7 Safety Element

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7.1 INTRODUCTION

Protecting the health, safety and welfare of the community is a fundamental role of the City of Placentia. The City faces the potential for natural and human-induced emergencies and disasters, many of which are made worse by climate change. Climate change occurs as the earth warms in response to solar energy being trapped in the atmosphere by greenhouse gasses such as carbon dioxide (CO2). Hazards facing Placentia include flooding, earthquakes, fires, heat waves, poor air quality and hazardous spills. Therefore, it is important that the City maintain policies and programs to protect and educate citizens and maintain an effective emergency response to incidents concerning public safety. These potential hazards have the ability to affect residents, businesses, and the City's economy to varying degrees. Therefore, to plan and protect the community, the Safety Element will equitably address the future needs of the community, including the City's most vulnerable and underserved populations (i.e. people with disabilities, seniors, children, limited English proficiency, and those without personal vehicles or access to public transportation). Considerations for these populations are largely addressed under the topic of disaster preparedness, response and recovery (Sections 6.8 and 6.9).

Addressing the Safety Element from a socially-conscious perspective, the City of Placentia understands that vulnerable and underserved populations experience various economic, physiological, and mental inequalities which create additional degrees of vulnerability within specific segments of the population. Members of various populations may experience this vulnerability if they live near freeways or other areas known to produce higher-concentrated levels of pollution, have limited financial resources to prepare for hazards, have decreased economic and social capacity, or educational disparities.

A focused vulnerability assessment was conducted and the considerations from this assessment were used to complete this Element. The purpose of the vulnerability assessment was to identify climate-related hazards, potential hazards affecting Placentia, and their relation to vulnerable and underserved populations within the City (see this assessment in Appendix 7-1). Climate change has broad implications including longer, hotter summers, increased severity of weather, more and larger wildfires, more flooding, and sea level rise. How climate change affects a community depends on its location, natural resources, built environment, and, most importantly, the varying degrees to which community members can respond to its impacts.

The vulnerability assessment found that in Placentia, climate change is most likely to increase the number and intensity of heat waves and decrease air quality in the City. The vulnerability assessment also analyzed the two census tracts in the City that are identified by the California Environmental Protection Agency (CalEPA) as adversely effected by the impacts of climate change due to the convergence of existing health, location and economic factors. These two census tracts represent the La Jolla and Old Town communities and are discussed in this Element. (See also the Health and Environmental Justice Elements for additional goals and policies on this topic.)

The sections going forward will document and assess the natural and human-induced hazards present within this City of Placentia, and how these hazards may adversely affect the community. The Safety Element policies seek to minimize potential dangers to residents, workers, and visitors and to reduce the level of economic and property loss due to a potential disaster. It also describes the emergency preparedness, response and recovery programs to be used before, during and after crisis situations.

7.2 GEOLOGIC & SEISMIC SAFETY CONSIDERATIONS

Regional and Local Faults

The City of Placentia is located in seismically active Southern California. Active and potentially active faults are located adjacent to Placentia; however, there are no Alquist-Priolo Earthquake Fault Zones within the city limits. The California Geological Survey defines active and potentially active faults in the Alquist-Priolo (AP) Special Studies Zone Act (1994). For the purpose of the Act, active and potentially active faults are defined as those that have ruptured during the Holocene period (11,000 years ago) and Quaternary period (1.5 million years ago) respectively. Maps of Earthquake Fault Zones have been published by the California Geological Survey in accordance with the AP Special Studies Zone Act, 1994, which regulates development near active faults.

Although Placentia does not lie within an AP Zone, seismic risk is still considered high because of the proximity to other active AP faulting in the region. Major faults that have potential to impact the City are shown in Exhibit 7-1, Regional Faults. The faults shown on this map are summarized below:

1. Yorba Linda seismic source zone is a group of faults located approximately 0.3 miles northeast of the City of Placentia and can produce a magnitude 6.4 earthquake.
2. The Puente Hills (Coyote Hills) is a northwest trending blind Thrust Fault system1 that extends approximately 26 miles between downtown Los Angeles and northern Orange County. The fault is buried and extends beneath the San Gabriel Mountains where it merges with the Sierra Madre Fault System. Locally the approximate location of the fault is between Whittier fault and the City of Placentia. The Puente Hills thrust is considered to be the source of the 1987 magnitude 6.0 Whittier Narrows earthquake. In 2014, this fault produced a magnitude 5.1 quake, with over 100 aftershocks within the following few days. The Puente Hills Thrust dips about 25 degrees to the north and is considered capable of generating a magnitude 7.1 earthquake.
3. Peralta Hills Thrust is an east-west trending thrust fault along the south flank of the Peralta Hills, about 3 mile southeast of the center of the City of Placentia. This is the closest known active fault to the City. This feature has been exposed in several excavations and displaces Tertiary-age rocks over Quaternary period deposits. Recent small earthquakes (1999-2000) with magnitudes of 1.7 to 3.9 at depths of 3.5 to 12 km under the Peralta Hills indicate right-oblique reverse active faulting below the area, supporting the concept of a deeper main break of the Peralta Hills thrust fault system. The fault is located approximately 3 miles southeast of the City. The length of the fault zone suggests that a maximum earthquake of about 6.0 to 6.5 is capable of occurring on this feature.
4. Whittier Fault is part of the Whittier- Elsinore fault system and extends from the Los Angeles basin area to Mexico, a distance of more than 250km. The Whittier segment extends along the western margin of the Puente Hills for a distance of about 40km. The fault is about 3.8 mile north of the center of the City of Placentia. Although this fault has not generated any major earthquakes in historical time, geological relationships suggest that it is capable of generating a magnitude 6 to 7.2 earthquake.
5. Newport-Inglewood Structural Zone is expressed as a series of discontinuous faults and folds extending from the Santa Monica fault at its northern end to the Newport Beach area where it trends offshore. The estimated total length of the fault zone is approximately 65 miles. The

[1] If the rock mass above an inclined fault (i.e. fractures where the blocks have mostly shifted vertically) moves down, the fault is termed normal, whereas if the rock above the fault moves up, the fault is termed reverse. A thrust fault is a reverse fault with a dip of 45 degrees or less. A blind thrust fault is a thrust fault that does not rupture all the way up to the surface so there is no evidence of it on the ground. It is "buried" under the uppermost layers of rock in the crust. Earthquake Glossary, USGS, https://earthquake.usgs.gov/learn/glossary/, 2018.

magnitude 6.25 Long Beach earthquake of 1933 occurred on the Newport-Inglewood fault. The epicenter of the earthquake was offshore near Newport Beach. The fault zone is located approximately 14.6 miles southwest of the City and is considered capable of producing earthquakes with a magnitude of up to 7.4.

6. Sierra Madre Fault is part of a set of north-dipping reverse faults extending between Santa Barbara Channel east to Chino Basin. The fault is located about 17 miles north of the City. The fault is classified as Holocene in age and is considered capable of producing earthquakes with a magnitude of up to 8.0.
7. The San Jacinto Fault system is highly seismically active and has been the source of several historical fault ruptures associated with the earthquake magnitudes in the range of 6 to 7. The San Jacinto fault zone extends more than 150 miles northwesterly from the Imperial segment near the Gulf of California to the San Gabriel-San Bernardino Mountains north of San Bernardino. The fault is located about 34 miles northeast of the City and is considered capable of producing earthquakes with a magnitude of up to 7.5.
8. The San Andreas Fault system extends southeasterly from Cape Mendocino, approximately 200 miles north of San Francisco, to the east side of the Salton Sea, a distance of almost 700 miles. The central portion of the San Andreas Fault produced a major earthquake in 1857 that resulted in ground rupture over approximately 190 miles from the Cholame Valley, in San Luis Obispo County, to just northwest of the San Bernardino area. The City of Placentia is located approximately 36 miles southerly of the central segment of the San Andreas Fault. The San Andreas Fault is considered capable of producing earthquakes with a magnitude of up to 7.9.
9. The Norwalk Fault is located approximately 4.5 miles west-northwest of the City of Placentia. It is postulated to have been the source of a magnitude 4.7 earthquake in 1929; however, the fault is not classified as an active AP fault by the California Geological Survey.

Ground Rupture and Shaking

Although ground rupture is not considered to be a major concern for the City of Placentia, it is still likely that the city will be subject to some moderate to severe seismic shaking. Some degree of structural damage due to stronger seismic shaking should be expected, but the risk can be reduced through adherence to seismic design codes (California Building Code 2016).

There are twelve documented buildings in the City that are constructed of unreinforced masonry, built before 1933 and therefore are most at risk of structural damage. These structures are listed below and a map of their locations is provided in Appendix 7-2:

1. 234 S. Bradford – APN: 339-061-07
2. 238 S. Bradford – APN: 339-061-08
3. 109 Santa Fe Ave – APN: 339-365-25
4. 141 Santa Fe Ave – APN: 339-365-10
5. 110 Santa Fe Ave – APN: 339-394-06
6. 100 Santa Fe Ave – APN: 339-394-07
7. 214 Santa Fe Ave – APN: 339-393-07
8. 226 Santa Fe Ave – APN: 339-393-02
9. 301 Santa Fe Ave – APN: 339-363-19
10. 352 Santa Fe Ave – APN: 339-392-01
11. 330 Santa Fe Ave – APN: 339-3992-07
12. 310 Santa Fe Ave – APN: 339-392-11

Soil liquefaction

Soil liquefaction is a seismically induced form of ground failure, which has been a major cause of earthquake damage in Southern California. During the 1971 San Fernando and 1994 Northridge earthquakes, significant damage to roads, utility pipelines, buildings and other structures was caused by liquefaction. Liquefaction takes place when granular materials that are saturated by water lose strength and transform from a solid to a liquid state. Liquefaction generally occurs during significant earthquake activity, and structures located on saturated granular soils such as silt or sand may experience significant damage during an earthquake due to the instability of structural foundations and the moving earth. Soils most susceptible to liquefaction are saturated, loose, uniformly graded, fine-grained sand deposits. However, silty sands and sandy silts have also been reported to be susceptible to liquefaction or partial liquefaction.

The occurrence of liquefaction is generally limited to soils located within about 50 feet of the ground surface. Primary factors affecting the potential for a soil to undergo liquefaction include:

1. Depth to groundwater;
2. Soil type;
3. Relative density of the soil and initial confining (overburden) pressure; and
4. Intensity and duration of ground shaking.

Potential problems associated with soil liquefaction include ground surface settlement (i.e., vertical movement of the ground), loss of foundation bearing support strength, and lateral spreading (i.e., landslides). The City's building codes require structures in liquefaction areas to be designed to withstand the potential impacts that could be caused by liquefaction. According to the California Department of Conservation, Division of Mines and Geology (CGS, 1998 and 2005), areas of high liquefaction potential for the City of Placentia are provided in Exhibit 7-2, Potential Liquefaction and Landslide Hazard Zones.

Slope Instability/Landslides

Slope failure can occur as either rapid movement of large masses of soil ("landslide") or slow, continuous movement ("creep"). Landslides result from the downward movement of earth or rock materials that have been influenced by gravity. In general, landslides occur due to various factors including steep slope conditions, erosion, rainfall, groundwater, nature of the underlying soil or bedrock, previous landslide deposits, and grading impacts.

The majority of City of Placentia has not been mapped as being within a zone susceptible to landslide as designated by the State of California Seismic Hazard Zones, Yorba Linda Quadrangle (CGS, 2005). However, a few local slope instabilities appear in the northwest area of the City, just south side of Anaheim Union Reservoir in Tri City Park. Landslide potential within the City is shown in Exhibit 7-2, Potential Liquefaction and Landslide Hazard Zones.

