elements, where appropriate.

Policy SE-6.2: Encourage city residents to form neighborhood councils.

Policy SE-6.3: Retain staffing ratios and response times that accommodate the demands of continued growth and development, tourism, and other events requiring police services by:

- Maintaining a service ratio of one officer per 1,000 population as fiscal resources allow; and
- Sustaining a standard response time of less than six minutes for Priority 1 police calls as staffing and fiscal resources allow.

Policy SE-6.4: Maintain a community engagement participatory role for the Police Department in the community to the extent budgeting and staffing allows.

Policy SE-6.5: Encourage programs for at-risk youth.

Policy SE-6.6: Allow for public safety cameras and other security measures in public places as warranted.

WHY IS THIS IMPORTANT?

Proper design and effective use of the built environment can lead to a reduction in the incidence and fear of crime. Safe, clean, and attractive neighborhoods promote bustling public spaces. When places are active with people and provide clear visibility into and out of public spaces, potential offenders are less likely to commit crimes because of all the "eyes-on-the-street." Bad behavior is deterred due to the higher risk of getting caught.

3.7. HAZARDOUS MATERIALS, BROWNFIELDS, AND MILITARY INSTALLATIONS

GOAL SE-7: MINIMIZE RISKS TO LIFE, PROPERTY, AND THE ENVIRONMENT ASSOCIATED WITH THE STORAGE, TRANSPORT, AND DISPOSAL OF HAZARDOUS MATERIALS.

Policy S-7.1: Promote hazardous waste minimization and use of best available technology in City operations, where feasible.

Policy S-7.2: Continue to consult with the County and other appropriate agencies in the administration and enforcement of hazardous materials permit requirements, where feasible.

Policy S-7.3: Continue to ensure that effective response to hazardous materials emergencies in the City are provided to minimize health and environmental risks.

Policy S-7.4: Promote public awareness of emergency preparedness in the event of a hazardous materials release.

Policy S-7.5: Ensure the compatibility of uses which store, collect, treat, or dispose of hazardous materials with adjacent uses.

Policy S-7.6: Work with the U.S. Navy to minimize public safety impacts from hazardous materials used in military operations.

Policy S-7.7: Work with property owners and lead agencies to reduce soil contamination from industrial operations and other activities that use, produce, or dispose of hazardous or toxic substances.

Policy S-7.8: Promote the development of a Hazardous Materials Management Plan and Jurisdictional Urban Runoff Management Programs. Ensure new development satisfies the requirements outlined in these management plans.

WHY IS THIS IMPORTANT?

Proper storage, use, disposal, and transport of hazardous materials are necessary to reduce the risk of contamination to surface and groundwater, land resources, air, and environmentally sensitive areas. Serious injuries, loss of life, and economic disruption can occur as a result of accidents related to hazardous materials. Informing residents about these dangers, minimizing exposure to hazardous materials, ensuring that County permitting requirements are met, and promoting awareness of emergency preparedness are all measures that will help to reduce the risks associated with hazardous materials.

3.8. REDEVELOPMENT OF BROWNFIELDS

GOAL SE-8: THE REDEVELOPMENT OF BROWNFIELDS WITH APPROPRIATE USES THAT REDUCE SAFETY HAZARDS AND ENHANCE THE CHARACTER OF THE COMMUNITY.

Policy S-8.1: Promote the clean-up and reuse of contaminated sites and prioritize remediation and redevelopment of brownfield sites within and adjacent to residential and mixed-use areas.

Policy S-8.2: Require owners of contaminated sites to develop a remediation plan, as required by State and Federal law.

Policy S-8.3: Continue to use the Department of Toxic Substances Control (DTSC) and the State Water Resources Control Board (SWRCB) active databases of permitted and cleanup sites to monitor future uses at those locations. Require appropriate mitigation and clean-up of sites that are known to contain toxic materials as a condition of allowing reuse.

Policy S-8.4: Ensure reuse developments prepare all required hazardous waste and material assessments, studies, and implement necessary avoidance, minimization, and/or mitigation measures.

WHY IS THIS IMPORTANT?

The interest in redeveloping brownfield sites will likely increase as opportunities to expand and construct new development in National City decreases. Therefore, ensuring proper remediation and clean-up requirements will become critical in maintaining the health and safety of community members and natural resources.

3.9. CLIMATE CHANGE ADAPTATION AND RESILIENCY

GOAL SE-9: EFFECTIVE PLANNING AND ADAPTATION TO IMPROVE COMMUNITY CLIMATE CHANGE RESILIENCY.

Policy SE-9.1: Improve community resilience by educating residents and businesses about climate change, global warming, and potential impacts.

Policy SE-9.2: Pursue environment justice and social equity by developing and periodically updating a Climate Equity Index.

Policy SE-9.3: Periodically assess local hazard mitigation plans, contingency and response plans, and other hazard planning documents for potential incorporation and/or refinement of mitigating measures for health impacts related to climate change.

Policy SE-9.4: Encourage Community Emergency Response Teams (CERT) and trusted community organizations to check on vulnerable residents and facilitate access to key services, public safety facilities, or medical services.

EXTREME HEAT

Policy SE-9.5: Provide adequate cooling centers prioritizing disadvantaged communities and ensure their availability is communicated to the public in multiple formats and languages.

Policy SE-9.6: Protect back-up energy systems (e.g., diesel for backup generators, propane) for cooling centers and other essential services.

Policy SE-9.7: Encourage residents and businesses to become heat resilient through home weatherization (weatherproofing), air conditioning, energy efficiency rebates, and programs.

Policy S-9.8: Work with San Diego Metropolitan Transit System (MTS) to ensure adequate shading is available at transit stops to reduce transit passenger heat exposure.

Policy SE-9.9: Implement cool land use elements (i.e., cool roofs, cool pavement, cool transit facilities, urban greening, public water features, etc.) as a part of sustainable community planning, especially for areas where dense building (infill, transit-oriented development, transit corridors, etc.) patterns might contribute to more urban heating.

Policy SE-9.10: Educate employers and employees in industries without cooling systems about heat risks and the importance of adequate water, shade, and rest breaks.

DROUGHT

Policy SE-9.11: Encourage water-recycling programs to treat wastewater for beneficial purposes such as landscape irrigation in parks and green spaces.

Policy SE-9.12: Encourage residents and businesses to incorporate drought tolerant landscaping.

SEA LEVEL RISE

Policy SE-9.13: Reference the current State of California's Sea-Level Rise Guidance when evaluating sea level rise risk, vulnerability and planning adaptation strategies.

Policy SE-9.14: Encourage the adoption of comprehensive and targeted strategies set forth in the Sea Level Rise Adaptation Strategy for San Diego Bay (2012).

Policy SE-9.15: Maintain and inform updates to the Sea Level Rise Adaptation Strategy for San Diego Bay as needed.

Policy SE-9.16: Participate regularly in the San Diego Bay Steering Committee.

WHY IS THIS IMPORTANT?

Proper research and planning of climate related impacts can help to understand the threats that climate change poses on different communities. Identifying policies to protect all communities, especially those more vulnerable than others, help to build a stronger resilience against climate change impacts.