8 Air Quality and Safety

8.1 INTRODUCTION

The Air Quality and Safety Element addresses air quality and the potential short and long-term risk of death, injuries, property damage, and economic and social dislocation resulting from climate change, hazardous materials, floods, fire, earthquakes, and crime. The element combines two of the nine mandatory general plan elements: air quality, which is required by Government Code 65302.1(c) and safety, which is required by Government Code 65302(g).

The safety portion of this element incorporates Guadalupe's local hazard mitigation plan in accordance with Government Code § 65302.6. Per Government Code § 65302, if a local jurisdiction has incorporated its local hazard mitigation plan into its safety element, the risks associated with climate change must be addressed in the local hazard mitigation plan at its next update.

Much of the material contained in this element comes from four documents:

- *2017 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan* (2017). This multi-jurisdictional hazard mitigation plan was prepared by the Santa Barbara County Office of Emergency Management in coordination with several Santa Barbara County cities, including the City of Guadalupe. The 2017 plan addresses 16 categories of hazard and includes goals, objectives, and mitigating actions to address the hazards. The *Guadalupe 2042 General Plan* incorporates by reference all materials in this document that have bearing on the City of Guadalupe and thereby comprise Guadalupe's local hazard mitigation plan. Goals, objectives, and mitigating actions contained in the 2017 plan are presented in Appendix C.
- *City of Guadalupe Volume I: Background Report* (2009). This background report, prepared by Cal Poly students, is an integral part of the City of Guadalupe community planning effort. It summarizes the existing (2009) conditions of Guadalupe and describes issues relevant to the update of the General Plan.
- *City of Guadalupe: General Plan Update Background Report* (2014). This background report, also prepared by Cal Poly students, built on the early Cal Poly work and provides a more recent account of background conditions in Guadalupe.

- *City of Guadalupe 2040 Draft General Plan* (2018). This draft general plan was prepared by Cal Poly students and included an extensive public participation effort, which is summarized in the "City of Guadalupe General Plan Update – Community Input Matrix" (published separately). The draft plan provided alternative buildout scenarios and goals, objectives, policies, and implementing measures. The draft plan was not completed but has been referred to during the development of the *Guadalupe 2042 General Plan*.

8.2 ISSUES AND OPPORTUNITIES

The primary air quality issues facing Guadalupe are pollutants generated by nearby agricultural operations. This includes dust from the fields and from road surfaces that are used by field equipment. It also includes fertilizers and other farm chemicals, hazardous materials used in cold storage and manufacturing, and exhaust from diesel trucks.

The primary safety issues facing Guadalupe involve: flooding, seismic hazards, wildfire and structural fire, climate change, and crime/police protection. Flooding risk is posed by the community's proximity to the Santa Maria River, which has a substantial watershed of 1,760 square miles, and by dam failure at Twitchell Dam.

With regard to seismic hazards, Guadalupe is located in an active fault region, and two historically significant buildings have been identified that lack proper earthquake retrofitting--899 Guadalupe Street (Far Western Tavern) and 848 Guadalupe Street (Royal Theater). These buildings may pose a substantial risk to life in the event of an earthquake.

Wildfire risk is posed by riparian vegetation in the Santa Maria River basin immediately north of the city, and this area is designated by CalFire as a very-high fire hazard severity zone[1]. Structural fires, which are an ever-present challenge for all communities, must also be anticipated and equipment and personnel upgrades may be required in Guadalupe.

Climate change risk is posed by overall drier conditions, lower average rainfall, and an increased number of high-intensity storm events. This means that flooding and wildfire events could become common, and the number of high-heat days could increase, posing a threat to vulnerable populations.

Finally, with regard to crime, Guadalupe has a lower-than-average crime rate but nonetheless has recently experienced increases in crime (2019) and issues related to homelessness and mental health. As is the case with fire protection services, policing is an ever-present challenge for all communities, and equipment and personnel upgrades may be necessary in the future.

[1] Source: CalFire https://gis.data.ca.gov/datasets/789d5286736248f69c4515c04f58f414

Each of these issues is discussed in more detail below. See the *2017 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan* (2017) for more information about natural hazards that could affect the community.

8.3 AIR QUALITY

The City of Guadalupe is located within the South-Central Coast Air Basin (air basin), which includes all of San Luis Obispo, Santa Barbara, and Ventura counties. The Santa Barbara County portion of the air basin is under the jurisdiction of the Santa Barbara County Air Pollution Control District (APCD).

Climate and Topography

The climate of the air basin is strongly influenced by its proximity to the Pacific Ocean and the location of the high-pressure cell in the northeastern Pacific Ocean. With a Mediterranean-type climate, the region can be characterized by warm, dry summers and cool winters with occasional rainy periods.

Cool, humid marine air causes frequent fog and low clouds along the coast, generally during the night and morning hours in the late spring and early summer months. The area around the region is subject to a diurnal cycle in which daily onshore winds from the west and northwest are replaced by mild offshore breezes flowing from warm inland valleys during night and early morning hours. This alternating cycle can create a situation where suspended pollutants are swept offshore at night, and then carried back onshore the following day. Dispersion of pollutants is further degraded when the wind velocity for both day and nighttime breezes is low. The region is also subject to seasonal "Santa Ana" winds. These are typically hot, dry northerly winds which blow offshore at 15 to 20 miles per hour (mph), but can reach speeds in excess of 60 mph.

Two types of temperature inversions (warmer air on top of cooler air) are created in the area: subsidence and radiational. The subsidence inversion is a regional effect created by the Pacific high in which air is heated as it is compressed when it flows from the high-pressure area to the low-pressure areas inland. This type of inversion generally forms at about 1,000 to 2,000 feet and can occur throughout the year, but it is most evident during the summer months. Radiational, or surface, inversions are formed by the more rapid cooling of air near the ground during the night, especially during winter. This type of inversion is typically lower (0 to 500 feet at Vandenberg Air Force Base, for example) and is generally accompanied by stable air. Both types of inversions limit the dispersal of air pollutants within the regional airshed, with the more stable the air (low wind speeds, uniform temperatures), the lower the amount of pollutant dispersion (Dudek 2019).

