



Annex A Arroyo Grande

A.1 Community Profile

A.1.1 Mitigation Planning History and 2025 Process

This annex was updated in 2025 to build upon the previous version created for the 2019 San Luis Obispo Hazard Mitigation Plan update. This 2025 annex update also includes input from the previous versions of the Multi-Jurisdictional Local Hazard Mitigation Plan for the City of Arroyo Grande, approved previously in 2014 and 2019, as well as the Grover Beach plan, the Lucia Mar Unified School District plan, and the South San Luis Obispo County Sanitation District plan. The 2025 update of this annex is planned for inclusion by reference in the city's comprehensive General Plan Update, which is anticipated to be complete in 2026. The city has also used the previous mitigation plan as a basis for the Emergency Operations Plan. A review of jurisdictional priorities found an increased emphasis on flood mitigation projects since the last update, in part due to storms in 2023.

The city's Local Planning Team (LPT), listed in Table A-1 holds responsibility for implementation and maintenance of the plan. Members are noted below.

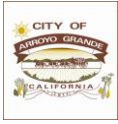
Table A-1 Arroyo Grande Hazard Mitigation Plan Revision Planning Group

DEPARTMENT	TITLE
Police	Police Commander
Five Cities Fire Authority	Fire Chief
Public Works	Public Works Manager
Community Development	Director of Community Development
Public Works	Senior Engineer
Community Development	Planning/Engineering Permit Technician
Community Development	Assistant Planner

Additionally, the plan must document opportunities for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies with the authority to regulate development, as well as businesses, academia, and other private and non-profit interests, to actively participate in the planning process. At least one point of contact for each stakeholder group should be listed below in Table A-2.

Table A-2 Arroyo Grande Hazard Mitigation Plan Stakeholder Group

STAKEHOLDER GROUP	ORGANIZATION
Agencies involved in hazard mitigation activities:	SLO Fire Safe Council
Agencies that have the authority to regulate development:	City of Arroyo Grande
Neighboring Communities:	City of Pismo Beach
	City of Grover Beach
Representatives of business academia, and other private orgs:	South County Chamber of Commerce
Representatives supporting underserved communities	Five Cities Homeless Coalition



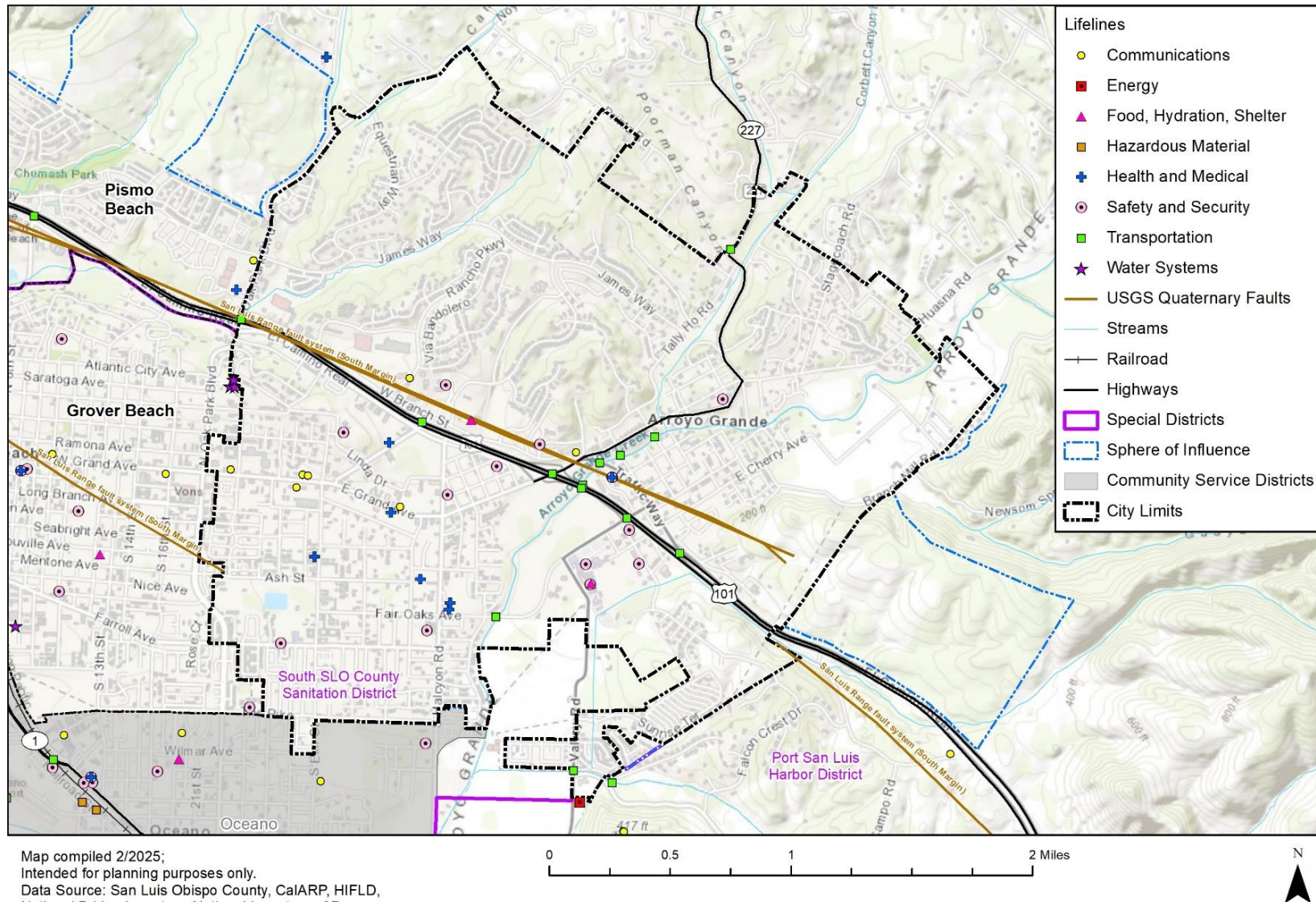
More details on the planning process and how the jurisdictions, service districts and stakeholders participated can be found in Chapter 3 Planning Process of the Base Plan, along with how the public was involved during the 2025 update.

A.1.2 Geography and Climate

The City of Arroyo Grande is located in the south county area of San Luis Obispo County. Highway 101 traverses the City, which is located midway between the Cities of Los Angeles and San Francisco. The Cities of Pismo Beach and Grover Beach border Arroyo Grande to the northwest and west. The unincorporated community of Oceano borders on the southwest and agricultural lands border the City on the north, east and south. This area is known as the Five Cities. Arroyo Grande is the largest community in the Five Cities area, encompassing a total of 5.45 square miles. The Arroyo Grande Creek is another dominate feature that runs north-south in the eastern portion of the City and has been a source of flooding issues in the past (refer to the Vulnerability Assessment in Section A.3). Figure A-1 displays a map of the Arroyo Grande planning area.

Arroyo Grande has an average high temperature (July) of 72°F and low temperature of 42°F (January). The jurisdiction receives 16.0 inches of rain annually. While the average temperature is relatively temperate, summer and winter months bring unique weather patterns to the region. Refer to the Adverse Weather Section of the HIRA in the Base Plan (Chapter 5) for general details on the climate in this area.

Figure A-1 The City of Arroyo Grande





A.1.3 History

The Arroyo Grande Valley was first inhabited by the Obispena Chumash Indians. The Obispena Chumash Indians were living in the Arroyo Grande Valley when the first Spanish explorer, Juan Cabrillo arrived in the Valley. In 1832, Francisco Zeba Branch purchased 17,000 acres in the Arroyo Grande Valley and started successful cattle ranching business. By 1840, colonial settlement of California led to the Arroyo Grande Valley to be divided into two major ranchos, granted by the Mexican government. In the mid-1860s a severe drought event in the Valley led to Branch's cattle population to diminish drastically. As a result, the two large ranchos were divided into smaller lots and sold to new settlers for agricultural uses. The Village of Arroyo Grande was developed to serve the new population. In 1862 the Arroyo Grande township was established by the San Luis Obispo Board of Supervisors, creating a flourishing community with a farm-based economy. In 1882 a railway depot was built, and businesses began to be established along Branch Street. Residents of the Arroyo Grande township voted on July 10, 1911 to incorporate and become the City of Arroyo Grande.

A.1.4 Economy

The tables below show a breakdown of the labor force in the City of Arroyo Grande by occupation and industry, based on the estimates from the U.S. Census Bureau's 5-year American Community Survey (2018-2023). Table A-3 shows how the cities employment is broken down by occupation, with management, business, science, and art occupations having the most employees (45.4%).

The top industries for employees in Arroyo Grande are educational services, health care, and social assistance (24.7%), as shown in Table A-4 below. Those employed also work in arts, recreation, and food services (14.4%) as well as professional, scientific and management, and administrative and waste management service industries (11%).

Table A-3 City of Arroyo Grande's Employment by Occupation, 2018-2023

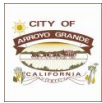
OCCUPATION	# EMPLOYED	% EMPLOYED
Management, Business, Science, and Arts occupations	4,040	45.4%
Service occupations	1,581	17.7%
Sales and Office occupations	1,890	21.2%
Natural Resources, Construction and Maintenance occupations	994	11.2%
Production, Transportation and Material Moving occupation	391	4.4%
Total (employed, 16 years and over)	8,896	100%

Source: U.S. Census Bureau American Community Survey 2018-2023 5-Year Estimates, www.census.gov/

*Excludes armed forces

Table A-4 City of Arroyo Grande's Employment by Industry, 2018-2023

INDUSTRY	# EMPLOYED	% EMPLOYED
Educational Services, Health Care, and Social Assistance	2,197	24.7%
Retail Trade	638	7.2%
Professional, Scientific, and Mgmt., and Administrative and Waste Mgmt. Services	980	11%
Manufacturing	641	7.2%
Arts, Entertainment, Recreation, Accommodation, and Food Services	1,284	14.4%
Construction	762	8.5%
Finance and Insurance, Real Estate and Rental and Leasing	220	2.5%



INDUSTRY	# EMPLOYED	% EMPLOYED
Public Administration	818	9.2%
Other Services, Except Public Administration	496	5.6%
Wholesale Trade	167	1.9%
Transportation and Warehousing, and Utilities	187	2.1%
Agriculture, Forestry, Fishing and Hunting, and Mining	126	1%
Information	117	1%
Total	8,896	100%

Source: U.S. Census Bureau American Community Survey 2018-2023 5-Year Estimates, www.census.gov/

A.1.5 Population

The 2023 American Community Survey lists the population of Arroyo Grande at 18,412. The population grew between 2018 and 2023 with the addition of 373 residents in a 5-year period. The estimated buildout population by the SLO County Council of Governments (2017) for the City of Arroyo Grande is 20,000 by 2040. Due to water availability this buildout estimate (20,000) is also a population growth cap for the city. The population went down in 2020 to 17,924, however it went back up in the following years past the 18,000 mark, surpassing the estimated growth to 18,288 by 2020. The per capita income in Arroyo Grande (\$50,203) is higher than both the county (\$49,581) and the state (\$47,977). Within Arroyo Grande there has also been an increase in characteristics such as the median home value (37.3%), and median household income (18.8%). Select demographic and social characteristics for the City of Arroyo Grande from the 2018-2023 American Community Survey are shown in Table A-5 below.

Table A-5 City of Arroyo Grande's Demographic and Social Characteristics, 2018-2023

CITY OF ARROYO GRANDE	2018	2023	% CHANGE
Population	18,039	18,412	+2.1%
Median Age	45.7	45.2	-1.1%
Total Housing Units	7,685	8,198	+6.7%
Housing Occupancy Rate	91.1%	93.5%	+2.6%
% of Housing Units with no Vehicles Available	3.9%	4.8%	+23.1%
Median Home Value	\$552,300	\$758,100	+37.3%
Unemployment	2.4%	1.4%	-41.7%
Mean Travel Time to Work (minutes)	22.7	23	+1.3%
Median Household Income	\$114,844	\$136,375	+18.8%
Per Capita Income	\$39,245	\$50,203	+27.9%
% of Individuals Below Poverty Level	6.3%	4.6%	-27%
# of Households	6,999	7,666	+9.5%
Average Household Size	2.54	2.36	-7.1%
% of Population Over 25 with High School Diploma	95%	94.8%	-.21%
% of Population Over 25 with Bachelor's Degree or Higher	33.6%	44.5%	+32.4%
% with Disability	11.1%	15.9%	+43.2%
% Speak a language other than English	13.6%	7.4%	-45.6%

Source: U.S. Census Bureau American Community Survey 2018-2023 5-Year Estimates, www.census.gov/

A.1.6 Development Trends

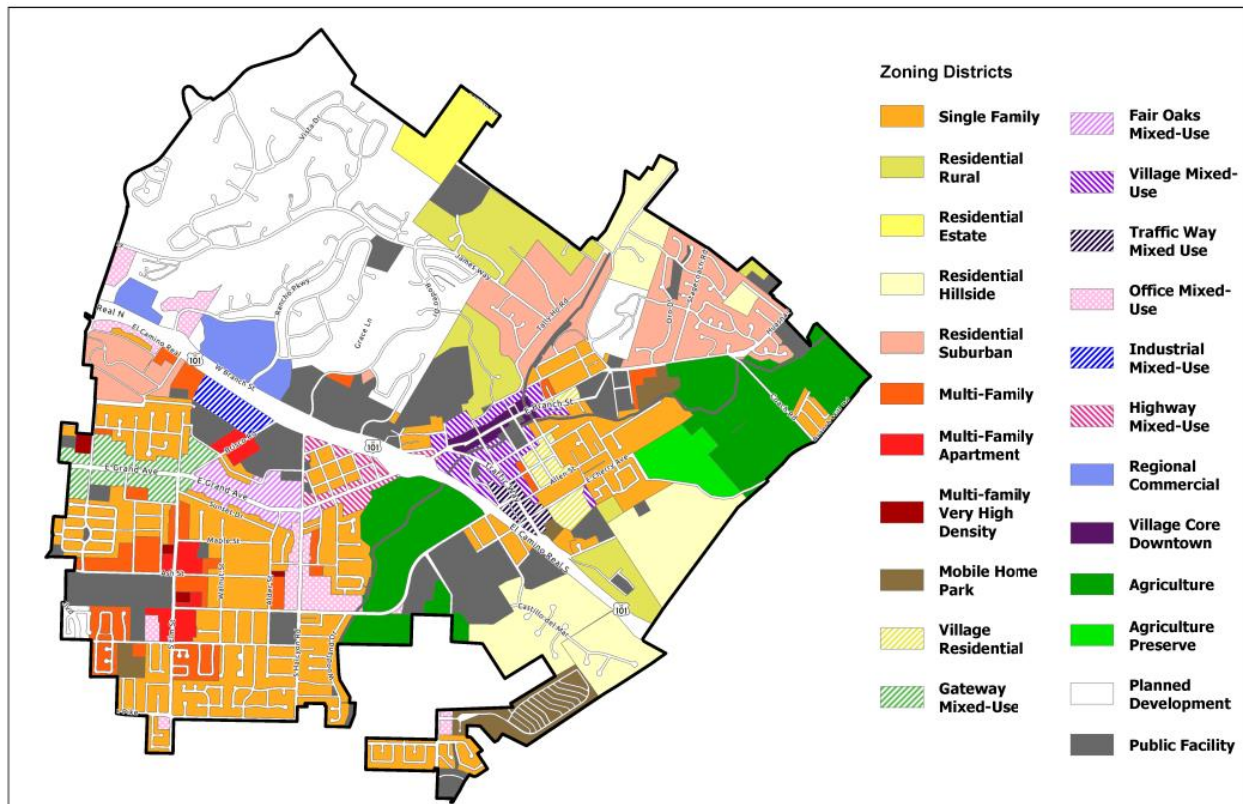
The most common land use in the City of Arroyo Grande as shown in Figure A-2 below is single family homes. There are very few vacant parcels within the city's boundaries and due to the community's strong feelings toward the preservation of "prime" agricultural land, it is projected that planned development in the northern part of the city will be infill and revitalization of existing parcels. According to the 2001 General Plan the infill development should be located in the following areas: East Grande Avenue, El Camino Real, and south and east of the Historic Village area.

The City is currently in the process of a comprehensive update to the General Plan, and the City's preferred growth scenario also includes potential development of several vacant focus areas. The Sphere of Influence for the City includes a 185-acre agricultural parcel along the city's southeastern boundary.

According the 2022 Arroyo Grande General Plan Annual Progress Report, the city's Building and Life Safety Division received 708 building permit applications and issued 581 building permits. Analysis of developed parcels between 2019-2024 since the last update of this HMP indicated some growth in areas prone to flood (0.2% annual chance zone), landslide, liquefaction, and wildfire (see Development Trends subsections in base plan Chapter 5).

Additionally, the availability of both the short-term and the long-term water source is the primary limitation of how the city can grow in the future. According to the city's Urban Water Management Plan (2022) the city's projected water supply is not a barrier to growth through the year 2045.

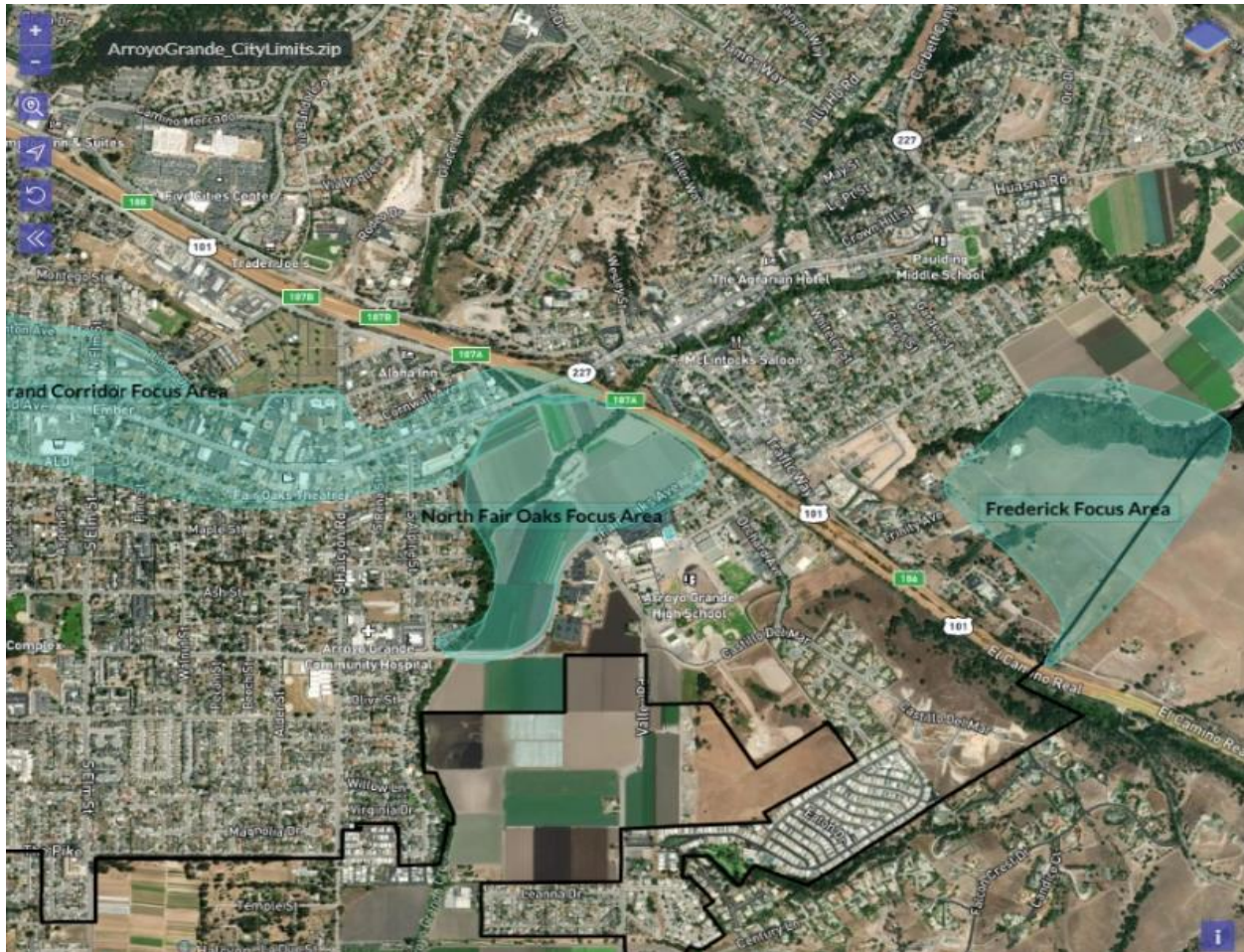
Figure A-2 City of Arroyo Grande Zoning Map



Source: City of Arroyo Grande Planning Division, <https://www.arroyogrande.org/142/Planning-Division>

The LPT notes that updating the general plan includes a couple focus areas that have the potential to have new development in the wildland urban interface (Fredrick's Focus Area) as shown in Figure A-3 below. However, the LPT also notes that some of these areas may impact surrounding floodplains and the City of Arroyo Grande has an ordinance that restricts development within flood affected areas by requiring compliance with setback from creeks and adherence to applicable building codes for development in areas prone to flooding..

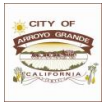
Figure A-3 Wildland Urban Interface Focus Areas



Source: City of Arroyo Grande Planning Division, <https://www.arroyogrande.org/142/Planning-Division>

A.2 Hazard Identification and Summary

The City of Arroyo Grande LPT identified the hazards that affect the city and summarized their frequency of occurrence, spatial extent, potential magnitude, and significance specific to their community (see Table A-6). There are no hazards that are unique to Arroyo Grande. The overall hazard significance takes into account the geographic area, probability and magnitude as a way to identify priority hazards for mitigation purposes. This is discussed further in the Vulnerability Assessment Section.

**Table A-6 City of Arroyo Grande – Hazard Summaries**

HAZARD	GEOGRAPHIC AREA	PROBABILITY OF FUTURE OCCURRENCE	MAGNITUDE/ SEVERITY (EXTENT)	OVERALL SIGNIFICANCE
Adverse Weather: Thunderstorm/ Heavy/ Rain/ Lightning/ Dense Fog/ Freeze	Significant	Likely	Limited	Medium
Adverse Weather: High Wind/ Tornado	Significant	Likely	Negligible	Low
Adverse Weather: Extreme Heat	Extensive	Occasional	Negligible	Low
Dam Incidents	Extensive	Unlikely	Catastrophic	Medium
Drought and Water Shortage	Significant	Likely	Limited	Medium
Earthquake	Significant	Occasional	Critical	High
Flood	Significant	Highly Likely	Limited	Medium
Wildfire	Significant	Occasional	Limited	Medium
Human Caused: Hazardous Materials	Limited	Highly Likely	Negligible	Medium
Geographic Area Limited: Less than 10% of planning area Significant: 10-50% of planning area Extensive: 50-100% of planning area Probability of Future Occurrences Highly Likely: Near 100% chance of occurrence in next year or happens every year. Likely: Between 10 and 100% chance of occurrence in next year or has a recurrence interval of 10 years or less. Occasional: Between 1 and 10% chance of occurrence in the next year or has a recurrence interval of 11 to 100 years. Unlikely: Less than 1% chance of occurrence in next 100 years or has a recurrence interval of greater than every 100 years.		Magnitude/Severity (Extent) Catastrophic—More than 50 percent of property severely damaged; shutdown of facilities for more than 30 days; and/or multiple deaths Critical—25-50 percent of property severely damaged; shutdown of facilities for at least two weeks; and/or injuries and/or illnesses result in permanent disability Limited—10-25 percent of property severely damaged; shutdown of facilities for more than a week; and/or injuries/illnesses treatable do not result in permanent disability Negligible—Less than 10 percent of property severely damaged, shutdown of facilities and services for less than 24 hours; and/or injuries/illnesses treatable with first aid Significance Low: minimal potential impact Medium: moderate potential impact High: widespread potential impact		

A.3 Vulnerability Assessment

The intent of this section is to assess Arroyo Grande's vulnerability separate from that of the planning area as a whole, which has already been assessed in Section 5.3 Risk Assessment in the Base Plan. This vulnerability assessment analyzes the population, property, and other assets at risk to hazards ranked of low, medium, or high significance that may vary from other parts of the planning area.

The information to support the hazard identification and risk assessment was based on a combination of the previous Local Hazard Mitigation Plan (LHMP) for the city and county and



jurisdiction specific information collected during the 2019 update. A Local Hazard Mitigation Plan Update Guide and associated worksheets were distributed to each participating municipality or special district to complete during the update process in 2025. Information collected was analyzed and summarized in order to identify and rank all the hazards that could impact anywhere within the county.

Each participating jurisdiction was in support of the main hazard summary identified in the Base Plan (see Table 5.2). However, the hazard summary rankings for each jurisdictional annex may vary due to specific hazard risk and vulnerabilities unique to that jurisdiction. The information in this annex helps differentiate the jurisdiction's risk and vulnerabilities from that of the overall county.

Note: The hazard "Significance" reflects overall ranking for each hazard and is based on the City of Arroyo Grande's Lead Planning Team member input from the Data Collection Guide and the risk assessment developed during the planning process (see Chapter 5 of the Base Plan), which included a more detailed qualitative and quantitative analysis with best available data.

A.3.1.1 Other Hazards

The following hazards identified in the base plan HIRA are not identified within this jurisdictional annex due to low or no risk or significant anticipated impacts and are not considered further for mitigation actions:

- Agricultural Pest Infestation and plant Disease/ Marine Invasive Species
- Biological Agents
- Coastal Storm/ Coastal Erosion/ Sea Level Rise
- Landslide and Debris Flow
- Subsidence
- Tsunami

A.3.2 Assets at Risk

This section considers Arroyo Grande's assets at risk, including values at risk, critical facilities and infrastructure, historic assets, economic assets and growth and development trends.

A.3.2.1 Values at Risk

The following data on property exposure is derived from the San Luis Obispo County 2024 Parcel and Assessor data. It is important to note that in the event of a disaster, it is generally the value of the infrastructure or improvements to the land that is of concern or at risk. Generally, the land itself is not a loss and is not included in the values below. Table A-7 shows the exposure of properties (e.g., the values at risk) broken down by property type for the City of Arroyo Grande.

Table A-7 Arroyo Grande Total Exposure by Property Type

PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE
Agricultural	3	\$95,445	\$95,445	\$190,890
Commercial	344	\$274,935,429	\$274,935,429	\$549,870,858
Exempt	27	\$30,655,093	\$30,655,093	\$61,310,186
Industrial	16	\$13,302,584	\$19,953,876	\$33,256,460
Mixed Use	402	\$105,312,979	\$105,312,979	\$210,625,958
Mobile/Manufactured Homes	8	\$12,009,866	\$6,004,933	\$18,014,799

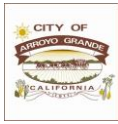


PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE
Multi-Family Residential	145	\$93,548,541	\$46,774,271	\$140,322,812
Residential	5,643	\$1,577,470,917	\$788,735,459	\$2,366,206,376
Vacant Improved	31	\$10,974,353	-	\$10,974,353
Total	6,619	\$2,118,305,207	\$1,272,467,484	\$3,390,772,691

Source: San Luis Obispo Assessor Data November 15, 2024, WSP GIS Analysis

A.3.2.2 Critical Facilities and Infrastructure

A critical facility may be defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. In Arroyo Grande, there are 45 critical facilities with five different types of facilities as shown in Table A-8 below. See Section 5 and Appendix E of the Base Plan for more details on the definitions and categories of critical facilities, which are aligned with the FEMA Lifelines framework. Refer to Figure A-1 for an inventory of critical facilities in the City of Arroyo Grande from San Luis Obispo County GIS.

**Table A-8 City of Arroyo Grande's Critical Facilities**

FACILITY TYPE	COUNTS
Communications	7
Food, Hydration, Shelter	2
Health and Medical	8
Safety and Security	14
Transportation	14
Total Count	45

Source: San Luis Obispo County, CalARP, HIFLD, National Bridge Inventory, National Inventory of Dams, FCWCD, WSP Analysis

A.3.2.3 Transportation and Lifeline Facilities

Highway 227 starts at the intersection of Highway 101 and Branch Street and provides an alternate route from Arroyo Grande to the City of San Luis Obispo. Highway 227 travels east on Branch Street through downtown Arroyo Grande. Damages to this highway could affect the local economy as it would disrupt traffic in and out of downtown Arroyo Grande.

Other transportation and lifelines include Highway 101 which traverses through the City of Arroyo Grande. Damages to Highway 101 would not only impact the City of Arroyo Grande but the entire region.

A.3.2.4 Historic and Cultural Resources

Heritage tourism and Arroyo Grande historical sites have been a draw to the area. There have been several informal historical surveys that have identified potential historical sites in the City, much of which is within the Village of Arroyo Grande area. According to the Historical Context Survey completed in 2011, the following are the eleven locally designated historical resources in Arroyo Grande.

- Former City Hall – 214 East Branch Street
- Conrad House – 208 East Branch Street
- Residence – 145 West Branch Street
- Office – 139 West Branch Street
- Santa Manuela School House – Heritage Square/Nelson Green
- Ruby's House – 134 South Mason Street
- Heritage House – 126 South Mason Street
- Swinging Bridge – Short Street, spanning Arroyo Grande Creek
- Bridge Street Bridge – Bridge Street, south of Olohan Alley
- Paulding House – 551 Crown Hill Street (California Register, 2009)
- Independent Order of Odd Fellows Hall (IOOF) – 128 Bridge Street (National Register, 1991)

The local tourism website (Visit Arroyo Grande) lists the following historic landmarks in addition to the ones identified above:



- The Barn Museum
- Rotary Bandstand
- Mason Street Bridge
- C. Loomis Building
- The Paulding History House
- The Pacific Coast Railroad Line
- Brisco Old Hotel – 129 E. Branch Olohan Building
- Hoosegow Park – LePoint Street



A.3.2.5 Natural Resources

Natural resources are important to include in benefit-cost analyses for future projects and may be used to leverage additional funding for projects that also contribute to community goals for protecting sensitive natural resources. Awareness of natural assets can lead to opportunities for meeting multiple objectives. For instance, protecting wetlands areas protects sensitive habitat as well as attenuates and stores floodwaters.

The City of Arroyo Grande is part of the Arroyo Grande and Cienega Valleys which contains “prime” soils for agricultural productions. A majority of the agricultural lands are outside of the city’s jurisdiction; however, the City of Arroyo Grande is in the process of comprehensively updating their General Plan, and will be determining how to balance the protection of existing agricultural lands with the need to provide much needed housing and economic development.

A.3.2.6 Economic Assets

Arroyo Grande has two of the largest employers in the county located in the city’s jurisdiction. The Arroyo Grande Community Hospital employs over 400 persons and is located in a dam inundation zone which would have devastating impacts not only on the local economy but also the ability for the community to respond and recover during and after a disaster. As noted above, the City of Arroyo Grande contains several historic structures and is a draw for tourism, a major contributor to the local economy. Certain hazards that impact agriculture could have a great impact on the local economy as industries such as wineries, breweries, and farmers markets are all huge drivers for tourism into the area.

A.3.3 Estimating Potential Losses

Note: This section details vulnerability to specific hazards of high, medium or low significance, where quantifiable, and/or where (according to LPT member input) it differs from that of the overall county.

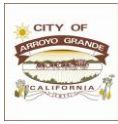
Table A-8 above shows Arroyo Grande’s exposure to hazards in terms of number and value of structures. San Luis Obispo County’s parcel and assessor data was used to calculate the improved value of parcels. The most vulnerable structures are those in the floodplain (especially those that have been flooded in the past), unreinforced masonry buildings, and buildings built prior to the introduction of modern-day building codes. Impacts of past events and vulnerability to specific hazards are further discussed below (see Section 5.1 Hazard Identification in the base plan for more detailed information about these hazards and their impacts on San Luis Obispo County as a whole).

Note: The risk and vulnerability related to agricultural pest infestation and disease, biological agents, coastal storm, erosion, and sea level rise, as well as landslide, debris flow, subsidence, and tsunami in Arroyo Grande do not differ from those of the county at large. Please refer to Chapter 5 of the Base Plan for more details on these hazards.

A.3.3.1 Adverse Weather: Thunderstorm/ Heavy Rain/ Lightning/ Dense Fog/ Freeze

The City of Arroyo Grande was given a **medium** overall significance rating by the HMPC for Adverse Weather: Thunderstorm/ Heavy Rain/ Lightning/ Dense Fog/ Freeze. These weather conditions have historically impacted the area, with severe thunderstorms and intense rainfall leading to significant flooding events.

One of the most recent and notable flooding incidents occurred January 9, 2023 when heavy rainfall cause Arroyo Grande Creek to overflow, prompting evacuation of residents in lower-lying areas along the creek channel. The flooding was exacerbated by debris buildup in the



waterway, which restricted water flow and increased the likelihood of the levee spilling over to the south.

The HMPC has acknowledged that future flooding events in this region remain a concern, though recent changes in environmental regulations may help mitigate the severity. The lifting of certain state environmental restrictions and permitting requirements has allowed for more effective debris-clearing efforts within the creek, improving water flow and reducing significant overflows. While these proactive measures may lower the likelihood of severe flooding, climate change considerations- such as increased precipitation variability and more intense storms systems could still contribute to periodic flood risks in the area.

A.3.3.2 Adverse Weather: High Wind/Tornado

Historically, the City of Arroyo Grande has minimal exposure to adverse weather events related to high wind and tornado. However, February 2024, the region experienced wind events that caused an energized power line to fall along the Pike, between Garfield Place and Gaynfair Terrace. A few days later, two EF-1 tornadoes touched down in San Luis Obispo County, starting in Grover beach, moving into Arroyo Grande. Although these events are uncommon, they are still possible. Aside from this recent occurrence, the overall significance of high wind/tornado in the area remains **low**.

A.3.3.3 Adverse Weather: Extreme Heat

Extreme heat is generally not considered a major hazard in Arroyo Grande due to its mild coastal climate, leading to a significant rating of **low**. The city's proximity to the Pacific Ocean and frequent coastal fog helps with moderate temperatures, making heat events rare. As a result, the city experiences relatively few days with temperatures exceeding 90 degrees, and extreme heat events are infrequent and typically short-lived.

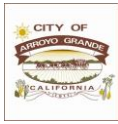
A.3.3.4 Dam Incidents

The City of Arroyo Grande rated Dam Incidents as having medium significance. The city is downstream from the Terminal Dam and the Lopez Dam. Terminal Dam is an earth fill dam that holds 844 acre-feet of water, located 4.7 miles northeast of the City of Arroyo Grande town center. This dam presents a considerable hazard to the City of Arroyo Grande, the potential inundation zone is shown in blue in Figure A-4. The Lopez Dam is an earth fill dam that is over 60 times larger, holding nearly 50,000 acre-feet of water about seven miles upstream from the community. The Lopez Dam presents a considerably greater hazard to Arroyo Grande than Terminal Dam, with a more extensive potential inundation zone (Figure A-4).

While there have been no dam incidents or failures in the jurisdiction of the City of Arroyo Grande, the City is among the most vulnerable community in San Luis Obispo County to the risk of dam failure. A total of 3,110 persons and 1,507 structures exist within the Lopez Dam inundation zone (Table A-9). Failure of the Lopez Dam would follow the Arroyo Grande Creek in a westerly direction potentially extending up to 3,000 feet in each direction of the centerline of the creek channel. Section 5.3.8 of the Base Plan provides additional information on dam-related hazards.

Table A-9 Lopez Dam Inundation Estimate Losses by Property Type

PROPERTY TYPE	STRUCTURE COUNT	POPULATION
Agricultural	3	-
Commercial	116	-
Exempt	10	-
Industrial	4	-



PROPERTY TYPE	STRUCTURE COUNT	POPULATION
Mixed Use	83	-
Mobile/Manufactured Homes	3	7
Multi-Family Residential	24	58
Residential	1,258	3,044
Vacant Improved	6	-
Total	1,507	3,110

Source: San Luis Obispo County, Division of Safety of Dams, Department of Water Resources, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis

There are also 22 critical facilities within the inundation zone for the Lopez Dam (Table A-10), including Fire Station 1 (which holds the emergency operations center), Arroyo Grande Community Hospital, City Hall, the Arroyo Grande High School, and 12 bridges. Appendix E provides additional detail of critical facilities at risk from dam inundation hazards.

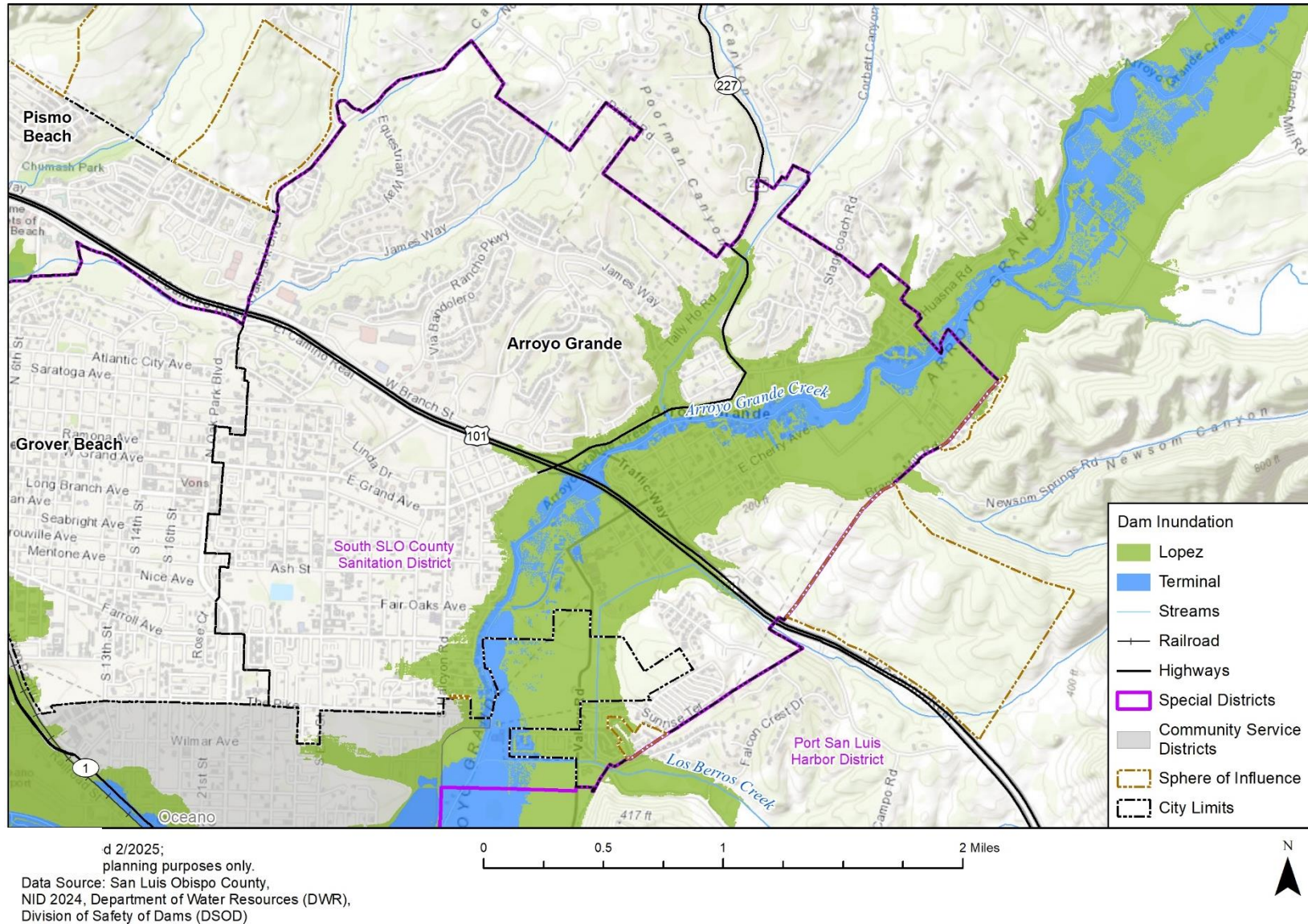
Table A-10 Critical Facility Assets Exposed to Dam Inundation in Arroyo Grande by FEMA Lifeline

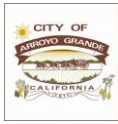
COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
1	-	1	-	2	6	12	-	22

Source: San Luis Obispo Assessor Data 2024, Division of Safety of Dams, Department of Water Resources, WSP GIS Analysis

A failure of the Lopez Dam would also affect Highway 101, impeding or reducing flows of goods, people, and resources, potentially impacting the entire region. The Lopez Dam is also a major source of water for the City of Arroyo Grande; failure of the dam would not only have immediate impacts to property but also long-term impacts on the community's water supply. Refer to Section 5.3.8 *Dam Incidents* of the Base Plan for additional discussion on the potential impacts of dam incidents in the County.

Figure A-4 Lopez Dam Inundation Zone within City of Arroyo Grande





A.3.3.5 Drought and Water Shortage

The City of Arroyo Grande has a variety of water sources that support the City's water supply, including groundwater, local surface water, and storm water captured for groundwater recharge, irrigation and construction water. The City has an entitlement of 1,323 acre-feet per year (AFY) from the Santa Maria River Valley Groundwater Basin, though extraction is carefully managed to prevent seawater intrusion. The City also operates wells that pump water from the Pismo Formation, totally about 160 AFY. The Lopez Reservoir, managed by the San Luis Obispo County Flood Control and Water Conservation District, provides 2,290 AFY to the City as part of its entitlement. Additionally, the City captures and utilizes stormwater for groundwater recharge, irrigation, and construction use.

The City provides water from both underground wells and surface sources through a network of pipes and storage tanks. This system includes 89 miles of pipelines, six storage tanks, and six pumping stations. The City operates ten wells, two of which draw water from the Pismo Formation. Wells 1-8 are disinfected with chloramines and then blended with surface water with a static mixer before distribution. Wells 9 and 10 are treated with a pressurized ion exchange filter using potassium permanganate as an oxidant and then chloraminated after filtration before distribution. All water distributed through the system is treated to meet drinking water standards before reaching customers.

The City recognizes the risk of being dependent on groundwater resources and has considered other supplies such as the State Water Project and recycled water, especially during dry years or drought conditions. According to the 2022 Urban Water Management Plan, the City has made and continues to make planning efforts to reduce its reliance on groundwater supplies, especially with concerns about declining water levels and seawater intrusion. To protect resources, the City is committed to sustainable pumping and minimizing groundwater impact.

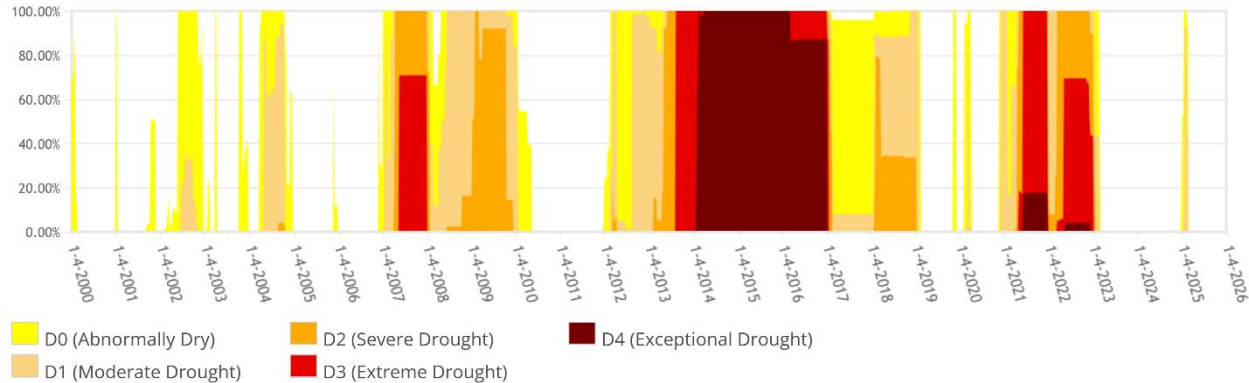
On October 12, 2021, the City declared a Stage 1 Water Shortage Emergency due to the combination of severe drought, low Lopez Reservoir levels, and declining groundwater levels. In response, City Council passed a resolution mandating the water use reductions in Table A-11, which are based on 2020 baseline consumption and punishable by fines of up to \$200.

Table A-11 Water Reduction Requirements by Consumer Type

CONSUMER TYPES		REQUIRED REDUCTION AMOUNT
Residential Customers	Tier 1 (0-9 units)	No reduction required but cannot exceed baseline
	Tier 2 (10-18 units)	7% reduction required
	Tier 3 (19+ units)	14% reduction required
All Commercial/Institutional Irrigation Accounts		25% reduction required

Source: City of Arroyo Grande Water Conservation, <https://www.arroyogrande.org/148/Water-Conservation/>

As of March 13, 2023, the US Drought Monitor, shown in Figure A-5, indicated that the County was no longer in a drought or abnormally dry. While the Arroyo Grande Municipal Code does not specify requirements for rescinding a Stage 1 Water Shortage Emergency, the declaration is based on water supply being insufficient to meet demand, therefore, with improved conditions, the emergency status could be lifted.

Figure A-5 San Luis Obispo County Percent Area in US Drought Monitor Categories


From the U.S. Drought Monitor website, <https://droughtmonitor.unl.edu/DmData/TimeSeries.aspx>, 3-3-2025



Factors influencing this decision are detailed in Table A-12. As shown, the Lopez Reservoir was at full capacity and groundwater capacities were improved due to winter 2023 storms which replenished groundwater supplies.

Table A-12 Current and Projected Water Supply in Acre Feet per Year (AFY)

WATER SUPPLY SOURCE	ENTITLEMENT	2022 ACTUAL USE	2023 PROJECTED USE	2024 PROJECTED USE
Santa Maria Groundwater Basin	1,323 AF	165.9 AF	100 AF	180 AF
Pismo Formation Groundwater	160 AF	1.8 AF	20 AF	40 AF
Lopez Reservoir Project	2,290 AF	1,822 AF	2,000 AF	2,100 AF
Total	3,773 AF	1,989.7 AF	2,120 AF	1,320 AF

Source: City of Arroyo Grande Water Conservation, <https://www.arroyogrande.org/148/Water-Conservation/>

Drought poses significant challenges to the City, but its impacts are often disproportionately felt by socially vulnerable populations. These vulnerable groups, including low-income and disabled individuals, are particularly susceptible to the adverse effects of water scarcity due to limited resources and socio-economic disparities. In times of drought, access to clean water for drinking, sanitation, and agriculture becomes severely constrained, exacerbating existing inequalities and increasing the risk of food insecurity, malnutrition, and disease among these populations.

According to CalEnviroScreen, portions of Arroyo Grande in census tracts south of Highway 101 have high rates of poverty. Census tract 6079011901 and 6079011902 have rates of poverty higher than 34% and 40% of the census tracts in California, respectively. Additionally, 3% of residents in census tract 6079011902 are unemployed, which is higher than 11% of census tracts in California. Additionally, according to the California Department of Water Resources Water Shortage Vulnerability Tool, the City has elevated numbers of disabled people, that when aggregated by block group, range from the 38th to 97th percentiles in California.

According to the 2022 Urban Water Management Plan, Arroyo Grande is projected to have sufficient water supplies to meet demands through 2027. The Water Service Reliability Assessment and Drought Risk Assessment confirm that the City's water supply will remain adequate under normal, single dry, and multiple dry-year conditions. The Lopez Reservoir, which was replenished by significant rainfall in 2023, is expected to continue meeting full

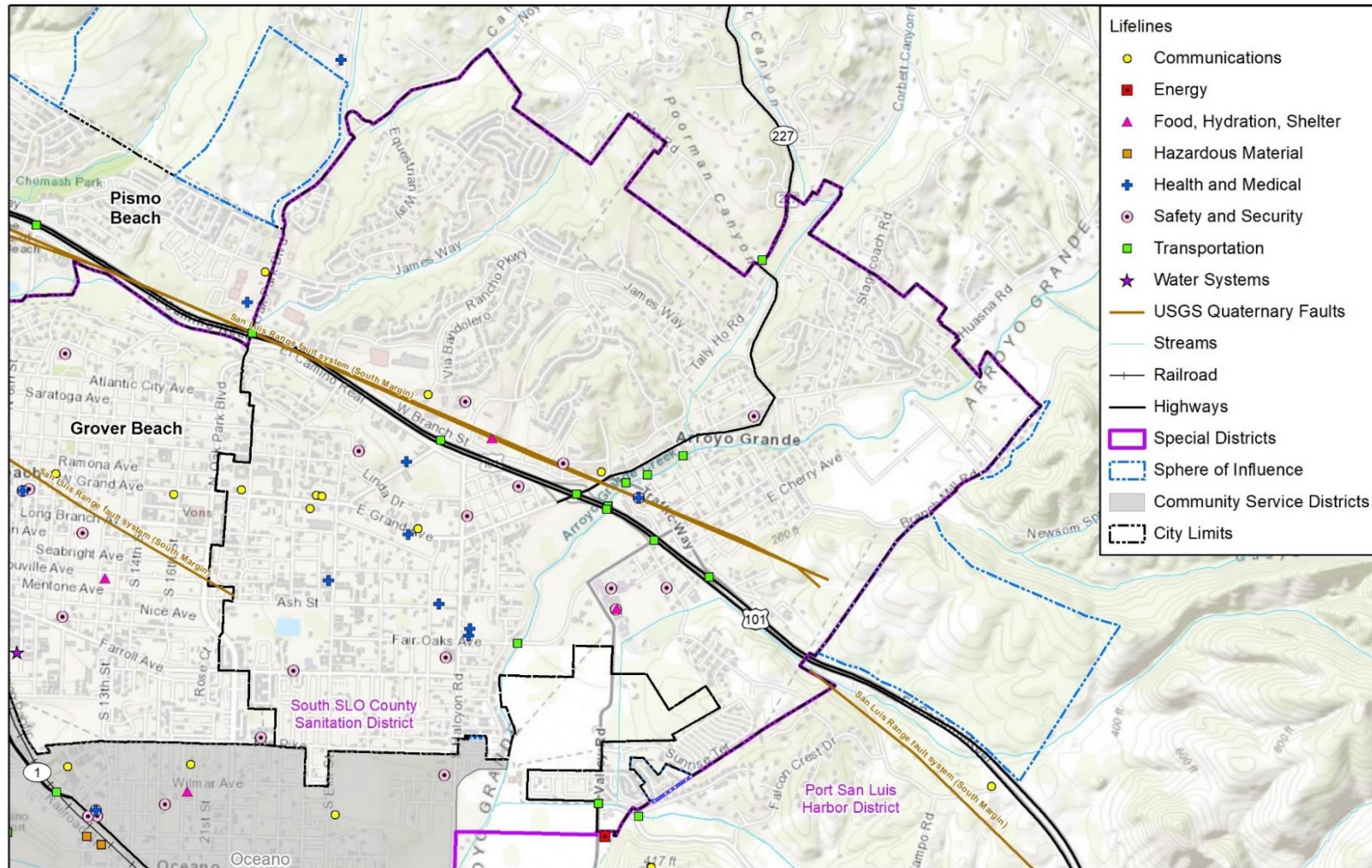


entitlements. The combination of Lopez Reservoir water and groundwater pumping will help sustain long-term water availability. Additionally, the Santa Maria Groundwater Basin and Pismo Formation continue to provide backup water sources.

A.3.3.6 Earthquake and Liquefaction

Earthquake events have occurred in Arroyo Grande in the past including a number of magnitude 5.0 to 6.2 earthquakes. There are two mapped faults within the City of Arroyo Grande, the potentially active Wilmar Avenue fault and the inactive Pismo fault; refer to the figure below. The City's downtown business district is at a greater risk from the impacts of a fault rupture compared to other part of the City due the majority of the buildings being Unreinforced Masonry. These types of buildings have shown to be unstable and prone to collapse during earthquake events. The loss of buildings in the City's business district would result in loss of commerce and a significant loss in tax revenue for the City. Arroyo Grande's City Hall is one of the unreinforced masonry buildings located in the downtown business district. A magnitude 6.5 earthquake or greater could result in the loss of the building and the relocation of City Hall.

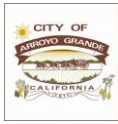
Figure A-6 City of Arroyo Grande Critical Facilities, USGS Quaternary Faults, and Alquist-Priolo Earthquake Fault Zones



Map compiled 2/2025;
Intended for planning purposes only.
Data Source: San Luis Obispo County, CalARP, HIFLD,
National Bridge Inventory, National Inventory of Dams,
Department of Conservation, USGS

0 0.5 1 2 Miles





In addition to the Wilmar Avenue fault there are a number of active and potentially active faults in proximity of the Arroyo Grande that are capable of producing strong groundshaking within the City limits. According to the Technical Background Report of the County Safety Element (1999), the San Andreas fault and the offshore Hosgri fault present the most likely sources of groundshaking for Arroyo Grande. Other faults that have the potential to generate strong ground motion include the Los Osos and the Pecho faults. The following table from the Technical Background Report and recreated for the 2025 Hazard Mitigation Plan, show the potential sources of groundshaking and approximate distance from Arroyo Grande.

Table A-13 Sources of Ground shaking in the Vicinity of Arroyo Grande

FAULT	APPROXIMATE DISTANCE (KILOMETERS)*	MAXIMUM EARTHQUAKE	MAXIMUM PROBABLE EARTHQUAKE	ANTICIPATED ACCELERATION RANGE (G)
Wilmar Avenue	0	6.5	4	0.1 - 0.7
Blind Thrust Point San Luis	0	7.5	6	0.2 - 0.8
Los Osos	6	7	5	0.1 - 0.5
Pecho	9	6.2	3	<0.1-0.3
Hosgri	25	7.5	6.5	0.1 - 0.2
Casmalia	21	7.5	6	0.1 - 0.3
La Panza	32	7.5	5	0.05 - 0.2
San Andreas	32	8.2	8	0.1 - 0.2

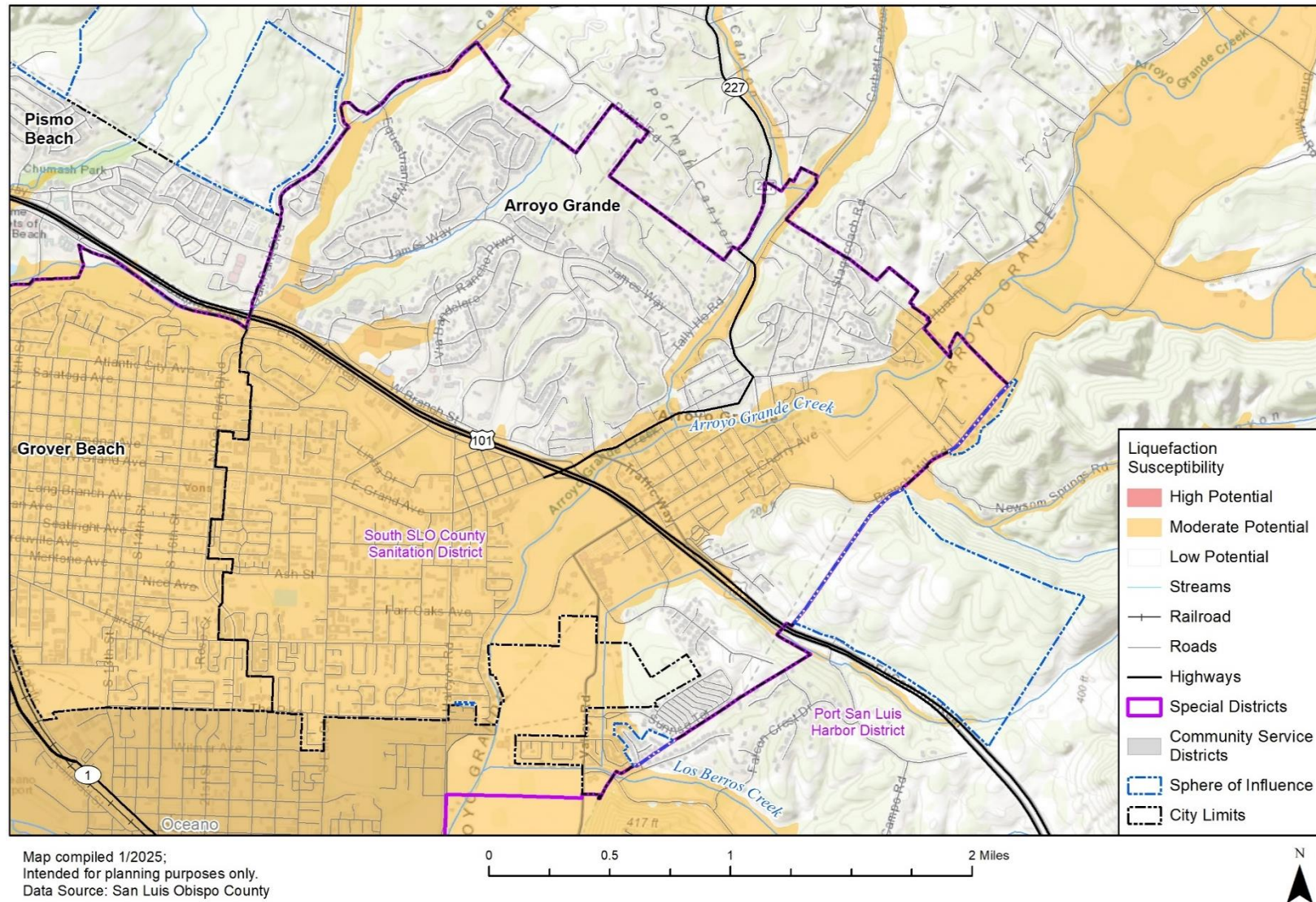
*Measured from the intersection of Branch and Mason Streets

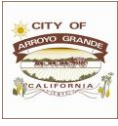
Source: San Luis Obispo County Safety Element Technical Background Report, December 1999

In addition to being at risk of groundshaking as a result of a fault rupture, the City of Arroyo Grande is also susceptible to the effects of liquefaction. Much of the City has soils with a moderate risk for liquefaction. According to GIS analysis conducted during this planning process, twenty-two (22) critical facilities located in the City are at risk of liquefaction. The map and table below describes in more detail locations and the types of properties at risk of liquefaction.



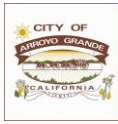
Figure A-7 Liquefaction Risk in Arroyo Grande



**Table A-14 City of Arroyo Grande Improved Properties Exposed to Liquefaction Potential by Property Type**

PROPERTY TYPE	STRUCTURE COUNT HIGH	STRUCTURE COUNT MODERATE	STRUCTURE COUNT LOW	TOTAL STRUCTUR E COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATIO N
Agricultural	-	3	-	3	\$95,445	\$95,445	\$190,890	-
Commercial	-	289	55	344	\$274,935,429	\$274,935,429	\$549,870,858	-
Exempt	-	18	9	27	\$30,655,093	\$30,655,093	\$61,310,186	-
Industrial	-	16	-	16	\$13,302,584	\$19,953,876	\$33,256,460	-
Mining	-	-	-	0	\$0	\$0	\$0	-
Mixed Use	-	315	87	402	\$105,312,979	\$105,312,979	\$210,625,958	-
Mobile/Manufactured Homes	-	6	2	8	\$12,009,866	\$6,004,933	\$18,014,799	19
Multi-Family Residential	-	140	5	145	\$93,548,541	\$46,774,271	\$140,322,812	351
Residential	-	3,677	1,966	5,643	\$1,577,470,917	\$788,735,459	\$2,366,206,376	13,656
Vacant Improved	-	20	11	31	\$10,974,353	\$0	\$10,974,353	-
Total	0	4,484	2,135	6,619	\$2,118,305,207	\$1,272,467,484	\$3,390,772,691	14,026

Source: San Luis Obispo Assessor Data November 15, 2024, WSP GIS Analysis

**Table A-15 Critical Facility Assets Exposed to Liquefaction Susceptibility by FEMA Lifeline**

LIQUEFACTION SUSCEPTIBILITY CATEGORY	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
Moderate Liquefaction Susceptibility	5	-	1	-	8	11	13	-	38
Low Liquefaction Susceptibility	-	-	-	-	1	1	-	-	2

Source: San Luis Obispo County, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis

A.3.3.7 Flood

The City of Arroyo Grande was given a **medium** significance ranking by the HMPC for flood hazards. The City is crossed by several creeks, including Canyon/Meadow Creek on the west, Corbett Canyon and Arroyo Grande Creeks on the east, and Los Berros Creek in the southeast. Areas near these waterways are prone to flooding. The severity of flood events depends on rainfall intensity and downstream tide conditions outside the city limits.

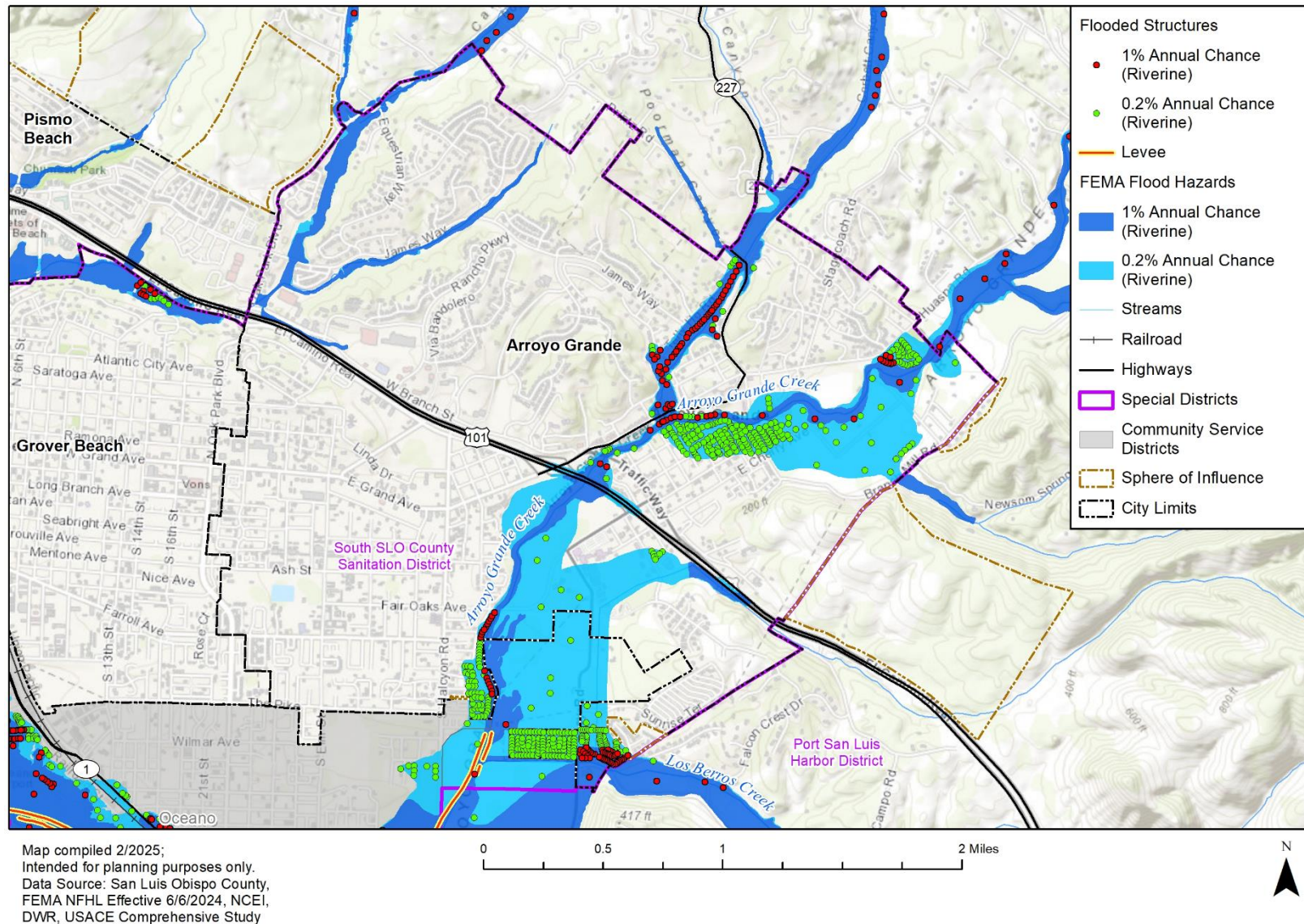
In January 2023, a series of atmospheric river storms caused a breach in the Arroyo Grande Creek levee, leading to flooding of homes and agricultural lands near Oceano. The event triggered evacuations and exposed vulnerabilities in the levee system, which was originally designed for a 10-year storm event. The County completed emergency repairs after the storms, including sediment removal and levee reinforcements using turf mats and hydraulic barriers. The County is also working with the Natural Resources Conservation Service (NCRS) on a voluntary property buyout program to restore parts of the floodplain. For additional context and a countywide flood hazard assessment, refer to Section 5.3.8 of the Base Plan.

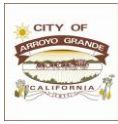
Values at Risk

A flood vulnerability assessment was completed, following the methodology described in Section 5 of the Base Plan. Flood hazards for the City are shown in Figure A-8. Table A-16 and Table A-17 summarize the values at risk in the City's 1% annual chance flood (100-year) and 0.2% annual chance flood (500-year) floodplains, respectively. These tables also detail loss estimates for each flood.



Figure A-8 City of Arroyo Grande DWR & FEMA Flood Hazards with Flooded Structures



**Table A-16 City of Arroyo Grande's Improved Properties Exposed to FEMA Riverine 1% Flood Hazard by Property Type**

PROPERTY TYPE	PARCEL COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	LOSS ESTIMATE
Commercial	12	\$8,967,619	\$8,967,619	\$17,935,238	\$4,483,810
Exempt	3	\$1,881,501	\$1,881,501	\$3,763,002	\$940,751
Industrial	1	\$79,578	\$119,367	\$198,945	\$49,736
Mixed Use	10	\$1,915,242	\$1,915,242	\$3,830,484	\$957,621
Multi-Family Residential	2	\$437,036	\$218,518	\$655,554	\$163,889
Residential	109	\$24,123,962	\$12,061,981	\$36,185,943	\$9,046,486
Vacant Improved	2	\$465,943	\$0	\$465,943	\$116,486
Total	139	\$37,870,881	\$25,164,228	\$63,035,109	\$15,758,777

Source: San Luis Obispo Assessor Data November 15, 2024, FEMA NFHL Effective Date 6/6/2024, WSP GIS Analysis

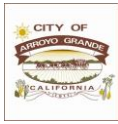
Table A-17 City of Arroyo Grande's Improved Properties Exposed to FEMA Riverine 0.2% Flood Hazard by Property Type

PROPERTY TYPE	PARCEL COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	LOSS ESTIMATE
Agricultural	2	\$66,808	\$66,808	\$133,616	\$33,404
Commercial	10	\$6,987,616	\$6,987,616	\$13,975,232	\$3,493,808
Exempt	1	\$1,745,379	\$1,745,379	\$3,490,758	\$872,690
Mixed Use	7	\$3,006,567	\$3,006,567	\$6,013,134	\$1,503,284
Mobile/Manufactured Homes	1	\$161,361	\$80,681	\$242,042	\$60,510
Multi-Family Residential	11	\$2,680,887	\$1,340,444	\$4,021,331	\$1,005,333
Residential	415	\$97,809,702	\$48,904,851	\$146,714,553	\$36,678,638
Vacant Improved	2	\$45,583	\$0	\$45,583	\$11,396
Total	449	\$112,503,903	\$62,132,345	\$174,636,248	\$43,659,062

Source: San Luis Obispo Assessor Data November 15, 2024, FEMA NFHL Effective Date 6/6/2024, WSP GIS Analysis

Based on the analysis, the City has a notable number of improved properties exposed to riverine flood risk. Within the 1% annual chance (100-year) floodplain, 139 parcels are located with a total estimated improved value of approximately \$38 million and a combined loss estimate of roughly \$15.8 million. The largest concentration of exposure is within residential properties, accounting for 109 parcels and an estimated \$36.2 million in total value.

Exposure within the 0.2% annual chance (500-year) floodplain is even more substantial. There are 449 improved parcels with a total estimated improved value of approximately \$112.5 million and a combined loss estimate of about \$43.7 million. Residential properties again represent the majority of exposure, with 415 parcels valued at nearly \$147 million in total. Commercial, multi-family, and mixed-use properties also show significant exposure in both flood zones.



Population at Risk

Using parcel data from the County and the digital flood insurance rate map (DFIRM), population at risk was calculated for the 1% annual chance (100-year) and 0.2% annual chance (500-year) flood events. The following populations are at risk of flooding in the City of Arroyo Grande:

- 1% annual chance flood: 269 people (264 Residential, 5 Multi-Family Residential)
- 0.2% annual chance flood: 1,033 people (1,004 Residential, 27 Multi-Family Residential, 2 Mobile/Manufactured Homes)
- Total population at risk: 1,302 people

Insurance Coverage, Claims Paid, and Repetitive Losses

The City joined the NFIP on September 19, 1984. The current effective map is dated June 6, 2024. As of May 12, 2025, NFIP records show 60 active flood insurance policies in the City, totaling \$18,120,000 in coverage. Of these, 26 policies are in A zones, and 34 are in B, C, or X zones.

Since joining the NFIP, the City has recorded 30 flood loss claims totaling \$4,408,953, all for residential properties. According to the OpenFEMA dataset accessed in 2024, the City includes three Repetitive Loss (RL) properties, two of which meet the criteria for Severe Repetitive Loss (SRL). Each affected structure is a single-family residential building, excluding mobile homes and units within multi-family buildings.

The City does not currently participate in the Community Rating System (CRS).

Critical Facilities at Risk

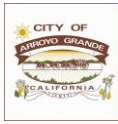
The City has 10 critical facilities located within the 1% annual chance (100-year) floodplain, all listed under the transportation lifeline. Five critical facilities fall within the 0.2% annual chance (500-year) floodplain. These include one facility providing food, hydration, or shelter services, two facilities related to safety and security, and two transportation-related assets. While not within the higher-risk flood zone, these facilities support essential services and vulnerable populations.

Their exposure during a large-scale flood event could significantly disrupt community operations and emergency response capacity. This highlights the importance of targeted mitigation efforts and continuity planning for infrastructure located within lower-frequency flood zones. Table A-18 and Table A-19 provide more details for critical facilities vulnerable to flooding.