Mining Activity, Oil and Gas Wells and Subsidence

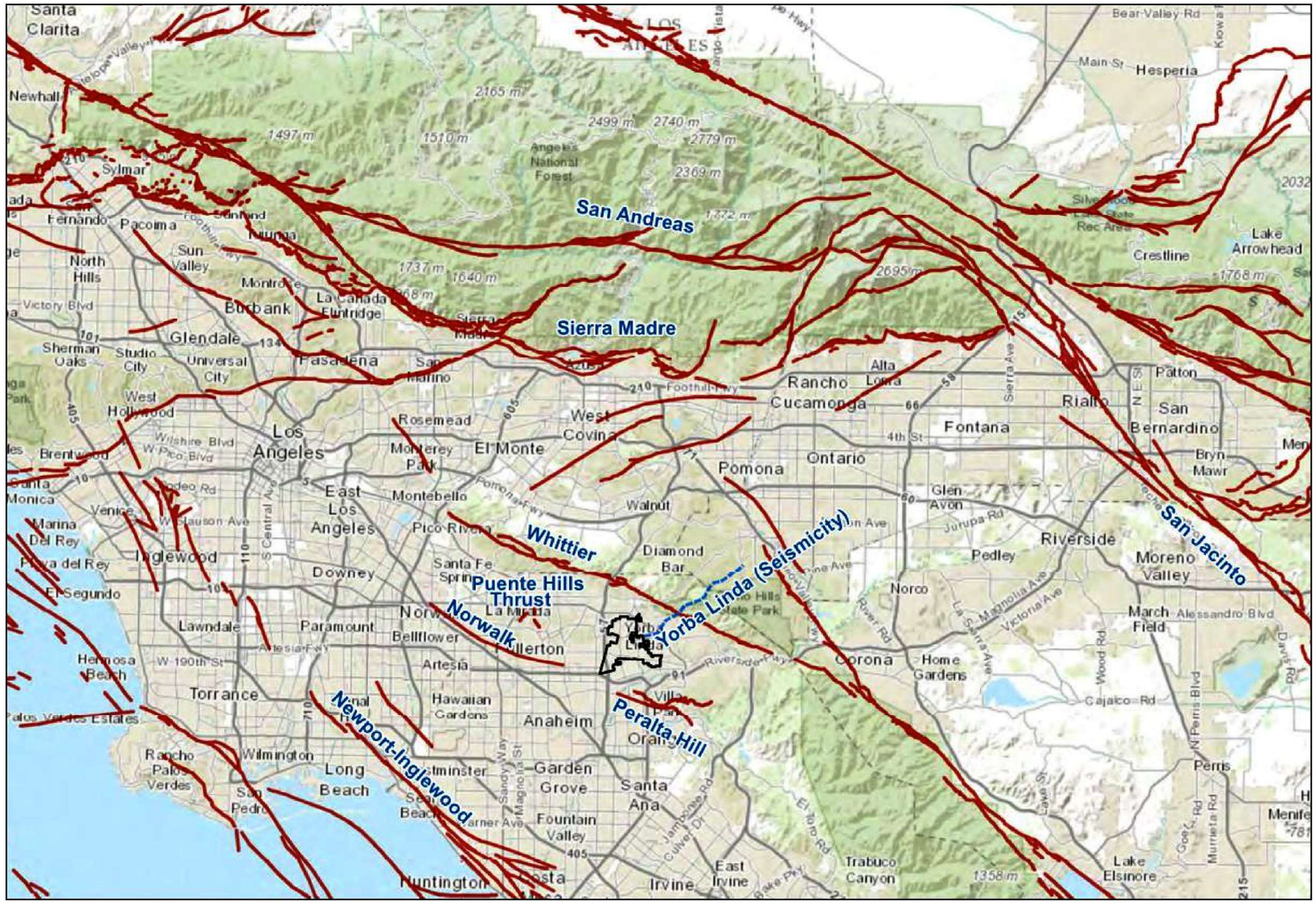
Pipelines represent a hazard due to the contents of the pipelines and the potential for them to rupture, causing chemical leaks, explosions or fires. Historically, mining activities and petroleum exploration have resulted in the creation of open pits and wells. In some cases, pits and wells may have been abandoned and backfilled with

undocumented fill materials. Existing pits and wells backfilled with undocumented materials may be subject to differential settlement, which causes structures to shift, and often become damaged, due to the uneven lowering of the earth. Differential settlement is closely related to subsidence, which is the sudden sinking or gradual downward settling of the earth's surface with little or no horizontal movement. Subsidence can be caused by natural geologic processes or by human activity such as subsurface mining or pumping of oil or groundwater.

The City of Placentia has numerous oil wells and pipelines (oil recovery operations) operating within the city. The location of these facilities is represented in Exhibits 7-3 (Well Locations) and 7-4 (Pipeline Locations).

Placentia's Municipal Code dictates where these facilities can be located, required maintenance, required fencing, procedures for how to abandon, and the requirement for additional safety measures and performance standards. Adherence to these requirements reduce the risks associated with the wells and pipelines. The Division of Oil and Gas Geothermal Resources (DOGGR) also regulates active oil facilities and provides standards for their abandonment.

Exhibit 7-1. Regional Faults



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- Faults
- Approximate limits Yorba Linda (Seismicity)
- Placentia City Limits

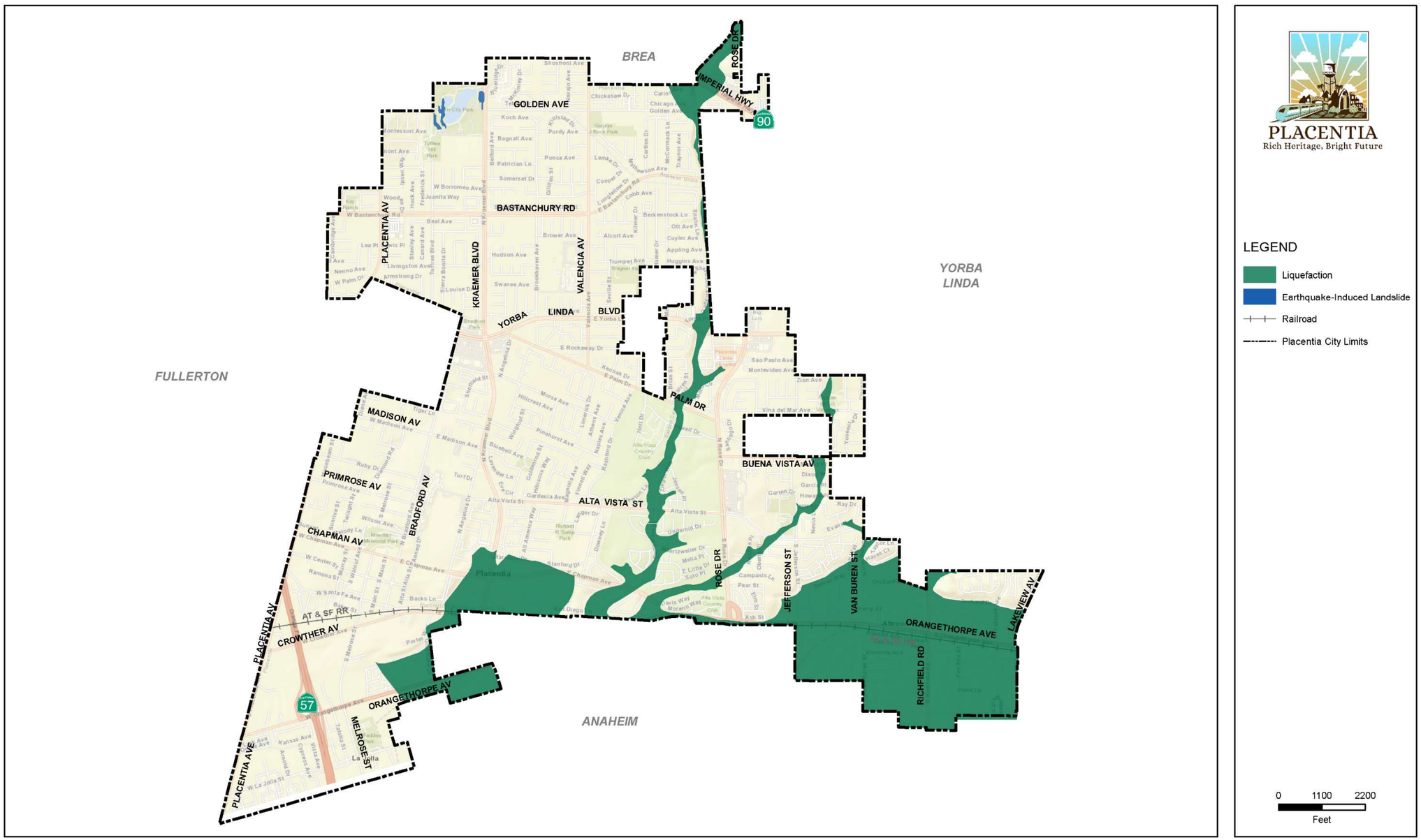
Not to Scale

Michael Baker INTERNATIONAL

Source: City of Placentia, 2018, Willdan 2014

Regional Faults

Exhibit 7-2. Potential Liquefaction and Landslide Hazard Zones

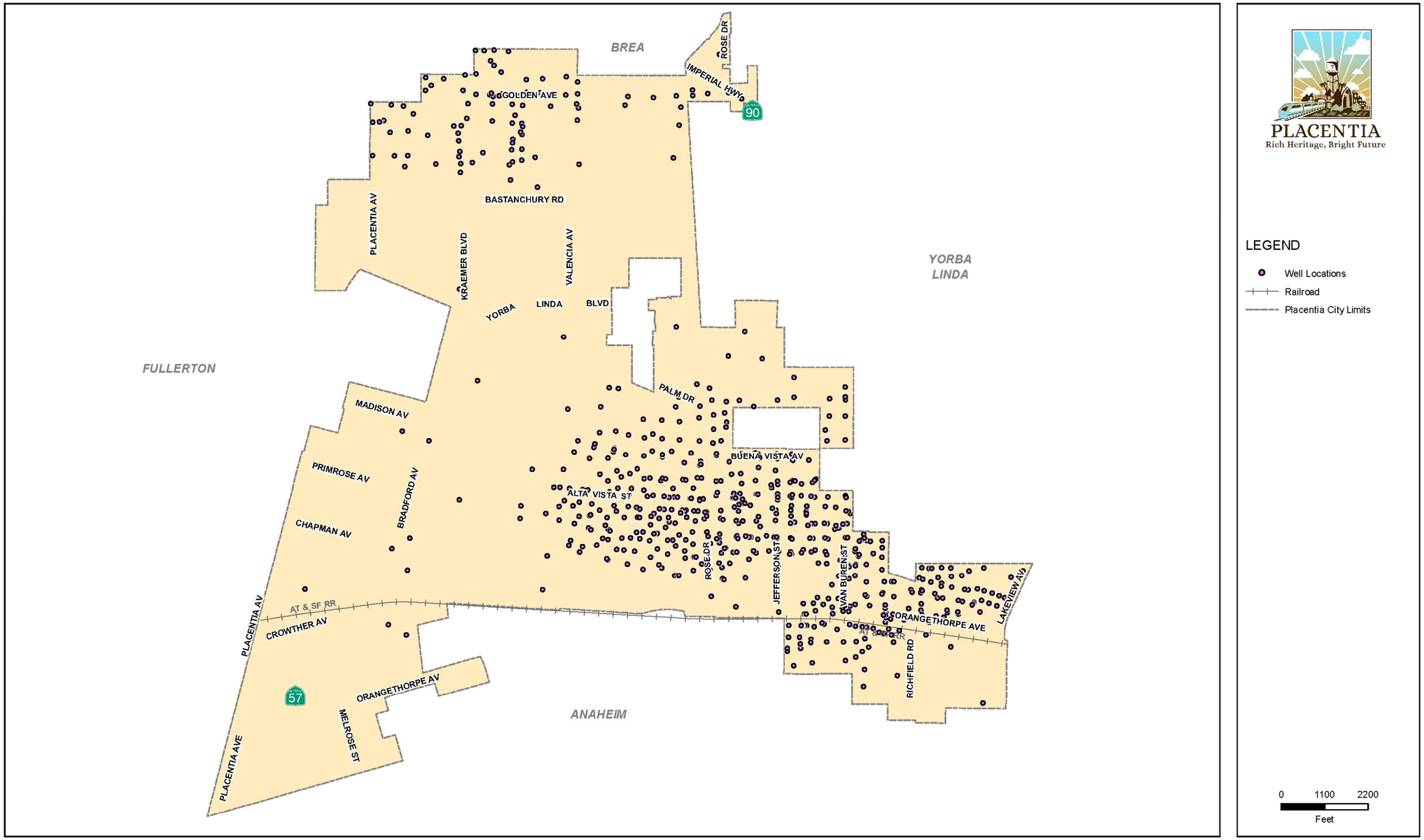


Michael Baker INTERNATIONAL

Source: City of Placentia, 2018, California Department of Conservation, 1998 and 2005