Air Pollutants of Primary Concern

The general characteristics of the six criteria pollutants regulated by the federal Clean Air Act and California Clean Air Act are described below.

Ozone

Ozone (O_3) is produced by a photochemical reaction (triggered by sunlight) between nitrogen oxides (NO_x) and reactive organic compounds (ROC). NO_x is formed during the combustion of fuels, while ROC is formed during combustion and evaporation of organic solvents. Because ozone requires sunlight to form, it mostly occurs in concentrations considered serious between the months of April and October. Ozone is a pungent, colorless, toxic gas with direct health effects on humans, including respiratory and eye irritation and possible changes in lung functions. Groups most sensitive to ozone include children, the elderly, persons with respiratory disorders, and people who exercise strenuously outdoors.

Carbon Monoxide

Carbon monoxide (CO) is a localized pollutant that is found in high concentrations only near its source. The major source of CO, a colorless, odorless, poisonous gas, is exhaust from internal combustion engine vehicles. Therefore, elevated concentrations are usually only found near areas of high traffic volumes. Carbon monoxide health effects are related to its affinity to hemoglobin in the blood. At high concentrations, CO reduces the amount of oxygen in the blood, causing heart difficulties in people with chronic diseases, reduced lung capacity, and impaired mental abilities.

Nitrogen Dioxide

Nitrogen dioxide (NO_2) is a by-product of fuel combustion, with the primary source being motor vehicles and industrial boilers and furnaces. The principal form of NO_2 produced by combustion is nitric oxide (NO), but NO reacts rapidly to form NO_2, creating the mixture of NO and NO_2 commonly called NO_x. Nitrogen dioxide is an acute irritant. A relationship between NO_2 and chronic pulmonary fibrosis may exist, and an increase in bronchitis in young children at concentrations below 0.3 parts per million (ppm) may occur. Nitrogen dioxide absorbs blue light, gives a reddish-brown cast to the atmosphere, and reduces visibility. It can also contribute to the formation of small particulate matter (PM_{10}) and acid rain.

Suspended Particulates

Small particulate matter measuring no more than 10 microns in diameter is considered PM_{10}, while $PM_{2.5}$ is fine particulate matter measuring no more than 2.5 microns in diameter. Suspended particulates are mostly dust particles, nitrates, and sulfates. Both PM_{10} and $PM_{2.5}$ are by-products of fuel combustion and wind erosion of soil and unpaved roads and are directly emitted into the atmosphere through these processes. Suspended particulates are

also created in the atmosphere through chemical reactions. The characteristics, sources, and potential health effects associated with small particulates (PM_{10}) and fine particulates ($PM_{2.5}$) can be very different. PM_{10} generally comes from windblown dust and dust kicked up from mobile sources. $PM_{2.5}$ is generally associated with combustion processes, as well as formation in the atmosphere as a secondary pollutant through chemical reactions. $PM_{2.5}$ is more likely to penetrate deeply into the lungs and poses a health threat to all groups, but particularly to the elderly, children, and those with respiratory problems. More than half of the small and fine particulate matter that is inhaled into the lungs remains there. These materials can damage health by interfering with the body's mechanisms for clearing the respiratory tract or by acting as carriers of an absorbed toxic substance.

Sulfur Dioxide

Sulfur dioxide (SO_2) is included in a group of highly reactive gases known as "oxides of sulfur." The largest sources of SO_2 emissions are from fossil fuel combustion at power plants (73 percent) and other industrial facilities (20 percent). Smaller sources of SO_2 emissions include industrial processes such as extracting metal from ore and the burning of fuels with a high sulfur content by locomotives, large ships, and non-road equipment. Sulfur dioxide is linked with a number of adverse effects on the respiratory system.

Lead

Lead (Pb) is a toxic metal that can be emitted from industrial sources, leaded aviation gasoline, and lead-based paint. Lead may cause a range of health effects, from behavioral problems and learning disabilities to seizures and death.

Toxic Air Contaminants

Toxic air contaminants (TAC) are a diverse group of air pollutants that may cause or contribute to an increase in deaths or serious illness or that may pose a present or potential hazard to human health. TACs include both organic and inorganic chemical substances that may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities. One of the main sources of TACs in California is diesel engines that emit exhaust containing solid material known as diesel particulate matter. TACs are different than the criteria pollutants previously discussed because ambient air quality standards have not been established for TACs. TACs occurring at extremely low levels may still cause health effects, and it is typically difficult to identify levels of exposure that do not produce adverse health effects. TAC impacts are described by carcinogenic risk and by chronic (i.e., long duration) and acute (i.e., severe but of short duration) adverse effects on human health.

Sensitive Receptors

Certain population groups are considered more sensitive to air pollution than others, particularly children, the elderly, and acutely ill and chronically ill persons, especially those with cardio-respiratory diseases. Sensitive land uses include those locations where such individuals are concentrated, such as hospitals, schools, residences, and parks with active recreational uses.

Regulatory Setting

Federal and State Standards for Criteria Pollutants

The federal and state Clean Air Acts regulate the emission of airborne pollutants from various mobile and stationary sources. The United States Environmental Protection Agency (USEPA) is the federal agency designated to administer air quality regulation, while the California Air Resources Board (CARB) is the state equivalent within the California Environmental Protection Agency (CalEPA). These agencies have established ambient air quality standards for the protection of public health. Local air quality management control and planning is provided through regional air pollution control districts established by CARB for the 14 statewide air basins. CARB is responsible for control of mobile emission sources, while the local air districts are responsible for control of stationary sources and enforcing regulations. As stated above, Santa Barbara County is located in the South-Central Coast Air Basin, and is under the jurisdiction of the Santa Barbara County Air Pollution Control District.

The CARB and the USEPA establish ambient air quality standards for major pollutants at thresholds intended to protect public health. Federal and State standards have been established for O_3, CO, NO_2, SO_2, Pb, PM_{10}, and $PM_{2.5}$. The table below summarizes the California Ambient Air Quality Standards and the National Ambient Air Quality Standards for each of these pollutants. California standards are more restrictive than federal standards for each of these pollutants, except for lead, the eight-hour average for CO, and the eight-hour average for O_3. Local air districts are required to monitor air pollutant levels to ensure that air quality standards are met and, if they are not, to develop strategies to meet these standards. Depending on whether the standards are met or exceeded, the local air basin is classified as being in "attainment" or "nonattainment." The Santa Barbara County portion of the air basin is currently designated nonattainment-transitional for the State eight-hour ozone standard and nonattainment for the State PM_{10} standard but is in attainment for all other federal and state standards. Table 8-1 shows current federal and state ambient air quality standards.