Table A-18 Critical Facility Assets Exposed to FEMA and DWR Awareness 1% Flood Hazards by Jurisdictions and FEMA Lifelines

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
Arroyo Grande	-	-	-	-	-	-	9	-	9
Total	-	-	-	-	-	-	9	-	9

Source: San Luis Obispo County, FEMA NFHL Effective Date 6/6/2024, DWR, USACE Comprehensive Study, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis

**Table A-19 Critical Facility Assets Exposed to FEMA Riverine 0.2% Flood Hazards by Jurisdictions and FEMA Lifelines**

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
Arroyo Grande	-	-	1	-	-	2	2	-	5
Total	-	-	1	-	-	2	2	-	5

Source: San Luis Obispo County, FEMA NFHL Effective Date 6/6/2024, DWR, USACE Comprehensive Study, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis

A.3.3.8 Wildfire

The City's mild climate and foggy days and nights generally helps maintain moisture levels, reducing the likelihood of rapid fire spread. However, despite the temperate climate, there have been past wildfire events that have put the City at risk. In 1985, the Los Pilitas Fire burned 84,271 acres in the mountains north of the City. The fire spread quickly, resulting in 10 homes being destroyed and highlighting the persistent wildfire threat in the area. Although the threat was short lived, if the correct combination of weather, topography and fuel existed, the potential for a wildfire within the City limit is possible. CAL FIRE has designated the City of Arroyo Grande as being at increased risk from wildfires, based on Wildfire Threat Zone mapping. Following the methodology described in the wildfire hazard Section 5 of the Base Plan, a wildfire vulnerability analysis for the City of Arroyo Grande was completed (see Table A-20). Wildfire hazards have been rated by the City's planning team as holding **High Significance** based on the community's experience and historical evidence.

GIS analysis shows critical facilities in Arroyo Grande that are exposed to wildfire severity, categorizing them by severity level and facility type. The exposure of these critical assets to wildfire hazards poses significant risks to transportation. The analysis shows that there is one (1) critical facilities exposed to moderate fire hazard severity zones, and none of which fall in the very high and high wildfire severity rating.

In the City of Arroyo Grande, 1,617 properties are situated within wildfire hazard exposure zones ranging from moderate to very high risk. Of these, no properties are located in the Very High Fire Severity Zone, while 1,080 properties fall within the High Fire Severity Zone and 537 properties fall within the Moderate Fire Hazard Severity zone. Collectively, these properties represent a total assessed value of \$1,027,169,142 and impact approximately 3,768 residents across all wildfire threat zones. Table A-20 shows the properties in the City exposed to Fire Hazard Severity Zones. Figure A-9 depicts the Fire Hazard Severity Zones in the City of Arroyo Grande.

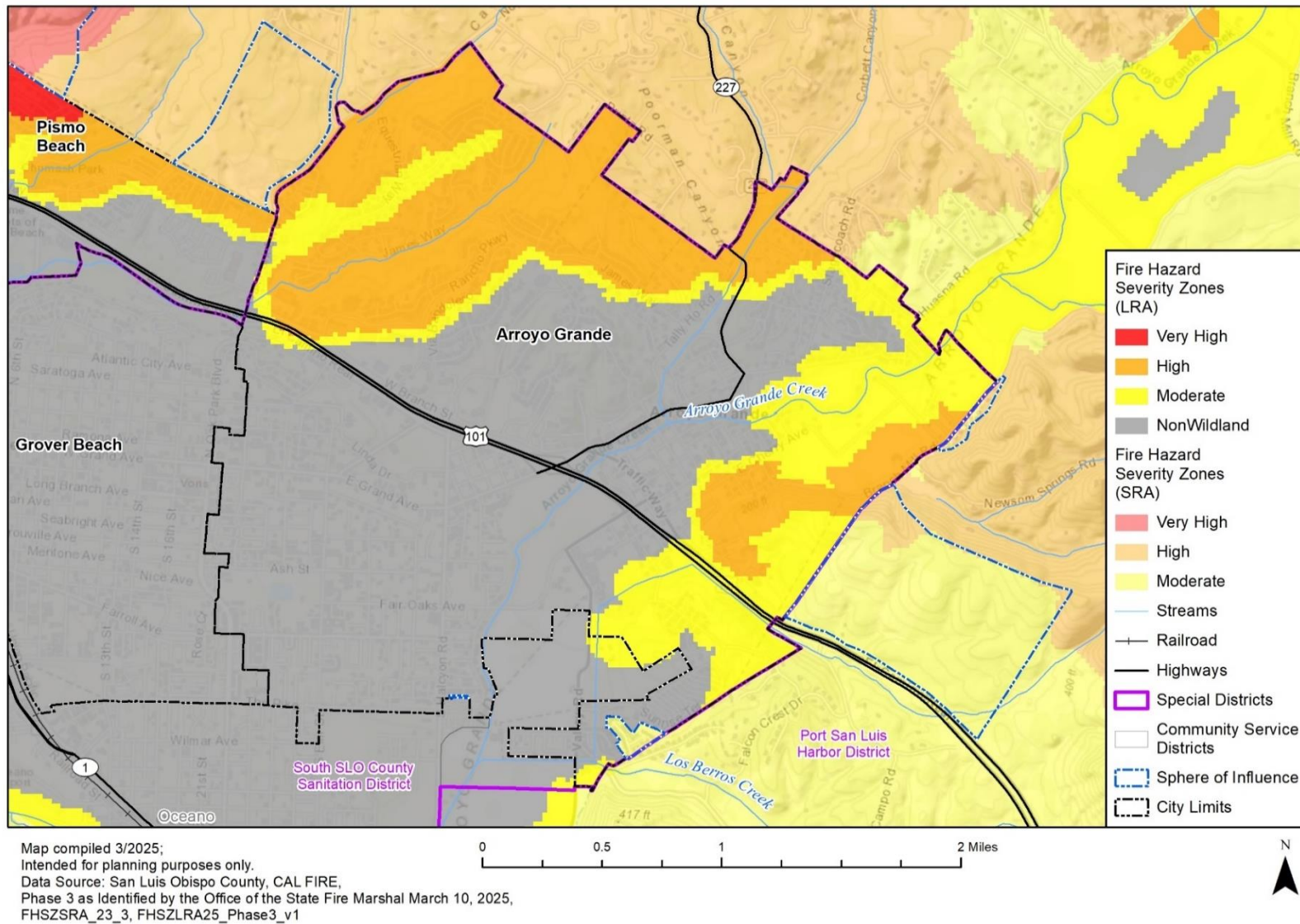
**Table A-20 City of Arroyo Grande Improved Properties Exposed to Fire Hazard Severity Zones by Property Type**

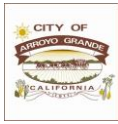
PROPERTY TYPE	STRUCTURE COUNT VERY HIGH	STRUCTURE COUNT HIGH	STRUCTURE COUNT MODERATE	TOTAL STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Agricultural	-	-	1	1	\$3,585	\$3,585	\$7,170	-
Commercial	-	39	8	47	\$65,054,469	\$65,054,469	\$130,108,938	-
Exempt	-	1	3	4	\$8,147,799	\$8,147,799	\$16,295,598	-
Mixed Use	-	-	3	3	\$1,045,409	\$1,045,409	\$2,090,818	-
Mobile/Manufactured Homes	-	-	2	2	\$4,761,244	\$2,380,622	\$7,141,866	5
Multi-Family Residential	-	-	8	8	\$2,232,162	\$1,116,081	\$3,348,243	19
Residential	-	1,037	510	1,547	\$578,021,277	\$289,010,639	\$867,031,916	3,744
Vacant Improved	-	3	2	5	\$1,144,593	\$0	\$1,144,593	-
Total	0	1,080	537	1,617	\$660,410,538	\$366,758,604	\$1,027,169,142	3,768

Source: San Luis Obispo Assessor Data November 15, 2024, CAL FIRE - FHSZ Phase 3 March 10, 2025, WSP GIS Analysis



Figure A-9 City of Arroyo Grande's Fire Hazard Severity Zones





A.3.3.9 Hazardous Materials Incident

The City of Arroyo Grande LPT rated hazardous materials incidents as having **medium** overall significance. The Cal OES Spill Release Reporting Center reports 25 hazardous materials incidents in Arroyo Grande from January 1st, 2019 through December 20th, 2024. This likely excludes a number of unreported minor spills. The 25 reported incidents constitutes 5.5% of the hazardous materials incidents reported countywide during the same time frame and averages out to roughly 4.1 incidents per year.

One reported spill, on February 2, 2022, was reported by the Governor's Office of Emergency Services. A semi-truck hit a low spot in the road causing a puncture to the gas tank. 50 gallons of petroleum was released onto the dirt, Cal Fire responded and contained the spill with no waterways impacted.

A.4 Capability Assessment

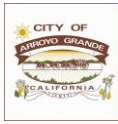
Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capabilities assessment is divided into six sections: regulatory mitigation capabilities, administrative and technical mitigation capabilities, fiscal mitigation capabilities, mitigation outreach and partnerships, participation in the National Flood Insurance Program, and other mitigation efforts. To develop this capability assessment, the jurisdictional planning representatives reviewed a matrix of common mitigation activities to inventory which of these policies or programs, and shared any updates or changes through the Arroyo Grande Data Collection Guide. The team then supplemented this inventory by reviewing additional existing policies, regulations, plans, and programs to determine if they contribute to reducing hazard-related losses.

During the plan update process, this inventory was reviewed by the jurisdictional planning representatives and WSP consultant team staff to update information where applicable and note ways in which these capabilities have improved or expanded. Additionally, in summarizing current capabilities and identifying gaps, the jurisdictional planning representatives also considered their ability to expand or improve upon existing policies and programs as potential new mitigation strategies. The City of Arroyo Grande's capabilities are summarized in the tables below.

A.4.1 Regulatory Mitigation Capabilities

Table A-21 City of Arroyo Grande Regulatory Mitigation Capabilities

REGULATORY TOOL	YES/NO	COMMENTS
General plan	Yes	Update ongoing for general plan
Zoning ordinance	Yes	Update in 2026
Subdivision ordinance	Yes	
Growth management ordinance	No	Limited to Sphere of Influence
Floodplain ordinance	Yes	Update 2026
Other special purpose ordinance (stormwater, water conservation, wildfire)	Yes	Stormwater and Wireless Telecom Ordinance
Building code and Type/Year	Yes	2022, update in 2025
Fire department ISO rating	Yes	2-2x
Erosion or sediment control program	Yes	Annual Stormwater inspections
Stormwater management program	Yes	
Site plan review requirements	Yes	
Capital improvements plan	Yes	
Economic development plan	Yes	



REGULATORY TOOL	YES/NO	COMMENTS
Local emergency operations plan	Yes	Local emergency plans and annexes need to be updated
Other special plans	Yes	Mills Act Ordinance; Climate Action Plan (under revision)
Flood Insurance Study or other engineering study for streams	Yes	
Elevation certificates (for floodplain development)	Yes	
Other	Yes	PSPS COOP Plan Updated in 2024

A.4.1.1 Discussion on Existing Building Codes, Land Use and Development Regulations

The 2024 Arroyo Grande General Plan Annual Progress Report notes that the city's Building and Life Safety Division reviews project plans, issue permits, and provides inspection services for compliance with California's building, fire, mechanical, electrical, plumbing, energy, and disabled access codes, as well as city ordinances. During 2021, city building inspectors made 2,923 construction and safety-related inspections associated with building permit activity. The Building Division finalized and completed 282 building permits in the same period.

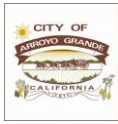
The LPT notes that the Building Division is responsible for implementing the 2022 Building Code update, fire sprinkler codes, and energy code. The city plans to adopt the new building code in 2025. They also note Ordinance No. 726 Section 13.07.030, which is the Arroyo Grande municipal code regarding water shortage contingency planning.

A.4.2 Administrative/Technical Mitigation Capabilities

Table A-22 identifies the personnel responsible for activities related to mitigation and loss prevention in Arroyo Grande.

Table A-22 City of Arroyo Grande Administrative/Technical Mitigation Capabilities

PERSONNEL RESOURCES	YES/NO	DEPARTMENT/POSITION
Planner/engineer with knowledge of land development/land management practices	Yes	Community Development Department: Assistant Planner, Planning Manager, Community Development Director
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Community Development Department: City Engineer, Building Official
Planner/engineer/scientist with an understanding of natural hazards	Yes	Community Development Department: Planning Manager
Personnel skilled in GIS	Yes	Community Development Department
Full time building official	Yes	Community Development Department: Building Official
Floodplain manager	Yes	City Engineer
Emergency manager	Yes	City Manager
Grant writer	No	
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	Yes	Community Development Department



PERSONNEL RESOURCES	YES/NO	DEPARTMENT/POSITION
Warning systems/services (Reverse 9-11, outdoor warning signals, social media)	Yes	Police Department, Fire Department, Deputy City Clerk

A.4.3 Fiscal Mitigation Capabilities

Table A-23 identifies financial tools or resources that the City could potentially use to help fund mitigation activities.

Table A-23 City of Arroyo Grande Fiscal Mitigation Capabilities

FINANCIAL RESOURCES	ACCESSIBLE/ELIGIBLE TO USE (YES/NO)
Community Development Block Grants	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
Fees for water, sewer, gas, or electric services	Yes/No - gas and electric fees
Impact fees for new development	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activities	No
Withhold spending in hazard prone areas	No

A.4.4 Mitigation Outreach and Partnerships

The City is currently working with the Five Cities Fire Authority, County and FireSafe Council to develop a city-specific Community Wildfire Protection Plan (CWPP). Mitigation efforts identified include education/outreach. Table A-24 summarizes other partnerships the City of Arroyo Grande has.

Table A-24 City of Arroyo Grande Mitigation Outreach and Partnerships

CAPABILITY TYPE	YES/NO	NOTES
Hazard Awareness/Education Campaigns	Yes	SLO Fire Safe Council
Firewise	No	
Storm Ready	No	
Severe Weather Awareness Week	No	
School programs	Yes	
Other		
Methods Used to Communicate Hazard Info. to the Public	No	
Local News	Yes	
Social media	Yes	
Community Newsletters	Yes	
Utility Bill Inserts	Yes	
Community Events	Yes	
Other		



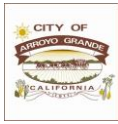
CAPABILITY TYPE	YES/NO	NOTES
Organizations that represent or work with underserved or vulnerable communities	Yes	5 Cities Housing Coalition, Latino Outreach Council, CAPSLO, Housing Authority San Luis Obispo, Transitions Mental Health Association, CASA
American Red Cross	No	
Salvation Army	Yes	
Veterans Groups	Yes	Veterans Connect, American Legion Post 136, Welcome Home Military Heroes
Environmental/Conservation Groups	Yes	RCD, Creek Lands Conservancy
Homeowner/Neighborhood Associations	Yes	Rancho Grande Highlands, Berry Gardens, Sunrise Terrace, Vista Del Mar, Village Homes, Wildwood Ranch, Los Robles de Rancho Grande, Linda Vista, Cherry Creek Estates, Brisco Heights, Walnut Grove Place, Stonecrest, Jasmine Place, Villa Los Berros, Oak Park Estates, La Jollas De Rancho Grande, Arroyo Vista, Birchwood, South Elm Street, Chelsea Court, Oak Village, Villa Calle, Ocean Oaks, Brambles, Oak Park Leisure Gardens, Heights at Vista Del Mar
Chamber of Commerce	Yes	South County Chamber of Commerce
Community Organizations (Lions, Kiwanis, etc.)	Yes	Lions Club, Kiwanis, Woman's Club of Arroyo Grande,
Others		

A.4.5 National Flood Insurance Program

In the City of Arroyo Grande, the Public Works Director is designated as the Floodplain Administrator (FPA). Local floodplain management regulations are actively implemented and enforced by the Public Works Director to regulate and permit development within Special Flood Hazard Areas (SFHAs). This includes reviewing construction and land use permits to confirm compliance with elevation, structural, and zoning requirements aimed at reducing flood risk to properties and residents. New construction in flood hazard areas is required to be raised one foot above base flood elevation.

The city consistently adopts the latest effective Flood Insurance Rate Map (FIRM) provided by FEMA, updating local floodplain management practices to align with newly identified flood risks. This helps to ensure the community is aware of the most recent flood hazard data for planning and development purposes.

Following flood or other damage events, the City of Arroyo Grande enforces substantial improvement/substantial damage provisions by evaluating damaged properties to determine if they meet thresholds requiring them to comply with updated floodplain management standards. If substantial damage is determined, properties must undergo upgrades to meet current floodplain standards before they can be repaired or rebuilt. This process helps to reduce future risk by ensuring that post-event repairs and reconstructions contribute to long-



term flood resilience. More information on Arroyo Grande's participation in the National Flood Insurance Program can be found in Table A-25 below.

Table A-25 City of Arroyo Grande Participation in National Flood Insurance Program

NFIP TOPIC	COMMENTS
Regulation	
Does the Community Participate in the NFIP?	Yes
How does the community enforce local floodplain regulations and monitor compliance?	Yes
Do floodplain development regulations meet or exceed FEMA or state minimum requirements? If so, in what ways?	Meet FEMA no-rise certification and modified building standards guided by building division. Planning regulates creekbank development setbacks.
Explain the permitting process.	Any new construction within a floodplain must provide a FEMA no-rise certification prepared by a registered civil engineer.
Compliance History	
Are there any outstanding compliance issues? (i.e., current violations)?	No. Many structures are still below the 100-year floodplain level but were built pre-FIRM.
Does the community intend to continue to comply with NFIP requirements?	Yes
How does the community identify substantially damaged/improved structures? What is the process to make sure these structures are brought into compliance post-disaster event?	When a structure comes in for a new building permit or remodel, the FEMA no-rise certification process is applied.
Staff Resources	
Please note the department and position responsible for floodplain management. Do they serve any roles other than Community Floodplain Administrator (FPA)?	Public Works Director is the Floodplain Manager with Engineering Division as a support.
Explain NFIP administration services (e.g., permit review, GIS, inspections, engineering capability).	Permit review, building and code inspections, and engineering guidance within city codes.
What are the barriers to running an effective NFIP program in the community, if any?	The cost to "build up" is substantial.
Community Rating System (CRS)	
Does the community participate in CRS? If so, what is the community's CRS Class Ranking?	No
What categories and activities provide CRS points, and how can the class be improved?	No
Does the plan include CRS planning requirements?	No

A.4.6 Other Mitigation Efforts

The LPT notes that community members that live on Tally Ho, the street that flooded in 2023, began meeting to organize efforts for localized creek flood management with the Coastal San Luis Resource Conservation District (RCD). RCD pursued grant funding to fix a head cut in the Arroyo Grande Creek on Tally Ho that contributed to the localized flooding the street experienced during 2023 storm events. The County of San Luis Obispo and Creek Lands



Conservancy worked together to repair the Arroyo Grande Creek stream gauge which was compromised during the 2023 storm events. The city completed a concrete project at Arroyo Grande High School which armored the embankment to redirect energy flow of the stormwater culvert to protect against slope erosion which occurred in the 2023 storm events and contributed to flooding the area.

Through the development of the Cherry Creek Estates, the city improved the Newsom Springs drainage, which now allows drainage through the Cherry Creek Estates development to Arroyo Grande Creek. The city has also conducted fuel reduction projects to reduce wildfire threats.

A.4.7 Opportunities for Enhancement

Based on the capabilities assessment, the City of Arroyo Grande has several existing mechanisms in place that already help to mitigate hazards. The city noted having a high degree of capability for planning and regulatory capabilities, administrative and technical capabilities and political capability, but a moderate rating for their fiscal capabilities. This may be an opportunity for the city to expand or improve on their fiscal capabilities and further protect the community. Other future improvements may include providing training for staff members related to hazards or hazard mitigation grant funding in partnership with the County and Cal OES. Additional training opportunities will help to inform city staff members on how best to integrate hazard information and mitigation projects into their departments. Continuing to train city staff on mitigation and the hazards that pose a risk to the city will lead to more informed staff members who can better communicate this information to the public. Additionally, ensuring all structures within the city comply with the NFIP 1% annual chance (100-year) floodplain level is another opportunity for enhancement.

The LPT notes that the Emergency Operation Center (EOC) located in the Arroyo Grande Police Department was activated during the January 2023 storm event. This activation highlighted deficiencies and outdated technology currently used in the city's EOC. This prompted the police department to evaluate the needs of the EOC in an emergency. It was identified that the department would need a complete overhaul of the EOC's technology. The police department applied for grant funding through the Nuclear Power Preparedness (NPP) Program. The NPP program will cover approximately 25% of the cost to upgrade the EOC to meet the needs of the city during an emergency. Hiring a grant writer could be an opportunity for enhancement to find other funding for projects such as this one.

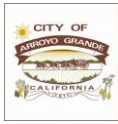
Finally, the LPT noted the concern of slow response-times to hazards such as fire, flood, and other building and life-safety issues as well as transportation needs of elderly, disabled, and low-income individuals who may not have access to reliable transportation. An opportunity for enhancement is joining programs such as the Firewise USA or Stormready that could greatly help with alerting and keeping residents updated during emergencies and evacuations.

A.5 Mitigation Strategy

A.5.1 Mitigation Goals and Objectives

The City of Arroyo Grande Planning Team determined the six goals from the 2025 County HMP are appropriate for this plan update:

1. Strengthen risk reduction and resilience by minimizing risks to life, property, infrastructure, and the environment through comprehensive, community-wide strategies.
2. Boost outreach and capacity to improve disaster resilience for vulnerable communities.



3. Promote regional collaboration to reduce hazard vulnerability and strengthen community resilience.
4. Reduce injury, loss of life, and damage to critical facilities and infrastructure from natural hazards.
5. Enhance public education and engagement to increase awareness and preparedness for natural, human-health, and human-caused hazards.
6. Use the best science and data to guide resilience efforts and prioritize mitigation projects for natural hazards and climate change impacts.

A.5.2 Completed 2019 Mitigation Actions

During the 2024 planning process the City of Arroyo Grande Planning Team reviewed all the mitigation actions from the 2019 plan. During the 2024 planning process the Planning Team identified that of their seventeen (17) mitigation actions from 2019, two (2) of the actions are completed as shown in Table A-26.

Table A-26 Arroyo Grande Completed Mitigation Actions

2019 ACTION ID	HAZARD(S) ADDRESSED	MITIGATION ACTION TITLE	LEAD AGENCY	ACTION STATUS NOTES
AG.8*	Earthquake	Notify the public of location of earthquake faults	Emergency Preparedness	Completed
AG.12*	Fire	Enforce building codes and ordinances that eliminate the use of wood shake roofs	Fire Department, Community Development	Completed. Fire and building code adoption no longer allow wood shake roofs.

A.5.3 Mitigation Actions

The 2025 update has eighteen annually implemented or ongoing actions for the City of Arroyo Grande as shown in Table A-27 below. During the planning process the Lead Planning Team identified that of their seventeen (17) mitigation actions from 2019, two (2) of the actions were completed, six (6) of the actions are implemented annually, four (4) were deferred, and three (3) new ones were added as of 2025, demonstrating ongoing progress and building the community's resiliency to disasters.

Actions were prioritized using the process described in Section 7.2.1 of the Base Plan. Actions that mitigate losses to future development are denoted by an '*' in the table.

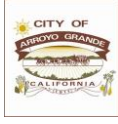
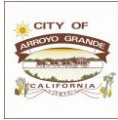


Table A-27 City of Arroyo Grande’s Mitigation Action Plan

MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
AG.1	Flood	Residential-Commercial-Government Flood smart projects Residential: relocate, revise, building codes, and provide mitigation assistance	Recreation Maintenance Services, Community Development, Emergency Preparedness	\$100,000 to \$500,000. General Funds, Capital Improvement Funds, Staff Time	High	Annual	Annual Implementation
AG.2	Flood	Residential-Commercial-Government Flood smart projects Commercial: relocate, revise, building codes, and provide mitigation assistance	Recreation Maintenance Services, Community Development, Emergency Preparedness	\$100,000 to \$500,000. General Funds, Capital Improvement Funds, Staff Time	High	Annual	Annual Implementation
AG.3	Flood	Conduct a cost to benefit analysis to consider expanding the capacity of the retention basins at various locations in the City of Arroyo Grande	Recreation Maintenance Services, Community Development, Emergency Preparedness	\$100,000 to \$500,000. General Funds, Capital Improvement Funds, Staff Time	High	2-3 years	Deferred; Limited availability of land to expand basins has resulted in deferral. Future analysis will focus on increasing depth of existing basins. Staff and fiscal constraints are ongoing.
AG.4	Flood	Creation of Bio-Swales for water conservation	Recreation Maintenance Services, Community Development, Emergency Preparedness	\$10,000 to \$50,000. General Funds, Capital Improvement Funds, Staff Time	High	Annual	Annual Implementation



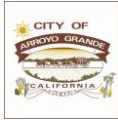
MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
AG.5	Flood	Determine cost effective mitigation strategies for Newsom Springs area	Recreation Maintenance Services, Community Development, Emergency Preparedness	Little to no cost. FEMA HMA Grant, General Funds, Capital Improvement Funds, Staff Time	High	2-3 years	Deferred; Limited CIP funding has been allocated to this project. In a catastrophic flood event, this area will be negatively impacted. Staff and fiscal constraints are ongoing.
AG.6	Flood	Conduct a cost to benefit analysis of a flood water diversion system for the City of Arroyo Grande's critical infrastructure and the flood vulnerable Commercial District	Recreation Maintenance Services, Community Development, Emergency Preparedness,	Less than \$10,000. General Funds, Capital Improvement Funds, Staff Time, FEMA HMA Grant	High	2-3 years	Deferred; Limited availability of staff and fiscal resources.
AG.7	Earthquake	Identify and catalog seismically vulnerable structures	Emergency Preparedness	Little to no cost. General Funds, Capital Improvement Funds, Staff Time	High	2-3 years	Deferred; City is beginning the ADA Transition Plan, which may result in identification/catalog of retrofits
AG.8	Earthquake	Notify public of location of Seismic vulnerable structures	Emergency Preparedness	Little to no cost. General Funds, Capital Improvement Funds, Staff Time	High	1 year	Deferred; URM Buildings in the Village area should have been completely retrofitted. Unknown cataloging of potentially other structures throughout the city. Staff and fiscal constraints ongoing.
AG.9	Wildfire	Encourage the 100' Defensible Space around structures in the Wildland Urban Interface	Fire Department, Community Development	Little to no cost. California Fire Safe Council, General Fund, Fire	High	1 year	Fire Board approved the FCFA updated defensible standards on 2.3.25



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
				Prevention Grant			
AG.10	Wildfire	Continue weed abatement program	Fire Department, Community Development	Little to no cost. California Fire Safe Council, General Fund, Fire Prevention Grant	High	Annual	New Guidelines were approved for implementation on 2.3.25
AG.11	Wildfire	Enforce codes and ordinances that require fire sprinkler fire systems in all new structures constructed.	Fire Department, Community Development	Little to no cost. California Fire Safe Council, General Fund, Fire Prevention Grant	High	Annual	Building and fire code adoptions require sprinklers
AG.12	Dam Incident	Create a community specific Evacuation Plan, including public outreach and education and identify public warning mechanisms and strategies.	Emergency Preparedness/Arroyo Grande Police Department	Less than \$10,000. General Funds, Capital Improvement Funds, Staff Time	High	3-5 yrs.	City has worked with County OES to enhance the evacuation notification system and establish evac. Zones. Part of Safety Element Update as part of Comprehensive General Plan Update



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
AG.13	Dam Incident	Exercise Evacuation Plan for effectiveness, including public warning elements.	Emergency Preparedness/Arroyo Grande Police Department	Less than \$10,000. General Funds, Capital Improvement Funds, Staff Time	High	3-5 yrs.	The dam inundation EOC exercise was planned on January 27th and is pending to be re-scheduled in 2025. Part of Safety Element Update as part of Comprehensive General Plan Update
AG.14	Dam Incident	Revise Evacuation plan as appropriate	Emergency Preparedness/Arroyo Grande Police Department	Less than \$10,000. General Funds, Capital Improvement Funds, Staff Time	High	3-5 yrs.	City has worked with County OES to enhance the evacuation notification system and establish evac. Zones. Part of Safety Element Update as part of Comprehensive General Plan Update
AG.15	Drought	Mitigate Drought Risk Through Water Availability Insurance. Continue to monitor well levels to prevent seawater intrusion while pursuing opportunities for regional recycled water projects that will result in groundwater injection.	Public Works; Community Development Department	\$30 million-\$50 million regionally; city's portion currently unknown. General Funds, Capital Improvement Funds, Staff Time	Medium	Annual	New for 2020 Benefits: Avoiding seawater intrusion; ensuring adequate water supply of the 5-cities region



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
AG.16	Wildfire	Update the City's Building Codes to the 2025 California Building Standards	Community Development/ Fire, All Departments	\$10,000 to \$50,000. Local Funds	High	1 year	New in 2025. The City currently has adopted the 2022 California Building Standards. By the end of 2025, the City anticipates approving the latest 2025 standards, including updated fire protection measures.
AG.17	Earthquake	Notify Public of location of earthquake faults	Planning; Public Works	Little to no cost. Local Funds	Low	1 year	New in 2025. The city proposes to provide the location of earthquake faults on the City's website to provide easy access to this information to the public.
AG.18	Adverse Weather: Thunderstorm, Adverse Weather: High Wind, Adverse Weather: Extreme Heat, Biological Incidents, Dam Incidents, Drought and Water Shortage, Earthquake, Flooding Dam/	Create a Safety Element, one of the required elements to the City's General Plan. California requires each jurisdiction to have an approved General Plan, which includes several mandatory elements. The Safety Element is one of those mandatory elements. The City's Safety Element was approved in 2001 and needs to be updated. The city intends to comprehensively update the General Plan, including the Safety Element. The Safety	Community Development, All Departments	\$10,000 to \$50,000. Local Funds	High	2-3 years	New in 2025.



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
	Levee Failure, Landslides and Debris Flow, Wildfire, Hazardous Materials Incident	Element provides for the protection of lives and property from adverse effects of natural and man-caused hazards.					



A.6 Implementation and Maintenance

Moving forward, the city will use the mitigation action table in the previous section to track progress on implementation of each project. Implementation of the plan overall is discussed in Section 7 in the Base Plan.

A.6.1 Incorporation into Existing Planning Mechanisms

The information contained within this plan, including results from the Vulnerability Assessment, and the Mitigation Strategy will be used by the city to help inform updates and the development of local plans, programs and policies. The Engineering Division may utilize the hazard information when implementing the City's Capital Improvement Program and the Planning and Building Divisions may utilize the hazard information when reviewing a site plan or other type of development applications. The City will also incorporate this LHMP into the Safety Element of their General Plan, as recommended by Assembly Bill (AB) 2140.

As noted in Section 8 Implementation and Monitoring, the HMPC representatives from Arroyo Grande will report on efforts to integrate the hazard mitigation plan into local plans, programs and policies and will report on these efforts at the annual HMPC plan review meeting.

A.6.2 Monitoring, Evaluation and Updating the Plan

The city will follow the procedures to monitor, review, and update this plan in accordance with San Luis Obispo County as outlined in Section 8 of the Base Plan. The City will continue to involve the public in mitigation, as described in Section 8.3 of the Base Plan. The Fire Chief for the Five Cities Fire Authority will be responsible for representing the city in the County HMPC, and for coordination with city staff and departments during plan updates. The city realizes it is important to review the plan regularly and update it every five years in accordance with the Disaster Mitigation Act Requirements as well as other State of California requirements.



Annex B City of Atascadero

B.1 Community Profile

B.1.1 Mitigation Planning History and 2025 Process

This annex was updated in 2025 to build upon the previous version created for the 2019 San Luis Obispo Hazard Mitigation Plan update. This 2025 annex update also includes input from the City of Atascadero Local Hazard Mitigation Plans completed in September 2015. The 2019 mitigation plan was not incorporated into the city's General Plan, Municipal Code, or Fire Department Master Plan; however the 2025 mitigation plan will be integrated into those documents. A review of jurisdictional priorities found no significant changes in priorities since the last update.

The city's Local Planning Team (LPT) held responsibility for implementation and maintenance of the plan. The city Fire Chief is responsible for coordinating the update of the plan.

Table B-1 Atascadero Hazard Mitigation Plan Revision Planning Group

DEPARTMENT	TITLE
Atascadero Fire Department	Fire Chief
Atascadero Fire Department	Battalion Chief
Atascadero Public Works	Public Works Director
Atascadero Public Works	Deputy Director
Atascadero Public Works	Public Works Analyst
Atascadero Police Department	Police Commander
Atascadero Police Department	Police Commander
Atascadero Department of Technology	Deputy City Manager
Atascadero Community Development	Planning Manager
Atascadero Community Development	Chief Building Official

Additionally, the plan must document opportunities for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies with the authority to regulate development, as well as businesses, academia, and other private and non-profit interests, to actively participate in the planning process. At least one point of contact for each stakeholder group should be listed below in Table B-2.

Table B-2 City of Atascadero Stakeholder Groups

STAKEHOLDER GROUP	ORGANIZATION
Agencies involved in hazard mitigation activities:	Atascadero State Hospital
	Waste Management
Agencies that have the authority to regulate development:	Atascadero Mutual Water Company
Representatives of business academia, and other private orgs:	Atascadero Unified School District
	Atascadero Chamber of Commerce
Representatives supporting underserved communities	El Camino Homeless Organization



More details on the planning process and how the jurisdictions, service districts and stakeholders participated, as well as how the public was involved during the 2025 update, can be found in Chapter 3 of the Base Plan.

B.1.2 Geography and Climate

Atascadero is located 17 miles inland from the Pacific coast and lies midway between Los Angeles and San Francisco on U.S. Highway 101 (US 101), about 220 miles from each city. The city is one of seven incorporated communities in San Luis Obispo County. The city consists of 26.15 square miles, is 879 feet above sea level and is located 40 miles west of the San Andreas Fault.

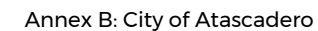
The city is situated in the southern part of the Salinas River Valley. The Salinas River flows along the eastern city limits from south to north. Steep hills and canyons border the community on the west, and open rolling hills surround the city center. The city lies within an agricultural area where ranchlands are becoming vineyards to support the growing wine industry. Suburban residential development approved by San Luis Obispo County borders the city on the southern and eastern edges, and lower-density residential development lies to the north and west.

Atascadero is bordered on the west by the rugged mountainous ridges of the Santa Lucia Coastal Range, on the east by the low hills of the La Panza and Temblor Ranges, and on the north by the low hills and flat-topped mesas of the Diablo Range. The highest elevations in the vicinity are within the Santa Lucia Coastal Range, where many peaks are 2,000 to 3,400 feet above mean sea level.

The area has a Mediterranean climate with a wet season from October to early April and a dry summer season with low humidity. The city has an average annual precipitation of 20.7 inches. In winter, the average high temperatures range from the 50s to the 60s, with lows in the 30s. In summer, the average daily highs are in the 90s, with some days exceeding 100. Summertime lows are typically in the 60s and 70s.

Atascadero is a General Law city operating within rules established by the California Legislature. The organizational structure of the local government is of the City Council–City Manager form. The City Manager, hired by the City Council, is responsible for planning, organizing, and directing all administrative activities such as enforcing municipal laws, directing the daily operations of the city, and preparing and observing the municipal budget. The City Council is composed of a mayor and four City Council members elected at large by the citizens of Atascadero. The City Council acts upon all legislative matters concerning Atascadero, approving and adopting all ordinances, resolutions, contracts, and other matters requiring overall policy decisions and leadership.

Figure B-1 displays a map of the City of Atascadero planning area.



Lifelines

- Communications
- Energy
- Food, Hydration, Shelter
- Hazardous Material
- Health and Medical
- Safety and Security
- Transportation
- Water Systems
- USGS Quaternary Faults
- Streams
- Railroad
- Highways
- Sphere of Influence
- Community Service Districts
- Atascadero

The map displays the city of Atascadero, California, and its surrounding areas. Key features include:

- Geography:** The map shows the Atascadero River, Santa Rita River, and various creeks like Morro Creek and Eagle Creek. The Los Padres National Forest is visible to the west and south.
- Infrastructure:** Major roads like Highway 41 and Highway 101 are shown. The Atascadero Fault Zone and other USGS Quaternary Faults are marked.
- Community Service Districts:** The map shows the boundaries of the Atascadero Community Service District and the Santa Maria Community Service District.
- Lifelines:** Various symbols represent different lifelines, such as Communications (yellow circle), Energy (red square), Food, Hydration, Shelter (pink triangle), Hazardous Material (orange square), Health and Medical (blue cross), Safety and Security (purple circle), Transportation (green square), Water Systems (purple star), and USGS Quaternary Faults (brown line).

Map compiled 2/2025;
Intended for planning purposes only.
Data Source: San Luis Obispo County, CalARP, HIFLD,
National Bridge Inventory, National Inventory of Dams,
Department of Conservation, USGS, FCWCD



B.1.3 History

The area was originally home to the Salinan Indians. In the late 18th Century and early 19th Century, Spanish missionaries established 21 missions along the California coast, including the nearby Mission San Miguel Arcángel, and Mission San Luis Obispo de Tolosa. When Mexico won its independence from Spain, and California became a Mexican province, the Mexican government secularized the mission lands. Rancho Atascadero was granted to Trifon Garcia in 1842, and Rancho Asuncion was granted to Pedro Estrada in 1845.

Toward the end of the 19th century, J.H. Henry consolidated a number of tracts into the 23,770-acre Atascadero Ranch, which included all of the present planning area, except for Baron von Schroeder's Eaglet, now part of Eagle Ranch. In 1913, E.G. Lewis founded Atascadero as California's first planned community, consisting of 26.15 square miles of the original 38 square miles of the historic Atascadero Ranch, later known as the Colony.

The Atascadero Fire Department was first established as an all-volunteer department in 1915. In 1922 the Atascadero Fire Protection District was founded on the heels of a disastrous 5,000-acre wildland fire near the Eagle Ranch property. Originally the District was 7 square miles in area with a population less than 3,000. On February 4, 1926 Atascadero's first paid fire department was established.

In June 1979 the residents of Atascadero voted in favor of incorporation. The Fire District dissolved in 1979 when the department became an official part of the newly incorporated City. The 1980 General Plan became the first major planning document adopted by the newly incorporated City of Atascadero. In 1983, a new zoning ordinance was adopted to implement that plan.

B.1.4 Economy

Based on the 2018-2023 American Community Survey (ACS) Atascadero's labor force is estimated to be 15,020 people. The city's economic base primarily consists of employees within the educational services, health care and social services, which accounts for 23.7% of jobs. The city's largest employers include the Atascadero State Hospital and the Atascadero Unified School District (AUSD). The second largest type of industry in the city is the retail trade and services sector at 14.2% of employment.

All consumable goods must be transported to the city via trucks utilizing U. S. Highway 101. It should be noted there are two rail spurs located in the undeveloped area of the county adjacent to the city. There is no airport in the city.

Table B-3 shows how Atascadero's labor force breaks down by industry estimates from the U.S. Census Bureau's 2018-2023 American Community Survey.

Table B-3 City of Atascadero's Employment by Industry

INDUSTRY	# EMPLOYED	%
Population (16 years and over)	24,330	
In Labor Force	15,020	64.5%
Agriculture, forestry, fishing and hunting, and mining	270	1.8%
Armed Forces	29	.001%
Construction	963	6.4%
Manufacturing	1,358	9%
Wholesale trade	120	.8%
Retail trade	2,129	14.2%
Transportation and warehousing, and utilities	810	5.4%



INDUSTRY	# EMPLOYED	%
Information	183	1.2%
Finance and insurance, and real estate and rental and leasing	668	4.4%
Professional, scientific, and management, and administrative and waste management services	1,700	11.3%
Educational services, health care, and social assistance	3,556	23.7%
Arts, entertainment, recreation, accommodation, and food services	1,501	10%
Other services, except public administration	757	5%
Public administration	1,005	6.7%
Unemployed	650	2.7%

Source: U.S. Census Bureau American Community Survey 2018-2023 5-Year Estimates, www.census.gov/

Table B-4 shows how Atascadero's labor force breaks down by occupation based on estimates from the U.S. Census Bureau's 2018-2023 American Community Survey. The most common occupations are those in management, business, science, and art (40.9%).

Table B-4 City of Atascadero Employment by Occupation (2023)

INDUSTRY	# EMPLOYED	%
Population (2023)	29,735	
In Labor Force	15,020	
Management, business, science, and arts occupations	6,148	40.9%
Service occupations	3,040	20.2%
Sales and office occupations	3,183	21.2%
Natural resources, construction, and maintenance occupations	1,174	7.8%
Production, transportation, and material moving occupations	1,475	9.8%

Source: U.S. Census Bureau American Community Survey 2018-2023 5-Year Estimates, www.census.gov/

B.1.5 Population

The U.S. Census Bureau's American Community Survey estimated the city's 2023 population as 29,735, down from 30,037 in 2017. Table B-5 shows an overview of key social and demographic characteristics of the city taken from the American Community Survey.

Note that the city's median household and per capita income are both above average for the county and the state, although the median home price is slightly below average for the county. The percentage of individuals living below the poverty level (9.9%) is less than that of the county (12.8%), or California as a whole (12%).

**Table B-5 City of Atascadero Demographic and Social Characteristics, 2018-2023**

CITY OF ATASCADERO	2018	2023	% CHANGE
Population	30,037	29,735	-1%
Median Age	38.3	40.5	+5.7%
Total Housing Units	12,029	12,090	+5%
Housing Occupancy Rate	96.3%	95%	-1.2%
% of Housing Units with no Vehicles Available	4.4%	3.2%	-27.3%
Median Home Value	\$471,900	\$673,400	+42.7%
Unemployment	3.3%	2.7%	-18.2%
Mean Travel Time to Work (minutes)	22.9	21.9	-4.4%
Median Household Income	\$103,085	\$130,843	+26.9%
Per Capita Income	\$38,371	\$59,728	+55.7%
% of Individuals Below Poverty Level	7.2%	9.9%	+37.5%
# of Households	11,580	11,510	+2.9%
Average Household Size	2.56	2.54	-.6%
% of Population Over 25 with High School Diploma	95.3%	92.8%	-2.6%
% of Population Over 25 with Bachelor's Degree or Higher	33.1%	30.2%	-8.8%
% with Disability	11.7%	13.7%	+17.1%

Source: U.S. Census Bureau American Community Survey 2018-2023 5-Year Estimates, www.census.gov/

B.1.6 Development Trends

Prior to the city's incorporation, San Luis Obispo County guided growth in the Unincorporated County through its General Plan. San Luis Obispo County adopted the General Plan in 1968 and by 1972 developed more stringent growth standards in accordance with State of California (State) planning standards. With the incorporation of Atascadero in 1979, the newly formed Planning Commission adopted the 1980 General Plan and subsequently, in 1983, a new zoning ordinance. The city updated the General Plan in the mid-1980s and adopted a revised version in 1992 and 2002.

The General Plan is currently being updated in 2025. The update process is an opportunity to evaluate long-term city growth, resources, public services, and facilities, and a host of other topics essential to our quality of life. This includes policies related to housing, economic development and discal sustainability, mobility, infrastructure, and public safety. The project is scheduled to be completed in September of 2025, and is envisioned to provide a blueprint for the city through 2045.

According to the Local Planning Team (LPT), Atascadero's growth will focus on in-fill development due to topographical and land area constraints in addition to infrastructure limitations, namely sewer service. Growth will be focused throughout the urban code, specifically in areas along and adjacent to El Camino Real and Morro Rd. One area available for potential annexation is Eagle Ranch, adjacent to the city's southern and western boundaries. Up to 3,000 acres could be annexed into the city limits to accommodate mostly residential uses with some commercial opportunities.

Most of the existing activity, including 3 million square feet of commercial and industrial buildings, takes place along El Camino Real, Morro Road, and near US 101 interchanges. The historic downtown, located in the city center, is surrounded by residential neighborhoods (with



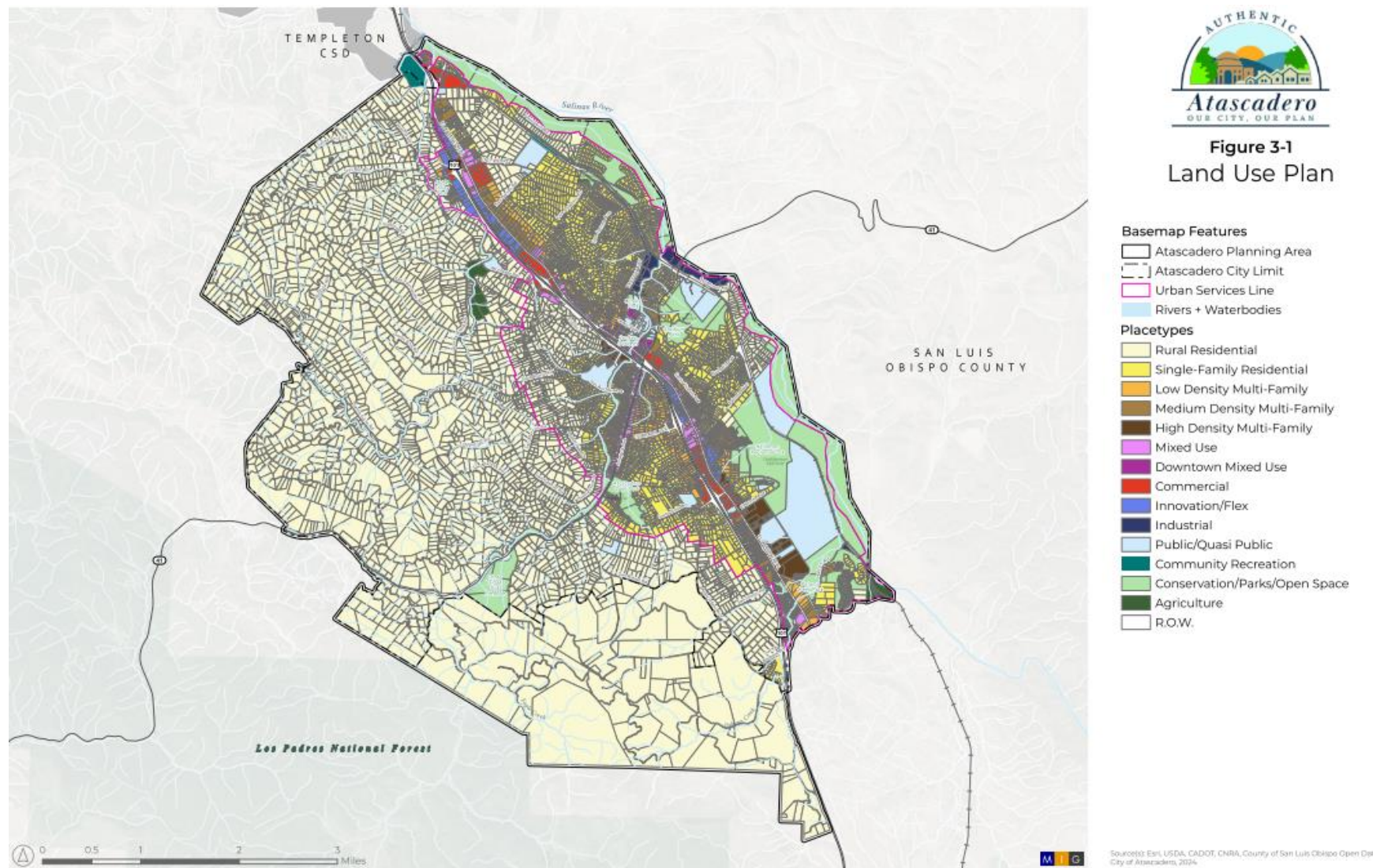
approximately 8,000 dwelling units) that transition to low-density rural areas to the east and west of US 101 and open space, public recreation, and public facilities east of US 101.

The LPT notes that, while the city is anticipating and planning for increased density and growth within the urban core, outside of the identified hazard areas. The state's policies to further provide increased density and housing will require the city to accommodate growth outside the urban core with more limited infrastructure and within higher wildfire risk areas. Figure B-2 below shows the updated 2025 General Plan land use in draft form.

Specific to hazards, analysis of parcels developed between 2019-2024 (since the last update of this HMP) indicated some growth in areas prone to dam inundation, flood (0.2% annual chance zone), landslide, liquefaction, and wildfire (see Development Trends subsections in base plan Chapter 5 for specific counts). While these trends may indicate some increase in community vulnerability, they do not account for site specific investigations or compliance with local regulations that may reduce risk during development.



Figure B-2 The City of Atascadero Land Use Plan





B.2 Hazard Identification and Summary

The Atascadero LPT identified the hazards that affect the city and summarized their frequency of occurrence, spatial extent, potential magnitude, and significance specific to their community (see Table B-6). There are no hazards that are unique to Atascadero. The overall hazard significance takes into account the geographic area, probability, and magnitude as a way to identify priority hazards for mitigation purposes. This is discussed further in the Vulnerability Section.

Table B-6 City of Atascadero – Hazard Summaries

HAZARD	GEOGRAPHIC AREA	PROBABILITY OF FUTURE OCCURRENCE	MAGNITUDE/ SEVERITY (EXTENT)	OVERALL SIGNIFICANCE
Adverse Weather: Thunderstorm/Heavy Rain/Hail/Lighting/Dense Fog/Freeze	Significant	Likely	Limited	Low
Adverse Weather: High Wind/Tornado	Extensive	Likely	Limited	Low
Adverse Weather: Extreme Heat	Extensive	Occasional	Negligible	Low
Agricultural Pest Infestation and Disease	Limited	Occasional	Negligible	Medium
Biological Agents (naturally occurring)	Extensive	Occasional	Critical	Medium
Dam Incidents	Limited	Unlikely	Limited	Low
Drought and Water Shortage	Extensive	Likely	Limited	Medium
Earthquake	Limited	Unlikely	Limited	Low
Flood	Significant	Occasional	Critical	Medium
Landslides and Debris Flow	Limited	Likely	Limited	Medium
Subsidence	Limited	Occasional	Negligible	Low
Wildfire	Extensive	Likely	Critical	High
Human Caused: Hazardous Materials	Significant	Likely	Limited	Medium
Geographic Area Limited: Less than 10% of planning area Significant: 10-50% of planning area Extensive: 50-100% of planning area Probability of Future Occurrences Highly Likely: Near 100% chance of occurrence in next year or happens every year. Likely: Between 10 and 100% chance of occurrence in next year or has a recurrence interval of 10 years or less. Occasional: Between 1 and 10% chance of occurrence in the next year or has a recurrence interval of 11 to 100 years.		Magnitude/Severity (Extent) Catastrophic—More than 50 percent of property severely damaged; shutdown of facilities for more than 30 days; and/or multiple deaths Critical—25-50 percent of property severely damaged; shutdown of facilities for at least two weeks; and/or injuries and/or illnesses result in permanent disability Limited—10-25 percent of property severely damaged; shutdown of facilities for more than a week; and/or injuries/illnesses treatable do not result in permanent disability Negligible—Less than 10 percent of property severely damaged, shutdown of facilities and		



HAZARD	GEOGRAPHIC AREA	PROBABILITY OF FUTURE OCCURRENCE	MAGNITUDE/ SEVERITY (EXTENT)	OVERALL SIGNIFICANCE
Unlikely: Less than 1% chance of occurrence in next 100 years or has a recurrence interval of greater than every 100 years.		services for less than 24 hours; and/or injuries/illnesses treatable with first aid		Significance Low: minimal potential impact Medium: moderate potential impact High: widespread potential impact

B.3 Vulnerability Assessment

The intent of this section is to assess Atascadero's vulnerability separately from that of the planning area as a whole, which has already been assessed in Section 5.3 Risk Assessment in the main plan. This vulnerability assessment analyzes the population, property, and other assets at risk to hazards ranked of low, medium, or high significance that may vary from other parts of the planning area.

The information to support the hazard identification and risk assessment was based on the City's previous Local Hazard Mitigation Plan (LHMP). A LHMP Update Guide and associated worksheets were distributed to each participating municipality or special district to complete during update process in 2025. Information collected was analyzed and summarized in order to identify and rank all the hazards that could impact anywhere within the county, as well as to rank the hazards and identify the related vulnerabilities unique to each jurisdiction.

Each participating jurisdiction was in support of the main hazard summary identified in the Base Plan (See Table 5-2). However, the hazard summary rankings for each jurisdictional annex may vary slightly due to specific hazard risk and vulnerabilities unique to that jurisdiction. Identifying these differences helps the reader to differentiate the jurisdiction's risk and vulnerabilities from that of the overall county.

Note: The hazard "Significance" reflects overall ranking for each hazard and is based on the City of Atascadero's LPT member input from the Data Collection Guide and the risk assessment developed during the planning process (see Section 5.1 of the Base Plan), which included a more detailed qualitative analysis with best available data.

B.3.1.1 Other Hazards

The following hazards identified in the base plan HIRA are **not applicable** within this jurisdictional annex due to no risk or insignificant anticipated impacts and are not considered further mitigation actions:

- Coastal Storm/ Coastal Erosion/ Sea Level Rise
- Tsunami and Seiche

B.3.2 Assets at Risk

This section considers Atascadero's assets at risk, including values at risk, critical facilities and infrastructure, historic assets, economic assets and growth and development trends.

B.3.2.1 Values at Risk

The following data on property exposure is derived from the San Luis Obispo County 2024 Parcel and Assessor data. This data should only be used as a guideline to overall values in the city as the information has some limitations. It is important to note that in the event of a disaster, it is generally the value of the infrastructure or improvements to the land that is of



concern or at risk. Generally, the land itself is not a loss. Table B-7 shows the exposure of properties to landslides (e.g., the values at risk) broken down by property type for the City of Atascadero. The property type with the highest exposed structure count is residential with 10,232 properties exposed. Note that all values are based on assessor data, but due to proposition 13, the actual replacement cost is generally significantly higher than the assessed value.

Table B-7 Atascadero Total Exposure by Property Type

PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE
Commercial	625	\$376,427,924	\$376,427,924	\$752,855,848
Exempt	53	\$29,821,565	\$29,821,565	\$59,643,130
Industrial	49	\$25,353,714	\$38,030,571	\$63,384,285
Mixed Use	364	\$98,313,172	\$98,313,172	\$196,626,344
Mobile/Manufactured Homes	133	\$19,805,202	\$9,902,601	\$29,707,803
Multi-Family Residential	315	\$206,003,403	\$103,001,702	\$309,005,105
Residential	8,551	\$2,390,630,571	\$1,195,315,286	\$3,585,945,857
Vacant Improved	142	\$15,935,099	-	\$15,935,099
Total	10,232	\$3,162,290,650	\$1,850,812,820	\$5,013,103,470

Source: San Luis Obispo Assessor Data November 15, 2024, WSP GIS Analysis

B.3.2.2 Critical Facilities and Infrastructure

A critical facility may be defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. In the City of Atascadero there are 78 critical facilities. See Section 5 and Appendix G of the Base Plan for more details on the definitions and categories of critical facilities.

An inventory of critical facilities in the City of Atascadero from San Luis Obispo County GIS is provided in Table B-8 and illustrated in Figure B-1.

Table B-8 City of Atascadero's Critical Facilities

FEMA LIFELINE	TOTAL
Communications	6
Energy	1
Food, Hydration, and Shelter	3
Health and Medical	12
Safety and Security	20
Transportation	35
Water Systems	1
Total	78

Source: San Luis Obispo County, CalARP, HIFLD, National Bridge Inventory, National Inventory of Dams, FCWCD, WSP Analysis

Table B-9 below lists additional critical facilities and infrastructure identified by the LPT from the City of Atascadero.

Table B-9 Critical Facilities and Infrastructure Identified by Atascadero Planning Team

CATEGORY	FACILITY	NUMBER	ESTIMATED VALUE PER STRUCTURE/MILE
City Hall	City Hall	1	\$43,400,000



CATEGORY	FACILITY	NUMBER	ESTIMATED VALUE PER STRUCTURE/MILE
Police and Fire Stations	Fire Station #1	1	\$1,777,972
	Fire Station #2	1	\$1,167,090
	Atascadero Police Department	1	\$2,168,594
Other City-Owned Facilities	Lake Pavilion	1	\$2,528,924
	Charles Paddock Zoo	1	\$2,352,377
	Ranger House	1	\$91,689
	Youth Center	1	\$9,902,817
	Skate Park	1	\$850,448
	Paloma Creek Park Facilities	4	\$351,765
	Pine and Chalk Mountain Towers	2	\$517,423
	Public Works Yard	1	N/A
	Wastewater Treatment Plant	1	\$Not available
Potable Water and Wastewater	Sewer Lift Stations	12	\$874,267
	Sewer Lift Station 5 Buildings	4	\$1,279,465
	Sewer Collection Pipes	67 mi	N/A
	Atascadero Mutual Water Company (AMWC) well sites	17	N/A
	AMWC well sites		
	AMWC water tanks	9	N/A
	AMWC operations buildings		N/A
	AMWC booster stations	8	N/A
	AMWC treatment facilities	5	N/A
	AMWC hydrants		N/A
	State and Federal Highways (miles)	21.277	\$109,967
Infrastructure	Major Arterials (miles)	27.044	\$14,279
	Railroads (miles)	7.608	\$10,532
	Bridges	14	\$5,930,990

Source: City of Atascadero



B.3.2.3 Transportation and Lifeline Facilities

Major transportation and lifeline facilities are located adjacent to US Highway 101 and State Highway 41, which traverse through Atascadero, as well as the rail line that runs through the eastern edge of the city. Damages to these transportation corridors would not only impact Atascadero but the entire region.

B.3.2.4 Historic and Cultural Resources

The National Register of Historic Places contains three sites in the City of Atascadero:

- Administration Building, Atascadero Colony, 6500 Palma Ave.
- Archeological Site 4 SLO 834, Address Restricted
- Atascadero Printery, 6351 Olmeda

There are no California State Historical Landmarks, and two California Register of Historical Resources properties located in Atascadero: The Printery Building and Historic Administration Building.

Other significant historic or cultural resources identified by the planning team include the Adobe Springs on Traffic Way and numerous homes built during the Atascadero Colony era.

B.3.2.5 Natural Resources

Natural resources are important to include in benefit-cost analyses for future projects and may be used to leverage additional funding for projects that also contribute to community goals for protecting sensitive natural resources. Awareness of natural assets can lead to opportunities for meeting multiple objectives. For instance, protecting wetlands areas protects sensitive habitat as well as attenuates and stores floodwaters.

Key natural assets in the city include Atascadero, Graves, Paloma, and Boulder creeks in addition to the Salinas River. The city also contains vast areas of native oak woodland, California Sycamore, Madrone, and Coast Live Oak. Native plants such as Santa Lucia Fir are well-suited for landscaping and habitat restoration as they provide drought tolerance and adaptability to areas around the city.

B.3.3 Estimating Potential Losses

Note: This section details vulnerability to specific hazards of high or medium significance, where quantifiable, and/or where (according to LPT member input) it differs from that of the overall County.

San Luis Obispo County's parcel and assessor data was used to calculate the improved value of parcels. The most vulnerable structures are those in the floodplain (especially those that have been flooded in the past), unreinforced masonry buildings, and buildings built prior to the introduction of modern-day building codes. Impacts of past events and vulnerability to specific hazards are further discussed below (see Section 4.1 Hazard Identification for more detailed information about these hazards and their impacts on San Luis Obispo County as a whole).

B.3.3.1 Adverse Weather: Thunderstorm/ Heavy Rain/ Lightning/ Dense Fog/ Freeze

The City of Atascadero's risk and vulnerability to adverse weather conditions does not differ significantly from San Luis Obispo County. As a city situated inland within the county's north-central region, Atascadero experiences many of the same regional weather patterns, particularly storm events and transitional seasons.

Like the rest of the county, Atascadero is susceptible to the impacts of intense rainfall, which can strain local drainage systems, cause localized floodings, and lead to road hazards. Thunderstorms and lightning events, while infrequent, pose risks to public safety, power



infrastructure, and wildland areas. Dense fog, especially during cooler months, can reduce visibility on major roadways such as U.S. Highway 101, increasing the potential for traffic accidents. A majority of the frost in the winter months does not affect road conditions significantly. The overall rating of adverse weather in Atascadero is rated low.

B.3.3.2 Adverse Weather: High Wind and Tornado

High wind and tornado hazards in Atascadero are rated as **low** due to the area's mild climate and geographical location. Strong wind events are infrequent and typically moderate with most damage caused by falling trees or branches onto structures or power lines. Tornadoes are extremely rare and not supported by the local topography or climate. Historical data shows minimal occurrences and negligible damage from these hazards.

B.3.3.3 Adverse Weather: Extreme Heat

Extreme heat is generally not considered a major hazard in Atascadero, though the risk is slightly higher than in nearby coastal cities, but it still benefits from the region's overall moderate climate. While the city can experience occasional heatwaves, extreme heat events are relatively infrequent and typically do not reach levels that pose a significant public health threat. Compared to other inland areas in California, Atascadero's temperatures are more manageable, and the overall risk from extreme heats is rated as a low significance.

B.3.3.4 Agricultural Pest Infestation, Plant Disease, Marine Invasive Species, and Tree Mortality

The City of Atascadero was given a **medium** significance ranking by the HMPC for agricultural pest infestation, plant disease, marine invasive species, and tree mortality. According to the United States Forest Service over 100 million trees have died in California and more continue to die due to many years of drought that have weakened trees and left millions of acres of forestland highly susceptible to insect attacks. The County of San Luis Obispo Assessor data shows that 57 properties are at risk from tree mortality as shown in Table B-10. Land use designations in Atascadero include a mix of agriculture, rural lands, and residential neighborhoods. According to Figure B-2 a majority of the land is used for rural residential areas. These areas contain vegetation such as the Coast live Oak. An outbreak of a disease such as Sudden Oak Death could kill many of these trees leaving residential areas susceptible to wildfires and more extreme drought conditions, and higher incidents of landslides and erosion. Table B-10 below shows that 56 residential properties with a total value of over \$29 million are exposed to tree mortality hazard zones. Preventative measures for diseases such as Sudden Oak Death include sanitation, quarantine, or removal of infected trees as there is no cure once a tree is infected with Sudden Oak Death.

Table B-10 Atascadero Properties Exposed to Tree Mortality Hazard Zones

PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Commercial	1	\$297,000	\$297,000	\$594,000	
Residential	56	\$19,727,099	\$9,863,550	\$29,590,649	141
Total	57	\$20,024,099	\$10,160,550	\$30,184,649	141

Source: San Luis Obispo Assessor Data November 15, 2024, CAL FIRE, FRAP, TMTF October 2022, WSP GIS Analysis

B.3.3.5 Biological Incidents

The Atascadero LPT gave biological agents a **medium** overall significance rating. Atascadero's risk and vulnerability to this hazard does not differ substantially from that of the county's overall. Disease outbreaks usually occur in densely populated areas, where person to person



proximity provides ample opportunity for transmission of illnesses. Places of work and business, schools and high-population public spaces are of particular concern when the threat of transmissible illness occurs. More information on biological agents can be found in Section 5.3.6 of the base plan.

B.3.3.6 Dam Incidents

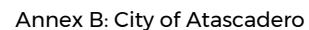
The City of Atascadero rated Dam Incidents as having low significance. Atascadero is potentially affected by four dams (Figure B-3). The Hartzell Dam is a significant hazard dam northwest of Atascadero. Water from this dam eventually flows to Paso Robles Creek to the Salinas River. The dam failure inundation zone is relative narrow and the stream only briefly flows on the northernmost tip of Atascadero and a small area designated as a “sphere of influence”.

Slightly south of town, the high-hazard Eagle Ranch Dam holds 300 acre-feet of water along Hale Creek. This dam drains to Atascadero Creek, flows through town roughly parallel to and mostly on the north side of Highway 41, and empties to the Salinas River slightly downstream (north) of the 101. The potential inundation zone through Atascadero is modest, especially compared to the Salinas Dam inundation zone discussed below.

In town, the high-hazard Atascadero Park Dam forms Atascadero Lake. This dam drains to the north along either side of Highway 41 through neighborhoods, across the 101/41 interchange, before emptying into Atascadero Creek and flowing north to the Salinas River. Exposure of people, structures, and infrastructure in the potential dam inundation zone is significant and discussed further below.

The Salinas Dam is a much larger high-hazard dam the southeast of Atascadero on the Salinas River. This dam holds roughly 140 times more water than any of the three dams described above. The inundation zone along the Salinas River, shown in Figure B-3, is relatively wide and is located along the entire eastern edge of the city limits.

A total of 607 structures and 298 people exist within one or more of the dam inundation zones in the City of Atascadero (Table B-11). In addition, 11 bridges exist within dam inundation zones of the Eagle Ranch, Atascadero Park, and Salinas Dams (Table B-12). Appendix E provides additional detail of critical facilities at risk from each dam inundation zone. Section 5.3.8 of the Base Plan provides additional information on dam-related hazards in the county.



Dam (Hazard Class)

- ▲ High
- Dam Inundation
- Atascadero Park
- Eagle Ranch
- Hartzell
- Salinas
- Streams
- Railroad
- Highways
- Community Service Districts
- Sphere of Influence
- Atascadero

Map compiled 2/2025;
 Intended for planning purposes only.
 Data Source: San Luis Obispo County,
 NID 2024, Department of Water Resources (DWR),
 Division of Safety of Dams (DSOD)

PROPERTY TYPE	STRUCTURE COUNT	POPULATION
Commercial	30	-
Exempt	7	-
Industrial	2	-
Mixed Use	12	-
Multi-Family Residential	9	23
Residential	233	585
Vacant Improved	5	-
Total	298	607

**Table B-12 Critical Facility Assets Exposed to Dam Inundation in Atascadero by FEMA Lifeline**

COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
-	-		-	-	-	11	-	11

Source: San Luis Obispo Assessor Data 2024, Division of Safety of Dams, Department of Water Resources, WSP GIS Analysis

B.3.3.7 Drought or Water Shortage

The City of Atascadero sources its water primarily from the Atascadero Subbasin of the Salinas Valley Groundwater Basin. The Atascadero Basin is approximately 19,800 acres in size, extending from the Salinas River on the north to the southern boundary of Paso Robles. The Salinas River is the primary surface water source, although the subbasin also encompasses Atascadero Creek, Graves Creek, and smaller tributaries which feed into the Salinas River. Average annual precipitation ranges from 13 to 23 inches (Atascadero GSP, 2022).

The Atascadero Groundwater Sustainability Agency (GA) published the *Water Year 2024 Annual Report for the Groundwater Sustainability Plan for the Atascadero Basin* in February 2025. According to this report, above average precipitation occurred in 2023-2024, resulting in generally stable groundwater levels throughout the year. Total pumping from the basin for water year (WY) 2024, which includes the City of Atascadero as well other municipal, agricultural, and public users, decreased to about 14,500 acre-feet (AF), down from about 15,000 to 16,700 AF during WY 2017-2022. About 526 AF of surface water came primarily from the Nacimiento Water Project (NWP) and was supplied exclusively to municipal agencies.

Total water use in WY 2024 was 15,000 AF, down from a peak of 19,500 AF in WY 2021. While the GSA will continue adaptive management based on monitoring data, the basin remains sustainable with no overdraft concerns and is expected to remain sustainable in the coming years.

The Atascadero Mutual Water Company (AMWC) manages and distributes the City's water supply. Its infrastructure includes 250 miles of pipelines, nine storage tanks ranging in capacity from 120,000 gallons to 4.8 million gallons, 17 active wells, eight booster stations, five treatment buildings, and 20 pressure reducing stations. Construction of an additional treatment facility for PFAW is underway and expected to be completed in 2026.

Drought poses a **medium** significance overall to the city, but its impacts are often disproportionately felt by socially vulnerable populations. These vulnerable groups, including low-income (9.9% of all people in Atascadero, according to the ACS 2023 Five-Year Estimates) and disabled individuals (13.7% of individuals in Atascadero) have a disability are particularly susceptible to the adverse effects of water scarcity due to limited resources and socio-economic disparities. In times of drought, access to clean water for drinking, sanitation, and agriculture becomes severely constrained, exacerbating existing inequalities and increasing the risk of food insecurity, malnutrition, and disease among these populations.

B.3.3.8 Earthquake and Liquefaction

Earthquake and liquefaction hazards pose a **Low Significance** for the City of Atascadero. According to the Technical Background Report of the County Safety Element (1999), mapped faults in the vicinity of Atascadero include the potentially active Rinconada fault and the



Nacimiento fault zones. The Rinconada fault trends northwest along the eastern City limits. The fault mostly lies east of the Salinas River and outside the City limits. Because the Rinconada fault is potentially active, it presents a moderate fault rupture hazard to the City of Atascadero. Further studies to evaluate the activity of the faults are warranted, prior to placing structures near the mapped fault traces.

Atascadero is at a lower risk of severe groundshaking compared to other areas within the county, but the risk is still present. Areas of the city more susceptible to the damaging effects of groundshaking are those areas that are underlain by liquefiable soils. Table B-14 below details the various property types in the City of Atascadero at risk of liquefaction. Based on this analysis residential property types, including mobile and manufactured homes and multi-family residential, are at the greatest risk of liquefaction in Atascadero compared to other types of properties in the community. Commercial properties throughout are also significantly exposed, moreso than most jurisdictions in the county, with 625 commercial properties exposed. There are 10,232 improved parcels at risk with a combined total value of over \$5 billion. Figure B-4 below depicts the areas of Atascadero at risk of liquefaction.

Table B-13 details the total number of critical facilities found in liquefaction susceptible zones in the city, organized by FEMA Community Lifeline.

