GENERAL PLAN UPDATE

San Juan Capistrano Safety Element

July 2021

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1 Introduction

This Safety Element focuses on the safety and security of the City of San Juan Capistrano residents and businesses. The City strives to provide a safe and enjoyable environment for residents, and properly addressing and reducing risks associated with natural and human-induced hazards will further this goal. This information serves as a guide for hazard mitigation, emergency planning, and preparedness throughout the City's jurisdiction.

1.1 Purpose

The purpose of the Safety Element is to identify potential hazards to the City's jurisdiction, including its residents, structures, public facilities, and infrastructure. By identifying local and regional hazards (including both natural hazards and human-made hazards), goals and policies can be crafted to address public safety concerns unique to the City.

This Safety Element satisfies the requirements of state planning law and is a mandated component of the General Plan. Government Code Section 65302(g) establishes the required components of the Safety Element, which include the following topical areas:

- Wildland and urban fires
- Seismic hazards: ground shaking, surface rupture, ground failure, tsunami, seiche, and dam failure
- Slope instability: mudslides, landslides, subsidence, liquefaction, and the relationship to other seismic and geologic hazards
- Flooding
- Climate change adaptation and resilience

State law allows communities to select additional safety issues for consideration in the Safety Element. Thus, the City has elected to address the following non-mandatory safety issues:

- Hazardous materials location and movement
- Utility-related events: power failure/stoppages, drought/water shortages, natural gas pipes
- Crime
- Health crises

1.2 Relationship to General Plan Elements

The policies in the Safety Element address the various public safety hazards and emergency preparedness needs of a community. The Land Use Element, which is closely related to the Safety Element, contains policies that ensure both natural and human-made hazards are considered while making land-use decisions. The distribution of residential and other sensitive

land uses in the Land Use Map is designed to avoid or mitigate areas where hazardous conditions have been identified. Safety Element policies are designed to protect existing and planned land uses identified in the Land Use Element, as well as associated persons and properties.

The Safety Element is also linked to the Housing Element. State law requires that the Safety Element be reviewed and updated every time the Housing Element is updated to ensure that any new areas considered for housing are adequately protected from hazards and that additional densities and redevelopment do not adversely impact the safety and well-being of people or property.

The Safety Element is also linked to both the Open Space and Recreation Element and Conservation Element. Many designated open space or conservation areas are also documented as earthquake fault zones, unstable soils or slope zones, floodplains, or watersheds. Open space can be used as a buffer zone between uses that may create or have public safety hazards, such as hazardous materials use or production. Development within designated open space and conservation areas would usually be inconsistent with the goals and policies in the Safety Element.

To a lesser extent, the Safety Element relates to the Noise Element and Circulation Element. Excessive noise can create nuisances that negatively affect public health. Additionally, public safety agencies may become involved in enforcing certain noise codes and regulations. The Circulation Element provides a policy framework for a safe and efficient circulation system, which is critical during the response to an emergency or in the event that an evacuation is necessary.

1.3 Relationship to Other City Plans

1.3.1 Local Hazard Mitigation Plan

The Local Hazard Mitigation Plan (LHMP) for San Juan Capistrano was developed in accordance with the Disaster Mitigation Act of 2000 (DMA 2000) and followed the Federal Emergency Management Agency's (FEMA) 2011 Local Hazard Mitigation Plan guidance. The LHMP incorporates a process where hazards are identified and profiled, the people and facilities at risk are analyzed, and mitigation actions are developed to reduce or eliminate hazard risk. The San Juan Capistrano LHMP included a strategy that enables the implementation and sustainment of mitigation policies, probability of future occurrence, potential impact, critical facilities at risk, climate change considerations, vulnerabilities, risk assessment, and preparedness actions such as evacuation routes. Implementing these mitigation actions, which include both short- and long-term strategies, involves planning, policy changes, programs, projects, and other activities. The LHMP also addresses the vulnerability assessment required to address climate resiliency and adaptation in the Safety Element. The LHMP is fully integrated into the Safety Element in accordance with Assembly Bill (AB) 2140, Government Code 65302 (g)(4)(D)(ii).

1.3.2 Emergency Operations Plan

The City Emergency Operations Plan outlines the coordinated response to major emergencies and disasters. It identifies operational strategies and plans for managing inherently complex and potentially catastrophic events by integrating emergency management, response, and coordination systems, such as the Incident Command System, the Standardized Emergency Management System, and the National Incident Management System. The Emergency Operations Plan addresses the four phases of emergency management: Preparedness, Response, Recovery, and Mitigation. The City Emergency Operations Plan is consistent and coordinated with the Unified County of Orange and Orange County Operational Area Emergency Operations Plan.

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2 Hazard Discussion and Programs

2.1 Wildland and Urban Fires

Wildfire is a major hazard in Orange County. The hazard is especially high during dry winters. Due to extensive development along the wildland/urban interface, wildfire is a major hazard for residents of this densely populated County. A classic wildland/urban interface exists where well-defined urban and suburban development presses up against open expanses of wildland areas. This threat is magnified due to hot, dry, and windy weather and is especially dangerous during Santa Ana wind events. Once a fire starts, several conditions influence its behavior, including fuel, topography, weather, drought, and development.

The City of San Juan Capistrano is subject to wildland and urban fires, which pose a hazard to life and property. The natural vegetation in the area is highly prone to wildland fire. The City has historically witnessed or been threatened by several fires. These include the 1958 Stewart Fire, which burnt 2,500 acres in the City and a total of 69,444 acres in the region, and the 1988 Ortega Fire, which burnt 2,384 acres. The 1889 Santiago Canyon Fire ignited in Santiago Canyon and burned south of El Toro in the coastal foothills and in the mountains. It continued burning southward both in the mountains and along the coastal plain, at one point threatening the City.[1]

As depicted in Figure 2-1, some areas of the City fall under very high fire hazard severity zones (VHFHSZ). These VHFHSZ continue into the unincorporated land adjacent to the northeastern and eastern City limits and a portion of Mission Viejo adjacent to the San Juan Capistrano boundary. These areas could create potential public safety hazards for the residents of San Juan Capistrano. The urbanized portions of the City are also subject to structural fires. The City partners with the Orange County Fire Authority (OCFA) for its fire and emergency medical services. The OCFA provides comprehensive emergency services to the residents of San Juan Capistrano through a regional approach.

Pursuant to the State Government Code, properties located within a VHFHSZ must maintain certain defensible space through specific fuel modification (brush clearing) requirements. These fuel modification requirements are enforced wholly by the OCFA. Furthermore, property owners located within a VHFHSZ must disclose that their property is situated in such a zone at the time of sale. These requirements have been in place since the original State Government Code dealing with VHFHSZ was adopted in 1995.

The City will reduce the potential for dangerous fires by coordinating with the OCFA to implement fire hazard education, fire protection, and fuel modification programs. The current California Fire Code will be used to reduce structural fire hazards. In addition, the City will cooperate with the OCFA and California Water Service to ensure that fire hydrant placement and water pressure

[1] Jon E. Keeley and Paul H. Zedler, " Large, high-intensity fire events in southern California shrublands: debunking the fine-grain age patch model," *Ecological Applications* 19(1), 2009, http://userwww.sfsu.edu/parker/bio821/papers/5-Fire%20Ecology%20&%20Management/KeeleyZedlerDebunking.pdf.

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are adequate for firefighting purposes. The City will require property owners to submit plans showing fuel modification/fire-retardant zones. The City Municipal Code, Section 6-7.01, requires that the abatement of weeds and thistle, and the removal of garbage, refuse, and dirt throughout the City be performed annually to assist in reducing risks associated with fire and health hazards. The City will continue its weed abatement and Arundo removal programs. To enforce the code on private property, notice is sent to the private property owners for weed removal on private properties if it is determined that there is overgrowth. In case the property owners do not respond to notices, the City crew takes action, and a corresponding bill is sent to the property owner. The City will continue this program.

The City maintains a contract with the Mission Resource Conservation District for Arundo removal services within the City and desires to maintain and preserve San Juan Creek and Oso Creek from invasive species. The City will continue to have the Arundo removal.

Erosion and mudslides during heavy rains are common threats after a wildfire. The City will require erosion prevention plans, using revegetation or other acceptable measures, for new development on hillside areas. The City will prepare a revegetation/erosion control strategy for the City-owned properties and rights-of-way following a wildfire. The City will coordinate and cooperate with respective agencies as well as private developers for properties not under the City's ownership in order to implement revegetation/erosion control strategies following a wildfire. The City will use native vegetation and/or drought-resistant planting when needed.

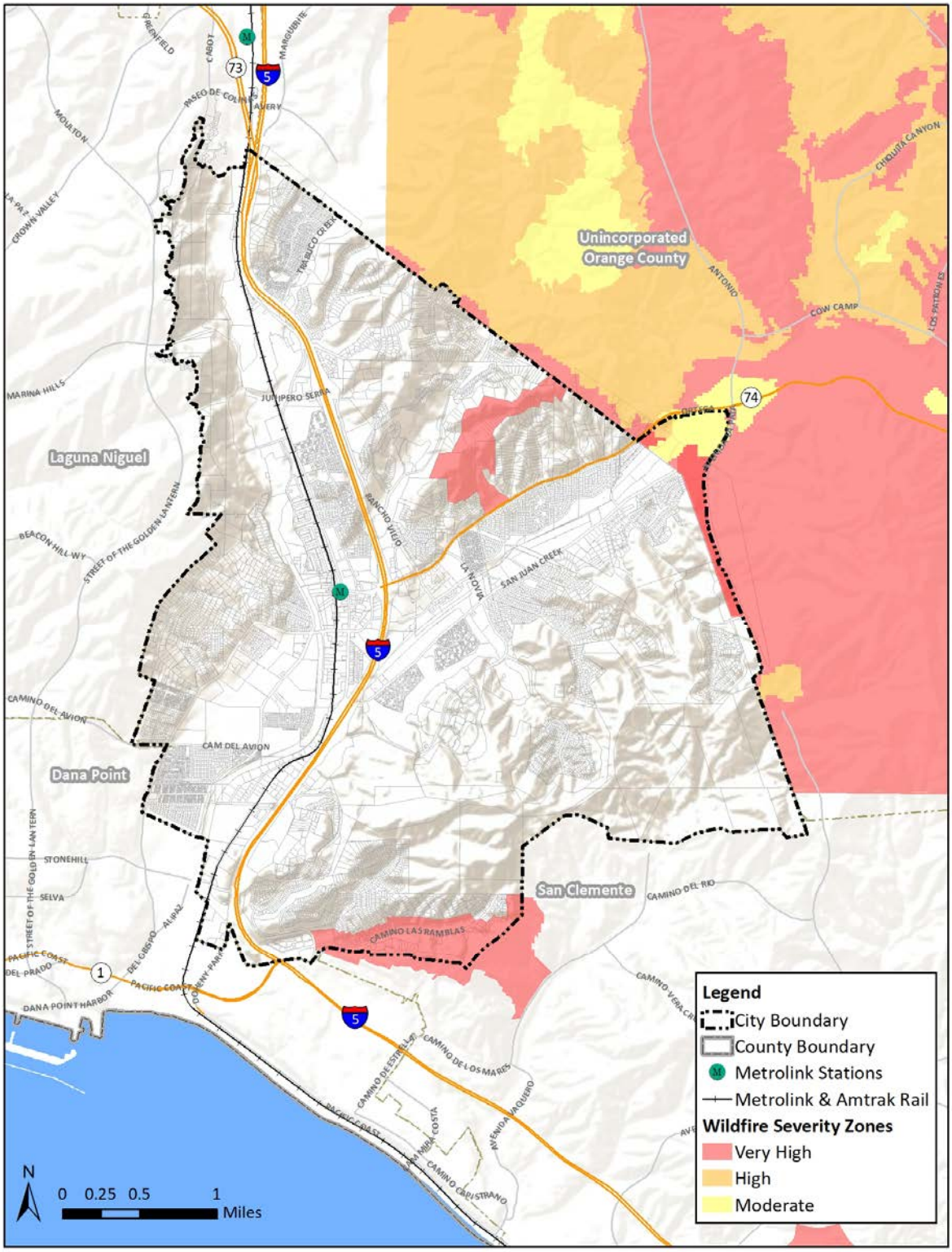
2.2 Seismicity

An earthquake is the ground shaking caused by a sudden slip on a fault. Stresses in the earth's outer layer push the sides of the fault together. Stress builds up, and the rocks slip suddenly, releasing energy in waves that travel through the earth's crust and cause the shaking.

Surface fault rupture is due to fault movement that breaks to the surface of the earth either suddenly during earthquakes or slowly due to a process known as fault creep; it is the result of tectonic movement that originates deep in the earth. Surface fault rupture is different from other types of earthquake-related ground deformation, such as that caused by soil liquefaction or earthquake-triggered landslides. The energy released during an earthquake is a direct result of fault rupture at depth, and when that rupture extends to the ground surface, it manifests as fractures, fissures, and related tectonic deformation. The release of energy during an earthquake will also cause shaking, which can trigger liquefaction and landslides.

The State of California classifies surface fault ruptures into two categories: Holocene-active fault and pre-Holocene faults. Holocene-active faults are the faults that have had surface displacement within the Holocene epoch (i.e., within the last 11,000 years). The San Andreas Fault, where the western Pacific Plate meets the eastern North American Plate, is the state's largest Holocene-active fault. Seismologists have determined that the San Andreas Fault is moving at a rate of approximately 2 inches per year. Holocene-active faults are also regulated by the Alquist-Priolo Earthquake Fault Zoning Act (A-P Act), which went into effect in March 1973.

Figure 2-1: Wildfire Hazard Areas



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The pre-Holocene fault is defined as showing evidence of surface displacement during the Quaternary Period (i.e., during the last 2.6 million years). These terms are used by the state primarily for use in evaluating the potential for surface rupture along faults and are not intended to describe possible seismic activity associated with displacement along a fault. Additionally, these definitions are not applicable to blind thrust faults that have only limited, if any, surface exposures.