Table 8-1 Current Federal and State Ambient Air Quality Standards

Pollutant	Federal Standard	California Standard
Ozone	0.070 ppm (8-hour average)	0.09 ppm (1-hour average) 0.07 ppm (8-hour average)
Carbon Monoxide	35.0 ppm (1-hour average) 9.0 ppm (8-hour average)	20.0 ppm (1-hour average) 9.0 (8-hour average)
Nitrogen Dioxide	0.053 ppm (annual average)	0.18 ppm (1-hour average) 0.030 ppm (annual average)
Sulfur Dioxide	0.075ppm (1-hour average) 0.14 ppm (24-hour average)	0.25 ppm (1-hour average) 0.04 ppm (24-hour average)
Lead	0.15 µg/m^3 (3-month average)	1.5 µg/m^3 (30-day average)
Particulate Matter (PM_{10})	150 µg/m^3 (24-hour average)	50 µg/m^3 (24-hour average) 20 µg/m^3 (annual average)
Particulate Matter ($PM_{2.5}$)	35 µg/m^3 (24-hour average) 12 µg/m^3 (annual average)	12 µg/m^3 (annual average)

SOURCE: County of Santa Barbara 2019
NOTE: (1) ppm = parts per million
(2) µg/m3 = micrograms per cubic meter

Regional Standards

Under state law, the APCD is required to prepare a plan for air quality improvement for pollutants for which the District is in nonattainment. The APCD regulates air quality in the portion of the air basin that is in Santa Barbara County and is responsible for attainment planning related to criteria air pollutants and for district rule development and enforcement.

The 2019 Ozone Plan was adopted by the APCD Board in December 2019 and is the most recent applicable air quality plan. The 2019 Ozone Plan is the ninth triennial update required by the State to demonstrate how the APCD plans to meet the state eight-hour ozone standard. The 2019 Ozone Plan addresses the state ozone standards only because the APCD is designated "attainment" for the federal 8-hour ozone standard of 0.070 ppm, which was promulgated by the United States Environmental Protection Agency in December 2015. The federal attainment designation for Santa Barbara County was finalized in April 2018. The 2019 Ozone Plan influences a range of activities such as the development of the APCD rules and regulations, transportation planning, and allocation of funds for air quality projects.

Air Monitoring

Each year, APCD data is compiled into an Annual Air Quality Report for comparison against the state and national ambient air quality standards. These reports provide information on the measured air quality concentrations and trends in Santa Barbara County, as well as a summary of the ambient air quality standards and exceedances for the year. The APCD also

prepares an annual air monitoring network plan for the county, which includes a statement of purpose for each monitor, and displays compliance with federal regulations. Every five years, the APCD prepares a five-year network assessment of the air quality surveillance system in Santa Barbara County.

The Santa Maria monitoring station is the nearest to the City of Guadalupe, located approximately eight miles east. According to the APCD, the Santa Maria monitoring station measures the following: ozone levels, nitrogen dioxide levels, carbon monoxide levels, PM_{10} levels, $PM_{2.5}$ levels, wind speed, wind direction, and ambient temperatures (Santa Barbara County Air Pollution Control District 2021b).

According to the APCD's 2019 Annual Air Quality Report, Santa Barbara County met the federal ambient air quality standards for all measured pollutants except the 8-hour ozone standard. The state ambient air quality standards were met for all pollutants except the 24-hour PM_{10} standard and the 8-hour ozone standard. The Santa Maria monitoring station exceeded the air quality standard for the state's PM_{10} for 17 days (Santa Barbara County Air Pollution Control District 2019).

Air Quality Summary

Air quality concerns are reflected in the *Guadalupe 2042 General Plan* in its emphasis on a mix of uses that over time would serve to reduce long-distance commuting and its provisions for non-automobile transportation. Policies and programs in this element are intended to minimize dust, the primary source of particulate matter pollution, as well as provide adequate separation between sensitive receptors and emission sources. See also Chapter 4 – Environmental Justice, for more information

8.4 CLIMATE ADAPTATION

Climate adaptation is another top priority for California. While the Conservation Element addresses the reduction of greenhouse gases that cause climate change, the Safety Element addresses climate adaptation and resiliency strategies, or in layperson's terms, the impact climate change has on local communities. These impacts can be both direct and indirect.

Climate change leads directly to more frequent extreme heat days that can put vulnerable populations at risk and challenge the power utility system as it strains to keep air conditioners running. For example, according to the *2017 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan*, the July 2006 heat wave in California caused the deaths of about 140 people over a 13-day period. It also resulted in 15 reported pet deaths and more than 25,000 cattle and 700,000 fowl heat-related deaths.

In California, climate change also leads to a dryer climate where vegetation more readily becomes fuel for wildfire, and when storms arrive in the rainy season, climate change leads to more powerful storms with the potential for extraordinary flooding events.

Government Code §65302 requires local hazard mitigation plans to evaluate the risks associated with climate change and to address climate adaptation and resiliency strategies. Government Code § 65302.6 allows a local jurisdiction to adopt its local hazard mitigation plan as part of its safety element, and the City of Guadalupe adopted Resolution No. 2018-52 incorporating its local hazard mitigation plan (an annex to the Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan) into the safety element on September 11, 2018.

See the *2017 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan* for a more complete discussion regarding Guadalupe's climate adaptation and resiliency strategy. The 2017 plan addresses 16 categories of hazard, each of which includes a discussion of "climate change considerations."