Potential Liquefaction and Landslide Hazard Zones

Exhibit 7-3. Well Locations

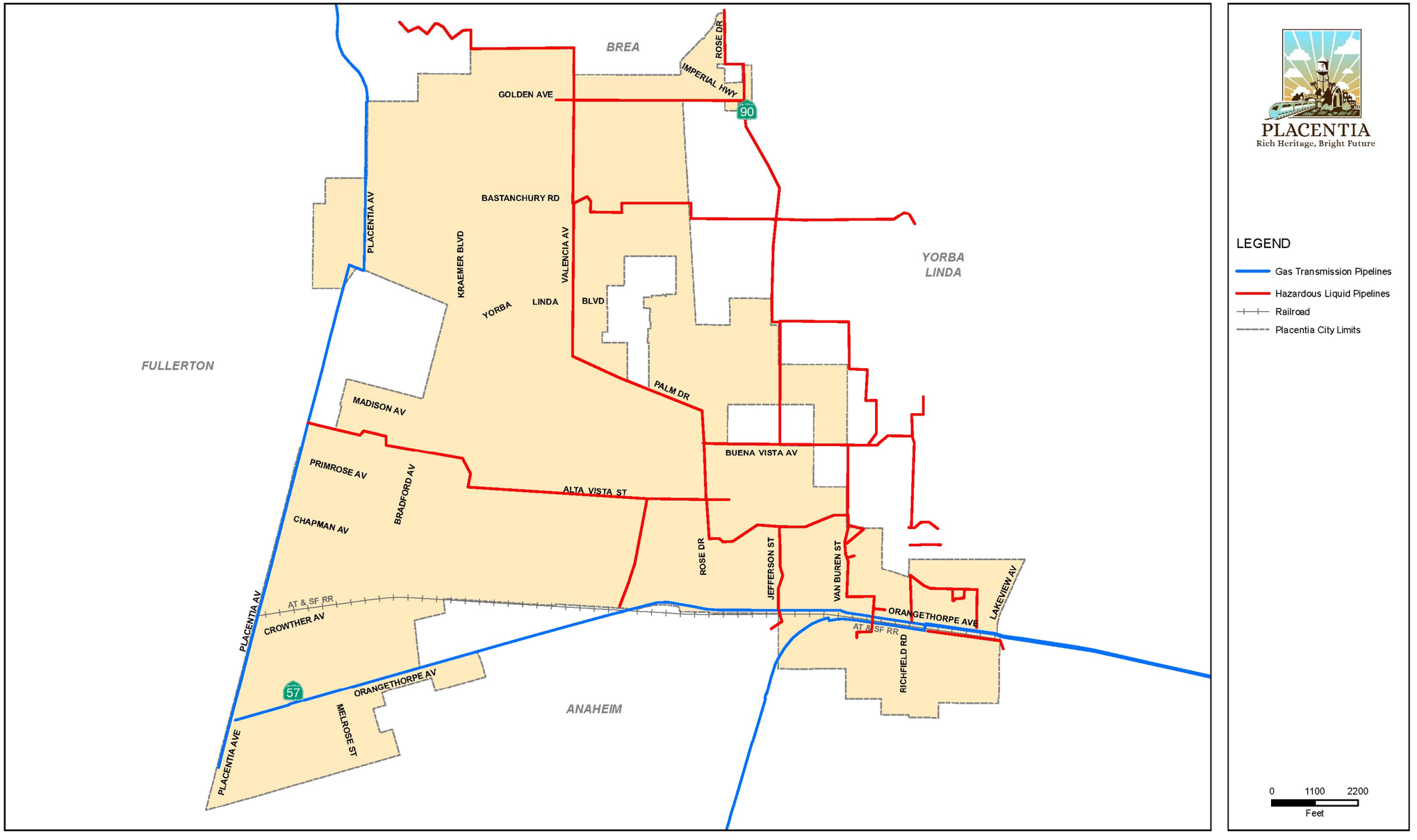


Michael Baker INTERNATIONAL

Source: City of Placentia, 2018; California Department of Conservation, Division of Oil, Gas and Geothermal Resources, accessed April 2018 http://www.conservation.ca.gov/dog/Pages/Wellfinder.aspx

Well Locations

Exhibit 7-4. Pipeline Locations



Michael Baker INTERNATIONAL

Source: City of Placentia, 2018, National Pipeline Mapping System (NPMS) Public Viewer https://pvnpms.phmsa.dot.gov/PublicViewer/ accessed April 2018

Pipeline Locations

7.3 URBAN FIRE HAZARDS

A majority of large fires occur in areas classified as Wildland or Wildland-Urban Interface; however, fires can, and historically have occurred in vastly urban environments throughout the nation. Oftentimes, urban fires have involved unpopulated areas within the urban area that may contain brush or grasslands, and some historical fires have included structures in close proximity.

As of 2019, the City of Placentia is approaching "build-out" conditions with approximately 98 percent of developable land developed or in the process of developing. Approximately 54.5 acres, or 1.3 percent, of the City's total acreage is vacant. Placentia is surrounded by other build-out cities and is not adjacent to wildland areas; therefore, the risk of Wildland-Urban Interface fires is relatively non-existent. Placentia's remaining vacant parcels of land are primarily in the southern portion of the City and are zoned for industrial and/or commercial uses. As a result of buildout, the City must continue to address the growing need to defend both life and property from urban fires.

Prior to July 1, 2019 the city's fire services were provided by the Orange County Fire Authority (OCFA) and beginning July 2019 the city transitioned to a full-service, public safety entity with the introduction of the Placentia Fire and Life Safety Department (PFLSD). Collectively the city's public safety entities and the Fire and Life Safety Department have increased access to the various special operations resources and equipment through mutual-aid and automatic-aid agreements with surrounding jurisdictions. Agreements with bordering jurisdictions enhance the city's capacity to procure helicopters, heavy equipment, large-scale disaster medical units, and Special Response Teams--such as Hazardous Material Units. To respond

to urban and nearby wildland fires, Placentia has two fire stations, Station 1 and 2. Station 1, is located at 110 South Bradford Avenue and is home to Engine 1. Station 2 is home to the PFLSD Battalion Chief; a Quint / Aerial Apparatus, and a rapid response apparatus. The PFLSD is comprised of career firefighters and reserve staff to support large-scale incidents.

Water resources used to combat fires are provided through the citywide fire hydrant systems which are serviced by the city's two water departments – Yorba Linda Water District and Golden State Water Company. Through routine infrastructure upgrades and maintenance projects, the PFLSD has access to a well-developed network of water systems to adequately respond to large-scale, multi-alarm fires that may occur within the city.

In urban areas, where the protection of structures is the principal goal, the effectiveness of the city's fire response efforts is based upon several factors, including the age of structures, type of structures, efficiency of circulation routes that correlate with response times, and availability of water resources to combat fires. The principal fire hazard in Placentia is from structures.

In addition, there are several oil pipelines throughout the City which are owned and operated by private industry. Utilizing a proactive approach, oil pipelines and wells located in the City are documented by the State of California, and responses to incidents related to these systems are a part of the PFLSD's Hazardous Materials Response Plan which document best practices for containing releases, leaks, and spills associated with these pipelines and wells.

Many factors contribute to the severity of fires including weather; specifically, winds locally referred to as the Santa Ana winds (strong, extremely dry, downslope winds).

The Santa Ana winds pose a significant fire hazard to the City each year, and typically occur from September to the first significant rain in December. The combination of dry air, low humidity, and heavy winds contributes to what is ultimately referred to as "fire weather" due to the limited amount of moisture in the air and increased dry, dead vegetation. As the City of Placentia approaches "build-out" fires resulting from the combination of the Santa Ana winds and dry, dead vegetation will continue to decrease as the undeveloped parcels are reduced.

The City does not have a significant history of fire – structural or wildland. The last multi-alarm fire in Placentia was in April 2013, and this involved a house and adjacent restaurant in the Old Town area of the City where construction is older, and the structures are closer together.

With the city approaching build-out, there are no longer any high-fire danger zones located within the City of Placentia. Although there is minimal undeveloped, open space located within the city, Placentia does border outside jurisdictions which have vast Wildland-Urban Interfaces (WUIs), and these WUIs may pose an indirect threat to the City.

To enhance the fire and life safety protections of the community, the PFLSD has implemented a robust Community Risk Reduction Program that conducts regular fire inspections of public and private structures and events in Placentia pursuant to state and local law. The PFLSD works in collaboration with multiple internal and external partners to complete plan reviews on proposed construction, enhance fire protection systems, and ensure the structures are designed to reduce the risk of fire before the projects are even built.

The PFLSD will continuously implement multiple, innovative fire prevention and community risk reduction programs on an "as-needed" basis to promote tailored safety measures for the members of the community. The fire prevention and risk reduction programs include:

- Fire Setter Regional Intervention Education Network This program is designed specifically for juveniles or youth who are exhibiting unusual or increased interest in fire and fire behavior. This intervention program is available to children and their families throughout the city.
- The implementation of a wide-ranging program to reduce risk to members of the senior community, access and functional needs community, and non-English proficient members of the community.
- An educational campaign focused on business resistance and resilience.
- The City's evacuation routes and transportation assembly points are shown in Exhibit 7-5 (Evacuation Routes and Assembly Locations). The City of Placentia has elected to provide pre-designated evacuation routes and Transportation Assembly Points (TAPs) for members within or traveling through the community. A majority of citizens will be able to self-evacuate

through the use of pre-designated evacuation routes; however, many individuals may require assistance in the event of a wide-scale emergency impacting the City and/or surrounding cities. Emergency personnel will attempt to utilize pre-designated evacuation routes to facilitate the orderly movement of vehicles through the city and assist members of the community with directions and additional information determined by the incident. The utilization of the pre-designated evacuation routes is contingent on the type of emergency that is impacting the City, and specifics regarding the use of evacuation routes will be determined during an emergency.

- TAPs are pre-designated locations for members of the community who may not have access to adequate transportation, require special assistance, have access and/or functional needs; and/or they are, or are with, an unaccompanied minor(s). TAPs are provided to ensure that equal access to evacuation transportation is provided to all members of the community. Without diversified methods of evacuation, the most vulnerable populations will not have adequate access to services and safety afforded to members of the community with private, functioning methods of transportation; therefore, the TAPs have been strategically located throughout the City to allow for all members of the community to have access to these resources.
- TAPs are growing in importance with their relation to land use planning and the development associated with high-density housing. As new development in the Transit-Oriented Development (TOD) and Old Town areas allow for high density populations and encourage diversified methods of transportation (e.g. ride-sharing, mass transit), TAPs will continue to grow in importance and will need to be revisited as populations increase.