No known active seismic faults traverse the City of San Juan Capistrano. Consequently, the potential for ground rupture is low, and no Alquist-Priolo Earthquake Fault Zoning has been established by the state. However, there are several major faults and fault systems in close proximity to the City (refer to Figure 2-2), placing it in an area of high seismic risk and high probability of occurrence. Of these faults, the Newport-Inglewood Fault Zone presents the highest risk of damage to the City. Table 2-1 lists the fault zones in the vicinity of the City. A major earthquake associated with any of these faults could result in moderate to severe ground-shaking in San Juan Capistrano. Damage to buildings and infrastructure could be expected as a result of ground shaking during a seismic event.

Table 2-1: Fault Zones

Fault Name	Distance to San Juan Capistrano	Probable Magnitude Range [A]
San Andreas Fault Zone	Approximately 50 miles (north/northeast)	6.8–8.0
Newport-Inglewood Fault Zone	Less than 5 miles (southwest)	6.0–7.4
San Joaquin Hills Fault	Approximately 7 miles (northwest)	Up to 7.3
Whittier-Elsinore Fault	Approximately 19 miles (northeast)	6.5–7.5
San Jacinto Fault[B]	Approximately 50 miles (north/northeast)	6.5–7.5
Palos Verdes Fault	Approximately 20 miles (southwest)	6.0–7.0

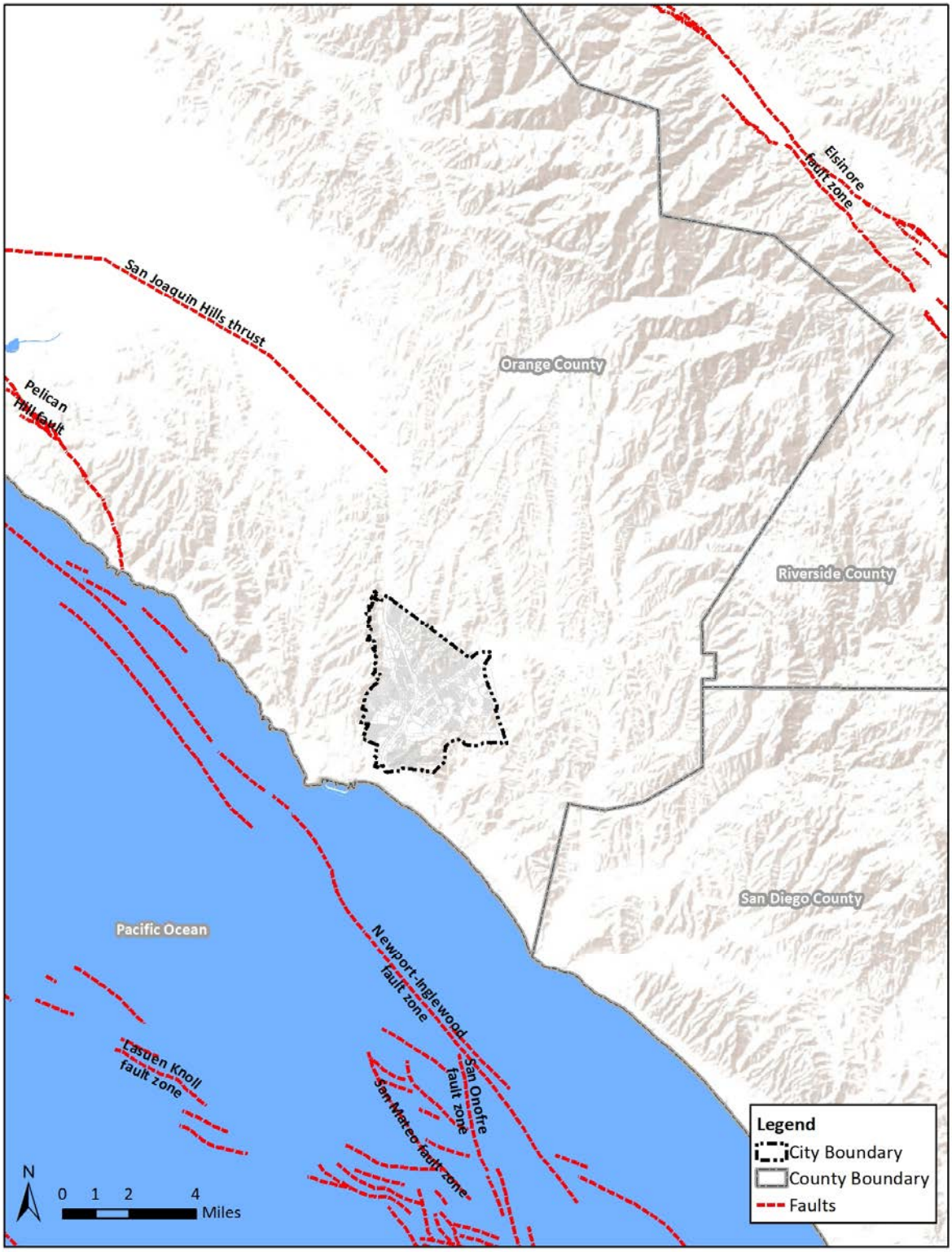
A. Magnitude is expressed in whole numbers and decimal fractions. For example, a magnitude 5.3 is a moderate earthquake, and a 6.3 is a strong earthquake. Because of the logarithmic basis of the scale, each whole-number increase in magnitude represents a tenfold increase in measured amplitude as measured on a seismogram.

B. The San Jacinto Fault Zone is a component of the larger San Andreas transform system.

Source: Southern California Earthquake Data Center, 2021, https://scedc.caltech.edu/earthquake.html.

Seismic activity poses two types of hazards: primary and secondary. Primary hazards include ground rupture, ground shaking, ground displacement, and subsidence and uplift from earth movement. Primary hazards can induce secondary hazards, including ground failure (lurch cracking [fractures/cracks due to ground shaking], lateral spreading, and slope failure), liquefaction, water waves (tsunamis and seiches), movement on nearby faults (sympathetic fault movement), dam failure, and fires.

Figure 2-2: Earthquake Fault



Liquefaction: Damage from earthquakes is most often the result of liquefaction. Liquefaction occurs primarily in areas of recently deposited sands and silts and in areas of high groundwater levels. Poorly consolidated sediment and high groundwater levels occur most frequently in creek beds and floodplains. As depicted in Figure 2-3, a significant area of the City is vulnerable to liquefaction in an earthquake. The potential for liquefaction is particularly high in the floodways located downstream of the confluence of San Juan Creek and Trabuco Creek.

Landslides: Large-scale landslides, as well as rockfalls, are relatively common events in major earthquakes. Unstable slopes are located throughout the City. Figure 2-3 depicts slope regions that have confirmed, known, or highly suspected landslides.

Tsunami: Earthquakes have the potential to cause sea waves (tsunami). The City is protected from sea waves due to its inland location (refer to Figure 2-4). However, the City's tanks, reservoirs, lakes, and swimming pools are enclosed bodies of water that are subject to potentially damaging oscillation or seiches during earthquakes. The hazard is dependent upon specific earthquake parameters, and the degree of damage due to seiches is likely to be minor.

The built environment is susceptible to damage from earthquakes. Buildings that collapse can trap and bury people. Lives are at risk, and the cost to clean up the damage is great. In most Southern California communities, including the City of San Juan Capistrano, a number of buildings were built before the 1994 Northridge earthquake, when building codes were not as strict. In addition, retrofitting is not required except under certain conditions and can be expensive. Therefore, the number of buildings at risk remains high. The California Seismic Safety Commission reports annually on the retrofitting progress of unreinforced masonry buildings. There are currently 17 unreinforced masonry buildings in the City, with several having undergone seismic retrofitting.

The City will continue to enact programs to reduce geologic, seismic, and structural hazards to protect public safety. To minimize hazards from earthquakes and other geologic hazards, the City will implement the most recent geologic, seismic, and structural guidelines, including the most recent California Building Code and the City's Seismic Hazard Mitigation Ordinance, and other relevant regulations. The stability of residential structures, critical structures, and vital emergency facilities will be given particular attention. During the review of development proposals involving grading, unstable soils, and other hazardous conditions, surveys of soils and geologic conditions will be required to be performed by a state-licensed engineering geologist. Based on survey results, projects will incorporate design measures to minimize geologic hazards. Open space easements to create buffers will also be considered to avoid geologic hazards.

Earthquake preparedness is one of the best methods to minimize personal injury and property damage and accelerate recovery. The City will continue to promote earthquake preparedness in the community through its Emergency Preparedness Program and Emergency Operations Plan. The programs will be coordinated with emergency service providers and school districts to maximize public participation and effectiveness.

Figure 2-3: Landslide and Liquefaction Zones

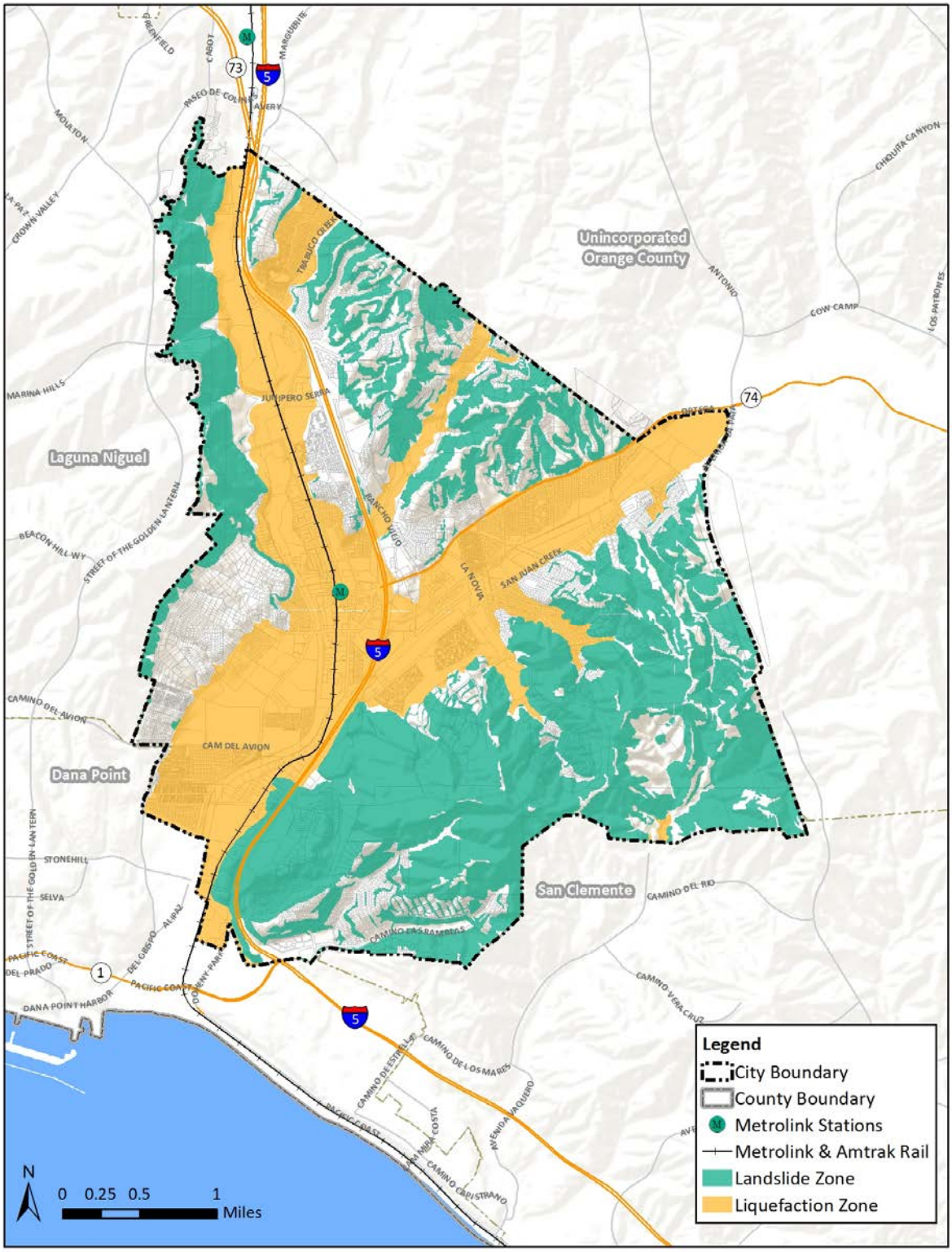
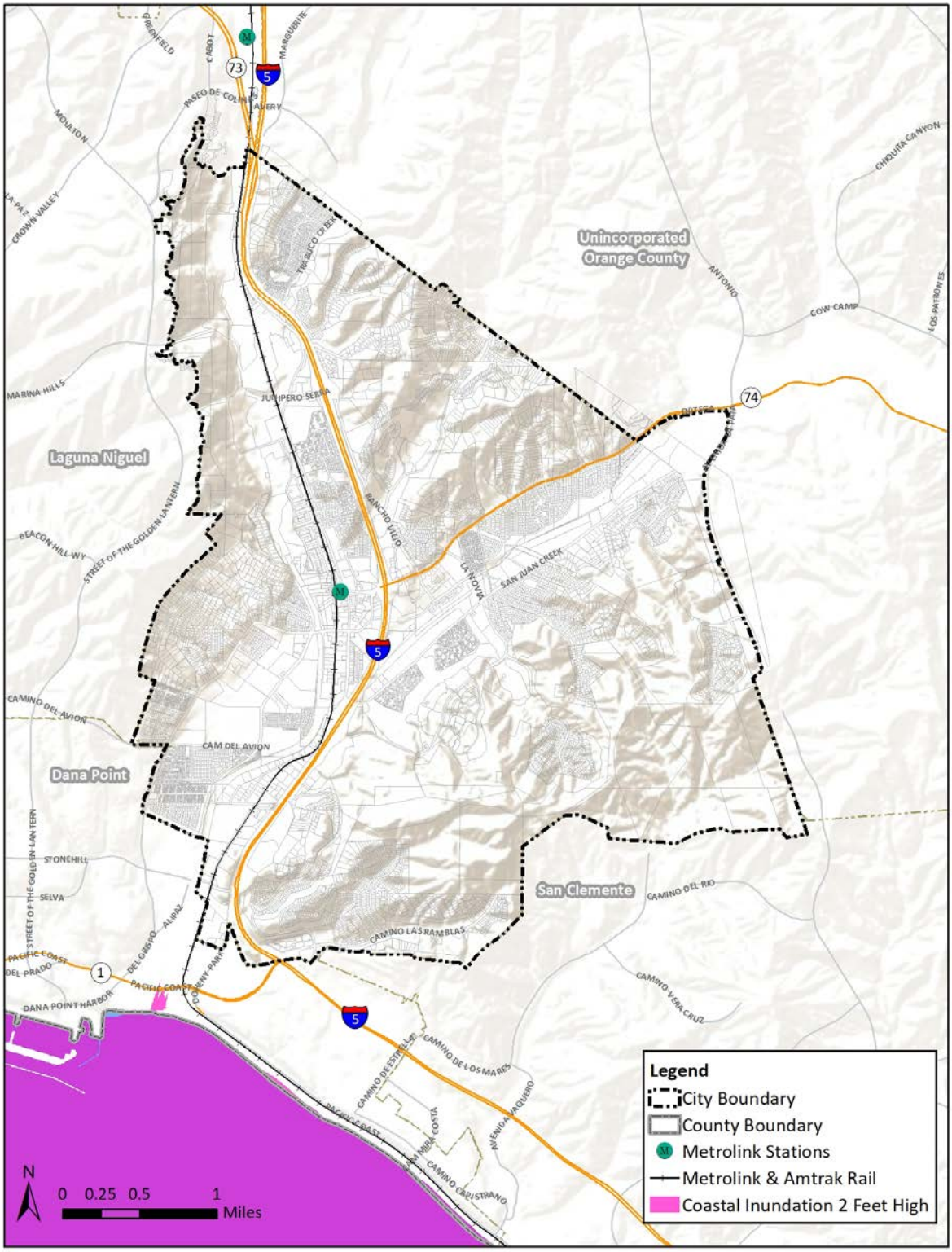