8.5 HAZARDOUS MATERIALS

Hazardous materials are stored in several locations in Guadalupe. For example, the City of Guadalupe stores motor oil, diesel fuel, and paints. Food processing plants in the city may use anhydrous ammonia for refrigeration in cold rooms and chlorine gas in the form of sodium hypochlorite as an industrial wash water. Adjacent agricultural operations use fertilizers, pesticides, and herbicides for crop production. Industrial users may use a variety of hazardous materials for sale or production. Finally, the Union Pacific Railroad operates freight trains on the tracks that run through the center of Guadalupe, and it is likely that the freight carried includes industrial chemicals and military materials (Vandenberg Airforce Base is located 10 miles south of Guadalupe) that could be hazardous to human health in the event of accidental release or upset.

According to State Water Resources Control Board Geotracker,[2] there are seven open cases of hazardous material contamination in the Guadalupe planning area. Six of these are in the city limits, and one is at the southern edge of the planning area on Betteravia Road. Table 8-2 lists clean-up sites being monitored by the State Water Resources Control Board.

[2] https://geotracker.waterboards.ca.gov/map/?global_id=T10000006223

Table 8-2 Clean-Up Sites in Guadalupe

Business Name	Address	Program	Status
Brian's Auto Body	750 Guadalupe Street	Leaking Underground Storage Tank (LUST)	Open -- Remediation
E-Z Serve	751 Guadalupe Street	LUST	Open -- Remediation
Al's Union 76	995 Guadalupe Street	LUST	Open – Remediation
Bud of California	1211 Peralta Street	LUST	Open – Eligible for Closure
JR Simplot	288 Guadalupe Street	Clean-Up Program	Open – Verification Monitoring
Conoco-Phillips Union Sugar #16-1	Main Street/SR 1	Clean-Up Program	Open – Assessment & Interim Remedial Action
Mathison W1 Oil Well & Sump	4094 W. Betteravia Rd	Clean-Up Program	Open – Verification Monitoring

SOURCE: State Water Resources Control Board, https://geotracker.waterboards.ca.gov/map/?global_id=T10000006223

Aside from clean-up efforts managed by the State Water Resources Control Board, the handling, storage, and transport of hazardous materials are regulated by the State Department of Health Services, which has designated counties as the primary enforcement agency for regulating hazardous materials. In Santa Barbara County, the Santa Barbara County Department of Environmental Health has authority over hazardous materials in Guadalupe and requires local businesses storing such materials to meet its standards and codes. Businesses with acutely hazardous wastes are required to have a risk management program addressing emergency procedures for containment, evacuation, inventory, and employee training. Business response plans are required to identify the procedures the business will follow in the event of an emergency.

Agricultural practices which involve hazardous materials include the application of herbicides, pesticides, and fertilizers, some of which contain chemicals that are potentially harmful to human health and the environment. In areas where such chemicals are applied, either from the ground or from the air, residents in adjacent neighborhoods could under some conditions be exposed to health risks. Buffers should be maintained between agricultural areas and residential areas to reduce resident exposure to agricultural chemicals.

The Guadalupe Fire Department is primarily responsible for responding to accidental release of hazardous materials that are stored and used in the community. The Guadalupe Fire Department coordinates its emergency response preparedness with the City of Santa Maria, and in 2017 the two jurisdictions adopted a joint response plan entitled: *Integrated Regional Multi-Hazard Emergency Response Plan for the Cities of Santa Maria and Guadalupe.*

8.6 FLOOD RISK

Flooding can be a hazard to development along nearly any waterway, and Guadalupe faces the risk of flooding from the Santa Maria River. As previously noted, the City of Guadalupe is located immediately south of the Santa Maria River, and although the City is situated above the floodplain, the river is subject to high flows following periods of intense precipitation. Flood waters resulting from these high flows could impact the community and constrain its ability to provide new housing opportunities in the future.

The risk of flooding from the Santa Maria River has been partially mitigated with the construction of the levees on the Santa Maria River east of the Guadalupe. The levees do not extend west of the city, however, leaving the Westside Neighborhood more vulnerable to unusually large flooding events.

Guadalupe also faces a risk of flooding in the event of dam failure at Twitchell Dam, which would release waters contained in the Twitchell Reservoir on the Cuyama River (the major tributary of the Santa Maria River). While the likelihood of dam failure is low, inundation from Twitchell Dam could affect all of Guadalupe's urbanized area.

Figure 8-1, Flood and Dam Inundation Hazards, shows areas in the Guadalupe planning area that are subject to flooding from the Santa Maria River during a 100-year storm[3] and areas that would be subject to inundation in the event of dam failure at Twitchell Reservoir.

8.7 WILDFIRE RISK

Wildfire has become an increasing threat throughout California, as the state has experienced historic levels of damage from wildfire in the last decade. Because of this, the State of California has tasked local communities to prioritize wildfire protection. These efforts must include avoiding urbanization in areas where significant wildfire risk is present, planning for emergency evacuations, and instituting fire suppression measures where urbanization must coexist with fire-prevalent landscapes.

While, the urbanized parts of Guadalupe contain few significant fire threats, the land immediately north of the city limits includes a riparian woodland that CalFire has designated as a Very High Fire Hazard Severity Zone. In addition, while not designated by CalFire as a fire hazard zone, the Ninth Street wetland complex is a woody habitat that could fuel wildfire in the vicinity of the Guadalupe Fire Station and various residences. Figure 8-2, Fire Hazard Severity Zones, shows Fire Hazard Severity Zones in and around the Guadalupe Planning Area.

[3] The 100-year flood has a statistical likelihood of occurrence of one percent per year, or once every 100 years.

8.8 PUBLIC SAFETY

The Guadalupe Department of Public Safety has administrative and operational oversight for the Police Department, the Fire Department, and the Office of Emergency Management. The current Director of Public Safety is Michael Cash, who is also the Chief of Police. According to Chief Cash, the overall response time objective for Guadalupe first responders is under five (5) minutes. The major source of funding for public safety is from the City General Fund.