Table B-13 Critical Facility Assets Exposed to Liquefaction Susceptibility by FEMA Lifeline

LIQUEFACTION SUSCEPTIBILITY CATEGORY	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
High Liquefaction Susceptibility	-	-	-	-	-	-	1	-	1
Moderate Liquefaction Susceptibility	1	-	1	-	1	6	21	-	30
Low Liquefaction Susceptibility	5	1	2	-	11	14	13	1	47

Source: San Luis Obispo County, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis

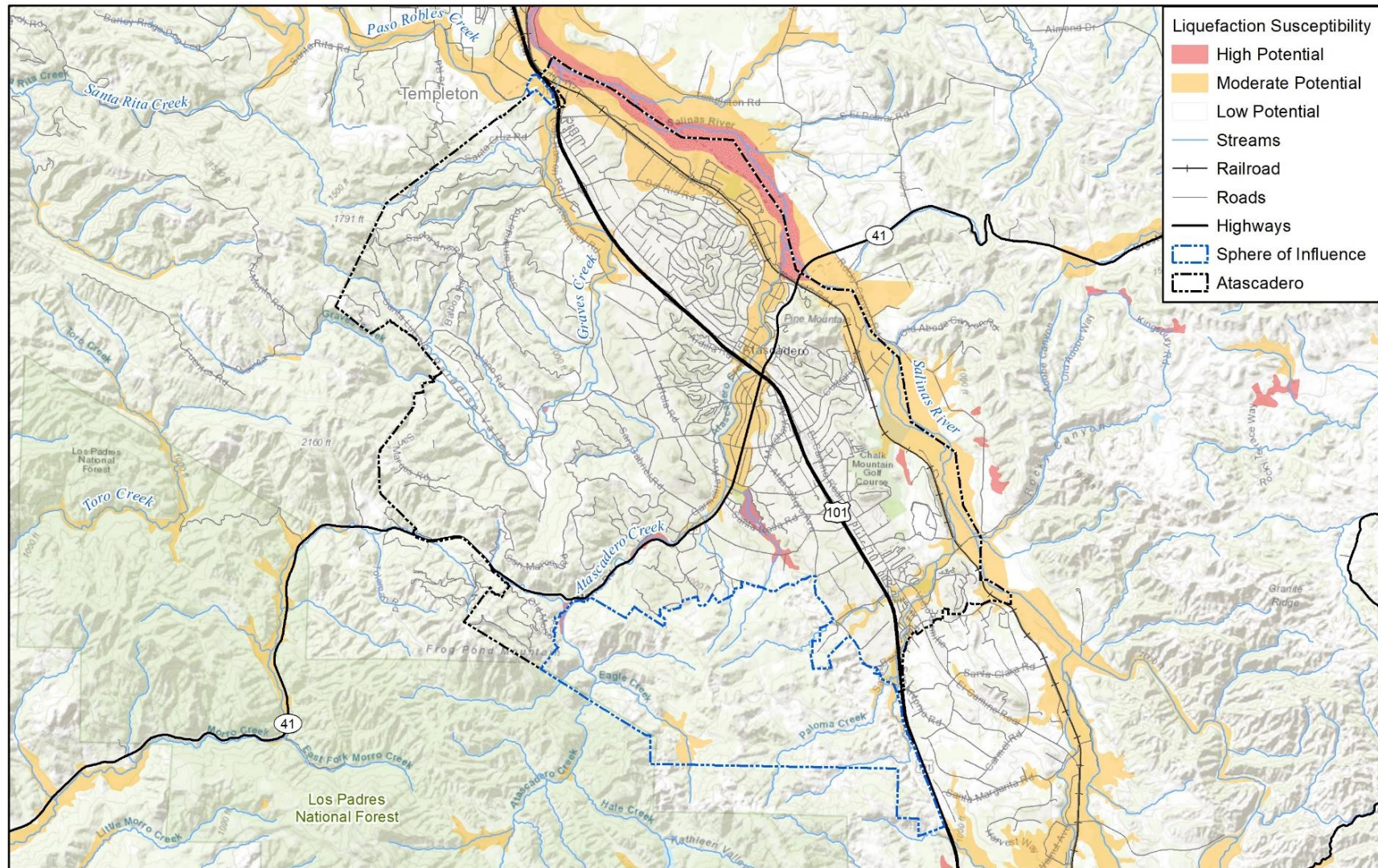
**Table B-14 City of Atascadero Improved Properties Exposed to Liquefaction Potential by Property Type**

PROPERTY TYPE	STRUCTUR E COUNT HIGH	STRUCTUR E COUNT MODERATE	STRUCTUR E COUNT LOW	STRUCTUR E PARCEL COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATIO N
Agricultural	-	-	-	0	\$0	\$0	\$0	-
Commercial	1	207	417	625	\$376,427,924	\$376,427,924	\$752,855,848	-
Exempt	2	12	39	53	\$29,821,565	\$29,821,565	\$59,643,130	-
Industrial	-	13	36	49	\$25,353,714	\$38,030,571	\$63,384,285	-
Mining	-	-	-	0	\$0	\$0	\$0	-
Mixed Use	-	87	277	364	\$98,313,172	\$98,313,172	\$196,626,344	-
Mobile/Manufacture d Homes	-	4	129	133	\$19,805,202	\$9,902,601	\$29,707,803	334
Multi-Family Residential	-	64	251	315	\$206,003,403	\$103,001,702	\$309,005,105	791
Residential	13	1,291	7,247	8,551	\$2,390,630,571	\$1,195,315,286	\$3,585,945,857	21,463
Vacant Improved	-	10	132	142	\$15,935,099	\$0	\$15,935,099	-
Total	16	1,688	8,528	10,232	\$3,162,290,650	\$1,850,812,820	\$5,013,103,470	22,587

Source: San Luis Obispo Assessor Data November 15, 2024, WSP GIS Analysis



Figure B-4 Areas of the City of Atascadero at Risk of Liquefaction



Map compiled 1/2025;
Intended for planning purposes only.
Data Source: San Luis Obispo County

0 0.5 1 2 Miles





B.3.3.9 Flood

Flood hazards pose a **medium** significance for the City. In Atascadero, flooding remains a significant hazard, primarily due to riverine and flash flood events. The city's topography, characterized by steep slopes and narrow valleys, contributes to rapid runoff during heavy rainfall, increasing the risk of flash floods. Key waterways, including Atascadero Creek, Graves Creek, and the Salinas River, play a central role in the city's flood dynamics.

The most severe flood events on record occurred in 1969, 1993, 1995, and 2001. Notably, the 1969 floods caused the Salinas River to reach a discharge of over 28,000 cubic feet per second, leading to extensive damage. In January 2023, a series of atmospheric river storms brought significant flooding, swelling the Salinas River into one of the largest rivers in the state during that period. This event damaged infrastructure and homes, especially along Atascadero Creek and the Salinas River. The city incurred nearly \$1 million in emergency repairs due to erosion along Atascadero Creek, and more than \$700,000 in repair to other drainage facilities and damages infrastructure throughout the city. Residents reported private property damage and sewage backups (Sources: High Country News; New Times SLO).

To mitigate flood risks, Atascadero maintains GIS-based maps of riparian areas, enforces creekside development standards, and collaborates with agencies such as the USACE and the U.S. Department of Fish and Wildlife. The city also participates in the National Flood Insurance Program (NFIP) and adheres to FEMA and state floodplain regulations to support its flood mitigation strategies.

Given the increasing frequency of severe weather events, it remains crucial for Atascadero to continue updating its hazard mitigation strategies, investing in resilient infrastructure, and engage the community in preparedness efforts. Ongoing collaboration with regional and federal agencies will further enhance the city's capacity to manage and reduce flood-related risks. A flood map for the City was created showing flooding extents and at-risk properties (see Figure B-5). For additional context and a countywide flood hazard assessment, refer to Section 5.3.8 of the Base Plan.

Values at Risk

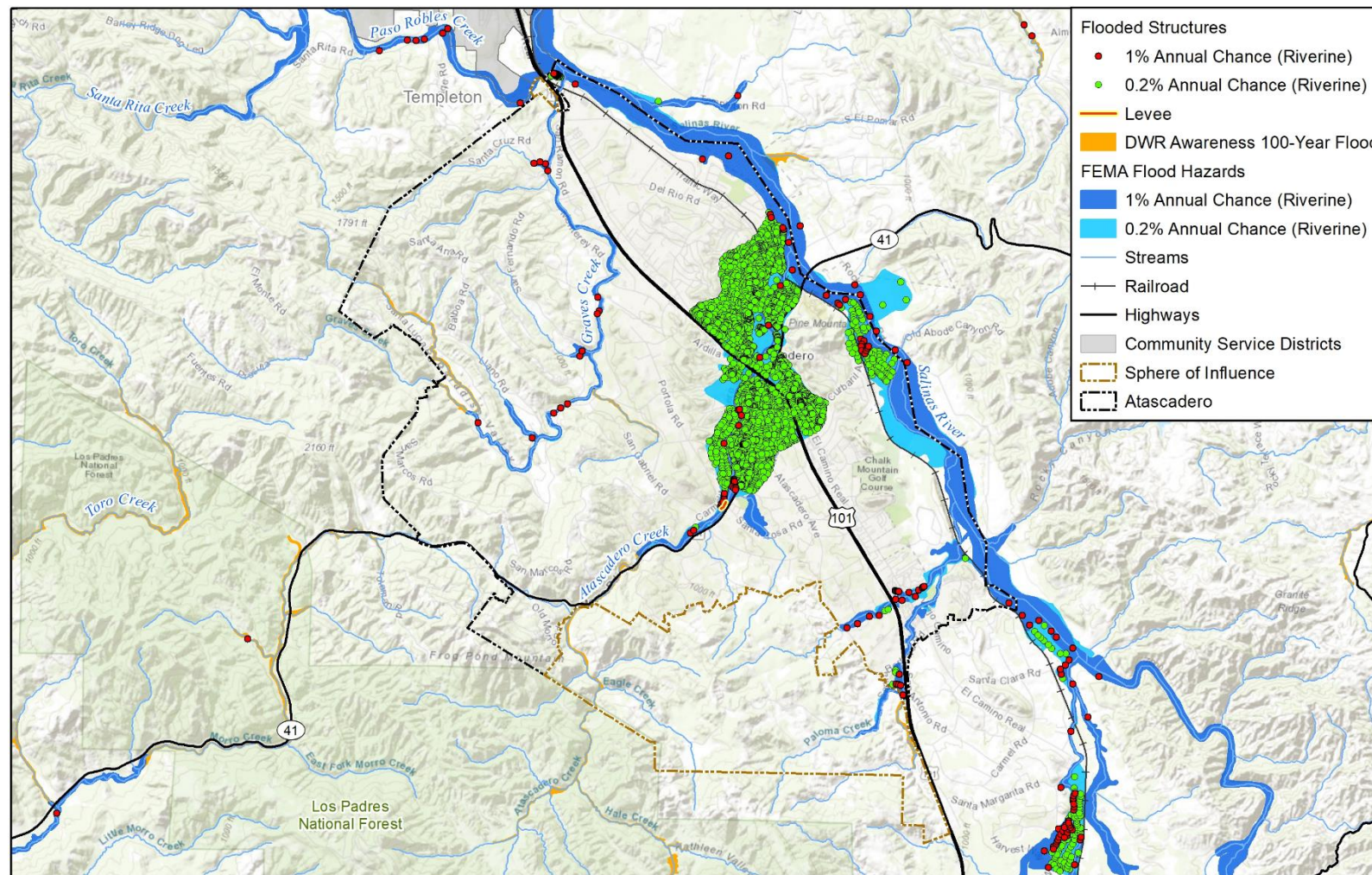
Table B-15 and Table B-16 summarize the values at risk in the City's 1% annual chance (100-year) and 0.2% annual chance (500-year) floodplains, respectively. These tables also detail loss estimates for each flood as well as population estimates at risk to flooding. Note that the potential loss increases significantly with the 500-year or 0.2% annual chance flood. It is also important to note that assessor data is generally significantly below actual replacements costs.

According to the updated exposure analysis, a number of properties in Atascadero are at risk to riverine flooding. Within the 1% annual chance flood zone, 99 improved parcels are exposed, with a total estimated improved value near \$26 million. The estimated content value adds another \$16 million, resulting in a combined total value at risk of approximately \$42 million. Estimated potential losses for the 1% annual chance flood total roughly \$10.6 million.

In the 0.2% annual chance flood zone, exposure increases significantly. A total of 2,797 improved parcels are located within the 0.2% floodplain. The improved value of these parcels is over \$715 million, with an additional \$474 million in content value, bringing the combined total value at risk to approximately \$1.19 billion. Estimated potential losses for the 0.2% annual chance flood event could reach nearly \$298 million. These figures highlight the importance of continued flood risk management and mitigation efforts within the City.



Figure B-5 City of Atascadero DWR & FEMA Flood Hazards with Flooded Structures



d 2/2025;
planning purposes only.
San Luis Obispo County,
FEMA NFHL Effective 6/6/2024, NCEI,
DWR, USACE Comprehensive Study

0 0.5 1 2 Miles



**Table B-15 City of Atascadero Improved Properties Exposed to FEMA Riverine 1% Flood Hazard by Property Type**

PROPERTY TYPE	PARCEL COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	LOSS ESTIMATE	POPULATION
Commercial	8	\$3,547,125	\$3,547,125	\$7,094,250	\$1,773,563	-
Exempt	5	\$0	\$0	\$0	\$0	-
Industrial	2	\$1,448,117	\$2,172,176	\$3,620,293	\$905,073	-
Mixed Use	3	\$575,843	\$575,843	\$1,151,686	\$287,922	-
Multi-Family Residential	1	\$30,259	\$15,130	\$45,389	\$11,347	3
Residential	79	\$20,280,040	\$10,140,020	\$30,420,060	\$7,605,015	198
Vacant Improved	1	\$5,306	\$0	\$5,306	\$1,327	-
Total	99	\$25,886,690	\$16,450,293	\$42,336,983	\$10,584,246	201

Source: San Luis Obispo Assessor Data November 15, 2024, FEMA NFHL Effective Date 6/6/2024, WSP GIS Analysis

Table B-16 City of Atascadero Improved Properties Exposed to FEMA Riverine 0.2% Flood Hazard by Property Type

PROPERTY TYPE	PARCEL COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	LOSS ESTIMATE	POPULATION
Commercial	373	\$152,458,529	\$152,458,529	\$304,917,058	\$76,229,265	-
Exempt	20	\$10,681,461	\$10,681,461	\$21,362,922	\$5,340,731	-
Industrial	12	\$6,651,683	\$9,977,525	\$16,629,208	\$4,157,302	-
Mixed Use	207	\$59,336,743	\$59,336,743	\$118,673,486	\$29,668,372	-
Mobile/Manufactured Homes	6	\$1,064,304	\$532,152	\$1,596,456	\$399,114	15
Multi-Family Residential	249	\$98,225,006	\$49,112,503	\$147,337,509	\$36,834,377	625
Residential	1,921	\$385,063,255	\$192,531,628	\$577,594,883	\$144,398,721	4,822
Vacant Improved	9	\$2,099,723	\$0	\$2,099,723	\$524,931	-
Total	2,797	\$715,580,704	\$474,630,540	\$1,190,211,244	\$297,552,811	5,462

Source: San Luis Obispo Assessor Data November 15, 2024, FEMA NFHL Effective Date 6/6/2024, WSP GIS Analysis

Population at Risk

The population exposure to flooding events also presents a significant concern. Based on the parcel and floodplain data analysis, approximately 201 people are at risk within the 1% annual chance floodplain, consisting of 198 residents in single-family homes and 3 in multi-family residential properties.

In the 0.2% annual chance flood zone, the number of people at risk increases to 5,462 residents. This includes 4,822 individuals in single-family homes, 625 in multi-family residential units, and 15 in mobile/manufactured homes. These figures emphasize the need for proactive flood mitigation planning to protect both property and public safety across Atascadero's flood hazard areas.

Insurance Coverage, Claims Paid, and Repetitive Losses

The City joined the NFIP on January 20, 1982. The current effective map is dated June 6, 2024. As of May 12, 2025, NFIP records show 68 active flood insurance policies in the City, totaling \$20,844,000 in coverage. Of these, 33 policies are in A zones, and the rest are in B, C, or X zones.

Since joining the NFIP, the City has recorded 40 flood loss claims totaling \$915,067, all for residential properties. According to the OpenFEMA dataset accessed in 2024, the City includes three Repetitive Loss (RL) properties, none of which meet the criteria for Severe Repetitive Loss (SRL). There are two affected structures categorized as a single-family residential building,



excluding mobile homes and units within multi-family buildings, as well as one categorized as a single-family residence only.

The City does not currently participate in the Community Rating System (CRS).

Critical Facilities at Risk

Atascadero has 19 critical facilities located within the 1% annual chance floodplain, based on combined FEMA and DWR awareness mapping. These facilities are all related to transportation, highlighting the vulnerability of the city's infrastructure network to major flood events. While no communications, energy, medical, or public safety assets are currently within this flood zone, the potential disruption to mobility and emergency access makes these at-risk facilities a priority for flood mitigation and response planning.

In the 0.2% annual chance floodplain, the number of critical facilities at risk rises to 29 *additional* within this zone, not inclusive of the 1% counts. This includes five communications facilities, three designated for food, hydration, or shelter, three medical-related sites, eight safety and security assets, and ten transportation facilities. Although these assets are exposed to a lower-probability event, the range of lifelines represented underscores the importance of long-term resilience planning, particularly as flood patterns continue to shift. Table B-17 and Table B-18 show critical facilities exposed by floodplain type, below.

Table B-17 Critical Facility Assets Exposed to FEMA and DWR Awareness 1% Flood Hazards by Jurisdictions and FEMA Lifelines

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
Atascadero	-	-	-	-	-	-	19	-	19
Total	-	-	-	-	-	-	19	-	19

Source: San Luis Obispo County, FEMA NFHL Effective Date 6/6/2024, DWR, USACE Comprehensive Study, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis

Table B-18 Critical Facility Assets Exposed to FEMA Riverine 0.2% Flood Hazards by Jurisdictions and FEMA Lifelines

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
Atascadero	5	-	3	-	3	8	10	-	29
Total	5	-	3	-	3	8	10	-	29

Source: San Luis Obispo County, FEMA NFHL Effective Date 6/6/2024, DWR, USACE Comprehensive Study, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis



B.3.3.10 Landslide and Debris Flow

The City of Atascadero LPT gave landslide and debris flow a **medium** ranking. Instability in the city generally increases with steepness and distance from the Salinas River, with areas of steep terrain that consist of fractured soil or thin layers of clay that are susceptible to erosion and land subsidence. The areas of the city that are considered to have a very high risk of landslides are developments along the alluvial valley of the Salinas River and Highway 101, and in the relatively steeply sloping terrain of the Santa Lucia Mountains west of Highway 101. Areas along Highway 41 are also documented as having steep and unstable slopes. There are also several high and very high-risk areas outside of the city boundary that have potential to impact the City. 8,600 properties in the city with a total value over \$4.2 billion are exposed to landslide potential as shown in Table B-19. Atascadero has 78 critical facility assets exposed to landslide potential as shown in Table B-20.

Overall, although some of the mapped landslides may now be stable, the concentration of old and recent landslides is indicative of relatively unstable slope conditions.

Table B-19 Improved Properties Exposed to Landslide Potential

PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Agricultural	0	\$0	\$0	\$0	-
Commercial	419	\$265,763,338	\$265,763,338	\$531,526,676	-
Exempt	39	\$27,373,606	\$27,373,606	\$54,747,212	-
Industrial	36	\$20,289,752	\$30,434,628	\$50,724,380	-
Mining	0	\$0	\$0	\$0	-
Mixed Use	315	\$88,957,940	\$88,957,940	\$177,915,880	-
Mobile/Manufactured Homes	130	\$19,523,253	\$9,761,627	\$29,284,880	326
Multi-Family Residential	252	\$177,354,647	\$88,677,324	\$266,031,971	633
Residential	7,277	\$2,061,255,488	\$1,030,627,744	\$3,091,883,232	18,265
Vacant Improved	132	\$13,589,672	\$0	\$13,589,672	-
Total	8,600	\$2,674,107,696	\$1,541,596,206	\$4,215,703,902	19,224

Source: San Luis Obispo Assessor Data November 15, 2024, WSP GIS Analysis

Table B-20 Critical Facility Assets Exposed to Landslide Potential by FEMA Lifelines

LANDSLIDE POTENTIAL	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
High	4	1	2	-	6	9	12	1	35
Moderate	1	-	-	-	5	5	1	-	12
Low	1	-	1	-	1	6	22	-	31
Total									78

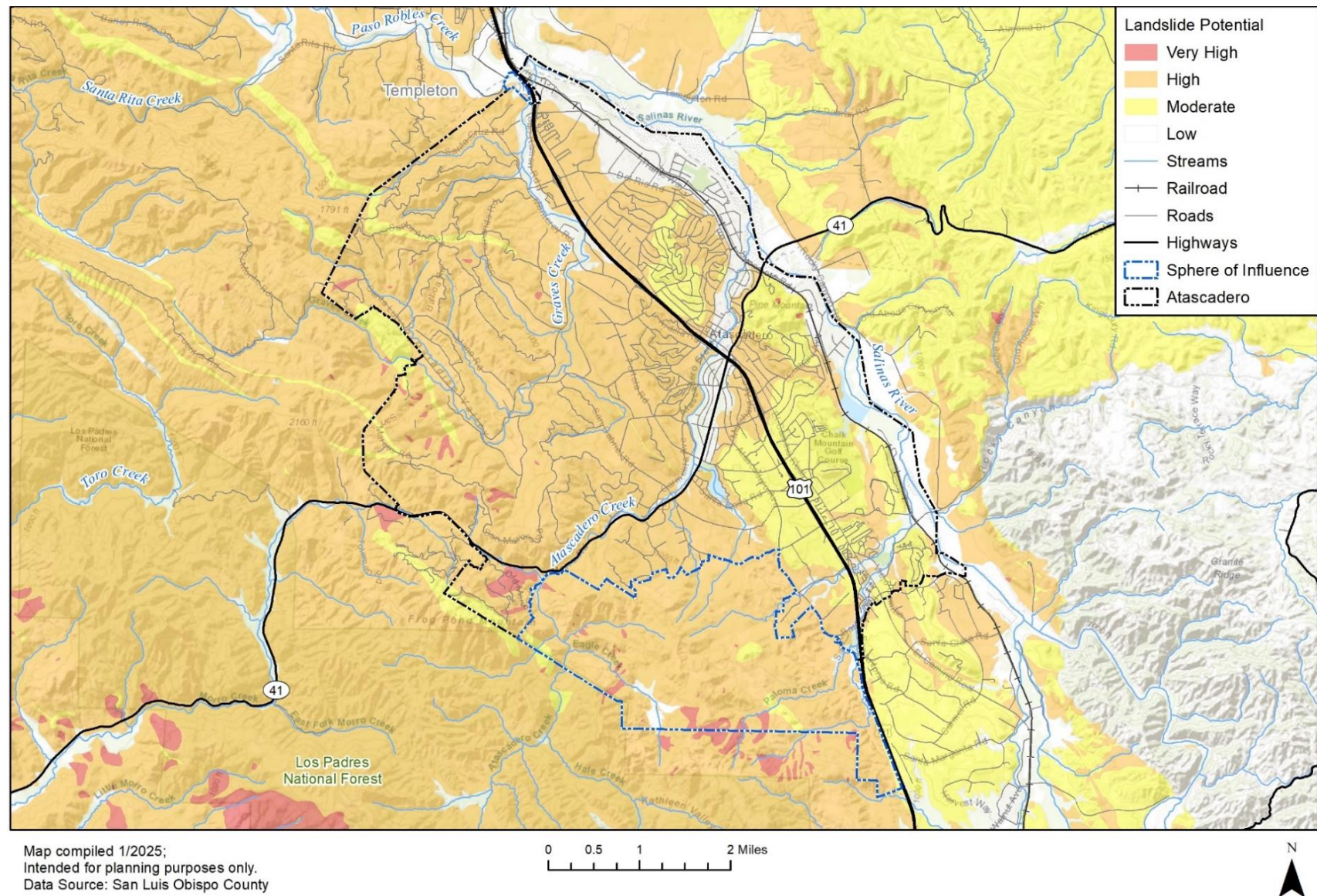
Source: San Luis Obispo County, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis



As shown in Figure B-6 below, areas in Atascadero with the very high risk of landslides are those around Little Morro Creek, Atascadero Creek, and Paloma Creek. Additionally, Los Padres National Forest and Morro Creek along Highway 41 have areas with very high landslide risks.



Figure B-6 City of Atascadero Landslide Risk





B.3.3.11 Subsidence

Subsidence was given a **low** overall significance rating from the Atascadero LPT. The United States Geological Survey shows that areas in northeastern Atascadero along Rocky Canyon Road and Highway 41 have subsidence from groundwater pumping. Throughout the last three decades land has been converted from dry farming and grazing to irrigated agriculture and urban development. Groundwater has been relied upon to make up for shortages of surface water. The 2015 City of Atascadero Local Hazard Mitigation Plan noted that Highway 1 west of Atascadero closes every winter due to land subsidence. Although subsidence isn't a major concern for Atascadero and is rated low, it will still be important to monitor groundwater extraction, as this is the main cause of subsidence in California. Additionally, land elevation should also be monitored to prevent any subsidence-related hazards in the city.

B.3.3.12 Wildfire

Wildfires in the City of Atascadero have been driven in the past by dry conditions, seasonal winds, and human activity. Strong seasonal winds, such as Santa Ana or Diablo winds, can further accelerate fire spread, making containment efforts more difficult. Wildfire occurrence usually happen between late summer and early fall. Among the most devastating wildfires to impact Atascadero and the surrounding San Luis Obispo County area was the Chimney Fire of 2016. This wildfire burned 46,344 acres, starting August 2016.

Following the methodology described in the wildfire hazard Section 5.3.15 Wildfire of the Base Plan, along with the GIS parcel analysis discussed in more detail under Section 5.2 Asset Summary, a wildfire vulnerability analysis for the City of Atascadero was completed. The assessment was performed using GIS, and results indicate that there were neither parcels nor critical facilities in wildfire severity hazard zones within the boundaries of the City of Atascadero. However, wildfire hazards have been rated by the City's planning team as holding **High Significance** based on the community's experience and historical evidence.

In the City of Atascadero, 8,034 properties are situated within fire hazard severity zone ranging from moderate to very high. Of these 1,119 are located in the Very High Fire Hazard Severity Zone, while 1,147 properties fall within the High Fire Hazard Severity Zone. Collectively, these properties represent a total assessed value of \$3,771,725,135 and impact approximately 18,423 residents across all fire hazard severity zones. Table B-21 shows the properties in the City exposed to Fire Hazard Severity Zones. Figure B-7 depicts the Fire Hazard Severity Zones in the City of Atascadero.

**Table B-21 City of Atascadero Improved Properties Exposed to Fire Hazard Severity Zones by Property Type**

PROPERTY TYPE	STRUCTURE COUNT VERY HIGH	STRUCTURE COUNT HIGH	STRUCTURE COUNT MODERATE	TOTAL STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Commercial	1	94	198	293	\$155,033,765	\$155,033,765	\$310,067,530	-
Exempt	2	5	31	38	\$18,043,750	\$18,043,750	\$36,087,500	-
Industrial	-	19	17	36	\$17,829,975	\$26,744,963	\$44,574,938	-
Mixed Use	-	50	180	230	\$56,652,383	\$56,652,383	\$113,304,766	-
Mobile/Manufactured Homes	3	7	105	115	\$14,706,460	\$7,353,230	\$22,059,690	289
Multi-Family Residential	1	18	175	194	\$121,317,542	\$60,658,771	\$181,976,313	487
Residential	1,101	935	4,995	7,031	\$2,034,623,449	\$1,017,311,725	\$3,051,935,174	17,648
Vacant Improved	11	19	67	97	\$11,719,225	\$0	\$11,719,225	-
Total	1,119	1,147	5,768	8,034	\$2,429,926,549	\$1,341,798,586	\$3,771,725,135	18,423

Source: San Luis Obispo Assessor Data November 15, 2024, CAL FIRE - FHSZ Phase 3 March 10, 2025, WSP GIS Analysis



Figure B-7 City of Atascadero Fire Hazard Severity Zones

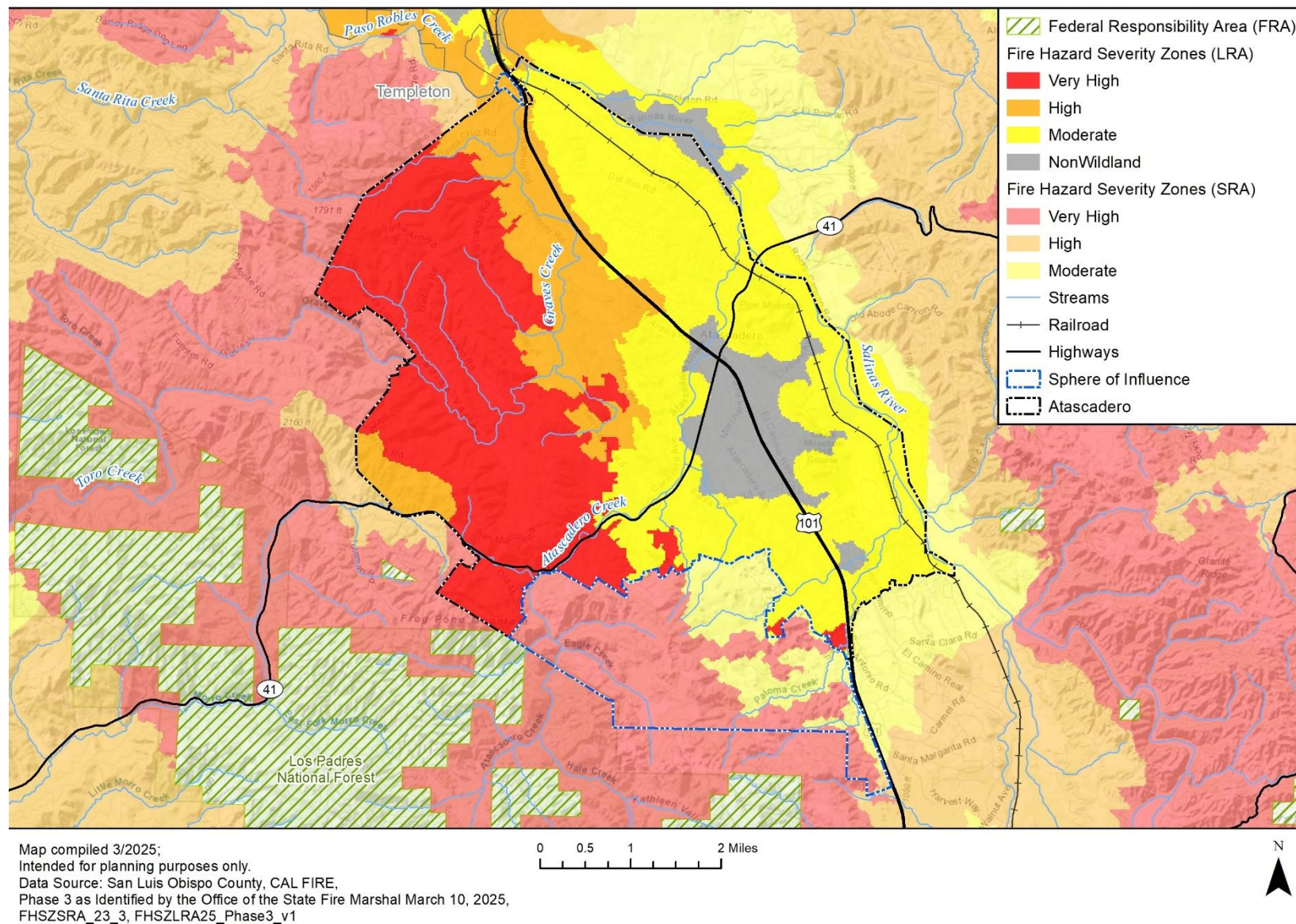




Table B-22 shows critical facilities in Atascadero that are exposed to fire hazard severity zones, categorizing them by severity level and facility type. The exposure of these critical assets to wildfire hazards poses significant risks to transportation and safety/security. The table below shows a total 50 critical facilities exposed to fire hazard severity zone, five (5) of which fall in the very high fire hazard severity zone rating, eight (8) of which are exposed to high fire hazard severity zone, and thirty-seven (37) exposed to moderate fire hazard severity zone. Linear transmission lines owned by PG&E are not considered in the analysis.

Table B-22 Critical Facilities Assets Exposed to Fire Hazard Severity Zones

WILDFIRE THREAT	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS*	TOTAL COUNT
Very High	-	-	-	-	1	-	4	-	5
High	-	-	-	-	1	2	5	-	8
Moderate	1	1	-	-	6	11	18	-	37
Total	1	1	0	0	8	13	27	0	50

Source: San Luis Obispo County, CAL FIRE - FHSZ Phase 3 March 10, 2025, CalARP, HIFLD, NBI, NID, WSP Analysis; *LPT noted that some AMWC water storage tanks on the west side may be at risk that may not be reflected in this analysis.

B.3.3.13 Human Caused: Hazardous Materials

The Atascadero LPT rated hazardous materials incidents as having medium overall significance. The Cal OES Spill Release Reporting Center reports 15 hazardous materials incidents in the City of Atascadero from January 1st, 2019 through December 20th, 2024. This likely excludes a number of unreported minor spills. The 15 reported incidents constitutes 3% of the hazardous materials incidents reported countywide during the same time frame and averages out to roughly 2.5 incidents per year.

B.4 Capability Assessment

Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capabilities assessment is divided into six sections: regulatory mitigation capabilities, administrative and technical mitigation capabilities, fiscal mitigation capabilities, mitigation outreach and partnerships, participation in the National Flood Insurance Program, and other mitigation efforts.

To develop this capability assessment, the jurisdictional planning representatives used a matrix of common mitigation activities to inventory which of these policies or programs were in place. The team then supplemented this inventory by reviewing additional existing policies, regulations, plans, and programs to determine if they contributed to reducing hazard-related losses.

During the plan update process, this inventory was reviewed by the jurisdictional planning representatives and WSP consultant team staff to update information where applicable and note ways in which these capabilities have improved or expanded. Additionally, in summarizing current capabilities and identifying gaps, the jurisdictional planning representatives also considered their ability to expand or improve upon existing policies and



programs as potential new mitigation strategies. The City of Atascadero's capabilities are summarized below.

B.4.1 Regulatory Mitigation Capabilities

Table B-23 City of Atascadero Regulatory Mitigation Capabilities

REGULATORY TOOL	YES/NO	COMMENTS
General plan	Yes	General Plan 2025 Safety Element Establishes policies, programs, goals and objectives to protect the community from risks associated with seismic, geologic, flood, and fire hazards. The plan was originally adopted in June 2002 and most recently updated in July 2016.
Zoning ordinance	Yes	Updated periodically as needed
Subdivision ordinance	Yes	Updated periodically as needed
Growth management ordinance	No	
Floodplain ordinance	Yes	Title 7 Public Works, Chapter 11 Flood Damage Prevention.
Other special purpose ordinance (stormwater, water conservation, wildfire)	Yes	Title 7 Public Works, Chapter 13 Stormwater Pollution Prevention Community Wildfire Protection Plan
Building code	Yes	CA Building Standards Title 24, Ata Municipal Code.
Fire department ISO rating		ISO Rating is a 3 / 3X
Erosion or sediment control program	Yes	Public Works manages the City's MS4 Permit
Stormwater management program	Yes	City Engineering Standard Specifications Section 5 and Regional Water Quality Control Board Resolution No. R-3-2013-0032 contains the regulatory criteria and mitigations applicable to new development and redevelopment
Site plan review requirements	Yes	All development plans are reviewed, at a minimum, through the City's permitting process.
Capital improvements plan	Yes	Five year Capital Improvement Plan updated every other year with budget process
Economic development plan	No	Incorporated into the General Plan and part of annual strategic planning efforts
Local emergency operations plan	Yes	Multi-Hazard Emergency Response Plan Basic Plan and Appendices A-F. Adopted in Fall 2003 and Summer 2004.
Other special plans	Yes	Fire Department Master Plan, CWPP. Identifies areas of the City at higher risk for wildland fires.
Flood Insurance Study or other engineering study for streams	Yes	The City Flood Damage Prevention Regulations and City Engineering Standard Specifications requires detailed hydrology and analysis of projects located within certain flood zones or where it may impact streams
Elevation certificates (for floodplain development)	Yes	FEMA Elevation Certificates are required for new structures and substantially remodeled structures within any Flood Zone A.



B.4.1.1 Discussion on Existing Building Codes, Land Use and Development Regulations

The City of Atascadero's Zoning Ordinance, contains numerous standards and requirements related to minimizing flood risk to new structures and developments. In addition, Ordinance No. 193, An Ordinance adding Chapter 5 to Article 7 of the City of Atascadero Municipal Code Relating to Flood Damage Prevention, provides further guidance to reduce flood damage. It is the purpose of this ordinance to promote public health, safety, and general welfare and to minimize public and private losses due to flood conditions. Also, Ordinance No. 304 amended Title 6, Chapter 13 of the Atascadero Municipal Code to provide a mechanism to allow the Fire Chief to order the removal of weeds, rubbish, and similar material that has the potential to become a flooding hazard. See also discussion in Development Trends.

The city adapts and enforces the California Building Code with local amendments and requirements.

B.4.2 Administrative/Technical Mitigation Capabilities

Table B-24 identifies the personnel responsible for activities related to mitigation and loss prevention in Atascadero.

Table B-24 City of Atascadero Administrative/Technical Mitigation Capabilities

PERSONNEL RESOURCES	YES/NO	DEPARTMENT/POSITION
Planner/engineer with knowledge of land development/land management practices	Yes	Community Development, Public Works
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Community Development, Public Works
Planner/engineer/scientist with an understanding of natural hazards	Yes	Community Development, Public Works, Fire Department
Personnel skilled in GIS	Yes	Information Technology
Full time building official	Yes	Community Development
Floodplain manager	Yes	Public Works
Emergency manager	Yes	City Manager, alt. Police Chief and Fire Chief
Grant writer	Yes	Administrative Services
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	Yes	Information Technology

B.4.3 Fiscal Mitigation Capabilities

Table B-25 identifies financial tools or resources that the City could potentially use to help fund mitigation activities.

Table B-25 City of Atascadero Fiscal Mitigation Capabilities

FINANCIAL RESOURCES	ACCESSIBLE/ELIGIBLE TO USE (YES/NO)
Community Development Block Grants	No
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	No
Fees for water, sewer, gas, or electric services	No
Impact fees for new development	No



FINANCIAL RESOURCES	ACCESSIBLE/ELIGIBLE TO USE (YES/NO)
Incur debt through general obligation bonds	No
Incur debt through special tax bonds	Yes
Incur debt through private activities	Yes
Withhold spending in hazard prone areas	No

B.4.4 Mitigation Outreach and Partnerships

The City of Atascadero has an active wildfire fuel reduction and education program and participates in programs such as Firewise and Storm Ready. The city also does outreach to local schools such as fire prevention presentations in all schools during fire prevention week. More outreach events and partnerships are listed below in Table B-26.

Table B-26 City of Atascadero Mitigation Outreach and Partnerships

CAPABILITY TYPE	YES/NO	NOTES
Hazard Awareness/Education Campaigns	Yes	Wildfire Consultations
Firewise	Yes	In the process of establishing 2 Firewise communities
Storm Ready	Yes	Post storm ready information on social media
Severe Weather Awareness Week	No	
School programs	Yes	Fire prevention presentations in all schools during fire prevention week
Other		
Methods Used to Communicate Hazard Info. to the Public	Yes	Social Media, Website, alertslo.org, Billboards
Local News	Yes	
Social media	Yes	Facebook, Instagram, X notifications of emergencies and utilize the platforms for education
Community Newsletters	Yes	City Manager Update through Chamber
Utility Bill Inserts	No	AMWC drought and water conservation
Community Events	Yes	Wildfire Prevention Day
Other		
Organizations that represent or work with underserved or vulnerable communities	Yes	ECHO, Atascadero Chamber of Commerce
American Red Cross	Yes	
Salvation Army	Yes	
Veterans Groups	No	
Environmental/Conservation Groups	Yes	Beaver Brigade, Atascadero Land Preservation Society (ALPS)
Homeowner/Neighborhood Associations	No	
Chamber of Commerce	Yes	
Community Organizations (Lions, Kiwanis, etc.)	Yes	



B.4.5 National Flood Insurance Program

In the City of Atascadero, the City Engineer is designated as the Floodplain Administrator (FPA). Local floodplain management regulations are actively implemented and enforced by this position to regulate and permit development within Special Flood Hazard Areas (SFHAs). This includes reviewing construction and land use permits to confirm compliance with elevation, structural, and zoning requirements aimed at reducing flood risk to properties and residents. The city consistently adopts the latest effective Flood Insurance Rate Map (FIRM) provided by FEMA, updating local floodplain management practices to align with newly identified flood risks. This helps to ensure the community is aware of the most recent flood hazard data for planning and development purposes.

Following flood or other damage events, the City of Arroyo Grande enforces substantial improvement/substantial damage provisions by evaluating damaged properties to determine if they meet thresholds requiring them to comply with updated floodplain management standards. If substantial damage is determined, properties must undergo upgrades to meet current floodplain standards before they can be repaired or rebuilt. This process helps to reduce future risk by ensuring that post-event repairs and reconstructions contribute to long-term flood resilience. The city does not participate in the NFIP's Community Rating System (CRS). More information on Atascadero's participation in the National Flood Insurance Program can be found in Table B-27 below.

Table B-27 City of Atascadero NFIP Participation

NFIP TOPIC	COMMENTS
Regulation	
Does the Community Participate in the NFIP?	Yes
How does the community enforce local floodplain regulations and monitor compliance?	Permitting process and code enforcement
Do floodplain development regulations meet or exceed FEMA or state minimum requirements? If so, in what ways?	Yes, meets minimum requirements of FEMA and State
Explain the permitting process.	Application, Review, Approval, Inspections
Compliance History	
Are there any outstanding compliance issues? (i.e., current violations)?	No
Does the community intend to continue to comply with NFIP requirements?	YES
How does the community identify substantially damaged/improved structures? What is the process to make sure these structures are brought into compliance post-disaster event?	Yes, Red tagging and permitting
Staff Resources	
Please note the department and position responsible for floodplain management. Do they serve any roles other than Community Floodplain Administrator (FPA)?	City Engineer Yes, Public Works Director and City Engineer
Explain NFIP administration services (e.g., permit review, GIS, inspections, engineering capability).	permit review, GIS, inspections, engineering capability
What are the barriers to running an effective NFIP program in the community, if any?	Funding
Community Rating System (CRS)	



NFIP TOPIC	COMMENTS
Does the community participate in CRS? If so, what is the community's CRS Class Ranking?	No
What categories and activities provide CRS points, and how can the class be improved?	N/A
Does the plan include CRS planning requirements?	N/A

B.4.6 Opportunities for Enhancement

Based on the capabilities assessment, the City of Atascadero has several existing mechanisms in place that already help to mitigate hazards. In addition to these existing capabilities, there are also opportunities for the city to expand or improve on these policies and programs to further protect the community. The city is anticipating and planning for increased density and growth outside of the identified hazard areas. To meet state policies surrounding increased density and housing, the city will have to accommodate this growth. This could include training opportunities to inform city staff members on how best to integrate hazard information and mitigation projects into their departments. Other opportunities include providing training for staff members related to hazards or hazard mitigation grant funding in partnership with the County and Cal OES and training city staff on mitigation and the hazards that pose a risk to the City of Atascadero. This will lead to more informed staff members who can better communicate this information to the public.

B.5 Mitigation Strategy

B.5.1 Mitigation Goals and Objectives

The City of Atascadero adopts those hazard mitigation goals and objectives developed by the County Planning Team and described in Section 7 of the Base Plan: Mitigation Strategy. Those goals are as followed:

1. Strengthen risk reduction and resilience by minimizing risks to life, property, infrastructure, and the environment through comprehensive, community-wide strategies.
2. Boost outreach and capacity to improve disaster resilience for vulnerable communities.
3. Promote regional collaboration to reduce hazard vulnerability and strengthen community resilience.
4. Reduce injury, loss of life, and damage to critical facilities and infrastructure from natural hazards.
5. Enhance public education and engagement to boost awareness and preparedness for natural, human-health, and human-caused hazards.
1. Use the best science and data to guide resilience efforts and prioritize mitigation projects for natural hazards and climate change impacts.

B.5.1.1 Continued Compliance with the National Flood Insurance Program

The city has been an NFIP participating community since 1982. In addition to the mitigation actions identified herein, the City will continue to comply with the NFIP. This includes ongoing activities such as enforcing local floodplain development regulations, including issuing permits for appropriate development in Special Flood Hazard Areas and ensuring that development is mitigated in accordance with the regulations. This will also include periodic reviews of the



floodplain ordinance to ensure that it is clear, up to date, and in compliance with the Federal model ordinance (Flood Damage Prevention Regulations).

B.5.2 Completed 2019 Mitigation Actions

During the 2025 planning process the City of Atascadero LPT reviewed all the mitigation actions from the 2019 plan. During the 2025 planning process the LPT identified that four (4) of the fourteen (14) mitigation actions from 2019 were deleted. Table B-28 below describes the mitigation actions from the 2019 plan that were completed or deleted.

Table B-28 Mitigation Actions for 2019

2019 Action ID	Hazard(s) Addressed	Mitigation Action Title	Lead Agency	Action Status Notes
AT.8	Wildfire	Continue fuel load reductions program by annual control burns in the WUI impacting the city	Fire Dept.	Deleted
AT.16	Landslide	Retrofit or implement stabilizing measures for Atascadero hillside developments that predate current best practices and codes	Community Development / Public Works	Deleted
AT.18	Landslide	Focus on proposed new developments to determine if soils stabilization is economically feasible. If the soils stabilization is not economically feasible deny, the proposed development or rezone	Community Development / Public Works	Deleted
AT.19	Drought and Water Shortage	Implement the water demand management strategies outlined in the Atascadero Mutual Water Company Urban Water Management Plan	Community Development / Public Works/ Atascadero Mutual Water Company	Deleted

B.5.3 Mitigation Actions

The LPT for the City of Atascadero identified and prioritized the following mitigation actions based on the risk assessment. Background information and information on how each action will be implemented and administered, such as ideas for implementation, responsible office, potential funding, estimated cost, and timeline are also included. Actions were prioritized using the process described in Section 7.2.1 of the Base Plan. Actions with an ** are those that mitigate losses to future development.



Table B-29 City of Atascadero's Mitigation Action Plan

MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
AT.1	Dam Incident	Perform inspections, maintenance, and repairs for Atascadero Lake dam and spillway. Install rock armoring on lake side of dam as funding becomes available.	City of Atascadero Public Works	\$500,000 FEMA HMA	Medium	2-3 yrs.	In Progress. Dam Inundation mapping and EAP complete.
AT.2	Dam Incident	Minimize development along the Salinas River. Maintain setback and open space zoning to the greatest extent possible along the River and continue the enforcement of existing land use ordinances	Community Development/Public Works	Little to no cost. Staff Time/Dept. Budget	Low	Annual Implementation	In Progress
AT.3	Wildfire	Wildfire Evacuation Routes. Seek options to improve city road systems to improve emergency access and egress and emergency evacuation times. Benefits: Improved road widths and clearance; enhanced residence evacuation times in high fire severity zones; elimination or reductions in loss of life	Atascadero Fire & Emergency Services/ Public Works	\$5M-\$10M FEMA HMA	High	More than 5 yrs.	In Progress
AT.4	Wildfire	Continue to educate public on wildland fire safety	Fire Dept.	Little to no cost. CA Fire Safe Council, General Fund, FEMA HMA	High	Annual Implementation	In Progress



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
AT.5	Wildfire	Continue the enforcement on the Weed Abatement Ordinance. Continue to seek annual grant funding for the residential chipping program.	Fire Dept.	Little to no cost. CA Fire Safe Council, General Fund, FEMA HMA	High	Annual Implementation	In Progress
AT.6	Wildfire	Maintain and revise the CWPP	Fire Dept.	Little to no cost. CA Fire Safe Council, General Fund, FEMA HMA	High	3-5 years	In Progress. To be updated in 2025.
AT.7	Wildfire	Continue to conduct current fuel management programs and investigate and apply new and emerging fuel management techniques.	Fire Dept.	Little to no cost. CA Fire Safe Council, General Fund, FEMA HMA	High	Annual Implementation	In Progress
AT.8	Adverse Weather - Wind	Debris Management Plan Development. Develop a debris management plan to handle slash and leaf accumulation produced by a wind or storm event. Benefits: Reduced impacts due to debris accumulation	Public Works/ Fire and Emergency Services	\$100,000 every 5 years. FEMA HMA	Medium	3-5 yrs.	In Progress
AT.9	Adverse Weather - Wind	Continue to communicate with Pacific Gas and Electric on new at-risk populations that may be affected by their PSPS events. Benefits: reduced impacts to at risk populations from rolling blackouts.	Public Works/ Fire and Emergency Services	Little to no cost. Staff Time/Dept. Budget	High	1 yr.	In Progress



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
AT.10	Earthquake	Continue to enforce Uniform Building Code (UBC) provisions pertaining to grading and construction related to seismic hazards.	Community Development/ Public Works	Little to no cost. General Fund/Staff Time/Dept. Budget	Medium	Annual Implementation	In Progress
AT.11	Earthquake	Continue to implement an Unreinforced Masonry (URM) building program that determines the structural safety of City owned critical facilities, and retrofit as necessary	Community Development/ Public Works	Little to no cost. General Fund/Staff Time/Dept. Budget	Medium	Annual Implementation	In progress
AT.12	Subsidence and Expansive Soils	Continue to require a Soils Report for all new building permits	Community Development	Little to no cost. General Fund/Staff Time/Dept. Budget	Medium	Annual Implementation	In Progress. Required for all buildings over 1K square ft.
AT.13	Flood	During the plan check process utilize GIS to ensure the building project meets current Flood Damage Prevention Regulations prior to the issuance of building permits	Community Development/ Public Works	Little to no cost. General Fund/Staff Time/Dept. Budget	Medium	Annual Implementation	In Progress
AT.14	Landslide	The City's Hillside Development Standards and Creekside Development Standards for all new development projects.	Community Development/ Public Works	Little to no cost. General Fund/Staff Time/Dept. Budget	Medium	Annual Implementation	In Progress
AT.15	Landslide	Located and identify unstable soils through the use of GIS and soil maps	Community Development/ Public Works	Little to no cost. General Fund/Staff Time/Dept. Budget	Medium	Annual Implementation	In Progress



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
AT.16	Hazardous Materials	Continue to monitor the manufacture, storage, and transport of hazardous materials by working with environmental health and public safety agencies to identify effective mitigation actions or requirements that will help reduce the risk of incidents, including the spread of released materials.	Fire Dept.	Little to no cost. Staff Time/Dept. Budget	Low	Annual Implementation	New in 2025
AT.17	Extreme Heat	Initiate an extreme heat public awareness and educational campaign to discuss the dangers of extreme heat, steps each individual can personally take during periods of extreme heat and ways to reduce energy consumption during periods of extreme heat.	Fire Dept.	Little to no cost. Staff Time/Dept Budget	Low	1 yr.	New in 2025
AT.18	Wildfire, Flood, Landslide	Educate the planning staff, City administrative staff and elected officials on the importance of keeping up to date on trends and developments in ,disaster preparedness. Attendance at seminars and lectures on the specific hazards would enable staff to make appropriate recommendations to the governing bodies as they go about the process of approving new developments.	Fire Dept.	Little to no cost. Staff Time/Dept Budget	Low	Annual Implementation	New in 2025
AT.19	Wildfire, Landslide, Flood, Dam Failure	Create a GIS-based pre-application review for new construction and major remodels in hazard areas, such high wildfire severity zones, moderate landslide susceptibility areas, and dam failure inundation zones.	Fire Dept.	Little to no cost. Staff Time/Dept Budget	Low	1 yr.	New in 2025
AT.20	Flood	Reinforce roads from flooding through protection activities, including elevating the road and installing/widening culverts	Fire Dept.	Little to no cost. Staff Time/Dept. Budget	Low	1 yr.	New in 2025



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
		beneath the road or upgrading storm drains.					
AT.21	Wildfire/ Flood	Ability to fast track cleanup efforts in the Salinas Riverbed with approvals through Fish and Wildlife, or other agencies involved in environmentally sensitive areas	Fire Dept.	Little to no cost. Staff Time/Dept. Budget	Low	1 yr.	New in 2025
AT.22	Adverse Weather: Thunderstorm Adverse Weather: Extreme Heat and Wind; Flood, Wildfire, Drought, Coastal Storm, Dam Incident, Landslide, Subsidence, Tsunami	Regularly review and continue to maintain consistency between the Safety Element, Municipal Code, zoning regulations, hazard area maps, and LHMP implementation strategies. Review the implementation and impacts of SB1069 Land use zoning	Fire Dept.	Little to no cost. Staff Time/Dept Budget	Low	Annual Implementation	New in 2025
AT.23	Adverse Weather, Biological, Earthquake, Flood, Wildfire, Hazardous Materials	Continue to enforce local codes, ordinances, and standards pertaining to safe development and resiliency to natural and human-caused hazards.	Fire Dept.	Little to no cost. Staff Time/Dept Budget	Low	Annual Implementation	New in 2025
AT.24	Hazardous Materials	Continue requiring businesses that use, store, or transport hazardous materials to ensure that adequate measures are taken to protect public health and safety.	Fire Dept.	Little to no cost. Staff Time/Dept Budget	Low	Annual Implementation	New in 2025



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
AT.25	Adverse Weather: Extreme Heat and Wind; Drought and Water Supply	Support ongoing urban forest maintenance and tree trimming programs, to include planting drought-resistant trees and plants.	Fire Dept.	Little to no cost. Staff Time/Dept Budget	Low	2-3 months	New in 2025
AT.26	Wildfire	Work to become a fire risk reduction community: Promote the effectiveness of defensible space in neighborhoods that have a high wildfire risk. Encourage neighbors to be accountable for not only their defensible space but also their neighborhoods. Help neighborhoods to facilitate the creation of NEPA Firewise uSA.	Atascadero Fire & Emergency Services, San Luis Obispo Fire Safe Council	Little to no cost.	Medium	3-5 Years	New in 2025



B.6 Implementation and Maintenance

Moving forward, the city will use the mitigation action table in the previous section to track progress on implementation of each project. As illustrated in Section 7.3.1 of the county plan, much progress has been made since the plan was originally developed. Implementation of the plan overall is discussed in Section 7 of the base plan. As the city is not the water purveyor, measures related to water supply monitoring, potable water quality standards and resilient water treatment and distribution systems will be managed by the mutual water company.

B.6.1 Incorporation into Existing Planning Mechanisms

The information contained within this plan, including results from the Vulnerability Assessment, and the Mitigation Strategy will be used by the city to help inform updates and the development of local plans, programs and policies. The Engineering Division may utilize the hazard information when implementing the city's Capital Improvement Plan and the Planning and Building Divisions may utilize the hazard information when reviewing a site plan or other type of development applications. The city will also incorporate this LHMP into the Safety Element of their General Plan, as recommended by Assembly Bill (AB) 2140.

As noted in Section 8 Implementation and Monitoring, the HMPC representatives from Atascadero will report on efforts to integrate the hazard mitigation plan into local plans, programs and policies and will report on these efforts at the annual HMPC plan review meeting.

B.6.2 Monitoring, Evaluation and Updating the Plan

The city will follow the procedures to monitor, review, and update this plan in accordance with San Luis Obispo County as outlined in Section 8 of the Base Plan. The city will continue to involve the public in mitigation, as described in Section 8.3 of the Base Plan. The Fire Chief will be responsible for representing the city in the county HMPC, and for coordination with city staff and departments during plan updates. The city realizes it is important to review the plan regularly and update it every five years in accordance with the Disaster Mitigation Act Requirements as well as other State of California requirements.



Annex C City of Grover Beach

C.1 Community Profile

C.1.1 Mitigation Planning History and 2025 Process

This annex was updated in 2025 to build upon the previous version created for the 2019 San Luis Obispo Hazard Mitigation Plan update. This 2025 Annex update also includes input from the previous versions of the Multi-Jurisdictional Local Hazard Mitigation Plan for the City of Grover Beach, last completed in 2012, as well as the Lucia Mar Unified School District and South San Luis Obispo County Sanitation District plans. The city has used the previous mitigation plan as a basis for the Emergency Operations Plan. A review of jurisdictional priorities found no significant changes in priorities since the last update.

The city's Local Planning Team (LPT) held responsibility for implementation and maintenance of the plan; members are noted below.

Table C-1 Grover Beach Hazard Mitigation Plan Local Planning Team

DEPARTMENT	TITLE
Five Cities Fire Authority	Fire Chief
City of Grover Beach	Community Development Director
City of Grover Beach	Senior Planner
City of Grover Beach	Associate Planner
City of Grover Beach	Public Works Director
City of Grover Beach	CIP Manager
Grover Beach Police	Chief of Police
City of Grover Beach	Community Services Supervisor

Additionally, the plan must document opportunities for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies with the authority to regulate development, as well as businesses, academia, and other private and non-profit interests, to actively participate in the planning process. At least one point of contact for each stakeholder group should be listed below.

Table C-2 Stakeholder Groups, Neighboring Communities, and Local Agencies

STAKEHOLDER GROUP	ORGANIZATIONS
Agencies involved in hazard mitigation activities:	County OES
Agencies that have the authority to regulate development:	California Coastal Commission
	Regional Water Quality Control Board (RWQCB)
Neighboring Communities:	City of Arroyo Grande
	City of Pismo Beach
	Oceano (County of SLO)
Representatives of business academia, and other private orgs:	Lucia Mar Unified School District
Representatives supporting underserved communities	5Cities Homeless Coalition
	Housing Authority of San Luis Obispo



STAKEHOLDER GROUP	ORGANIZATIONS
	People's Self-Help Housing
	Transitional Mental Health Association (THMA) of San Luis Obispo

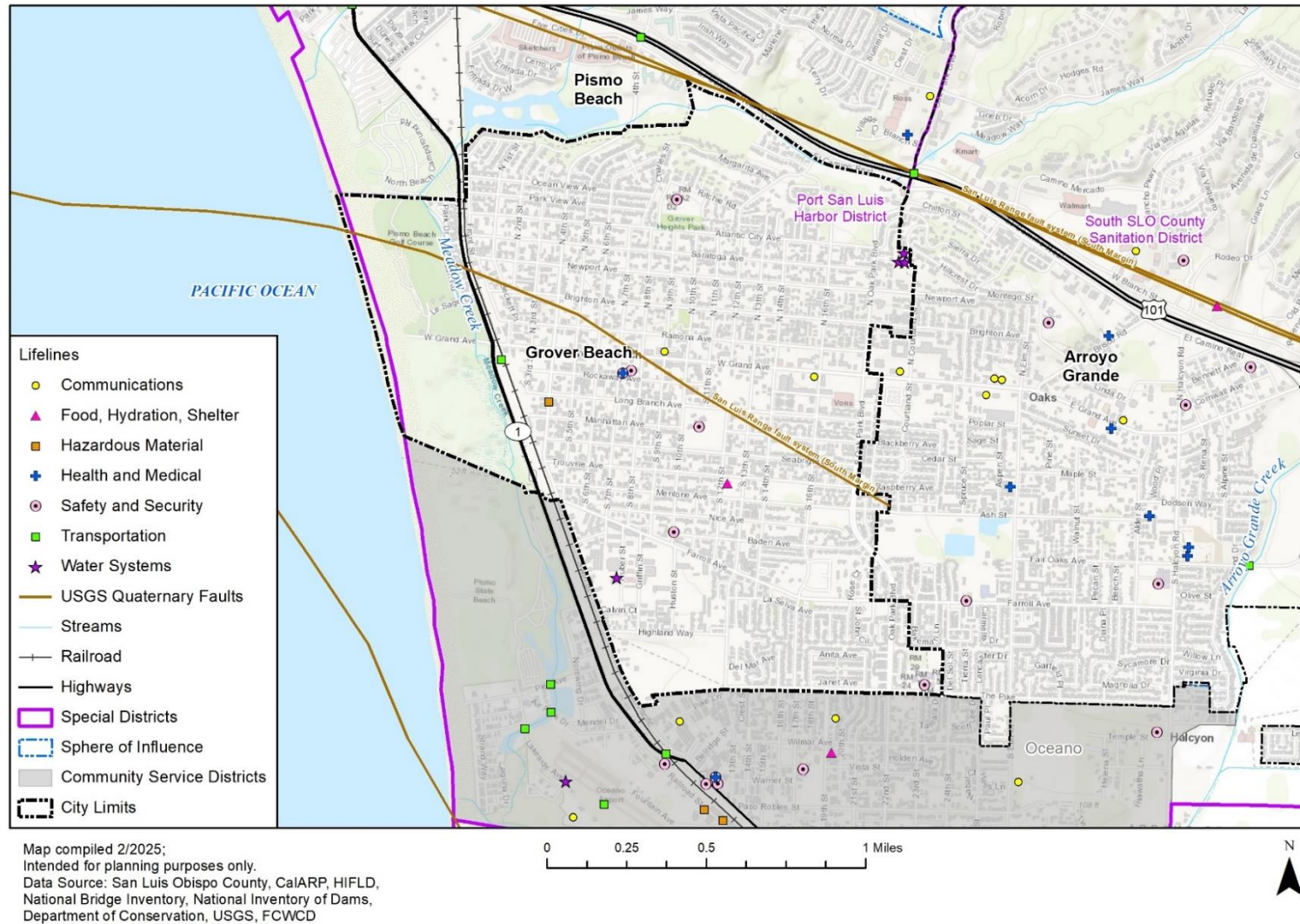
More details on the planning process and how the jurisdictions, service districts and stakeholders participated can be found in Chapter 3 of the Base Plan, as well as how the public was involved during the 2025 update.

C.1.2 Geography and Climate

The City of Grover Beach is a coastal community located in the south county area of San Luis Obispo County. Grover Beach has wide sandy beaches with coastal dunes and is a gateway to Pismo State Beach and Oceano Dunes State Vehicular Recreational Area. According to the city's 2019 LHMP, Grover Beach has an average high temperature in the summer months of 76°F to 80°F and average low temperatures of 62°F to 65°F in the winter months. The hottest months are August and September, with average highs of 80°F. The jurisdiction receives 17.1 inches of rainfall in an average year. While the average temperature is relatively temperate, summer and winter months bring unique weather patterns to the region. Figure C-1 displays a map and the location within San Luis Obispo County of the City of Grover Beach planning area.



Figure C-1 The City of Grover Beach





C.1.3 History

On August 1, 1887, Dwight William Grover founded the Town of Grover after purchasing the land for \$22,982.20 in gold from John Michael Price, the founder of Pismo Beach. Grover promoted his town as “the place where the tide lands and the rails meet” and had a vision of a community that had a hotel and a train station near the beach. Grover and his partner George Gates laid out a street grid pattern and promoted the community as Grover City, the “grandest summer and winter seaside resort on the Pacific Coast.”

Development didn’t flourish in Grover City until 1935 when Horace V. Bagwell bought 1,100 acres and advertised Grover City as the “home of the average man” with land prices affordable to the working man. People and development began to happen and by the mid-1940s the first store opened in Grover City followed by the first post office. The Fair Oaks Fire District and the Grover City Water District were formed in 1949 and supported a boom in population throughout the 1950s. On December 21, 1959, the people of Grover City voted to incorporate and become the City of Grover City. In 1992, the city had become more established, and the residents of Grover City decided to rename the community to “Grover Beach”. By 1996 the train station Dwight William Grover dreamed of became a reality when Amtrak began rail service at a newly constructed Grover Beach Train Station.

C.1.4 Economy

Based on the 2018-2023 American Community Survey (ACS) Grover Beach’s labor force is estimated to be 6,892 people. The city’s economic base primarily consists of employees within educational services, health care and social services, which account for 18.8% of jobs. The second largest type of industry in the city is construction (15.3%) followed by arts, entertainment, and food services at 14.1% of employment. Unemployment has dropped from 3.6% in 2018 to 2.2% in 2023.

Table C-3 shows how Grover Beach’s labor force breaks down by occupation estimates from the U.S. Census Bureau’s American Community Survey 5-year estimate.

**Table C-3 City of Grover Beach's Employment by Industry, 2018-2023**

INDUSTRY	# EMPLOYED	%
Population (2023)	12,687	
In Labor Force	6,892	65.8%
Agriculture, forestry, fishing and hunting, and mining	164	2.5%
Construction	1,020	15.3%
Manufacturing	233	3.5%
Wholesale trade	51	.8%
Retail trade	876	13.2%
Transportation and warehousing, and utilities	414	6.2%
Information	281	4.2%
Finance and insurance, and real estate and rental and leasing	250	3.8%
Professional, scientific, and management, and administrative and waste management services	456	6.8%
Educational services, health care and social assistance	1,255	18.9%
Arts, entertainment, recreation, and accommodation and food services	936	14.1%
Other services, except public administration	386	5.8%
Public administration	335	5%
Unemployed	235	2.2%

Source: U.S. Census Bureau American Community Survey 2018-2023, 5-Year Estimates, www.census.gov/

Table C-4The table above shows how the City of Grover Beach's labor force breaks down by occupation based on estimates from the 2018-2023 five-year American Community Survey. Table C-4 shows how the City of Grover Beach's labor force breaks down by occupation based on estimates from the 2018-2023 five-year American Community Survey.

Table C-4 City of Grover Beach Employment by Occupation (2023)

INDUSTRY	# EMPLOYED	%
Population (2023)	12,687	
In Labor Force	6,657	65.8%
Management, business, science, and arts occupations	2,069	31.1%
Service occupations	1,529	23%
Sales and office occupations	1,515	22.8%
Natural resources, construction, and maintenance occupations	1,106	16.6%
Production, transportation, and material moving occupations	438	6.6%

Source: U.S. Census Bureau American Community Survey 2018-2023 5-Year Estimates, www.census.gov/

C.1.5 Population

According to data extracted by the U.S. Census Bureau's American Community Survey 5-Year Estimates (2018-2023), the total population for the City of Grover Beach was estimated at 12,687 persons in 2023. This is down 6.3% since 2018. Note in Table C-5 that the city's median household income (\$114,044) is above both the county (\$93,398) and the state (\$96,334), although the median home price (\$691,900) is slightly below average for the county (\$777,200). Note in Table C-5 that the city's median household income (\$114,044) is above both the county (\$93,398) and the state (\$96,334), although the median home price (\$691,900) is slightly below average for the county (\$777,200). The percentage of individuals living below the poverty level (12.7%) is similar to the County level (12.8%), and California as a whole (12%). The number of



individuals who speak English less than “very well” is also between the county and state averages (5.8% and 17.3% respectively).

The LPT noted areas of improvement for outreach and partnerships could include monitoring vulnerable communities and functional needs populations during extreme heat events or severe weather. Elderly and disabled populations may have a more difficult time accessing emergency shelters, transportation, or being alerted to early warning systems. They also noted that those reliant on medical equipment are particularly vulnerable to power outages. There has been a 21.3% increase in the population with a disability as shown in Table C-5.

Table C-5 City of Grover Beach Demographic and Social Characteristics, 2018-2023

CITY OF GROVER BEACH	2018	2023	% CHANGE
Population	13,538	12,687	-6.3%
Median Age	38.3	40.5	+5.7%
Total Housing Units	5,748	5,757	+1.6%
Housing Occupancy Rate	90.7%	86.4%	-4.7%
% of Housing Units with no Vehicles Available	4.2%	2.6%	-38.1%
Median Home Value	\$464,000	\$691,900	+49.1%
Unemployment	3.6%	2.2%	-39.9%
Mean Travel Time to Work (minutes)	23	18.8	-18.3%
Median Household Income	\$105,577	\$114,044	+8%
Per Capita Income	\$31,949	\$41,607	+30.2%
% of Individuals Below Poverty Level	13.6%	12.7%	-6.6%
# of Households	5,216	4,973	-4.7%
Average Household Size	2.59	2.54	-1.9%
% of Population Over 25 with High School Diploma	83.5%	99.1%	+18.7%
% of Population Over 25 with Bachelor's Degree or Higher	24.5%	30.7%	+25.3%
% with Disability	15%	18.2%	+21.3%
% Speak English less than “very well”	8.2%	13.2%	+61%

Source: U.S. Census Bureau American Community Survey 2018-2023 5-Year Estimates, www.census.gov/

C.1.6 Development Trends

Grover Beach is a predominantly infill community. The opportunity for future expansion beyond city limits is limited. Future growth is focused on implementing the Housing Element to meet the Regional Housing Needs Allocation (RHNA), the West Grand Avenue corridor, and the Industrial area (focus on broadband infrastructure, precision manufacturing and job sector growth), with emphasis on higher density and affordable housing projects. Quality mixed use, infill housing and ADUs will continue to dominate residential development, especially in existing neighborhoods.

Development in or near the 100-year or 500-year floodplain will require FEMA compliance and floodplain management measures. Areas along Meadow Creek may be particularly vulnerable depending on the severity of the weather event. Limited areas of the city may be subject to liquefaction. A geotechnical analysis would be required in areas with unstable soil conditions for new development to ensure appropriate construction methods mitigate any risks.

Grover Beach has a limited Wildfire Urban Interface (WUI), with the latest state fire maps indicating designated wildfire severity areas are confined to land within or adjacent to state



park boundaries. Any new development in these areas would be required to employ fire resistant construction materials and methods, along with strict compliance with applicable fire codes.

The following figures from the San Luis Obispo County Council of Governments (COG), 2050 Regional Growth Forecast for San Luis Obispo County show the projected population and housing unit growth between 2010 and 2050. According to the COG's document, the city's population is projected to increase to over 15,000 residents by 2050. However, the population saw a 6.3% decrease from 2018 to 2023. The World Population Review indicates that most recent population numbers from 2024 have Grover Beach population at 12,495. This is a 1.5% decrease in population than what was recorded in the American Community Survey for 2023, which was 12,687. Although projections show an increase in population and housing units, recent data shows they might continue to decrease.