7.4 FLOOD & DAM INUNDATION HAZARDS

Second to fires, the Federal Emergency Management Agency (FEMA) has determined that floods are the most common and widespread of all-natural disasters. Most communities in the United States have experienced some kind of flooding, during spring rains, heavy thunderstorms, or winter snow thaws. Climate change has increased the intensity of storms, which increases the risk of flooding because global warming increases the temperatures of the water and air, creating the climatic conditions for heavier rain, melting snowcaps and icebergs, and more hurricanes and tornados.

In the Los Angeles and Orange County region, total rainfall is expected to stay relatively stable, however, extreme events such as drought and heavy rainfall are projected to increase due to climate change (California Natural Resources Agency 2018). Increases in extreme rainfall will in turn increase flooding. Most of the City is not in a flood hazard zone, however, some areas on the east and south sides are in the 500-year flood zone (0.2% chance of flooding each year) and could see increased flooding and reduced drainage from intense storms. A small pocket of homes between Highway 57 and Orangethorpe Avenue is in the 100-year flood zone (1% chance of flooding each year) and is most likely to be impacted from flooding due to changes in rainfall. The La Jolla community in the southwest corner of Placentia is located in the 100-year flood zone, with a portion in the 500-year flood zone. As discussed in Section 6.6, Climate Change, the La Jolla community is one of the two communities designated by the California Environmental Protection Agency as a disadvantaged area (i.e., more vulnerable to climate change due to the confluence of existing health and economic factors). It is a policy of this Safety Element to improve drainage in the City, prioritizing the La Jolla community, to

minimize damage in the event of a flood. Exhibit 7-6, FEMA Flood Zones, shows the location of the 100-year and 500-year flood zones in the City.

The City has no natural, permanent water features. The Anaheim Union Reservoir at Tri-City Park is a 10-acre man-made lake located at 2301 N. Kraemer Boulevard, and there are numerous small man-made water features located in the Alta Vista Country Club golf course. The Orange County Flood Control District has implemented measures to reduce the likelihood of flooding at these locations. Drainage through the City is controlled and directed via storm drains and storm drain channels, including Carbon Canyon Creek Channel and Atwood Channel. The channels are located in the southern and southeastern portions of Placentia.

Congress developed the National Flood Insurance Program (NFIP) in 1968 to respond to the elevating cost of taxpayer-funded disaster relief for flood victims and the increasing level of damage that was caused by flooding. According to FEMA, approximately 20,000 communities across the United States, including Placentia, participate in the NFIP through the adoption and enforcement of floodplain management ordinances. These ordinances help to reduce future flood damage, and in return, the NFIP makes Federally-backed flood insurance available to homeowners, renters, and business owners in participating communities.

Dam Inundation

Flood inundation resulting from dam failure of Prado Dam or Carbon Canyon Dam is a potential hazard for the City. Inundation from Prado Dam would affect the very southern portions of the City. Inundation from Carbon Canyon would affect the majority of the City generally west of Rose Drive/Tustin Avenue. The two dams are described below.

Carbon Canyon Dam

The Carbon Canyon Dam, an earth-filled structure with a capacity of 12,000 acre-feet, is located approximately one (1) mile north of Placentia and was completed in 1961. It is 2,600 feet in length and 99 feet in height. The drainage area above the dam is 19.3 square miles. The structure provides flood protection to the cities of Placentia, Brea, Yorba Linda, Anaheim, Fullerton, Buena Park and unincorporated areas of the County of Orange. The Carbon Canyon Dam rarely contains threatening quantities of water. However, when the dam is filled to its capacity, the reservoir could create some potential upstream flooding problems. The dam is owned and operated by the US Army Corps of Engineers.

If an inundation event should occur as a result of dam failure, floodwaters are expected to generally follow the path of the Carbon Canyon Creek Channel. Floodwaters could potentially reach the SR-91 Freeway in the southern portion of the City.

Prado Dam

Prado Dam, designed in the 1930s and completed in 1941, is located approximately 18 miles east of Placentia in Riverside County. The Prado Dam was intended to provide flood protection to the Lower Santa Ana River Basin. The existing 9,000 cubic feet per second (cfs) limit on controlled releases from the Prado Dam is based upon the original non-damaging capacity of the downstream channel. Recently downstream channel improvements were completed as part of the United States Army Corps of Engineers' Santa Ana River project. According to the OCFCD, the status of these improvements are as follows:

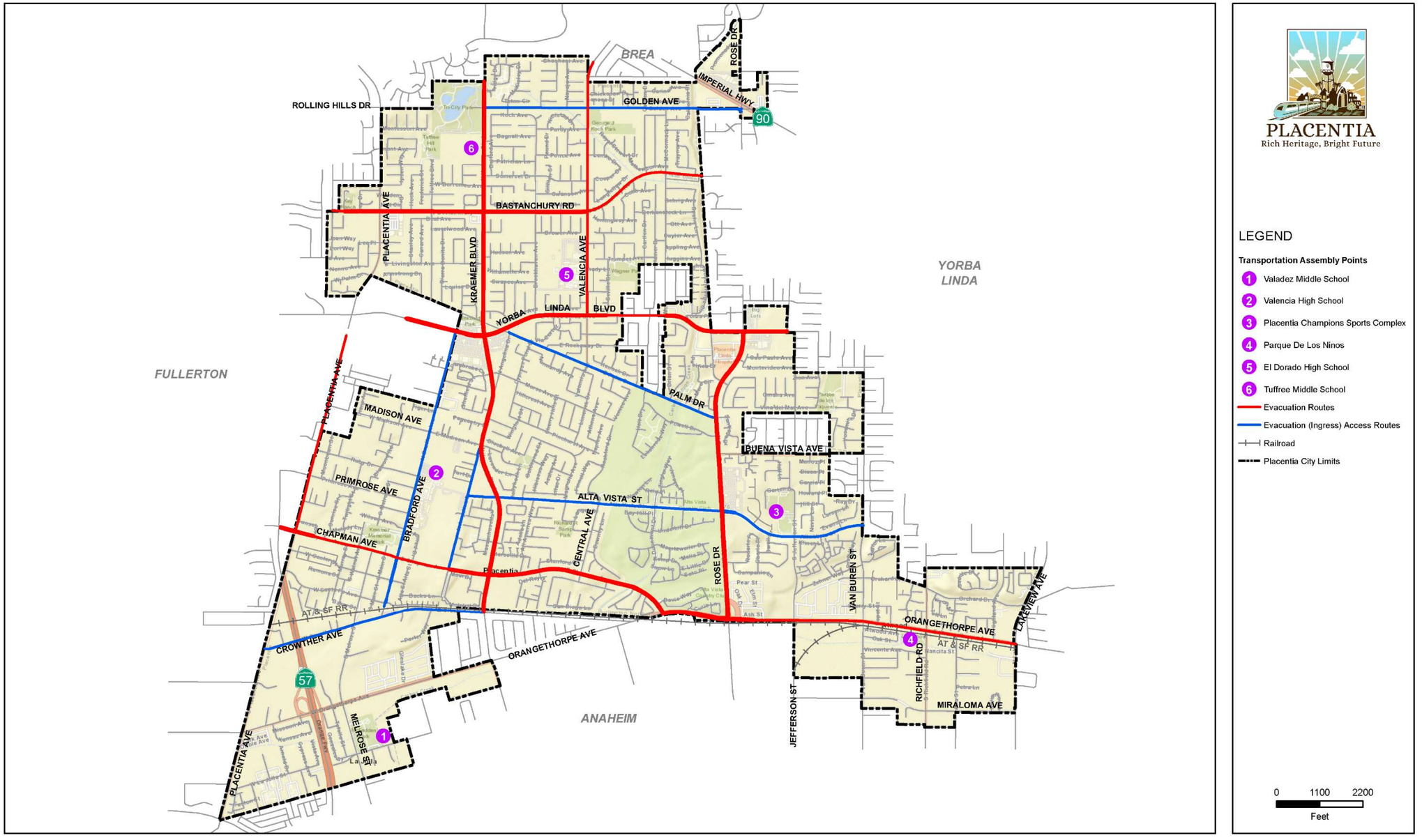
- Raising the existing embankment 28.4 feet to an elevation of 594.4 feet – Completed;
- Raising the spillway crest from elevation of 543 ft. to 563 ft – Planned for 2021;
- Constructing new outlet works increasing the maximum discharge capacity from 9,000 cubic feet per second (cfs) to 30,000 cfs – Completed;
- Constructing new levees and dikes- Underway;
- Acquiring over 1,700 acres of property rights for reservoir expansion - Underway;
- Relocating and protecting 30 various utility lines- Underway;
- Increasing reservoir area from 6,695 acres to 10,256 acres; and

- Increasing-impoundment from 217,000 acre-feet to 362,000 acre-feet.

Santa Ana River Mainstem Project

The Santa Ana River Mainstem project is designed to provide flood protection to Orange, Riverside and San Bernardino Counties, and is being managed by the US Army Corp of Engineers. The proposed improvements cover 75 miles from the headwaters of the Santa Ana River, east of the City of San Bernardino, to the mouth of the river at the Pacific Ocean between the cities of Newport Beach and Huntington Beach. The Mainstem Project will increase flood protection to more than 3.35 million people within the three counties. The project includes seven independent features: Seven Oaks Dam, Mill Creek Levee, San Timoteo Creek, Oak Street Drain, Prado Dam, Santiago Creek and the lower Santa Ana River. The Santa Ana River Mainstem project is designed to provide flood protection for residences and business in the three counties. All three counties, collectively, are working in conjunction with the U.S. Army Corps of Engineers to design and construct the project. The Prado Dam improvements component of the project is anticipated for completion in the year 2020.

Exhibit 7-5. Evacuation Routes



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Transportation Assembly Points

1. Valadez Middle School
2. Valencia High School
3. Placentia Champions Sports Complex
4. Parque De Los Ninos
5. El Dorado High School
6. Tuffree Middle School

Evacuation Routes
Evacuation (Ingress) Access Routes
Railroad
Placentia City Limits