Guadalupe Police Department:

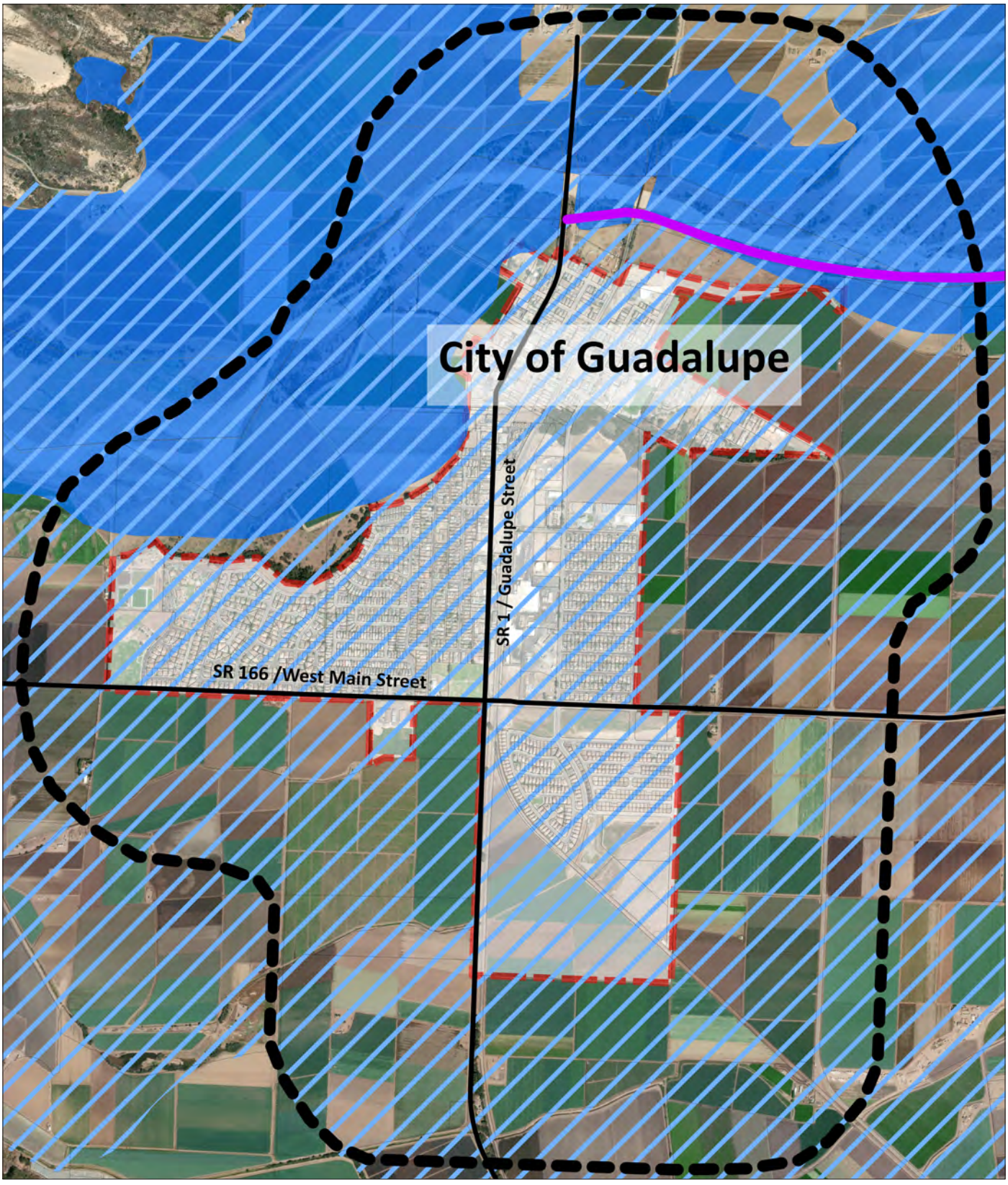
The City of Guadalupe Police Department headquarters is located adjacent to City Hall. The department currently employs 12 full-time sworn police officers, two (2) police supervisors, one (1) Code Compliance Officer, and one (1) Police Chief as the Director of Public Safety. There are two (2) civilian office staff: an office manager and an evidence technician.

Special Programs

- The Police Explorer program has 15 youth assigned to the program.
- School Resource Officer is assigned to both the elementary and middle school on a federal grant.
- Airport Officers are assigned to the Santa Maria Airport on a contracted basis.
- Code Compliance Officer to enforce municipal ordinances.
- "Kids Day" is a community outreach to youth for positive interaction with local law enforcement.
- "DARE" Drug Abuse Resistance Education. A police / student school program aimed to reduce drug-taking, gangs, and violence among young people.
- Guadalupe Business Watch to actively reduce and prevent crime through cooperation and education.

The City of Guadalupe's primary criminal policing issues revolve around juvenile crime, domestic violence, gang, and narcotic issues. Homelessness and mental health crisis incidents are on the increase. The 2019 crime rate in Guadalupe was 122, which is 2.2 times lower than the United States average. The 2019 Guadalupe crime rate rose by 48 percent compared to 2018.[4] Table 8-3 summarizes Guadalupe's 2019 crime statistics.

[4] The information in this paragraph was provided by Michael Cash, Guadalupe Chief of Police in March 2021.



0 1900 feet

City Limits
Flood Zone
Planning Area
Twitchell Dam Inundation Area
Santa Maria River Levee