Figure C-2 City of Grover Beach Population Projections, 2010 to 2050

Jurisdiction	2010	2015	2020	2025	2030	2035	2040	2045	2050
Arroyo Grande	17,252	17,678	18,288	18,956	19,505	19,930	20,158	20,293	20,449
Atascadero	28,310	30,401	31,384	32,240	33,043	33,703	34,063	34,278	34,538
Grover Beach	13,156	13,340	13,751	14,183	14,536	14,804	14,934	15,001	15,091
Morro Bay	10,234	10,640	11,025	11,401	11,715	11,961	12,092	12,169	12,261
Paso Robles	29,793	31,348	32,755	34,314	35,582	36,561	37,130	37,487	37,858
Pismo Beach	7,655	8,068	8,642	9,122	9,486	9,753	9,901	9,989	10,079
San Luis Obispo	45,119	45,950	47,214	48,601	49,759	50,659	51,105	51,347	51,672
Incorporated Cities	151,519	157,425	163,059	168,817	173,626	177,371	179,383	180,564	181,948
Unincorporated Area	118,118	118,950	123,597	128,279	132,066	134,975	136,539	137,461	138,534
Regional Total:	269,637	276,375	286,657	297,095	305,692	312,346	315,922	318,025	320,482

Source: U.S. Census Bureau (2010 Census), State of California, Department of Finance (2015), Beacon Economics (forecast years)

Source: 2050 Regional Growth Forecast for San Luis Obispo County, San Luis Obispo Council of Governments and Beacon Economics, June 2017

Figure C-3 City of Grover Beach Housing Unit Projections, 2010 to 2050

Jurisdiction	2010	2015	2020	2025	2030	2035	2040	2045	2050
Arroyo Grande	7,628	7,740	8,228	8,541	8,767	8,949	9,054	9,122	9,186
Atascadero	11,505	11,875	12,845	13,553	14,077	14,501	14,767	14,995	15,120
Grover Beach	5,748	5,770	6,102	6,274	6,409	6,531	6,610	6,670	6,728
Morro Bay	6,320	6,378	6,785	7,010	7,190	7,325	7,384	7,409	7,433
Paso Robles	11,426	11,706	12,343	12,949	13,452	13,843	14,071	14,215	14,342
Pismo Beach	5,585	5,649	6,089	6,227	6,364	6,517	6,629	6,707	6,768
San Luis Obispo	20,553	20,887	21,786	22,165	22,388	22,534	22,655	22,658	22,816
Incorporated Cities	68,765	70,005	74,178	76,719	78,646	80,200	81,170	81,775	82,395
Unincorporated Area	48,550	49,692	50,672	52,449	53,814	54,929	55,486	55,888	56,244
Regional Total:	117,315	119,697	124,850	129,168	132,460	135,129	136,657	137,664	138,640

Source: U.S. Census Bureau (2010 Census), State of California, Department of Finance (2015), Beacon Economics (forecast years)

Source: 2050 Regional Growth Forecast for San Luis Obispo County, San Luis Obispo Council of Governments and Beacon Economics, June 2017

Grover Beach has experienced steady development over the past five years. Only recently has the city seen marked increase in residential development along West Grand Avenue for both market-rate and affordable housing. Residential projects have largely focused on infill



opportunities, Accessory Dwelling Unit construction, and new multi-family development including a 53-unit 100% affordable housing project managed by People's Self-help Housing, and three multi-unit housing projects that will result in 135 new market-rate units. Out of these 135 new market-rate units, three of the unit will be affordable units (low income to moderate income and deed restricted).

Commercial development in the city has trended toward tourism in the recent years. Two new hotels planned on El Camino Real are set to open in Summer of 2025 and 2026. Commercial low-lying areas may face flood risks; however, the city's development standards require erosion and sedimentation control as well as drainage upgrades to improve resiliency to mitigate these vulnerabilities.

C.2 Hazard Identification and Summary

The Grover Beach Lead Planning Team (LPT) identified the hazards that affect the city and summarized their frequency of occurrence, spatial extent, potential magnitude, and significance specific to Grover Beach. There are no hazards that are unique to Grover Beach. The overall hazard significance considers the geographic area, probability and magnitude as a way to identify priority hazards for mitigation purposes. This is discussed further in the Vulnerability Assessment Section.

Table C-6 City of Grover Beach - Hazard Summaries

HAZARD	GEOGRAPHIC AREA	PROBABILITY OF FUTURE OCCURRENCE	MAGNITUDE/ SEVERITY (EXTENT)	OVERALL SIGNIFICANCE
Adverse Weather: Thunderstorm/ Heavy Rain/ Lightning/ Dense Fog/ Freeze	Significant	Likely	Limited	Low
Adverse Weather: High Wind/ Tornado	Significant	Likely	Negligible	Low
Adverse Weather: Extreme Heat	Extensive	Occasional	Negligible	Low
Coastal Storm/Coastal Erosion/Sea Level Rise	Limited	Occasional	Limited	Low
Dam Incidents	Extensive	Unlikely	Catastrophic	Medium
Drought and Water Shortage	Extensive	Likely	Limited	High
Earthquake	Extensive	Occasional	Critical	High
Flood	Limited	Occasional	Limited	Low
Tsunami and Seiche	Limited	Occasional	Limited	Low
Wildfire	Limited	Occasional	Limited	Low
Human Caused: Hazardous Materials	Limited	Highly Likely	Negligible	Low
Geographic Area Limited: Less than 10% of planning area Significant: 10-50% of planning area Extensive: 50-100% of planning area Probability of Future Occurrences Highly Likely: Near 100% chance of occurrence in next year or happens every year. Likely: Between 10 and 100% chance of occurrence in next year or has a recurrence interval of 10 years or less. Occasional: Between 1 and 10% chance of occurrence in the next year or has a recurrence interval of 11 to 100 years.		Magnitude/Severity (Extent) Catastrophic—More than 50 percent of property severely damaged; shutdown of facilities for more than 30 days; and/or multiple deaths Critical—25-50 percent of property severely damaged; shutdown of facilities for at least two weeks; and/or injuries and/or illnesses result in permanent disability Limited—10-25 percent of property severely damaged; shutdown of facilities for more than a week; and/or injuries/illnesses treatable do not result in permanent disability		



HAZARD	GEOGRAPHIC AREA	PROBABILITY OF FUTURE OCCURRENCE	MAGNITUDE/ SEVERITY (EXTENT)	OVERALL SIGNIFICANCE
Unlikely: Less than 1% chance of occurrence in next 100 years or has a recurrence interval of greater than every 100 years.			Negligible—Less than 10 percent of property severely damaged, shutdown of facilities and services for less than 24 hours; and/or injuries/illnesses treatable with first aid Significance Low: minimal potential impact Medium: moderate potential impact High: widespread potential impact	

C.3 Vulnerability Assessment

The intent of this section is to assess Grover Beach’s vulnerability separately from that of the county as a whole, which has already been assessed in Section 5.3 Risk Assessment in the Base Plan. This vulnerability assessment analyzes the population, property, and other assets at risk to hazards ranked of medium or high significance that may vary from other parts of the planning area.

The information to support the hazard identification and risk assessment was based on the previous LHMP for the city. A Local Hazard Mitigation Plan Update Guide and associated worksheets was distributed to each participating municipality or special district to complete during the 2025 update process. Information collected was analyzed and summarized to identify and rank all the hazards that could impact anywhere within the County, as well as to rank the hazards and identify the related vulnerabilities unique to each jurisdiction.

Each participating jurisdiction was in support of the main hazard summary identified in the Base Plan (See Table 5.2). However, the hazard summary rankings for each jurisdictional annex may vary slightly due to specific hazard risk and vulnerabilities unique to that jurisdiction. Identifying these differences helps the reader to differentiate the jurisdiction’s risk and vulnerabilities from that of the overall County.

Note: The hazard “Significance” reflects overall ranking for each hazard and is based on the City of Grover Beach’s Planning Team member input from the Data Collection Guide and the risk assessment developed during the planning process (see Chapter 5 of the Base Plan), which included a more detailed qualitative analysis with best available data.

C.3.1 Other Hazards

The following hazards identified in the base plan HIRA are not identified within this jurisdictional annex due to no risk or insignificant anticipated impacts and are not considered further for vulnerability assessment or mitigation actions:

- Agricultural Pest Infestation, Plant Disease, and Marine Invasive Species
- Biological agents
- Landslide and Debris Flow
- Subsidence

C.3.2 Assets at Risk

This section considers Grover Beach’s assets at risk, including values at risk, critical facilities and infrastructure, historic assets, economic assets, and growth and development trends.



C.3.2.1 Values at Risk

The following data on property exposure is derived from the San Luis Obispo County 2024 Parcel and Assessor data. This data should only be used as a guideline to overall values in the city as the information has some limitations. It is important to note that in the event of a disaster, it is generally the value of the infrastructure or improvements to the land that is of concern or at risk. Generally, the land itself is not a loss. The table below shows the exposure of properties (e.g., the values at risk) broken down by property type for the City of Grover Beach.

Table C-7 Total Exposure by Property Type

PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE
Agricultural	1	\$3,498	\$3,498	\$6,996
Commercial	259	\$105,727,455	\$105,727,455	\$211,454,910
Exempt	20	\$5,014,580	\$5,014,580	\$10,029,160
Industrial	57	\$30,702,216	\$46,053,324	\$76,755,540
Mixed Use	680	\$152,085,667	\$152,085,667	\$304,171,334
Mobile/Manufactured Homes	38	\$3,521,408	\$1,760,704	\$5,282,112
Multi-Family Residential	444	\$163,244,537	\$81,622,269	\$244,866,806
Residential	3,153	\$684,446,062	\$342,223,031	\$1,026,669,093
Vacant Improved	18	\$4,155,398	-	\$4,155,398
Total	4,670	\$1,148,900,821	\$734,490,528	\$1,883,391,349

Source: San Luis Obispo County Assessor Data November 15, 2024, WSP GIS Analysis

C.3.2.2 Critical Facilities and Infrastructure

A critical facility may be defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. In The City of Grover Beach there are 16 critical facilities as shown in Table C-8 below. See Section 5 of the Base Plan for more details on the definitions and categories of critical facilities.

An inventory of critical facilities in the City of Grover Beach from San Luis Obispo County GIS is provided in appendix G as well as illustrated in Figure C-1.

Table C-8 City of Grover Beach's Critical Facilities

FACILITY TYPE	COUNTS
Communications	2
Food, Hydration, Shelter	1
Hazardous Materials	1
Health and Medical	1
Safety and Security	6
Transportation	1
Water Systems	4
Total	16

Source: San Luis Obispo County, CalARP, HIFLD, National Bridge Inventory, National Inventory of Dams, FCWCD, WSP Analysis

C.3.2.3 Transportation and Lifeline Facilities

State Route 1 and U.S. Highway 101 border the City of Grover Beach on the west and the northeast of the city limits. Route 1 serves as a two-lane arterial for the city and merges with Highway 101 north of the city. In addition to these major transportation routes adjacent to Grover Beach, the city also offers multi-modal transportation options for residents including



bike lanes, bus routes and the Grover Beach Train Station. According to the City's 2022 Safety Element Update the Grover Beach Train Station is listed as being vulnerable to earthquakes, flooding, wildfire and tsunami hazards. Other vulnerable city owned transportation and lifeline facilities were noted in the Safety Element with a combined value of nearly \$50 million.

C.3.2.4 Historic and Cultural Resources

While the City of Grover Beach has no registered state or federal historic sites, there are several assets within Grover Beach that define the community and represent the city's history. Many of the historical sites of importance to Grover Beach have been converted into different uses but the historic buildings still stand. In honor of the City's 50th Anniversary a self-guided tour pamphlet was created and lists the following historic sites.

- Grover Beach City Hall – 154 South 8th Street
- Precision Automotive (now Grover Beach Fire Station) – 701 Rockaway Avenue
- Grover City Hall/Fire Department (now Exploration Station) – 967 Ramona Avenue
- Grover City Development (now Spoon Trade Restaurant) – 295 West Grand Avenue
- White's Malt Shop (now Enterprise Rental Car) – 502 West Grand Avenue
- The Keen Agency (now Taco De Mexico) – 791 West Grand Avenue
- Marshall – Spoo Sunset Funeral Chapel – 1239 Longbranch Avenue
- Yeackel's / Fairlane Department Store (now Ron's Nursery)– 850 West Grand Avenue
- Grover City Shoe – (now South County Sanitary) – 866 West Grand Avenue
- Greg's Restaurant (DarWish Cuisine) – 967 West Grand Avenue
- Grover City Pharmacy (now Green Bargain) – 901 West Grand Avenue
- First Southern Baptist Church (now Beacon Chiropractic) 902 West Grand Avenue
- Grover City Feed Store (now Ben's Computer Outlet) – 983 West Grande Avenue
- Blinking Owl (now Villa Del Mar) – 110 West Grand Avenue
- Pizza Fresh – 1301 West Grand Avenue;
- Mobile Station (now Nan's Bookstore) – 1328 West Grand Avenue
- Spears Residence (now Salon Dee) – 122 North 16th Street This is now Hogge Insurance Services
- A&W Root Beer (now Higher Grounds) – 1754 Grande Avenue this is now Crossroads Cafe

Source: City of Grover Beach Historic Self-Guided Tour <http://www.grover.org/DocumentCenter/Home/View/1455>

C.3.2.5 Natural Resources

Natural resources are important to include in benefit-cost analyses for future projects and may be used to leverage additional funding for projects that also contribute to community goals for protecting sensitive natural resources. The City of Grover Beach has designated areas on the coast as Coastal Open Space Zone; according to the City of Grover Beach Local Coastal Program (2014) this zone is designed to protect and preserve sensitive natural areas including but not limited to those containing significant habitat areas, rare or endangered plant and animal species, and erosion-prone lands. Awareness of natural assets and designated natural areas can lead to opportunities for meeting multiple objectives. For instance, protecting wetlands areas protects sensitive habitat as well as attenuates and stores floodwaters.

C.3.2.6 Economic Assets

Tourism and the industries that support tourists and tourism activities are one of the greatest economic assets in the City of Grover Beach. Additionally, the commercial cannabis industry has taken off and has become a critical economic asset for the city in terms of tax revenue. The



city is located close to multiple destinations including Pismo State Beach, Oceano Dunes State Recreation Area, and the Guadalupe-Nipomo Dunes National Wildlife Refuge.

The LPT reviewed the economic strengths and competitive advantages listed in the City of Grover Beach Final Economic Development Strategy (April 11, 2017), and identified the following:

- Grover Beach is one of the few areas within the Southern SLO County area that has undeveloped industrial land, however these properties are quickly transforming into developed industrial and commercial holdings.
- Growth in commercial cannabis. The commercial cannabis industry has played a major role in the last few years in redeveloping properties, as well as new industrial construction within the undeveloped industrial zone. The city will continue to be a future “synergy” location for commercial cannabis within San Luis Obispo County with testing labs, manufacturing, warehousing, and retail sales of commercial cannabis.
- Transient occupancy tax revenue recovered quickly following the Great Recession. Development of additional lodging facilities including the Springhill Suites, located at 950 El Camino Real, La Quinta Inn at 1598 El Camino Real, and the future Grover Beach Lodge at 55 West Grand Avenue will provide Grover Beach the opportunity to increase tourism to the community.
- Higher quality retail and food service establishments have entered the market and increased the city’s regional draw
- Grover Beach has a reputation as a business-friendly community with a local government that is easy to work with, compared to other communities.

C.3.3 Estimating Potential Losses

Note: This section details vulnerability to specific hazards of high or medium significance, where quantifiable, and/or where (according to Planning Team member input) it differs from that of the overall County.

Table C-8 above shows Grover Beach’s exposure to hazards in terms of number and value of structures. San Luis Obispo County’s parcel and assessor data was used to calculate the improved value of parcels. The most vulnerable structures are those in the floodplain (especially those that have been flooded in the past), unreinforced masonry buildings, and buildings built prior to the introduction of modern-day building codes. Impacts of past events and vulnerability to specific hazards are further discussed below. (See Section 5.1 for more detailed information about these hazards and their impacts on San Luis Obispo County as a whole.)

C.3.3.1 Adverse Weather: Thunderstorm/ Heavy Rain/ Lightning/ Dense Fog/ Freeze

The City of Grover Beach’s risk and vulnerability to adverse weather conditions does not differ significantly from that of San Luis Obispo County. As a coastal city located along the southern portion of the county, Grover Beach is subject to many of same regional weather patterns particularly during storm seasons and transitional weather periods.

Similar to other areas in the county, Grover Beach is susceptible to impacts of heavy rainfall, which can overwhelm local drainage infrastructure, contribute to localized flooding- especially in low-lying areas- and create hazardous driving conditions. While thunderstorms and lightning are relatively rare, they can still pose safety risks to residents and strain electrical infrastructure when they occur. Dense fog is a common concern along the coast, particularly in the cooler months, often reducing visibility along roadways such as Highway 1 and nearby stretches of U.S. Highway 101, thereby increasing the risk of traffic-related incidents.



C.3.3.2 Adverse Weather: High Wind and Tornado

Although tornadoes are rare in Grover Beach, high wind events can occur, especially during winter storms and atmospheric river events. February 7, 2024, the city faced an unusual weather occurrence of an EF-1 tornado. The path of the tornado originated in Pismo Beach, traversing approximately 0.7 miles through Grover Beach, and dissipated near Arroyo Grande. The aftermath of this tornado caused numerous trees being uprooted or snapped, some of which fell onto vehicles and power lines. Structural damage was reported across parts of the city, including commercial areas along Gran Avenue. Critical services were also affected—facilities such as the Grover Beach Fire Department sustained damage to bay doors, while the Police Department experienced minor impacts from falling debris. Power outages were widespread, temporarily affecting over 1,600 residents.

C.3.3.3 Adverse Weather: Extreme Heat

Extreme heat is generally not considered a major hazard in Grover Beach due to its location along California's Central Coast. The city benefits from a temperate coastal climate, with frequent marine layer influence and onshore breezes that help moderate summer temperatures. Unlike inland areas of San Luis Obispo County, Grover Beach rarely experiences periods of high heat. While occasional heatwaves can impact the region, temperatures in Grover Beach typically remain several degrees cooler than those inland, often staying below critical thresholds that trigger public health warnings.

C.3.3.4 Coastal Storm/Coastal Erosion/Sea Level Rise

The City of Grover Beach has an overall **low** significance rating for coastal storms, coastal erosion, and sea level rise hazards. The jurisdiction's coastline is characterized by sandy beaches and low dunes that provide moderate protection from storm waves. However, active beach and dune erosion continues to impact low-lying recreation areas, commercial uses, and residential structures, including mobile home parks near the coast. Past events, such as severe winter storms, have caused damage to beach access infrastructure and highlight the ongoing vulnerability.

Recent sea level rise risk assessments indicate that portions of the city could be subject to future inundation from sea level rise and from the combination of sea level rise with a 1% annual chance coastal flood. While no critical facilities have been identified within the areas projected to be impacted under these scenarios, continued erosion and gradual inundation may affect private properties and public infrastructure over time. Future planning and shoreline management will be important to minimize impacts from sea level rise and coastal hazards.

Values at Risk

Table C-9 and Table C-10, below, show both properties inundated by sea level rise with and without the 1% annual chance flood at different scenarios, and also the improved value estimates. Based on the latest modeling, Grover Beach currently has no improved properties at risk under 25-centimeter or 75-centimeter sea level rise scenarios. However, under the 300-centimeter sea level rise scenario, 15 improved parcels would be impacted. These include commercial, industrial, mixed-use, multi-family residential, and single-family residential properties. When factoring in sea level rise combined with a 1% annual chance coastal flood, the number of at-risk properties increases significantly. Under the 300-centimeter sea level rise with 1% flood scenario, 38 improved parcels would be impacted, further increasing vulnerability across a range of property types, including mobile and manufactured homes.

The total improved value of properties at risk under the 300-centimeter sea level rise scenario is approximately \$6.8 million. When combined with the effects of a 1% annual chance flood, the total improved value of properties exposed increases to approximately \$13.4 million. Commercial, mixed-use, and multi-family residential properties account for the majority of the



value at risk under these combined scenarios. As sea level rise continues, even relatively moderate increases in flood elevation could expose critical sections of Grover Beach's built environment to higher risks of damage, highlighting the need for proactive planning and shoreline management strategies.

Table C-9 City of Grover Beach Properties Inundated by Sea Level Rise and Sea Level Rise with 1% Annual Chance Flood

PROPERTY TYPE	25-CM SLR	75-CM SLR	300-CM SLR	25-CM SLR W/1% FLOOD	75-CM SLR W/1% FLOOD	300-CM SLR W/1% FLOOD
Commercial	-	-	7	-	-	7
Industrial	-	-	1	-	-	4
Mixed Use	-	-	2	-	-	5
Mobile/Manufactured Homes	-	-	-	-	-	1
Multi-Family Residential	-	-	4	-	-	11
Residential	-	-	1	-	-	10
Total	0	0	15	0	0	38

Source: San Luis Obispo County Assessor Data November 15, 2024, USGS CoSMoS v3.1, WSP GIS Analysis

Table C-10 City of Grover Beach Improved Values of Properties Inundated by Sea Level Rise and Sea Level Rise with 1% Annual Chance Flood

PROPERTY TYPE	25-CM SLR	75-CM SLR	300-CM SLR	25-CM SLR W/1% FLOOD	75-CM SLR W/1% FLOOD	300-CM SLR W/1% FLOOD
Commercial	-	-	\$1,126,075	-	-	\$1,126,075
Industrial	-	-	\$69,595	-	-	\$595,988
Mixed Use	-	-	\$3,543,910	-	-	\$4,124,016
Mobile/Manufactured Homes	-	-	-	-	-	\$340,612
Multi-Family Residential	-	-	\$1,774,344	-	-	\$5,098,033
Residential	-	-	\$258,060	-	-	\$2,111,522
Total	\$0	\$0	\$6,771,984	\$0	\$0	\$13,396,246

Source: San Luis Obispo County Assessor Data November 15, 2024, USGS CoSMoS v3.1, WSP GIS Analysis

Critical Facilities at Risk

Under the 300 cm sea level rise scenario, both with and without the presence of a 1% annual chance flood, Grover Beach has one critical facility at risk, classified under the Transportation FEMA lifeline. This consistent exposure across both conditions suggests the facility is located in a low-lying area highly susceptible to long-term coastal inundation. While no other lifeline sectors show vulnerability in these scenarios, the potential disruption to transportation infrastructure could have cascading effects on evacuation routes, emergency response, and community mobility if mitigation measures are not considered.

The maps below show extents for sea level rise scenarios with tidal inundation only and with the 1% annual chance flood, below



Figure C-4 Grover Beach Sea Level Rise Scenario Analysis: Tidal Inundation Only

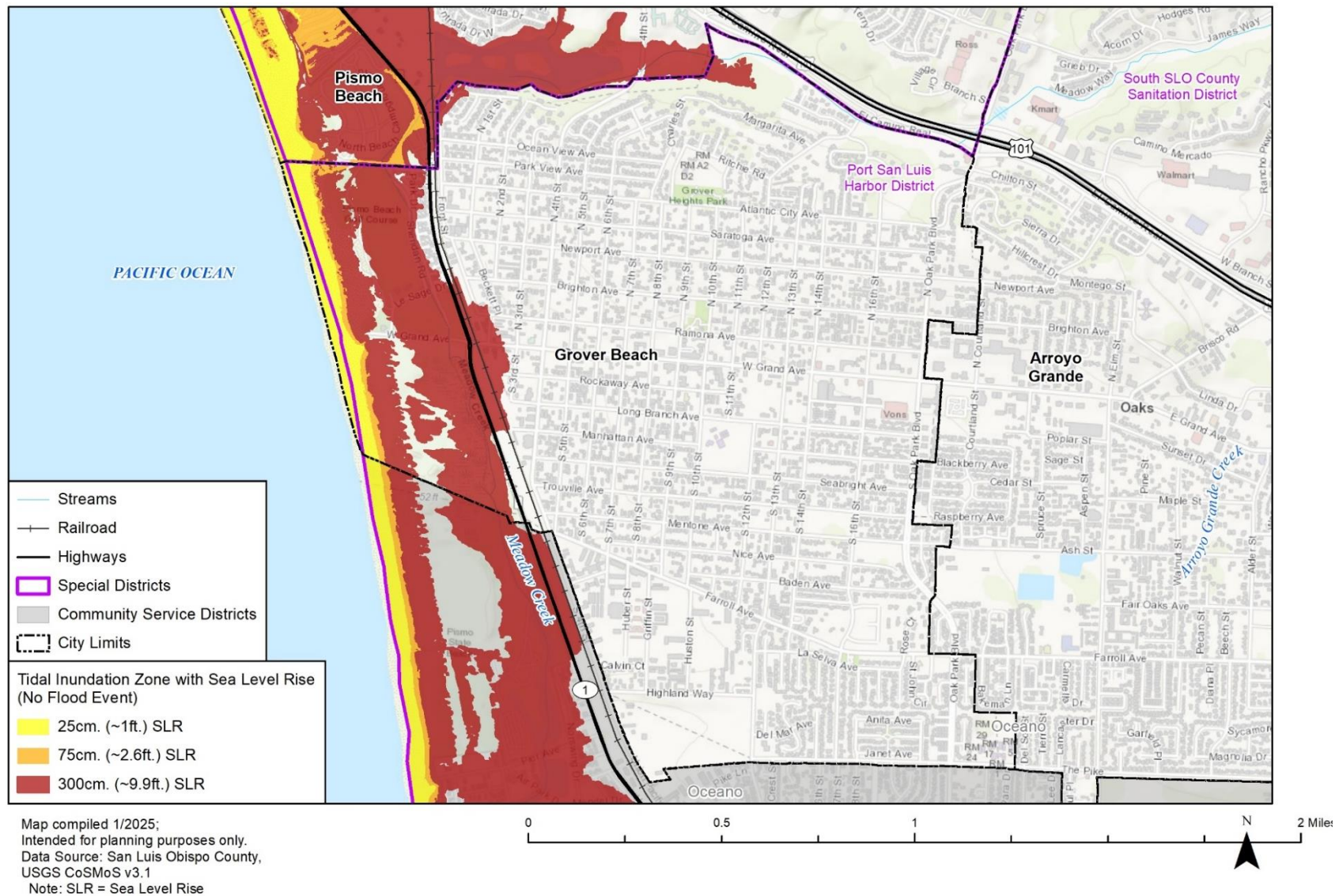
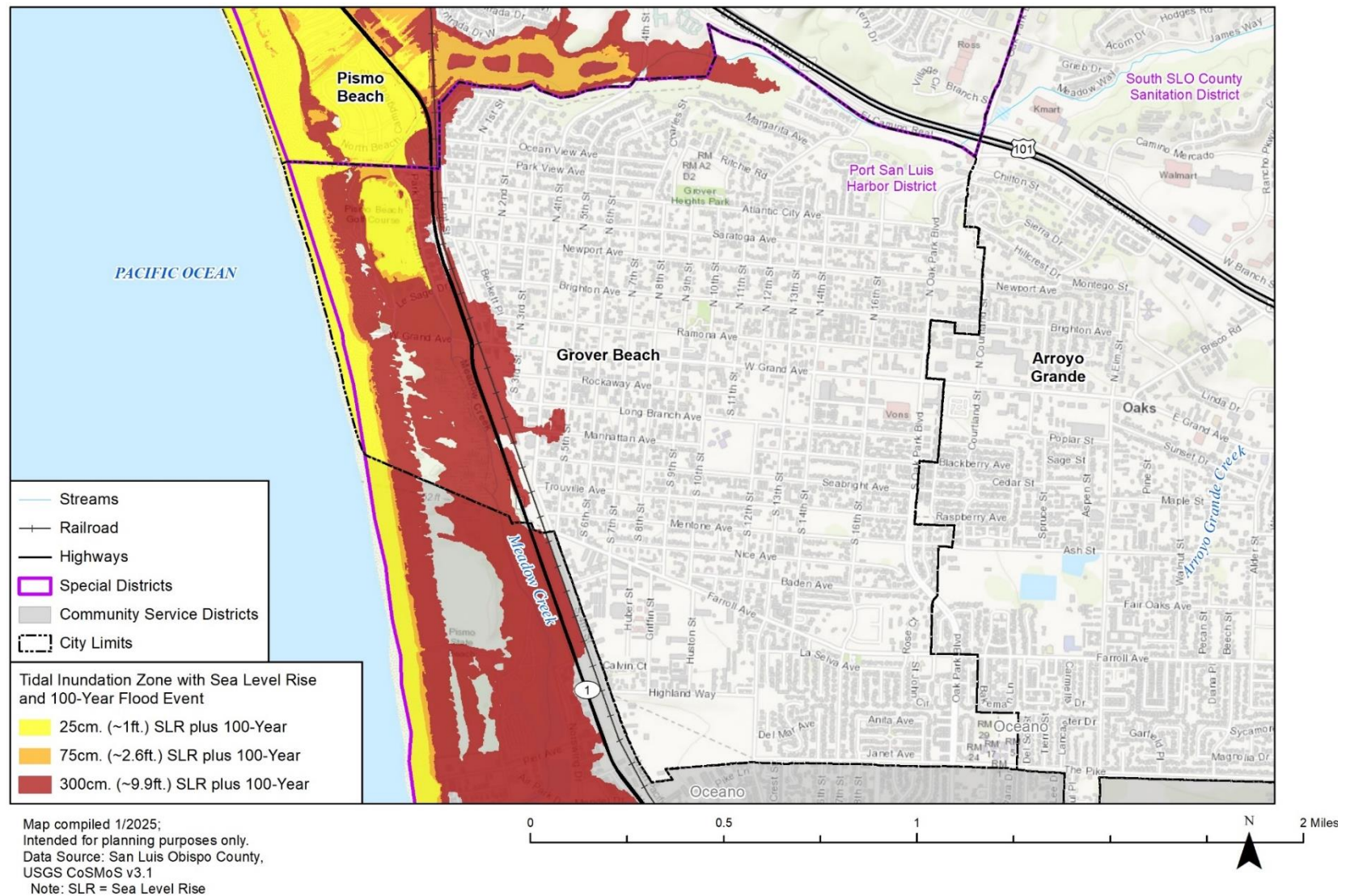




Figure C-5 Grover Beach Sea Level Rise Scenario Analysis: Tidal Inundation and 1% Annual Chance Flood





C.3.3.5 Dam Incidents

The City of Grover Beach is downstream from the high-hazard Lopez Dam. Failure of the Lopez Dam would cause water to flow along Arroyo Grande Creek in a westerly direction, extending laterally approximately 3,000 feet in each direction of the centerline of the creek channel. The inundation would hit the nearby city of Arroyo Grande particularly hard, and extend into Grover Beach to a more limited extent. A total of 35 people and 101 structures in Grover Beach exist within the designated Lopez Dam inundation zone (Table C-11 and Figure C-6). Two critical facilities are located in the dam inundation zone (Table C-12), a train platform and a water treatment facility. See Appendix G for details of these facilities.

A failure of the Lopez Dam would also affect Highway 101 impeding or reducing flows of goods, people and resources into and out of Grover Beach and potentially impacting the entire region. There have been no past dam incidents or failures in the jurisdiction of the City of Grover Beach. Refer to Section 5.3.8 *Dam Incidents* of the Base Plan for additional discussion on the potential impacts of dam incidents in the County.

This information was derived from the most recent dam inundation mapping, parcel, and critical facility data available to the County of San Luis Obispo. The Grover Beach planning team added the following comments related to dam failure and inundation hazards:

- Lopez Dam failure would result in overtopping of Arroyo Grande Creek which would cause a backwater condition in Meadow Creek extending to the north, primarily along Highway 1 and the Union Pacific Railroad tracks.
- There are two facilities deemed critical to the City which are at risk from this flooding: The Train Station and the Front Street Sanitary Sewer Lift Station
- Grover Beach would be surrounded by flood waters and Highway 101 would be impassible at Oak Park Boulevard if the Lopez Dam were to cause inundation downstream, which would limit ingress/egress to Highway 101 to the northwest and significantly restrict access by emergency services from outside the city.

Table C-11 Lopez Dam Inundation Estimate Losses by Property Type

PROPERTY TYPE	STRUCTURE COUNT	POPULATION
Commercial	57	-
Industrial	24	-
Mixed Use	6	-
Multi-Family Residential	5	12
Residential	9	22
Total	101	35

Source: San Luis Obispo County Planning and Building Dept., Assessor's Office, Wood Plc Parcel Analysis

Table C-12 Critical Facility Assets Exposed to Dam Inundation in Grover Beach

COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
-	-	-	-	-	-	1	1	2

Source San Luis Obispo County, CalARP, HIFLD, National Bridge Inventory, National Inventory of Dams, FCWCD, WSP Analysis



Figure C-6 City of Grover Beach Dam Inundation Extent

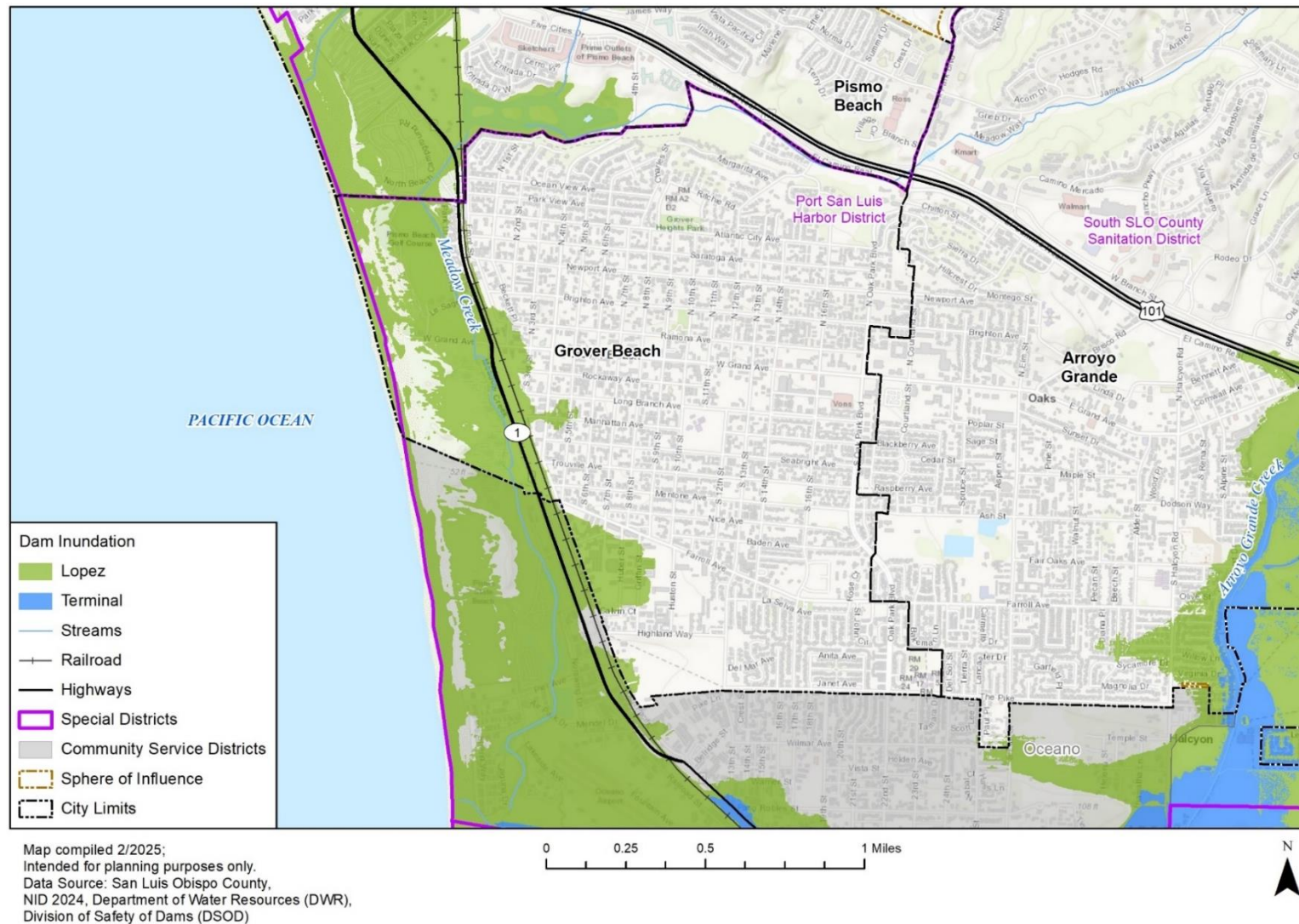
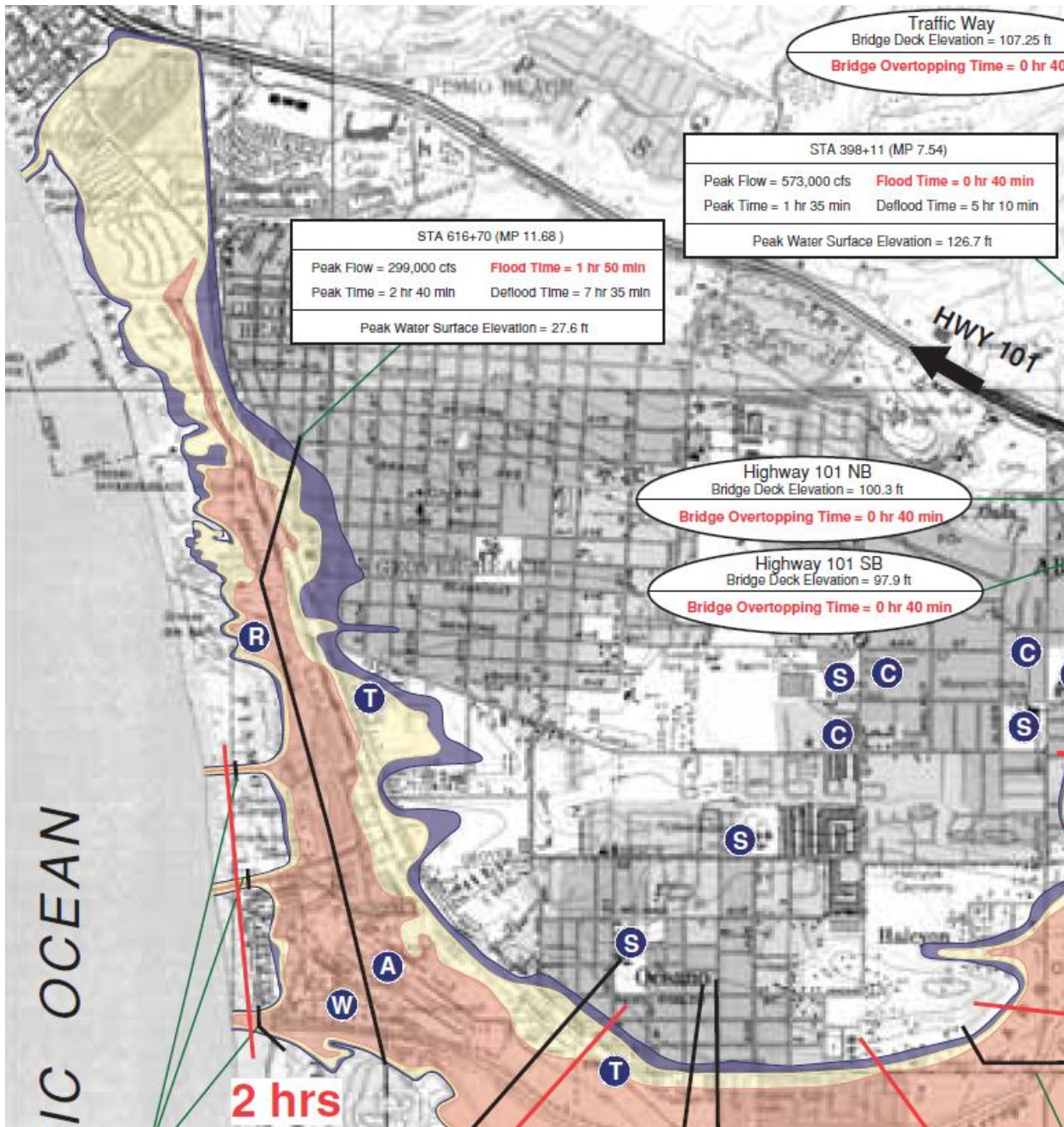




Figure C-7 Dam Inundation Map



Source San Luis Obispo County



C.3.3.6 Drought and Water Shortage

The City of Grover Beach currently relies on a combination of surface water from the Lopez Lake, groundwater from the Santa Maria Groundwater Basin, and local wells to meet its water needs. In the City's 2020 Urban Water Management Plan, the City also explores additional sources, such as stormwater capture, recycled water programs, and potential desalination projects.

The City's water system consists of four production wells, two of which are active, three welded steel storage tanks, one booster pump station, and 57 miles of water mains. The system is functional but aging, with ongoing investments needed in pipeline upgrades, wells, and pumping facilities. Water loss prevention and metering improvements are actively pursued to improve efficiency. Additionally, new water and storage treatment facilities may be necessary to accommodate growth and sustainability efforts.

A majority of water consumption is by residential properties. According to the San Luis Obispo Council of Government's 2050 Regional Growth Forecast for San Luis Obispo County (2017), the projected water demand in the City of Grover Beach is not expected to supply from 2015 to 2030, as shown in Figure C-8. The City of Grover Beach's population is not expected to grow dramatically by 2035 and as a result the water demand is not projected to increase over the next 20 to 30 years.

Figure C-8 Projected Water Demand in Grover Beach, 2015 to 2030

Water Supply and Demand and Beacon Projections	2015	2020	2025	2030	2035
Projected Supply Utilization	2,207	2,207	2,207	2,207	2,207
Projected Demand	1,149	1,186	1,223	1,254	1,227
Beacon Demand Projection	1,099	1,153	1,201	1,237	1,209
Supply Less Demand	1,108	1,054	1,006	970	998

Source: City of Grover Beach, 2010 Urban Water Management Plan, personal communications with Grover Beach staff, Beacon Economics (population projections)

Source: 2050 Regional Growth Forecast for San Luis Obispo County, San Luis Obispo Council of Governments and Beacon Economics, June 2017

The City has consistently met 100% of its water demand, even during dry years, due to the availability of imported water and historical groundwater production. There is no historical basis for reducing supply reliability based on single or multiple dry years. However, future water reliability will depend on groundwater conditions, Lopez Reservoir levels, and the effects of climate change.

The Low Reservoir Response Plan Diversion Reduction Strategy assessed water reliability for five consecutive dry years, assuming reductions of 0%-35% in successive years. Over the last 50 years, Lopez Reservoir has never reached a level requiring a 20% reduction in municipal diversions. The City expects to maintain an 800 acre-feet (AF) allocation from the reservoir for the next 20 years and will need to increase groundwater pumping to meet future demands. Table C-13 outlines projected supply and demand through 2045 under multiple dry year scenarios.

Table C-13 Multiple Dry Years Supply and Demand Comparison

DROUGHT YEAR	SOURCE	2025	2030	2035	2040	2045
First Year	Groundwater – SMVG (AF)	500	500	500	550	600



DROUGHT YEAR	SOURCE	2025	2030	2035	2040	2045
	Groundwater Central Coast Blue (AF)	324	324	324	324	324
	Imported Water – Lopez Reservoir	800	800	800	800	800
	Demand totals	1,375	1,464	1,550	1,636	1,723
	Difference	249	160	74	38	1
Second Year	Groundwater – SMVG (AF)	500	500	500	550	600
	Groundwater Central Coast Blue (AF)	324	324	324	324	324
	Imported Water – Lopez Reservoir	800	800	800	800	800
	Demand totals	1,375	1,464	1,550	1,636	1,723
	Difference	249	160	74	38	1
Third Year	Groundwater – SMVG (AF)	500	500	500	550	600
	Groundwater Central Coast Blue (AF)	324	324	324	324	324
	Imported Water – Lopez Reservoir	800	800	800	800	800
	Demand totals	1,375	1,464	1,550	1,636	1,723
	Difference	249	160	74	38	1
Fourth Year	Groundwater – SMVG (AF)	500	500	500	550	600
	Groundwater Central Coast Blue (AF)	324	324	324	324	324
	Imported Water – Lopez Reservoir	800	800	800	800	800
	Demand totals	1,375	1,464	1,550	1,636	1,723
	Difference	249	160	74	38	1
Fifth Year	Groundwater – SMVG (AF)	500	500	500	550	600
	Groundwater Central Coast Blue (AF)	324	324	324	324	324
	Imported Water – Lopez Reservoir	800	800	800	800	800
	Demand totals	1,375	1,464	1,550	1,636	1,723
	Difference	249	160	74	38	1

Source: City of Grover Beach 2020 Urban Water Management Plan

The returned 2020 Data Collection Guide from the City of Grover Beach Planning Team noted that due to the region's water supply being served by a mix of reservoir and pumped well water, state-wide droughts in California have led to regional impacts, including watering restrictions that have led to landscaping on many properties to die, increasing the risk of wildfire for some properties.

C.3.3.7 Earthquake and Liquefaction

The City of Grover Beach is vulnerable to various types of seismic hazards including fault rupture, groundshaking and liquefaction. The Wilmar Avenue fault is the only mapped fault near the City of Grover Beach. The fault runs along the northern portion of the City limits. The Wilmar Avenue fault is exposed in the sea cliff near Pismo Beach and buried portions are generally aligned along the Highway 101. The fault is considered potentially active and a moderate fault rupture hazard to the City of Grover Beach.

In addition to the Wilmar Avenue fault there are a number of active and potentially active faults in proximity of the Grover Beach that are capable of producing strong groundshaking within the City limits. According to the Technical Background Report of the County Safety Element (1999), the San Andreas fault and the offshore Hosgri fault present the most likely sources of groundshaking for Grover Beach. The following table from the Technical Background Report and recreated for the 2019 Hazard Mitigation Plan, show the potential sources of groundshaking and approximate distance from Grover Beach.

**Table C-14 Sources of Groundshaking in the Vicinity of Grover Beach**

FAULT	APPROXIMATE DISTANCE (KILOMETERS)*	MAXIMUM EARTHQUAKE	MAXIMUM PROBABLE EARTHQUAKE	ANTICIPATED ACCELERATION RANGE (G)
Wilmar Avenue	1	6.5	4	0.1-0.7
Blind Thrust Point San Luis	3	7.5	6	0.3-0.7
Los Osos	9	7	5	0.1-0.4
Pecho	6	6.3	3	<0.1-0.3
Casmalia-Orcutt- Little Pine	19	7.5	6	0.1-0.4
Hosgri	21	7.5	6.5	0.2-0.3
Rinconada	23	7.5	6.3	0.1-0.3
Los Alamos- Base Line	27	7	5.8	0.1-0.2
San Andreas	66	8.3	8	0.1-0.2

*Measured from Grand Avenue and North 8th

Source: San Luis Obispo County Safety Element Technical Background Report, December 1999

As a coastal community, portions of Grover Beach are underlain by layers of unconsolidated sand and young alluvium which have a high potential to become liquefied during groundshaking events. The following table shows the various property types in the City of Grover Beach at risk of liquefaction. Based on this analysis residential property types, including mobile and manufactured homes, are at the greatest risk of liquefaction in Grover Beach compared to other types of properties in the community. There are 4,670 improved parcels at risk with a combined value of over \$1.1 billion. Table C-15 below summarizes the properties exposed to liquefiable soils throughout the city, broken up by parcel type and level of risk, while Figure C-9 below depicts the areas of Grover Beach at risk of liquefaction. A total of 16 critical facilities are found in liquefaction susceptible zones in the city, all of which are exposed to moderate liquefaction susceptibility.

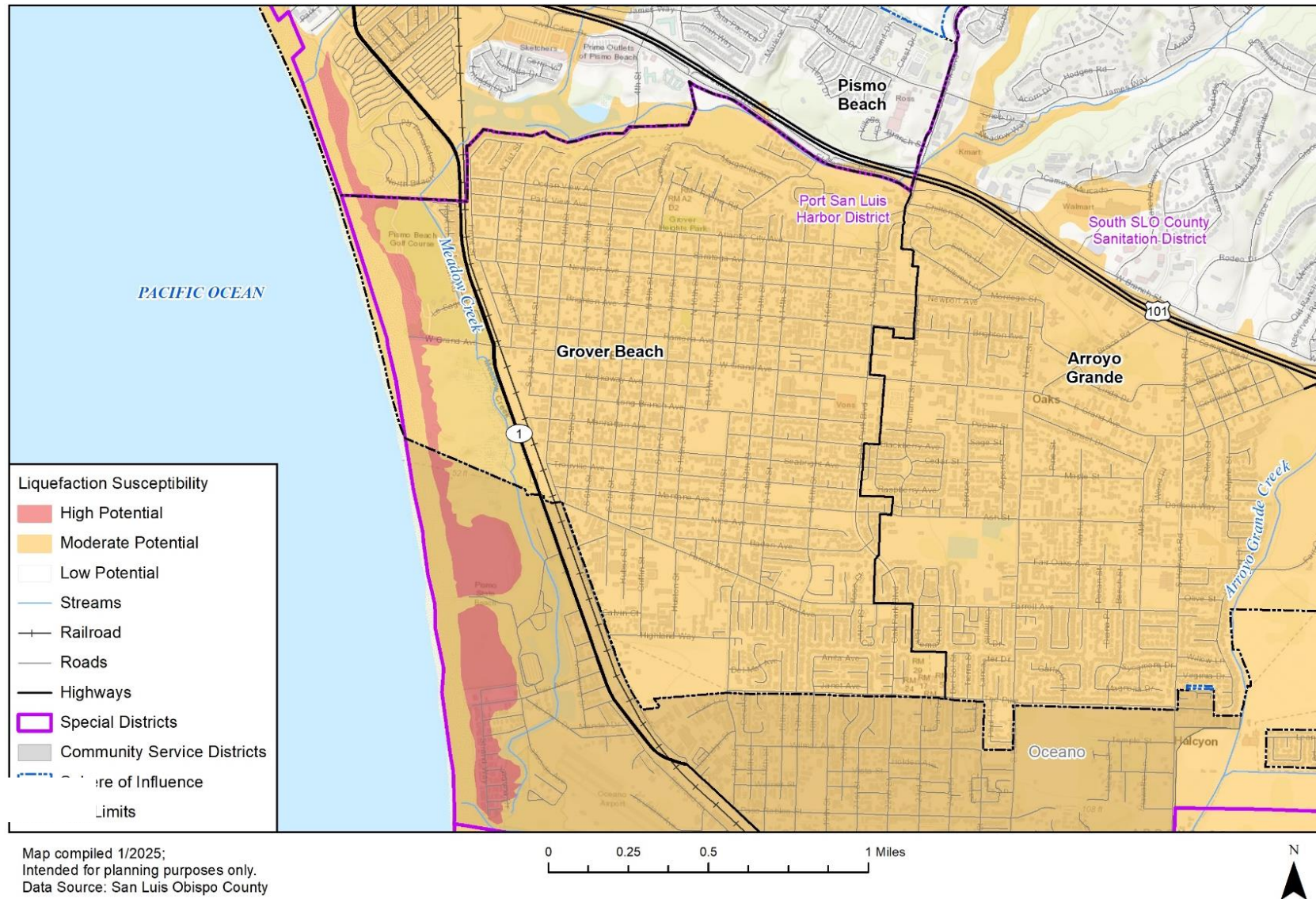
**Table C-15 City of Grover Beach Improved Properties Exposed to Liquefaction Potential by Property Type**

PROPERTY TYPE	STRUCTURE COUNT MODERATE	STRUCTURE COUNT LOW	TOTAL STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Agricultural	1	-	1	\$3,498	\$3,498	\$6,996	-
Commercial	259	-	259	\$105,727,455	\$105,727,455	\$211,454,910	-
Exempt	20	-	20	\$5,014,580	\$5,014,580	\$10,029,160	-
Industrial	57	-	57	\$30,702,216	\$46,053,324	\$76,755,540	-
Mining	-	-	0	\$0	\$0	\$0	-
Mixed Use	680	-	680	\$152,085,667	\$152,085,667	\$304,171,334	-
Mobile/Manufactured Homes	38	-	38	\$3,521,408	\$1,760,704	\$5,282,112	94
Multi-Family Residential	444	-	444	\$163,244,537	\$81,622,269	\$244,866,806	1,097
Residential	3,153	-	3,153	\$684,446,062	\$342,223,031	\$1,026,669,093	7,788
Vacant Improved	17	1	18	\$4,155,398	\$0	\$4,155,398	-
Total	4,669	1	4,670	\$1,148,900,821	\$734,490,528	\$1,883,391,349	8,978

Source: San Luis Obispo Assessor Data November 15, 2024, WSP GIS Analysis



Figure C-9 Areas of the City of Grover Beach at Risk of Liquefaction





C.3.3.8 Flood

The City of Grover Beach has been assigned a **Low Significance** ranking for flood hazards by the HMPC. While widespread flooding is uncommon, the city experiences localized flooding in specific areas following heavy rainfall events. The greatest flood risks are associated with Arroyo Grande Creek and Meadow Creek, which can overtop and cause flooding in the northern and western parts of the city. Notably, Meadow Creek flooding has historically blocked roads, impacting access to and from neighborhoods in these areas.

According to the City's Safety Element, the northern portion of the city near U.S. 101 and Nacimiento Avenue, which includes a mobile home subdivision, is particularly vulnerable to a 1% annual chance flood event. The South Grover Beach and West Grover Beach neighborhoods are also prone to flooding. In addition, certain low-lying parcels, such as those at South 5th Street and Manhattan Avenue, and 6th Street and Mentone Avenue, have documented flood risks during intense storm events.

Recent flood-related impacts include the January 9, 2023 atmospheric river event, which caused significant roadway damage and power outages near Nacimiento Avenue. Although no major property losses were reported, the city received federal and state disaster funding to support recovery efforts.

Grover Beach continues to implement mitigation strategies to address localized flood risks, including drainage improvements and participation in the National Flood Insurance Program (NFIP). As climate patterns shift and intense weather events become more frequent, the city will need to remain proactive in maintaining stormwater systems, updating development standards, and ensuring that vulnerable areas near Meadow Creek and other flood-prone zones are resilient against future events.

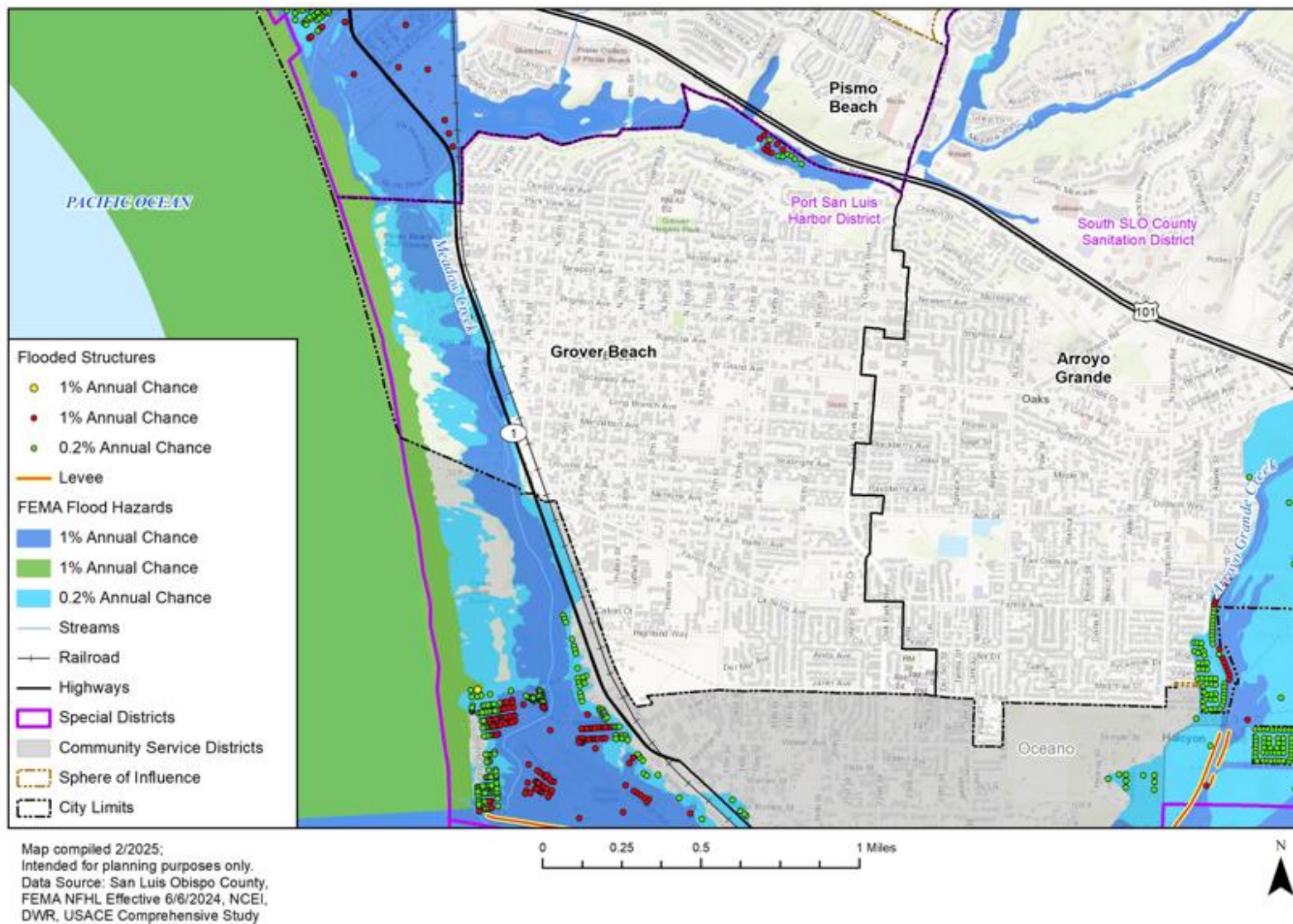
Values at Risk

Table C-16 and Table C-17 show the properties at risk to flooding in the City based on mapped floodplains and parcels with improvements intersecting the flood hazard areas. As with previous assessments, it is important to note that structures elevated above base flood elevations may be less vulnerable to damage.

Based on this updated analysis, the City has moderate assets at risk to the 1% and 0.2% annual chance floods. Within the 1% annual chance floodplain, there are 8 improved parcels with a total value of approximately \$707,000 and an estimated potential loss of about \$177,000. Within the 0.2% annual chance floodplain, there are an additional 8 improved parcels valued at roughly \$508,000, with an estimated potential loss of about \$127,000.



Figure C-10 Areas of City of Grover Beach at Risk to Floods with Floodprone Structures



**Table C-16 City of Grover Beach's FEMA 1% Annual Chance Flood Hazard by Property Type**

PROPERTY TYPE	PARCEL COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	LOSS ESTIMATE	POPULATION
Mobile/Manufactured Homes	8	\$471,202	\$235,601	\$706,803	\$176,701	20
Total	8	\$471,202	\$235,601	\$706,803	\$176,701	20

Source: San Luis Obispo Assessor Data November 15, 2024, FEMA NFHL Effective Date 6/6/2024, WSP GIS Analysis

Table C-17 City of Grover Beach's FEMA 0.2% Annual Chance Flood Hazard by Property Type

PROPERTY TYPE	PARCEL COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	LOSS ESTIMATE	POPULATION
Commercial	1	\$152,955	\$152,955	\$305,910	\$76,478	-
Mobile/Manufactured Homes	7	\$134,985	\$67,493	\$202,478	\$50,619	17
Total	8	\$287,940	\$220,448	\$508,388	\$127,097	17

Source: San Luis Obispo Assessor Data November 15, 2024, FEMA NFHL Effective Date 6/6/2024, WSP GIS Analysis

Population at Risk

Using parcel data from the County and the digital flood insurance rate map, and applying an average household size of 2.47 persons, the population at risk in the City of Grover Beach is estimated as follows:

- 1% annual chance flood: 20 people
- 0.2% annual chance flood: 17 people
- Total population at risk: 37 people

Insurance Coverage, Claims Paid, and Repetitive Losses

The City joined the NFIP on August 1, 1984. The current effective map is dated June 6, 2024. As of May 12, 2025, NFIP records show 13 active flood insurance policies in the City, totaling \$4,199,000 in coverage. Of these, one policy is in an A zone, and the rest are in B, C, or X zones.

Since joining the NFIP, the City has recorded 7 flood loss claims totaling \$45,397, all for residential properties. According to the OpenFEMA dataset accessed in 2024, the City currently has no Repetitive Loss (RL) or Severe Repetitive Loss (SRL) properties.

The City does not currently participate in the Community Rating System (CRS).

Critical Facilities at Risk

The City has no identified critical facilities located within the 1% annual chance floodplain. Based on the updated analysis, there is one critical facility located within the 0.2% annual chance floodplain. This facility falls under the Transportation sector and may be vulnerable during major flooding events. While the overall number of critical facilities at risk remains low, protecting transportation infrastructure is essential for maintaining emergency access and community connectivity during flood events.

C.3.3.9 Tsunami and Seiche

Tsunami inundation poses a risk to all coastal communities in the San Luis Obispo County. Offshore faults and related seismic activity could cause a tsunami event off the coast of Grover Beach, even if the faults are thousands of miles away. Grover Beach's wide beaches and coastal dunes in general provide some protection to the developed areas of the city from coastal hazards, although the low-lying areas where Meadow Creek meets the ocean is considered to be at moderate risk of tsunami hazards. Figure C-11 below displays areas of Grover Beach that are vulnerable to tsunami hazards.



Table C-18 below breaks down the tsunami risk in the City of Grover Beach by property type. According to the vulnerability analysis there are an estimated 215 people residing in the inundation zone in Grover Beach.

Table C-18 City of Grover Beach Improved Properties Exposed to Exposed to Tsunami Hazard Areas by Property Type

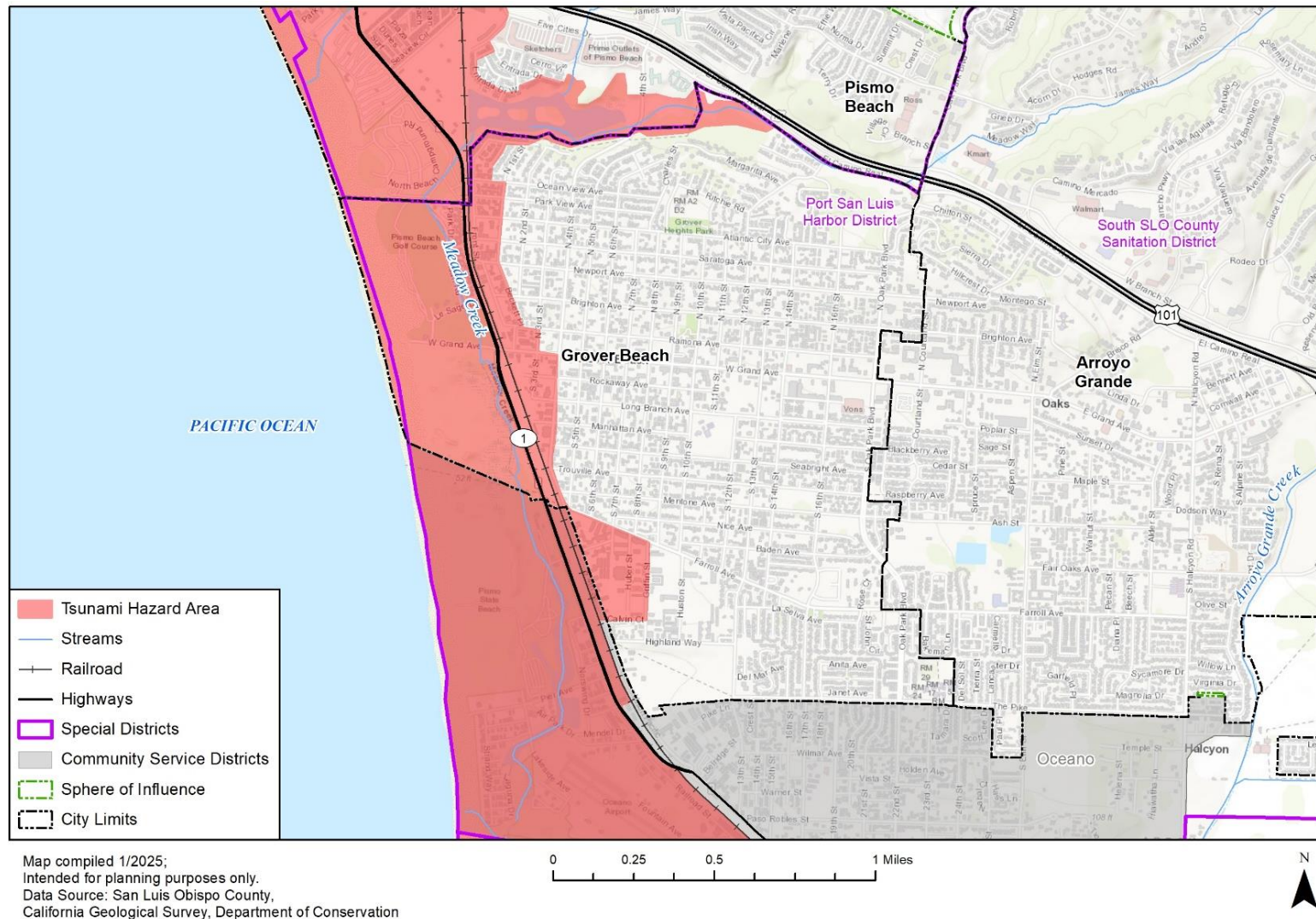
PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE
Commercial	86	\$22,961,751	\$22,961,751	\$45,923,502
Industrial	41	\$18,355,862	\$27,533,793	\$45,889,655
Mixed Use	41	\$11,597,164	\$11,597,164	\$23,194,328
Mobile/Manufactured Homes	1	\$340,612	\$170,306	\$510,918
Multi-Family Residential	33	\$9,642,159	\$4,821,080	\$14,463,239
Residential	53	\$11,041,918	\$5,520,959	\$16,562,877
Total	255	\$73,939,466	\$72,605,053	\$146,544,519

Source: San Luis Obispo Assessor Data November 15, 2024, California Geological Survey, Dept. of Conservation, WSP GIS Analysis

Based on this analysis there are 255 structures with a combined value of over \$146.5 million vulnerable to the impacts of a tsunami. Of the properties at risk, 87 are residential properties (including mobile/manufactured homes) totaling \$31.5 million in estimated value. There are 86 commercial properties exposed to tsunami inundation as well, an increase from 64 commercial properties identified in the previous plan, as well as 41 industrial properties. This represents approximately 32% of the commercial properties in the city and 72% of industrial properties in the city. In addition to the monetary damages that would be associated with the loss of these properties, a major tsunami could cripple the city's employment and tourism bases, resulting in longer lasting economic impacts to the population.



Figure C-11 Areas of City of Grover Beach at Risk to Tsunami Inundation





There are three identified critical facilities located in the inundation zone in Grover Beach, one each from the Hazardous Materials, Transportation, and Water Systems FEMA Lifeline Categories. The area along Highway 1 is also expected to be in the tsunami inundation zone, which would have cascading impacts on people attempting to evacuate. The LPT noted that Grover Beach swells with beachgoing tourists including an estimated 10,000 to 40,000 visitors to the Oceano Dune State Park on a busy summer weekend or holiday; these visitors may not be familiar with the risk posed by tsunamis or the local geography and safe areas of refuge. Refer to Section 5 of the Base Plan for additional information related to the past tsunami events and analysis on future vulnerability.

C.3.3.10 Wildfire

The overall significance rating for wildfire in Grover Beach is rated **low**. This is due to the Central Coast location of the planning area, which has a coastal climate, bringing cooler temperatures, higher humidity, and frequent marine layer influence. Historically, there have been minimal wildfire incidents near Grover beach. Despite the low overall risk, the city remains indirectly vulnerable to smoke impacts and evacuation challenges due to wildfires in nearby inland regions.

C.3.3.11 Hazardous Materials

The City of Grover Beach LPT rated hazardous materials incidents as having **low** overall significance. The Cal OES Spill Release Reporting Center reports 16 hazardous materials incidents in the City of Grover Beach from January 1st, 2019 through December 20th, 2024. This likely excludes a number of unreported minor spills. The reported incidents constitutes 3.53% of the hazardous materials incidents reported countywide during the same time frame and averages out to roughly 2.66 incidents per year.

C.4 Capability Assessment

Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capabilities assessment is divided into six sections: regulatory mitigation capabilities, administrative and technical mitigation capabilities, fiscal mitigation capabilities, mitigation outreach and partnerships, participation in the National Flood Insurance Program and other mitigation efforts.

To develop this capability assessment, the jurisdictional planning representatives used a matrix of common mitigation activities to inventory which of these policies or programs were in place. The team then supplemented this inventory by reviewing additional existing policies, regulations, plans, and programs to determine if they contributed to reducing hazard-related losses.

During the plan update process, this inventory was reviewed by the jurisdictional planning representatives and WSP consultant team staff to update information where applicable and note ways in which these capabilities have improved or expanded. Additionally, in summarizing current capabilities and identifying gaps, the jurisdictional planning representatives also considered their ability to expand or improve upon existing policies and programs as potential new mitigation strategies. The City of Grover Beach's capabilities are summarized below.



C.4.1 Regulatory Mitigation Capabilities

Table C-19 City of Grover Beach Regulatory Mitigation Capabilities

REGULATORY TOOL (ORDINANCES, CODES, PLANS)	YES/NO	2024 COMMENTS OR OPPORTUNITIES TO IMPROVE/EXPAND
General Plan	Yes	
Zoning ordinance	Yes	
Subdivision ordinance	Yes	
Growth management ordinance	No	
Floodplain ordinance	Yes	
Other special purpose ordinance (stormwater, steep slope, wildfire)	Yes	Stormwater, Steep slopes
Building code and Type/Year	Yes	
Building Code Effectiveness Grading System and Rating (if applicable)	No	
Fire department ISO rating	Yes	3
Erosion or sediment control program	Yes	
Stormwater management program	Yes	
Site plan review requirements	Yes	
Capital improvements plan	Yes	5 Year CIP
Economic development plan	Yes	2008 Economic Development Strategy
Local emergency operations plan	Yes	
Other special plans	Yes	Local Coastal Program
Flood insurance study or other engineering study for streams	Yes	
Elevation certificates (for floodplain development)	Yes	
Other	Yes	2010 Technology Master Plan

C.4.1.1 Discussion on Existing Building Codes, Land Use and Development Regulations

Grover Beach has an adopted General Plan and Local Coastal Program. Recently, the city updated its Development Code (Zoning Ordinance, 2021) and additional revisions were adopted locally in 2024. Those revisions will be considered by the California Coastal Commission in Summer 2025. The Development Code regulates development within the community. The Community Development Department is responsible for implementing the General Plan, LCP, and Development Code. Chapter 5 of the Development Code, implemented predominantly by the Public Works Department, maintains “Site Development Standards” relating to Flood Hazards, Grading and Drainage, Stormwater and Post-Construction Management. In the event a situation falling under the term “emergency” occurs in the Coastal Zone, Chapter 6 (Section 6.20.050) outlines procedures for issuance of an “Emergency Coastal



Development Permit.” Additionally, the Building Code is updated with each California Building Code cycle. The next cycle is scheduled to be updated beginning in July 2026.

C.4.2 Administrative/Technical Mitigation Capabilities

Table C-20 identifies the personnel responsible for activities related to mitigation and loss prevention in Grover Beach.