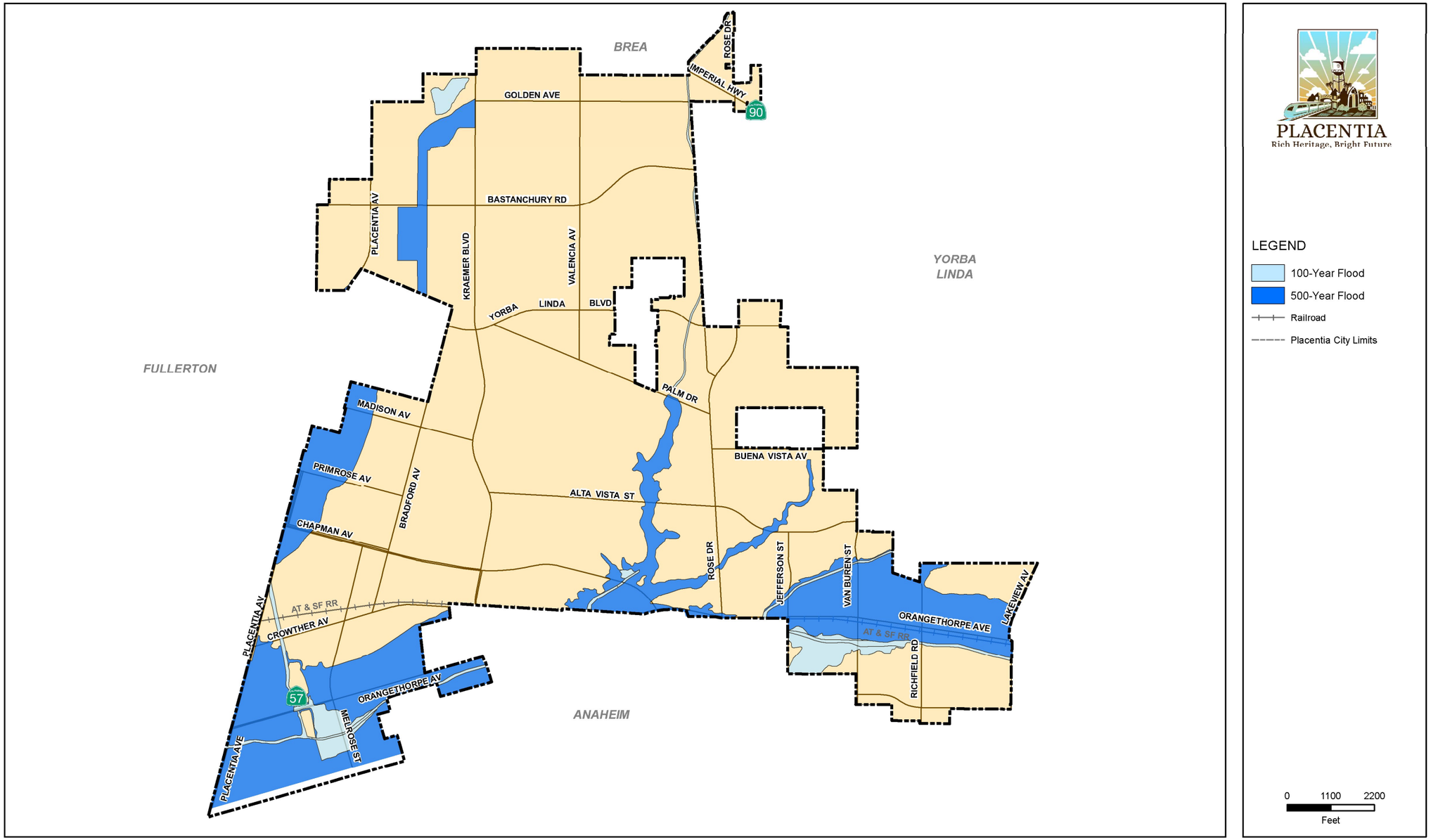
0 1100 2200
Feet

Michael Baker INTERNATIONAL

Source: City of Placentia, 2018

Evacuation Routes and Assembly Locations

Exhibit 7-6. FEMA Flood Zones



Michael Baker INTERNATIONAL

Source: City of Placentia, 2018, FEMA Effective Products 2009

FEMA Flood Zones

7.5 HAZARDOUS MATERIALS AND WASTE

Many businesses manufacture, transport, store, use and dispose of hazardous materials. In addition, the City has miles of oil pipelines, gas lines and water mains that traverse the City. Placentia, therefore, like many other cities, has potential for hazardous materials spills or incidents within or directly adjacent to facilities that warehouse, manufacture and process hazardous or toxic materials within or directly adjacent to Placentia. The use of hazardous materials in these facilities can pose a significant threat; however, Federal, State and local regulatory requirements and site-specific contingency and evacuation plans reduce these potential threats.

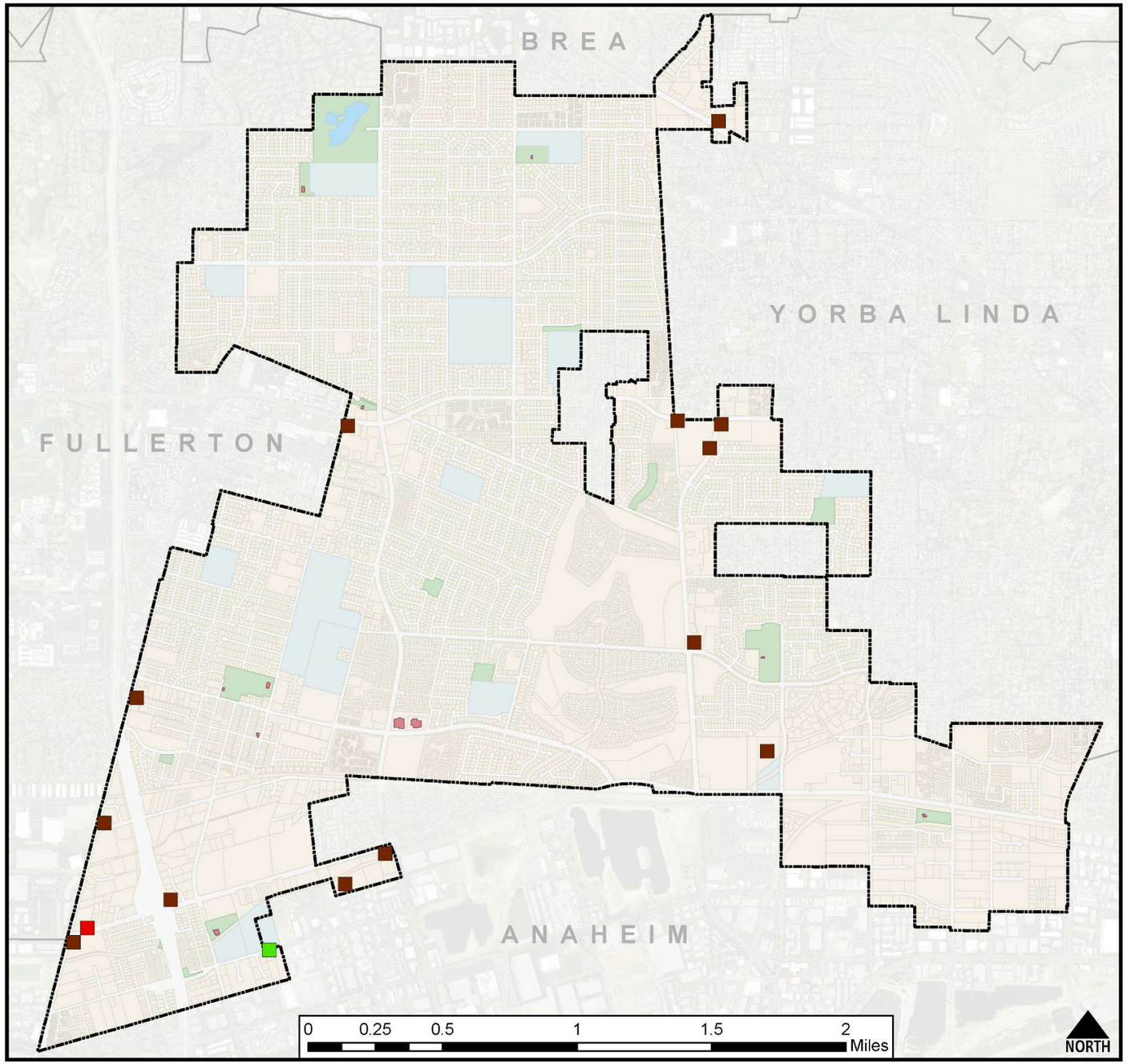
As of July 1, 2013, the Orange County Certified Unified Program Agencies (CUPA) implemented the Hazardous Material Disclosure, Business Emergency Plan and California Accidental Release Prevention programs. All regulated businesses in Placentia must submit hazardous materials disclosure forms online, which includes their business emergency plans, contact information and chemical inventories. This is also a great benefit to the community because it allows local fire agencies to have immediate access to chemical inventories in the region in case of a spill, fire or other incident.2 According to the Orange County Health Care Agency Environmental Health Division, there are approximately 100 facilities in Placentia that have been identified as containing and/or handling reportable amounts of hazardous materials. Not all facilities are covered under this program, as some businesses and facilities may be exempt due to limited quantities of hazardous materials. See Exhibit 7-7, Hazardous Facilities.

Hazardous Materials Area Plan

The PFLSD will proactively work with County partners and outside agencies to implement the Hazardous Materials Area Plan (Haz-Mat Area Plan). The Haz-Mat Area Plan was implemented to assist agencies in their pre-emergency planning and their emergency response role. The Haz-Mat Area Plan also provides the public with information about facilities that pose a threat or potential hazard to the community's health and safety. The Haz-Mat Area Plan is designed to assist in the prevention or mitigation of the damage to the health and safety of persons and the environment from the release or threatened release of hazardous materials into the workplace or environment.

[2] Orange County Environmental Health, http://occupainfo.com/

Exhibit 7-7. Hazardous Facilities



PLACENTIA
Rich Heritage, Bright Future

Hazardous Facilities

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.

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.

PERMITTED UNDERGROUND STORAGE TANK

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).

Source: GeoTracker

Produced: March 27, 2019

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7.6 CLIMATE CHANGE

Climate change, or the effects of global warming, in Placentia is most likely to increase the number and intensity of heat waves and decrease air quality, as concluded by the Vulnerability Assessment (see Appendix 7-1). Two communities in the City are more vulnerable to climate change due to the confluence of existing health and economic factors: The La Jolla and Old Town communities. The following describes the effects of extreme heat and poor air quality in the City of Placentia, including effects on those most vulnerable. Section 6.8 provides associated goals and policies to mitigate for these effects and build adaptation and resilience capacity in Placentia, with focused efforts directed towards more vulnerable populations.

Extreme Heat

In urban environments like Placentia, extreme heat is the most pervasive climate-related hazard. Extreme heat is the leading cause of death when compared to all weather-related hazards (Environmental Protection Agency, 2016). Dark urban surfaces, such as asphalt, absorb heat throughout the day and release it at night, which increases the nighttime minimum temperature and does not allow the air or human body to cool off. High heat can also intensify air pollution like smog and particulate matter. Communities that lack green open spaces, parks, shade trees, and other cooling elements face even more intense heat in addition to poorer air quality, this is also referred to as the "heat island effect."

In Placentia, an extreme heat event occurs when the temperature rises above 99.8 degrees. Between 2020 and 2040, Placentia is forecasted to experience approximately two heat waves a year that will last two to four days. The safety hazards associated with extreme heat include heat stroke and other heat-related illness. Safety risks are most prevalent amongst vulnerable populations, including older adults and children who are more sensitive to heat, as well as outdoor workers and those who lack air conditioning. These vulnerable populations who are more sensitive to heat will experience heatwaves and health impacts including heat stroke at lower temperatures. Because of this sensitivity at lower temperatures, these populations will have up to seven extreme heat events in the same year that last even longer- between three to five days (California Heat Assessment Tool, 2018).

Poor Air Quality

Climate change decreases air quality in three major ways: increasing the production of ozone, increasing the frequency and intensity of wildfires, and increasing allergens (CDC 2018).

Ozone

Ozone is a gas composed of three atoms of oxygen (O3). Ozone occurs both in the Earth's upper atmosphere and at ground level. Ozone that occurs naturally in Earth's upper atmosphere is good, as it forms a protective layer that shields us from the sun's harmful ultraviolet rays. Ozone at ground level is a harmful air pollutant, because of its effects on people and the environment, as is the main ingredient in "smog". Ground level ozone is created when sunlight reacts with other air pollutants from vehicle tailpipes and industrial facilities. Exposure to ground level ozone can make it harder to breathe, cause asthma attacks, and even lead to premature death. Therefore, increases in the number of hot and sunny conditions as a result of climate change will also increase the amount of ground level ozone.