Source: City of Guadalupe 2021

Figure 8-1

Flood and Dam Inundation Hazards

Guadalupe 2042 General Plan

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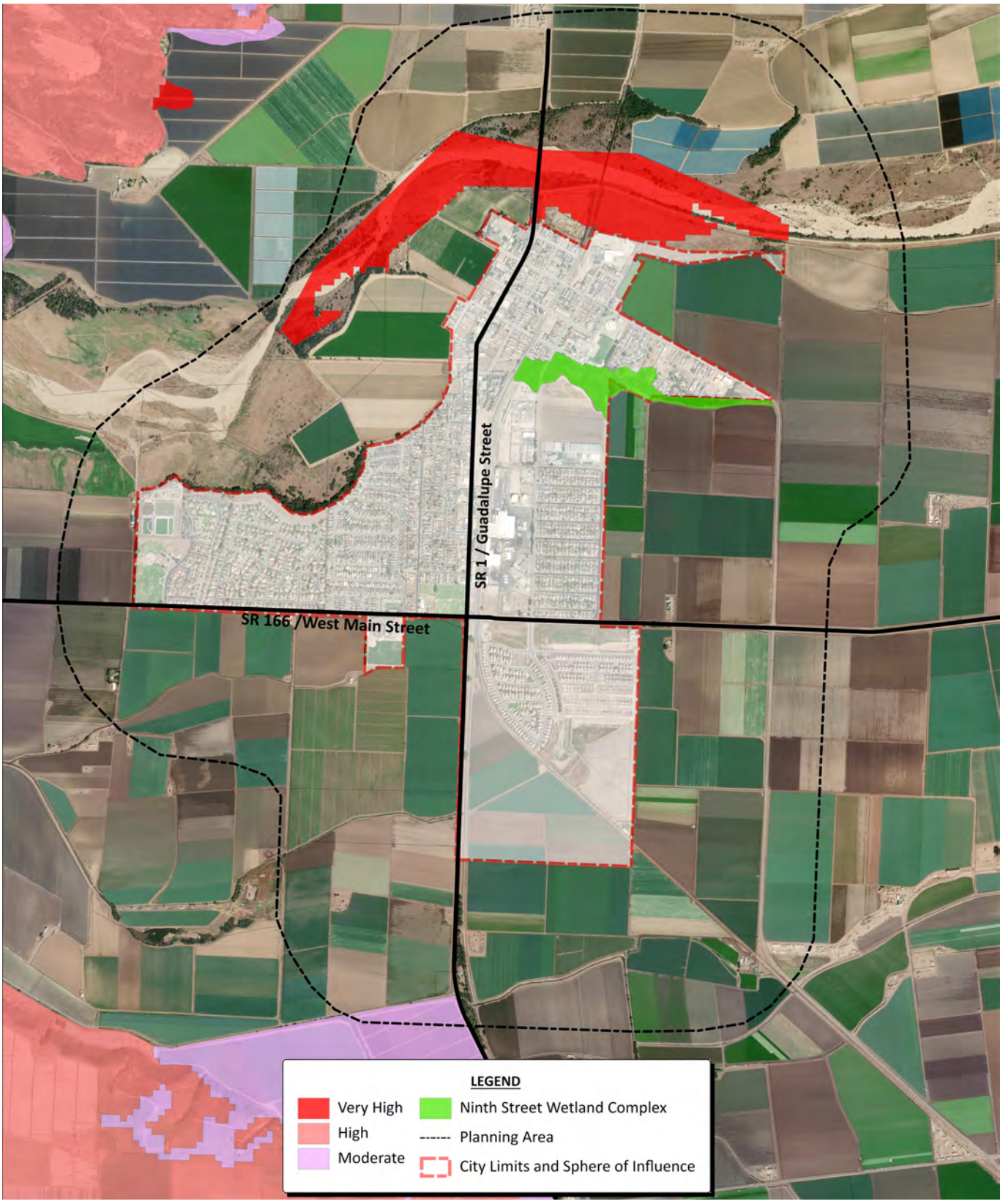

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Source: City of Guadalupe 2021

Figure 8-2
Fire Hazard Severity Zones

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Table 8-3 2019 Crime Statistics

Type of Crime	Number of Incidents
Rape	2
Robbery	3
Assault	10
Burglary	32
Theft	34
Arson	2

SOURCE: https://www.city-data.com/crime/crime-Guadalupe-California.html

Guadalupe Fire Department

The City of Guadalupe Fire Department operates two (2) fire stations. The main station is adjacent to City Hall. The department employs three (3) full-time Fire Captains, and three (3) full-time Fire Engineers. There are four (4) part-time Fire Firefighters. All fire personnel are Emergency Medical Training (EMT) trained or have advanced medical training (Optional Skills Medical Training).

Special Programs

The Guadalupe Fire Department operates four special programs:

- Fire Safety - School Education programs
- Fire Inspections – Business and Residents
- Smoke Detector Inspections – Business and residents
- Advanced Medical Care

Office of Emergency Management

The Guadalupe Office of Emergency Management operates with one (1) Emergency Services Manager.

Special Programs

The Guadalupe Office of Emergency Management operates three special programs

- Emergency Preparedness Training (Residents & City Employees)
- Youth Emergency Preparedness Training interaction program
- Grant Writing abilities

Assessment of Future Public Safety Needs

The City of Guadalupe's primary criminal policing issues revolve around juvenile crime, theft, domestic violence, gangs, and narcotic issues. Homelessness and mental health crisis incidents are on the increase. The City is fortunate that most of its criminal issues and/or participants are a very small faction of our population. Most are known to local law enforcement personnel.

Public Safety Outreach, which has included Fire, Police, Emergency Preparedness, and Code Compliance personnel, has been extremely successful in reaching misguided youth and adults prior to most major incidents. This has led to the continued low crime rate the City has experienced for the past 20 some years.

Public Safety personnel work on a weekly basis to assist with distribution of food at the Guadalupe Senior Center with the Santa Barbara County Food Bank. The City has no bars, one liquor store, and limited alcohol on-sale at City restaurants.

The Department of Public Safety sees great opportunity with the growth and future of the City. Community partnerships have been the real success of the department. Current staffing is at appropriate and proportionate levels to crime and population. Funding, equipment, and technology has been upgraded and exceeds past years. The "Scheduled Equipment Rotation Program" will enable us to properly plan and execute for future expenditures.

Guadalupe has a vast outdoor capacity for self-guided exercise and entertainment with biking trails, fishing, hiking, and other activities. There are few structured led events for families to participate. Currently because of COVID-19 restrictions, the City has limited youth recreation led activities and no entertainment outlets.

To continue to provide and maintain proper public safety standards for present and future residents, visitors, and businesses, the Public Safety Department has identified the following goals:

- Continue to monitor and keep salaries and benefits competitive for recruitment and retention.
- Establish and maintain a "Scheduled Equipment Rotation Program" for Public Safety to sell and replace outdated equipment and vehicles.
- Develop and finance a Public Safety Operations Center to join the facilities of police, fire, and an emergency operations center. Currently we have no separate female and male accommodations which include, sleeping quarters, locker rooms, or bathrooms.
- Establish a Police K-9 program to assist and protect officers, firefighters, and citizens with searches, arrest, community programs, mental health crises interactions, gang and narcotic enforcement.