Table C-20 City of Grover Beach Administrative/Technical Mitigation Capabilities

PERSONNEL RESOURCES	YES/NO	DEPARTMENT/POSITION OR 2024 CHANGES/OPPORTUNITIES
Planner/engineer with knowledge of land development/land management practices	Yes	Community Development Director Public Works Director/Engineer
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Public Works Director/Engineer Building Official (Contract CSG Consultants)
Planner/engineer/scientist with an understanding of natural hazards	Yes	Community Development Director Public Works Director/Engineer Building Official (Contract CSG Consultants)
Personnel skilled in GIS	Yes	Community Development Department, Senior Planner
Full time building official	No	Contract, CSG Consultants
Floodplain manager	Yes	Public Works/Engineer
Emergency manager	Yes	City Manager Fire Chief Police Chief Community Development Director Public Works Director/Engineer
Grant writer	Yes	Community Development Department, Associate Planner
Other personnel	Yes	Administrative Services Director, Finance Manager
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	Yes	Community Development Department, Director and Senior Planner
Warning Systems/Services (Reverse 9-1-1, cable override, outdoor warning signals)	Yes	City Manager’s Office Grover Beach Police Department Five Cities Fire Authority

C.4.3 Fiscal Mitigation Capabilities

Table C-21 identifies financial tools or resources that the City could potentially use to help fund mitigation activities.

Table C-21 City of Grover Beach Fiscal Mitigation Capabilities

FINANCIAL RESOURCES	ACCESSIBLE/ELIGIBLE TO USE (YES/NO)
Community Development Block Grants	Yes



FINANCIAL RESOURCES	ACCESSIBLE/ELIGIBLE TO USE (YES/NO)
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes (as needed)
Fees for water, sewer, gas, or electric services	No
Impact fees for new development	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activities	No
Withhold spending in hazard prone areas	No

The development that has occurred since the last plan update has not notably increased vulnerability to hazards.

C.4.4 Mitigation Outreach and Partnerships

Table C-22 identifies education and outreach programs and methods already in place that could be used to carry out mitigation activities and communicate information about hazards.

Table C-22 Grover Beach Mitigation Outreach and Partnerships

CAPABILITY TYPE	YES/NO	NOTES
Hazard Awareness/Education Campaigns		SLO Fire Council
Firewise	No	
Storm Ready	No	
Severe Weather Awareness Week	No	
School programs	Yes	Lucia Mar Unified School District
Other	No	
Methods Used to Communicate Hazard Info. to the Public	No	
Local News	Yes	
Social media	Yes	Tripepi Smith
Community Newsletters	Yes	City of Grover Beach – Grover Gazette
Utility Bill Inserts	Yes	Administrative Services Department
Community Events	Yes	
Other		
Organizations that represent or work with underserved or vulnerable communities	Yes	5 Cities Housing Coalition, Latino Outreach Council, CAPSLO, Housing Authority San Luis Obispo, Transitions Mental Health Association, CASA
American Red Cross	Yes	
Salvation Army	Yes	



CAPABILITY TYPE	YES/NO	NOTES
Veterans Groups	Yes	Veterans Connect, American Legion Post 136, Welcome Home Military Heroes
Environmental/Conservation Groups	Yes	RCD, Creek Lands Conservancy
Homeowner/Neighborhood Associations	Yes	
Chamber of Commerce	Yes	South County Chamber of Commerce
Community Organizations (Lions, Kiwanis, etc.)	Yes	

The LPT noted that Grover Beach participated in the previous MJHMP update and will continue to be a partner with the County of San Luis Obispo and the other six cities in efforts to address hazard mitigation and climate adaptation efforts.

C.4.5 National Flood Insurance Program (NFIP)

The City of Grover Beach has been an NFIP participating community since 1984. In the City of Grover Beach, the Public Works Director is designated as the Floodplain Administrator (FPA). Local floodplain management regulations are actively implemented and enforced by the Public Works Director to regulate and permit development within Special Flood Hazard Areas (SFHAs). This includes reviewing construction and land use permits to confirm compliance with elevation, structural, and zoning requirements aimed at reducing flood risk to properties and residents. Grover Beach also consistently adopts the latest effective Flood Insurance Rate Map (FIRM) provided by FEMA, updating local floodplain management practices to align with newly identified flood risks. This helps to ensure the community is aware of the most recent flood hazard data for planning and development purposes.

Following flood or other damage events, the City of Grover Beach enforces substantial improvement/substantial damage provisions by evaluating damaged properties to determine if they meet thresholds requiring them to comply with updated floodplain management standards. If substantial damage is determined, properties must undergo upgrades to meet current floodplain standards before they can be repaired or rebuilt. This process helps to reduce future risk by ensuring that post-event repairs and reconstructions contribute to long-term flood resilience. The city does not participate in the NFIP's Community Rating System (CRS). More information about the city's participation is found in Table C-23 below.

Table C-23 City of Grover Beach Compliance with National Flood Insurance Program

NFIP TOPIC	COMMENTS
Regulation	
Does the Community Participate in the NFIP?	Yes
How does the community enforce local floodplain regulations and monitor compliance?	Development Review Public Works Department Public Works Director/Engineer
Do floodplain development regulations meet or exceed FEMA or state minimum requirements? If so, in what ways?	Meet requirements
Explain the permitting process.	Public Works reviews applications near or in floodplain and associated elevation certificates provided by applicant for compliance with Floodplain Ordinance.



NFIP TOPIC	COMMENTS
Compliance History	
Are there any outstanding compliance issues? (i.e., current violations)?	None
Does the community intend to continue to comply with NFIP requirements?	Yes
How does the community identify substantially damaged/improved structures? What is the process to make sure these structures are brought into compliance post-disaster event?	Post flood evaluation by staff with assistance from FEMA. Review by Building Official and permit process in coordination with FEMA staff.
Staff Resources	
Please note the department and position responsible for floodplain management. Do they serve any roles other than Community Floodplain Administrator (FPA)?	Public Works Department Public Works Director/Engineer
Explain NFIP administration services (e.g., permit review, GIS, inspections, engineering capability).	Activities associated with and not limited to enforcing local floodplain development regulations, including issuing permits for appropriate development in Special Flood Hazard Areas and ensuring that this development is mitigated in accordance with the regulations. This will also include periodic reviews of the floodplain ordinance to ensure that it is clear and up to date and reflects new or revised flood hazard mapping.

C.4.6 Other Mitigation Strategies

Grover Beach has multiple city plans that have helped to inform hazard mitigation and resource management.

2020 Conservation and Open Space Element

The Conservation and Open Space Elements of the General Plan are two of the seven State-mandated elements of the General Plan. State law requires the Conservation Element address topics such as water, floodwater, rivers and soils while the Open Space Element is required to address natural resources, outdoor recreation, and tribal resources.

2019 Sewer Master Plan

The purpose of the Sewer Master Plan was to evaluate the City of Grover Beach existing sewer collection system and identify necessary capital improvements to serve customer sewer flows over a 30-year planning horizon.

2019 Water System Master Plan

Similar to the Sewer Master Plan, the Water System Master Plan was created to evaluate the existing water distribution system and identify necessary capital improvements over a 30-year planning horizon. The capital improvement program was developed to identify improvements necessary to correct hydraulic deficiencies in the existing system. It will also identify improvements needed to meet the demands of new development.



C.4.7 Opportunities for Enhancement

Future improvements may include providing training for staff members related to hazards or hazard mitigation grant funding in partnership with the County and Cal OES. Additional training opportunities will help to inform city staff members on how best to integrate hazard information and mitigation projects into their departments. Continuing to train city staff on mitigation and the hazards that pose a risk to the City of Grover Beach will lead to more informed staff members who can better communicate this information to the public. Become a Storm Ready or Tsunami Ready community would also be a potential enhancement.

C.5 Mitigation Strategy

C.5.1 Mitigation Goals and Objectives

During the 2025 Planning Process the Grover Beach Planning Team reviewed the mitigation goals and objectives from the 2019 LHMP and determined the existing number and intent of the goals and objectives continue to be appropriate, and no revisions or additions were necessary. The City of Grover Beach's 2025 hazard mitigation goals and objectives are the following:

- **Goal 1.** Minimize the level of damages and losses due to earthquake.
- **Objective 1.a** - Develop a comprehensive approach to reducing the level of damage and losses due to earthquakes.
- **Objective 1.b** - Perform a safety review of all current City structures and facilities, paying close attention to disaster proofing all facilities. Convene a group of department heads to prioritize the needs and research funding strategies.
- **Objective 1.c** - Develop disaster preparedness caches of supplies, tools, and equipment for use by City employees, so that they may continue to perform their duties during a major emergency.
- **Goal 2.** Minimize the level of damage and losses due to flooding.
- **Objective 2.a** - Research and identify flooding vulnerability within the City of Grover Beach.
- **Goal 3.** Minimize the level of damage and losses to people due to wildland and structure fires.
- **Objective 3.a** - Educate the public about wildland and structure fire danger.
- **Goal 4.** Minimize the level of damage and losses to people and surrounding areas due to tsunami events and increase understanding and response to tsunamis.
- **Objective 4.a** - Increase the understanding and response to tsunamis within the community by working with Federal and State agencies to better understand and prepare for the hazards of tsunamis, and improve the ability to respond to tsunami warnings provided by NOAA's West Coast and Alaska Tsunami Warning Center.
- **Goal 5.** Minimize the potential for dam failure and the impacts from such incidents.
- **Objective 5.a** - Work with regional partners to reduce the negative impact on the community as a result of a dam incident or failure through proper planning and infrastructure maintenance and improvement.
- **Objective 5.b** - Develop a public outreach program to educate residents and businesses in the dam failure inundation areas on their responsibilities and emergency preparedness.
- **Objective 5.c** - Develop a dam failure emergency response plan.
- **Objective 5.d** - Develop a hazard alert system to allow the city and regional partners to contact and alert our residents and businesses about the possibility of a dam failure and flooding caused by a dam failure.

**C.5.1.1****C.5.1.2 Continued Compliance with the National Flood Insurance Program**

The city has been an NFIP participating community since 1984. In addition to the mitigation actions identified herein, the City will continue to comply with the NFIP. This includes ongoing activities such as enforcing local floodplain development regulations, including issuing permits for appropriate development in Special Flood Hazard Areas and ensuring that this development is mitigated in accordance with the regulations. This will also include periodic reviews of the floodplain ordinance to ensure that it is clear and up to date and reflects new or revised flood hazard mapping.

C.5.2 Completed 2019 Mitigation Actions

During the 2025 planning process the Grover Beach Lead Planning Team reviewed all the mitigation actions from the 2019 plan. During the 2025 planning process the LPT identified that seven (7) of the actions from 2019 were deleted and one (1) was completed. The table below describes the mitigation actions from the 2019 plan that were completed or deleted.

Table C-24 2019 Grover Beach Completed and Deleted Mitigation Actions

2019 ACTION ID	HAZARD(S) ADDRESSED	MITIGATION ACTION TITLE	LEAD AGENCY	ACTION STATUS NOTES
GB.15*	Flood	Implement policies, procedures and regulations which reduce the exposure to flood hazards	Recreation and Maintenance Services, Public Works and Emergency Preparedness	Deleted
GB.16	Flood	Protect the improved property and infrastructure vulnerable to flood hazards	Recreation and Maintenance Services, Public Works and Emergency Preparedness	Deleted
GB.17	Flood	Reduce the vulnerability of community assets, particularly critical facilities, located in the 100-year floodplain	Recreation and Maintenance Services, Public Works and Emergency Preparedness	Deleted
GB.21	Tsunami	Review emergency policies and training needs	Police Department	Deleted
GB.22	Tsunami	Review Tsunami plans, maps, and evacuation plans	Police Department	Deleted
GB.23	Dam Failure	Work with our regional partners to reduce the negative impact on the community as a result of a dam incident or failure through proper planning and	Public Works Department, Community Development Department, Emergency Preparedness	Deleted



2019 ACTION ID	HAZARD(S) ADDRESSED	MITIGATION ACTION TITLE	LEAD AGENCY	ACTION STATUS NOTES
		infrastructure maintenance and improvement.		
GB.24	Dam Failure	Develop a public outreach program to educate residents and businesses in the dam failure inundation areas on their responsibilities and emergency preparedness.	Public Works Department, Community Development Department, Emergency Preparedness	Completed
GB.26	Dam Failure	Develop a hazard alert system to allow the city and regional partners to contact and alert our residents and businesses about the possibility of a dam failure and flooding caused by a dam failure.	Public Works Department, Community Development Department, Emergency Preparedness	Deleted

C.5.3 Mitigation Actions

The planning team for the City of Grover Beach identified and prioritized the following mitigation actions based on the risk assessment. Background information and information on how each action will be implemented and administered, such as ideas for implementation, responsible office, potential funding, estimated cost, and timeline, are also included. Actions were prioritized using the process described in Section 7.2.1 of the Base Plan. Actions with an ‘*’ are those that mitigate losses to future development.



Table C-25 City of Grover Beach's Mitigation Action Plan

MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
GB.1	Adverse Weather: Wind, Rain, Heat, Thunderstorm, Flood	Reduce the negative impact on the community due to weather-related incidents that could include heavy rain, high winds and extreme heat. Benefits: Improved water runoff in low-lying areas, reduced pooling and low impact street flooding; tree trimming, and removal of old trees will reduce falling limbs and trees	Public Works Department	\$125,000 - \$250,000. General funds; capital improvement funds; staff time	Medium	3-5 yrs.	In Progress. Storm drain capital improvement projects completed on W. Grand Ave., Continuing to implement flood control measures in new development, ongoing maintenance of eucalyptus trees to minimize risks associated with high wind.
GB.1	Adverse Weather: Wind, Rain, Heat, Thunderstorm,, Flood	Reduce the negative impact on the community due to weather-related incidents that could include heavy rain, high winds and extreme heat. Benefits: Improved water runoff in low-lying areas, reduced pooling and low impact street flooding; tree trimming, and removal of old trees will reduce falling limbs and trees	Public Works Department	\$125,000 - \$250,000.General funds; capital improvement funds; staff time	Medium	3-5 yrs.	In Progress. Storm drain capital improvement projects completed on W. Grand Ave., Continuing to implement flood control measures in new development, ongoing maintenance of eucalyptus trees to minimize risks associated with high wind.
GB.3	Coastal Storm, Erosion and Sea Level Rise	Work in partnership with the State of California and County of San Luis Obispo to identify community impacts associated with coastal erosion through sea level rise and storms. In coordination with the State and County, map areas of the City that may be affected by sea level rise. Benefits: Lessen the impacts on the community from the effects of sea level rise and coastal erosion	Public Works Department; Community Development; Emergency Preparedness	Less than \$10,000. General funds; capital improvement funds; staff time	Low	More than 5 yrs.	Annual Implementation. Continued to coordinate with State and County. Inundation and flooding maps included in EOC info and available on City website.
GB.4	Dam Incident	In collaboration with state, county and other local governments, reduce the negative impact on the community as a result of a dam incident or failure through proper planning and infrastructure maintenance and improvement. City Staff will map areas of potential inundation via its Geographic Informational System and continue to	Public Works Department; Community Development; Emergency Preparedness	Less than \$10,000. General funds; capital improvement funds; staff time	Low	3-5 yrs.	Annual Implementation. Continued to coordinate with State and County. Inundation and flooding maps included in EOC info and available on City website.



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
		implement the San Luis Obispo County Office of Emergency Services (OES) Emergency Plan. Benefits: Lessen the potential for dam failure and reduce the likelihood of this hazard occurring					
GB.5	Drought; Coastal Storm/Coastal Erosion/Sea Level Rise	In collaboration with state, county and other local governments, reduce the negative impact of drought on the community through proper planning and infrastructure maintenance and improvement; continue to monitor well levels to prevent seawater intrusion while pursuing opportunities for regional recycled water projects that will result in groundwater injection; implement water efficient landscaping. Benefits: Avoid sea water intrusion; lessen potential negative impacts on the community as a result of drought or water shortage	Public Works; Community Development Department	Less than \$10,000. General funds; capital improvement funding; staff time	High	More than 5 yrs.	In Progress. Ongoing monitoring of well levels, implemented water conservation measures to reduce demand, ongoing consideration of supplemental water sources
GB.6	Earthquake	Identify and catalog seismically vulnerable structures	Emergency Preparedness	Less than \$10,000. General Funds, Capital Improvement funds, Staff time		More than 5 yrs.	Not Started. Limited URM structures. Limited staff and fiscal resources.
GB.7	Earthquake	Implement policies, procedures and regulations which reduce the exposure to earthquake hazards	Emergency Preparedness	Little to no cost. General Funds, Capital Improvement funds, Staff time	Medium	More than 5 yrs.	Annual Implementation.
GB.8	Earthquake	Protect the improved property and infrastructure vulnerable to earthquake hazards	Emergency Preparedness	Less than \$10,000. General Funds, Capital Improvement funds, Staff time	Medium	More than 5 yrs.	Annual Implementation.



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
GB.9	Wildfire	Continue weed abatement program	Fire Department	Little to no cost. California Fire Safe Council, Fire Prevention Grant Funding, PDM Grant, General Funds, Capital Improvement funds, Staff Time	High	Annual	Annual Implementation. Implementation began in 2019/2020 and has been conducted in collaboration with local agencies every year for the LHMP cycle.
GB.10	Wildfire	Create a Fire-Smart Community by developing a comprehensive approach to reducing damage and loss due to fires; encourage the 100' defensible space around structures in the Wildland-Urban Interface (WUI); continue weed abatement program to reduce the threat of fire around open spaces; enforce building codes and ordinances that eliminate the use of wood shake roofs; enforce codes and ordinances that require fire sprinkler systems consistent with the California Building Code	Fire Department; Community Development, Emergency Preparedness	Little to no cost. California Fire Safe Council; Fire Prevention Grants; PDM Grants; FEMA funding; General Funding; Capital Improvement Funds; Staff Time	Low	More than 5 yrs.	Not Started. Grover does not have as high of a fire hazard severity rating than other rural areas. Grover will support creation of a "Fire wise community" should a neighborhood choose to pursue the designation. All other items, as described above are either in progress or complete.
GB.11	Hazardous Materials	Require businesses that use, store or transport hazardous materials to ensure that adequate measures are taken to protect public health and safety; coordinate with allied agencies to prepare for hazmat incidents; support training and exercises in response to hazmat incidents; coordinate responses and investigations with the county hazmat team and Five Cities Fire; add gas pipeline mapping to the City's GIS resources; continue to monitor the manufacture, storage, transport of hazardous materials by working with	Fire Department; Community Development; Emergency Preparedness	Less than \$10,000. California Fire Safe Council; Fire Prevention Grants; PDM Grants; FEMA funding; General Funding; Capital Improvement Funds; Staff Time	Medium	3-5 yrs.	Annual Implementation. All items are implemented on an annual basis contingent on new business applications and/or new land use entitlements. City will consider pursuing a contract for GIS services to map all utility infrastructure in the City (public and private).



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
		environmental health and public safety agencies to identify effective mitigation actions or requirements that will help reduce the risk of incidents, including the spread of released materials; coordinate with the rail line industries to prepare for train-related hazmat incidents					
GB.12	Tsunami	Develop a comprehensive action plan to reduce damage from a tsunami; display standardized and easy to read signs alerting community members of tsunami hazard zones, evacuation routes and evacuation sites; review tsunami inundation areas and educational needs; review emergency policies and training needs; review tsunami maps and evacuation plans	Public Works; Community Development; Emergency Services	\$10,000 to \$50,000.General funds; capital improvement funds; staff time	Low	3-5yrs.	Annual Implementation.
GB.13	Tsunami	Review Tsunami inundation areas, educational needs, emergency policies, training needs, tsunami plans, maps, and evacuation areas.	Police Department	Little to no costs. General Funds, Capital Improvement funds, Staff time	Medium	3-5 yrs.	In Progress. The city is pursuing an emergency plan update within the next two-year budget cycle. As part of that work, Tsunami inundation will be part of that planning, training, and educational process. Action items GB21 and GB22 will be merged with GB20.
GB.14	Dam Incident	Develop a comprehensive dam failure emergency response plan in collaboration with regional partners to minimize community impact through proper planning, infrastructure maintenance, and improvement. This plan should include a public outreach program to educate residents and businesses in dam failure inundation areas on their responsibilities and emergency preparedness. Additionally,	Public Works Department, Community Development Department, Emergency Preparedness	\$5,000 to \$10,000. PDM Grant, FEMA grant, General Funds, Capital Improvement funds, Staff time	Medium	2-3 yrs	In Progress. The City has developed an emergency exercise to address the emergency response plan in the event of failure of Lopez Dam.



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
		it should incorporate a hazard alert system to effectively notify residents and businesses of potential dam failures and related flooding.					



C.6 Implementation and Maintenance

Moving forward, the City will use the mitigation action table in the previous section to track progress on implementation of each project. As illustrated in Section 7.3.1 of the Base Plan, much progress has been made since the plan was originally developed. Implementation of the plan overall is discussed in Section 7 in the Base Plan.

C.6.1 Incorporation into Existing Planning Mechanisms

The information contained within this plan, including results from the Vulnerability Assessment, and the Mitigation Strategy will be used by the city to help inform updates and the development of local plans, programs and policies. The Public Works Department may utilize the hazard information when designing and implementing the City's capital improvement projects, and the Planning and Building Divisions within the Community Development Department may utilize the hazard information when reviewing a site plan or other type of development applications. The city will also incorporate this LHMP into the Safety Element of their General Plan, as recommended by Assembly Bill (AB) 2140. Other opportunities include:

the next Five-year Capital Improvement Plan, Local Coastal Program Update (tentative to 2026 calendar year) or General Plan Updates (Land Use and Safety Element).

As described in Section 8 Implementation and Monitoring, the LPT representatives from Grover Beach will report on efforts to integrate the hazard mitigation plan into local plans, programs and policies and will report on these efforts at the annual HMPC plan review meeting.

C.6.2 Monitoring, Evaluation and Updating the Plan

The city will follow the procedures to monitor, review, and update this plan in accordance with San Luis Obispo County as outlined in Section 8 of the Base Plan. The City will continue to involve the public in mitigation, as described in Section 8.3 of the Base Plan. The Chief of Police will be responsible for representing the city in the County HMPC, and for coordination with city staff and departments during plan updates. The City realizes it is important to review the plan regularly and update it every five years in accordance with the Disaster Mitigation Act Requirements as well as other State of California requirements.



Annex D City of Morro Bay

D.1 Community Profile

D.1.1 Mitigation Planning History and 2025 Process

This annex was updated in 2025 to build upon the previous version created for the 2019 San Luis Obispo Hazard Mitigation Plan update. This 2025 annex update also includes input from the previous versions of the City of Morro Bay Local Hazard Mitigation Plans completed in June 2019 and September 2006. The 2006 mitigation plan was not integrated into the City's General Plan, however the updated 2019 version was successfully incorporated by reference, and the upcoming 2025 update is also planned for incorporation by reference. A planned review of the City's regulations and procedure to ensure they reflect the goals established in the 2006 plan did not take place but was conducted following the adoption of the 2019 plan. The Fire Department's staff represented the City of Morro Bay on the County HMPC and took the lead for developing the plan and this annex in coordination with the Morro Bay Local Planning Team (Planning Team). A review of jurisdictional priorities found no significant changes in priorities since the last update.

The Local Planning Team will be responsible for implementation and maintenance of the plan. Table D-1 summarizes the City's planning team for the plan revision process, and

Table D-2 summarizes various stakeholder groups, neighboring communities, and local agencies which supported or coordinated on this HMP update.

Table D-1 Morro Bay Local Planning Team

DEPARTMENT	TITLE
Fire Department	Fire Chief
Fire Department	Deputy Chief
Public Works	City Engineer
Community Development	Director
Community Development	Chief Building Inspector
Police Department	Police Chief

Table D-2 Morro Bay Stakeholder Groups, Neighboring Communities, and Local Agencies

STAKEHOLDER CATEGORY	ORGANIZATION
Agencies involved in hazard mitigation activities:	Fire Safe Council
	California State Parks
Agencies that have the authority to regulate development:	California Coastal Commission
Neighboring Communities:	Los Osos CSD
Representatives of business academia, and other private orgs:	Morro Bay Chamber of Commerce
Representatives supporting underserved communities:	Community Action Partnership of San Luis Obispo (CAPSLO)



More details on the planning process and how the jurisdictions, service districts and stakeholders participated can be found in Chapter 3 of the Base Plan (Planning Process), as well as how the public was involved during the 2025 update.

D.1.2 Geography and Climate

The City of Morro Bay (City) is located on the central coast of California, bordered by the Pacific Ocean to the west, the Los Osos Community Services District to the south, and the Cayucos Community Services District to the north. A shallow agricultural valley extends eastward from the City limits, which is surrounded by the Santa Lucia Coastal Range to the north, the Seven Sisters on the south, and the City of San Luis Obispo to the east. The City's topography varies from level coastal terrain to rolling hills and a few steeper escarpments in the North Atascadero Beach area and Southern portions on Black Mountain. The City's elevations range from sea level to a height of approximately 640 feet on Black Mountain. The highest elevations in the vicinity are located in the Santa Lucia Coastal Range where many peaks are 2,000 to 3,400 feet above mean sea level (MSL). The vegetation throughout the city includes Central California Coastal Community habitats, particularly the coastal wetland habitat with diverse tree species and native chaparral communities.

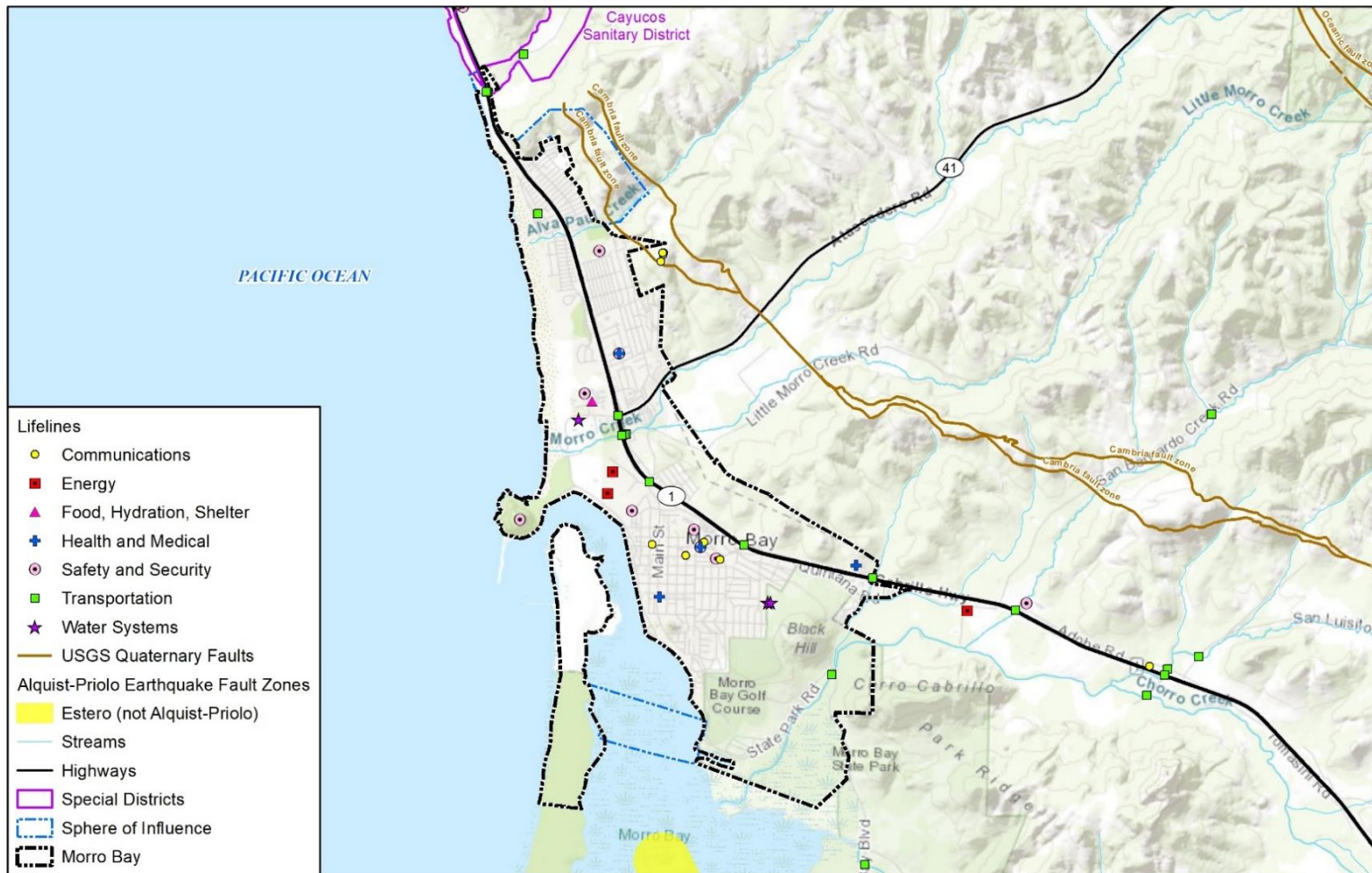
The City of Morro Bay is a small coastal town in a rural setting. Morro Bay's harbor provides a port of refuge, a working waterfront, commercial fishing and recreational boating facilities, shopping and sightseeing, bird watching, and eco-tourism. In 1994, the Governor established Morro Bay as California's first State Estuary, and in October 1995 it was accepted into the National Estuary Program (NEP).

This portion of the central coast of California generally has cool, foggy summers and low rainfall. The Pacific Ocean exerts a tremendous influence on temperature. The area is characterized by a Coastal climate with a wet season from October to early April. In the City of Morro Bay, the total annual precipitation is approximately 20 to 25 inches. In winter, the average high temperatures range from the 50's to the 60's, with lows seldom reaching into the 30's. In summer, the average daily highs are in the 60's and 70's, while lows are typically in the 50's and 60's.

Figure D-1 The City of Morro Bay below shows the location and geographic context of the City of Morro Bay. The City of Morro Bay's existing Sphere of Influence is approximately 100+/- acres beyond the city limits and includes two general areas, one within the bay south of town adjacent to the marina and the other north of town along the beach (City of Morro Bay, 2017).



Figure D-1 The City of Morro Bay



Map compiled 2/2025;
Intended for planning purposes only.
Data Source: San Luis Obispo County, CalARP, HIFLD,
National Bridge Inventory, National Inventory of Dams,
Department of Conservation, USGS, FCWCD



D.1.3 History

The City of Morro Bay is a small coastal town in a rural setting. What makes Morro Bay unique is an image reminiscent of California fishing ports in the 1950's and 1960's, a fishing village nestled in a rural setting around a bay and harbor with Morro Rock towering over the entrance. Morro Bay's harbor provides a port of refuge, a working waterfront, commercial fishing and recreational boating facilities, shopping and sightseeing, bird watching, and eco-tourism, all of which make it a unique tourist and recreation destination.

Archaeological evidence suggests that Native Americans including the Chumash Tribe settled in northern Santa Barbara County and San Luis Obispo County more than 9,000 years ago (City of Morro Bay Local Hazard Mitigation Plan, 2012). Following an annual cycle of hunting, fishing, fowling, and harvesting, the Native American peoples adapted to changing environmental conditions and grew into a large, complex society. In 1542, Juan Rodriguez Cabrillo, a Portuguese navigator, sailed into the bay named "Los Esteros." He is acknowledged as the first European to discover the land of Upper California, including the area now known as Estero Bay and Morro Bay. In 1870, the township of Morro Bay was established with a population of approximately 200.

Until the Second World War, the area was relatively undeveloped. Most of the small community of Morro Bay was built on the bluff tops. In 1942, the Department of the Navy initiated a national defense project to construct an amphibious training base in Morro Bay. From 1942 to 1944, the north and south breakwaters, the two T-Piers, and the inner harbor revetment from Coleman Beach to the sandspit were constructed. In addition, the federal government dredged the current Navy and Morro Channels and deposited the dredge spoils behind the inner harbor revetment to create the current Embarcadero Road area on what had previously been tidal flats.

In 1994, the Governor established Morro Bay as California's first State Estuary. In October 1995 Morro Bay was accepted into the National Estuary Program (NEP) primarily because of long-term grass-roots efforts and because it was the first ever State Estuary. The Morro Bay National Estuary Program (MBNEP) is one of 28 national programs currently working to safeguard the health of some of the nation's most important coastal areas. Like the NEP, the City of Morro Bay desires to protect and conserve the bay that bears its name.

D.1.4 Economy

Morro Bay is a largely built-out community with limited space for residential, commercial, and industrial growth; only 1.25% of the area is considered undeveloped, which limits the City's potential economic growth. Morro Bay contains four economic activity centers: Downtown, Embarcadero, Quintana, and North Main. Each of these economic centers have the opportunity for renovation and enhancement of space and development.

The utilities infrastructure in the City includes water provision, and wastewater collection and treatment (City of Morro Bay Local Hazard Mitigation Plan, 2021). The public services infrastructure in the city include fire protection and emergency services, police protection, public schools, libraries, the harbor and its associated infrastructure, and solid waste collection and disposal.

Select estimates of economic characteristics for the City of Morro Bay are shown in below. Table D-3 and Table D-4 show the occupational and industry breakdown of the City of Morro Bay's labor force based on estimates from the 2018-2023 American Community Survey.

**Table D-3 City of Morro Bay Employment by Occupation**

OCCUPATION	% EMPLOYED	# EMPLOYED
Sales and Office Occupations	22.3%	1,096
Management, Business, Science, and Arts Occupations	38.7%	1,906
Service Occupations	21.4%	1,055
Production, Transportation, and Material Moving Occupations	9.4%	462
Natural Resources, Construction, and Maintenance Occupations	8.2%	404
Total		4,923

Source: U.S. Census Bureau American Community Survey 2018-2023, 5-Year Estimates www.census.gov**Table D-4 City of Morro Bay Employment by Industry**

INDUSTRY	# EMPLOYED	% EMPLOYED
Population (16 years and over, 2023)	9,559	
In Labor Force	5,383	56.3%
Agriculture, forestry, fishing and hunting, and mining	64	1.3%
Construction	456	9.3%
Manufacturing	249	5.1%
Wholesale trade	114	2.3%
Retail trade	765	15.5%
Transportation and warehousing, and utilities	116	2.4%
Information	42	.9%
Finance and insurance, and real estate and rental and leasing	357	7.3%
Professional, scientific, and management, and administrative and waste management services	511	11.7%
Educational services, health care and social assistance	1,005	20.4%
Arts, entertainment, recreation, accommodation and food services	487	9.9%
Other services, except public administration	239	4.9%
Public administration	452	9.2%
Unemployed	451	4.7%

Source: U.S. Census Bureau American Community Survey 2018-2023, 5-Year Estimates www.census.gov

D.1.5 Population

According to data extracted by the U.S. Census Bureau's American Community Survey 5-Year Estimates (2018-2023), the total population for the City of Morro Bay is 10,717 persons in 2023. Select demographic and social characteristics for the City of Grover Beach from the 2018-2023 American Community Survey are shown in Table D-5.

Table D-5 City of Morro Bay Demographic and Social Characteristics

CITY OF MORRO BAY	2018	2023	% CHANGE
Population	10,592	10,717	+1.2%
Median Age	48.8	52.9	+8.4%
Total Housing Units	6,246	6,271	+4%
Housing Occupancy Rate	76.7%	80%	+4.3%
% of Housing Units with no Vehicles Available	4.4%	3.2%	-27.3%



CITY OF MORRO BAY	2018	2023	% CHANGE
Median Home Value	\$613,900	\$931,100	+51.7%
Unemployment	3.8%	4.7%	+23.7%
Mean Travel Time to Work (minutes)	20.7	20.8	+5%
Median Household Income	\$88,986	\$145,625	+63.6%
Per Capita Income	\$35,852	\$59,411	+65.3%
% of Individuals Below Poverty Level	9.8%	9.9%	+1%
# of Households	4,792	4,989	+4.1%
Average Household Size	2.18	2.11	+3.2%
% of Population Over 25 with High School Diploma	91.1%	90.7%	-.4%
% of Population Over 25 with Bachelor's Degree or Higher	37.4%	51.5%	+37.7%
% with Disability	15%	17%	+13.3%
% Speak a language other than English	12.7%	10.6%	-16.5%

Source: U.S. Census Bureau American Community Survey 2018-2023 5-Year Estimates, www.census.gov/

D.1.6 Development Trends

Morro Bay is mostly built-out and geographically constrained by the Pacific Ocean to the west, steep topography to the east, and protected agricultural land and open space to the north and south. The city approves approximately 20 to 30 new residential units each year. This includes new single-family homes, accessory dwelling units, and multi-family units. These are mostly infill units located on existing lots throughout the city, some of which (particularly in North Morro Bay and Morro Bay Heights) are located on moderate to steep (10 - 30 percent) slopes.

The city permits approximately 1 to 5 new commercial development / redevelopment projects each year. These most commonly consist of hotel and retail projects. Some of these projects are located on the Embarcadero on City tidelands lease sites. These areas are potentially vulnerable to coastal hazards, flooding, and tsunami inundation. The city is in the process of updating its Waterfront Master Plan to include a sea level rise vulnerability assessment and adaptation plan. The Local Planning Team noted that in the Waterfront Master Plan they have identified a safety risk of traffic congestion and one way access to certain areas that can limit or impede evacuation access and egress. Specifically, the traffic congestion on Embarcadero is being caused by larger vehicles having difficulty turning around in the central Embarcadero and excessive length of dead-end roads creating congestion and safety hazards.

The City received an application for a 600 MW battery energy storage systems (BESS) facility on a 23-acre portion of the power plant property. This industrial project would potentially be vulnerable to coastal hazards, particularly if shoreline armoring is not used to protect the proposed project. On October 28, 2024, the applicant (Vistra Energy) requested the city “pause” processing of the project and indicated their intention to apply instead for approval with the California Energy Commission under the AB 205 opt-in certification program. However, on April 4th, 2025 Vistra formally withdrew BESS application from the city.

Multiple areas within the city are within the 100-year and 500-year floodplain. This includes (but is not limited to) tidelands and coastal areas north and east of Morro Rock; along Morro Valley; and low-lying drainage areas in North Morro Bay as shown in Figure D-2 below. The City’s land use regulations require any structure proposed within a flood zone to be elevated above the floodplain.

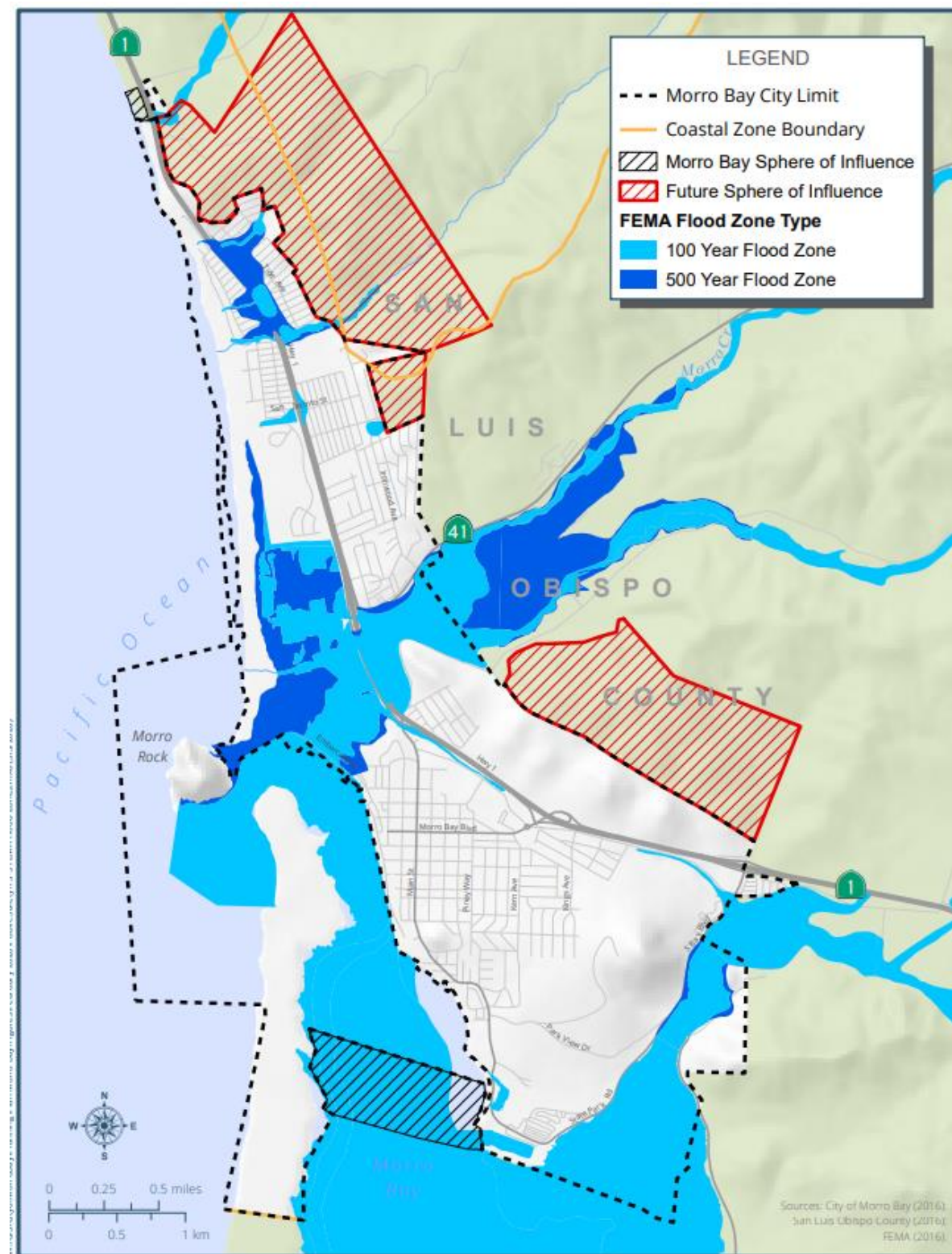
Specific to hazards, analysis of parcels developed between 2019-2024 (since the last update of this HMP) indicated some growth in areas prone to flood (0.2% annual chance zone), landslide,



liquefaction, tsunami, and wildfire (see Development Trends subsections in base plan Chapter 5 for specific counts). While these trends may indicate some increase in community vulnerability, they do not account for site specific investigations or compliance with local regulations that may reduce risk during development.



Figure D-2 City of Morro Bay FEMA Flood Zones



Source: City of Morro Bay Planning Division



D.2 Hazard Identification and Summary

Morro Bay's planning team identified the hazards that affect the city and summarized their frequency of occurrence, spatial extent, potential magnitude, and significance specific to Morro Bay (Table D-6). There are no hazards that are unique to Morro Bay. The overall hazard significance considers the geographic area, probability and magnitude as a way to identify priority hazards for mitigation purposes. This is discussed further in the sections below.

Table D-6 City of Morro Bay – Hazard Summaries

HAZARD	GEOGRAPHIC AREA	PROBABILITY OF FUTURE OCCURRENCE	MAGNITUDE/ SEVERITY (EXTENT)	OVERALL SIGNIFICANCE
Adverse Weather: Thunderstorm/Heavy Rain/Hail/Lightning/Dense Fog/Freeze	Extensive	Highly Likely	Limited	High
Adverse Weather: High Wind/Tornado	Significant	Highly Likely	Limited	Medium
Adverse Weather: Extreme Heat	Significant	Highly Likely	Limited	Medium
Coastal Storm/Coastal Erosion/Sea Level Rise	Extensive	Likely	Critical	High
Drought and Water Shortage	Extensive	Likely	Critical	High
Earthquake and Liquefaction	Significant	Occasional	Catastrophic	High
Flood	Extensive	Highly Likely	Critical	High
Landslides and Debris Flow	Significant	Likely	Critical	Medium
Tsunami and Seiche	Extensive	Occasional	Catastrophic	High
Wildfire	Extensive	Highly Likely	Catastrophic	High
Human Caused: Hazardous Materials	Limited	Highly Likely	Negligible	Medium
Geographic Area Limited: Less than 10% of planning area Significant: 10-50% of planning area Extensive: 50-100% of planning area Probability of Future Occurrences Highly Likely: Near 100% chance of occurrence in next year or happens every year. Likely: Between 10 and 100% chance of occurrence in next year or has a recurrence interval of 10 years or less. Occasional: Between 1 and 10% chance of occurrence in the next year or has a recurrence interval of 11 to 100 years. Unlikely: Less than 1% chance of occurrence in next 100 years or has a recurrence interval of greater than every 100 years.		Magnitude/Severity (Extent) Catastrophic—More than 50 percent of property severely damaged; shutdown of facilities for more than 30 days; and/or multiple deaths Critical—25-50 percent of property severely damaged; shutdown of facilities for at least two weeks; and/or injuries and/or illnesses result in permanent disability Limited—10-25 percent of property severely damaged; shutdown of facilities for more than a week; and/or injuries/illnesses treatable do not result in permanent disability Negligible—Less than 10 percent of property severely damaged, shutdown of facilities and services for less than 24 hours; and/or injuries/illnesses treatable with first aid Significance Low: minimal potential impact Medium: moderate potential impact High: widespread potential impact		

D.3 Vulnerability Assessment

The intent of this section is to assess the City of Morro Bay's vulnerability separately from that of the County, which has already been assessed in Section 5 Hazard Identification and Risk Assessment (HIRA) in the Base Plan. This assessment analyzes the population, property, and



other assets (e.g. critical facilities) at risk to hazards ranked of medium or high significance that may vary from other parts of the planning area.

The key information to support the HIRA for this Annex was collected through a Data Collection Guide, which was distributed to each participating municipality, community services district, or special district to complete during the planning process. Information collected was analyzed and summarized in order to identify and rank all the hazards that could impact anywhere within the County, as well as to rank the hazards and identify the related vulnerabilities unique to each jurisdiction/district. In addition, the Morro Bay planning team was asked to share information on past hazard events that have affected the district.

Each participating jurisdiction or district was in support of the main hazard summary identified in the Base Plan (See Table 5.1). However, the hazard summary rankings for each jurisdictional annex may vary slightly due to specific hazard risk and vulnerabilities unique to that jurisdiction (see Table D-6). Identifying these differences helps the reader to differentiate the district's risk and vulnerabilities from that of the overall County.

Note: The hazard "Significance" reflects overall ranking for each hazard and is based on the Morro Bay planning team input from the Data Collection Guide and the risk assessment developed during the planning process (see Chapter 5 of the Base Plan), which included more detailed quantitative and qualitative analyses with best available data for all hazards in the County.

D.3.1.1 Other Hazards

The following hazards identified in the base plan HIRA are not identified within this jurisdictional annex due to no risk or insignificant anticipated impacts and are not considered further for mitigation actions:

- Agricultural Pest Infestation and Plant Disease/ Marine Invasive Species
- Biological Agents
- Dam Incidents
- Subsidence

D.3.2 Assets at Risk

This section considers Morro Bay's assets at risk, including an inventory of improved properties and critical facilities and Community Lifelines, and historic, economic, cultural, and environmental assets. Please refer to Section 5.2.2 of the base plan for a detailed description of the methodology used.

D.3.2.1 Property Inventory

Table D-7 shows the total exposure of improved properties, broken down by property type, for the City of Morro Bay.

Table D-7 Morro Bay Total Exposure by Property Type

PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE
Agricultural	1	\$5,388	\$5,388	\$10,776
Commercial	292	\$164,005,608	\$164,005,608	\$328,011,216
Exempt	21	\$13,969,219	\$13,969,219	\$27,938,438
Industrial	28	\$9,715,451	\$14,573,177	\$24,288,628
Mixed Use	221	\$60,955,027	\$60,955,027	\$121,910,054
Mobile/Manufactured Homes	17	\$2,931,434	\$1,465,717	\$4,397,151



PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE
Multi-Family Residential	309	\$115,702,017	\$57,851,009	\$173,553,026
Residential	4,332	\$1,103,150,824	\$551,575,412	\$1,654,726,236
Vacant Improved	30	\$11,546,771	-	\$11,546,771
Total	5,251	\$1,481,981,739	\$864,400,556	\$2,346,382,295

Source: San Luis Obispo County Assessor Data November 15, 2024, WSP GIS Analysis

D.3.2.2 Critical Facilities and Infrastructure

A critical facility is defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation.

An inventory of critical facilities in the city is provided in Table D-8 as well as illustrated in Figure D-1. Refer to Section 5.2 of the Base Plan for more information on the Assets used throughout this annex, including the definitions and categories of critical facilities, and the County-wide analyses.

Table D-8 City of Morro Bay's Critical Facilities Assets Summary by FEMA Lifeline

FEMA LIFELINE CATEGORY	COUNTS
Communications	4
Energy	2
Food, Hydration, Shelter	1
Hazardous Material	-
Health and Medical	4
Safety and Security	8
Transportation	12
Water Systems	3
Total	34

Source: San Luis Obispo County, CalARP, HIFLD, National Bridge Inventory, National Inventory of Dams, FCWCD, WSP Analysis

D.3.2.3 High Potential Loss Facilities

High potential loss facilities are considered critical facilities that present significant risks if damaged and include nuclear power plants, dams, and military installations. The city has one classified high potential loss facility: Dynergy's Morro Bay Power Plant.

D.3.2.4 Transportation Systems

The City of Morro Bay contains portions of Highway 41 and Highway 1, which are primary points of transportation access for the city and region. However, no critical facilities classified as part of essential/critical transportation systems were noted.

D.3.2.5 Lifeline Facilities

Lifeline Utility Systems include 2 Microwave Service Towers, 1 Wastewater Treatment Plant, and 1 Energy Commission Facilities for a total of 4 lifeline utility critical facilities.

D.3.2.6 Emergency Service Facilities

The city contains 12 Emergency Services facilities aimed at providing for the health, welfare, and safety of the entire community. These include emergency medical service stations, fire stations, local law enforcement stations, nursing homes, emergency shelters, and schools as noted in Table D-8.



D.3.2.7 Additional Critical Facilities

Additional Essential Infrastructures and Vulnerable Facilities to the district were noted by the Planning Team, which may or may not have been noted in the previous lists and tables. The 10 are summarized below along with their estimated replacement values (per the planning team input):

- City Hall - \$1,471,400 + \$329,595 for Annex
- Police Station - \$2,175,000
- Fire Station - \$7,238,400
- Water Treatment Plant (555 South Bay) - \$93,941,500
- Water Treatment Plant (160 Atascadero Road) - \$11,849,975
- Desalinization Plant \$7,775,149
- Community Center - \$6,776,028
- Corporation Yard - \$1,580,533
- Harbor Department - \$4,500,000; Office building \$305,327, South T-Pier \$2,537,416, N T-Pier \$2,284,916
- Public Works - \$1,572,000
- Veterans Hall - \$1,574,700

D.3.2.8 Historic and Cultural Resources

One of the most visually prominent historic natural landmarks immediately vulnerable to coastal hazards and sea level rise is Morro Rock. Morro Rock stands approximately 576 feet tall and was created from a volcanic plug. The area is a significant cultural and religious monument, as it was once the site of Chumash sacred rituals (City of Morro Bay 2018). Morro Rock is a protected State Historic Landmark (#821) that also provides nesting habitat for peregrine falcons, a previously endangered and currently fully protected species (Department of Fish and Wildlife 2019).

The City of Morro Bay has no registered federal historic sites; however, the State registered historical site, Morro Rock, is within the City Limits (State of California Office of Historic Preservation, 2019). Other historical sites of importance to the County of San Luis Obispo in Morro Bay are listed below.

- Filipino Landing - Coleman Park
- Morro Bay State Park - 20 State Park Road
- Morro Rock - Coleman Drive

D.3.2.9 Natural Resources

Natural resources are important to include in benefit-cost analyses for future projects and may be used to leverage additional funding for projects that also contribute to community goals for protecting sensitive natural resources. Awareness of natural assets can lead to opportunities for meeting multiple objectives. For instance, the Morro Bay coast is fronted by large sand dunes from Atascadero State Beach and continuing south through much of Montaña de Oro State Park that provide protection for developments located on terrace materials behind the sand dunes. The beach has widened about 250 feet near San Jacinto Avenue and almost 500 feet in front of Morro Bay High School in the past 50 years. This sandbar protects development in this region.

One of the most visually prominent historic natural landmarks immediately vulnerable to coastal hazards and sea level rise is Morro Rock. Morro Rock is a protected State Historic Landmark as mentioned above that also provides nesting habitat for peregrine falcons, a previously endangered and currently fully protected species.



D.3.3 Estimating Potential Losses

This section details vulnerability to specific hazards of medium or high significance, where quantifiable, noted by the Planning Team, and/or where it differs significantly from that of the overall County. Impacts of past events and vulnerability to specific hazards are further discussed below, though refer to Section 5 of the Base Plan for more details on the County's HIRA findings and hazard profiles.

D.3.3.1 Adverse Weather: Thunderstorm/ Heavy Rain/ Lightning/ Dense Fog/ Freeze

Heavy rains and adverse storms occur in Morro Bay primarily during the late fall and winter but have a chance of occurring in every month of the year. According to information obtained from the Western Regional Climate Center (WRCC) the majority of precipitation is produced by storms during January and other winter months. Precipitation during the summer months is in the form of rain showers and is rare. Snowstorms, and hailstorms occur infrequently in San Luis Obispo County, and severe occurrences of any of these are very rare. Dense fog in Morro Bay reduces visibility making driving more dangerous during fog events. There have been several fog advisories over the years. Most recently, the National Service Weather issued a Dense Fog Advisory for the San Luis Obispo area. Visibility was reduced to a quarter mile or less and created hazardous driving conditions in the surrounding areas.

Of specific concern for Morro Bay is the combination of high winds, winter storms and the resultant high surf. Coastal communities in the County face increased hazards to high wind and extreme wind storms. The surfing industry of Morro Bay, which attracts visitors and tourists, could be at risk due to the hazard to human safety in the event of increasing unsafe wind events.

The climate of the County is influenced by the effects of the Santa Lucia Range, the Pacific Ocean, and routine climate patterns such as El Niño.

Loss of life is uncommon but could occur during severe storms depending on secondary effects or impacts. Immobility can occur when roads become impassable due to dense fog, heavy rains causing flooding, and even downed trees (often referred to as hazardous trees due to the threat they pose). Overall, the Morro Bay planning team has rated adverse weather hazards as holding **high** significance.

D.3.3.2 Adverse Weather: High Wind/ Tornado

The overall significance of high wind and tornadoes in Morro Bay is rated **medium**, primarily due to frequent high wind events and the rare occurrence of tornadoes. Strong coastal winds, especially during winter storms, can cause power outages and property damage. While tornadoes are uncommon, past events demonstrate that the threat is possible in the planning area.

February 2024, an EF1 tornado touched down in nearby Los Osos and moved to the outskirts of Morro Bay causing damage to power lines and structures. The tornado produced wind speeds of up to 110 mph, uprooting trees, damaging power lines, and causing structural damage to several homes and businesses along its path. This event demonstrates that although tornadoes are not common in the area, they are not impossible and can cause disruption if they do occur.

D.3.3.3 Adverse Weather: Extreme Heat

Extreme heat events can have severe impacts on human health and mortality, natural ecosystems, the agriculture sector and other economic sectors. Coastal communities including Morro Bay on average have lower temperatures compared to communities in inland areas of the County and may be less at risk to extreme temperatures, although they may be potentially less acclimatized to high temperatures if the event of occurrence.



Extreme heat in Morro Bay is rated as **medium** due to occasional spikes in temperatures and increased frequency of warmer days. While the city generally has a mild coastal climate, certain weather patterns- such as inland heat pushing toward the coast- can lead to short-term events that affect daily life. These events, while not as common, can still have a noticeable impact on the community.

D.3.3.4 Drought and Water Shortage

The City of Morro Bay sources its water from a combination of seven local groundwater wells in the Morro and Chorro Groundwater Basins, as well as imported water delivered through the State Water Project. Additionally, the recently completed Water Reclamation Facilities provides advanced treated water for indirect potable reuse, and uses injection wells to recharge groundwater. Current infrastructure consists of 72 miles of pipelines, ten treated water storage tanks, three booster pump stations, and four pressure-reducing stations.

The City's 2020 Urban Water Management Plan identified several critical areas where improvements could be made to the City's water treatment and distribution systems. Aging infrastructure and leak reduction remain a top priority as pipelines and storage tanks require upgrades to prevent inefficiencies and water loss, which ranged from 17 to 129-acre feet per year between 2015 and 2020.

The City is implementing a new water metering system to improve accuracy in water losses and billing. The City is also exploring solar power options for its water treatment plant and booster pump stations. Additionally, Morro Bay is looking to expand its recycled water infrastructure and expand non-potable water distribution for landscape irrigation and industrial use. The City is also exploring desalination as a future backup water source.

The City of Morro Bay anticipates managing its water supply during consecutive dry years through 2045 by utilizing a combination of stored water, groundwater, and recycled water. During drought years, the City anticipates supply reductions compared to normal years and has outlined a strategy to meet demand. As a result, the City anticipates having enough supply to accommodate multiple dry year scenarios, as shown in Table D-9 below.

Table D-9 Multiple Dry Year Supply and Demand Comparison

DROUGHT YEAR	SUPPLY/DEMAND	2025	2030	2035	2040	2045
First Year	Supply Totals	3,151	3,151	3,151	3,151	3,151
	Demand Totals	1,333	1,366	1,400	1,445	1,445
	Difference	1,818	1,785	1,751	1,706	1,706
Second Year	Supply Totals	2,967	2,967	2,967	2,967	2,967
	Demand Totals	1,333	1,366	1,400	1,445	1,445
	Difference	1,634	1,601	1,567	1,522	1,522
Third Year	Supply Totals	1,702	1,702	1,702	1,702	1,702
	Demand Totals	1,333	1,366	1,400	1,445	1,445
	Difference	369	336	302	257	257
Fourth Year	Supply Totals	1,445	1,445	1,445	1,445	1,445
	Demand Totals	1,333	1,366	1,400	1,445	1,445
	Difference	112	79	45	0	0
Fifth Year	Supply Totals	1,720	1,720	1,720	1,720	1,720
	Demand Totals	1,333	1,366	1,400	1,445	1,445
	Difference	387	354	320	275	275

Source: Morro Bay 2020 Urban Water Management Plan



D.3.3.5 Earthquake and Liquefaction

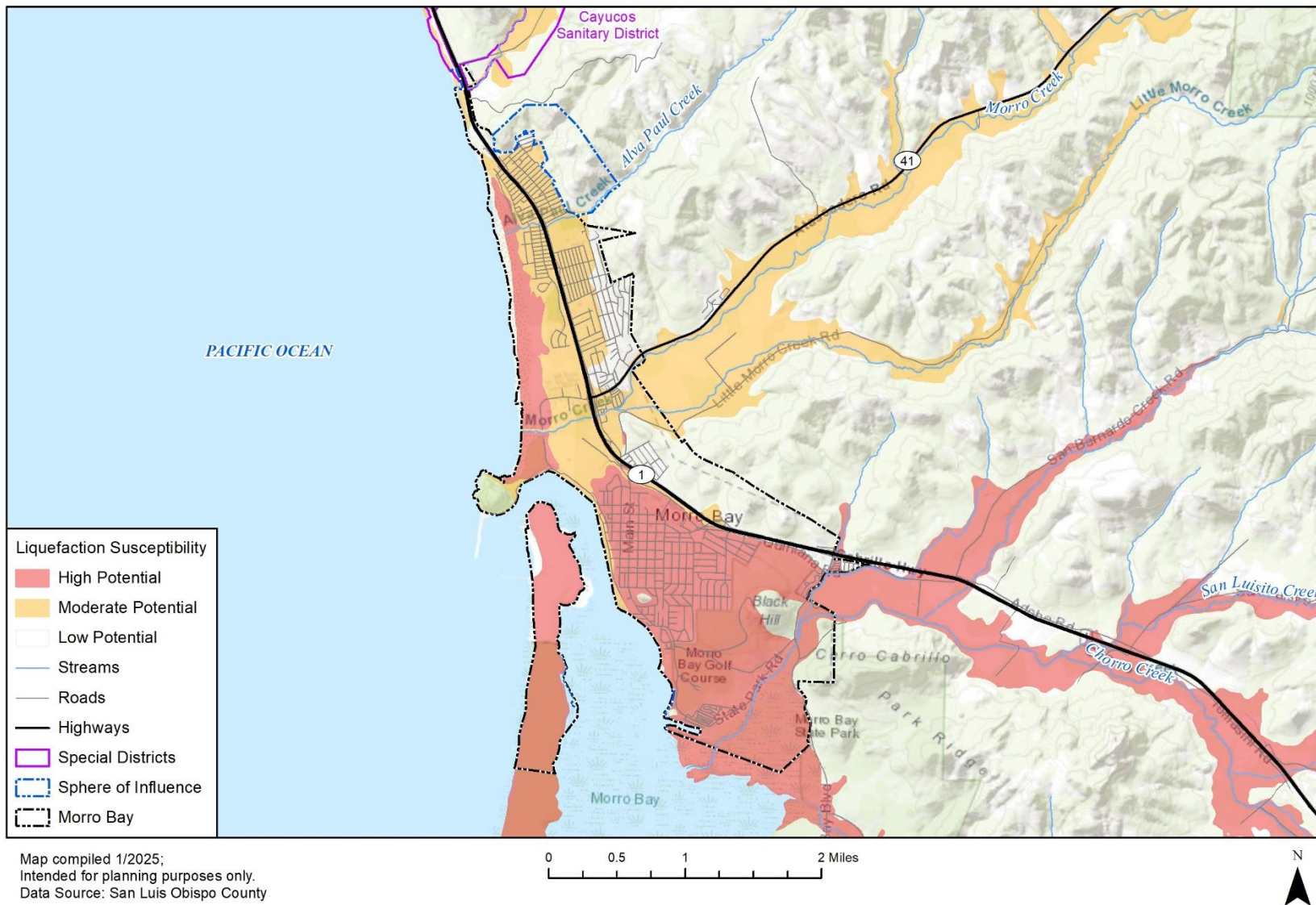
Earthquake and liquefaction hazards pose a **High Significance** for the City of Morro Bay. The northwest trending Cambria Fault zone is within the City limits of Morro Bay (US Quaternary Fault 2019). Within the surrounding area, the East Hausna, La Panza, Los Osos, Edna, Nacimiento, Rinconada, San Andres, and San Simeon- Hosgri Faults are considered to pose a potential hazard to the City in catastrophic and cascading effects (City of Morro Bay 2012). Earthquake-event associated impacts have occurred in Morro Bay in the past including a number of magnitude 5.0 to 7.7 earthquakes. The City's residential area consists predominantly of framed-type structures, which contain some material flexibility allowing the structures to withstand larger seismicity impacts in earthquake events than masonry buildings. Most structure's weak areas are between sill plates and the foundation especially in homes constructed prior to 1950. Major efforts will be required to remove debris and clear roadways, demolish unsafe structures, assist in reestablishing public services and utilities, and provide continuing care and temporary housing for affected citizens.

In addition to being at risk of groundshaking as a result of a fault rupture, the City of Morro Bay is also susceptible to the effects of liquefaction. Much of the City has soils with a moderate risk for liquefaction. A majority of the city is underlain by beach and sand dune sediments and alluvial soils. Areas along the Embarcadero are known to have been filled in over the years with a variety of fill materials, and when combined with the high-water table in the area, these areas present increased concern for liquefaction impacts. Table D.1 below summarizes the properties exposed to liquefiable soils throughout the city, broken up by parcel type and level of risk, while Figure D-3 displays the City's liquefaction zones. Overall, the City has over \$2.3 billion in total property value potentially exposed to liquefaction, and a total of 5,251 exposed parcels.

A total of 21 critical facilities are found in either moderate or low-risk liquefaction zones in the City. These are listed in Table D.2 by facility type.



Figure D-3 Liquefaction Risk in Morrow Bay



**Table D.1 City of Morro Bay Improved Properties Exposed to Liquefaction Potential by Property Type**

PROPERTY TYPE	STRUCTURE COUNT HIGH	STRUCTURE COUNT MODERATE	STRUCTURE COUNT LOW	TOTAL STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Agricultural	-	1	-	1	\$5,388	\$5,388	\$10,776	-
Commercial	200	75	17	292	\$164,005,608	\$164,005,608	\$328,011,216	-
Exempt	12	4	5	21	\$13,969,219	\$13,969,219	\$27,938,438	-
Industrial	14	13	1	28	\$9,715,451	\$14,573,177	\$24,288,628	-
Mining	-	-	-	0	\$0	\$0	\$0	-
Mixed Use	165	24	32	221	\$60,955,027	\$60,955,027	\$121,910,054	-
Mobile/Manufactured Homes	9	4	4	17	\$2,931,434	\$1,465,717	\$4,397,151	37
Multi-Family Residential	212	68	29	309	\$115,702,017	\$57,851,009	\$173,553,026	674
Residential	1,535	1,783	1,014	4,332	\$1,103,150,824	\$551,575,412	\$1,654,726,236	9,444
Vacant Improved	16	7	7	30	\$11,546,771	\$0	\$11,546,771	-
Total	2,163	1,979	1,109	5,251	\$1,481,981,739	\$864,400,556	\$2,346,382,295	10,154

Source: San Luis Obispo Assessor Data November 15, 2024, WSP GIS Analysis

**Table D.2 Critical Facility Assets Exposed to Liquefaction Susceptibility by FEMA Lifeline**

LIQUEFACTION SUSCEPTIBILITY CATEGORY	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
Moderate Liquefaction Susceptibility	-	2	1	-	1	3	11	1	19
Low Liquefaction Susceptibility	-	-	-	-	1	1	-	-	2

Source: San Luis Obispo County, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis

D.3.3.6 Flood

Flooding remains a significant hazard in the City of Morro Bay, with a **High Significance** ranking based on historical impacts and potential future risk. The City has experienced damaging flood events that caused extensive property losses, particularly in areas near major drainage systems such as Chorro Creek, Little Morro Creek, No-Name Creek, Alva Paul Creek, Toro Creek, and San Bernardo Creek. Chorro Creek, the largest system, runs along the southern boundary of the city and presents flood risks to nearby mobile home parks and low-lying residential neighborhoods. Morro Creek, which parallels Highway 41, also contributes to localized flooding during major storm events.

Areas most vulnerable to flooding include South Bay Boulevard between Highway 1 and State Park Road, the corridor between Highway 41/Atascadero Road and Radcliff Avenue, low-lying sections of Island Street and Beachcomber, and portions of Highway 1 both at the northern and southern city limits. These areas are exposed to riverine flooding, where storm runoff exceeds drainage capacity, leading to overbank flooding and blocked transportation routes.

In addition to riverine flooding, Morro Bay is susceptible to flash flooding, particularly in smaller watersheds following intense rainfall or post-wildfire conditions. Flash floods in the area are typically high velocity, short-duration events capable of transporting large debris and causing rapid erosion. Urbanization has increased runoff volumes, compounding flash flood risks. Recent storms in 2023 and 2024 led to widespread impacts across the County. In winter 2023, a federal disaster was declared for the state (DR-4699-CA), with city damages estimated at approximately \$18 million. Flooding continues to pose a serious risk, and the City remains focused on stormwater system improvements, floodplain management, and resilience strategies to reduce vulnerabilities to future flood events.

Values at Risk

A flood vulnerability assessment was completed, following the methodology described in Section 5.2 of the Base Plan. Table D-10 summarizes the values at risk in the City's 1% (100-year) annual chance and 0.2% (500-year) annual chance floodplains. The table also details total values, loss estimates for each flood, and potential population at risk to each flooding zone. Figure D-4 shows the flooded parcels along with the FEMA flood hazard areas which cross the boundaries of Morro Bay.