Wildfires

The relatively urban landscape of the City of Placentia limits the direct impact of wild fires; however, the City is in close proximity to wildland areas prone to fire on the east and northeast in the neighboring cities of Yorba Linda and Brea and in unincorporated areas of Orange County. Between 2020 and 2040, twice as much area around the City is likely to burn each year as a result of climate change. Wildfires can emit toxic chemicals when houses burn and particulate matter (ash) from burning vegetation can enter a person's lungs and blood causing heart and lung disease (Environmental Protection Agency, 2017; National Oceanic and Atmospheric Administration, 2018). Therefore, while the City of Placentia may not be physically threatened by wildfire, the poor air quality caused by neighboring wildfires can impact the health of the Placentia community.

Allergens

Longer warm seasons can also lead to longer pollen seasons. These longer pollen seasons can increase allergic reactions and asthma-related episodes, which can result in adults missing work or children missing school. Increased allergens and air pollutants like ozone can also work together to lead to greater respiratory problems.

Populations Most Vulnerable to Climate Change

Climate change impacts do not affect people equally. Children, pregnant women, older adults, and those with pre-existing conditions are considered a "vulnerable" or "sensitive" population, meaning they're more prone to falling ill from climate-related public health events due to their developing or weakened bodies. Additionally, people with fewer economic resources, limited mobility or access to transportation, lower English language proficiency and education, and uncertain citizenship status are at greater risk as they have fewer resources to adapt, evacuate, or access information. Lower income persons may not be able to prioritize healthcare needs or have access to air conditioning in either their cars or homes and may work outdoors, further exacerbating the impact.

Disadvantaged Census Tracts

CalEPA identifies disadvantaged communities by the confluence of geographic, socioeconomic, public health and environmental hazard criteria. Census Tracts which score in the top 25% are considered disadvantaged and are the most vulnerable to climate change. These areas are also eligible for specific funding sources and environmental justice considerations. There are two such communities in the City, the La Jolla and Old Town Communities. The Health, Wellness and Environmental Justice Element discusses in detail the areas where the more vulnerable communities exist and describes the two "disadvantaged communities" within the City.

Both the La Jolla and Old Town communities have a much higher pollution burden relative to other Census Tracts in the state, meaning they are disproportionately burdened by major pollution sources, including toxic releases from industrial facilities and traffic-related air pollution from high volume roadways. The Old Town community also suffers disproportionately from low birth weights and cardiovascular disease, which can be symptoms of pollution exposure.[3] Both communities have a higher sensitive population in terms of education, poverty and housing burden compared to other census tracts, meaning they are less educated, living below the federal poverty level and paying more than 50% of their income in housing costs. The confluence of existing health and economic factors make these communities more vulnerable to the effects of climate change, which creates safety hazards.

Summary of Potential Climate-Related Impacts

Table 7-1 summarizes the potential effects of climate change in the City as analyzed in the vulnerability assessment, including who, where, and when the effects will likely pose the greatest risk, as well as an overall rating. As indicated in the table, increased heat-related illness poses the most immediate and highest risk citywide amongst older adults, children, outdoor workers and those who lack air conditioning, with the greatest risk facing those that live in older buildings and lack shaded areas. Increase in ozone production poses the most immediate and highest air quality risk citywide amongst older adults, children, outdoor workers, and pregnant women, with the greatest effects found near major roadways. Ozone has been found in the placentas of baby fetuses and is correlated with low birth weights. The particulate matter in the air dissipates quickly; however, those living near major roadways are exposed to this dangerous emission. Goals and policies within this Element address each of these impacts, with a focus on prioritizing the needs of the most vulnerable populations.

[3] Source: Office of Environmental Health Hazard Assessment (OEHHA). 2018. CalEnviroScreen 3.0. Available from: https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30

Table 7-1. Impacts Due to Climate Change

Hazard	Potential Impacts	Vulnerability/ Sensitivity	Temporal Extent	Spatial Extent	Rating
Extreme Heat	Increased heat related illness	Older adults, children, outdoor workers, and those who lack air conditioning	Short term	City wide with greater effects on those areas with older buildings and less greenspace (i.e., shade)	High
	Increased use of air conditioning	Low-income populations	Short term	City wide with greater effects on those areas with older buildings and less greenspace	Moderate
Decreased Air Quality	Increase in ozone production	Older adults, children, outdoor workers, and pregnant women	Short term	City wide with greater effects near major roadways	High
	Increase in wildfire in wildlands adjacent to the City	Older adults, children, outdoor workers, and pregnant women	Medium Term	City wide	Moderate
	Increase in allergens	Those with pre-existing health conditions	Medium Term	City wide	Moderate
Flooding	Water damage and destruction of homes from dam failure or inundation	Residences in 100-flood zone in La Jolla Community	Medium Term	Limited to the 100-year flood zone	Moderate
	Water damage and destruction of homes from extreme flooding	Industrial facilities in the southeastern part of the City	Long Term/ Unlikely	Limited to the areas that are protected by levees	Low

Source: Placentia Vulnerability Assessment

7.7 POLICE AND LAW ENFORCEMENT

The City of Placentia Police Department station is located within the City of Placentia Civic Center at 401 E. Chapman Avenue. The Police Department houses a mixture of sworn members, civilian/ non-sworn members, and dedicated volunteers that work together to maintain a safe community. Among its many operations, sworn members of the department oversee traditional law enforcement activities pertaining to the California Health and Safety Code. In the event of an emergency or disaster, the Police Department maintains law and order and plays a role in directing citizens to safety.

As communities grow and transform in the future, law enforcement must proactively adapt to ensure adequate police services are available throughout the community.

Community-Oriented Policing

The Police Department supports the Community-Oriented Policing (COPS) philosophy, which promotes organizational strategies that support the systematic use of partnerships and problem-solving techniques to proactively address the immediate conditions that give rise to public safety issues such as crime, social disorder, and fear of crime. COP is the method of policing that invokes trust-building, integrity-building, and positive, reoccurring interactions between members of the community and the police. Through COP, the Police Department vigorously supports community engagement as a mechanism to apply community-centric, problem-solving methods as a key method to reduce all types of crime and promote community safety.

Neighborhood Watch Program

The Police Department's Crime Prevention Bureau coordinates the Neighborhood Watch program. In addition to the effectiveness of this program for crime reporting by individual neighbors, the program promotes neighbors getting out and getting to know each other, which ultimately enhances community security, awareness, and positive interactions with the Police Department. In the event of an emergency, individuals play an important role in assisting the Police Department with notifying their neighbors and assisting them to safety. It is an important goal of the City to continue efforts to strengthen this program to adequately provide for the needs of the community, particularly the vulnerable and underserved populations.

7.8 DISASTER PREPAREDNESS, RESPONSE AND RECOVERY

Localized emergencies and disasters are often referred to in terms of the "Emergency Management and Disaster Cycle" – the continuous, cyclical process which involves the stages of preparedness, prevention, mitigation, response, and recovery. When faced with any hazard, the goal is to prevent impacts on the community, however, some disasters, especially natural ones, cannot be prevented. Therefore, continuous preparedness measures are implemented to reduce the loss of life and property and protect the health and wellness of the community. The most effective preparedness is achieved by having a deep understanding of the community.

Preparedness and mitigation are only the initial steps in the management of hazards and disasters; however, they are the most important. Accordingly, the City of Placentia prepares for emergencies in a variety of ways to ensure that once a disaster has occurred, the capacity of the City to respond to the situation at hand is adequate.

The City of Placentia's Emergency Services Division works collaboratively on various internal and external programs to support the coordination of resources and plans during large- and small-scale incidents. In accordance with best practices, the city's Emergency Services Division strives to manage all incidents at the lowest level possible. Through a scalable response to all emergencies, the implementation of the city's Emergency Operations Plan enhances the response that the city can provide to the members of the community.

The implementation of various guides and procedural documents enhances the overall response and scalability into the City's Emergency Operations Plan, described below, which promotes a coordinated response based on the city's overall mission. Based on principles of SEMS (Standardized Emergency Management System), ICS (Incident Command System), equity, cultural competence, inclusion, and coordination, the Emergency Services Division has designated trained personnel to effectively respond to the EOC (Emergency Operations Center) during any activation, and designated personnel will jointly work to support the mission of field personnel and response partners.

Emergency Operations Plan

The primary document that describes the City of Placentia's emergency response plan is the City of Placentia Emergency Operations Plan (EOP). The EOP is a continuously updated response plan based on the community profile, hazard assessments, government structures, and agreed-upon measures that shall be taken to respond to a large-scale event. The data delineated in the EOP reflect State and Federal laws and requirements, and interfaces with other cities and counties within Southern California. The plan outlines the operations that shall be implemented in the event of a disaster to ensure a coordinated response between the City, County, volunteers (e.g. Community Emergency Response Team – CERT and Radio Amateur Civil Emergency Service – RACES), businesses, State, and Federal partners. The EOP also allows for coordination with other agencies outside of the City due to the plans being developed based on the Standardized Emergency Management System (SEMS) and the Incident Command System (ICS). The plan addresses Alert and Warning systems, the Emergency Operations Center (EOC) structure, evacuation routes, sheltering, and recovery. The plan provides a foundation to conduct operations and coordinate the management of critical resources during emergencies. The EOP also provides the framework for which non-governmental agencies and organizations that have requested resources needed to meet emergency requirements are integrated into the response.

The City's EOP provides guidance for the coordinated response to extraordinary emergency situations associated with natural disasters, acts of terrorism, civil disturbances, fires, public health emergencies, technological incidents, and nuclear defense operations, both during war and in times of peace. This plan has been developed to provide a comprehensive emergency management program for all

City employees and response partners to understand prior to an emergency in the City of Placentia.

The EOP does not address ordinary day-to-day emergencies, and it does not provide a singular response to all emergencies. Rather, the EOP concentrates on operational concepts and response procedures relative to large-scale disasters.

The EOP is the general organization of the various City departments and personnel into their respective emergency responsibilities pursuant to the Standardized Emergency Management System/National Incident Management System (SEMS/NIMS). SEMS is required by the California Government Code and was developed to provide a "common language" for emergency response personnel to request resources and equipment from other agencies.

The City developed the EOP based on the Incident Command System (ICS) principles and concepts within the SEMS. The SEMS and the NIMS are compatible plans, and the City of Placentia recognizes these policies and utilizes the SEMS/NIMS as a basis for the ICS structure. The SEMS/NIMS create a standard incident management system that is scalable and modular and can be used in incidents of any size/complexity. All jurisdictions are now addressing the use of the ICS as required under SEMS/NIMS. SEMS/NIMS became effective, statewide, in March 1995. The City of Placentia adopted NIMS on July 19, 2005.

Prevention, Preparedness, and Mitigation – Emergency Operations Plan

The City of Placentia's EOP is a document that has been developed to respond to the onset of a natural or human-induced emergency. Although this plan focuses on the City's response to an emergency, the EOP also contains a forward-leaning approach to emergency and disaster preparedness. When developing the EOP, the City elected to include Annex A – The Prevention, Preparedness, and Mitigation Annex. Annex A of the EOP focuses on the actions that all departments must take in the preparedness and mitigation for all emergencies within the City.

With the City continuously analyzing data that helps to understand the individual complexities that lie within the borders of the city; it is the role of all city personnel to ensure that everything that we can do to reduce risk and increase individual capacity is accomplished. To ensure that all populations are served in an equitable and inclusive manner, the City provides information and community specific training that focuses messaging and information to various members of the community. Focused messaging not only allows for members of underrepresented and underserved communities to gather information that is appropriate for their communities, but this messaging also allows for a reciprocal understanding of the community's needs by the City. The implementation of Annex A is a continuous process, and it is the only portion of the Emergency Operations Plan that is always in effect.