- Replace outdated and donated Fire Engine.
- Develop a Public Safety City-Wide Mass Notification and Alert System.
- Develop and maintain a multi-use Emergency Evacuation and Shelter location for city residents with a generator. Store emergency supplies and food for long term events.
- Develop and institute an "Increased Medical Focused Program" at the paramedic level to address, meet, and exceed community needs regarding medical calls for service.
- Establish a civilian "Crisis Response Team" to address social issues of homelessness, mental health crises, and domestic violence to handle non-threatening situations instead of police officers.
- A Development Impact Fee associated with Public Safety needs to be developed and implemented for funding and growth purposes.

According to Chief Cash, staffing levels are appropriate and almost at full capacity for police and fire. Funding, equipment, and technology has been upgraded and exceeds past years. The Scheduled Equipment Rotation Program enable the Police Department to properly plan and execute for future expenditures. Currently, there are only two pressing expenditures facing the department: the development of an updated and adequate Public Safety Operations Center and the replacement of the outdated, aged main fire engine. The major source of funding for public safety is from the General Fund. The Police Department hopes to work with the City Manager and City Council to create and implement a development impact fee to fund future public safety expenditures.

8.9 SEISMIC RISK

Seismic hazards in Guadalupe include surface ruptures from faulting, ground shaking, ground failures, and the collapse of substandard structures that have not been retrofitted for earthquake safety. There are three known faults in the Guadalupe area: the Casmalia Fault Zone approximately three and one-half miles southwest of the city, the Hosgri Fault Zone approximately four miles west of the city, and the San Luis Range Fault System approximately five miles northwest and west of the city. All of these faults are considered active.[5]

[5] Source: https://usgs.maps.arcgis.com/apps/webappviewer/index.html?id=5a6038b3a1684561a9b0aadf88412fcf; Each fault is classified as "Late Quaternary" (< 130,000 years), which is considered active.

While compliance with the California Building Code reduces the risk of structural failure in the community, there remains risk from large seismic events that could interrupt electricity, water, and sewer services and even damage area bridges and roadways blocking evacuation and emergency access. In addition, there are a number of historic structures that remain in Downtown Guadalupe that were built long before the current building code standards were put in place. Fortunately, the City of Guadalupe has worked effectively with property owners to retrofit 19 of these structures in the last couple of decades, and only two structures remain to be retrofitted—899 Guadalupe Street (Far Western Tavern) and 848 Guadalupe Street (Royal Theater).

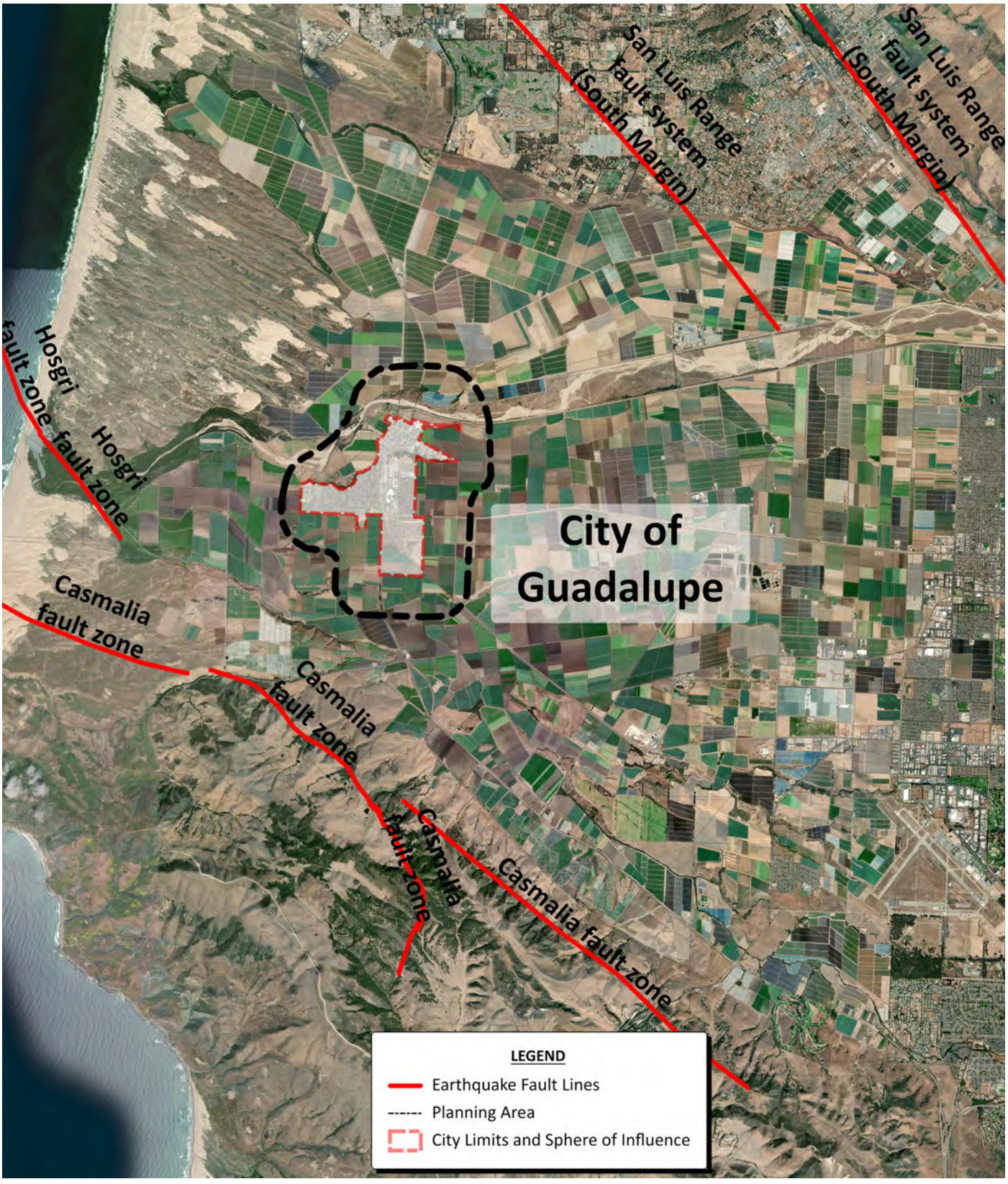
Figure 8-3, Earthquake Faults in the Region, shows earthquake faults in the region surrounding Guadalupe.