Figure 2-4: Tsunami Inundation Zone



The City will explore the possibility of creating a Geologic Hazard Abatement District (GHAD) to finance the prevention, mitigation, abatement, or control of a geologic hazard. A geologic hazard is defined as an actual or threatened landslide, land subsidence, soil erosion, earthquake, fault movement, or any other natural or unnatural movement of land or earth. A GHAD may also be used to finance the mitigation or abatement of structural hazards that are partly or wholly caused by geologic hazards. Geologic Hazard Abatement Districts (GHADs) enabled by the Beverly Act of 1979 (SB 1195), are useful financial mechanisms for reducing hillslope hazards (Kockelman, 1986). The enabling statute, (Division 17 of the Public Resources Code, Sections 26500 - 26654).[2]

2.3 Soils and Geology

The City of San Juan Capistrano is located in the foothills of southern Orange County, near the southeastern tip of the Santa Ana Mountains and south of the San Joaquin Hills. The terrain of the City consists predominantly of gently to steeply rolling hills containing deep-cut canyons and gullies. More than 600 feet of vertical relief is present within the City, and, as a result, landslides and debris flows are the dominant geologic hazard risks within the City.

Figure 2-5 shows the geologic makeup of San Juan Capistrano. The southeast and northeast portions of the City are made up of marine sedimentary rocks from the Miocene age and consist of sandstone, shale, siltstone, conglomerate, and breccia. These areas are moderate to well consolidated. The majority of the City, including areas in the vicinity of San Juan Creek and other waterways, is made up of marine and nonmarine (continental) sedimentary rocks from the Pleistocene-Holocene age. These consist of alluvium, lake, playa, and terrace deposits and are unconsolidated or semi-consolidated. A few portions of the City around the creek are also made up of marine sedimentary rocks from the Pliocene age and contain sandstone, siltstone, shale, and conglomerate. These areas are mostly moderately consolidated.

The abundant shales and siltstones underlying the hills of San Juan Capistrano are highly porous and do not hold together well when wet, which can lead to slope instability and landslides, especially in areas around San Juan Creek. Secondary factors contributing to slope instability and landslides include rainfall, the City's complex water distribution system, and earthquakes. As indicated in Figure 2-3, a significant portion of the City is vulnerable to landslides and liquefaction.

The Capistrano Formation is a geologic formation in coastal southern Orange County, California. It crops out along the coast from Dana Point to San Clemente, and inland for seven miles encompassing portions of San Juan Capistrano. It preserves fossils dating back to the Neogene period. Fifty-nine species and varieties of foraminifera (one-celled organisms that are living but are not fungi, plants, or animals) are recognized from the Capistrano Formation[3].

[2] https://www.conservation.ca.gov/cgs/Pages/GHAD.aspx, Accessed 07/28/2021

[3] Journal of Pathology, https://www.jstor.org/stable/1300262?seq=1#page_scan_tab_contents, Accessed 07/28/2021

The area consists of poorly consolidated, fossiliferous, sandy-siltstone and mudstone. Sediment failures can cause extensive land sliding in San Juan Capistrano and San Clemente areas[4].

Debris flows can occur rapidly and without warning during periods of exceptionally high rainfall. Although rockfall hazards are low in the City, mudflows are more likely to occur. Due to the predominant underlying geologic formations and topography, a significant portion of the City is susceptible to mud debris flows. These can be magnified in the aftermath of wildfires. The risk of debris flow hazard is thus considered high in San Juan Capistrano.

There are a variety of soils in the City, as depicted in Figure 2-6. A relatively large portion of the City has significant amounts of clay, clay loam, and sandy loam present in the underlying bedrock. Clay content in soil can make the soil moderately to extremely dense and resistant to water movement. Clay can also pose an expansive soil hazard. Expansive soils are soils that have the ability to shrink and/or swell and thus change in volume in relation to changes in their moisture content. They usually contain some form of expansive clay mineral that is able to absorb water and swell, thus enabling the soils to increase in volume when they get wet and shrink when they dry. The more water they absorb, the more their volume increases. For the most expansive soils, volume changes of 10 percent are not uncommon. When bedrock from these units is used as fill material during grading for construction, differences in the rate of settlement and expansion will likely result in damage to structures.

Land subsidence can also occur based on the soil composition. Land subsidence occurs when large amounts of groundwater have been withdrawn from certain types of rocks, such as fine-grained sediments. The rock compacts because the water is partly responsible for holding the ground up. When the water is withdrawn, the rocks fall in on themselves. City's municipal code Section 9-3.545. details City's Soils subsidence remediation program. The purpose of this program is to establish specific measures that will provide financial resources and programs to assist in the correction of damages arising from slope displacement.

The understanding of the geology and soil composition of a site is important for new construction and redevelopment of land as it can impact the safety of the structures. The City has a Hillside Management District ordinance, as well as building and grading codes, in place to safeguard from such hazards and will continue to implement these codes. Technical guidelines for soil and geology reports to reduce the risk associated with slope instability are also available (Refer to San Juan Capistrano Municipal Code Sec. 9-3.301. Residential districts).

[4]Source: http://academics.ivc.edu/pst/geology/Pages/ocgeo.aspx, Accessed 07/28/2021

Figure 2-5: Geology

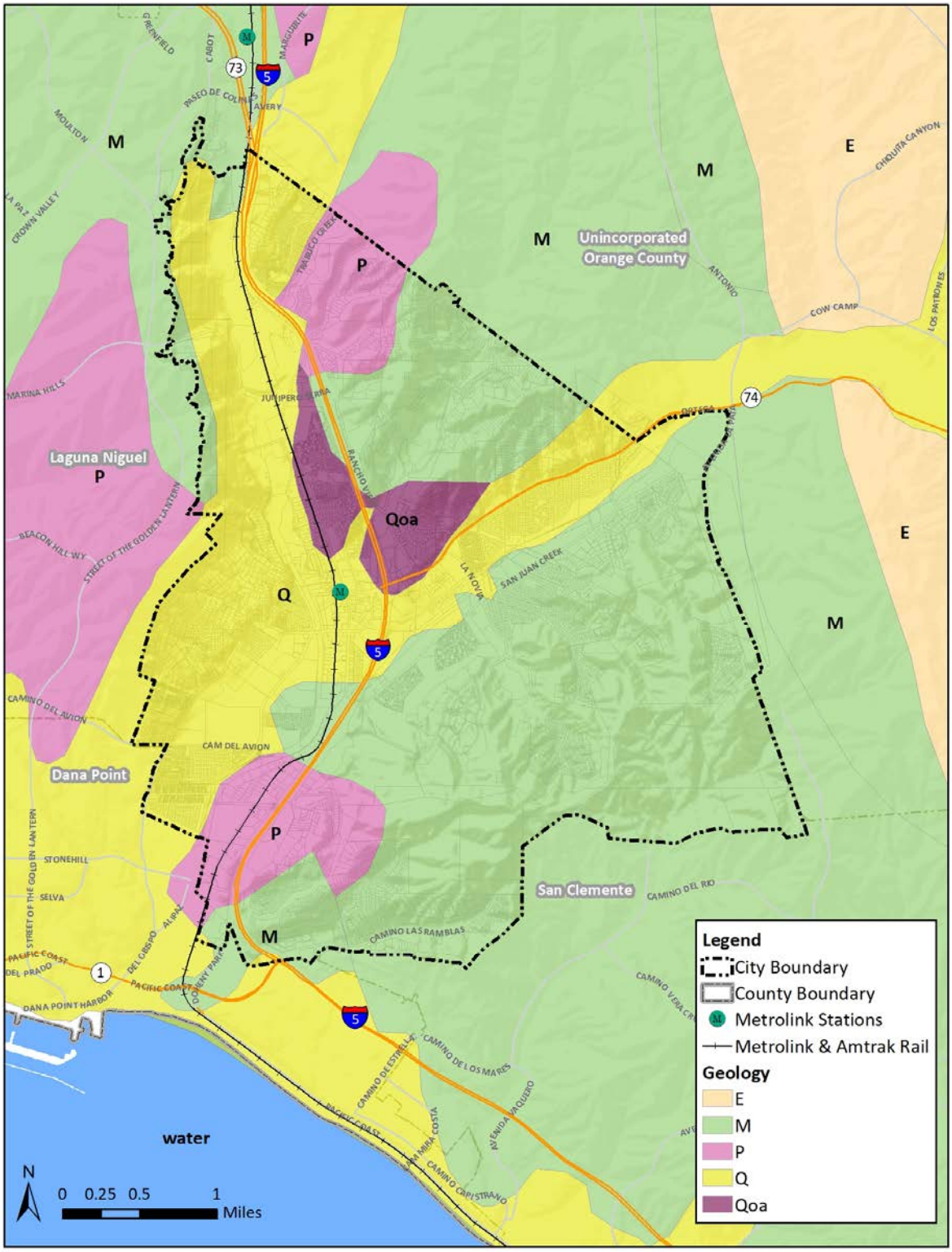


Table 2-2: Geology

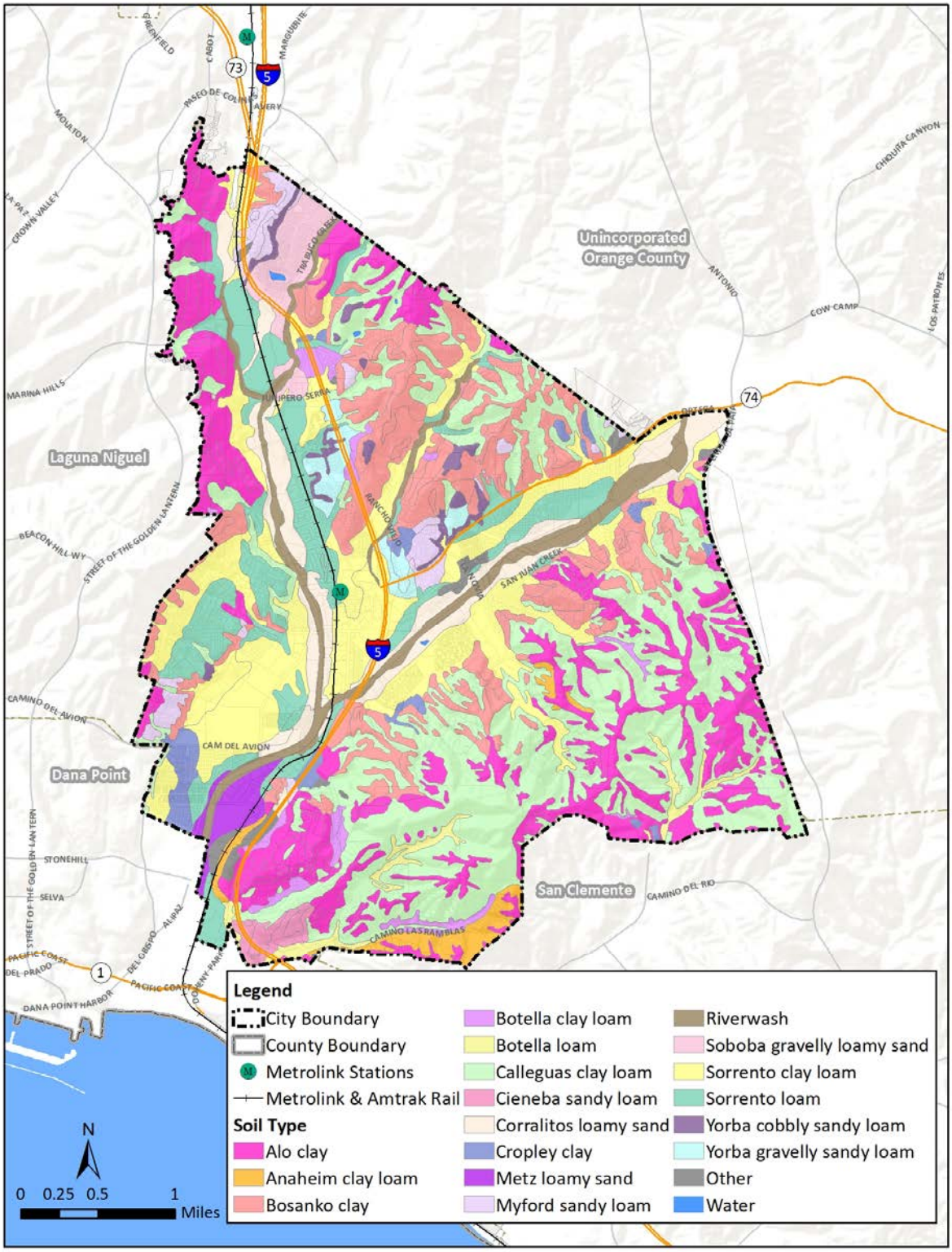
Generalized Rock Types	General Lithology	Age	Description
E	marine sedimentary rocks	Eocene	Shale, sandstone, conglomerate, minor limestone; mostly well consolidated.
M	Marine sedimentary rocks	Miocene	Sandstone, shale, siltstone, conglomerate, and breccia; moderately to well consolidated.
P	marine sedimentary rocks	Pliocene	Sandstone, siltstone, shale, and conglomerate; mostly moderately consolidated.
Q	marine and nonmarine (continental) sedimentary rocks	Pleistocene-Holocene	Alluvium, lake, playa, and terrace deposits; unconsolidated and semi-consolidated. Mostly nonmarine, but includes marine deposits near the coast.
Qoa	marine and nonmarine (continental) sedimentary rocks	Pleistocene	Older alluvium, lake, playa, and terrace deposits.
Source: https://maps.conservation.ca.gov/cgs/gmc/App/			