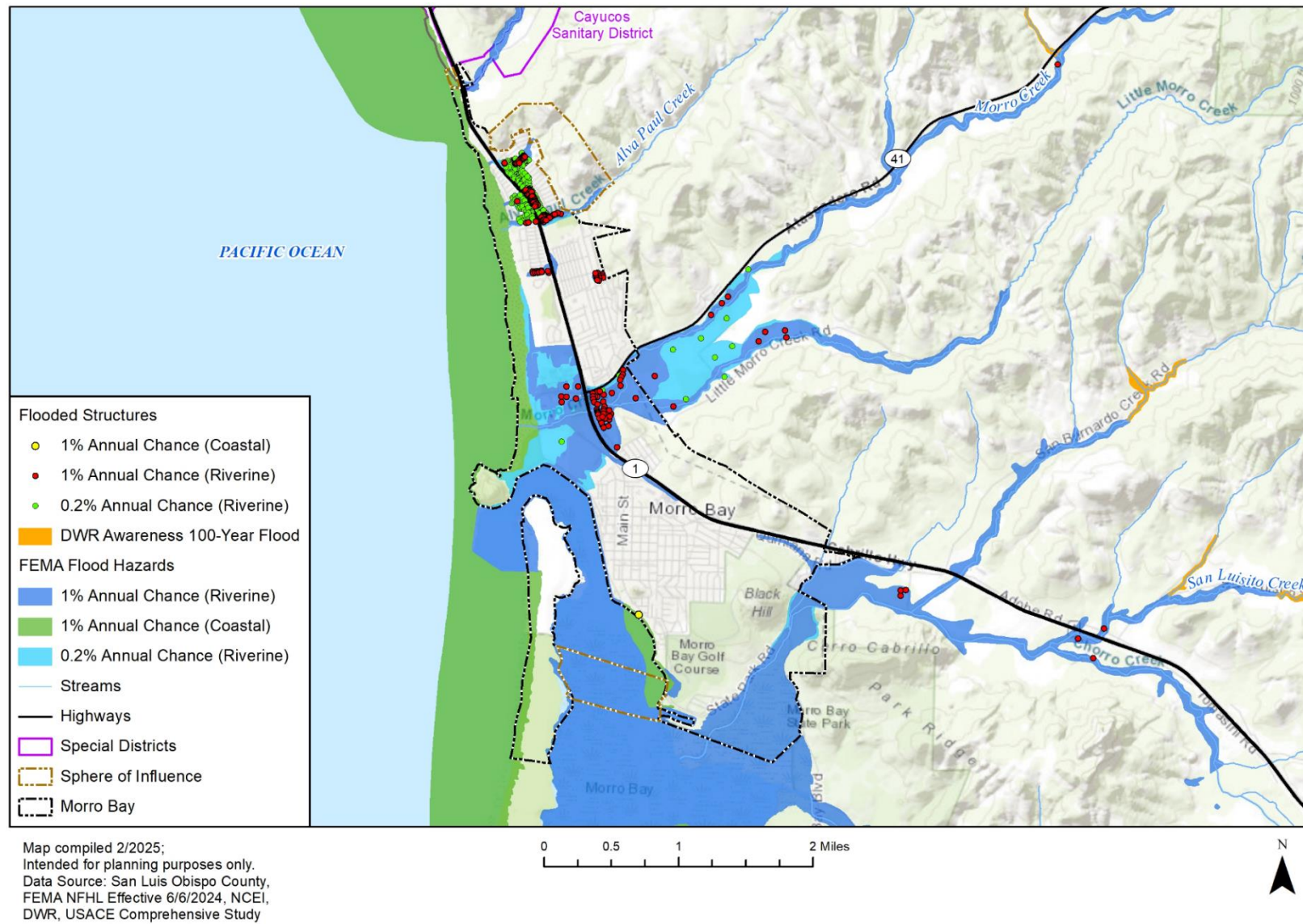
**Table D-10 City of Morro Bay 1% Annual Chance (100-Year) and 0.2% Annual Chance (500-Year) Flooding by Population and Parcel Type**

PARCEL TYPE	PARCEL COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	LOSS ESTIMATE	POPULATION
1% ANNUAL CHANCE (100-YEAR) FLOOD EVENT						
Agricultural	1	\$5,388	\$5,388	\$10,776	\$2,694	-
Commercial	30	\$10,554,019	\$10,554,019	\$21,108,038	\$5,277,010	-
Industrial	7	\$935,555	\$1,403,333	\$2,338,888	\$584,722	-
Mixed Use	7	\$670,654	\$670,654	\$1,341,308	\$335,327	-
Mobile/Manufactured Homes	2	\$439,279	\$219,640	\$658,919	\$164,730	4
Multi-Family Residential	4	\$2,721,450	\$1,360,725	\$4,082,175	\$1,020,544	9
Residential	104	\$24,334,201	\$12,167,101	\$36,501,302	\$9,125,325	227
Vacant Improved	3	\$5,028,640	\$0	\$5,028,640	\$1,257,160	-
Total	158	\$44,689,186	\$26,380,859	\$71,070,045	\$17,767,511	240
0.2% ANNUAL CHANCE (500-YEAR) FLOOD EVENT						
Commercial	4	\$1,477,786	\$1,477,786	\$2,955,572	\$738,893	-
Exempt	2	\$6,901,650	\$6,901,650	\$13,803,300	\$3,450,825	-
Industrial	1	\$600,000	\$900,000	\$1,500,000	\$375,000	-
Mixed Use	1	\$141,391	\$141,391	\$282,782	\$70,696	-
Multi-Family Residential	5	\$3,037,141	\$1,518,571	\$4,555,712	\$1,138,928	11
Residential	237	\$47,282,121	\$23,641,061	\$70,923,182	\$17,730,795	517
Vacant Improved	1	\$8,129	\$0	\$8,129	\$2,032	-
Total	251	\$59,448,218	\$34,580,458	\$94,028,676	\$23,507,169	528

San Luis Obispo Assessor Data November 15, 2024, FEMA NFHL Effective Date 6/6/2024, WSP GIS Analysis



Figure D-4 Morro Bay DWR & FEMA Flood Hazards with Flooded Structures





The City has substantial assets at risk to flooding in both the 1% and 0.2% annual chance floodplains. Within the 1% annual chance floodplain, there are 158 improved parcels with a total value of approximately \$71 million. In the 0.2% annual chance floodplain, an additional 251 improved parcels are valued at approximately \$94 million.

The estimated loss in a 1% annual chance flood is approximately \$18 million, while a 0.2% annual chance flood could result in an estimated \$24 million in damages. Commercial, residential, and multi-family residential properties make up the majority of assets exposed to flooding. Industrial and mixed-use properties also account for a notable share of at-risk structures.

It is important to note that some structures may be elevated above the base flood elevation, reducing their vulnerability to direct flood damage.

Population at Risk

Using parcel data and an average household size of 2.47 persons, the City of Morro Bay has approximately 240 people at risk within the 1% annual chance floodplain and about 528 people at risk within the 0.2% annual chance floodplain.

Residential exposure in the 0.2% annual chance floodplain is more significant, with most of the population at risk residing in single-family and multi-family residential properties. This highlights the importance of maintaining flood protection, emergency planning, and evacuation access for the city's most vulnerable communities.

Insurance Coverage, Claims Paid, and Repetitive Losses

The City joined the NFIP on December 18, 1979. The current effective map is dated May 16, 2017. As of May 12, 2025, NFIP records show 97 active flood insurance policies in the City, totaling \$31,298,000 in coverage. Of these, 40 policies are in A zones, and the rest are in B, C, or X zones.

Since joining the NFIP, the City has recorded 37 flood loss claims totaling \$828,657. According to the OpenFEMA dataset accessed in 2024, the City includes three Repetitive Loss (RL) properties, and no Severe Repetitive Loss (SRL) properties. Two of the affected structures are categorized as single-family residential buildings, excluding mobile homes and units within multi-family buildings, and one is labeled as a single family residence.

Critical Facilities at Risk

The City has a number of critical facilities located within the 1% and 0.2% annual chance flood hazard areas. In total, 14 critical facilities are exposed to flood risk across both floodplains.

Within the 1% annual chance floodplain, 12 facilities are at risk, including 2 energy facilities, 9 transportation facilities, and 1 water system facility. In the 0.2% annual chance floodplain, 2 additional critical facilities are exposed: one categorized under food, hydration, and shelter, and another under safety and security.

The presence of energy, transportation, and public safety-related facilities in flood hazard areas increases the potential for widespread disruption during a major flood event, making targeted mitigation and preparedness planning for these assets a priority.

Table D-11 and Table D-12, below, summarize critical facilities exposed to the City's floodplains.

**Table D-11 Morro Bay Critical Facility Assets Exposed to FEMA Riverine 1% Flood Hazards by Jurisdictions and FEMA Lifelines**

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
Morro Bay	-	2	-	-	-	-	9	1	12

Source: San Luis Obispo County, FEMA NFHL Effective Date 6/6/2024, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis

Table D-12 Morro Bay Critical Facility Assets Exposed to FEMA Riverine 0.2% Flood Hazards by Jurisdictions and FEMA Lifelines

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
Morro Bay	-	-	1	-	-	1	-	-	2

Source: San Luis Obispo County, FEMA NFHL Effective Date 6/6/2024, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis

D.3.3.7 Landslides and Debris Flow

A well-documented history of landslide activity in the study area is present. Landslides activity is observable all along the Highway 1 corridor from San Luis Obispo, through the community of Morro Bay, and on north to San Simeon. In 1983, and again in 1995, very wet winters led to significant slope movement in the North Morro Bay area, north of Highway 41 and east of Highway 1; a number of slides caused the total destruction of homes, considerable damage to others, and damage to pipelines, driveways, and roadways. Numerous studies have documented unstable, landslide prone slopes in the Morro Bay area generally east of Highway 1 and north of Highway 4. In July of 2020 a landslide of 13,000 cubic yards of soil at the site of Morro Bay's sewer treatment plant project caused a total of \$1.13 million in damages.

A major landslide along the transportation routes in and out of the City of Morro Bay is a potential hazard to the heavily tourism-reliant economy. For example, in March of 2023 debris flow took down trees and powerlines and shut down three miles of Highway 41 from San Gabriel Road to Los Altos Road between Atascadero and Morro Bay.

Table D-13 summarizes the structure counts and values exposed to landslide potential areas in the city. Figure D-5 shows, in map form, where these landslide potential areas are in and near the city. 34 critical facilities, including 1 health and medical building in a high potential zone, are located within the landslide potential areas in Morro Bay as shown on Table D-14. Overall, landslide and debris flow hazards pose a **Medium** Significance risk to the City of Morro Bay.

**Table D-13 Improved Properties Exposed to Landslide Potential in Morro Bay**

PROPERTY TYPE	STRUCTUR E COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATIO N
Agricultural	0	\$0	\$0	\$0	-
Commercial	17	\$18,604,559	\$18,604,559	\$37,209,118	-
Exempt	4	\$3,885,380	\$3,885,380	\$7,770,760	-
Industrial	1	\$520,200	\$780,300	\$1,300,500	-
Mining	0	\$0	\$0	\$0	-
Mixed Use	32	\$11,269,553	\$11,269,553	\$22,539,106	-
Mobile/Manufactured Homes	4	\$475,278	\$237,639	\$712,917	9
Multi-Family Residential	34	\$12,212,193	\$6,106,097	\$18,318,290	74
Residential	1,015	\$289,621,808	\$144,810,904	\$434,432,712	2,213
Vacant Improved	4	\$845,422	\$0	\$845,422	-
Total	1,112	\$337,434,393	\$185,694,432	\$523,128,825	2,296

San Luis Obispo Assessor Data November 15, 2024, WSP GIS Analysis

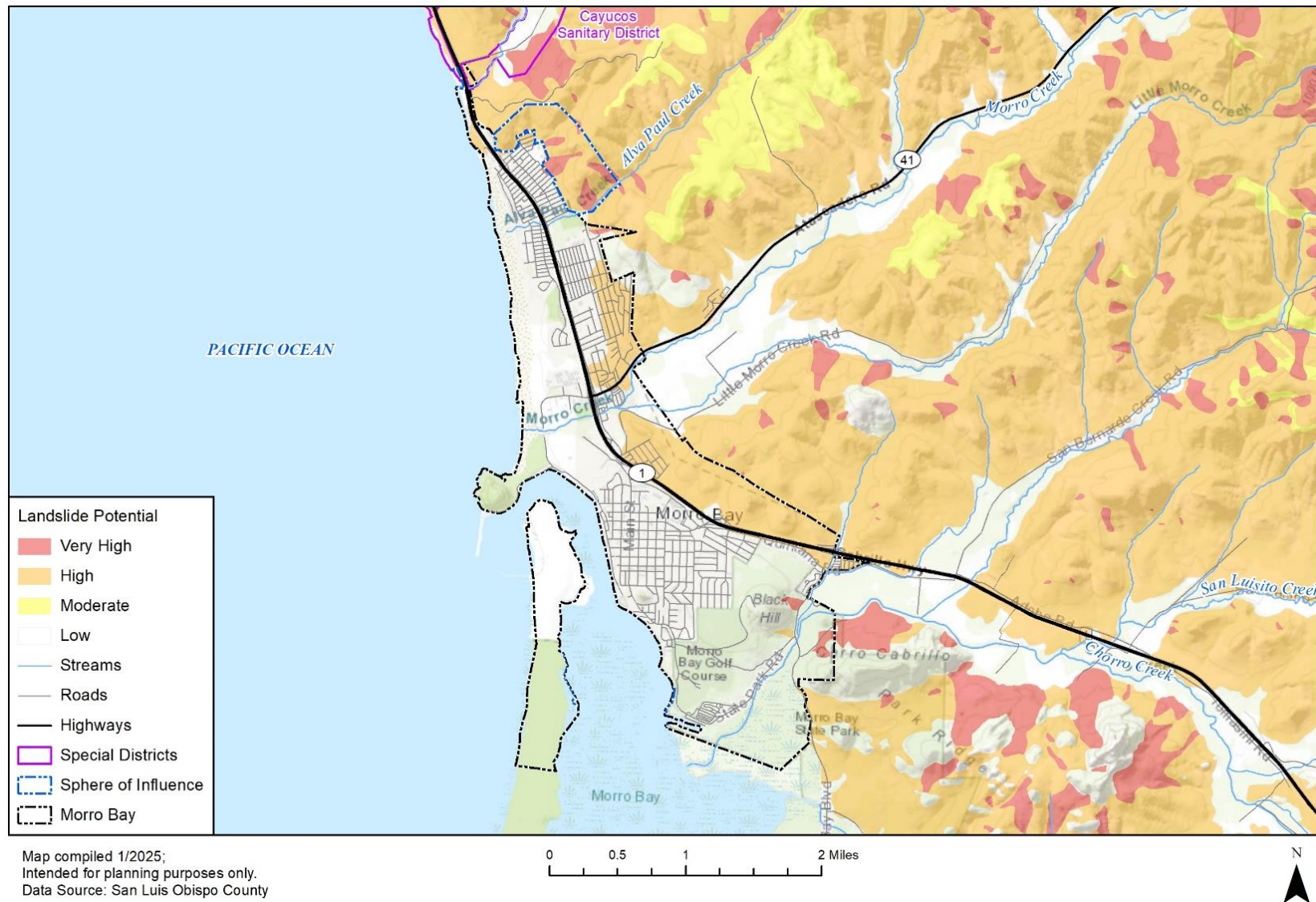
Table D-14 Critical Facility Assets Exposed to Landslide Potential

LANDSLIDE POTENTIAL	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
High	-	-	-	-	1	-	-	-	1
Low	4	2	1	-	3	8	12	3	33
Total									34

Source: San Luis Obispo County, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis



Figure D-5 Landslide Potential in Morro Bay





D.3.3.8 Coastal Storm/Coastal Erosion/Sea Level Rise

The City of Morro Bay faces a **High Significance** of risk from coastal storm events, coastal erosion, and sea level rise (SLR). The City's coastline, including sandy beaches, dunes, coastal bluffs, and key infrastructure like the Embarcadero Waterfront and Highway 1, is highly exposed to these hazards. Morro Bay's public trust lands, critical recreation areas, commercial hubs, and natural assets such as Morro Rock and the Morro Bay Sandspit are particularly vulnerable.

Coastal hazards such as inundation, bluff and dune erosion, tidal flooding, and extreme wave action have historically impacted the City. Large winter storms can damage beach access points, infrastructure, and the harbor entrance jetties, while more routine seasonal erosion affects the beach and dune systems. Although the northern beaches are somewhat buffered by natural sand dunes, intense winter surf and extreme weather events continue to pose threats to public infrastructure and ecological assets.

Recent assessments, including the 2018 Sea Level Rise Adaptation Strategy and the California State Lands Commission AB691 study, highlight the increasing risks. Vulnerable built facilities include the Embarcadero Waterfront, wastewater and storm drainage facilities, desalination plants, telecommunications infrastructure, Fire Stations 53 and 54, and key fishing industry infrastructure such as docks and piers. Natural assets such as Morro Rock, Morro Sand Dunes, and critical habitats like the Heron Rookery and eelgrass beds are also at risk.

The AB691 study emphasized that even moderate sea level rise scenarios (one to two feet by mid-century) will increase the exposure of key infrastructure. Without proactive adaptation, losses from erosion, inundation, and extreme weather could significantly impact the local economy and environment. Specific vulnerabilities include the loss of access to Highway 1, flooding of harbor facilities, and impacts to tourism-dependent assets.

Adaptation and mitigation strategies recommended for Morro Bay include improving existing revetments along Highway 1, extending sand dunes for protection, elevating Highway 1 and storm drain infrastructure, improving dock resiliency, and planning for strategic retreat where necessary. The City recognizes that early action, including nature-based solutions and infrastructure upgrades, will be critical to maintaining community resilience.

While much of the waterfront and supporting facilities are currently elevated above immediate flood risks, extreme sea level rise scenarios (66 inches by 2100) could overwhelm existing protections. The City's forward-looking planning efforts aim to reduce vulnerabilities and maintain a sustainable coastline under future conditions.

As part of the 2019 HMP planning effort, a sea level rise risk assessment was completed to determine how sea level rise may affect coastal jurisdictions and critical facilities and how coastal flooding might be exacerbated in the future. Table D-15 lists the critical facilities that would be affected by sea level rise. There is no risk until the 300 cm scenario; facilities identified include the Morro Bay High School, the power plant and a PG&E substation. Table D-15 Morro Bay and Table D-16 summarize the other properties at risk of inundation by sea level rise and sea level rise combined with a 1% annual chance coastal flood. The area of inundation by sea level rise and sea level rise combined with the 1% coastal flood are shown Figure D-6 and Figure D-7 in, respectively. See Section 5.3.4 Coastal Storm/Coastal Erosion/Sea Level Rise in the base plan for more details on the scenarios and data sources used for this analysis.

Table D-15 and Table D-16 summarize the number of Morro Bay properties and associated improved values projected to be inundated under sea level rise scenarios alone and under sea level rise combined with the 1% annual chance coastal flood scenario. Sea level rise modeling for Morro Bay shows minimal impacts under lower sea level rise scenarios but increasing



vulnerability at higher levels. No properties are impacted under the 25-centimeter sea level rise scenario, and only one commercial property is affected under the 75-centimeter scenario. Under the 300-centimeter sea level rise scenario, 32 parcels are at risk, including commercial, industrial, mixed-use, residential, and vacant improved properties.

When sea level rise is combined with a 1% annual chance flood, the number of affected parcels rises to 98 under the 300-centimeter scenario. This includes 74 residential parcels, 17 commercial parcels, 3 mixed-use parcels, 2 industrial parcels, 1 exempt property, and 1 vacant improved parcel.

The total improved property value exposed under the 300-centimeter sea level rise scenario alone is approximately \$29.2 million. When combined with a 1% annual chance flood, this exposure increases to approximately \$70.8 million. Assets at risk include key commercial properties, residential neighborhoods, industrial sites, mixed-use developments, and critical government and utility infrastructure, highlighting the significant vulnerability of Morro Bay to future sea level rise and combined flooding scenarios.

Table D-15 Morro Bay Properties Inundated by Sea Level Rise and Sea Level Rise with 1% Annual Chance Flood

PROPERTY TYPE	25-CM SLR	75-CM SLR	300-CM SLR	25-CM SLR W/1% FLOOD	75-CM SLR W/1% FLOOD	300-CM SLR W/1% FLOOD
Commercial	-	1	16	1	3	17
Exempt	-	-	-	-	-	1
Industrial	-	-	2	-	-	2
Mixed Use	-	-	3	-	-	3
Residential	-	-	10	1	1	74
Vacant Improved	-	-	1	-	-	1
Total	0	1	32	2	4	98

Source: San Luis Obispo County Assessor Data November 15, 2024, USGS CoSMoS v3.1, WSP GIS Analysis

Table D-16 Morro Bay Improved Values of Properties Inundated by Sea Level Rise and Sea Level Rise with 1% Annual Chance Flood

PROPERTY TYPE	25-CM SLR	75-CM SLR	300-CM SLR	25-CM SLR W/1% FLOOD	75-CM SLR W/1% FLOOD	300-CM SLR W/1% FLOOD
Commercial	-	\$431,766	\$18,232,774	\$431,766	\$9,499,096	\$20,768,623
Exempt	-	-	-	-	-	\$6,760,042
Industrial	-	-	\$79,448	-	-	\$79,448
Mixed Use	-	-	\$1,704,221	-	-	\$1,704,221
Residential	-	-	\$4,210,663	\$301,705	\$301,705	\$36,481,451
Vacant Improved	-	-	\$5,000,000	-	-	\$5,000,000
Total	\$0	\$431,766	\$29,227,106	\$733,471	\$9,800,801	\$70,793,785

Source: San Luis Obispo County Assessor Data November 15, 2024, USGS CoSMoS v3.1, WSP GIS Analysis



Figure D-6 Morro Bay Sea Level Rise Scenario Analysis: Tidal Inundation Only

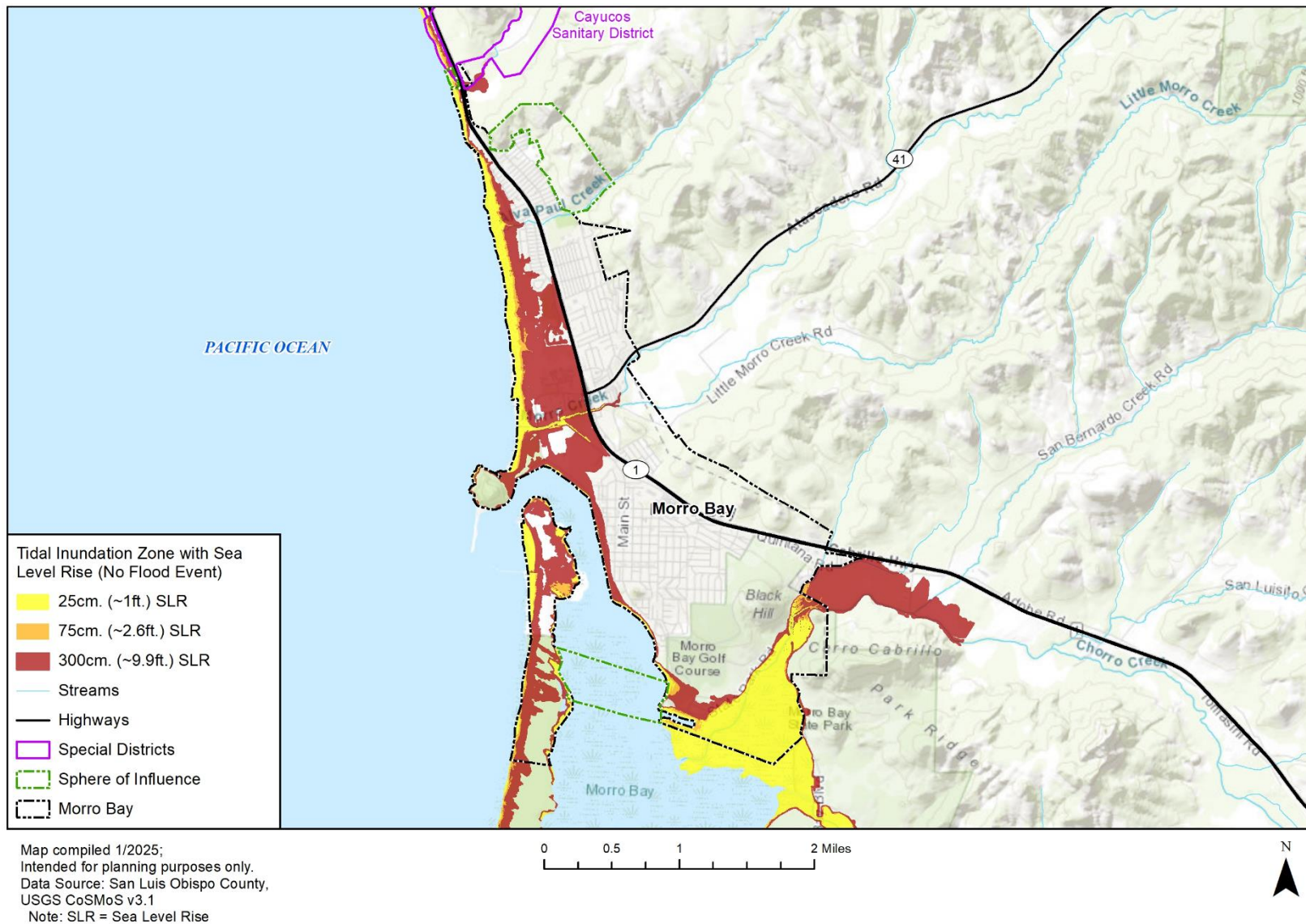




Figure D-7 Morro Bay Sea Level Rise Scenario Analysis: Tidal Inundation and 1% Annual Chance Flood

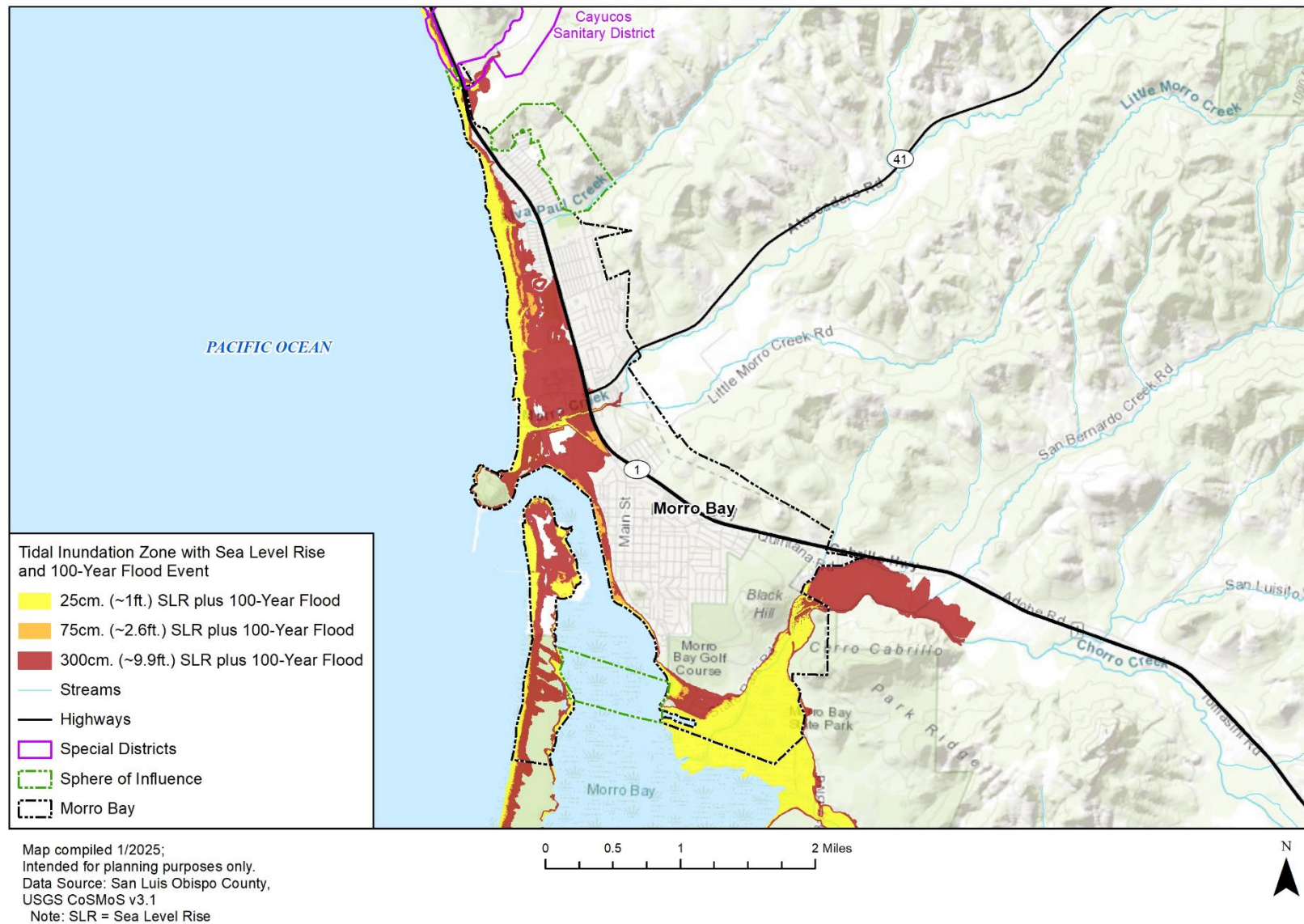




Table D-17 shows critical facilities exposed to sea level rise under both flood and no-flood scenarios.

Table D-17 Critical Facility Assets Exposed to Sea Level Rise for Flood and No Flood Scenarios

FEMA LIFELINE	25-CM SLR	75-CM SLR	300-CM SLR	25-CM SLR W/1% FLOOD	75-CM SLR W/1% FLOOD	300-CM SLR W/1% FLOOD
Communications	-	-	-	-	-	-
Energy	-	-	2	-	-	2
Food, Hydration, Shelter	-	-	1	-	-	1
Hazardous Material	-	-	-	-	-	-
Health and Medical	-	-	-	-	-	-
Safety and Security	-	-	1	-	-	1
Transportation	2	1	7	2	2	8
Water Systems	-	-	1	-	-	-
Total	2	1	12	2	2	12

Source: San Luis Obispo County, USGS CoSMoS v3.1, CalARP, HIFLD, NBI, NID, WSP Analysis

Critical facility exposure to sea level rise in Morro Bay is limited under lower sea level rise scenarios but increases notably under more extreme conditions. No critical facilities are affected under the 25 or 75 centimeter scenarios except for minor impacts to transportation infrastructure. At 300 centimeters of sea level rise, 12 critical facilities become exposed, including energy, food, safety, transportation, and water system assets.

When sea level rise is combined with a 1% annual chance coastal flood, the number of affected critical facilities increases to 13, primarily impacting transportation and key utility services. This highlights the growing threat to essential infrastructure under future sea level rise and flood conditions

D.3.3.9 Tsunami and Seiche

Tsunami hazards have been rated as high significance for the City of Morro Bay. Tsunami inundation poses a risk to all coastal communities in the County of San Luis Obispo including Morro Bay. Offshore faults and related seismic activity could generate a tsunami event off the coast of Morro Bay, even if the fault rupture occurs thousands of miles away. Historically, significant tsunamis on the Central Coast of California have been infrequent. Only a few incidences have been recorded, and the historical record is not extensive enough to develop an accurate prediction for the pattern of recurrence. The potential tsunami hazard for the City's coastal areas is greatest for those communities or portions of communities that are located at or below 50 feet above mean sea level. In general, much of the Coast of Morro Bay is protected from tsunami hazards by wide beaches, coastal dunes, or sea cliffs that provide protection for coastal developments. Coastal developments most vulnerable to the tsunami hazards are those located near mouths of streams that drain into the Pacific Ocean, such as Morro and Chorro Creeks, the Morro Bay Estuary, and stretches of land between Highway 1 and the ocean. The potential for damage to coastal structures would likely increase if the tsunami event were to coincide with a high tide, storm related waves, or large winter storm runoff. Tsunami hazards are predicted in the following locations within the City of Morro Bay: Morro Creek, Alva Paul Creek, Chorro Creek, Atascadero Beach, the harbor area, and Embarcadero.

A GIS analysis performed on the parcels and the tsunami inundation layers determined that 638 structures with an estimated total value of over \$378.5 million are at risk of this hazard. This is almost double the number of structures identified at risk in the previous plan. See Table D-18 for a summary of the parcel count, improved values, content values, total values, and population at risk of tsunami inundation. Figure D-8 displays these tsunami inundation areas of the city.



Critical Facilities were also overlaid with the tsunami inundation layers in GIS. This analysis yielded a total of 17 facilities found at risk, the majority of these being within the Transportation Community Lifeline. These are listed in Table D-19.

Table D-18 City of Morro Bay Improved Properties Exposed to Tsunami Hazard Areas by Property Type

PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Commercial	52	\$29,228,663	\$29,228,663	\$58,457,326	-
Exempt	1	\$6,760,042	\$6,760,042	\$13,520,084	-
Industrial	10	\$2,785,061	\$4,177,592	\$6,962,653	-
Mixed Use	16	\$4,377,913	\$4,377,913	\$8,755,826	-
Mobile/Manufactured Homes	2	\$439,279	\$219,640	\$658,919	4
Multi-Family Residential	15	\$7,306,990	\$3,653,495	\$10,960,485	33
Residential	536	\$182,188,523	\$91,094,262	\$273,282,785	1,168
Vacant Improved	6	\$5,883,038	\$0	\$5,883,038	-
Total	638	\$238,969,509	\$139,511,606	\$378,481,115	1,206

Source: San Luis Obispo Assessor Data November 15, 2024, California Geological Survey, Dept. of Conservation, WSP GIS Analysis

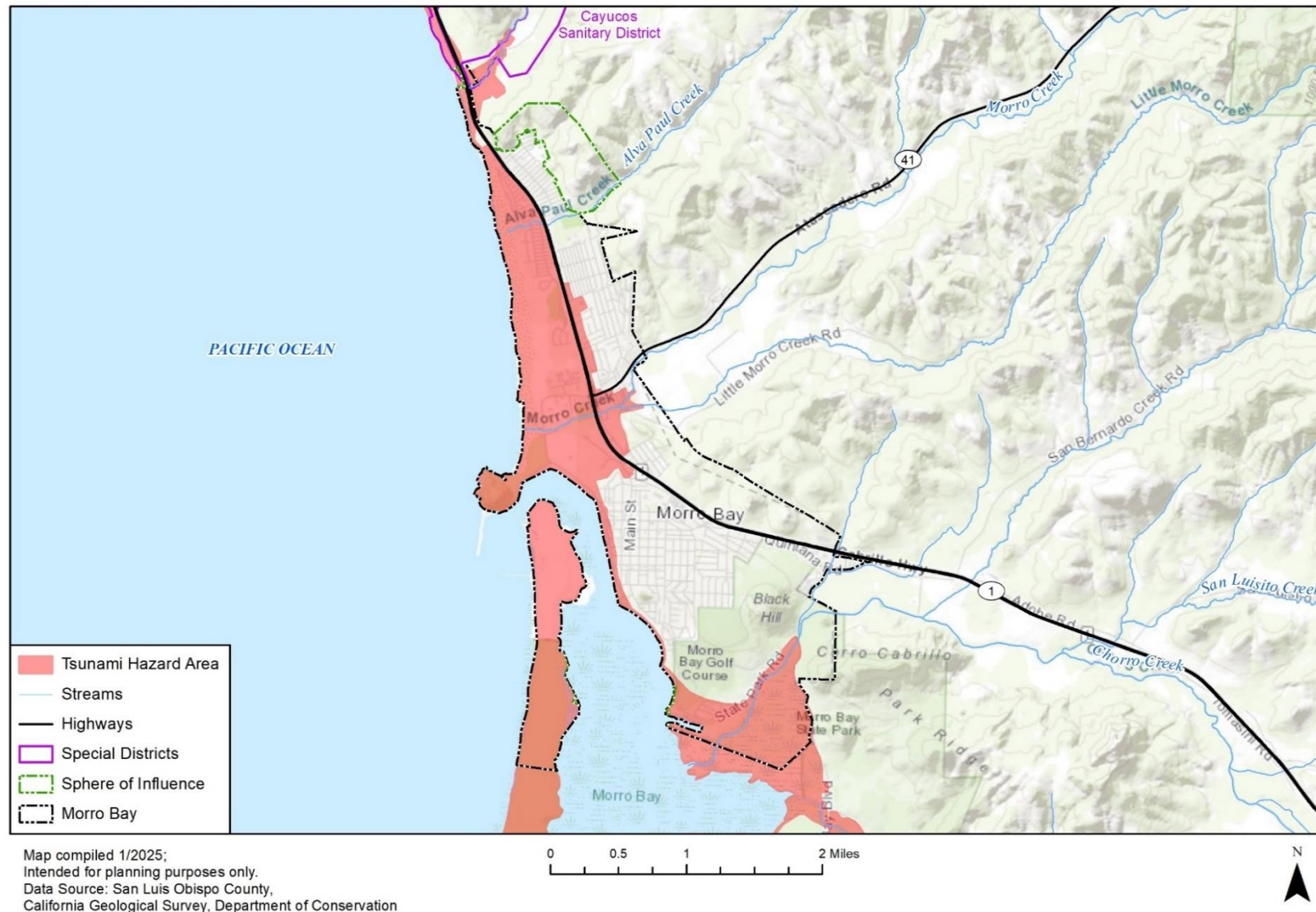
Table D-19 Critical Facility Assets Exposed to Tsunami Hazard Areas by FEMA Lifelines, City of Morro Bay

FEMA LIFELINE CATEGORY	NUMBER OF FACILITIES
Communications	0
Energy	2
Food, Hydration, Shelter	1
Hazardous Materials	0
Health and Medical	0
Safety and Security	2
Transportation	11
Water Systems	1
TOTAL	17

Source: San Luis Obispo County, California Geological Survey, Dept. of Conservation, CalARP, HIFLD, NBI, NID, WSP Analysis



Figure D-8 Tsunami Inundation Areas in the City of Morrow Bay





D.3.3.10 Wildfire

Weather plays a key factor in the wildland fire potential in Morro Bay. Rain fall occurs primarily between the months of November and April, and ranges between 20 to 25 inches per year. Summers are typically cool with fog or high humidity the norm. Wind in the area, a key factor in spread, is quite predictable and is usually moisture laden due to the close proximity of the ocean. Fall season typically shows drier and warmer days, which combine with the lack of rainfall to increase the fire hazard threat. Despite the temperate climate in the City, the lack of rainfall can lead to an increase in fire hazard threat. Fuel sources in the Morro Bay area are diverse, including everything from dead tree leaves, twigs, and branches to dead standing trees, live trees, brush, and cured grasses. The type of prevalent fuel directly influences the behavior of wildfire, and the City's planning team has identified hazardous trees as potentially increasing fuel sources.

Wildland fires are common occurrences in San Luis Obispo County. The most significant wildland fires within the county have been located in the northern division of the Los Padres National Forest. In 1994, a 49,000-acre fire burned forestland from the western portion of Morro Bay to Morro Bay. In 1996, 106,000 acres burned in the Machesna Mountain Wilderness area southeast of the City before the fire was contained. A little over one year later, a 30,000-acre wildland fire burned in forestland in the southern portion of San Luis Obispo County. The largest historical wildfire in the City limits of Morro Bay was contained to approximately seven acres. The open lands in and adjoining the City have been categorized by the California Department of Forestry and Fire Protection's Fire and Resource Assessment Program (FRAP), as being of a Medium Fire Hazard. The areas that are at risk from a large-scale wildland fire are mostly located on the edge of the City limits. These "fringe" areas are where there is the most potential for a wild fire to cause significant property damage, however most of these lands are grazed by cattle and the fuel loads are kept to a minimum. The neighborhoods bordering the Morro Bay State Park and Black Hill area also constitute wildfire urban interface problem.

Following the methodology described in the wildfire hazard Section 5.3.15 Wildfire of the Base Plan, along with the GIS parcel analysis discussed in more detail under Section 5.2 Asset Summary, a wildfire vulnerability analysis for the City of Morro Bay was completed. However, wildfire hazards have been rated by the City's planning team as holding **High Significance** based on the community's experience and historical evidence.

In the City of Morro Bay, 2,354 properties are situated within wildfire hazard exposure zones ranging from moderate to very high. Of these 468 are located in the Very High Fire Hazard Severity Zone, while 505 properties fall within the High Fire Hazard Severity Zone. Collectively, these properties represent a total assessed value of \$994,867,559 and impact approximately 4,859 residents across all fire hazard severity zones. Table D-20 shows the properties in the City exposed to Fire Hazard Severity Zones. Figure D-8 depicts the Fire Hazard Severity Zones in the City of Morro Bay.

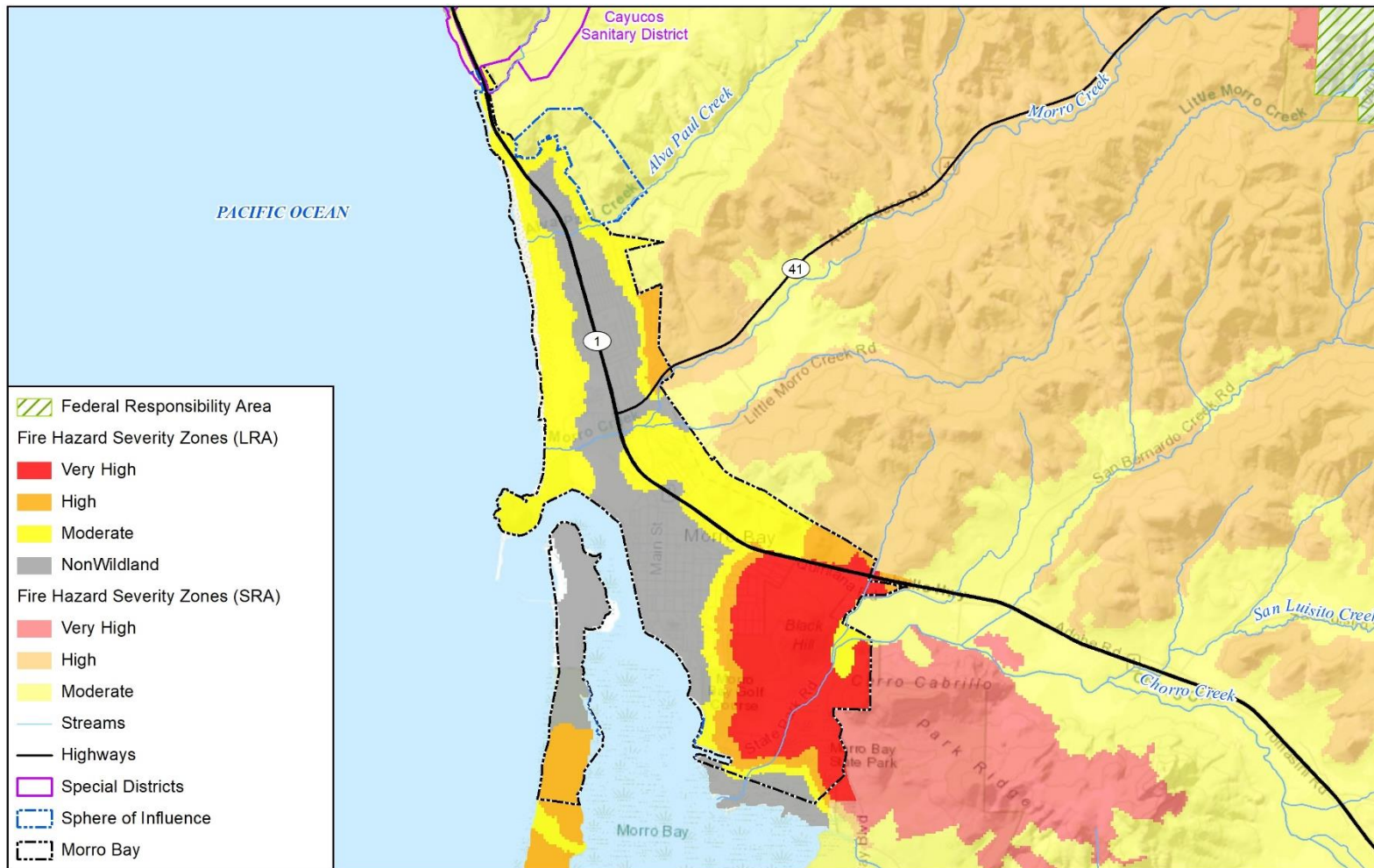
**Table D-20 City of Morro Bay Improved Properties Exposed to Fire Hazard Severity Zone by Property Type**

PROPERTY TYPE	STRUCTURE COUNT VERY HIGH	STRUCTURE COUNT HIGH	STRUCTURE COUNT MODERATE	TOTAL STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Agricultural	-	-	1	1	\$5,388	\$5,388	\$10,776	-
Commercial	16	6	26	48	\$23,090,703	\$23,090,703	\$46,181,406	-
Exempt	2	3	3	8	\$4,616,833	\$4,616,833	\$9,233,666	-
Industrial	10	1	6	17	\$6,100,162	\$9,150,243	\$15,250,405	-
Mixed Use	8	16	11	35	\$8,402,547	\$8,402,547	\$16,805,094	-
Mobile/Manufactured Homes	2	1	1	4	\$1,052,554	\$526,277	\$1,578,831	9
Multi-Family Residential	30	10	29	69	\$18,450,762	\$9,225,381	\$27,676,143	150
Residential	400	462	1,294	2,156	\$583,351,889	\$291,675,945	\$875,027,834	4,700
Vacant Improved	-	6	10	16	\$3,103,404	\$0	\$3,103,404	-
Total	468	505	1,381	2,354	\$648,174,242	\$346,693,317	\$994,867,559	4,859

Source: San Luis Obispo Assessor Data November 15, 2024, CAL FIRE - FHSZ Phase 3 March 10, 2025, WSP GIS Analysis



Figure D-9 Morro Bay Fire Hazard Severity Zones Areas



Map compiled 3/2025;
Intended for planning purposes only.
Data Source: San Luis Obispo County, CAL FIRE,
Phase 3 as Identified by the Office of the State Fire Marshal March 10, 2025,
FHSZSRA_23_3, FHSZLRA25_Phase3_v1



Table D-21 shows critical facilities in Morro Bay that are exposed to fire hazard severity zones, categorizing them by fire hazards severity zone level and facility type. The exposure of these critical assets to wildfire hazards poses significant risks to transportation. The table below shows that a total of twenty six (26) critical facilities exposed to fire hazard severity zones, four (4) of which fall in the very high fire hazard severity zone rating, sixteen (16) are exposed to a high fire hazard severity.

Table D-21 Critical Facilities Assets Exposed to Fire Hazard Severity Zones

FIRE HAZARD SEVERITY ZONE	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
Very High	-	-	-	-	1	-	1	2	4
High	1	-	1	-	4	6	4	-	16
Moderate	-	-	-	-	-	2	4	-	6
Total	1	0	1	0	5	8	9	2	26

Source: San Luis Obispo County, CAL FIRE - FHSZ Phase 3 March 10, 2025, CalARP, HIFLD, NBI, NID, WSP Analysis

D.3.3.11 Human Caused: Hazardous Materials

The City of Morro Bay is at risk of both hazardous material incidents at fixed facilities as well as materials being transported on Highway 101 which traverse the City's jurisdiction and is considered a major transportation route for shipping hazardous materials. An incident along this Highway would expose a significant portion of the City's population as well as the local economy if Highway 101 was to be shut down for an extended period of time.

The Cal OES Spill Release Reporting Center reports 15 hazardous materials incidents in the City of Morro Bay from January 1st, 2019 through December 20th, 2024. This likely excludes a number of unreported minor spills. The 46 reported incidents constitutes 10.2% of the hazardous materials incidents reported countywide during the same time frame and averages out to roughly 7.66 incidents per year. The Although there are no significant hazardous materials facilities located in the City, Morro Bay sits within the Emergency Planning Zone for the Diablo Canyon Nuclear Power Plant. Overall, the planning team has classified Hazardous Materials as holding **medium** Significance for the jurisdiction.

D.4 Capability Assessment

Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capability assessment is divided into five sections: regulatory mitigation capabilities, administrative and technical mitigation capabilities, fiscal mitigation capabilities, mitigation outreach and partnerships, and other mitigation efforts.

To develop this capability assessment, the jurisdictional planning representatives used a matrix of common mitigation activities to inventory which of these policies or programs were in place. The team then supplemented this inventory by reviewing additional existing policies, regulations, plans, and programs to determine if they contributed to reducing hazard-related losses.

During the plan update process, this inventory was reviewed by the jurisdictional planning representatives and WSP consultant team staff to update information where applicable and



note ways in which these capabilities have improved or expanded. In summarizing current capabilities and identifying gaps, the jurisdictional planning representatives also considered their ability to expand or improve upon existing policies and programs as potential new mitigation strategies. The City of Morro Bay's updated capabilities are summarized below in Table D-22.

D.4.1 Regulatory Mitigation Capabilities

Table D-22 City of Morro Bay Regulatory Mitigation Capabilities

REGULATORY TOOL (ORDINANCES, CODES, PLANS)	Yes/No	2025 COMMENTS OR OPPORTUNITIES TO IMPROVE/EXPAND
General Plan	Yes	The City's combined General Plan and Local Coastal Program ("Plan Morro Bay") was approved by the California Coastal Commission (CCC) on August 12, 2021.
Zoning ordinance	Yes	The City's Comprehensive Zoning Update as approved by the CCC on March 12, 2024. This is in Title 17 of the CMC.
Subdivision ordinance	Yes	Title 16 of the CMC.
Growth management ordinance	Yes	Ordinance No. 266
Floodplain ordinance	Yes	MBMC Chapter 14.72
Other special purpose ordinance (stormwater, steep slope, wildfire)	Yes	MBMC Chapter 14.48 building Regulations: Illicit Discharge and Stormwater Management Control, 13.04.345 Mandatory Water Conservation Requirements Ordinance under Emergency Water levels.
Building code and Type/Year	Yes	2022 California Building Code, MBMC Chapter 14.03
Building Code Effectiveness Grading System and Rating (if applicable)	Yes	NEW
Fire department ISO rating	Yes	3/3x
Erosion or sediment control program	Yes	Erosion and Sediment Control Manual
Stormwater management program	Yes	MBMC Chapter 14.48 Illicit Discharge and Stormwater Management Control
Site plan review requirements	Yes	MBMC Chapter 17.38.080 Design Review Criteria
Capital improvements plan	Yes	One Water plan
Economic development plan	Yes	Economic Development Roadmap
Local emergency operations plan	Yes	MBMC chapter 8.08.080 Emergency Plan
Other special plans	Yes	Downtown Waterfront Strategic Plan, Local Coastal Plan, - more available online
Flood insurance study or other engineering study for streams	Yes	Morro Creek Flood Analysis Addendum, WWTP Flood hazard Analysis, Plan Morro Bay Coastal Resources and Resiliency update
Elevation certificates (for floodplain development)	Yes	MBMC 14.72.050 - Provisions for flood hazard reduction



D.4.1.1 Discussion on Existing Building Codes, Land Use and Development Regulations

The Morro Bay City Community Development Department is responsible for implementing the Building and Construction Code, Title 14 of the City of Morro Bay Municipal Code. The Building and Construction Code addresses hazard-specific issues, such as soil-related hazards, seismicity, and flood inundation. The City Community Development Department is also responsible for implementing the City General Plan, Local Coastal Program, Zoning Code, Subdivision Ordinance, and Building Code. These regulations address hazard specific issues, including flooding, tsunami inundation, seismicity, geologic hazards, fire hazards, etc.

Additionally, the City of Morro Bay received a Local Coastal Program planning grant from the California Coastal Commission to update the City's Waterfront Master Plan, which hasn't been updated since it was first adopted in 1996. This initiative will include an update to the City's Sea level rise projections, a coastal hazards vulnerability assessment, and a sea level rise adaptation plan, which will include strategies such as elevating waterfront infrastructure to avoid inundation.

D.4.2 Administrative/Technical Mitigation Capabilities

Table D-23 identifies the personnel responsible for activities related to mitigation and loss prevention in Morro Bay.

Table D-23 City of Morro Bay Administrative/Technical Mitigation Capabilities

PERSONNEL RESOURCES	Yes/No	DEPARTMENT/POSITION OR 2024 CHANGES/OPPORTUNITIES
Planner/engineer with knowledge of land development/land management practices	Yes	Planning Manager Cindy Cecil, City Engineer
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Chad Ouimet, Chief Building Inspector Pamela Newman, Associate Engineer Matt Bishop, Public Works Inspector
Planner/engineer/scientist with an understanding of natural hazards	Yes	Planning Manager
Personnel skilled in GIS	Yes	Mike Brannagan, GIS Contractor (Terra Solutions)
Full time building official	Yes	Airlin Singewald, Community Development Director
Floodplain manager	Yes	Public Works
Emergency manager	Yes	Yvonne Kimball, City Manager
Grant writer	Yes	Administrative Services
Other personnel		
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	Yes	Mike Brannagan, GIS Contractor (Terra Solutions)
Warning Systems/Services (Reverse 9-1-1, cable override, outdoor warning signals)	Yes	Partnered with SLO County OES for evacuation zone management, reverse 911, Morro Bay PD Messaging boards for public notification



D.4.3 Fiscal Mitigation Capabilities

In order to achieve the goals and objectives of the Mitigation Strategy, one or more of the following funding sources could be utilized: federal and state entitlements and grants, 58 general fund, sales and property taxes, infrastructure user fees, impact fees, and new development impact fees. The City of Morro Bay has the necessary budgetary tools and practices in place to facilitate handling appropriate funds; however, funding sources are very limited. Table A.16 identifies financial tools or resources that the City could potentially use to help fund mitigation activities.

Table D-24 City of Morro Bay Fiscal Mitigation Capabilities

FINANCIAL RESOURCES	Accessible/Eligible to Use (Yes/No)
Community Development Block Grants	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
Fees for water, sewer, gas, or electric services	Yes
Impact fees for new development	Yes
Incur debt through general obligation bonds	Yes
Incur debt through special tax bonds	Yes
Incur debt through private activities	No
Withhold spending in hazard prone areas	No

D.4.4 Mitigation Outreach and Partnerships

The County of San Luis Obispo conducted community outreach within the City limits to receive feedback from stakeholders on outlined mitigation strategies within the SLO County Multi-Jurisdictional Hazard Mitigation Plan.

The City of Morro Bay maintains partnerships with the local Morro Bay, Fire, Police, and Harbor Departments to provide daily, long-term services required under the LHMP and the SLO County Multi-Jurisdictional Hazard Mitigation Plan. The City's fire prevention and suppression services are provided by the City of Morro Bay Fire Department (MBFD), a fire and emergency service organization. As of May 2025, MBFD is staffed by 13 full time professional firefighters, 1 Deputy Chief/Fire Marshal, 1 Administrative Assistant, and up to 4 seasonal Firefighter. The City of Morro Bay Police Department (MBPD) provides law enforcement services for the City. MBPD is staffed at 17 sworn officers including the Chief and Commander and one reserve officer, for a ratio of 1.7 officers per 1,000 residents. The Harbor Department of the City of Morro Bay provides a high level of service in community education (water safety programs), public outreach, and community relations for boaters, beach users, and waterfront visitors. The Harbor Department is also involved with resource management for the City's beaches and natural resources including coordination with state and federal regulatory agencies.

Table D-25 City of Morro Bay Mitigation Outreach and Partnerships

CAPABILITY TYPE	Yes/No	NOTES
Hazard Awareness/Education Campaigns	Yes	Holiday fire safety information, public outreach campaigns,



CAPABILITY TYPE	Yes/No	NOTES
		disaster preparedness information.
Firewise	No	
Storm Ready	No	
Severe Weather Awareness Week	No	
School programs	Yes	Fire Prevention week activities, AARBF Burn Relay
Other		
Methods Used to Communicate Hazard Info. to the Public	Yes	Social media, City Website,
Local News	Yes	
Social media	Yes	Facebook, Instagram
Community Newsletters	Yes	City Managers monthly newsletter
Utility Bill Inserts	Yes	Hazard fuel reduction notices
Community Events	Yes	
Other		
Organizations that represent or work with underserved or vulnerable communities	Yes	Partnership with 805 Street Outreach, CAPSLO for homeless outreach, showers, warming services, and supplies
American Red Cross	Yes	Evacuation shelter assistance
Salvation Army	No	
Veterans Groups	No	
Environmental/Conservation Groups	No	
Homeowner/Neighborhood Associations	No	
Chamber of Commerce	Yes	
Community Organizations (Lions, Kiwanis, etc.)	Yes	

D.4.5 National Flood Insurance Program

In the City of Morro Bay, the City Engineer, in the Engineering Division of the Public Works Department, is designated as the Floodplain Administrator (FPA) as noted in Morro Bay Municipal Code 14.72.040 B. The City of Morro Bay's Engineering Division of Public Works has overseen the participation of the Community Rating System (CRS) for the National flood Insurance Program (NFIP) with the initial Flood Insurance Rate Map (FIRM) date from 1979. The city consistently adopts the latest effective Flood Insurance Rate Map (FIRM) provided by FEMA, updating local floodplain management practices to align with newly identified flood risks. This helps to ensure the community is aware of the most recent flood hazard data for planning and development purposes. Local floodplain management regulations are actively implemented and enforced by the City Engineer to regulate and permit development within SFHAs. This includes reviewing construction and land use permits to confirm compliance with



elevation, structural, and zoning requirements aimed at reducing flood risk to properties and residents.

Following flood or other damage events, the jurisdiction enforces substantial improvement/substantial damage provisions by evaluating damaged properties to determine if they meet thresholds requiring them to comply with updated floodplain management standards. If substantial damage is determined, properties must undergo upgrades to meet current floodplain standards before they can be repaired or rebuilt. This process helps to reduce future risk by ensuring that post-event repairs and reconstructions contribute to long-term flood resilience. More information on Morro Bay's participation in the National Flood Insurance Program can be found in Table D-26 below.

Table D-26 The City of Morro Bay National Flood Insurance Program Participation

NFIP TOPIC	COMMENTS
Regulation	
Does the Community Participate in the NFIP?	Yes.
How does the community enforce local floodplain regulations and monitor compliance?	The City of Morro Bay enforces floodplain regulations through the review of plans and associated documents submitted as part of the building permit application. Compliance and monitoring of floodplain regulations is enforced through the inspection process performed after a building permit has been issued.
Do floodplain development regulations meet or exceed FEMA or state minimum requirements? If so, in what ways?	The City's floodplain development regulation exceeds FEMA and state requirements with an additional freeboard of two feet above the established base flood elevation (BFE), from the lowest floor.
Explain the permitting process.	The Engineering Division of the Public Works Department reviews development projects and floodplain related documents. However, the building permit plans, and fee intakes are coordinated by the Community Development Department. The Building Permit Technician uploads and routes plans in a permitting tracking system. All new and substantially improved development projects require the submittal of a completed Construction Drawing Elevation Certificate (EC). The Engineering Division reviews the plans, EC and associated documents to ensure applicable building codes, development ordinances and engineering standards are met. After plans are approved and building permits are issued, the Public Works/Engineering Inspector performs construction inspections, including the installation of any flood related requirements. A Final Construction Elevation Certificate and Floodproofing Certificate (if applicable) must be submitted, reviewed, and approved prior to a final project approval and Certificate of Occupancy issuance.
Compliance History	
Are there any outstanding compliance issues? (i.e., current violations)?	None
Does the community intend to continue to comply with NFIP requirements?	Yes, we completed this year's Community Rating System Annual Recertification in July 2024.



NFIP TOPIC	COMMENTS
How does the community identify substantially damaged/improved structures? What is the process to make sure these structures are brought into compliance post-disaster event?	Substantial damage is identified by an inspection from the Community Building Official and cost estimator to determine if the sustained flood damage to a structure will cost 50% or more of the structure's pre-damage market value to rebuild and comply with City, state and FEMA requirements. A Substantial Damage letter is provided to the property owner to submit with the insurance claim. The submittal and review process of a building permit application ensures the rebuild will comply with the floodplain requirements.
Staff Resources	
Please note the department and position responsible for floodplain management. Do they serve any roles other than Community Floodplain Administrator (FPA)?	The City Engineer, in the Engineering Division of the Public Works Department, is designated as the Floodplain Administrator (FPA) as noted in Morro Bay Municipal Code 14.72.040 B. The City Engineer has many roles in addition to Floodplain Administration.
Explain NFIP administration services (e.g., permit review, GIS, inspections, engineering capability).	As a participant in the NFIP, the city uses physical copies and on-line GIS system of the current flood maps. This information is used when residents visit our department counters, email or call us with questions regarding flood zone issues, flood insurance inquiries, and elevation certificate information. The City's GIS system is regularly updated to include all new and improved developments, updated infrastructure, stormwater management, all map revisions and map amendments. Our database of elevation certificates, Letter of Map Revisions, new development flood related information, and NFIP updates are located both in physical binders and on the City's server. We keep a log record of phone calls, emails and in person flood related inquiries and use our database information and maps to answer questions and provide documents, maps and other related information.
What are the barriers to running an effective NFIP program in the community, if any?	An increase in the percentage of insurance discount rates to participating communities and/or additional Federal and State funding would incentivize private property owners within a flood zone to potentially rebuild to comply with current floodplain development regulations. The financial barrier to rebuild within an established flood zone limits the effectiveness of the NFIP program.
Community Rating System (CRS)	
Does the community participate in CRS? If so, what is the community's CRS Class Ranking?	Yes, the City of Morro Bay has participated in the Community Rating System (CRS) since 2013 with a current class ranking of 7.
What categories and activities provide CRS points, and how can the class be improved?	The City of Morro Bay obtained a total community credit calculation of 1616 through verification of the following activities: Elevation Certificates (310), Map Information Service (320), Outreach Projects (330), Hazard Disclosure (340), Flood Protection Information (350), Open Space Preservation (420), Higher Regulatory Standards (430), Flood Data Maintenance (440), and Stormwater Management (450). Due to the development size and open space of the city, the increase of the class rating is highly limited.
Does the plan include CRS planning requirements?	No.



D.4.6 Other Mitigation Efforts

The City of Morro Bay is completing a Community Risk Assessment and Standards of Cover Survey for Fire and Police services to evaluate service levels related to a community risk profile. The Fire Department is evaluating renovation and replacement options for Fire Station #2 in North Morro Bay. This station would help to ensure access to emergency services in North Morro Bay in the event of floods and other disasters such as the storms in January and March of 2023 that closed Main Street and Highway 1.

The city relocated its wastewater plant away from the coastline where it was vulnerable to flooding, sea level rise and tsunamis. This new Water Resources Center has been operational since October 2022, just a few short months after the city experienced flooding and the old Wastewater plant was 3 to 4 feet underwater. This new facility not only solved the disaster potential of the city's wastewater plant flooding but also addresses future water needs with the addition of the advanced water treatment facility. This phase of the project is projected to be completed by Fall 2026.

The City of Morro Bay also received two CalOES grants to address protection of critical facilities. The scope of the first grant includes hydrologic and hydraulic (H&H) analysis of the watershed and existing storm drain system, performing an alternatives analysis and a benefit cost analysis, developing preliminary design and engineering plans for the preferred alternative and environmental reviews and permitting at the City's reverse osmosis water treatment facility. There was damage to the pump at this facility during the 2023 storms and flooding. The second grant scope includes conducting a hydrologic and hydraulic (H&H) analysis of the Morro Creek Watershed, develop a watershed management plan, analyze alternatives, and design for the preferred alternative and environmental reviews and permitting.

The City of Morro Bay has multiple other plans and initiatives that help with hazard mitigation and resource planning and management. These include:

One Water Plan

The purpose of the One Water Plan is to update the previous master plans, conduct an analysis of the City's water supplies, to identify capacity deficiencies in the water, sanitary sewer, and storm drainage systems, to develop feasible alternatives to correct these deficiencies, and to plan the infrastructure that will serve future development through the year 2040.

Local Road Safety Plan

The Local Roadway Safety Plan (LRSP) will identify areas for roadway and safety improvements on local roads. The City has received grant funding from Caltrans to conduct this plan, which will develop potential safety improvement projects for pedestrians, bicyclists, and motorists and in turn, make the City eligible for future state roadway safety funding.

Water Resources Center

The Morro Bay Water Resources Center provides wastewater treatment on behalf of the communities of Morro Bay and Cayucos. The treatment plant is designated as a Class III Biofiltration Plant by the Regional Water Quality Control Board.

Morro Bay Fire Department

The Morro Bay Fire Department continuously reviews its current Insurance Service Office (ISO) Class 3 rating. The ratings calculate how well-equipped fire departments are to put out fires in that community. The ISO provides this score, often called the "ISO fire score," to homeowners insurance companies. The insurers then use it to help set homeowners insurance rates. The more well-equipped your fire department is to put out a fire, the less likely your house is to burn down. And that makes your home less risky, and therefore less expensive, to insure.



D.4.7 Opportunities for Enhancement

Based on the capability assessment, the City of Morro Bay has several existing mechanisms in place that help to mitigate hazards. There are also opportunities for the City to expand or improve on these policies and programs to further protect the community. Future improvements may include providing training for staff members related to hazards or hazard mitigation grant funding in partnership with the County and Cal OES. Additional training opportunities will help to inform City staff members on how best to integrate hazard information and mitigation projects into their departments. Continuing to train City staff on mitigation and the hazards that pose a risk to the City of Morro Bay will lead to more informed staff members who can better communicate this information to the public.

D.5 Mitigation Strategy

D.5.1 Mitigation Goals and Objectives

The City of Morro Bay's Hazard Mitigation Planning Group determined the goals from the base plan are appropriate for this plan update. The following are the City of Morro Bay's 2025 mitigation goals:

- Strengthen risk reduction and resilience by minimizing risks to life, property, infrastructure, and the environment through comprehensive, community-wide strategies.
- Boost outreach and capacity to improve disaster resilience for vulnerable communities.
- Promote regional collaboration to reduce hazard vulnerability and strengthen community resilience.
- Reduce injury, loss of life, and damage to critical facilities and infrastructure from natural hazards.
- Enhance public education and engagement to boost awareness and preparedness for natural, human-health, and human-caused hazards.
- Use the best science and data to guide resilience efforts and prioritize mitigation projects for natural hazards and climate change impacts.

D.5.1.1 *Continued Compliance with the National Flood Insurance Program*

The City has been an NFIP participating community since 1979. In addition to the mitigation actions identified herein the City will continue to comply with the NFIP. This includes ongoing activities such as enforcing local floodplain development regulations, including issuing permits for appropriate development in Special Flood Hazard Areas, and ensuring that this development mitigated in accordance with the regulations. This will also include periodic reviews of the floodplain ordinance to ensure that it is clear and up to date and reflects new or revised flood hazard mapping.

D.5.2 Progress on 2019 Mitigation Actions

During the 2025 planning process the City of Morro Bay Planning Team reviewed all the mitigation actions from the previous LHMP. The review indicated the city has completed four mitigation actions since 2019 and has made continued progress in implementing mitigation projects and building the community's resilience to disasters. The completed actions have reduced vulnerability to hazards and increased local capability to implement additional mitigation actions. Table D-27 below show the mitigation actions that have been completed or deleted since 2019.

**Table D-27 City of Morro Bay Completed or Deleted Mitigation Actions**

2019 ACTION ID	HAZARD(S) ADDRESSED	MITIGATION ACTION TITLE	LEAD AGENCY	ACTION STATUS NOTES
MB.15	Flood	Amend the Municipal Code to require flood risk disclosure and active acknowledgment of expanded flood risk in property purchases/turnovers.	Community Development	Completed MBMC 14.72.010 C.7
MB.16	Flood	Require new development in the Sea Level Rise Hazard Overlay Zone to evaluate potential impacts to adjacent or nearby properties from all proposed structural flood protection measures to ensure that these measures will not create adverse direct and/or cumulative on-site or off-site impacts.	Community Development	Completed- Flood zone ordinance city safety elements
MB.17	Flood	Continue to adopt and enforce the most up-to-date California Building Standards Code and California Fire Code, with appropriate local amendments.	Community Development; Fire	Completed update tri-annually. Last update implemented January 1, 2023
MB.19	Flood	During Development Review, determine if any structures meant for human habitation are to be constructed within the 100-year floodplain or in the Sea Level Rise Hazard Overlay Zone. If necessary, evaluate each structure's safety from flood and sea level rise related hazards, and recommend remedial actions.	Development Standards/Community Development	Completed, required by code and morro Bay General plan.

D.5.3 Mitigation Actions

The City of Morro Bay identified 24 mitigation actions for their 2025 Mitigation Action Plan, including 19 continued actions and 5 new. The Planning Team for the City of Morro Bay identified and prioritized the following future mitigation actions based on the conducted risk assessment (see Table D-28). Background information and information on how each action will be implemented and administered, such as ideas for implementation, responsible office, potential funding, estimated cost, and timeline are also included. Actions were prioritized using the process described in Section 7.2.1 of the Base Plan. Actions with an asterisk (*) are those that mitigate losses to future development.



Table D-28 City of Morro Bay 2025 Mitigation Action Plan

MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
MB.1	Adverse Weather: Thunderstorm, High Wind, Extreme Heat, Coastal Storm, Drought and Water Shortage, Earthquake, Flood, Landslides, Tsunami, Wildfire, Hazmat	Educate the planning staff, City administrative staff and elected officials on the importance of keeping up to date on trends and developments in disaster preparedness. Attendance at seminars and lectures on specific hazards would enable staff to make appropriate recommendations to the governing bodies as they go about the process of approving new developments.	Admin/All City Depts.	Little to no cost; General Fund	Medium	Annual	Annual Implementation. Implemented annually,
MB.2	Adverse Weather: Thunderstorm, High Wind, Extreme Heat, Drought and Water Shortage, Coastal Storm, Earthquake, Flood, Landslides, Tsunami, Wildfire, Hazmat	Through newsletters, advertisements, speaking engagements and other public contacts, educate the general public and key stakeholders on the issues, responsibilities, and current efforts and successes in the area of hazard mitigation and disaster preparedness.	Admin/All City Depts.	Little to no cost; General Fund	Medium	Annual	Annual Implementation. Public notification through social media and city website about severe weather, fire safety, flood information and disaster preparedness practices. Participation in Great American Shake-out earthquake preparedness.
MB.3	Adverse Weather: Thunderstorm, High Wind, Extreme Heat, Coastal Storm, Earthquake, Flood, Landslides, Tsunami, Wildfire, Hazmat	Train the police, harbor and fire department supervisors and officers on the activation of the County's early warning system and additional public notification systems to ensure that warning systems function as tools to mitigate potential hazard impacts to citizens.	Fire Dept/Police Dept/Harbor Dept	Less than \$10,000; General Fund	Medium	Annual	Annual Implementation. Implementation of Countywide evacuation zones, County evacuation plan. Conducted presentation at city council meetings regarding know your zone program.



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
MB.4	Adverse Weather: Thunderstorm, High Wind, Extreme Heat, Coastal Storm, Drought and Water Shortage, Earthquake, Flood, Landslides, Tsunami, Wildfire, Hazmat	Survey the applicable department heads as to their perceived hazard mitigation and disaster preparedness needs. Convene a special meeting of the Disaster Council to prioritize these needs and develop funding strategies.	Fire Department	Little to no cost; Staff Time	High	Annual	Annual Implementation. local Hazard Mitigation Plan working group, city Emergency Management plan updates
MB.5	Ag. Pest, Biological Agents	Participate in the public education process of human and agricultural health related issues as available.	Admin/FD	Little to no cost; Staff Time	Medium	2-3 Yrs.	In Progress. Public health education through health fairs.
MB.6	Ag. Pest, Biological Agents	Encourage broad participation in County public and agricultural health associated emergency preparedness exercises	Admin/FD	Little to no cost; Staff Time	Medium	1 Yr.	In Progress. FLU POD exercises, COVID vaccine distribution
MB.7	Adverse Weather: Thunderstorm, High Wind, Extreme Heat, Biological Agents, Coastal Storm, Drought and Water Shortage, Earthquake, Flood, Landslides, Tsunami, Wildfire, Hazmat	Increase involvement of special needs populations (disabled, elderly) in education, awareness, hazard mitigation and disaster preparedness activities	Admin/FD	Little to no cost; Staff Time	Medium	1 Yr.	In Progress. Public Health fairs, vaccine clinics,



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
MB.8	Earthquake	Perform a seismic safety review of all current City structures, infrastructure and facilities paying close attention to structural and non-structural mitigation of all facilities. Convene the Disaster Council to prioritize the findings of the seismic safety review and research funding strategies.	PS / FD	Less than \$10,000; Staff Time	High	Annual	In Progress. Installed Safehub remote earthquake monitoring sensors on key city facilities.
MB.9	Flood	Continue to work cooperatively with the state and federal flood-related agencies	Admin/All City Depts.	Little to no cost; Staff Time	Medium	Annual	Annual Implementation.
MB.10	Tsunami	Review the current City Tsunami Plan and update it as necessary to ensure regional consistency with the SLO County Tsunami Plan	Admin / Fire Department	Little to no cost; Staff Time	Medium	Annual	Annual Implementation.
MB.11	Tsunami	Educate the public about tsunami dangers and appropriate response and mitigation actions	Fire Department	Little to no cost; Staff Time	Medium	Annual	Annual Implementation.
MB.12	Tsunami	Evaluate the potential to maximize life safety associated with the use of route signs, tactical staging areas, tsunami safe zones, and traffic control points as outlined in the County Tsunami Plan.	Fire Department/PD	Less than \$10,000; FEMA HMA	Medium	1-2 Years	In Progress. Working with County OES on updated information signs.
MB.13	Wildfire, Hazmat	Work with the California State Parks and San Luis Obispo County Fire Safe Council to initiate fuel thinning and chipping projects in the Black Mountain area within the city limits.	Fire Department	Less than \$10,000; FEMA HMA	Medium	3-5 Yrs.	Annual Implementation. Collaborating with State Parks as part of their 4-year fuels management program.
MB.14	Wildfire	Continue to support the City's weed abatement program to provide additional wildfire mitigation through vegetation management.	Fire Department	7 to 10% of Fire Marshal; FEMA HMA Grant/Staff Time/Dept. Budget	Medium	Annual	Annual Implementation. Annual weed abatement inspections conducted.