Emergency and Incident Mass Notification

The Police Department continues to explore ways to communicate with the community during emergencies. In 2018, the City of Placentia partnered with Everbridge, a global provider of critical notifications, to expand the wireless notification systems for the citizens and businesses of the community. Through the partnership, the Police Department looked at the ways to best communicate with people within the City's community and determined that traditional methods of communication are no longer viable as the effectiveness of loud speakers and door-to-door notifications is reduced due to well-built, secured structures that promote external noise reduction. Moving forward, the City will implement Everbridge's methodology of communicating critical information with the community via telephone, text message and email, thus changing the way that emergency contact is made within the City.

Hazard Mitigation Planning

Hazard mitigation planning is the process used by state, local and tribal leaders to understand risks from natural hazards and develop long-term strategies to reduce the impacts of disasters on people, property, and the environment. The City currently does not have an approved Local Hazard Mitigation Plan; however, an important policy under the Disaster Preparedness Goal of this element is to prepare and adopt a hazard mitigation plan to more thoroughly understand each risk and establish implementation actions to reduce impacts and implement the goals and policies of this Element.

7.9 GOALS AND POLICIES

Geologic and Seismic

GOAL SAF - 1	***Minimize the risk to public health and safety and disruptions to vital services, economic vitality, and social order resulting from seismic and geologic activities.***
Policy SAF - 1.1	Minimize the risk to life and property through the identification of potentially hazardous areas, adherence to proper construction design criteria, and provision of public information.
Policy SAF - 1.2	Require geologic and geotechnical investigations in areas of potential seismic or geologic hazards as part of the environmental and/or development review process for all structures. Require that engineered slopes be designed to resist earthquake-induced failure.

Policy SAF - 1.3 Require removal or rehabilitation of hazardous or substandard structures that may collapse in the event of an earthquake, such as the unreinforced masonry buildings identified above.

Policy SAF - 1.4 Promote the strengthening of planned utilities, the retrofit and rehabilitation of existing weak structures and lifeline utilities (i.e., utility and communications lines), and the relocation of certain critical facilities to increase public safety and minimize potential damage from seismic and geologic hazards.

Policy SAF - 1.5 Require that new construction and significant alterations to structures located within potential landslide areas (northwest part of City) be evaluated for site stability, including the potential impact to other properties, during project design and review.

Policy SAF - 1.6 Provide public education and information materials to increase the community's preparedness in the event of a disaster.

Policy SAF - 1.7 Continue to have and improve upon inter-jurisdictional cooperation and communication, especially with regards to safety aspects of dams, freeway structures, oil wells and pipelines, regional fault studies, and disaster response and emergency plans.

Urban Fire Hazards

GOAL SAF - 2 ***Protect the lives and property and minimize the exposure of residents, businesses owners, and visitors from the hazards of urban fires.***

Policy SAF - 2.1 Continue to conduct long-range fire safety planning, including enforcement of stringent building, fire, subdivision and other Municipal Code standards, improved infrastructure, and mutual aid agreements with other public agencies and the private sector.

Policy SAF - 2.2 Continue to refine procedures and processes to minimize the risk of fire hazards, requiring new development, where appropriate, to:

- Utilize fire-resistant building materials;
- Incorporate Fire retardant landscaping;
- Incorporate fire sprinklers as appropriate; and
- Provide Fire Protection Plans,

Policy SAF - 2.3 Encourage owners of homes with wood roofs and flammable siding to replace them with Class-A, non-wood roof systems.

Policy SAF - 2.4 Monitor fire response times to ensure they are keeping to desired levels of service.

Policy SAF - 2.5 Ensure that adequate fire-fighting resources are available to meet the demands of new development, especially with increases in the construction of mid- to high-rise structures, by ensuring that:

- Fire flow engine requirements are consistent with Insurance Service Office (ISO) recommendations; and
- The height of truck ladders and other equipment and apparatus are sufficient to protect multiple types of structures.

Policy SAF - 2.6 Continue public education efforts to inform residents and business owners of fire hazards and measures to minimize the damage caused by fires to life and property.

Policy SAF - 2.7 Conduct a survey to identify structures that pose a fire hazard, and initiate programs that will assist owners and renters to bring properties up to current Fire and Building Code requirements and to prevent overcrowding.

Policy SAF - 2.8 Ensure that city is up to date with the most recent fire code and that it is being enforced.

Flood & Dam Inundation Hazards

GOAL SAF - 3 ***Reduce, to the greatest extent possible, the risk to life, property and public investment by flood hazards.***

Policy SAF - 3.1 Continue to use best practices through the planning, design and building process to mitigate flood hazards.

Policy SAF - 3.2 Prohibit housing in the 100-year flood zone unless the plans mitigate the potential for flooding by elevating the ground floor or other mitigation measures recommended by a licensed civil engineer with expertise in flooding mitigation and approved by the Development Services and Public Works Departments of the City.

Policy SAF - 3.3 Continue to participate in the National Flood Insurance Program.

Policy SAF - 3.4 Continue to comply with the Cobey-Alquist Floodplain Management Act requirements and State of California Model Floodplain Management Ordinance.

Policy SAF - 3.5 Continue to work with the Orange County Flood Control District and the United States Army Corps of Engineers to receive and implement updated flood control measures and information.

Policy SAF - 3.6 Utilize flood control methods that are consistent with Regional Water Quality Control Board Policies and Best Management Practices (BMPs).

Hazardous Materials and Waste

GOAL SAF - 4 ***Decrease the risk of exposure for life, property and the environment to hazardous materials and hazardous waste.***

Policy SAF - 4.1 Follow the response procedures outlined within the Operational Area / County Hazardous Materials Area Plan in the event of a hazardous materials emergency.

Policy SAF - 4.2 Implement Federal, State and local regulations for the disposal, handling, and storage of hazardous materials.

Policy SAF - 4.3 Promote the recovery and recycling of hazardous materials.

Policy SAF - 4.4 Employ effective emergency preparedness and emergency response strategies to minimize the impacts to health and safety that can result from hazardous materials emergencies such as spills or contamination.

Policy SAF - 4.5 Continually update maps of the City's emergency facilities, evacuation routes and hazardous areas to reflect additions or modifications.

Policy SAF - 4.6 Continue to partner with the County of Orange to provide needed programs such as the Regional Household Hazardous Waste Collection Center, allowing disposal of household hazards at no cost to Placentia residents and participating agencies.

Policy SAF - 4.7 Work with Caltrans to plant, maintain and enhance landscaping abutting the California State Route 57 that passes through Placentia's disadvantaged communities.

Policy SAF - 4.8 Require enhanced landscaped buffers in industrial-zoned areas that abut residential zones, consisting of more densely planted trees in setback areas.

Policy SAF - 4.9 Prohibit outdoor industrial operations in industrial zones that abut residential areas.

Climate Change

GOAL SAF - 5 ***Increase Placentia's ability to adapt and become resilient to the effects of climate change, including extreme heat and poor air quality, while achieving other health and environmental benefits.***

Policy SAF - 5.1 Educate residents and businesses in Placentia about climate change and global warming.

Policy SAF - 5.2 Review and improve the City's emergency response plans and systems to warn and protect residents during extreme heat events.

Policy SAF - 5.3 Help residences become heat resilient (i.e., energy efficient and weatherproof) through home weatherization, air conditioning, energy subsidies and programs.

Policy SAF - 5.4 Reduce the heat-island effect, and help residents stay safe with cool infrastructure and recreation facilities (e.g., cool roofs on public facilities, cool pavements, cool transit facilities, urban greening, public swimming pools, etc.).

Policy SAF - 5.5 Plant and maintain trees, gardens and other vegetation, and direct resources to areas with low canopy cover to improve air quality and reduce the impact of increasing heat.

Policy SAF - 5.6 Focus urban greening efforts along Highways 57 and 91, near other major roadways and near industrial facilities, to provide natural buffers to absorb and block toxic emissions from these high polluting sources.

Policy SAF - 5.7 Ensure that adequate and culturally-appropriate cooling centers exist community-wide, prioritizing disadvantaged communities, and that locations are widely communicated in multiple formats and languages.

Policy SAF - 5.8 Adopt a Climate Action Plan.

Police and Law Enforcement

GOAL SAF - 6 ***Maintain law and order in the City for the safety of the community through programs that promote positive partnerships between neighbors and the Police Department.***

Policy SAF - 6.1 Maintain adequate and equitable levels of police service throughout the community.

Policy SAF - 6.2 Continue to strengthen the Neighborhood Watch program as a way to reduce crime enhance emergency preparedness and response in Placentia's neighborhoods.

Policy SAF - 6.3 Continue to support the Community-Oriented Policing philosophy to promote community safety through trust-building and positive reoccurring interactions between members of the community and police.

Policy SAF - 6.4 Develop an enhanced Volunteer Police unit which provides increased visibility and community involvement in areas with high population densities and pedestrian traffic.

Policy SAF - 6.5 Increase involvement with local community groups within the Old Town and La Jolla areas to promote safety and appropriate and effective policing.

Policy SAF - 6.6 Monitor for and investigate any human trafficking activities within the City and aggressively enforce, bringing in outside agencies as appropriate of if needed.

Disaster Preparedness, Response and Recovery

GOAL SAF - 7 ***Minimize the risk to life and property through emergency preparedness and public awareness.***

Policy SAF - 7.1 Ensure the availability of both the Safety Element and City emergency preparedness plans to employers and residents of Placentia.

Policy SAF - 7.2 Coordinate disaster preparedness and recovery with other local, state and federal governmental agencies.

Policy SAF - 7.3 Evaluate, Citywide, the adequacy of access routes to and from hazard areas relative to the degree of development or use (e.g. road width, road type, length of dead-end roads, etc.).

Policy SAF - 7.4 Continue to conduct public outreach efforts to prepare the community for an emergency and provide them with guidance on how to respond to natural and man-made disasters, including the location of pre-designated evacuation routes and Transportation Assembly Points. This can be done through community newsletters, the City website and information at community events. Ensure that outreach efforts are done in multiple languages.

Policy SAF - 7.5 Develop an emergency communications system that will be able to inform all residents of a disaster and instructions for safety.

Policy SAF - 7.6 Train multi-lingual personnel to assist in evacuation and other emergency response activities to meet the community need.

Policy SAF - 7.7 Apply the procedures outlined in the Homeland Security Advisory System (HSAS) to prepare the City to respond to terrorist attacks.

Policy SAF - 7.8 Continue to evaluate and practice preparedness through Emergency Operations Center (EOC) exercises.

Policy SAF - 7.9 Continue and build on the existing Community Emergency Response Team (CERT) program, providing more information to the community and raising the awareness of the program via community newsletters, the City website and information at community events.

Policy SAF - 7.10 Help residents build a stronger, broader Neighborhood Watch program, seeking more participation across all neighborhoods of Placentia, prioritizing disadvantaged communities.

Policy SAF - 7.11 Adopt a Local Hazard Mitigation Plan, incorporating climate change policy and coordinated with surrounding cities.

Policy SAF - 7.12 Ensure that mutual aid agreements are in place.

7.10 SAFETY ACTION PLAN

Government Code Section 65302(g) requires feasible mitigation measures to implement policies pertaining to flooding and climate adaptation and resilience goals and policies. Progress on General Plan goals and policies can be measured in short-, mid- and long-term phases. The Action Plan below sets out the policies, suggested time frame for implementation of each policy, and the City Department responsible for implementing.

Short term actions are those that can be completed within the first three years of the adoption of the General Plan and would in this case be 2019-2022. Mid-term actions, which may build on the work completed in the short term, are those that could be completed within the three to five years following short term actions (2022-2027). Long term policies would typically take five or more years to implement and would take into account the updates made to the General Plan every ten years. There are also policies that are ongoing or required continuous efforts to implement and are not specifically dependent upon a single mobilizing action.