2.4 Flooding

San Juan Capistrano contains three major creeks: San Juan Creek, Trabuco Creek, and Oso Creek (refer to Figure 2-7). These creeks carry water runoff from the hills northeast of the City toward the Pacific Ocean in the south. Floods along any of these major creeks are expected. Although considerable development has occurred near the City's creeks over the years, most of the creeks have not been channelized with hard concrete sides or bottoms, which are designed to reduce the risk of flooding. Floods in residential areas are considered hazardous due to the potential for injury and property damage. Business and commercial activities can be impeded by floods due to facility damage and access-related problems.

FEMA maps flood-prone areas as part of the National Flood Insurance Program (NFIP). Flood zones are geographic areas that face heightened risks of flooding, most of which are located near bodies of water. Every zone is classified according to its level of risk and the potential severity of flood events. The most hazardous flood zones begin with the letters A or V, according to the NFIP, and homeowners living in these areas are required to purchase flood insurance. There are no zones beginning with the letter V in the City. Figure 2-7 depicts the flood zones in San Juan Capistrano as mapped by FEMA.

Figure 2-6: Soils



These are explained below[5].

- Zone A: Areas subject to inundation by the 1-percent-annual-chance flood event generally determined using approximate methodologies. Because detailed hydraulic analyses have not been performed, no base flood elevations or flood depths are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.
- Zone AO: Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually sheet flow on sloping terrain) where average depths are between one and three feet. Average flood depths derived from detailed hydraulic analyses are shown in this zone. Mandatory flood insurance purchase requirements and floodplain management standards apply.
- Zone AE: Areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. Base flood elevations are shown. Mandatory flood insurance purchase requirements and floodplain management standards apply.
- Zone X (Shaded): Areas of moderate flood hazard, usually the area between the limits of the 100- year and 500-year floods. Flood insurance is optional.

San Juan Capistrano participates in the NFIP, which is administered by FEMA. The NFIP provides federal flood insurance and federally financed loans for property owners in flood-prone areas. To qualify for federal flood insurance, the City must identify flood hazard areas and implement a system of protective controls.

The City will also control development in the floodplain and floodplain fringe through its Floodplain Management Overlay District. The Orange County Flood Control District (OCFCD) is the agency responsible for the regional drainage facilities, while the City controls local facilities. As a part of its seven-year Capital Improvement Program (2020-21 to 2026-27), the OCFCD has budgeted for reconstructing the existing trapezoidal channel of San Juan Creek into a rectangular channel with drop structures, allowing the channel reach to convey a 100-year storm. The City will coordinate with the OCFCD to regularly schedule inspections of flood control channels and complete necessary repairs.

2.5 Inundation Areas

2.5.1 Reservoir Inundation Areas

There are no dams located in the City of San Juan Capistrano, and the City does not own or operate any dams. However, the City is located in the inundation path of three dams: Trampas Canyon Dam, Lake Mission Viejo Dam, and Upper Oso Reservoir. Due to their proximity to the City, in case of dam failure, there may be a loss of life, damage to property, and/or other ensuing

[5] https://floodpartners.com/flood-zones/, Accessed 07/28/2021

hazards, as well as the displacement of persons residing in the inundation path. The inundation studies for the three dams are based on worst-case scenarios, which are depicted in Figure 2-8. All dams in California are regulated by the Department of Water Resources (DWR), Division of Safety of Dams (DSOD) that provides oversight to the design, construction, and maintenance. Because of the current design and construction practices, catastrophic dam failure is considered unlikely.

Portions of the City are also subject to the potential risk of hazards associated with the failure of the Trampas Canyon Dam, which is located 2 miles east of the City limits within a tributary of San Juan Creek. The dam was built in the 1970s and was the largest surface water reservoir in south Orange County. The aging reservoir has since been transformed into a recycled water repository and was dedicated in October 2020. Trampas Canyon Reservoir will capture and store recycled water from the Chiquita Water Reclamation Plant and other recycled water supply sources. The Santa Margarita Water District estimates that the reservoir could be filled to its 1.6 billion gallon capacity by October 2021. Figure 2-8 shows the location of the reservoir and the portions of the City that would be subject to inundation if a catastrophic failure of this reservoir were to occur.

2.5.2 Tsunami Inundation

A tsunami is a series of extremely long waves caused by a large and sudden displacement of the ocean, usually the result of an earthquake below or near the ocean floor. This force creates waves that radiate outward in all directions away from their source, sometimes crossing entire ocean basins. A tsunami event is unlikely to cause damage to the City due to its inland location (refer to Figure 2-4).

2.6 Nuclear

The San Onofre Nuclear Generating Station (SONGS) is located near the southern boundary of Orange County, 10 miles from the southern City limits of San Juan Capistrano. Southern California Edison (SCE) permanently ceased operation of the facility in 2013 and is in the process of decommissioning and dismantling the plant.

Decommissioning is a well-defined Nuclear Regulatory Commission (NRC) process that involves transferring the spent fuel into safe storage, followed by the removal and disposal of radioactive components and materials.

In August 2020, all spent fuel at SONGS was transferred to dry storage and completed the implementation of the Independent Spent Fuel Storage Installation (ISFSI) under the ISFSI Only Emergency Plan (IOEP) and Security Plan.

Figure 2-7: FEMA Flood Zones

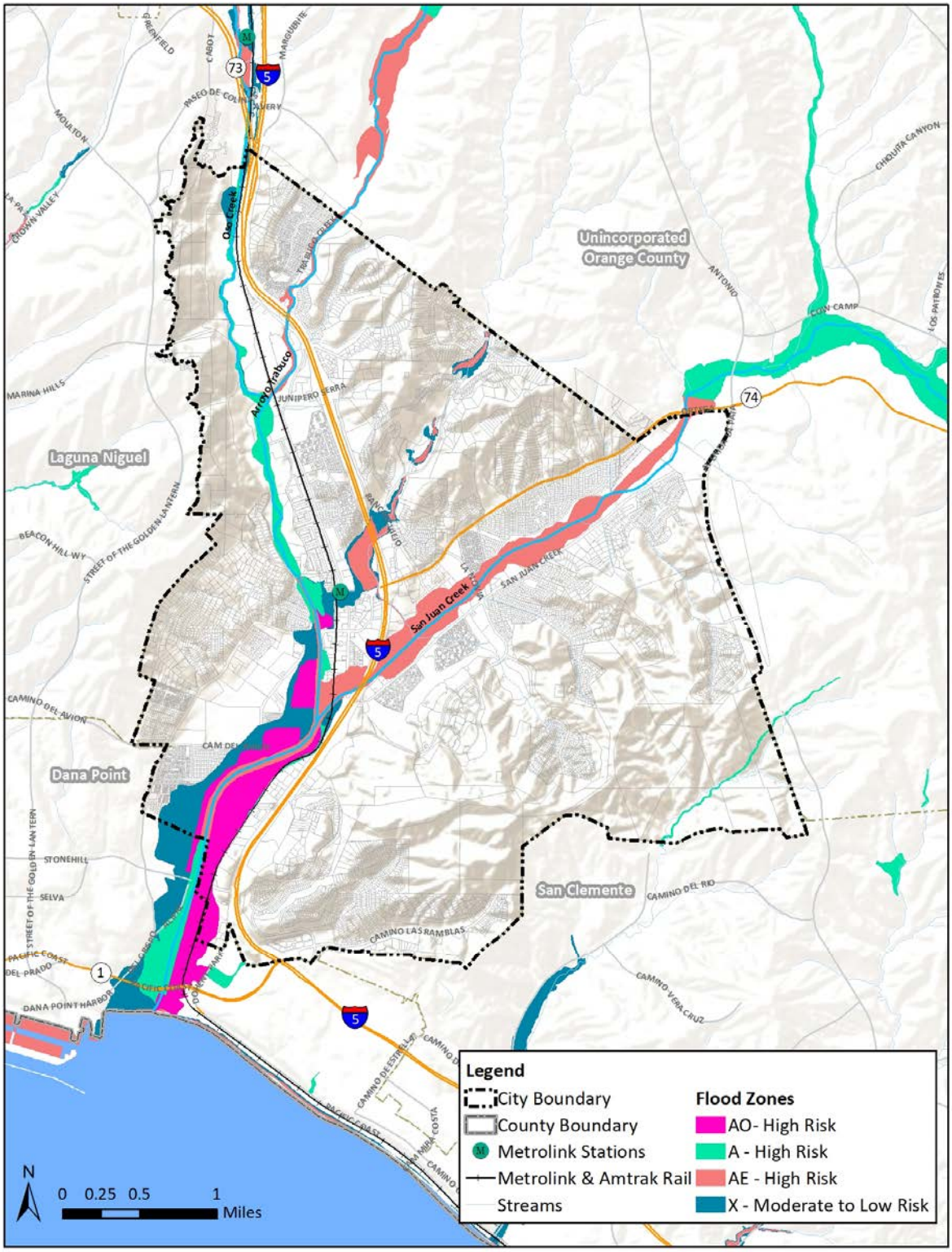
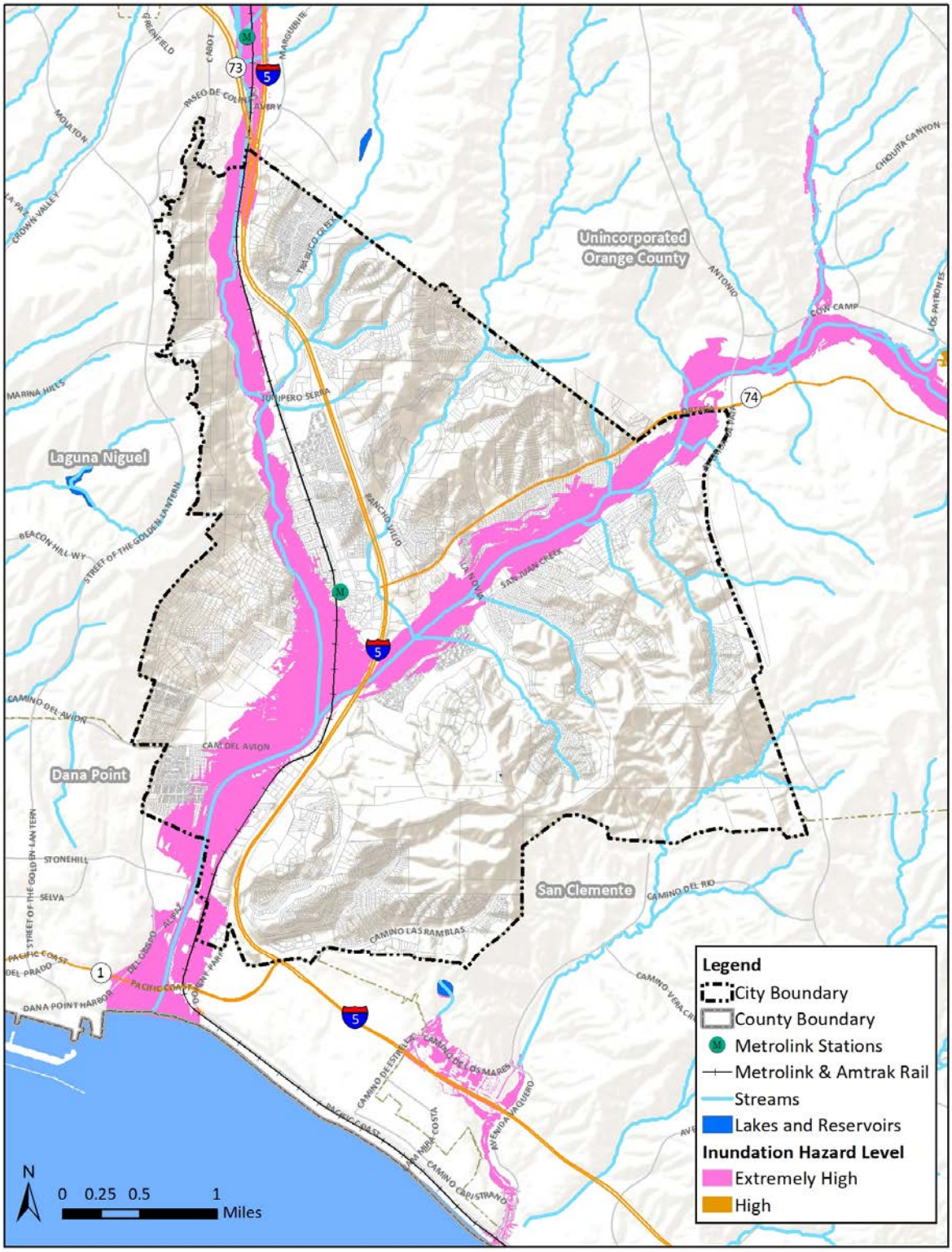


Figure 2-8: Reservoir Inundation Areas



The SONGS ISFSI is essentially an interim spent fuel storage facility where the spent fuel is surrounded by inert gas inside a container called a canister. The canisters used at SONGS are stainless steel cylinders that are welded closed. The fuel is cooled by natural airflow around the canister. The fuel was moved to dry storage after several years in spent fuel pools, so the heat given off by the fuel is significantly decreased. Each canister is surrounded by additional steel, concrete, or other material to provide physical protection, structural integrity, and additional radiation shielding to workers and members of the public. As long as used nuclear fuel remains on site at San Onofre, the Independent Spent Fuel Storage installation will continue to be licensed and inspected by the NRC, and the used nuclear fuel will be maintained and protected by SCE.