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
MB.18	Coastal Storm, Sea Level Rise, Flood	Develop timing triggers for actions to address sea level rise impacts for each character area in Morro Bay based on sea level rise adaptation studies, sea level rise modeling, best available science, and the vision for each character area.	Community Development	Unknown; General Fund	Medium	3-5 Yrs.	In Progress. General plan is resiliency based. Need to conduct lease site evaluation/ have general height evaluation. This will be included in Waterfront Master Plan Update, which has estimated completion date of December 2027.
MB.20*	Coastal Storm, Flood, Tsunami	Armoring Morro Creek against erosion.	Public Works	unknown; General Fund, Development Fees	Medium	3-5 Years	New in 2025. Will require signing off by CCC.
MB.21*	Coastal Storm, Flood, Tsunami	Rebuild seawalls and revetments protecting Morro Rock parking lot, Morro Rock Causeway, and Morro Harbor, and other critical infrastructure.	Public Works/Harbor	unknown; Harbor Fund, General Fund, FEMA HMA Grants	High	5-10 Years	New in 2025. Seawall/Revetment Condition Assessment Completed early 2025
MB.22	Flood	City received FEMA Hazard Mitigation Grant to conduct Hydrology studies on the storm drain system and the Chorro Creek Watershed, as well as a study to determine the feasibility of floodproofing the BWRO treatment plant and associated well fields.	Public Works	Grant + \$431,995.00 Non-federal match; General Fund	Medium	3-5 Years	New in 2025. Procuring a grant/project Manager
MB.23	Wildfire, Drought and Water Shortage	City will continue to work on the One Water Plan Projects that specifically address the inadequate fire flows/pressures.	Public Works	unknown; Water Fund	Medium	Annual	New in 2025. Working with Engineer to develop project scope and plans



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
MB.24	Adverse Weather: Thunderstorm, High Wind, Extreme Heat, Coastal Storm, Earthquake, Flood, Landslide, Tsunami, Wildfire, Hazmat	Secondary Egress/ Evacuation planning. The lack of any connection between Embarcadero and Highway 41 eliminates alter-native emergency access to the high school, City Maintenance yard and campgrounds in the event of an earthquake or an accident which blocks or destroys one of the bridges on Highway I. The Coleman Drive termination at Morro Rock end is over a mile from Beach Street, the first intersection which provides access to the area. This is more than 10 times the length allowed for a cul-de-sac and there is no alternative access to this high use area. Action needed: Possible solution is to replace pedestrian bridge with a bridge suitable for vehicular traffic to allow for secondary egress and emergency access.	Public Works	Unknown. FEMA HMA, Local Funds	High	More Than 5 Years	New in 2025.

*mitigates impacts to new development



D.6 Implementation and Maintenance

Moving forward, the city will use the mitigation action table in the previous section to track progress on implementation of each project. As illustrated in the completed actions table (Table D-27), much progress has been made since the plan was originally developed. Implementation of the plan overall is discussed in Chapter 8 of the Base Plan.

D.6.1 Incorporation into Existing Planning Mechanisms

The information contained within this plan, including results from the Vulnerability Assessment and the Mitigation Strategy, will be used by the City to help inform updates and the development of local plans, programs and policies. The Engineering Division may utilize the hazard information when implementing the City's Community Investment Program and the Planning and Building Divisions may utilize the hazard information when reviewing a site plan or other type of development applications. The city will also incorporate this LHMP into the Safety Element of their General Plan by reference, as recommended by Assembly Bill (AB) 2140.

In January 2025, the city will start the process of updating the City's 1996 Waterfront Master Plan. The Waterfront Master Plan Update will support this HMP by identifying circulation and infrastructure improvements to address hazards on the waterfront, such as inadequate secondary emergency egress, coastal flooding, and sea level rise. This update will also include updated sea-level rise vulnerability and adaptation assessments for its legislatively granted state lands, in compliance and alignment with AB 691.

As noted in Chapter 8 of the Base Plan, the HMPC representatives from Morro Bay will report on efforts to integrate the hazard mitigation plan into local plans, programs and policies and will report on these efforts at the annual HMPC plan review meeting.

D.6.2 Monitoring, Evaluation and Updating the Plan

The City will follow the procedures to monitor, review, and update this plan in accordance with San Luis Obispo County as outlined in Chapter 8 of the Base Plan. The city will continue to involve the public in mitigation, as described in Section 8.3 of the Base Plan. The City of Morro Bay Planning Team will be responsible for representing the city in the County HMPC, and for coordination with City staff and departments during plan updates. The City realizes it is important to review the plan regularly and update it every five years in accordance with the Disaster Mitigation Act Requirements as well as other State of California requirements.



Annex E Paso Robles

E.1 Community Profile

E.1.1 Mitigation Planning History and 2025 Process

This annex was updated in 2025 to build upon the previous version created for the 2019 San Luis Obispo Hazard Mitigation Plan update. The City of Paso Robles initial Local Hazard Mitigation Plan was completed February 2016; these previous mitigation plans are referenced several times by the City's General Plan. A review of jurisdictional priorities found no significant changes in priorities since the last update. More details on the planning process and how the jurisdictions, service districts and stakeholders participated, as well as how the public was involved during the 2025 update, can be found in Chapter 3 of the Base Plan.

The City's Local Planning Team (LPT) held responsibility for implementation and maintenance of the plan. Table E-1 Paso Robles Hazard Mitigation Plan Revision Planning Group summarizes the City's planning team for the plan revision process, and Table E-1 summarizes various stakeholder groups, neighboring communities, and local agencies which supported or coordinated on this HMP update.

Table E-1 Paso Robles Hazard Mitigation Plan Revision Planning Group

DEPARTMENT OR STAKEHOLDER	TITLE
Fire and Emergency Services Department	Fire Chief
Fire and Emergency Services Department	Battalion Chief
Finance Department	Finance Manager
Community Development Department	City Planner
Police Department	Commander
Public Works	Operations Manager
Utilities Department	Solid Waste & Recycling Manager
Community Services	Recreation Services Manager

Table E-2 Paso Robles Stakeholder Groups, Neighboring Communities, and Local Agencies

STAKEHOLDER GROUP	NAME
Agencies involved in hazard mitigation activities:	Althouse & Meade
Agencies that have the authority to regulate development:	Regional Water Quality Control Board
Neighboring Communities:	County Planning
Representatives of business academia, and other private orgs:	San Luis Obispo Fire Safe Council
Representatives supporting underserved communities	Community Action Partnership of SLO

E.1.2 Geography and Climate

Paso Robles is located in northern San Luis Obispo County, California, approximately halfway between the cities of Los Angeles and San Francisco. It is 19.4 square miles (12,534.7 acres) and 24 miles inland from the Pacific Ocean. Paso Robles is considered to be in the most northern area of Southern California.



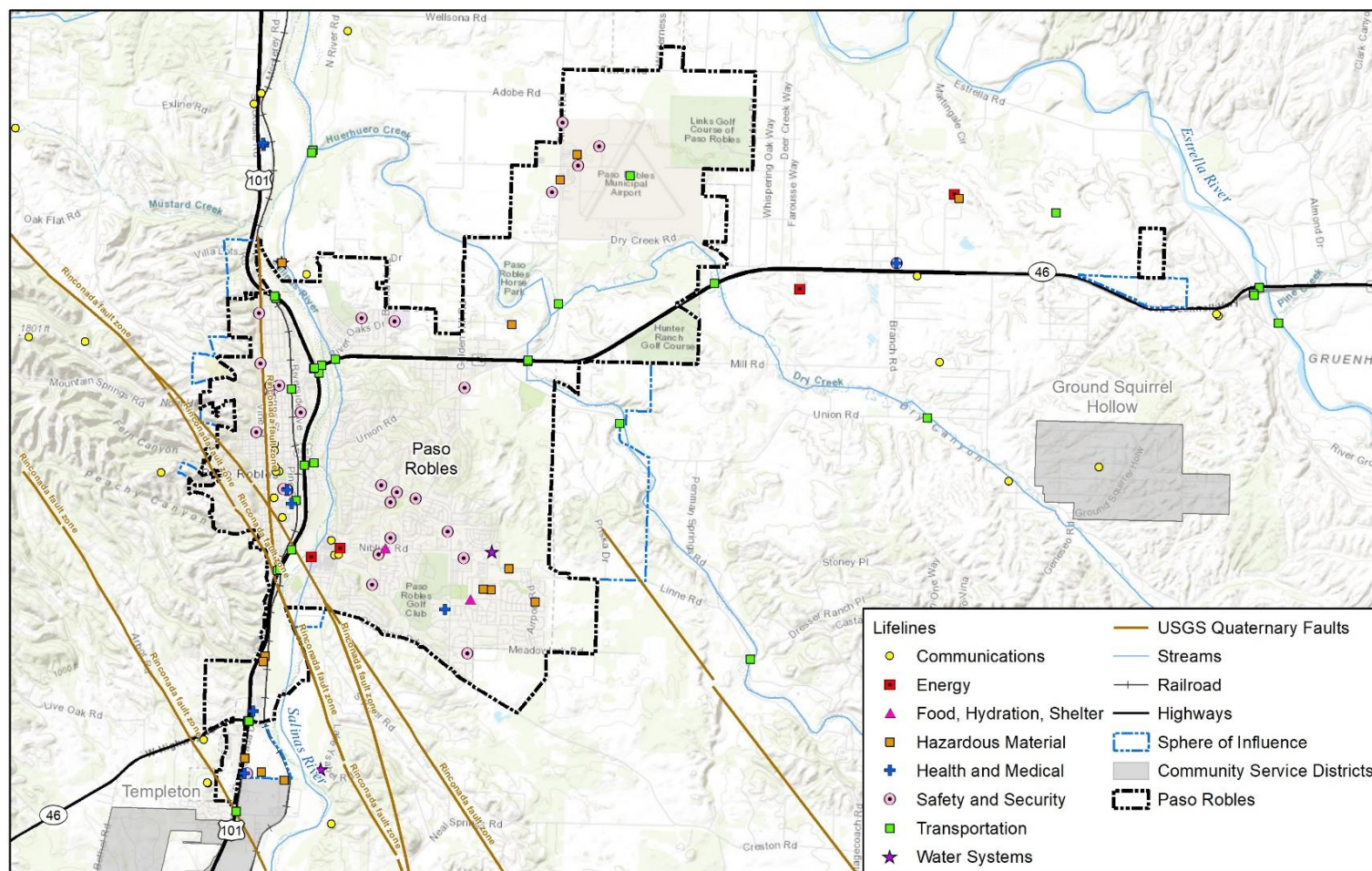
Paso Robles is bordered on the south and west by the rugged mountainous ridges of the Santa Lucia Coastal Range, to the east by the low hills of the La Panza and Temblor Ranges, and to the north by the low hills and flat-topped mesas of the Diablo Range. The highest elevations in the vicinity are located in the Santa Lucia Coastal Range where many peaks are 2,000 to 3,400 feet above mean sea level. Substantial ridgelines are distributed throughout the western, southern, and eastern portions of the City. The Mediterranean climate of the region and coastal influence produce moderate temperatures year round, with rainfall concentrated in the winter months.

Within the City limits, the Salinas River, U.S. Highway 101 and the Union Pacific Railroad divides the City east to west at the center of the City. The City is bounded by steep hills and canyons on the west, and open rolling hills to the east. Suburban residential development frames the City on the southern and eastern edges, with lower density residential development to the north and west of the City. Agricultural uses both north and south of the City eventually give way to the unincorporated communities of Templeton and San Miguel, approximately 5 miles south and 9 miles north, respectively.

Figure E-1 displays a map of the City of Paso Robles planning area.



Figure E-1 The City of Paso Robles



Map compiled 2/2025;
Intended for planning purposes only.
Data Source: San Luis Obispo County, CalARP, HIFLD,
National Bridge Inventory, National Inventory of Dams,
Department of Conservation, USGS, FCWCD

0 0.5 1 2 Miles





E.1.3 History

The Paso Robles area was home to several Native American tribes for thousands of years before the mission era.

In 1857, James and Daniel Blackburn purchased the Rancho Paso de Robles Mexican land grant. The land was a rest-stop for travelers of the Camino Real trail, and was known for its mineral hot springs. In 1864, the first El Paso de Robles Hotel was constructed and featured a hot mineral springs bath house. In 1886, after the coming of the Southern Pacific Railroad, work began on laying out a town site, with the resort as the nucleus.

Paso Robles incorporated as a City in 1889. That same year, construction began on the current El Paso de Robles Hotel, which opened for business in 1891.

For a time, Paso Robles was known as the “Almond City” because the local almond growers created the largest concentration of almond orchards in the world. The ranchers in the outlying areas were very important to the Paso Robles area. On these ranches were cattle and horses, grain crops (primarily wheat and barley), garden produce and fruit and nut orchards. Many of these ranch lands and orchards have become vineyards for the many wineries which currently draw tourists to the area.

Wine grapes were introduced to the Paso Robles soil in 1797 by the Spanish conquistadors and Franciscan missionaries. The first vineyardists in the area were the Padres of the Mission San Miguel, and their old fermentation vats and grapevine artwork can still be seen at the Mission, north of the City of Paso Robles. Commercial winemaking in the Paso Robles region dates back to 1882 when Andrew York, a settler from Indiana, established the Ascension Winery at what is now York Mountain Winery. Paso Robles’ reputation as a premier wine region became established in the 1920s and 30s, and continues to this day.

Paso Robles has a “Council-Manager” general law form of government where the City Manager is appointed by the City Council and is the Chief Executive Officer of the Municipal Corporation. The City Council acts as the board of directors of the municipal corporation and meets in a public forum where citizens may participate in the governmental process.

The City Council consists of five members elected at-large, on a non-partisan basis. Residents elect the Mayor and four Council members, making each accountable to the entire citizenry. Council members serve four-year overlapping terms. The mayor is directly elected and serves a two-year term. The City Council establishes City policies, approves ordinances and resolutions, makes land use decisions, approves agreements and contracts, hears appeals on decisions made by City staff or advisory committees, and sets utility rates. The Mayor and City Council members receive a monthly stipend set by resolution.

The City Manager is the Chief Executive Officer of the City. The City Manager is appointed by the City Council to enforce city laws, to direct the operations of city government, to prepare and manage the municipal budget, and to implement the policies and programs initiated by the City Council. The City Manager is responsible to the City Council, and directs departments and operations.

The City Attorney is appointed by the City Council and works under contract to the City. The City Attorney is the legal advisor for the council. He or she provides general legal advice on all aspects of city business and represents the City in legal actions.

The City Clerk is an elected official. The City Clerk is charged with responsibility of maintaining records of council actions, permanent records of all city transactions and documents, and coordinating the city’s elections. The Deputy City Clerk is an appointed staff position that assists the City Clerk in carrying out all duties.



The City Treasurer is an elected official who acts as the custodian of all public funds belonging to or under the control of the City. The City Treasurer's duties are mandated by state law and city policies. These duties include accounting for the receipt and disbursement of all City funds, the management of the City's Investment Portfolio, and reporting investment activity to the City Council. The primary mission of the City Treasurer is the safeguarding of City funds with the goals of preservation of capital balances, ensuring liquidity to meet the daily, weekly, monthly and annual cash needs of the City and investing idle funds to generate revenues to the city without compromising the goals of safety and liquidity. Boards, commissions and special committees composed of local citizens are frequently appointed by the City Council to advise the City Council in one or more aspects of city government. Typical advisory committees include Parks & Recreation, Streets and Utilities, Airport, Youth Commission, and Senior Citizens. The Planning Commission implements Council development and land use policy, and makes recommendations for policy revisions.

One of the major investments the City makes is the City's work force. City employees perform the day-to-day functions necessary to provide services to the community. Department heads administer specific functions of city government and are responsible to the City Manager. Such positions are Public Works Director, Community Development Director, Community Services Director, Administrative Services Director, Utilities Director, and Police and Fire Chiefs.

E.1.4 Economy

Based on the 2023 American Community Survey (ACS) Paso Robles' labor force is estimated to be 14,363 persons. The City has a relatively diverse economy, with no single sector or industry making up more than 20% of all jobs. The educational services, health care and social services accounts for 18.3% of jobs, followed by Professional, scientific, and management, and administrative and waste management services (12.3%), manufacturing (12.0%), and retail trade (10.5%). While the City's manufacturing sector has declined some – as recently as 2001 it represented 23.2% of the local economy – Paso Robles is one of the few areas in the region where manufacturing still accounts for a sizable fraction of employment. By comparison, manufacturing in San Luis Obispo County as a whole is approximately 6.0%.

The City's largest employers include Paso Robles School District, Firestone Walker, Walmart, Applied Tech., City of Paso Robles, IQMS, Joslyn-Sunbank, Zurn, Target, Lowes, and Cuesta College. At 4.2%, the City's unemployment rate is similar to what it was in 2017 (4.5%). This has been accompanied by a 36% increase in per capita income, from \$31,991 in 2018 to \$43,615 in 2023.

Table E-3 shows how Paso Robles' labor force breaks down by industry and Table E-4 shows breakdown by occupation based on estimates from the U.S. Census Bureau's 2023 American Community Survey.

As the leading agricultural business in the county, the area's wine industry attracts more than half a million visitors to San Luis Obispo County annually. A 2014 study of the Paso Robles and Greater San Luis Obispo County Wine and Wine Grape industries shows that of the \$924 million of total value added to the regional economy by the wine industry, about \$417 million is attributable to wine grape production and \$398 million to wine production. The remaining \$109 million is the value added from wine-related tourism to the area.

Table E-3 City of Paso Robles Employment by Industry (2023)

INDUSTRY	# EMPLOYED	% EMPLOYED
Population (2023)	24,493	
In Labor Force	14,985	61.2
Agriculture, forestry, fishing and hunting, and mining	730	5.1



INDUSTRY	# EMPLOYED	% EMPLOYED
Construction	949	6.6
Manufacturing	1,754	12.2
Wholesale trade	350	2.4
Retail trade	1,506	10.5
Transportation and warehousing, and utilities	382	2.7
Information	213	1.5
Finance and insurance, and real estate and rental and leasing	806	5.6
Professional, scientific, and management, and administrative and waste management services	1,764	12.3
Educational services, health care and social assistance	2,630	18.3
Arts, entertainment, recreation, and accommodation and food services	1,871	13
Other services, except public administration	607	4.2
Public administration	801	5.6
Unemployed	622	2.5

Source: U.S. Census Bureau American Community Survey 2018-2023 5-Year Estimates, www.census.gov/

Table E-4 City of Paso Robles Employment by Occupation (2023)

INDUSTRY	# EMPLOYED	% EMPLOYED
Population (2023)	24,493	
In Labor Force	14,363	61.2
Management, business, science, and arts occupations	5,250	36.6
Service occupations	2,638	18.4
Sales and office occupations	3,212	22.4
Natural resources, construction, and maintenance occupations	1,642	11.4
Production, transportation, and material moving occupations	1,621	11.3

Source: U.S. Census Bureau American Community Survey 2018-2023 5-Year Estimates, www.census.gov/

E.1.5 Population

The U.S. Census Bureau estimated the City's 2023 population as 31,399, down from 31,656 at the 2018 American Community Survey. Table E-5 shows an overview of key social and demographic characteristics of the City taken from the U.S. Census Bureau's American Community Survey.

Table E-5 City of Paso Robles Demographic and Social Characteristics, 2018-2023

CITY OF PASO ROBLES	2018	2023	% CHANGE
Population	31,656	31,399	-.81%
Median Age	38.4	38.8	+1.04%
Total Housing Units	12,590	12,688	+.78%
Housing Occupancy Rate	96.2%	94.6	-1.67%
% of Housing Units with no Vehicles Available	3.2%	3.9%	+21.9%
Median Home Value	\$433,900	\$648,400	+49.44%
Unemployment	3.8%	4.2%	+10.5%
Mean Travel Time to Work (minutes)	23.8	23.9	+.42%



CITY OF PASO ROBLES	2018	2023	% CHANGE
Median Household Income	\$92,559	\$119,341	+28.94%
Per Capita Income	\$31,991	\$43,615	+36.34%
% of Individuals Below Poverty Level	11.8%	12.8%	+8.47%
# of Households	12,109	11,676	-3.58%
Average Household Size	2.60	2.67	+2.69%
% of Population Over 25 with High School Diploma	84.2%	88.7%	+5.34%
% of Population Over 25 with Bachelor's Degree or Higher	23.8%	29.1%	+22.27%
% with Disability	11.4%	13.1%	+14.91%
% Speak English less than "Very Well"	12.0%	13.6%	+13.33%

Source: U.S. Census Bureau American Community Survey 2012-2017 5-Year Estimates, www.census.gov/

Despite the economic gains discussed in the previous section, the number of individuals living below the poverty level has stayed relatively constant, and it is the same as the County (12.8%) and slightly above the state of California (12%). The percentage of population over 25 with a high school diploma in Paso Robles (88.7%) is between the County (91.8%) and the State (84.6%) average. The number of individuals who speak English less than very well is also significantly above the County average (5.8%), though still below the State average (17.3%).

E.1.6 Development Trends

According to the 2003 General Plan Land Use Element (revised in April 2014) approximately 78.1% (8,639 acres) of the City's total land area is developed as residential, commercial, mixed use and industrial land, and public facilities uses. The remaining land is made up of 2,448 acres of agriculture (7.3%) and parks and open space (14.5%).

Table E-6 shows the potential land use categories for the 2025 build-out population of 44,000 persons as identified in the City's General Plan. However, as noted in the revised Land Use Element, it is expected that an additional 20 years (2045) or longer will be needed to reach the 44,000 persons build-out population.

Table E-6 General Plan Development Potential (2014 Update)

LAND USE CATEGORY	ACREAGE	PERCENT
Commercial	1,271	10.0%
Business Park/Industrial	1,721	13.5%
Other/Public Facilities	1,947	15.3%
Agriculture & Open Space	2,572	20.0%
Residential	5,228	41.2%
Total	12,739	100%

Source: City of El Paso de Robles General Plan 2003 Land Use Element, as amended April 1, 2014

When the General Plan Update was adopted in 2003, based on the pace of development activity at that time, it was anticipated that residential build-out of the City, resulting in a population of 44,000, would occur by 2025. However, the national economic slowdown that began in 2007, coupled with the history of periodic slowdowns over prior decades, has caused the City to consider that build-out and an attendant population of 44,000 may take more than 20 additional years: to 2045 or longer, to attain.

In 2021, the City of Paso Robles received grants from the State of California to support technical assistance, planning document preparation, and process improvements aimed at accelerating



housing production. The funds have been used to update the City's Zoning Code (title 21). Updated zoning and land use maps can be found on the City's website.

The LPT noted that there is significant growth in both commercial and residential. Approximately four million square feet of commercial space and 5,000 new homes in the planning or development stages. This is projected to increase population by 12,900 in 2031.

Specific to hazards, analysis of parcels developed between 2019-2024 (since the last update of this HMP) indicated some growth in areas prone to flood (0.2% annual chance zone), landslide, liquefaction, and wildfire (see Development Trends subsections in base plan Chapter 5 for specific counts). While these trends may indicate some increase in community vulnerability, they do not account for site specific investigations or compliance with local regulations that may reduce risk during development.

E.2 Hazard Identification and Summary

The Paso Robles planning team identified the hazards that affect the City and summarized their frequency of occurrence, spatial extent, potential magnitude, and significance specific to their community (see Table E-7). There are no hazards that are unique to Paso Robles. The overall hazard significance takes into account the geographic area, probability and magnitude as a way to identify priority hazards for mitigation purposes. This is discussed further in the Vulnerability section.

Table E-7 City of Paso Robles - Hazard Summaries

HAZARD	GEOGRAPHIC AREA	PROBABILITY OF FUTURE OCCURRENCE	MAGNITUDE/ SEVERITY (EXTENT)	OVERALL SIGNIFICANCE
Adverse Weather: Thunderstorm/ Heavy Rain/Hail/Lighting/Dense Fog/Freeze	Significant	Highly Likely	Limited	Medium
Adverse Weather: High Wind	Significant	Highly Likely	Limited	Low
Adverse Weather: Extreme Heat	Extensive	Highly Likely	Limited	Medium
Agricultural Pest Infestation and Disease	Limited	Highly Likely	Negligible	Low
Biological Agents (naturally occurring)	Extensive	Occasional	Negligible	Low
Dam Incidents	Significant	Occasional	Limited	Low
Drought and Water Shortage	Extensive	Likely	Limited	High
Earthquake	Significant	Likely	Critical	High
Flood	Significant	Likely	Limited	High
Landslides and Debris Flow	Significant	Likely	Critical	High
Subsidence	Significant	Occasional	Negligible	Low
Wildfire	Extensive	Highly Likely	Critical	High
Human Caused: Hazardous Materials	Limited	Highly Likely	Negligible	Low
Geographic Area Limited: Less than 10% of planning area Significant: 10-50% of planning area Extensive: 50-100% of planning area		Magnitude/Severity (Extent) Catastrophic—More than 50% of property severely damaged; shutdown of facilities for more than 30 days; and/or multiple deaths		



HAZARD	GEOGRAPHIC AREA	PROBABILITY OF FUTURE OCCURRENCE	MAGNITUDE/ SEVERITY (EXTENT)	OVERALL SIGNIFICANCE
Probability of Future Occurrences Highly Likely: Near 100% chance of occurrence in next year or happens every year. Likely: Between 10 and 100% chance of occurrence in next year or has a recurrence interval of 10 years or less. Occasional: Between 1 and 10% chance of occurrence in the next year or has a recurrence interval of 11 to 100 years. Unlikely: Less than 1% chance of occurrence in next 100 years or has a recurrence interval of greater than every 100 years.		Critical—25-50% of property severely damaged; shutdown of facilities for at least two weeks; and/or injuries and/or illnesses result in permanent disability Limited—10-24% of property severely damaged; shutdown of facilities for more than a week; and/or injuries/illnesses treatable do not result in permanent disability Negligible—Less than 10% of property severely damaged, shutdown of facilities and services for less than 24 hours; and/or injuries/illnesses treatable with first aid Significance Low: minimal potential impact Medium: moderate potential impact High: widespread potential impact		

E.3 Vulnerability Assessment

The intent of this section is to assess Paso Robles's vulnerability separate from that of the planning area as a whole, which has already been assessed in Section 5.3 Risk Assessment in the main plan. This vulnerability assessment analyzes the population, property, and other assets at risk to hazards ranked of medium or high significance that may vary from other parts of the planning area.

The information to support the hazard identification and risk assessment was based on the City's previous LHMP. A Local Hazard Mitigation Plan Update Guide and associated worksheets was distributed to each participating municipality or special district to complete during update process in 2025. Information collected was analyzed and summarized in order to identify and rank all the hazards that could impact anywhere within the County, as well as to rank the hazards and identify the related vulnerabilities unique to each jurisdiction.

Each participating jurisdiction was in support of the main hazard summary identified in the Base Plan (See Table 5-2). However, the hazard summary rankings for each jurisdictional annex may vary slightly due to specific hazard risk and vulnerabilities unique to that jurisdiction. Identifying these differences helps the reader to differentiate the jurisdiction's risk and vulnerabilities from that of the overall County.

Note: The hazard "Significance" reflects overall ranking for each hazard, and is based on the City of Paso Robles's HMPC member input from the Data Collection Guide and the risk assessment developed during the planning process (see Section 5.1 of the Base Plan), which included a more detailed qualitative analysis with best available data.

E.3.1.1 Other Hazards

The following hazards identified in the base plan HIRA are not identified within this jurisdictional annex due to low or no risk or insignificant anticipated impacts (non-coastal) and are not considered further mitigation actions:

- Coastal Storms/Coastal Erosion/Sea Level Rise
- Tsunami and Seiche



E.3.2 Assets at Risk

This section considers Paso Robles's assets at risk, including values at risk, critical facilities and infrastructure, historic assets, economic assets and growth and development trends.

E.3.2.1 Values at Risk

The following data on property exposure is derived from San Luis Obispo County Assessor's data. This data should only be used as a guideline to overall values in Paso Robles. Table E-8 shows the exposure of properties (e.g., the values at risk based on improvement and content values only) broken down by property type for the City of Paso Robles. Refer to the Base Plan Section 5.2 (HIRA Asset Summary) for more details on value information, content calculations, and overall parcel analysis methodology.

Table E-8 Property Exposure for the City of Paso Robles by Property Types

PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE
Agricultural	28	\$65,247,121	\$65,247,121	\$130,494,242
Commercial	645	\$692,009,096	\$692,009,096	\$1,384,018,192
Exempt	64	\$34,925,072	\$34,925,072	\$69,850,144
Industrial	122	\$166,136,395	\$249,204,593	\$415,340,988
Mixed Use	202	\$57,377,172	\$57,377,172	\$114,754,344
Mobile/Manufactured Homes	328	\$59,791,723	\$29,895,862	\$89,687,585
Multi-Family Residential	536	\$400,738,884	\$200,369,442	\$601,108,326
Residential	8,660	\$2,422,545,360	\$1,211,272,680	\$3,633,818,040
Vacant Improved	93	\$54,306,319	-	\$54,306,319
Total	10,678	\$3,953,077,142	\$2,540,301,037	\$6,493,378,179

Source: San Luis Obispo County Assessor Data November 15, 2024, WSP GIS Analysis

E.3.2.2 Critical Facilities and Infrastructure

A critical facility may be defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation. See Section 5 of the Base Plan for more details on the definitions and categories of critical facilities and Appendix E for details on names, addresses, and specific hazard vulnerabilities (where applicable).

An inventory of critical facilities in the City of Paso Robles from San Luis Obispo County GIS is provided in Table E-9 and illustrated in Figure E-2.

Table E-9 City of Paso Robles's Critical Facilities

FACILITY TYPE	COUNTS
Communications	10
Energy	2
Food, Hydration, Shelter	3
Hazardous Materials	9
Health and Medical	4
Safety and Security	26
Transportation	20
Water Systems	1
Landfills	1

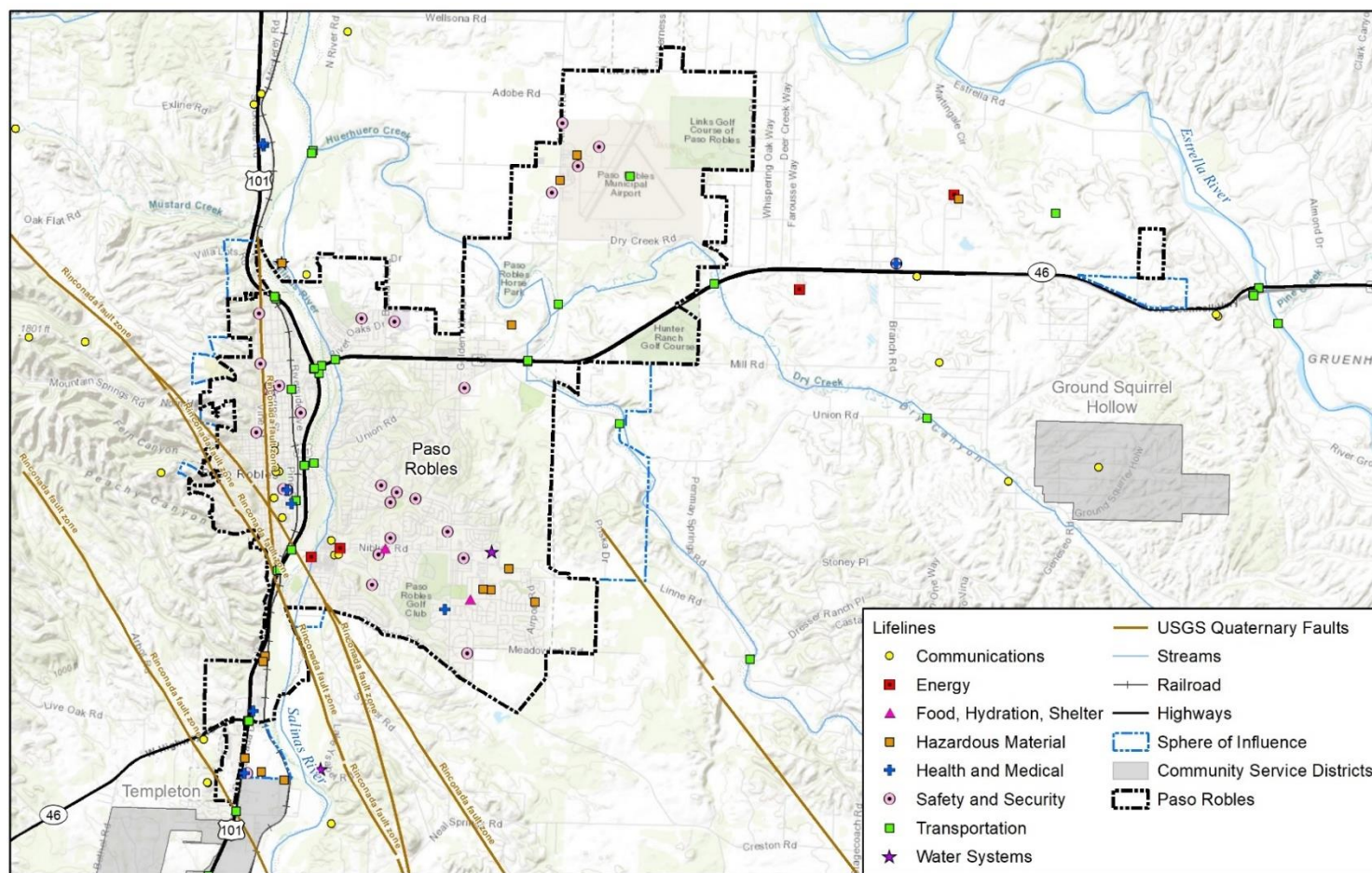


FACILITY TYPE	COUNTS
Total Count	76

Source: San Luis Obispo County, CalARP, HIFLD, National Bridge Inventory, National Inventory of Dams, FCWCD, WSP Analysis



Figure E-2 Critical Facilities in Paso Robles



Map compiled 2/2025;
Intended for planning purposes only.
Data Source: San Luis Obispo County, CalARP, HIFLD,
National Bridge Inventory, National Inventory of Dams,
Department of Conservation, USGS, FCWCD

0 0.5 1 2 Miles





E.3.2.3 Transportation and Lifeline Facilities

Major transportation and lifeline facilities are located adjacent to US Highway 101 and the Union Pacific Railroad line, both of which serve as vital links for regional commerce, emergency response, and daily travel, traversing through the City. Damages to these transportation corridors would impact not only Paso Robles but the entire region.

Other lifelines include Niblick Bridge, 13th Street Bridge, Highway 46E Bridge, Highway 46W and G14 (Nacimiento Lake Drive).

E.3.2.4 Historic and Cultural Resources

The National Register of Historic Places contains five sites in the City of Paso Robles:

- Bank of Italy (aka Old Bank of America), 1245 Park St.
- Brewster-Dutra House (aka Moye House), 1803 Vine St.
- Carnegie Library, City Park, 800 12th St.
- Lincoln School (aka Adelaida School), 9000 Chimney Rock Rd. (outside City limits)
- Paso Robles Almond Growers Association Warehouse (aka Farmers' Alliance Building), 525 Riverside Ave.

There is also one California State Historical Landmark located in Paso Robles: the Estrella Adobe Church.

E.3.2.5 Natural Resources

Incorporating natural resources into benefit-cost analyses for future projects is essential, as they provide not only environmental benefits but also opportunities to leverage additional funding. Projects that support both infrastructure development and the protection of sensitive ecosystems can align with broader community goals, maximizing both economic and environmental returns. Recognizing and preserving natural assets can create opportunities to achieve multiple objectives simultaneously, such as enhancing biodiversity, improving climate resilience, and mitigating natural hazards. For instance, protecting wetlands areas protects sensitive habitat as well as attenuates and stores floodwaters.

In Paso Robles, key natural assets include the Salinas Riverbed, which provides ecological benefits and serves as a foundation for recreational spaces like the Riverwalk, offering walking trails and open space for residents and visitors. Additionally, open space areas throughout the city play a crucial role in maintaining air and water quality, supporting wildlife corridors, and offering scenic and recreational opportunities that enhance residents quality of life.

E.3.2.6 Economic Assets

Key economic assets in Paso Robles play a vital role in driving the local economy, supporting jobs, and attracting both residents and visitors. These assets span a diverse range of industries, from retail and hospitality to commercial and industrial enterprises, contributing to the city's long-term economic growth and resilience. These assets include: the downtown corridor, car dealerships, Lowe's Plaza, Woodland Plaza, Target Center, Airport commercial businesses, and Commerce Road businesses.

E.3.3 Estimating Potential Losses

Note: This section details vulnerability to specific hazards of high or medium significance, where quantifiable, and/or where (according to HMPC member input) it differs from that of the overall County.

Table E-8 above shows Paso Robles's exposure to hazards in terms of number and value of structures. San Luis Obispo County's parcel and assessor data was used to calculate the improved value of parcels. The most vulnerable structures are those in the floodplain



(especially those that have been flooded in the past), and buildings built prior to the introduction of modern-day building codes. Impacts of past events and vulnerability to specific hazards are further discussed below (see Section 4.1 Hazard Identification for more detailed information about these hazards and their impacts on San Luis Obispo County as a whole).

E.3.3.1 Adverse Weather: Thunderstorm/Heavy Rain/Hail/Lightning/Dense Fog/Freeze

Paso Robles's risk and vulnerability to this hazard does not differ substantially from that of the County overall. As part of the North County Inland area, Paso Robles experiences similar patterns of seasonal weather, including occasional winter storms that bring periods of heavy rainfall and the potential for localized flooding. Thunderstorms and lightning are infrequent but can occur, sometimes bringing hail and brief downpours. Dense fog, particularly in the early mornings, can affect visibility and transportation safety. The overall significance rating of this hazard for Paso Robles is **medium**. The tables below show key climate variables such as extreme temperatures, precipitation totals, and the frequency of specific weather events. Weather data for the North County Inland Area, Paso Robles Weather Station, can be found in Section 5.3.1 of the Base Plan.

Table E-10 Paso Robles Climate Summary Table – Weather (Period of Record: 01/01/1894 - 04/15/2025)

SUMMARY PERIOD	MONTHLY MEAN MAXIMUM TEMP.	MONTHLY MEAN MINIMUM TEMP.	DAILY EXTREME HIGH TEMP	DAILY EXTREME HIGH DATE	DAILY EXTREME LOW TEMP	DAILY EXTREME LOW DATE	MAXIMUM TEMP. ≥ 90°F MEAN # DAYS	MINIMUM TEMP. ≤ 32°F MEAN # DAYS
Winter	61.9 °F	33.9 °F	87 °F	12/4/1958	0 °F	1/6/1913	0	41.7
Spring	73.2 °F	41 °F	110 °F	5/31/1910	20 °F	3/2/1971	6.5	7.9
Summer	90.8 °F	49.6 °F	117 °F	8/13/1933	31 °F	6/15/1973	54.5	0
Fall	79.7 °F	41.8 °F	115 °F	9/7/2020	14 °F	11/17/1958	21.1	12.6
Annual	76.5 °F	41.6 °F	117 °F	8/13/1933	0 °F	1/6/1913	82.4	63.2

Source: Western Regional Climate Center (WRCC) <https://wrcc.dri.edu/>

* Winter is defined as December, January, and February

** Summer is defined as June, July, and August

Table E-11 Paso Robles Climate Summary Table – Precipitation (Period of Record: 01/01/1894 - 04/15/2025)

SUMMARY PERIOD	PRECIP. MEAN	PRECIP. HIGH	PRECIP. HIGH YEAR	PRECIP. LOW	PRECIP. LOW YEAR	PRECIP. 1 DAY MAXIMUM	PRECIP. 1 DAY MAXIMUM DATE	PRECIP. ≥ 1.00 IN. MEAN # DAYS
Winter	9.06 in.	26.18 in.	1969	2.03 in.	1964	5.25 in.	12/6/1966	2.4
Spring	3.77 in.	12.84 in.	1995	0 in.	1997	4.7 in.	3/10/1995	0.7
Summer	0.13 in.	2.82 in.	2015	0 in.	1900	2.29 in.	7/19/2015	0
Fall	2.07 in.	7.64 in.	1900	0.02 in.	1980	3.88 in.	10/14/2009	0.3
Annual	14.88 in.	29.19 in.	1941	2.78 in.	2013	5.25 in.	12/6/1966	3.5

Source: Western Regional Climate Center (WRCC) <https://wrcc.dri.edu/>

* Winter is defined as December, January, and February

** Summer is defined as June, July, and August

E.3.3.2 Adverse Weather: High Wind/Tornado

Paso Robles' risk and vulnerability to this hazard does not differ substantially from that of the County overall significance rating of **low**. While these hazards are not common in the region,



they can occasionally occur during strong storm systems, particularly in the winter months. Paso Robles may experience gusty winds capable of causing minor damage and tornado activity is extremely rare across the county.

E.3.3.3 Adverse Weather: Extreme Heat

Extreme heat is a **medium** significance hazard for Paso Robles. The monthly mean maximum summer temperature for the Paso Robles NOAA weather station is 90.8°F; however, temperatures up to 117°F have been recorded (see Table E-10). Recent heatwaves have led to a significant increase in heat-related emergency calls, particularly impacting the elderly, children, outdoor workers, and residents without air conditioning. Additionally, rising temperatures and more frequent heat waves are increasing the likelihood of more extreme heat events in the future.

The local economy heavily relies on viticulture. This industry is particularly vulnerable, as extreme heat can damage grape yields and worker health. Infrastructure faces added stress due to increased strain and wildfire risk which may lead to power shutoffs, and can limit access to cooling centers and essential services. Social vulnerability further compounds these risks in lower-income areas with fewer resources for heat resilience.

E.3.3.4 Agricultural Pest Infestation, Plant Disease, and Tree Mortality

Paso Robles received a **low** significance ranking from the LPT for agricultural pest infestation, plant disease, and tree mortality. According to the United States Forest Service over 100 million trees have died in California and more continue to die due to many years of drought that have weakened trees and left millions of acres of forestland highly susceptible to insect attacks. The County of San Luis Obispo Assessor data shows that 10,288 properties are exposed to tree mortality hazard zones, with a total value of over \$5.8 billion as shown in Table E-12 below. The property types with the highest total values include residential (\$3.5 billion), commercial (\$1.1 billion), and multi-family residential (\$600 million). According to CAL FIRE, Paso Robles has some areas in the Tier 2 High Hazard zones for tree mortality.

Land use in Paso Robles is mostly agriculture and rural residential areas. Pests and diseases that target agriculture such as the Vine mealybug as well as the glassy-winged sharpshooter that target grapevines could cause economic damage if not contained.

Table E-12 Properties Exposed to Tree Mortality Hazard Zones

PROPERTY TYPE	PROPERTY COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Agricultural	1	\$5,571,999	\$5,571,999	\$11,143,998	
Commercial	552	\$551,188,839	\$551,188,839	\$1,102,377,678	
Exempt	60	\$34,925,072	\$34,925,072	\$69,850,144	
Industrial	78	\$101,380,896	\$152,071,344	\$253,452,240	
Mixed Use	196	\$55,735,522	\$55,735,522	\$111,471,044	
Mobile/Manufactured Homes	323	\$54,043,369	\$27,021,685	\$81,065,054	846
Multi-Family Residential	535	\$400,532,940	\$200,266,470	\$600,799,410	1,402
Residential	8,477	\$2,366,637,072	\$1,183,318,536	\$3,549,955,608	22,210
Vacant Improved	66	\$41,695,138	\$0	\$41,695,138	
Total	10,288	\$3,611,710,847	\$2,210,099,467	\$5,821,810,314	24,458

Source: San Luis Obispo Assessor Data November 15, 2024, CAL FIRE, FRAP, TMTF October 2022, WSP GIS Analysis



Paso Robles also has 62 critical facilities exposed to tree mortality hazard zones. The FEMA lifeline with the most facilities exposed is safety and security with 20 facilities, as shown in Table E-13

Table E-13 Critical Facility Assets Exposed to Tree Mortality Hazard Zones by FEMA Lifelines

COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
10	2	3	6	4	20	16	1	62

Source: San Luis Obispo County, CAL FIRE, FRAP, TMTF October 2022, CalARP, HIFLD, NBI, NID, WSP Analysis

Biological Agents (Naturally Occurring)

The Paso Robles LPT gave biological agents a **low** overall significance rating. Paso Robles risk and vulnerability to this hazard does not differ substantially from that of the county's overall. Disease outbreaks usually occur in densely populated areas, where person to person proximity provides ample opportunity for transmission of illnesses. Places of work and business, schools and high-population public spaces are of particular concern when the threat of transmissible illness occurs. More information on biological agents can be found in Section 5.3.6 of the base plan.

E.3.3.5 Dam Incidents

The City of Paso Robles rated dam incidents a low significance hazard. Paso Robles is affected by drainage from Salinas Dam as it travels down the Salinas River (Figure E-3). The Salinas Dam is a 135-ft tall concrete arch dam that holds over 43,000 acre-feet of water and is rated a high-hazard potential dam. Within the City of Paso Robles, 60 people and 50 structures exist within the modeled dam inundation zone (Table E-14). Six pieces of critical infrastructure in Paso Robles also exist within the dam inundation zone (Table E-15, notably portions of Highway 101. Appendix E provides additional detail of critical facilities at risk from dam inundation hazards. Section 5.3.8 of the Base Plan provides additional information on dam-related hazards in the county.



Figure E-3 Salinas Dam Inundation Zone Near Paso Robles

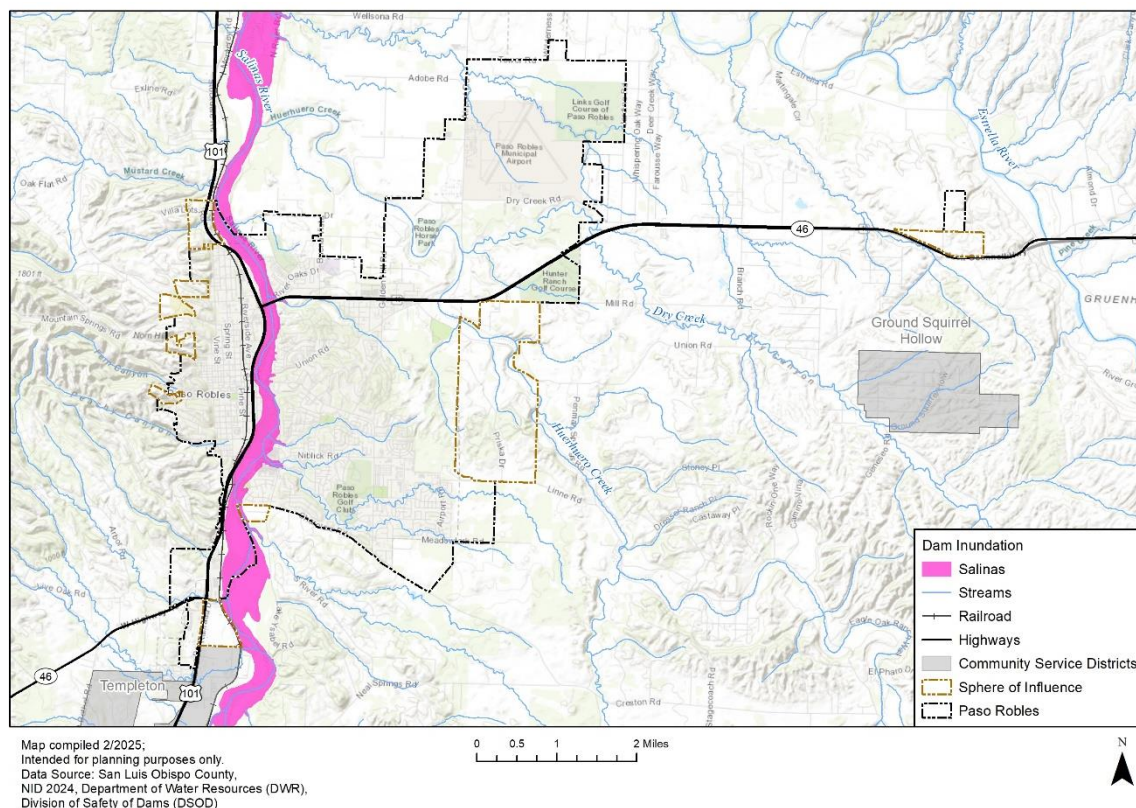


Table E-14 Improved Properties Exposed to Dam Inundation by Property Type

PROPERTY TYPE	STRUCTURE COUNT	POPULATION
Commercial	21	-
Exempt	2	-
Industrial	4	-
Multi-Family Residential	1	3
Residential	22	58
Total	50	60

Source: San Luis Obispo Assessor Data 2024, Division of Safety of Dams, Department of Water Resources, WSP GIS Analysis

**Table E-15 Critical Facility Assets Exposed to Dam Inundation**

COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
1	1	-	-	-	-	4	-	6

Source: San Luis Obispo Assessor Data 2024, Division of Safety of Dams, Department of Water Resources, WSP GIS Analysis

E.3.3.6 Drought and Water Shortage

Until 2015, all water demands in the City were met with groundwater. Currently, the City of Paso Robles relies on a combination of surface water supplies and groundwater to provide potable water to all water customers. In a normal year, over 50% of the City's water is supplied by seven relatively-shallow wells located along the Salinas River corridor. Surface water from the Nacimiento Water Project and groundwater from the Paso Robles Groundwater Basin is used to supplement the Salinas River wells. Additionally, a recently implemented recycled water program treats wastewater to a tertiary level for safe reuse in irrigation and other non-potable applications.

The Paso Robles Water Division (PRWD) serves approximately 9,200 residential, 800 commercial, and 400 irrigation customers. PRWD manages 19 wells, two arsenic removal treatment systems, one micro-filtration water treatment plant, six booster stations, four reservoirs, and 172 miles of water mains. PRWD also maintains the distribution system, repairs leaks, and installs customer connections and fire hydrants.

According to the City's 2020 Urban Water Management Plan (UWMP), the City's water loss audit revealed some inefficiencies in metering accuracy, leakage detection, and system monitoring, with a validity score of 65 out of 100. Additionally, the Paso Robles Groundwater Basin remains classified as critically over drafted and requires ongoing management strategies to prevent declining groundwater levels, land subsidence, and water quality issues. However, analysis in the City's UWMP anticipates having enough water to meet demand in single and multiple dry year scenarios, as is displayed in Table E-16

Table E-16 Multiple Dry Years Supply and Demand Comparison

DROUGHT YEAR	SUPPLY/DEMAND/ DIFFERENCE	2025	2030	2035	2040	2045
First Year	Supply totals	6,515	7,102	7,689	8,277	8,863
	Demand totals	6,515	7,102	7,689	8,277	8,863
	Difference	0	0	0	0	0
Second Year	Supply totals	6,515	7,102	7,689	8,277	8,863
	Demand totals	6,515	7,102	7,689	8,277	8,863
	Difference	0	0	0	0	0
Third Year	Supply totals	6,515	7,102	7,689	8,277	8,863
	Demand totals	6,515	7,102	7,689	8,277	8,863
	Difference	0	0	0	0	0
Fourth Year	Supply totals	6,515	7,102	7,689	8,277	8,863
	Demand totals	6,515	7,102	7,689	8,277	8,863
	Difference	0	0	0	0	0
Fifth Year	Supply totals	6,515	7,102	7,689	8,277	8,863
	Demand totals	6,515	7,102	7,689	8,277	8,863
	Difference	0	0	0	0	0



Source: Paso Robles 2020 UWMP

E.3.3.7 Earthquake and Liquefaction

Historically, most of the earthquakes that have occurred near Paso Robles have originated from movement along the San Andreas Fault, which is located approximately 38 miles northeast of the City limits. The only known mapped fault within the City of Paso Robles is the Rinconada fault. The potentially active Rinconada fault is mapped through southwestern Paso Robles and crosses Highway 101 just south of Spring Street. A trace of the fault is also identified as running up Spring Street, which corresponds to a line of hot springs that once existed in this area but have since been capped and buried. As a potentially active fault, the Rinconada presents a moderate fault rupture hazard to the City. Further studies to evaluate the activity of the faults are warranted, prior to placing structures near the mapped fault traces.

The northern end of the potentially active La Panza fault is located about 20 kilometers (12.43 miles) southeast of Paso Robles, near the town of Creston. The northwest striking La Panza fault is about 75 kilometers (46.6 miles) long. The Huerhuero fault is a possible extension of the La Panza and is mapped trending northwest along Huerhuero Creek south of Highway 46 but is not within the current City limits.

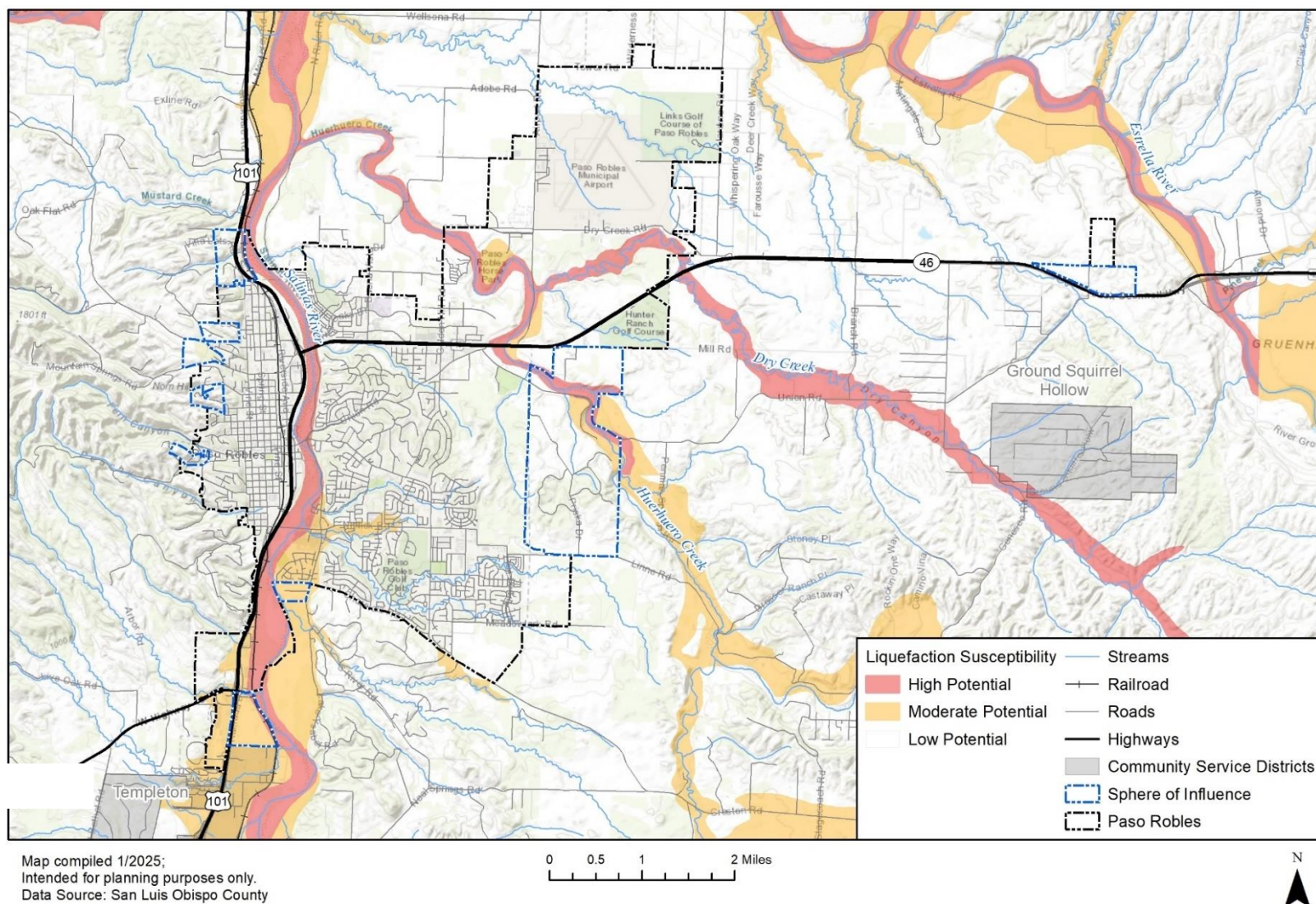
While no large earthquakes greater than Mw 5.0 have occurred recently within the City limits, a number of relatively large earthquakes outside Paso Robles have caused damage within San Luis Obispo County and neighboring counties. The 2003 San Simeon Earthquake for example led to significant damage in the City of Paso Robles. Most notably, an unreinforced masonry building in the city, the Acorn Building, collapsed in this quake and killed two women who were inside at the time. The quake also triggered the eruption of two sulfur hot springs in the city, one of which was beneath the parking lot of the recently opened city hall and library building. There were several other unreinforced masonry buildings in the city which experienced extensive damage, however no structures with even partial seismic retrofitting collapsed, highlighting the importance and life-saving potential of this mitigation effort. Outside of Paso Robles, the damages in this event were far less severe.

In addition to being at risk of ground shaking as a result of a fault rupture, the City is also susceptible to the effects of liquefaction. The areas of Paso Robles, shown in Figure E-4 below, that have a high potential to be underlain by potentially liquefiable sediments are those areas underlain by younger alluvium. Portions of the City that are located in the low-lying areas adjacent to the Salinas River (or its tributaries) appear to have the highest potential for liquefaction. Site specific studies are needed to evaluate if a geologic unit actually contains potentially liquefiable materials, and if they require mitigation for development. Refer to Section 5 of the Base Plan for additional details on the City's risk to liquefaction.

Based on the vulnerability analysis conducted, the city contains 10,678 improved parcels with a total estimated value of \$6.5 billion exposed to liquefiable soils. The vast majority of these parcels are located within low liquefaction susceptible areas, with 545 parcels located in moderate susceptibility areas and only 36 parcels located in high susceptibility areas. There are also 75 critical facilities found in liquefaction susceptible areas. These details are summarized in Table E-17 and Table E-18.



Figure E-4 Paso Robles Liquefaction Susceptibility



**Table E-17 City of Paso Robles Improved Properties Exposed to Liquefaction Potential by Property Type**

PROPERTY TYPE	STRUCTURE COUNT HIGH	STRUCTURE COUNT MODERATE	STRUCTURE COUNT LOW	TOTAL STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Agricultural	-	-	28	28	\$65,247,121	\$65,247,121	\$130,494,242	-
Commercial	14	54	577	645	\$692,009,096	\$692,009,096	\$1,384,018,192	-
Exempt	-	2	62	64	\$34,925,072	\$34,925,072	\$69,850,144	-
Industrial	6	8	108	122	\$166,136,395	\$249,204,593	\$415,340,988	-
Mining	-	-	-	0	\$0	\$0	\$0	-
Mixed Use	-	1	201	202	\$57,377,172	\$57,377,172	\$114,754,344	-
Mobile/ Manufactured Homes	1	2	325	328	\$59,791,723	\$29,895,862	\$89,687,585	859
Multi-Family Residential	2	-	534	536	\$400,738,884	\$200,369,442	\$601,108,326	1,404
Residential	12	467	8,181	8,660	\$2,422,545,360	\$1,211,272,680	\$3,633,818,040	22,689
Vacant Improved	1	11	81	93	\$54,306,319	\$0	\$54,306,319	-
Total	36	545	10,097	10,678	\$3,953,077,142	\$2,540,301,037	\$6,493,378,179	24,953

Source: San Luis Obispo Assessor Data November 15, 2024, WSP GIS Analysis

**Table E-18 Critical Facility Assets Exposed to Liquefaction Susceptibility by FEMA Lifeline**

LIQUEFACTION SUSCEPTIBILITY CATEGORY	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
High Liquefaction Susceptibility	-	1	-	-	-	-	4	-	5
Moderate Liquefaction Susceptibility	3	1	1	2	1	1	4	-	13
Low Liquefaction Susceptibility	7	-	2	7	3	25	12	1	57

Source: San Luis Obispo County, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis

E.3.3.8 Flood

Flooding remains a **High Significance** hazard for the City of Paso Robles. The City is primarily vulnerable to riverine and localized flood events, both of which have caused serious impacts historically. Major floods were recorded during the storms of 1969, 1973, 1978, 1995, 2001, 2004–2005, 2005–2006, and 2010–2011. In January 2023, severe rains again triggered flooding across Paso Robles, resulting in infrastructure damage, washouts, trail erosion, and emergency repairs at critical facilities like the wastewater treatment plant and landfill. The city activated its Emergency Operations Center (EOC) in response to the storm, and multiple roads, schools, and businesses experienced closures.

Paso Robles is particularly susceptible to flooding along its major creek systems and low-lying areas, where intense rainfall can overwhelm stormwater drainage infrastructure. Rapid runoff from steep areas surrounding the city can also lead to flash flooding, particularly in areas where natural vegetation has been altered by development or wildfire. As the city continues to experience growth, with new homes and millions of square feet of commercial space planned or under development, careful stormwater management and flood resilience planning remain essential.

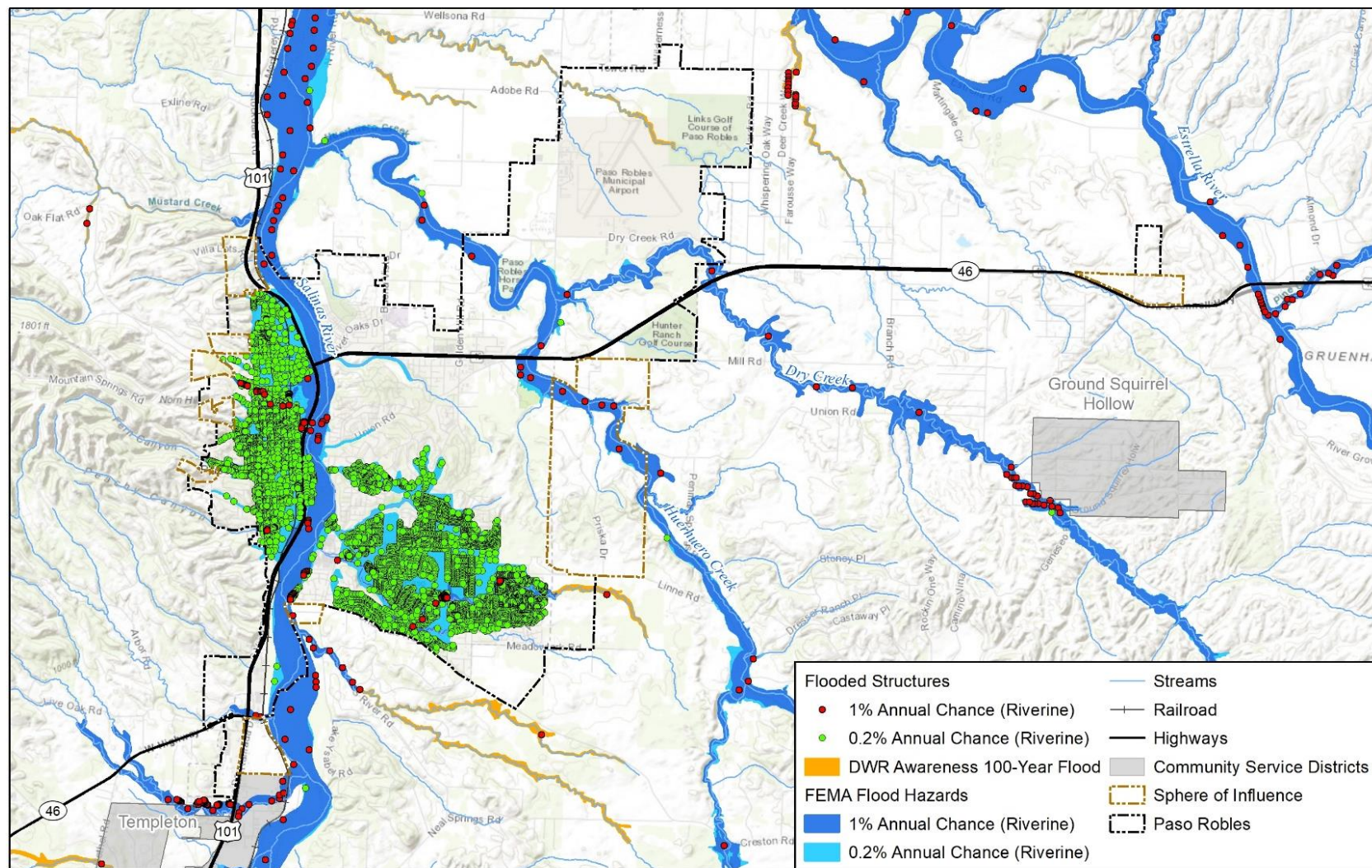
Refer to the Flood Section of the Base Plan for additional information on regional flood hazards, flood mitigation activities, and historical flood events affecting the City.

Values at Risk

Based on the updated analysis, 82 improved parcels in the City are located within the FEMA 1% annual chance floodplain, with a combined improved and content value of approximately \$58.2 million and an estimated loss of about \$14.5 million. In contrast, the 0.2% annual chance floodplain includes 5,781 improved parcels with a combined value exceeding \$3.05 billion and an estimated loss of approximately \$764.3 million. This represents a dramatic increase in the number of parcels and total value at risk between the 1% and 0.2% flood scenarios, indicating that a larger portion of the city's assets would be impacted by more extreme flood events.



Figure E-5 Paso Robles DWR & FEMA Flood Hazards with Flooded Structures



Map compiled 2/2025;
Intended for planning purposes only.
Data Source: San Luis Obispo County,
FEMA NFHL Effective 6/6/2024, NCEI,
DWR, USACE Comprehensive Study



Population at Risk

Approximately 144 people are at risk within the FEMA 1% annual chance floodplain. In the 0.2% annual chance flood zone, the at-risk population rises sharply to an estimated 13,134 people, primarily associated with residential and multi-family residential parcels. This highlights the much broader exposure of the city's population under more severe flood scenarios.

Table E-19 and Table E-20 show those improved properties and populations exposed to the 1% and 0.2% annual chance flood zones, below.

Table E-19 City of Paso Robles Improved Properties Exposed to FEMA Riverine 1% Flood Hazard by Property Type

PROPERTY TYPE	PARCEL COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	LOSS ESTIMATE	POPULATION
Commercial	16	\$15,144,859	\$15,144,859	\$30,289,718	\$7,572,430	-
Exempt	3	\$0	\$0	\$0	\$0	-
Industrial	5	\$2,529,226	\$3,793,839	\$6,323,065	\$1,580,766	-
Mixed Use	1	\$143,661	\$143,661	\$287,322	\$71,831	-
Mobile/Manufactured Homes	1	\$491,141	\$245,571	\$736,712	\$184,178	3
Multi-Family Residential	5	\$1,483,453	\$741,727	\$2,225,180	\$556,295	13
Residential	49	\$11,993,858	\$5,996,929	\$17,990,787	\$4,497,697	128
Vacant Improved	2	\$310,751	\$0	\$310,751	\$77,688	-
Total	82	\$32,096,949	\$26,066,585	\$58,163,534	\$14,540,884	144

San Luis Obispo Assessor Data November 15, 2024, FEMA NFHL Effective Date 6/6/2024, WSP GIS Analysis

Table E-20 City of Paso Robles Improved Properties Exposed to FEMA Riverine 0.2% Flood Hazard by Property Type

PROPERTY TYPE	PARCEL COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	LOSS ESTIMATE	POPULATION
Agricultural	1	\$5,571,999	\$5,571,999	\$11,143,998	\$2,786,000	-
Commercial	463	\$360,141,299	\$360,141,299	\$720,282,598	\$180,070,650	-
Exempt	49	\$32,361,720	\$32,361,720	\$64,723,440	\$16,180,860	-
Industrial	62	\$61,078,205	\$91,617,308	\$152,695,513	\$38,173,878	-
Mixed Use	172	\$52,735,210	\$52,735,210	\$105,470,420	\$26,367,605	-
Mobile/Manufactured Homes	266	\$43,113,866	\$21,556,933	\$64,670,799	\$16,167,700	697
Multi-Family Residential	466	\$326,978,664	\$163,489,332	\$490,467,996	\$122,616,999	1,221
Residential	4,281	\$955,180,777	\$477,590,389	\$1,432,771,166	\$358,192,791	11,216
Vacant Improved	21	\$14,794,607	\$0	\$14,794,607	\$3,698,652	-
Total	5,781	\$1,851,956,347	\$1,205,064,189	\$3,057,020,536	\$764,255,134	13,134

Source: San Luis Obispo Assessor Data November 15, 2024, FEMA NFHL Effective Date 6/6/2024, WSP GIS Analysis

Insurance Coverage, Claims Paid, and Repetitive Losses

The City joined the NFIP on September 16, 1981. The current effective map is dated June 6, 2024. As of May 12, 2025, NFIP records show 36 active flood insurance policies in the City, totaling \$10,695,000 in coverage. Of these, 20 policies are in A zones, and the rest are in B, C, or X zones.

Since joining the NFIP, the City has recorded 11 flood loss claims totaling \$153,642, all for residential properties. According to the OpenFEMA dataset accessed in 2024, the City currently does not have any Repetitive Loss (RL) or Severe Repetitive Loss (SRL) properties.



The City does not currently participate in the Community Rating System (CRS).

Critical Facilities at Risk

In Paso Robles, 12 critical facilities are located within the 1% annual chance (100-year) floodplain. These facilities are primarily concentrated in transportation, with 11 facilities exposed, along with one facility classified under energy. Although relatively limited in number, their exposure could impact critical mobility and utility functions during a major flood event.