8.10 GOALS, POLICIES, AND PROGRAMS

The following goals, policies, and programs address safety issues facing Guadalupe. In addition to these, Appendix C restates the goals, objectives, and mitigating actions that are contained in the *2017 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan*, and these 2017 goals, objectives, and implementing actions are incorporated into this safety element by reference.

Goals

Goal S-1	To achieve and maintain clean, healthy air for the residents of Guadalupe and to reduce greenhouse gases consistent with state efforts to address climate change.
Goal S-2	To make Guadalupe a resilient community with minimized damage from climate-change-induced hazards.
Goal S-3	To protect Guadalupe residents and employees from accidental exposure to hazardous materials.
Goal S-4	To protect Guadalupe residents and property owners from unreasonable risks of flooding.
Goal S-5	To protect Guadalupe residents and property owners from unreasonable risks associated with the effects of wildland and urban fires.
Goal S-6	To protect Guadalupe residents and property owners from seismic hazards and associated soil and ground instability
Goal S-7	To establish and maintain reliable police and fire emergency response and prevention capabilities.



Source: City of Guadalupe 2021

Figure 8-3
Earthquake Faults in the Region

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Policies

General Policies

Policy S-1.1 The City shall take all reasonable actions to prepare for emergencies, using the *2017 Santa Barbara County Multi-Jurisdictional Hazard Mitigation Plan* as the basis for planning and preparation.

Air Quality

Policy S-1.2 The City will review all development projects for impact on air quality and will require the implementation of the Santa Barbara County Air Pollution Control District dust control measures during construction, implement exhaust control measures during construction activities, and require all development projects to pave roads and parking areas.

Policy S-1.3 The City will ensure that new development with sensitive uses located adjacent to toxic air contaminant (TAC) sources minimizes potential health risks by requiring new development to be designed with consideration of site and building orientation, location of trees, and incorporation of ventilation and filtration to lessen any potential health risks. At the City's discretion, it will require preparation of a health risk assessment for projects deemed to have acute potential for harm through the exposure of sensitive uses to the effects of TACs.

Climate Adaptation

Policy S-1.4 The City will support continuing regional efforts to mitigate the effects of climate change through the multi-jurisdictional hazard mitigation planning process administered by the County of Santa Barbara.

Policy S-1.5 New nonresidential developments with 10 or more parking spaces will install electric vehicle capable infrastructure in approximately six (6) percent of parking spaces (minimum one (1) space). Electric vehicle capable infrastructure includes raceway and panel capacity to support future installation of a Level 2 charger on a dedicated 40-amp, 208/240-volt branch circuit, per the California Green Building Standards Code, or additional requirements as amended.

Hazardous Materials

Policy S-1.6 The City will require all new construction and renovation to be designed and constructed to mitigate the effects of hazardous materials. This includes both measures to regulate industry that uses hazardous materials and measures to ensure that remodeling of older historic structures does not expose persons to hazardous buildings materials used in the past (e.g., asbestos: flooring to ceilings and siding.)

Policy S-1.7 The Emergency Preparation coordinator will develop appropriate response procedures for potential hazardous materials releases within the City's jurisdictional limits using the Santa Barbara County hazardous materials inventory listing found in the California Environmental Reporting System (CERS) database.

Flood Risk

Policy S-1.8 The City will minimize the risks of flooding to development through its development review process, including prohibiting development in the flood hazard zones of the Santa Maria River and locating, when feasible, new essential public facilities outside of flood hazard zones.

Wildfire and Fire Risk

Policy S-1.9 The City will establish and maintain levels of service for fire services that meet national and/or regional standards. Proposals for new development will be evaluated against these service levels to determine the extent of improvements needed.

Seismic Risk

Policy S-1.10 The City will require all new construction and renovation to be designed and constructed to retain structural integrity when subject to seismic activity, in accordance with the City's and State's building codes.

Police Protection

Policy S-1.11 The City will establish and maintain levels of service for police services that meet national and/or regional standards. Proposals for new development shall be evaluated against these service levels to determine the extent of improvements needed.

Programs

Program S-1.1.1 On an ongoing basis, the Building and Planning Department will coordinate with the Santa Barbara County Air Pollution Control Board and with other regional, State, and Federal agencies in conducting studies and implementing regulations to achieve and maintain ambient air quality standards and will use the development review process to minimize local air quality impacts related to new construction by requiring dust abatement measures where appropriate.

Program S-1.1.2 On an ongoing basis, the Building and Planning Department will use the development review process to require new development proposals to include information on toxic air contaminant health risks for major new sources of TACs (e.g., trucking distribution centers, dry cleaners or gasoline stations) are proposed to be located near a sensitive receptor. Such analysis will include an evaluation of the adequacy of the setbacks and, if necessary, identify measures to reduce health risks to acceptable levels.

Program S-1.1.3 Within three years of adoption of the *Guadalupe 2042 General Plan*, the Public Works Department will identify hazard-prone critical facilities and infrastructure and carry out acquisition, relocation, and structural and non-structural retrofitting measures as necessary.

Program S-1.1.4 Within three years of adoption of the *Guadalupe 2042 General Plan*, the Building and Planning Department will meet with the owner of 899 Guadalupe Street (Far Western Tavern) to explore ways to make this building earthquake safe. See also LU-1.1.2 and ED-1.1.2.

Program S-1.1.5 Within three years of adoption of the *Guadalupe 2042 General Plan*, the City Administrator will work with the Police Department and Fire Department to develop and institute a development impact fee to fund upgrades to police and fire department staffing and equipment as needed to ensure that adequate public safety services are provided to the community.

Program S-1.1.6 Two times each year, the Emergency Preparation Coordinator will work with the Police and Fire Departments to conduct emergency drills to test the effectiveness of the City's emergency response procedures.

Program S-1.1.7 On an ongoing basis, the Building and Planning Department will use the development review process to ensure that the Fire Department reviews and evaluates proposed development projects from the perspective of fire safety.