SCE has committed to the California Coastal Commission to continue to evaluate potential coastal hazards and will, by 2035, evaluate potential alternative sites at SONGS for the ISFSI.

Two counties (San Diego and Orange) and the three cities nearest SONGS (San Clemente, Dana Point, and San Juan Capistrano) continue to coordinate with SCE and maintain radiological emergency preparedness planning, though not required by state or federal regulations

2.7 Hazardous Materials

Hazardous materials are used in San Juan Capistrano for a variety of purposes, including manufacturing, service industries, small businesses, agriculture, medical clinics, schools, and households. Many chemicals used in household cleaning, construction, dry cleaning, film processing, landscaping, and automotive maintenance and repair are considered hazardous. Accidents can occur in the production, use, transport, and disposal of hazardous materials.

In order to effectively manage hazardous materials and waste, the City cooperates and coordinates with the Certified Unified Program Agency (CUPA). The CUPA is the local administrative agency that coordinates the regulation of hazardous materials and hazardous wastes in Orange County through the following six programs:

- Hazardous Materials Disclosure
- Business Emergency Plan
- Hazardous Waste
- Underground Storage Tank (UST)
- Aboveground Petroleum Storage Tank
- California Accidental Release Prevention

Household hazardous waste (HHW) and e-waste disposal are provided by Orange County Waste and Recycling services. Leftover household products that contain corrosive, toxic, ignitable, or reactive ingredients, products such as paints, cleaners, oils, batteries, and pesticides, and e-waste such as televisions, tablets, cell phones, and computers are considered HHW. These can be taken to the San Juan Capistrano Collection Center at the Prima Deshecha Landfill.

Encampment hazardous waste is also an issue in San Juan Capistrano. Homeless people generate solid waste during their daily activities. The resulting piles of trash become harborages and food sources for vectors and related pathogens, sources of odors, fuel for fires, unattractive nuisances to the public. The City will work with Orange County Waste and Recycling services to investigate providing collection containers at encampment sites for solid waste with locking lids large enough so residents cannot easily relocate the containers is an effective strategy. Scheduled collection and disposal of containerized waste at least once a week is desirable. Provision of scheduled recyclables that can be redeemed for money at homeless encampments could be a consideration. Also utilizing residents of an encampment to help manage the collection of solid waste from their encampment can be effective especially if stipends are provided.

Hazardous materials pass through the City en route to other destinations via the freeway, rail, and surface street system. The major transportation routes through the City include Interstate 5 and the Atchison, Topeka, and Santa Fe Railroad. However, the City has no direct authority to regulate the transport of hazardous materials on these state highways and rail lines. Transportation of hazardous materials by truck and rail is regulated by the US Department of Transportation, which establishes criteria for safe handling procedures. Federal safety standards are also included in the California Administrative Code. The California Department of Public Health also regulates hazardous waste haulers but does not regulate all hazardous materials.

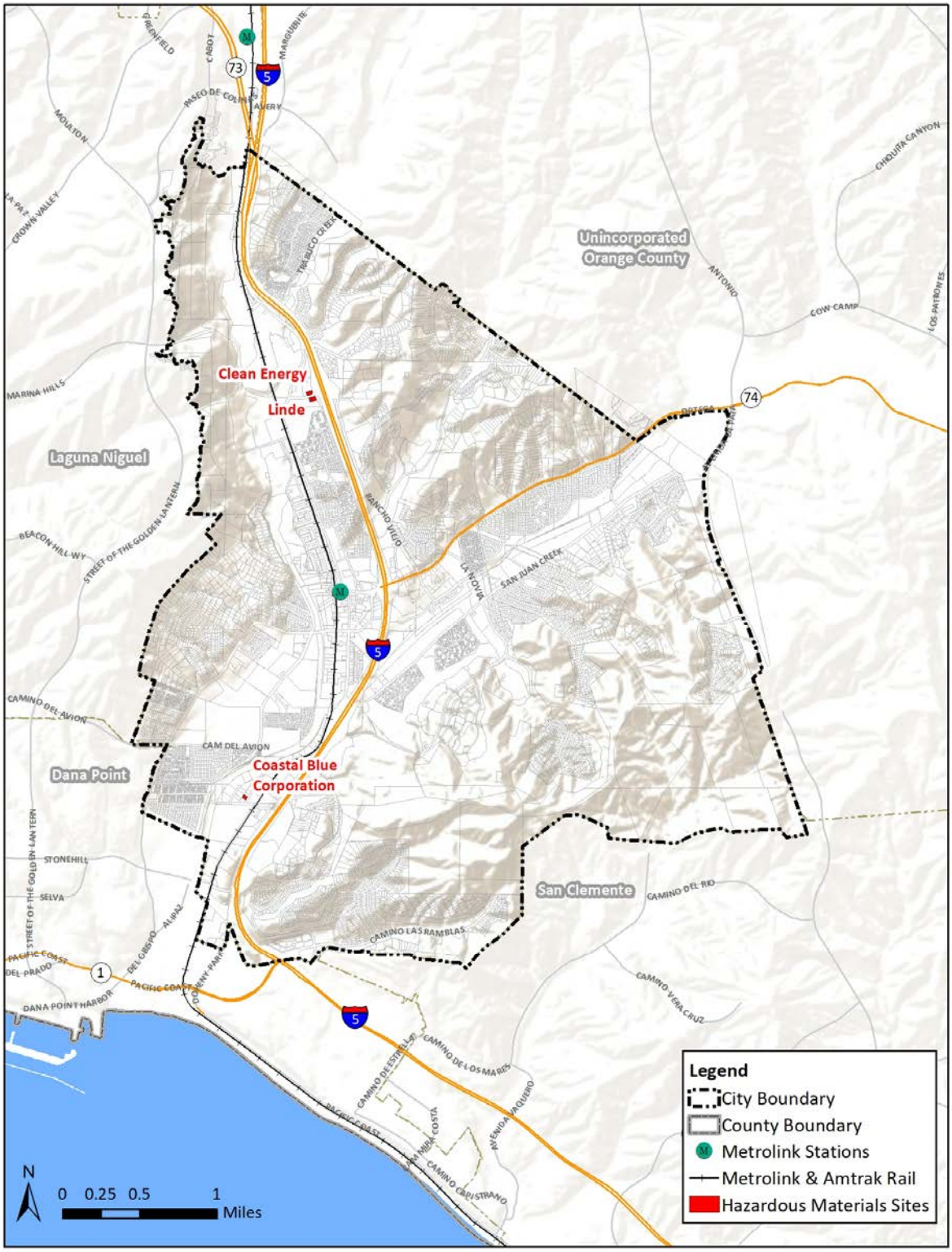
Retail, manufacturing, and light industrial firms are areas of concern. These facilities have the highest concentration of hazardous materials at fixed facilities in the planning area due to their manufacturing operations. Each business is required to file a detailed plan with the Orange County Health Care Agency, Environmental Health Services regarding materials on-site and safety measures taken to protect the public. Three such facilities are located in San Juan Capistrano, as depicted in Figure 2-9 and Table 2-3.

Table 2-3: Hazardous Materials Locations

Name	Address	Material	Quantity
Clean Energy	26571 Junipero Serra	Compressed Natural Gas	30,000 cubic feet
Linde	26572 Junipero Serra	Hydrogen Gas	26,304 cubic feet
Coastal Blue Corp.	33091 Calle Perfecto	Ammonia	Unknown

The State Water Resources Control Board keeps a record of the sites that have the potential to impact water quality in California, with emphasis on groundwater. These include leaking underground storage tank (LUST) sites, Department of Defense sites, and Cleanup Program Sites. The Board also has a record on various unregulated projects as well as permitted facilities, including irrigated lands, oil and gas production, operating permitted USTs, and land disposal sites. The programs and sites located in San Juan Capistrano, as well as their status, are available in a GeoTracker database and documented in Appendix 1.

Figure 2-9: Hazardous Material Locations



The City will work to minimize the accident and health risk from hazardous materials with the following approaches:

- Cooperation with federal, state, and local agencies to effectively regulate the management of hazardous materials and hazardous waste;
- Cooperation with the Department of Toxic Substances Control's CUPA;
- Cooperation with Orange County Health Care Agency, Environmental Health Services;
- Identification of roadway transportation routes for the conveyance of hazardous materials (the City does not exercise jurisdiction over transportation of freight along railroad right-of-way);
- Cooperation with Orange County Waste and Recycling services; and
- Implementation of an emergency response plan for accidents involving hazardous materials.

2.8 Climate Change

Climate change can lead to changes in temperature, precipitation, and storm patterns, which pose increased threats of sea level rise, wildfires, extreme heat days, flooding, etc. The City's LHMP (2020) documents and provides a vulnerability assessment of these threats to facilities and the public. Facilities that provide critical and essential services following a major emergency are of particular concern because these locations house staff and equipment necessary for important public safety, emergency response, and/or disaster recovery functions. These structures are also vulnerable to earthquakes. The secondary impacts of earthquakes could be magnified by climate change. Soils saturated by repetitive storms could fail prematurely during seismic activity due to the increased saturation.

The Cal-Adapt tool provides local climate projections for temperature, precipitation, and wildfire snapshots for cities and counties in California. Table 2-4 provides the changes specific to San Juan Capistrano. As shown in the table, the number of extreme heat days and increase in annual maximum temperatures may be a cause of concern for the City. The City will explore and implement appropriate strategies such as urban greening, reduction in carbon emissions, heat relief shelters, medical readiness, adequate water supply, incentives for cool surfaces and pavement, and reduction in minimum parking requirements to address rising temperatures. The City will also explore the prospect of partnering with health care providers and nonprofit organizations to ensure that vulnerable populations that are homebound during extreme heat are delivered water, medicine, and other critical resources.

Table 2-4: Local Climate Change Snapshots

Climate Change Factors	Observed (1961-1990)	Mid-Century (2035-2064)	
		Medium Emissions[A]	High Emissions[A]
City Level			
Annual Average Maximum Temperature (°F)	71.2	72.9 to 76.4	73.5 to 76.9
Extreme Heat Days (days)[B]	4	5 to 16	6 to 21
Annual Precipitation (inches)	13.2	10.8 - 17.3	10.0 - 18.5
Maximum Length of Dry Spell (days)	134	132 - 179	127 - 179
Annual Average Area Burned (acres)[C]	Not available	25.9 - 33.1	25.2 - 33.2

A. The Medium Emissions Scenario represents a mitigation scenario where global carbon dioxide (CO2) emissions peak by 2040 and then decline. Statewide, the temperature is projected to increase by 2-4°C for this scenario by the end of this century. The High Emissions Scenario represents a scenario where CO2 emissions continue to rise throughout the twenty-first century. Statewide, the temperature is projected to increase 4-7°C by the end of this century.

B. Number of days in a year when the daily maximum temperature is above a threshold temperature of 89.7°F.

C. This area may contain locations outside the combined fire state and federal protection responsibility areas. These locations were excluded from these wildfire simulations and have no climate projections.

Source: Cal-Adapt, https://cal-adapt.org/tools/local-climate-change-snapshot, Accessed April 14, 2021

2.9 Ground Transportation

San Juan Capistrano is traversed by a variety of transportation systems, including Interstate 5, the Atchison, Topeka and Santa Fe Railroad, and major arterials and roadways. The Orange County Transit Authority (OCTA) transit system provides bus service. The Southern California Regional Rail Authority (SCRRA) operates Metrolink. The preponderance of ground transportation systems is an asset to local economic development but poses several potential hazards, including automobile accidents, rail accidents, and pedestrian and bicycling accidents. The risk of accidents can be reduced by properly maintaining the transportation system infrastructure and correcting deficiencies. The City will work with the Orange County Sheriff's Department (OCSD) and the California Highway Patrol to monitor the ground transportation system for hazardous conditions. When safety problems are identified, the City will request the appropriate agency (i.e., Caltrans, OCTA, SCRRA, or the City Public Works Department) to take corrective measures. The City will also continue to implement signal preemption devices at certain intersections within the City to reduce the risk of vehicular accidents and reduce fire service response time to emergencies.