Urban Fire Hazards

Goals, Policies, & Measurable Objectives	Responsible Department, Agency, Or Organization	Timeframe: Short	Mid	Long	Ongoing	Annually w/ Budget
GOAL SAF- 2: Protect and minimize the exposure of residents, businesses owners, and visitors from the hazards of urban fires.						
Policy 2.1: Continue to conduct long-range fire safety planning, including enforcement of stringent building, fire, subdivision and other Municipal Code standards, improved infrastructure, and mutual aid agreements with other public agencies and the private sector. ***Action 2-1.1:*** *Agendize this annually on department head meeting with City Manager and conduct review every two years.*	Development Services/Public Works/PFLSD	●			●	
Policy 2.2: Continue to refine procedures and processes to minimize the risk of fire hazards, requiring new development, where appropriate. ***Action 2-2.1:*** *Monitor new fire regulations by assigning one City staff person to coordinate with PFLSD on a regular basis.*	Development Services/Public Works/PFLSD	●			●	
Policy 2.3: Encourage owners of homes with wood roofs and flammable siding to replace them with Class-A, non-wood roof systems. ***Action 2-3.1:*** *Conduct a public information campaign for homeowners and conduct a citywide survey to identify these roofs and contact specific homeowners.*	Development Services	●			●	
Policy 2.4: Monitor fire response times to ensure they are keeping to desired levels of service. ***Action 2-4.1:*** *PFLSD to report to City Manager office on response times every six months.*	PFLSD to report to City Manager Office	●			●	
Policy 2.5: Ensure that adequate fire-fighting resources are available to meet the demands of new development, especially with increases in the construction of mid- to high-rise structures. ***Action 2-5.1:*** *At annual budget meetings, PFLSD to present a report giving status of adequate resources and remedies if inadequate.*	PFLSD to report to City Manager Office					●
Policy 2.6: Continue public education efforts to inform residents and business owners of fire hazards and measures to minimize the damage caused by fires to life and property. ***Action 2-6.1:*** *Conduct an annual outreach campaign via city website and publications mailed out to residents.*	Development Services with PFLSD					●

Urban Fire Hazards

Goals, Policies, & Measurable Objectives	Responsible Department, Agency, Or Organization	Timeframe: Short	Mid	Long	Ongoing	Annually w/ Budget
GOAL SAF- 2: Protect and minimize the exposure of residents, businesses owners, and visitors from the hazards of urban fires.						
Policy 2.7: Conduct a survey to identify structures that pose a fire hazard, and initiate programs that will assist owners and renters to bring properties up to current Fire and Building Code requirements and to prevent overcrowding. ***Action 2-7.1:*** *Code Enforcement to note during inspections and city surveys any structure that poses a threat and contact the property owner for immediate remedy.*	Code Enforcement and Police				●	
Policy 2.8: Ensure that city is up to date with the most recent fire code and that it is being enforced. ***Action 2-8.1:*** *PFLSD to review city regulations for compliance and monitor new regulations as they are adopted. Any new regulations should be adopted with six months.*	PFLSD and Development Services				●	

Flood & Dam Inundation Hazards

Goals, Policies, & Measurable Objectives	Responsible Department, Agency, Or Organization	Timeframe: Short	Mid	Long	Ongoing	Annually w/ Budget
GOAL SAF- 3: Reduce, to the greatest extent possible, the risk of life, property, public investment by flood hazards.						
Policy 3.1: Continue to use best practices through the planning, design and building process to mitigate flood hazards. ***Action 3-1.1:*** *Update land use regulations and site development standards every five years to be consistent with Regional Water Quality Control Board (RWQCB) Policies and Best Management Practices (BMPs).*	Development Services/Public Works		●		●	
Policy 3.2: Prohibit housing in the 100-year flood zone unless the plans mitigate the potential for flooding by elevating the ground floor or other mitigation measures recommended by a licensed civil engineer with expertise in flooding mitigation and approved by the Development Services and Public Works Departments of the City. ***Action 3-2.1:*** *Update land use regulations to prohibit housing in the 100-year flood zone unless the plans mitigate the potential for flooding by elevating the ground floor or other mitigation measures recommended by a licensed civil engineer with expertise in flooding mitigation and approved by the Development Services and Public Works Departments of the City.*	Development Services/Public Works	●			●	
Policy 3.3: Continue to participate in the National	Development Services	●			●	

Flood & Dam Inundation Hazards

Goals, Policies, & Measurable Objectives	Responsible Department, Agency, Or Organization	Timeframe: Short	Mid	Long	Ongoing	Annually w/ Budget
GOAL SAF- 3: Reduce, to the greatest extent possible, the risk of life, property, public investment by flood hazards.						
Flood Insurance Program (NFIP).						
Action 3-3.1: *Annually review the NFIP standards to ensure compliance with its provisions.*						
Policy 3.4: Continue to comply with the Cobey-Alquist Floodplain Management Act requirements and State of California Model Floodplain Management Ordinance.	Development Services/Public Works	●			●	
Action 3-4.1: *Annually review the Model Floodplain Management Ordinance to ensure compliance.*						
Policy 3.5: Continue to work with the Orange County Flood Control District and the United States Army Corps of Engineers to receive and implement updated flood control measures and information.	Development Services/Public Works	●			●	
Action 3-5.1: *Annually monitor to identify any updated measures.*						
Policy 3.6: Utilize flood control methods that are consistent with RWQCB policies and BMPs.	Development Services/Public Works	●			●	
Action 3-6.1: *Review all development applications within flood plain districts and implement flood control methods consistent with RWQCB policies and BMPs.*						

Climate Change

Goals, Policies, & Measurable Objectives	Responsible Department, Agency, Or Organization	Timeframe: Short	Mid	Long	Ongoing	Annually w/ Budget
GOAL SAF- 5: Increase Placentia's resilience to extreme heat while achieving other health and climate benefits.						
Policy 5.1: Educate residents and businesses in Placentia about climate change and global warming. ***Action 5-1.1:*** *As part of the EOP-Annex A messaging and information program, integrate an educational component on climate change, with a goal of building individual and community resilience, prioritizing disadvantaged communities.*	Emergency Management Division with assistance from Development Services and Community Services	●			●	
Policy 5.2: Review and improve the City's emergency response plans and systems to warn and protect residents during extreme heat events. ***Action 5-2.1:*** *Adopt and implement a heat annex plan, which includes a public education component, to predict and communicate with the public about heat events, coordinate jurisdiction response, and identify strategies to create a heat-resistant community, including designating cooling centers throughout the City, prioritizing disadvantaged communities.*	Emergency Management Division with assistance from Development Services and Community Services	●				
Policy 5.3: Help residences become heat resilient (i.e., energy efficient and weatherproof) through home weatherization, air conditioning, energy subsidies and programs. ***Action 5-3.1:*** *Identify all available funding sources and programs to assist homeowners financially with installing air conditioning or purchasing swamp coolers and making other weatherproof upgrades.*	Police Department working with PFLSD/Saint Jude Hospital/Placentia Unified School District/Community-Based Organizations with assistance from Development Services and Community Services	●			●	

Climate Change

Goals, Policies, & Measurable Objectives	Responsible Department, Agency, Or Organization	Timeframe: Short	Mid	Long	Ongoing	Annually w/ Budget
GOAL SAF- 5: Increase Placentia's resilience to extreme heat while achieving other health and climate benefits.						
Action 5-3.2: *Issue a citywide survey to identify and educate all households that are not weatherproof and do not have air conditioning and provide the resources at low or no cost to both homeowners and renters. Educational materials shall be included to identify the health risks of extreme heat events, as well as strategies to stay safe, in advance of an emergency.* ***Action 5-3.3:*** *Partner with schools, public health departments, healthcare providers and community-based organizations to educate specific groups about the health risks of extreme heat events, as well as strategies to stay safe, in advance of an emergency.*						
Policy 5.4: Reduce the heat-island effect, and help residents stay safe with cool infrastructure and recreation facilities (e.g., cool roofs, cool pavements, cool transit facilities, urban greening, swimming pools, etc.). ***Action 5-4.1:*** *Create and implement a heat response plan as an updated Hazard Mitigation Plan to identify strategies to create a heat-resistant community.* ***Action 5-4.2:*** *Develop and launch a neighborhood retrofit pilot program within a disadvantaged community that tests cooling strategies identified in the heat response plan* ***Action 5-4.3:*** *Explore partnerships with energy companies, to use public dollars to offer cool roof incentives and heat resilient households* ***Action 5-4.4:*** *Adopt cool pavement standards for City facilities and update the Zoning Code to provide incentives for developers to install cool pavements on surface parking areas*	Community Services with assistance from Police Department and Development Services	●	●			

Climate Change

Goals, Policies, & Measurable Objectives	Responsible Department, Agency, Or Organization	Timeframe: Short	Mid	Long	Ongoing	Annually w/ Budget
GOAL SAF- 5: Increase Placentia's resilience to extreme heat while achieving other health and climate benefits.						
Action 5-4.5: *Perform an audit of existing transit stops to identify those that need shading and natural ventilation and develop priorities for cooling these facilities, beginning with those in disadvantaged communities.* ***Action 5-4.6:*** *Create a volunteer program to transport citizens in need to designated cooling centers.*						
Policy 5.5: Plant and maintain trees, gardens and other vegetation, and direct resources to areas with low canopy cover to improve air quality and reduce the impact of increasing heat. ***Action 5-5.1:*** *Update the Zoning Code to maximize opportunities to require landscaped private and public open space.*	Development Services with assistance from Community Services and Public Works	●	●			
Action 5-5.2: *Create voluntary partnerships with non-profits, utility companies, air-quality or stormwater management agencies to plant and maintain trees and encourage broader urban greening promotion and activity, prioritizing areas near major transportation corridors and other polluting sources and with lower canopy cover.* *See the Open Space Element for additional actions related to the Urban Forest Management Plan.*	Community Services / Partner Organizations					
Policy 5.6: Focus urban greening efforts along Highways 57 and 91, near other major roadways and near industrial facilities, to provide natural buffers to absorb and block toxic emissions from these high polluting sources.	Public Works and Caltrans	●	●			

Climate Change

Goals, Policies, & Measurable Objectives	Responsible Department, Agency, Or Organization	Timeframe: Short	Mid	Long	Ongoing	Annually w/ Budget
GOAL SAF- 5: Increase Placentia's resilience to extreme heat while achieving other health and climate benefits.						
Action 5-6.1: *Create voluntary partnerships with non-profits, utility companies, air-quality or stormwater management agencies to plant and maintain trees and encourage broader urban greening promotion and activity, prioritizing areas near major transportation corridors and other polluting sources and with lower canopy cover.*						
Policy 5.7: Ensure that adequate and culturally-appropriate cooling centers exist community-wide, prioritizing disadvantaged communities, and that locations are widely communicated in multiple formats and languages	Police Department and Community Services					
Action 5-7.1: *Create and implement a heat annex plan, which includes a public education component to predict and communicate with the public about heat events, coordinate jurisdiction response, and identify strategies to create a heat-resistant community, including designating cooling centers throughout the City, prioritizing disadvantaged communities.*	Emergency Management Division working with Orange County Health and Orange County Sheriff's Department	●	●			
Action 5-7.2: *Partner with schools, public health departments, healthcare providers and community-based organizations to educate specific groups about the health risks of extreme heat events, as well as strategies to stay safe, in advance of an emergency, including the locations of designated cooling centers.*	Police Department working with PFLSD /Saint Jude Hospital/Placentia Unified School District/Community-Based Organizations with assistance from Community Services					
Policy 5.8: Adopt a Climate Action Plan.						
Action 5-8.1: *Add task to 2018/19 Budget and commence work on Plan by mid-year 2020 for adopting by end of 2020.*	Development Services		●			