2.10 Public Safety Services

2.10.1 Fire Services

The OCFA provides fire protection and firefighting services to the unincorporated areas of Orange County and 23 cities in Orange County from its 77 fire stations located throughout Orange County. The OCFA is served by more than 1,500 full-time and around 200 reserve

personnel. In 2020, there were 5.86 firefighters for every 10,000 residents, with an average response time for emergency calls at less than seven minutes per call.

OCFA Station 7 provides fire protection and firefighting services in San Juan Capistrano. The department's responsibilities include taking preparatory steps to prevent fires or limit their destruction. OCFA Station 7 is staffed by five career firefighters daily that include a fire captain, an engineer, a firefighter, and two paramedics. Station 7 also has an active crew of volunteer reserve firefighters, three fire engines, and one water tender.

Fire-related mitigation actions related to reducing the likelihood of fires, minimizing injury and damage from fires, and continuing education programs are necessary and may be implemented through OCFA staff.

2.10.2 Police Services

Police protection is provided by the OCSD's Southwest Operations Division. The division provides law enforcement services to seven southwest cities of Orange County, including San Juan Capistrano and its Police Services Department. The division is based out of the Aliso Viejo Station in the City of Aliso Viejo. The Major Accident Reconstruction Team (MART) responds to traffic collision scenes at the request of field officers to investigate a fatal or major injury or high-profile or complex collision incidents. MART comprises six sergeants and 12 deputies. The Transit Police Services provides law enforcement services to OCTA to enhance safety and security within the Orange County mass transit system.

The Behavioral Health Bureau is a new unit of the OCSD tasked with assisting the homeless population and those with mental health disorders through a robust program that includes proactive engagement, case management, and resource distribution. The goal of the Behavioral Health Bureau is to create a professional, collaborative, and appropriate response to mental health calls for service to better connect people with services and reduce recidivism. Addressing mental health disorders related to homelessness also helps addresses homeless encounters/attacks on the public as well as the drug paraphernalia (needles) littering in the City. Additionally, the City should explore ways to increase awareness regarding programs such as Orange County Armory Emergency Shelter Program and CalWORKs Homeless Assistance. Volunteers groups can also assist in increasing awareness amongst the homeless population[6].

Criminal activity in San Juan Capistrano is lower than in some other parts of Orange County and has decreased in actual numbers during recent years even as more people have moved into the City. Burglary and petty theft are the most frequent crimes. The frequency of violent crimes such as homicide, rape, and robbery is relatively low. Protecting residents and businesses from criminal activity is a priority in San Juan Capistrano. Crime prevention techniques include substantive levels of police protection, education of the public about methods to reduce illegal activity, and the implementation of a graffiti removal program.

[6] https://www.ocgov.com/services/homeless/, Accessed July 28,2021

The City will ensure that contracted staffing levels correspond to the City population and needs and will monitor mutual aid agreements between the OCSD and the police departments of surrounding jurisdictions. Crime prevention programs will continue to be implemented through Neighborhood Watch and Associated Senior Action Program (ASAP) for both residential and business communities in conjunction with the OCSD. ASAP is a group of dedicated volunteers assigned to the San Juan Capistrano Police Services Department under the direction of the OCSD. When property owners present development proposals, the City will encourage the use of Crime Prevention Through Environmental Design concepts such as Defensible Space, Natural access control, Defensible Space, Territorial Reinforcement, etc., as suggested by the Whole Building Design Guide[7].

2.11 Emergency Preparedness

The City maintains a comprehensive Emergency Management Program that is easily accessible on its website with up-to-date information on emergency preparedness. This includes evacuation routes, volunteer programs, emergency notification services, preparedness information, and other public information resources.

City employees are trained in the National Incident Management System, which provides a proactive approach to guide departments and agencies at all levels of government and non-governmental organizations to reduce loss of life, property, and harm to the environment. Volunteers are a vital part of the City's Emergency Preparedness Program and can be involved in the programs is listed below:

- CERT – Community Emergency Response Team
- LART – Large Animal Response Team
- ASAP – Associated Senior Action Program
- RACES – Radio Amateur Civil Emergency Services

The City maintains and updates an Emergency Operations Plan (EOP). The EOP addresses San Juan Capistrano's planned response as a whole community to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies. The operational concepts reflected in the EOP focus on potential large-scale disasters that can generate unique situations requiring unusual emergency responses to reduce loss of life, property, and harm to the environment. Local EOP's serve as extensions of the State of California Emergency Plan[8] and the Unified County of Orange and Orange County Operational Area Emergency Operations Plan. The City supports a high level of multi-jurisdictional coordination and cooperation in emergency planning and response. The effective emergency

[7] Whole Building Design guide, https://www.wbdg.org/resources/crime-prevention-environmental-design, Accessed 07/28/2021

[8] State of California, 2017, Emergency Plan, https://www.caloes.ca.gov/PlanningPreparednessSite/Documents/California_State_Emergency_Plan_2017.pdf.

response also requires vital facilities such as hospitals, fire stations, and communication centers to be functional during disasters.

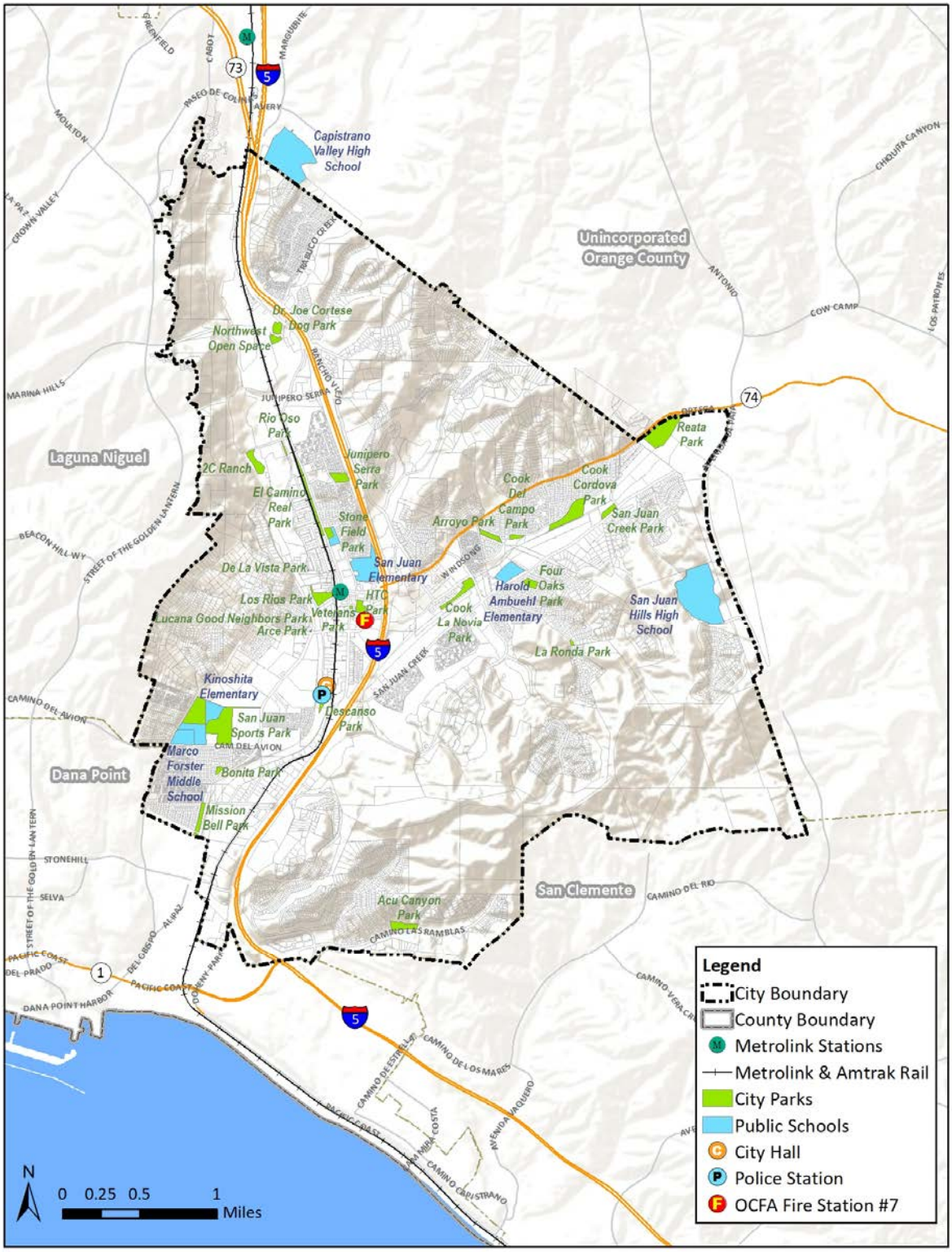
Educating residents and businesses about potential disasters and the Emergency Management System can increase the effectiveness of response efforts. An educated public will know how to prevent injury and property damage during and after emergency incidents and also know how to find help. The City works to educate residents and businesses about appropriate actions to safeguard life and property during and after emergencies. Education about emergency preparedness can occur through the distribution of brochures, presentations to civic groups and homeowners associations, instruction in local schools, social media outlets, and maintaining information on the city website. The City will also explore avenues such as City festivals and public displays to increase awareness regarding safety and emergency preparedness.

Emergency notification is an important part of disaster preparedness. The City uses AlertOC, a mass notification system, to issue emergency messages directly to residents and businesses. In case of an emergency, City officials can use AlertOC to send important information to the public by telephone, email, and text messaging. In times of crisis and natural disasters, amateur radio is often used as a means of emergency communication when wireline, cell phones, and other conventional means of communication fail. The Tri-Cities RACES group provides amateur radio communications for Dana Point, San Clemente, and San Juan Capistrano for special events and maintaining readiness for radio communications in the event of an emergency or disaster. These volunteers hold dual membership in RACES and Amateur Radio Emergency Service.

Maintaining an adequate stock of emergency preparedness equipment and supplies is an important part of being prepared for emergencies. The City will periodically inventory supplies and personnel and, where necessary, acquire supplemental disaster communication equipment and other equipment, tools, and supplies that could be used in the event of a major disaster. In addition, the City will maintain a three-day emergency supply for all its employees.

The City can also develop a program for quick and easy reporting by residents, employees, visitors on various safety-related issues in the City. This can be done by developing an app or a website form whereby all sorts of issues get reported, documented, and tracked, and referred to the appropriate City department.

Figure 2-10: Public Safety Facilities



2.12 Health Crises

The City of San Juan Capistrano identifies health crises as a safety hazard. This includes pandemics leading to a health emergency and vector-borne diseases.

An outbreak that spreads to more than one continent is called a pandemic (Example Covid 19 outbreak). It is important that the City analyze its response after each declared emergency to inform future preparedness and future responses. The future preparedness/ response planning efforts should be informed by applicable scientific research and modeling by responsible agencies and organizations. The City will follow the procedures and make educational information available on its website based on the direction and guidance of appropriate public health and infrastructure agencies.

Vectors, as defined by the California Department of Public Health, are "any insect or other arthropod, rodent or another animal of public health significance capable of harboring or transmitting the causative agents of human disease, or capable of causing human discomfort and injury." Under this definition of a vector, the Orange County Mosquito and Vector Control District (District) provides surveillance and control measures for rats, mosquitoes, flies, and Red Imported Fire Ants. The District provides information on and has control programs for these vectors. Major Vector-borne diseases include West Nile virus, Zika, Yello Fever and Dengue, Flea Borne Typhus, Lyme Disease, Spotted Fever.

The City will make the information for both exclusion and control of various other vectors and pests that can be performed by the homeowner readily available on the website by linking to Orange County Mosquito and Vector Control District. The City will make health crises a regular part of the education program. The City will also cooperate with Orange County Mosquito and Vector Control District in the implementation of their Response Plans, including the integrated Vector Management Plan 2010.

2.13Critical Facilities

The LHMP identifies critical facilities for San Juan Capistrano. These are based on FEMA guidance that separates critical facilities into five categories (listed below) based on their loss potential.

Critical facilities are essential to the health and welfare of:

- The whole population: especially important following hazard events. These facilities include hospitals and other medical facilities, police and fire stations, emergency operations centers and evacuation shelters, and schools.
- Transportation systems: airways (airports, heliports); highways (bridges, tunnels, roadbeds, overpasses, transfer centers); railways (trackage, tunnels, bridges, rail yards, depots); and waterways (canals, locks, seaports, ferries, harbors, drydocks, piers).
- Lifeline utility systems: for example, potable water, wastewater, oil, natural gas, electric power, and communication systems.

- High potential loss facilities: facilities that would have a high loss associated with them, such as nuclear power plants, dams, and military installations.
- Hazardous material facilities: facilities that house industrial/hazardous materials, such as corrosives, explosives, flammable materials, radioactive materials, and toxins.

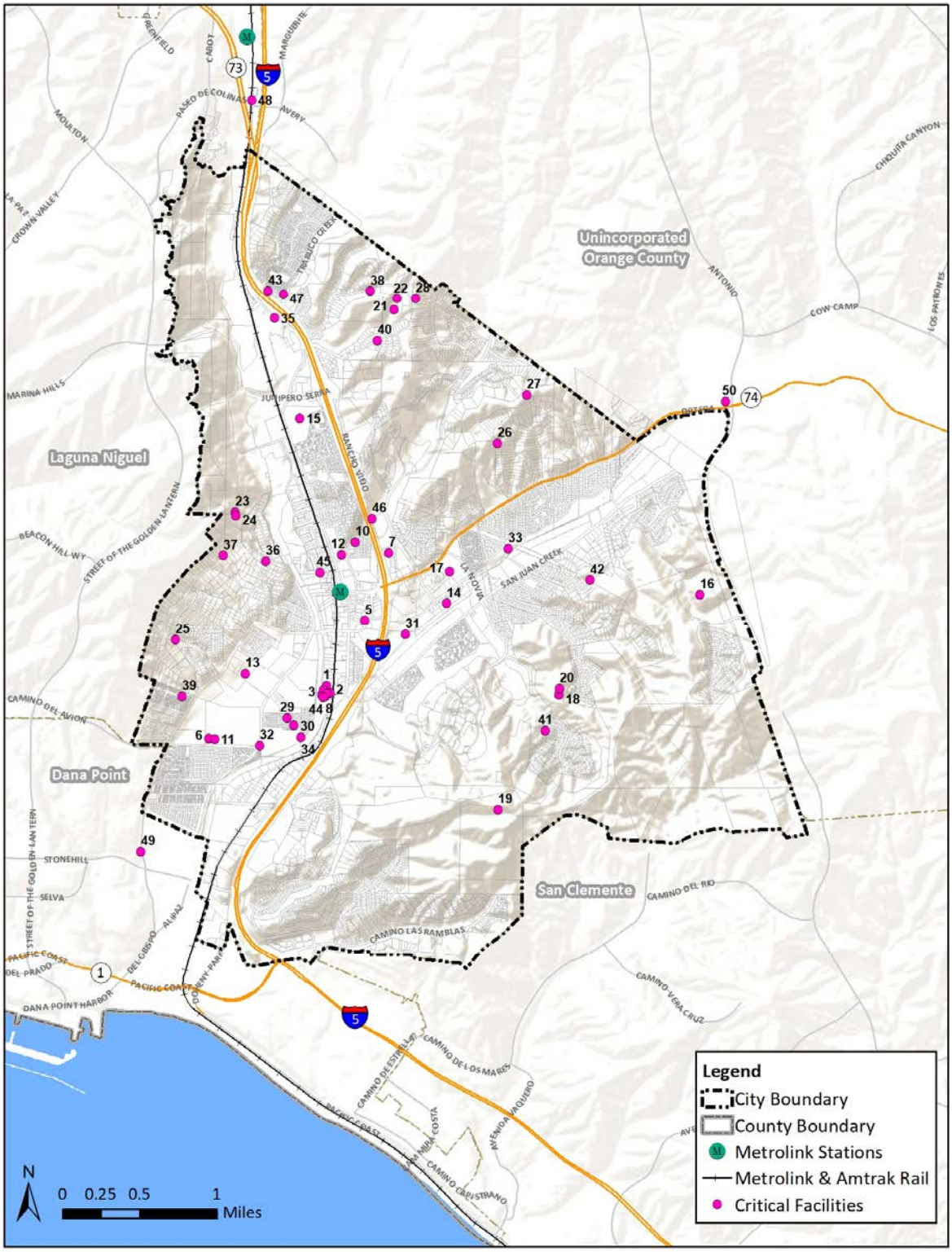
The LHMP identified 50 critical facilities for incorporation in the hazard vulnerability/risk analysis. These facilities include police stations, fire stations, several City-owned properties, and other facilities that provide important services to the community. Damage to these facilities caused by a hazardous event has the potential to impair response and recovery and may lead to the disruption of services. These facilities are shown in Figure 2-11 and documented in Table 2-5.

Table 2-5: Critical Facilities List

(Refer to Figure 2-11 for location)

Label	Name	Label	Name
1	City Hall	26	Zone 3 #2 Reservoir (Lower Hunt Club)
2	Utilities Yard	27	Zone 3 #1 Reservoir (Upper Hunt Club)
3	Dance Hall\Police Services	28	Mission Hills Reservoir
4	Utilities Department Offices	29	CVWD Well #1
5	OCFA Fire Station #7	30	SJBA Well #2
6	SJC City Gym/Boys & Girls Club	31	Tirador Well
7	South Coast Christian Assembly	32	Kinoshita Well
8	Groundwater Recovery Plant (GWRP)	33	Well #5A
9	Public Works Yard	34	SJBA Well #4
10	Old Fire Station Complex	35	North Open Space Well
11	SJC Community Center	36	Bear Brand (Aguacate) Pump Station
12	San Juan Capistrano Regional Library	37	Bear Brand (Peppertree Bend) Pump Station
13	Mariners Church Ocean Hills	38	Capistrano Royale Pump Station
14	South Cooks Well	39	Captain's Hill Pump Station
15	JSerra Catholic High School	40	Mission Hills Pump Station
16	San Juan Hills High School	41	Zone 2 Pump Station
17	St. Margaret's Episcopal School	42	Hidden Mountain Pump Station
18	Reed Reservoir Zone 2 #1	43	Rosenbaum Well #1
19	760 Reservoir South	44	Dance Hall Well
20	Reed Reservoir Zone 2 #1B	45	Mission Street Well
21	Terminal Reservoir #2	46	Strawberry Hill Pump Station
22	Terminal Reservoir #3	47	Rosenbaum Lift Station
23	High West Side Reservoir #2	48	Master Meter CM10 ETM
24	High West Side Reservoir #1	49	Tricities Interconnect
25	Cooks Reservoir	50	SC-04 Flow Station

Figure 2-11: Critical Facilities (Refer to Table 2-5 for details) -



RPC 3(b)(ii)

2.14Disaster and Evacuation Routes

Mass evacuation may be essential to save lives before, during, or following a disaster. In the event of a significant emergency, clear routes are needed to ensure that emergency responders and supplies can be transported and that community members and animals can be evacuated. The City has identified several evacuation routes that will help with such emergency access. These routes are shown in Figure 2-12.

Government Code 65302 (g) requires communities to identify residential developments in any hazard area identified in the safety element that does not have at least two emergency evacuation routes meaning the communities can evacuate on two separate roadways. Figure 2-13 identifies these neighborhoods.

Maintenance and regular clearance of roadways is an essential part of being prepared to evacuate during emergencies. The City will regularly maintain the city-owned roadways and coordinate with other relevant agencies and HOAs to maintain roadways that the City does not own. These cleated roadways also act as fire break areas and stop the spread of fire. The City will require property owners to submit plans showing ingress/egress, evacuation routes, emergency vehicle access, visible home addressing, and signage. The City will also ensure that all new residential development with more than 150 units provides dual access to the project site per OCFA requirement.[9]

[9] Source: Fire Master Plans for Commercial & Residential Development, Guideline B-09; *Orange County Fire Authority, https://www.ocfa.org/Uploads/CommunityRiskReduction/OCFA%20Guide-B09-Fire%20Master%20Plan%20For%20Commercial%20and%20Residential.pdf, Accessed June 18, 2021*

Figure 2-12: Disaster and Evacuation Routes

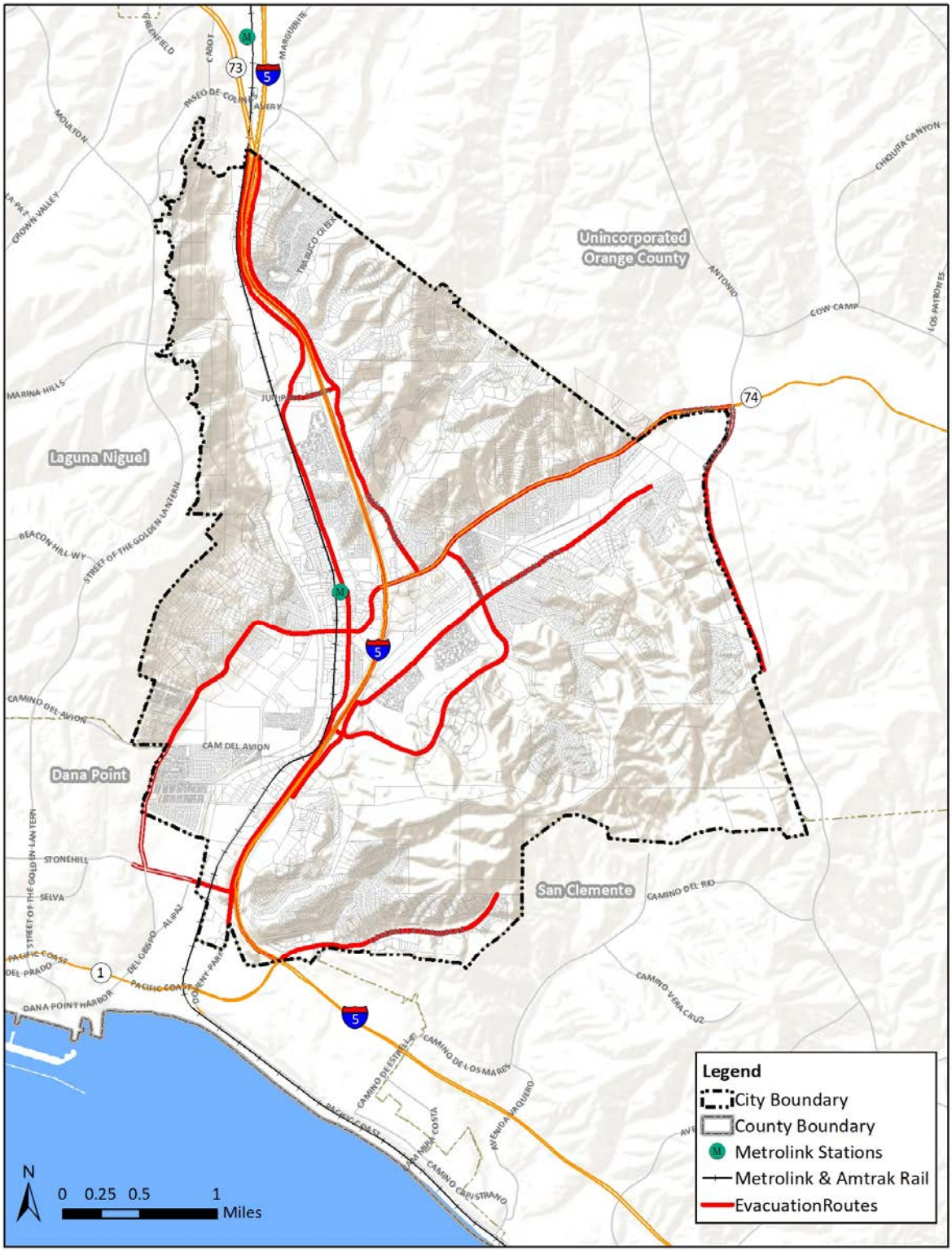
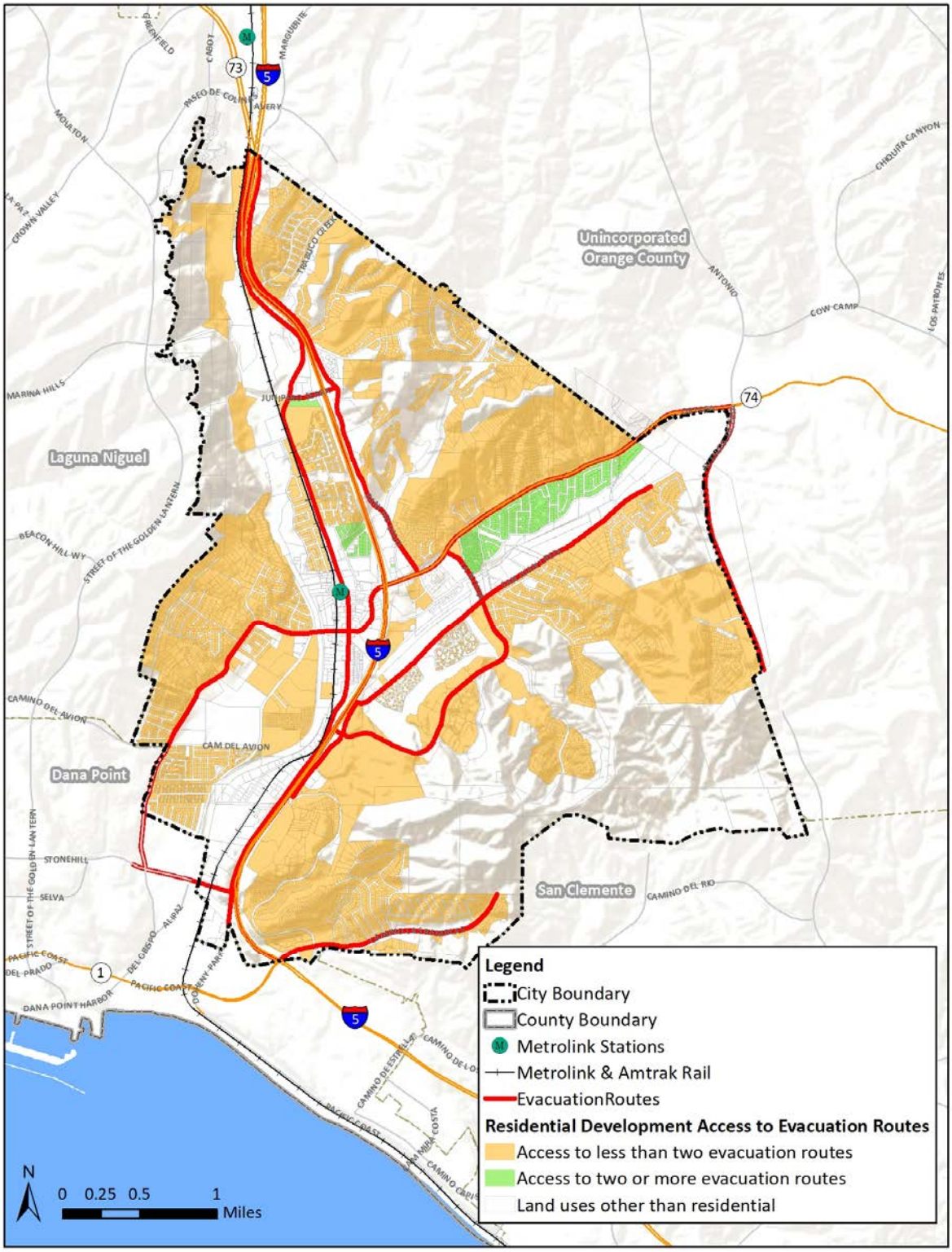


Figure 2-13: Access to Evacuation Routes



3 Goals and Policies

Safety Goal 1: Reduce the risk to the community from hazards related to geologic conditions, seismic activity, wildfires, flooding, and climate change

Seismicity

Policy 1.1: Reduce the risk of impacts from geologic and seismic hazards by applying proper development engineering, building construction, and retrofitting requirements.

Policy 1.2: - Explore funding sources to create an inventory of hazardous or substandard structures in the City that may collapse in the event of an earthquake and prepare a program to work with the property owners to seismically retrofit, rehabilitate or, if necessary, removal or replacement of unsafe structures.

Policy 1.3: - Explore the possibility of creating a Geologic Hazard Abatement District (GHAD) to finance the prevention, mitigation, abatement, or control of a geologic hazard.

Policy 1.4: - Continue the Soils subsidence remediation program that establishes specific measures to provide financial resources and programs to assist in the correction of damages arising from slope displacement.

Flooding

Policy 1.1: - Protect the community from flooding hazards by providing and maintaining flood control facilities and limiting development within the floodplain.

Policy 1.2: - Coordinate and cooperate with the Orange County Flood Control District (OCFCD) in maintaining and improving the regional drainage system and levee certification program.

Policy 1.3: - Explore funding sources for Storm Drain/flood control facility improvement and increased maintenance.

Wildfire

Policy 1.1: - Ensure that the City standards for fire protection for new development in Very High Fire Hazard Severity Zones meet or exceed the statewide minimums.

Policy 1.2: - Minimize the approval of new residential subdivision developments in Very High Fire Hazard Severity Zones when feasible.

Policy 1.3: - Continue to enforce and, as needed, increase the weed abatement and Arundo removal program on an annual basis.

Policy 1.4: - Require property owners to incorporate fire-safe and erosion-safe design during new development or major renovations (development over a two-year period of

more than 33% of existing square footage or 2,000 s.f. resulting in the building exceeding 5,000 square feet.) and receive contracted emergency service agency's approval prior to permit issuance.

Policy 1.5: - Coordinate with local contracted fire emergency service agency to evaluate the required fire safe design to be incorporated during rebuilding effort after a major disaster.

Policy 1.6: - Reduce the risk of wildfire hazards by requiring fuel modification for landscaping and defensible space for development located in areas of high wildfire risk.

Policy 1.7: - Cooperate and coordinate with the Orange County Fire Authority and California Water Service to ensure that fire hydrant placement, water pressure, and availability of fire suppression equipment are adequate for firefighting purposes.

Policy 1.8: - Cooperate with the California Water Service to make sure that present and future water supply needs are met adequately.

Policy 1.9: - Reduce the risk of erosion and mudslides following wildfires by developing a revegetation/erosion control strategy.

Policy 1.10: - Coordinate with Caltrans, Orange County, local contracted emergency service agency's, and City Public Works to maintain defensible space along public and private roads.

Policy 1.11: - Coordinate with Cal Fire, and local contracted fire emergency service agency to maintain and create fuel breaks in and around the City.

Policy 1.12: - Continue to coordinate with the local contracted fire emergency service agency to determine future emergency needs and required training.

Climate Change

Policy 1.1: - Designate weather-control shelters and develop strategies to protect residents from extreme weather conditions and power outages.

Policy 1.2: - Include extreme weather as an integral part of the Emergency Operations Plan upon its next update.

Policy 1.3: - Explore funding sources to incorporate capital improvement projects that promote alternative transportation methods to offset greenhouse gas emissions from automobiles.

Safety Goal 2: Protect the community from hazards related to air pollution, nuclear power production, hazardous materials, ground transportation, and health crises.

Policy 2.1: Continue to coordinate with Southern California Edison and maintain radiological emergency preparedness planning during the decommissioning and dismantling

of the San Onofre Nuclear Generating Station (SONGS) until all potentially hazardous materials have been removed.

Policy 2.2: Work with the Orange County Sheriff's Department to ensure that no hazardous materials are dumped in any area of the City and increasing surveillance to enable enforcement on illegal dumping.

Policy 2.3: Cooperate with responsible federal, state, and County agencies to minimize the risk to the community from the use and transportation of hazardous materials through the City.

Policy 2.4: Reduce the per capita production of household hazardous waste in San Juan Capistrano in concert with the County of Orange plans for reducing hazardous waste.

Policy 2.5: - Coordinate with respective agencies to reduce the risk from ground transportation hazards, such as rail and roadway systems.

Policy 2.6: - Coordinate with the appropriate agency (i.e., Caltrans, Orange County Transit Authority, Southern California Regional Rail Authority - Metrolink, or the City Public Works Department) to take corrective measures when safety problems are identified in the ground transportation system.

Policy 2.7: - Include public health crises including vector borne diseases as an integral part of the Emergency Operations Plan upon its next update.

Policy 2.8: - Cooperate with Orange County Mosquito and Vector Control District in implementing their Response plans

Policy 2.9: - Strive to keep the essential City services operational and timely to the extent possible in the event of public health crisis scenarios.

Policy 2.10: - Ensure that City employees have access to appropriate protective equipment as well as telecommuting infrastructure so they may continue to provide essential services in the event of a public health emergency to the extent available.

Safety Goal 3: Protect citizens and businesses from criminal activity.

Policy 3.1: - Coordinate with the Orange County Sheriff's Department to reduce the risk of criminal activity and to increase surveillance.

Policy 3.2: - Explore the possibility of applying appropriate design techniques and standards aimed at reducing criminal activity, such as Crime Prevention Through Environmental Design (CPTED) principles, to new development and redevelopment.

Policy 3.3: - Promote after-school programs, volunteer programs, and Neighborhood Watch programs to reduce the risk of criminal activity.

Policy 3.4: - Improve public awareness of both the responsiveness of the Orange County Sheriff's Department and ways to reduce criminal activity within the City.

Safety Goal 4: Improve the ability of the City to be prepared for and respond effectively to natural and human-caused emergencies.

Policy 4.1: Support the development of local preparedness plans and multi-jurisdictional cooperation and communication for emergency situations consistent with the Standardized Emergency Management System (SEMS).

Policy 4.2: Maintain and update the Emergency Operations Plan and Local Hazard Mitigation Plan.

Policy 4.3: - Maintain an adequate stock of emergency preparedness equipment and supplies.

Policy 4.4: - Educate residents and businesses regarding appropriate actions to safeguard life and property during and immediately after emergencies and encourage them to sign up for an emergency notification system per City's Emergency Preparedness Program.

Policy 4.5: - Educate City officials periodically on the process and protocols to be followed in times of disaster.

Policy 4.6: - Continue to seek volunteers for current emergency preparedness and response programs as well as increasing awareness regarding homeless assistance programs.

Policy 4.7: - Identify rights-of-way that do not provide adequate clearance for emergency vehicles and develop a contingency plan, to reach people in need of evacuation.

Policy 4.8: - Ensure that all new residential projects provide secondary access to the project site per Orange County Fire Authority Requirements. The secondary access may be designated as emergency access only.

Policy 4.9: - Develop a program for residents and visitors to easily and quickly report issues related to safety.

Policy 4.10: - Create an expedited process for permit approval following a major disaster to bolster reconstruction efforts.

Appendix 1

GeoTracker Sites

The State Water Resources Control Board maintains the GeoTracker database for sites that impact or have the potential to impact water quality in California, with emphasis on groundwater. GeoTracker contains records for sites that require cleanups, such as LUST sites, Department of Defense sites, and Cleanup Program Sites. GeoTracker also contains records for various unregulated projects as well as permitted facilities, including irrigated lands, oil and gas production, operating permitted USTs, and land disposal sites. The program sites located in San Juan Capistrano and their status are documented below. The section following the table explains these programs.

Table A-1. GeoTracker Sites in San Juan Capistrano

GLOBAL ID	SITE / FACILITY NAME	ADDRESS (OR PARTIAL ADDRESS)	SITE / FACILITY TYPE	STATUS
SLT9S0114218	POLO CLEANERS (MARBELLA PLAZA)	31105 RANCHO VIEJO ROAD, SUITE 11	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED
T10000000266	KINOSHITA FARM SITE	32701 ALIPAZ	CLEANUP PROGRAM SITE	OPEN - VERIFICATION MONITORING
T10000001640	PLAZA DEL RIO/URBAN CLEANERS	32301 CAMINO CAPISTRANO	CLEANUP PROGRAM SITE	COMPLETED - CASE CLOSED
AGL020032204	CORAL FARMS L.P. - APN # 6501900200	31062 CASA GRANDE	IRRIGATED LANDS REGULATORY PROGRAM	ENROLLED
AGL020033068	JERRY NEELY - APN: 675-331-20	33581 VALLE ROAD	IRRIGATED LANDS REGULATORY PROGRAM	ENROLLED
AGL020031827	SHADOW RUN ORGANICS - APN: 109-190-02-00	30800 RANCHO VIEJO RD	IRRIGATED LANDS REGULATORY PROGRAM	ENROLLED
AGL020031032	TREE OF LIFE NURSERY - APN # 33201 ORTEGA HWY	33201 ORTEGA HWY	IRRIGATED LANDS REGULATORY PROGRAM	ENROLLED
T10000013947	CAPISTRANO GREENERY COMPOSTING FACILITY	32250 AVENIDA LA PATA	LAND DISPOSAL SITE	OPEN - PROPOSED
L10004423988	FORSTER CANYON LANDFILL	I-5 AT SAN JUAN CREEK ROAD	LAND DISPOSAL SITE	OPEN - CLOSED/WITH MONITORING
L10003995148	PRIMA DESHECHA SANITARY LANDFILL	END OF LA PATA RD	LAND DISPOSAL SITE	OPEN - OPERATING
T0605902617	7 ELEVEN STORE #18901	32022 CAMINO CAPISTRANO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902440	ARCO	26851 ORTEGA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902419	CAL MAT	31511 ORTEGA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902549	CAL TRANS MAINTENANCE YARD	32941 CAMINO CAPISTRANO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605963754	CALIFORNIA HIGHWAY PATROL	32951 CAMINO CAPISTRANO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED

Table A-1, continued

GLOBAL ID	SITE / FACILITY NAME	ADDRESS (OR PARTIAL ADDRESS)	SITE / FACILITY TYPE	STATUS
T0605902488	CALIFORNIA SILICA PRODUCTS	31302 ORTEGA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902428	CALIFORNIA SILICA PRODUCTS CO	31302 ORTEGA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605999189	CAPISTRANO CAR WASH	32841 CAMINO CAPISTRANO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605906503	CASPERS WILDERNESS PARK	33401 ORTEGA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902453	CHEVRON	27112 ORTEGA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902379	CHEVRON #9-3417	32009 CAMINO CAPISTRANO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902510	CHEVRON #9-8719	26988 ORTEGA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902614	CHEVRON STATION #9-8719	26988 ORTEGA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605977989	CHIQUITA WATER RECLAMATION PLANT	28793 ORTEGA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902372	CITY OF SAN JUAN CAPISTRANO	32400 PASEO ADELANTO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902452	EXXON	26572 JUNIPERO SERRA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902423	FORD AEROSPACE CORP	33600 ORTEGA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902449	GLEN FED DEVELOPMENT CO	0 TRACT 10139	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902487	LOS PINOS FORESTRY CAMP	39251 ORTEGA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605992001	MARBELLA GOLF COURSE	30650 GOLF CLUB	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902439	MISSION PIPE AND SUPPLY CO	32107 ALIPAZ	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902429	MISSION VIEJO MATERIALS INC	29261 TRABUCO CREEK	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902544	OGLEBOY NORTON INDUSTRIAL SAND	31302 ORTEGA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902503	ORANGE COUNTY FIRE STATION #7	31865 DEL OBISPO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902401	RANCHO CAPISTRANO COMMUNITY CHURCH	29251 CAMINO CAPISTRANO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902462	RANCHO MISSION VIEJO	28675 ORTEGA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902463	RAYNE WATER	33021 CALLE PERFECTO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED

Table A-1, continued

GLOBAL ID	SITE / FACILITY NAME	ADDRESS (OR PARTIAL ADDRESS)	SITE / FACILITY TYPE	STATUS
T0605902460	ROMARCO REALTY CORP	31642 AVE LOS CERRITOS	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902366	SHELL	26571 JUNIPERO SERRA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902592	SHELL OIL	27101 ORTEGA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902548	SOLAG DISPOSAL	31731 PASEO ADELANTO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902421	SUPER 7	32022 CAMINO CAPISTRANO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902524	TEXACO	26874 ORTEGA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902561	TOSCO - 76 #5425	27164 ORTEGA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902555	ULTRAMAR /SAN JUAN SERVICE	26572 JUNIPERO SERRA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605999248	UNITED RENTALS	32821 CALLE PERFECTO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902586	UNOCAL S #5425	27164 ORTEGA	LUST CLEANUP SITE	COMPLETED - CASE CLOSED
T0605902550	WESELOH HONDA	32881 CAMINO CAPISTRANO	LUST CLEANUP SITE	COMPLETED - CASE CLOSED

Cleanup Program Sites: 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 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.

Irrigated Lands Regulatory Program (ILRP): includes all sites that discharge agricultural runoff and are regulated by the ILRP at the State Water Resources Control Board or one of the nine Regional Water Quality Control Boards. Many ILRP sites in the Central Valley operate under general orders (broad-based Waste Discharge Requirements) or commodity-specific orders designed to prevent discharges of agricultural runoff from causing or contributing to exceedances of water quality objectives.

Land Disposal Sites: includes sites with solid and/or liquid wastes discharged to lands 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.

Leaking Underground Storage Tank (LUST) Cleanup Sites: includes all 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, LUST sites consist almost entirely of fuel-contaminated LUST sites (also known as leaking underground fuel tank sites), which are regulated pursuant to Title 23 of the California Code of Regulations, Chapter 16, Article 11.