In the broader 0.2% annual chance (500-year) floodplain, the number of critical facilities increases significantly to 41. This includes seven communications facilities, three food, hydration, and shelter facilities, four hazardous material facilities, three health and medical facilities, 17 safety and security facilities, six transportation-related facilities, and one water system facility. The sharp increase in exposed assets between the 1% and 0.2% flood scenarios highlights the importance of considering high-consequence flood events when planning for hazard mitigation and critical facility resilience.

Table E-21 and Table E-22 show critical facilities exposed to 1% and 0.2% flood hazards, below.

Table E-21 City of Paso Robles Critical Facility Assets Exposed to FEMA and DWR Awareness 1% Flood Hazards by Jurisdictions and FEMA Lifelines

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
Paso Robles	-	1	-	-	-	-	11	-	12

Source: San Luis Obispo County, FEMA NFHL Effective Date 6/6/2024, DWR, USACE Comprehensive Study, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis.

Table E-22 City of Paso Robles Critical Facility Assets Exposed to FEMA 0.2% Flood Hazards by Jurisdictions and FEMA Lifelines

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
Paso Robles	7	-	3	4	3	17	6	1	41

Source: San Luis Obispo County, FEMA NFHL Effective Date 6/6/2024, DWR, USACE Comprehensive Study, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis.

E.3.3.9 Landslides and Debris Flow

Paso Robles is considered to have a **high** overall significance rating for landslides in certain areas of the city. In the past twenty-five years, there have been three notable landslide and debris flow events in or near Paso Robles. In 1995 a landslide on a hillside west of Olive Street (just north of Hilltop Drive) slid into the back of two homes after a series of winter storms. The hillside area that slid was approximately 150 wide by 40 feet high, and the slope of the hillside was about 30%.

December 22, 2003, numerous small landslides occurred as a result of the San Simeon Earthquake. Particularly noticeable was a landslide along State Routes 46 and 41, east and west



of downtown. The larger surficial slides were observed in the Franciscan Formation along State Route 46. Surficial slides were also observed along River Road in Paso Robles.

Landslides throughout the city have a high potential of occurring along the Huehuero Creek and along Highway 101 as shown in Figure E-6. Table E-23 shows the properties exposed to landslide potential with 10,102 properties with a total value of over \$5.8 billion exposed to landslide potential. There are 78 critical facilities in landslide potential zones including 35 facilities in high potential zones, as shown in Table E-24 below. Figure E-6 shows, in map form, where these landslide potential areas are in and near the city. Some areas with high potential include the areas directly west of Highway 101 as well as the areas within and surrounding Paso Robles Municipal Airport.

Table E-23 Improved Properties Exposed to Landslide Potential in Paso Robles

PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Agricultural	28	\$65,247,121	\$65,247,121	\$130,494,242	-
Commercial	580	\$527,357,484	\$527,357,484	\$1,054,714,968	-
Exempt	62	\$33,252,248	\$33,252,248	\$66,504,496	-
Industrial	109	\$130,989,383	\$196,484,075	\$327,473,458	-
Mining	0	\$0	\$0	\$0	-
Mixed Use	201	\$57,137,172	\$57,137,172	\$114,274,344	-
Mobile/Manufactured Homes	325	\$58,308,049	\$29,154,025	\$87,462,074	852
Multi-Family Residential	534	\$388,534,836	\$194,267,418	\$582,802,254	1,399
Residential	8,182	\$2,313,872,645	\$1,156,936,323	\$3,470,808,968	21,437
Vacant Improved	81	\$45,901,912	\$0	\$45,901,912	-
Total	10,102	\$3,620,600,850	\$2,259,835,865	\$5,880,436,715	23,687

Source: San Luis Obispo Assessor Data November 15, 2024, WSP GIS Analysis

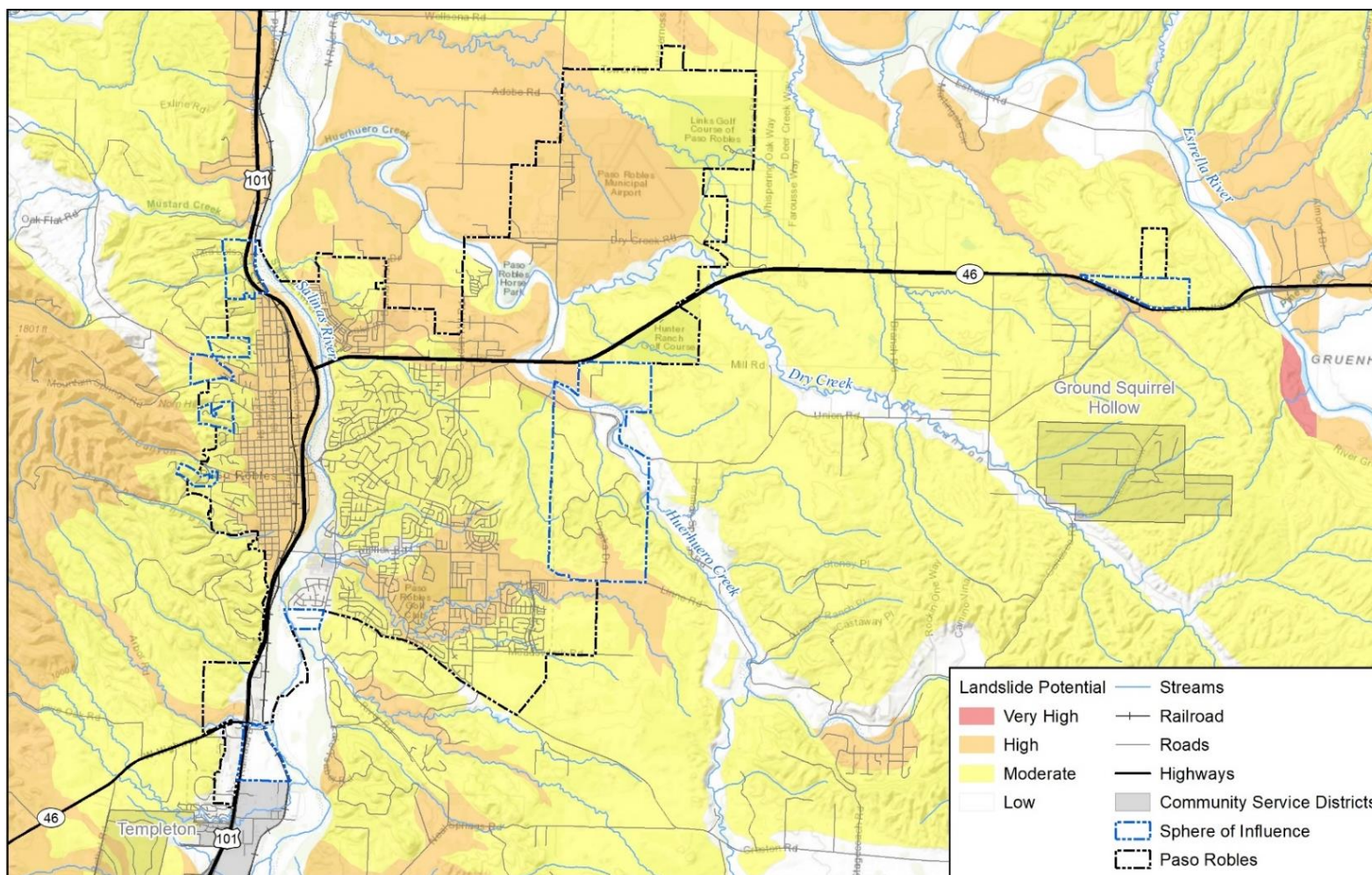
Table E-24 Critical Facility Assets Exposed to Landslide Potential by FEMA Lifelines

LANDSLIDE POTENTIAL	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
High	4	1	2	-	6	9	12	1	35
Moderate	1	-	-	-	5	5	1	-	12
Low	1	-	1	-	1	6	22	-	31
Total	78								

Source: San Luis Obispo County, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis



Figure E-6 Landslide Potential in Paso Robles



Map compiled 1/2025;
Intended for planning purposes only.
Data Source: San Luis Obispo County

0 0.5 1 2 Miles



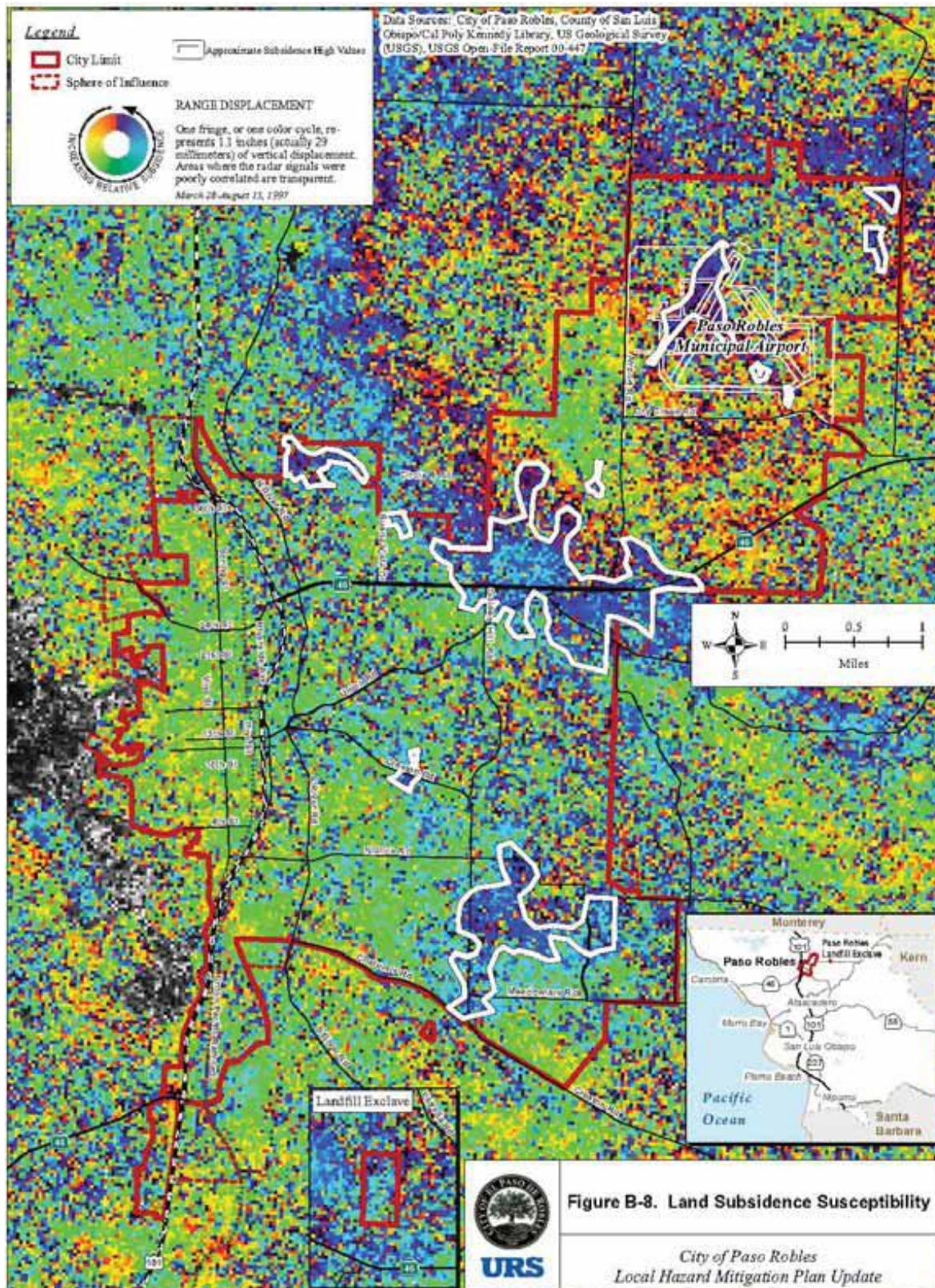


E.3.3.10 Subsidence

The Paso Robles LPT gave subsidence a **high** overall significance rating. According to the United States Geologic Survey, it is likely that concentrated pumping is responsible for localized land subsidence in Paso Robles. Small amounts of subsidence owing to seasonal changes in groundwater levels may be elastic and recoverable. However, many formerly reliable wells have gone dry. According to the 2019 Paso Robles Local Hazard Mitigation Plan, Paso Robles has 1.90 square miles of subsidence-prone areas along the Salinas River and Huerhuero Creek, as well as in the east and southeast portions of the city. It will be important to monitor groundwater extraction, as this is the main cause of subsidence in California. Additionally, land elevation should also be monitored to prevent any subsidence-related hazards in the city.



Figure E-7 City of Paso Robles' Land Subsidence Susceptibility





E.3.3.11 Wildfire

In recent years, fire seasons have become longer and more intense, challenging the City's firefighting resources and community resilience. Based on weather factors such as wind, humidity, and temperature, the region experiences severe fire weather around the City of Paso Robles. Many areas throughout the City are highly susceptible to large conflagrations. One area of high concern is the Salinas Riverbed corridor. The riverbed corridor encompasses over 680 acres, much of it heavily forested. The brush and dead fuels provide a significant source of fuel. Vegetation management is conducted within the riverbed since 2021 with permitting through the State Water Board. Paso Robles is the first jurisdiction in the State to obtain these annual permits.

Emergency Response personnel responded to 115 fires in the riverbed corridor in 2018. From January 1-June 30, 2019, Emergency Response personnel responded to 63 fires. Thus, the risk of fire in the riverbed jumping out of the bed and racing through the rest of the community is unacceptably high. Fires in the riverbed corridor threaten critical City infrastructure, nearby residential and commercial properties, and the health and safety of all residents and visitors in the area. On July 16, 2019, the City of Paso Robles proclaimed a local emergency related to the riverbed fires.

Following the methodology described in the wildfire hazard Section 5.3.15 Wildfire of the Base Plan, along with the GIS parcel analysis discussed in more detail under Section 5.2 Asset Summary, a wildfire vulnerability analysis for the City of Paso Robles was completed. The assessment was performed using GIS, and results indicate that there were neither parcels nor critical facilities in wildfire severity hazard zones within the boundaries of the City of Paso Robles. However, wildfire hazards have been rated by the City's planning team as holding **High Significance** based on the community's experience and historical evidence.

In the City of Paso Robles, 3,137 properties are situated within wildfire hazard severity zones ranging from moderate to very high. Of these none are located in the Very High Severity Zone, while 1,946 properties fall within the High Severity Zone. Collectively, these properties represent a total assessed value of \$2,507,771,547 and impact approximately 7,407 residents across all fire hazard severity zone ratings. Table E-25 shows the properties in the City exposed to wildfire severity. Figure E-8 depicts the Fire Hazard Severity Zones in the City of Paso Robles.

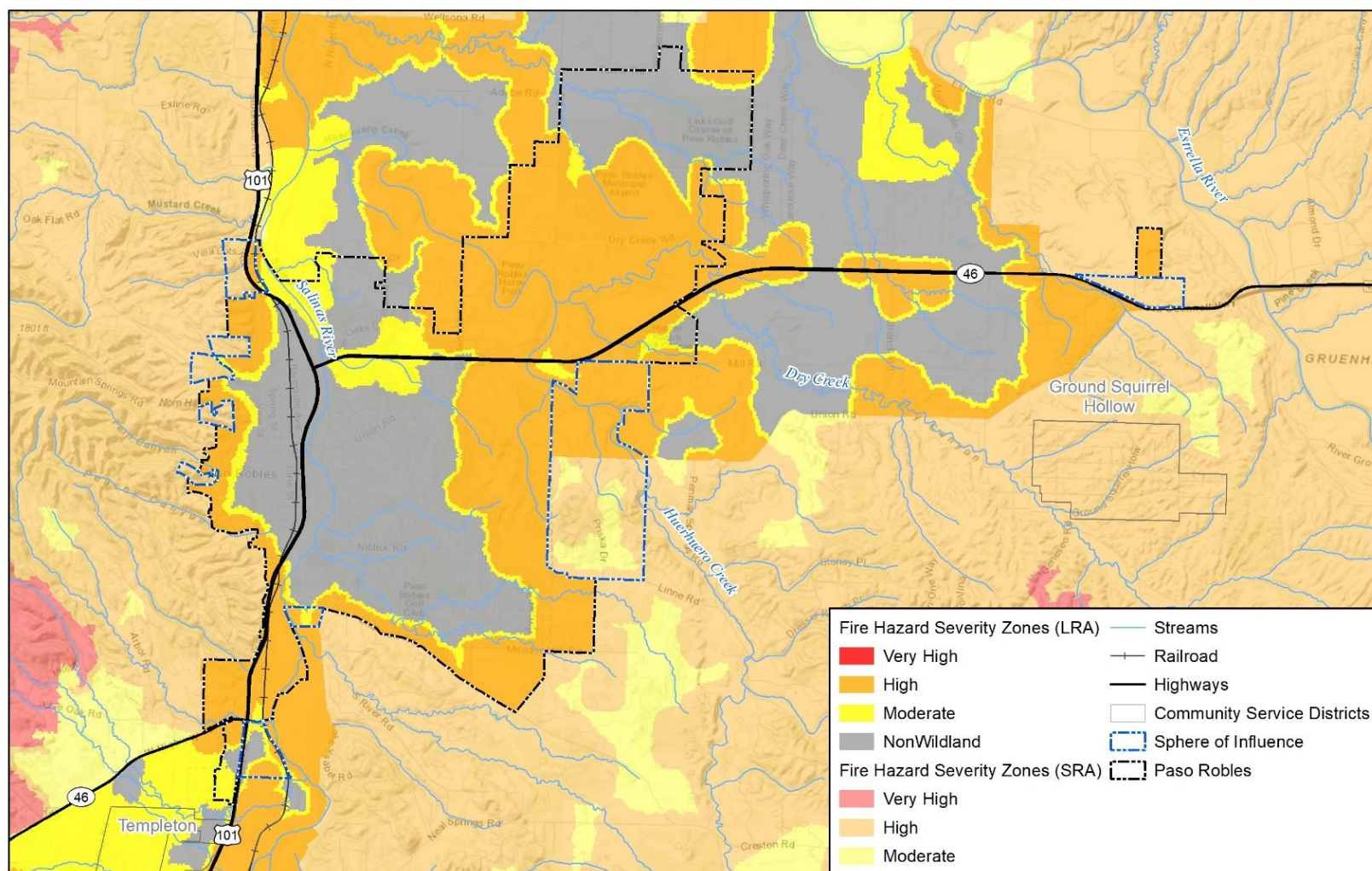
**Table E-25 City of Paso Robles Improved Properties Exposed to Fire Hazard Severity Zones by Property Type**

PROPERTY TYPE	STRUCTURE COUNT VERY HIGH	STRUCTURE COUNT HIGH	STRUCTURE COUNT MODERATE	TOTAL STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Agricultural	-	13	2	15	\$53,043,345	\$53,043,345	\$106,086,690	-
Commercial	-	112	34	146	\$271,810,539	\$271,810,539	\$543,621,078	-
Exempt	-	10	3	13	\$3,778,572	\$3,778,572	\$7,557,144	-
Industrial	-	51	9	60	\$112,879,072	\$169,318,608	\$282,197,680	-
Mixed Use	-	13	6	19	\$6,740,565	\$6,740,565	\$13,481,130	-
Mobile/Manufactured Homes	-	91	41	132	\$32,002,031	\$16,001,016	\$48,003,047	346
Multi-Family Residential	-	91	48	139	\$145,559,221	\$72,779,611	\$218,338,832	364
Residential	-	1,522	1,034	2,556	\$837,149,164	\$418,574,582	\$1,255,723,746	6,697
Vacant Improved	-	43	14	57	\$32,762,201	\$0	\$32,762,201	-
Total	0	1,946	1,191	3,137	\$1,495,724,710	\$1,012,046,837	\$2,507,771,547	7,407

Source: San Luis Obispo Assessor Data November 15, 2024, CAL FIRE - FHSZ Phase 3 March 10, 2025, WSP GIS Analysis



Figure E-8 Fire Hazard Severity Zones in the Paso Robles Area



Map compiled 3/2025;
Intended for planning purposes only.
Data Source: San Luis Obispo County, CAL FIRE,
Phase 3 as Identified by the Office of the State Fire Marshal March 10, 2025,
FHSZSRA_23_3, FHSZLRA25_Phase3_v1



Table E-26 shows critical facilities in Paso Robles that are exposed to wildfire severity, categorizing them by severity zones. The exposure of these critical assets to wildfire hazards poses significant risks to transportation and communication facilities. The tables below show that there are twenty (20) critical facilities exposed to high fire hazard severity zones, six (6) exposed to moderate fire hazard severity zones, and none exposed to very high fire severity zones.

Table E-26 Critical Facility Assets Exposed to Fire Hazard Severity

FIRE HAZARD SEVERITY ZONE	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
Very High	-	-	-	-	-	-	-	-	0
High	-	-	-	5	1	5	8	1	20
Moderate	-	-	-	2	-	2	2	-	6
Total	0	0	0	7	1	7	10	1	26

Source: San Luis Obispo County, CAL FIRE - FHSZ Phase 3 March 10, 2025, CalARP, HIFLD, NBI, NID, WSP Analysis

E.3.3.12 Human Caused: Hazardous Materials, including Emerging Contaminants

The Paso Robles LPT rated hazardous materials incidents as having **low** overall significance. To date, there is a low risk for exposure to known *Human Caused: Hazardous Materials*; however, as technology and research advances, existing materials may prove to be hazardous and may require additional oversight, handling, and advanced treatment. The Cal OES Spill Release Reporting Center reports 60 hazardous materials incidents in the City of Paso Robles from January 1st, 2019 through December 20th, 2024. This likely excludes a number of unreported minor spills. The 60 reported incidents constitutes 13.2% of the hazardous materials incidents reported countywide during the same time frame and averages out to roughly 10 incidents per year.

E.4 Capability Assessment

Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capabilities assessment is divided into five sections: regulatory mitigation capabilities, administrative and technical mitigation capabilities, fiscal mitigation capabilities, mitigation outreach and partnerships, and other mitigation efforts.

To develop this capability assessment, the jurisdictional planning representatives used a matrix of common mitigation activities to inventory which of these policies or programs were in place. The team then supplemented this inventory by reviewing additional existing policies, regulations, plans, and programs to determine if they contributed to reducing hazard-related losses.

During the plan update process, this inventory was reviewed by the jurisdictional planning representatives and Wood consultant team staff to update information where applicable and note ways in which these capabilities have improved or expanded. Additionally, in summarizing current capabilities and identifying gaps, the jurisdictional planning representatives also considered their ability to expand or improve upon existing policies and



programs as potential new mitigation strategies. The City of Paso Robles's capabilities are summarized below.

E.4.1 Regulatory Mitigation Capabilities

Table E-27 City of Paso Robles Regulatory Mitigation Capabilities

REGULATORY TOOL	YES/NO	COMMENTS
General plan	Yes	Current General Plan on City Website
Zoning ordinance	Yes	New version of Zoning Code
Subdivision ordinance	Yes	See City Website.
Growth management ordinance	Yes	See City Website
Floodplain ordinance	Yes	Floodplain Management Ordinance (2008)
Other special purpose ordinance (stormwater, water conservation, wildfire)	Yes	Hazardous Fuels Reduction Ordinance (2019) Storm Water Management Ordinance (2013)
Building code	Yes	2016 California Building Code, Title 17 Municipal Code (See Website)
Fire department ISO rating	Yes	ISO Rating 03/3X
Building Department ISO Rating	Yes	ISO Rating 2/3
Erosion or sediment control program	Yes	Ongoing Public Works/ Development Review Process
Stormwater management program	Yes	Public Works
Site plan review requirements	Yes	See 2024 Zone Code Update
Capital improvements plan	Yes	Revolving Five Year Program
Economic development plan	Yes	See 2024 Economic Strategy
Local emergency operations plan	Yes	EOC Emergency Plan and Annexes
Other special plans	No	
Flood Insurance Study or other engineering study for streams	Yes	FEMA LOMR by project when applicable, City Engineer
Elevation certificates (for floodplain development)	Yes	FEMA/ Floodplain Development requirements ongoing, City Engineer

Discussion on Existing Building Codes, Land Use and Development Regulations

In Paso Robles, existing building codes, land use polices, and development regulations are actively managed through a coordinated and collaborative approach among key city departments. The LPT noted that the Building, Planning, Engineering, and Fire Departments meet weekly to discuss development projects, permitting, safety concerns, and any code-related issues that may arise.

The city follows California Building Standards Code (Title 24), including locally adopted amendments that reflect Paso Roble's unique climate, topography, and hazards. The codes address structural integrity, fire safety, energy efficiency, and accessibility, and are enforced through the City's Building Division. In addition, the Paso Robles Municipal Code includes local ordinances and development standards that guide land use, environmental protection, grading, stormwater management, and hazard area restrictions.

The Planning Division oversees the implementation of the City's General Plan, Zoning Ordinances, and other long-range planning tools to ensure that growth occurs in a safe and sustainable manner. The Fire Department plays a critical role in reviewing site plans and construction documents to verify compliance with fire codes and defensible space requirements, especially important in areas at risk of wildland-urban interface fires or other



emergencies. Together, these departments use a proactive, integrated approach to managing risk and enforcing regulations that protect the health, safety, and welfare of Paso Robles residents. Anyone seeking to understand the full scope of applicable rules and procedures is encouraged to consult the Paso Robles Municipal Code, which outlines all relevant ordinances and regulations related to development, safety, and hazard mitigation.

E.4.2 Administrative/Technical Mitigation Capabilities

Table E-28 identifies the personnel responsible for activities related to mitigation and loss prevention in Paso Robles.

Table E-28 City of Paso Robles Administrative/Technical Mitigation Capabilities

PERSONNEL RESOURCES	YES/ NO	DEPARTMENT/ POSITION	COMMENTS
Planner/engineer with knowledge of land development/land management practices	Yes	Community Development Department (Planning Division)	Develops and maintains the General Plan, including the Safety Element. Develops area plans based on the General Plan, to provide more detailed guidance for the development of more specific areas. Reviews private development projects and proposed capital improvements projects and other physical projects involving property for consistency and conformity with the General Plan. Anticipates and acts on the need for new plans, policies, and Code changes. Applies the approved plans, policies, code provisions, and other regulations to proposed land uses.
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Community Development Department (Building Division)	Oversees the effective, efficient, fair, and safe enforcement of the California Building Code.
Planner/engineer/scientist with an understanding of natural hazards	Yes	Community Development (Building and Engineering Divisions)	Reviews Grading and Building Plans to ensure that development is in compliance with existing policies and codes relating to mitigation of natural hazards.
Personnel skilled in GIS	Yes	Administrative Services GIS	
Full time building official	Yes	Community Development Department/Building Official	
Floodplain manager	Yes	Community Development Department (Engineering Division)	Reviews and ensures that new development proposals do not increase flood risk, and that new developments are not located below the 100-year flood level. In addition, the Floodplain Administrator is responsible for



PERSONNEL RESOURCES	YES/ NO	DEPARTMENT/ POSITION	COMMENTS
			planning and managing flood risk reduction projects throughout the City.
Emergency manager	Yes	Emergency Services (Fire Chief)	Coordinates local response and relief activities within the Emergency Operation Center, and works closely with county, state, and federal partners to support planning and training and to provide information and coordinate assistance.
Grant writer	Yes	Emergency Services	
Other personnel			
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	Yes	GIS	
Warning Systems/Services (Reverse 9-11, cable override, outdoor warning signals)	Yes	Reverse 911 and EAS activated through Sherriff's Department	
Procurement Services Manager	Yes	Administrative Services	Provides a full range of municipal financial services and administers several licensing measures.

E.4.3 Fiscal Mitigation Capabilities

Table E-29 identifies financial tools or resources that the City could potentially use to help fund mitigation activities.

Table E-29 City of Paso Robles Fiscal Mitigation Capabilities

FINANCIAL RESOURCES	ACCESSIBLE/ ELIGIBLE TO USE (YES/NO)	COMMENTS
Community Development Block Grants	N	
Capital improvements project funding	Y	
Authority to levy taxes for specific purposes	Y	
Fees for water, sewer, gas, or electric services	Y	
Impact fees for new development	Y	
Incur debt through general obligation bonds	Y	
Incur debt through special tax bonds	Y	
Incur debt through private activities	N	
Withhold spending in hazard prone areas	N	



E.4.4 Mitigation Outreach and Partnerships

The City conducts several ongoing public education or information programs, such as for fire safety, disaster preparedness, wildland preparedness, responsible water use, FOG (fats, oils and greases), and storm water public education.

Table E-30 City of Paso Robles Mitigation Outreach and Partnerships

CAPABILITY TYPE	YES/NO	NOTES
Hazard Awareness/Education Campaigns		
Firewise	*Pending	Application submitted. Awaiting approval.
Storm Ready	No	
Severe Weather Awareness Week	Yes	Extreme Heat and Flooding community awareness
School programs	Yes	E.D.I.T.H. contests, AARBF Burn Relay
Other	Yes	Community Risk Reduction Program, Wildfire Preparedness, Community AED Program, Weed Abatement, National Fire Prevention Week, C.E.R.T., Smoke/CO Detector Program
Methods Used to Communicate Hazard Info. to the Public		Press Releases, PulsePoint
Local News	Yes	Press Releases, On-Camera Interviews
Social media	Yes	Press Releases, Events, PRFES Website (https://pasoroblesdailynews.com/)
Community Newsletters	No	CERT
Mailings	Yes	Weed Abatement Program
Community Events	Yes	Safety Fest, CA Great Shakeout Earthquake Awareness Event, Wildfire Preparedness, Fire Department Open House, National Night Out, Hometown Heroes, Dia de Los Muertos, AARBF Burn Relay,
Other	Yes	Presentations, City-wide digital signage
Organizations that represent or work with underserved or vulnerable communities		
American Red Cross	Yes	Post-Disaster Assistance, "Sound the Alarm"
Salvation Army	No	
Veterans Groups	Yes	Senior Safety
Environmental/Conservation Groups	No	



CAPABILITY TYPE	YES/NO	NOTES
Homeowner/Neighborhood Associations	Yes	Quail Run, Traditions
Chamber of Commerce	Yes	
Community Organizations (Lions, Kiwanis, etc.)	Yes	Rotary
Others	Yes	SLO County Fire Safe Council, LISTOS, Promotores Collaborative of San Luis Obispo County, CERT, Disaster Preparedness Action Committee (DPAC)

E.4.5 National Flood Insurance Program (NFIP)

The City of Paso Robles participates in the National Flood Insurance Program (NFIP). This participation allows residents and property owners within the City to purchase federally backed flood insurance. The City collaborates with FEMA and San Luis Obispo County on flood risk mitigation efforts, including updates to flood maps that inform insurance requirements and building standards. In Paso Robles, the floodplain manager is designated by the municipal code to oversee floodplain management activities. This role is assigned to the City Engineer.

Following flood or other damage events, the City enforces substantial improvement/substantial damage provisions by evaluating damaged properties to determine if they meet thresholds requiring them to comply with updated floodplain management standards. If substantial damage is determined, properties must undergo upgrades to meet current floodplain standards before they can be repaired or rebuilt. This process helps to reduce future risk by ensuring that post-event repairs and reconstructions contribute to long-term flood resilience. The city does not participate in the NFIP's Community Rating System (CRS).

E.4.6 Other Mitigation Efforts

Other mitigation efforts the City has conducted include:

- Riverbed Hazardous Fuels Reduction Program
- Weed Abatement Program
- Fuel Breaks
- Un-reinforced Masonry Building Retrofit Ordinance (retrofits completed)

E.4.7 Opportunities for Enhancement

Based on the capabilities assessment, the City of Paso Robles has several existing mechanisms in place that already help to mitigate hazards. In addition to these existing capabilities, there are also opportunities for the City to expand or improve on these policies and programs to further protect the community. Future improvements may include providing training for staff members related to hazards or hazard mitigation grant funding in partnership with the County and Cal OES. Additional training opportunities will help to inform City staff members on how best to integrate hazard information and mitigation projects into their departments. Continuing to train City staff on mitigation and the hazards that pose a risk to the City of Paso Robles will lead to more informed staff members who can better communicate this information to the public.



E.5 Mitigation Strategy

E.5.1 Mitigation Goals and Objectives

The City of Paso Robles adopts those hazard mitigation goals and objectives developed by the County Planning Team and described in Section 7 of the Base Plan: Mitigation Strategy.

E.5.1.1 Continued Compliance with the National Flood Insurance Program

The City has been an NFIP participating community since 1981. In addition to the mitigation actions identified herein the City will continue to comply with the NFIP. This includes ongoing activities such as enforcing local floodplain development regulations, including issuing permits for appropriate development in Special Flood Hazard Areas and ensuring that this development is mitigated in accordance with the regulations. This will also include periodic reviews of the floodplain ordinance to ensure that it is clear and up to date and reflects new or revised flood hazard mapping.

E.5.2 Completed 2019 Mitigation Actions

During the 2025 planning process the City of Paso Robles Planning Team reviewed all the mitigation actions from the 2019 plan. During the 2025 planning process the Planning Team identified that of their twenty-one (21) mitigation actions from 2019, four (4) were completed, one (1) was deleted, five (5) were deferred; and sixteen (16) of the actions are ongoing.

**Table E-31 Paso Robles Completed and Deleted Mitigation Actions**

2019 ACTION ID	HAZARD(S) ADDRESSED	MITIGATION ACTION TITLE	LEAD AGENCY	ACTION STATUS NOTES
PR.3	Flood, Landslide, Wildfire	Establish a county evacuation and re-population plan. Make sure this plan works with other municipalities so that people are not receiving conflicting information about where to evacuate to. Benefit: Reduce death and injury; organized and systemic approach to evacuation of area with predesignated locations on where to go	Emergency Services Department	Completed. SLO County Plan approved 9/2024
PR.5	Drought	Develop a drought contingency plan to provide an effective and systematic means of assessing drought conditions, develop mitigation actions and programs to reduce risks in advance of drought, and develop response options that minimize hardships during drought.	Public Works Department	Completed. Adopted Water Storage Contingency Plan in 2021
PR.7	Adverse Weather: Extreme Heat	Initiate an extreme heat public awareness and educational campaign to discuss the dangers of extreme heat, steps each individual can personally take during periods of extreme heat and ways to reduce energy consumption during periods of extreme heat.	Emergency Services Department	Completed. Utilized as needed - Community Risk Reduction Division Created to Monitor this and other Public Safety needs
PR.11	Flood	Partner with propane companies and regulating agencies to secure tanks located in special flood hazard areas.	Emergency Services Department	Deleted. No propane tanks located in flood hazard areas - City utilizes natural gas
PR.20	Earthquake	Develop an inventory of public and community building that may be particularly vulnerable to earthquake damage, including pre-1940s homes and with cripple wall foundations	Information Technology (GIS)	Completed. All Pre-33 buildings retrofitted or demolished



E.5.3 Mitigation Actions

The planning team for the City of Paso Robles identified and prioritized the following mitigation actions based on the risk assessment. Background information and information on how each action will be implemented and administered, such as ideas for implementation, responsible office, potential funding, estimated cost, and timeline, are also included. Actions were prioritized using the process described in Section 7.2.1 of the Base Plan. Actions with an ¹⁸ are those that mitigate losses to future development.



Table E-32 City of Paso Robles Mitigation Action Plan

MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
PR.1	Drought, Flood, Landslide, Wildfire, Subsidence	Integrate the hazard analysis and mitigation strategy into the General Plan’s Safety Element.	CMO	Little to no cost. Staff Time/Dept. Budget	Low	1-2 yrs	Can leverage 2025 HMP update
PR.2	Flood, Landslide, Wildfire, Subsidence	Create a GIS-based pre-application review for new construction and major remodels in hazard areas, such high wildfire severity zones, moderate landslide susceptibility areas, and dam failure inundation zones.	Community Development Department/ Fire and Emergency Services	Less than \$10,000. FEMA HMA/Staff Time/Dept. Budget	Low	3-5 yrs.	Fire Hazard Severity Zone Local Responsibility Area map received 3/2025 and PR Muni Code ordinance amendment presented to City Council.
PR.3	Dam Incident	Develop a public outreach program that informs property owners located in the dam inundation areas about voluntary flood insurance.	Public Works Department	Little to no cost. Staff Time/Dept. Budget	Low	2-3 yrs.	Deferred
PR.4	Drought and Water Shortage	Develop measures to achieve a higher level of irrigation efficiency with respect to plant water requirements, through assistance programs to customers.	Utilities Department	Little to no cost. Staff Time/Dept. Budget	Low	2-3 yrs.	Recycled Water Connected from the Waste Water Treatment Plant to the East Side of the City under the Salinas River
PR.5	Flood	Acquire, relocate, elevate, and/or floodproof public works critical facilities that are located within the 100-year floodplain.	Public Works Department	\$500,000 to \$1,000,000. FEMA HMA	High	More than 5 yrs.	Deferred



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
PR.6	Flood	Reinforce roads from flooding through protection activities, including elevating the road and installing/widening culverts beneath the road or upgrading storm drains.	Public Works Department	\$500,000 to \$1,000,000. FEMA HMA	High	More than 5 yrs.	Paso Robles Storm Drain Master Plan approved 1/2025
PR.7	Flood	Develop a public outreach program that educates property owners about voluntary flood insurance (targeted at areas that historically flood, but are not acknowledged on FEMA flood insurance rate maps)	Public Works Department	Little to no cost. Staff Time/Dept. Budget	Low	2-3 yrs.	Deferred
PR.8	Flood	Increase participation in the NFIP by entering the Community Rating System program which through enhanced floodplain management activities would allow property owners to receive a discount on their flood insurance.	Public Works Department	Little to no cost. Staff Time/Dept. Budget	Low	1 yr.	Deferred
PR.9	Hazmat	Continue to monitor the manufacture, storage, and transport of hazardous materials by working with environmental health and public safety agencies to identify effective mitigation actions or requirements that will help reduce the risk of incidents, including the spread of released materials.	Fire and Emergency Services	Little to no cost. Staff Time/Dept. Budget	Low	Ongoing	On going monitoring with collaborative



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
PR.10	Landslide, Subsidence	Establish local zoning regulations that require the stabilization of landslide-prone areas and land subsidence hazard areas before new development can occur, through stability improvement measures such as the inclusion of interceptor drains, in-situ soil piles, drained earth buttresses, and subdrains.	Community Development Department	Little to no cost. Staff Time/Dept. Budget	Low	Ongoing	Ongoing basis
PR.11	Wildfire	Create a new vegetation management program that provides vegetation management services to elderly, disabled, or low-income property owners who lack the resources to remove flammable vegetation from around their homes.	Fire and Emergency Services	Less than \$10,000. FEMA HMA	High	3-5 yrs.	Chipping Program in Development Stage
PR.12	Wildfire	Implement a fuel modification program for new construction by requiring builders and developers to submit their plans, complete with proposed fuel modification zones, to the local fire department for review and approval prior to beginning construction.	Community Development Department/ Fire and Emergency Services	Less than \$10,000. FEMA HMA	High	2-3 yrs.	Awaiting 2025 CBC and CFC updates to determine new requirements.
PR.13	Wildfire	Ability to fast track cleanup efforts in the Salinas Riverbed with approvals through Fish and Wildlife, or other agencies involved in environmentally sensitive areas	Emergency Services Department	Less than \$10,000. General funds; FEMA HMA	High	1 yr.	Contracts with State Water Board in Place & Annual Vegetation Management and Fire Breaks Maintained within the Salinas Riverbed
PR.14	Earthquake	Implement Digital “Collector” App for damage inspection program (DINS)	Information Technology (GIS)	Already Purchased. General Fund	Medium	2 Years	In BETA testing period



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
PR.15	Earthquake	Implement Applied Technology Council Placards and Evaluation Forms	Community Development Department	Little to No Cost. General Fund	Low	2 Years	Deferred
PR.16	Adverse Weather: Thunderstorm/ Heavy Rain/Hail/Lighting/Dense Fog/Freeze/High Wind/Extreme Heat	Through newsletters, advertisements, speaking engagements and other public contacts, educate the general public and key stakeholders on the issues, responsibilities, and current efforts and successes in the area of hazard mitigation and disaster preparedness related to adverse weather.	Community Development Department/ Fire and Emergency Services	Little to no cost. General Fund	Medium	Annual	All Emergency-Based Press Releases translated into Spanish as of 1/2025



E.6 Implementation and Maintenance

Moving forward, the City will use the mitigation action table in the previous section to track progress on implementation of each project. Implementation of the plan overall is discussed in Section 7 of the main plan.

E.6.1 Incorporation into Existing Planning Mechanisms

The information contained within this plan, including results from the Vulnerability Assessment, and the Mitigation Strategy will be used by the City to help inform updates and the development of local plans, programs and policies. The Engineering Division may utilize the hazard information when implementing the City's Community Investment Program and the Planning and Building Divisions may utilize the hazard information when reviewing a site plan or other type of development applications. The City will also incorporate this LHMP into the Safety Element of their General Plan, as recommended by Assembly Bill (AB) 2140.

As noted in Section 8 Plan Implementation, the HMPC representatives from Paso Robles will report on efforts to integrate the hazard mitigation plan into local plans, programs and policies and will report on these efforts at the annual HMPC plan review meeting.

E.6.2 Monitoring, Evaluation and Updating the Plan

The City will follow the procedures to monitor, review, and update this plan in accordance with San Luis Obispo County as outlined in Section 8 of the Base Plan. The City will continue to involve the public in mitigation, as described in Section 8.3 of the Base Plan. The Fire Chief will be responsible for representing the City in the County HMPC, and for coordination with city staff and departments during plan updates. The City realizes it is important to review the plan regularly and update it every five years in accordance with the Disaster Mitigation Act Requirements as well as other State of California requirements.



Annex F City of Pismo Beach

F.1 Community Profile

F.1.1 Mitigation Planning History and 2025 Process

This annex was updated in 2025 to build upon the previous version created for the 2019 San Luis Obispo Hazard Mitigation Plan update. This 2025 annex update also builds upon previous versions of the Local Hazard Mitigation Plan for the City of Pismo Beach, including one completed adopted by the City Council on July 15, 2014 and approved by FEMA in June 2015. The updated 2019 version was successfully incorporated into the general plan as well as the City's Local Coastal Plan, and the 2025 update is also planned for inclusion. A review of jurisdictional priorities found no significant changes in priorities since the last update.

The City's Local Planning Team (LPT) held responsibility for implementation, maintenance and updating the plan. Table F-1 summarizes the City's LPT for the plan revision process, and Table F-2 summarizes various stakeholder groups, neighboring communities, and local agencies which supported or coordinated on this HMP update.

Table F-1 Pismo Beach Hazard Mitigation Local Planning Team

DEPARTMENT	TITLE
Community Development – Building	Building Official
Community Development – Planning	Director of Community Development
Fire Department	CAL FIRE Battalion Chief
Police Department	Police Commander
Public Works – Engineering	City Engineer
Public Works – Facilities	Facilities Manager
Public Works – Utilities	Utilities Manager
Public Works	Director of Public Works
City Manager	Assistant City Manager

Table F-2 Pismo Beach Stakeholder Groups, Neighboring Communities, and Local Agencies

STAKEHOLDER CATEGORY	ORGANIZATION
Agencies involved in hazard mitigation activities:	CAL FIRE
Agencies that have the authority to regulate development:	CAL FIRE
Neighboring Communities:	Arroyo Grande
	Grover Beach
	San Luis Obispo County
Representatives of business academia, and other private orgs:	Allan Hancock College
	Cuesta College
	California Polytechnic State University, San Luis Obispo
	Pismo Beach Chamber of Commerce
	Rotary Club of Pismo Beach
	Shell Beach Improvement Group (SBIG)



STAKEHOLDER CATEGORY	ORGANIZATION
Representatives supporting underserved communities:	5Cities Homeless Coalition
	People's Self-Help Housing
	Housing Authority of San Luis Obispo (HASLO)

More details on the planning process and how the jurisdictions, service districts, and stakeholders participated can be found in Chapter 3 of the Base Plan, as well as how the public was involved during the 2025 update.

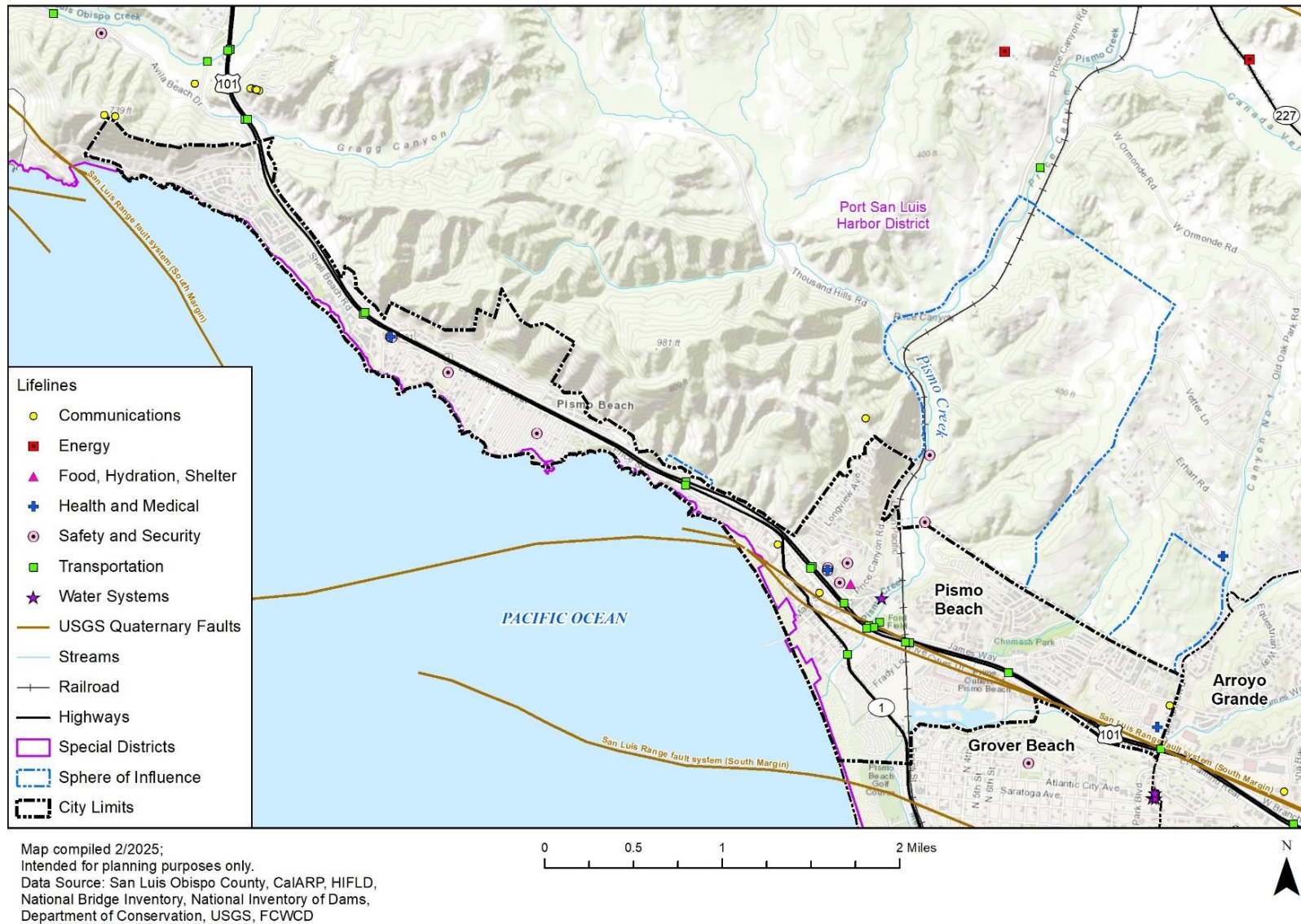
F.1.2 Geography and Climate

The City of Pismo Beach is a coastal community located in the south county area of the San Luis Obispo. U.S. Highway 101 traverses the City limits along the Pacific Ocean. The City of Pismo Beach, encompassing 3.6 miles, is one of the communities in the area known as the Five Cities. The Cities of Grover Beach and Arroyo Grande border Pismo Beach on the south, and the unincorporated community of Avila Beach borders Pismo Beach to the North. The City of Pismo Beach has varying topography with elevations ranging from 0 feet above mean sea level (msl) to 600 feet msl, as can be seen from the community's sandy beaches and sand dune to cliffs and bluffs ranging from 10 to 100 feet in height. Figure F-3Figure F-1 displays a map of the City of Pismo Beach planning area.

According to the Western Regional Climate Center, Pismo Beach has an average high temperature (June) of 70°F and low temperature of 42°F (January). The jurisdiction receives 17.14 inches of rain annual. While the average temperature is relatively temperate, summer and winter months bring unique weather patterns to the region.



Figure F-1 The City of Pismo Beach Basemap and Infrastructure





F.1.3 History

The City of Pismo Beach consists of 3.6 square miles of the original 13.8 square miles of Rancho Pismo. The historic Pismo Beach was founded in 1840 by Jose Ortega and was purchased by John Price in the mid-1850s. Price hired a surveyor to plan and plat a town which would be known as “El Pismo”. The town consisted of a wharf, warehouse, school districts, post office, and beach hotel, and quickly establishing itself as a tourist destination. The original town site of El Pismo continues to be the downtown area of the City. The community changed the its name from “El Pismo” to “Pismo Beach” in 1923. Tourism continued to be a draw to Pismo Beach as the community-built tourist attractions such as the pier at Pismo Beach, which continues to be an attraction to this day. In 1926 the community attempted to incorporate but was unsuccessful until 1939. The following year, in 1940 with fears of increased taxes under the newly incorporated City, the Community voted to disincorporate the City. The City was again incorporated on April 25, 1946. Shell Beach was annexed into the City of Pismo Beach in 1964 followed by the annexation of Sunset Palisades in 1970.

F.1.4 Economy

The City of Pismo Beach has a robust economy that’s been built around education, healthcare, and retail industries. The 5-year estimates (2018-2023) from the U.S. Census Bureau’s American Community Survey show the majority of those employed work in Management, Business, Science, and Arts Occupations (53.5%) as shown in Table F-3. As for industries, the educational services and health care and social assistance industry has the most employees (27.2%), followed by retail trade (12.6%) and professional, scientific and management (11%);. Refer to Table F-4 for a complete breakdown of the labor force by industry, based on the estimate from the 2018-2023 five-year American Community Survey.

Tourism also plays a significant role in the local economy of Pismo Beach. Many of the historic, cultural and natural resources noted above help to attract visitors to the City. According to the City’s Housing Element (2007), the Pismo Beach’s primary industries relate to service industry such as lodging, food service, and retail. With tourism being the greatest economic asset, if a disaster event was to occur within or near the City of Pismo Beach there is also a risk of the public’s perception of safety after the event that could impact the number of tourists or visitors to the City in the years following the event.

**Table F-3 City of Pismo Beach Employment by Occupation**

OCCUPATION	# EMPLOYED	% EMPLOYED
Sales and Office Occupations	851	22.3%
Management, Business, Science, and Arts Occupations	2,037	53.5%
Service Occupations	360	9.4%
Production, Transportation, and Material Moving Occupations	367	9.6%
Natural Resources, Construction, and Maintenance Occupations	207	5.4%

Source: U.S. Census Bureau American Community Survey 2018-2023 5-Year Estimates, www.census.gov/**Table F-4 City of Pismo Beach Employment by Industry, 2023**

INDUSTRY	# EMPLOYED	%
Agriculture, forestry, fishing and hunting, and mining	211	5.5%
Construction	122	3.2%
Manufacturing	155	4.1%
Wholesale trade	25	.7%
Retail trade	483	12.6%
Transportation and warehousing, and utilities	325	8.5%
Information	49	1.3%
Finance and insurance, and real estate and rental and leasing	310	8.1%
Professional, scientific, and management, and administrative and waste management services	421	11%
Educational services, health care and social assistance	1,039	27.2%
Arts, entertainment, recreation, and accommodation and food services	313	8.2%
Other services, except public administration	110	2.9%
Public Adm	259	6.8%

Source: U.S. Census Bureau American Community Survey 2018-2023 5-Year Estimates, www.census.gov/

F.1.5 Population

The U.S. Census Bureau estimated the City's 2023 population as 8,024, down from 8,116 in 2018. Table F-5 shows an overview of key social and demographic characteristics of the City taken from the U.S. Census Bureau's American Community Survey.

Table F-5 City of Pismo Beach's Demographic and Social Characteristics, 2018-2023

CITY OF PISMO BEACH	2018	2023	% CHANGE
Population	8,116	8,024	-1.1%
Median Age	55	55.5	+.9%
Total Housing Units	5,806	6,060	+4.4%
Housing Occupancy Rate	68%	73%	-4.7%
% of Housing Units with no Vehicles Available	4.7%	2.6%	+7.35%
Median Home Value	\$464,000	\$691,900	+49.1%
Unemployment	3.6%	2.2%	+38.9%
Mean Travel Time to Work (minutes)	23	18.8	-18.2%
Median Household Income	\$88,003	\$112,913	+28.3%



CITY OF PISMO BEACH	2018	2023	% CHANGE
Per Capita Income	\$74,035	\$60,148	-18.8%
% of Individuals Below Poverty Level	5.8%	8.1%	+39.7%
# of Households	4,245	4,112	-3.1%
Average Household Size	1.95	1.91	-2.1%
% of Population Over 25 with High School Diploma	95.9%	97.6%	+1.8%
% of Population Over 25 with Bachelor's Degree or Higher	37.3%	47.7%	+27.9%
% with Disability	11.3%	13.2%	+16.8%
% Speak a language other than English	8.3%	9.9%	+19.3%

Source: U.S. Census Bureau American Community Survey 2018-2023 5-Year Estimates, www.census.gov/

F.1.6 Development Trends

According to the LPT, the City of Pismo Beach is fairly built out. The City experiences infill development activities as they relate to residential, commercial and industrial properties. The number of ADU's are increasing to provide opportunities for housing options. Because the general footprint of all new development projects are either within previously established areas or neighborhoods or are contained within the footprints of existing development, in general there are no new hazardous areas that present additional concerns/issues.

New hotels near the City Pier have been developed, which the LPT has concerns will expose an increased number of visitors to hazards such as tsunamis. Most of the City is within the Coastal Zone, although recently development has extended into the foothills beyond the Coastal Zone. Development within the City falls under two zoning codes: the 1983 zoning codes applies to the Coastal Zone, while the 1998 zoning code applies to properties outside the Coastal Zone.

F.2 Hazard Identification and Summary

The Pismo Beach Planning Team identified the hazards that affect the City and summarized their frequency of occurrence, spatial extent, potential magnitude, and significance specific to Pismo Beach (see Table F-6). There are no hazards that are unique to the City. The overall hazard significance takes into account the geographic area, probability and magnitude as a way to identify priority hazards for mitigation purposes. This is discussed further in the Vulnerability Assessment section below.

**Table F-6 City of Pismo Beach – Hazard Summaries**

HAZARD	GEOGRAPHIC AREA	PROBABILITY OF FUTURE OCCURRENCE	MAGNITUDE/ SEVERITY (EXTENT)	OVERALL SIGNIFICANCE
Adverse Weather: Thunderstorm/ Heavy Rain/ Lightning/ Dense Fog/ Freeze	Significant	Likely	Negligible	Low
Adverse Weather: High Wind and Tornado	Significant	Likely	Limited	Low
Adverse Weather: Extreme Heat	Significant	Likely	Limited	Low
Dam Incidents	Limited	Occasional	Critical	Medium
Drought and Water Shortage	Extensive	Likely	Negligible	Medium
Flood	Significant	Likely	Limited	Medium
Earthquake	Extensive	Occasional	Limited	Medium
Landslide	Significant	Likely	Limited	Medium
Coastal Storm/ Coastal Erosion/ Sea Level Rise	Limited	Likely	Limited	Medium
Tsunami	Significant	Occasional	Critical	Medium
Wildfire	Significant	Occasional	Critical	Medium
Human Caused: Hazardous Materials	Limited	Likely	Limited	Medium
Geographic Area Limited: Less than 10% of planning area Significant: 10-50% of planning area Extensive: 50-100% of planning area Probability of Future Occurrences Highly Likely: Near 100% chance of occurrence in next year or happens every year. Likely: Between 10 and 100% chance of occurrence in next year or has a recurrence interval of 10 years or less. Occasional: Between 1 and 10% chance of occurrence in the next year or has a recurrence interval of 11 to 100 years. Unlikely: Less than 1% chance of occurrence in next 100 years or has a recurrence interval of greater than every 100 years.		Magnitude/Severity (Extent) Catastrophic—More than 50 percent of property severely damaged; shutdown of facilities for more than 30 days; and/or multiple deaths Critical—25-50 percent of property severely damaged; shutdown of facilities for at least two weeks; and/or injuries and/or illnesses result in permanent disability Limited—10-25 percent of property severely damaged; shutdown of facilities for more than a week; and/or injuries/illnesses treatable do not result in permanent disability Negligible—Less than 10 percent of property severely damaged, shutdown of facilities and services for less than 24 hours; and/or injuries/illnesses treatable with first aid Significance Low: minimal potential impact Medium: moderate potential impact High: widespread potential impact		



F.3 Vulnerability Assessment

The intent of this section is to assess Pismo Beach’s vulnerability separate from that of the planning area as a whole, which has already been assessed in Section 5 of the Base Plan. This vulnerability assessment analyzes the population, property, and other assets at risk to hazards ranked of medium or high significance, or that may vary from other parts of the planning area.

The key information to support the HIRA for this Annex was collected through a Data Collection Guide, which was distributed to each participating municipality, community services district, or special district to complete during the planning process. Information collected was analyzed and summarized in order to identify and rank all the hazards that could impact anywhere within the County, as well as to rank the hazards and identify the related vulnerabilities unique to each jurisdiction/district. In addition, the Pismo Beach LPT was asked to share information on past hazard events that have affected the district.

Each participating jurisdiction was in support of the main hazard summary identified in the Base Plan (See Table 5.2). However, the hazard summary rankings for each jurisdictional annex may vary slightly due to specific hazard risk and vulnerabilities unique to that jurisdiction (See Table F-6). Identifying these differences helps the reader to differentiate the jurisdiction’s risk and vulnerabilities from that of the overall County.

Note: The hazard “Significance” reflects overall ranking for each hazard, and is based on the City of Pismo Beach’s LPT member input from the Data Collection Guide and the risk assessment developed during the planning process (see Section 5 of the Base Plan), which included a more detailed qualitative analysis with best available data.

F.3.1 Other Hazards

The following hazards identified in the base plan HIRA are not identified within this jurisdictional annex due to low or no risk or insignificant anticipated impacts and are not further for vulnerability analysis or mitigation actions:

- Agricultural Pest Infestation and Plant Disease/ Marine Invasive Species
- Biological Agents
- Subsidence

F.3.2 Assets at Risk

This section considers Pismo Beach’s assets at risk, including an inventory of improved properties and critical facilities and Community Lifelines, and historic, economic, cultural, and environmental assets. Please refer to Section 5.2.2 of the base plan for a detailed description of the methodology used.

F.3.2.1 Property Inventory

Table F-7 shows the total exposure of improved properties, broken down by parcel type, for the City of Pismo Beach.

Table F-7 Pismo Beach Total Exposure by Property Type

PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE
Commercial	205	\$355,940,626	\$355,940,626	\$711,881,252
Exempt	15	\$7,762,880	\$7,762,880	\$15,525,760
Industrial	1	\$9,020,268	\$13,530,402	\$22,550,670
Mixed Use	244	\$87,866,610	\$87,866,610	\$175,733,220



PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE
Mobile/Manufactured Homes	5	\$27,958,196	\$13,979,098	\$41,937,294
Multi-Family Residential	182	\$78,122,068	\$39,061,034	\$117,183,102
Residential	4,069	\$1,386,479,211	\$693,239,606	\$2,079,718,817
Vacant Improved	36	\$27,931,810	-	\$27,931,810
Total	4,757	\$1,981,081,669	\$1,211,380,256	\$3,192,461,925

Source: San Luis Obispo County Assessor Data November 15, 2024, WSP GIS Analysis

F.3.2.2 Critical Facilities and Infrastructure

A critical facility is defined as one that is essential in providing utility or direction either during the response to an emergency or during the recovery operation.

An inventory of critical facilities in the city is provided in Table F-8 as well as illustrated in Figure F-1 above (note: the Water Systems shown on the map is the Wastewater Treatment Plant). Refer to Section 5.2 of the Base Plan for more information on the Assets used throughout this annex, including the definitions and categories of critical facilities, and the County-wide analyses, and Appendix E for details on names, addresses, and specific hazard vulnerabilities (where applicable). The City also noted additional infrastructure including under the purview of public works/utilities including wells, pressure booster stations, reservoirs, and lift stations.

Table F-8 City of Pismo Beach's Critical Facility Assets Summary by FEMA Lifeline

FEMA LIFELINE CATEGORY	COUNTS
Communications	3
Energy	-
Food, Hydration, Shelter	1
Hazardous Material	-
Health and Medical	3
Safety and Security	8
Transportation	15
Water Systems (Wastewater Treatment Plant)	1
Total	31

Source: San Luis Obispo County, CalARP, HIFLD, National Bridge Inventory, National Inventory of Dams, FCWCD, WSP Analysis



F.3.2.3 Transportation and Lifeline Facilities

The City of Pismo Beach is a “highway-oriented” community, with U.S. Highway 101 traversing through the center of the City along its entire length. There are several bridges within the City limits that cross Highway 101, and which the LPT noted as being vulnerable to an earthquake event; in some cases, the bridges are also at risk of other hazards such as tsunami inundation or inundation from the Lopez Dam. In addition to Highway 101 there are two regionally significant roads that cross the City of Pismo Beach: Price Canyon Road and State Road 1. The LPT notes the limited transportation route options as a concern if evacuation was required.

Other transportation facilities within or near the City of Pismo Beach include, Oceano County Airport and the San Luis Obispo County Regional Airport. Both airports are outside the City limits of Pismo Beach but could impact the City of Pismo Beach if these facilities were impacted by a disaster.

F.3.2.4 Emergency Services

The city contains 12 Emergency Services facilities aimed at providing for the health, welfare, and safety of the entire community. These include emergency medical service stations, fire stations, local law enforcement stations, nursing homes, emergency shelters, and schools. . A majority of these emergency services facilities are located near Highway 101. According to the LPT, Fire Stations 63 and 64 as well as the Police Annex, and Police Department/EOC are vulnerable to an earthquake event. The two public schools in the City of Pismo Beach, Judkins Middle School, and Shell Beach Elementary as well as the Happy Time Cooperative Preschool are all considered by the Planning Team to be vulnerable to earthquake hazards.

The LPT also notes that the five lifeguard towers in Pismo Beach are an important asset for the recreation and safety of the city. Each tower is valued at around \$70,000 each and is operated and managed by Cal Fire and the Pismo Beach Fire Department. This asset is considered to be vulnerable to tsunamis.

F.3.2.5 Historic and Cultural Resources

The National Register of Historic Places lists one historic site in the City of Pismo Beach: the John Price House, Also known as the Price Anniversary House, which is the oldest building in Pismo Beach. The Lead Planning Team lists the following resources as community assets for Pismo Beach.

- Pismo Beach Pier
- Pismo Veterans’ Hall
- Price Anniversary House
- Meherin House
- Price Adobe
- Shell Beach Veterans’ Hall

F.3.2.6 Natural Resources

Natural resources are important to include in benefit-cost analyses for future projects and may be used to leverage additional funding for projects that also contribute to community goals for protecting sensitive natural resources. Awareness of natural assets can lead to opportunities for meeting multiple objectives. For instance, protecting the dunes and bluffs along the coast of Pismo Beach is important both for continuing to attract tourists but also as a form of natural protection against coastal storms for the entire community of Pismo Beach. The City of Pismo Beach is home to several parks and natural areas, including the Monarch Butterfly Grove and the Dinosaur Cave Park, which encompasses 11-acres of ocean-front, bluff-top park. Adjacent to the City, The over 900-acre Pismo Preserve is another natural attraction near the City with over



10 miles of existing ranch roads and trails that meander through the Preserve. It is constructed and operated by the Land Conservancy of San Luis Obispo.

F.3.3 Estimating Potential Losses

Note: This section details vulnerability to specific hazards of high or medium significance, where quantifiable, and/or where (according to HMPC member input) it differs from that of the overall County.

Table F-7 above shows Pismo Beach's exposure to hazards in terms of number and value of structures. San Luis Obispo County's parcel and assessor data was used to calculate the improved value of parcels. Impacts of past events and vulnerability to specific hazards are further discussed below (see Section 5 for more detailed information about these hazards and their impacts on San Luis Obispo County as a whole).

F.3.3.1 Adverse Weather: Thunderstorm/ Heavy Rain/ Lightning/ Dense Fog/ Freeze

Pismo Beach generally experiences mild climate but it is occasionally impacted from adverse weather. Thunderstorms and periods of heavy rain typically occur in winter months and lightning is rare. Dense fog is typically a common occurrence, particularly in early mornings and can significantly reduce visibility. Overall, the risk from adverse weather in Pismo Beach is considered low. The tables below show key climate variables such as extreme temperatures, precipitation totals, and frequency of specific weather events.

Table F-9 Pismo Beach Climate Summary Table – Weather (Period of Record: 07/01/1949 - 08/30/2017)

SUMMARY PERIOD	MONTHLY MEAN MAXIMUM TEMP.	MONTHLY MEAN MINIMUM TEMP.	DAILY EXTREME HIGH TEMP	DAILY EXTREME HIGH DATE	DAILY EXTREME LOW TEMP	DAILY EXTREME LOW DATE	MAXIMUM TEMP. $\geq 90^{\circ}\text{F}$ MEAN # DAYS	MINIMUM TEMP. $\leq 32^{\circ}\text{F}$ MEAN # DAYS
Winter	63.9 °F	43.5 °F	92 °F	12/2/1958	21 °F	12/3/1986	0	2.9
Spring	66.9 °F	46.3 °F	101 °F	4/7/1989	23 °F	3/23/1963	0.6	0.4
Summer	69.5 °F	52.4 °F	102 °F	8/22/1972	37 °F	6/29/1987	1.1	0
Fall	70.3 °F	50.1 °F	103 °F	9/3/1982	27 °F	10/27/1986	1.4	0.1
Annual	67.5 °F	47.8 °F	103 °F	9/3/1982	21 °F	12/3/1986	3.4	4.3

Source: Western Regional Climate Center (WRCC) <https://wrcc.dri.edu/>

* Winter is defined as December, January, and February

** Summer is defined as June, July, and August

Table F-10 Pismo Beach Climate Summary Table – Precipitation (Period of Record: 07/01/1949 - 08/30/2017)

SUMMARY PERIOD	PRECIP. MEAN	PRECIP. HIGH	PRECIP. HIGH YEAR	PRECIP. LOW	PRECIP. LOW YEAR	PRECIP. 1 DAY MAXIMUM	PRECIP. 1 DAY MAXIMUM DATE	PRECIP. ≥ 1.00 IN. MEAN # DAYS
Winter	9.34 in.	26.85 in.	1969	2.03 in.	1964	5.16 in.	1/19/1969	2.4
Spring	4.1 in.	17.23 in.	1991	0.03 in.	1997	2.62 in.	3/20/2011	1
Summer	0.15 in.	1.5 in.	2015	0 in.	1953	1.15 in.	7/19/2015	0
Fall	2.76 in.	8.19 in.	1972	0.09 in.	2014	2.25 in.	11/14/1953	0.6
Annual	15.92 in.	33.58 in.	1983	3.23 in.	2013	5.16 in.	1/19/1969	4.3

Source: Western Regional Climate Center (WRCC) <https://wrcc.dri.edu/>

* Winter is defined as December, January, and February



** Summer is defined as June, July, and August

F.3.3.2 Adverse Weather: High Wind and Tornado

Pismo Beach's risk and vulnerability to this hazard does not differ significantly from that of the County overall significance of **low**. While these hazards are not not common in the region they can occasionally occur during strong storm systems, particularly in the winter months. Pismo Beach may experience gusty winds capable of causing minor damage; tornado activity is rare across but an EF-1 landed in nearby Grover Beach in February 2024. As such, while the potential for high wind events exists, the likelihood of significant damage or disruption remains low.

F.3.3.3 Adverse Weather: Extreme Heat

Extreme heat is a **low** significance hazard for Pismo Beach. The monthly mean maximum temperature for Pismo Beach is 69.5 °F; however, temperatures up to 103°F have been recorded (see Table F-9). Additionally, rising temperatures and more frequent heat waves are increasing the likelihood of more extreme heat events in the future. Projections by the Scripps Institute suggest that the Central Coast region could see as many as five times as many days of extreme heat by the end of the century (Thorton 2024).

The public health effects of extreme heat is a concern for the city, particularly for sensitive populations such as older adults, children, individuals with chronic illnesses, and outdoor workers. Local infrastructure may also be strained, as extreme heat can damage roads, power systems, and public transit, potentially disrupting essential services. Additionally, the City's tourism-dependent economy could be negatively impacted if heatwaves deter visitors. Surrounding agricultural areas may also experience reduced productivity due to heat stress, potentially affecting local food supply and employment.

F.3.3.4 Dam Incidents

The City of Pismo Beach is at risk of a dam failure incident. The Lopez Dam, a high hazard earthen dam holding 55,000 acre feet of water, is located on Arroyo Grande Creek northeast of the city. If this dam were to fail catastrophically, water would rush down Arroyo Grande Creek. The potentially enormous volume of water would become restricted as it approaches the ocean and some flow would be forced to the north, up Meadow Creek along Highway 1 and eventually inundate southern parts of Pismo Beach (Figure F-2).

A total of 20 persons and 15 structures within the City of Pismo Beach exist in the modeled inundation area (Table F-11). Two critical facilities, bridges on Villa Creek and Pismo Creek, exist within the potential inundation zone. See Appendix E for details of these facilities. The LPT noted that utilities assets could also be impacted. Refer to Section 5.3.8 *Dam Incidents* of the Base Plan for additional discussion on the potential impacts of dam incidents in the County.

Table F-11 Lopez Dam Inundation Estimate Losses by Property Type

PROPERTY TYPE	STRUCTURE COUNT	POPULATION
Commercial	5	-
Mobile/Manufactured Homes	3	6
Multi-Family Residential	1	2
Residential	6	12
Total	15	20

Source: San Luis Obispo Assessor Data 2024, Division of Safety of Dams, Department of Water Resources, WSP GIS Analysis



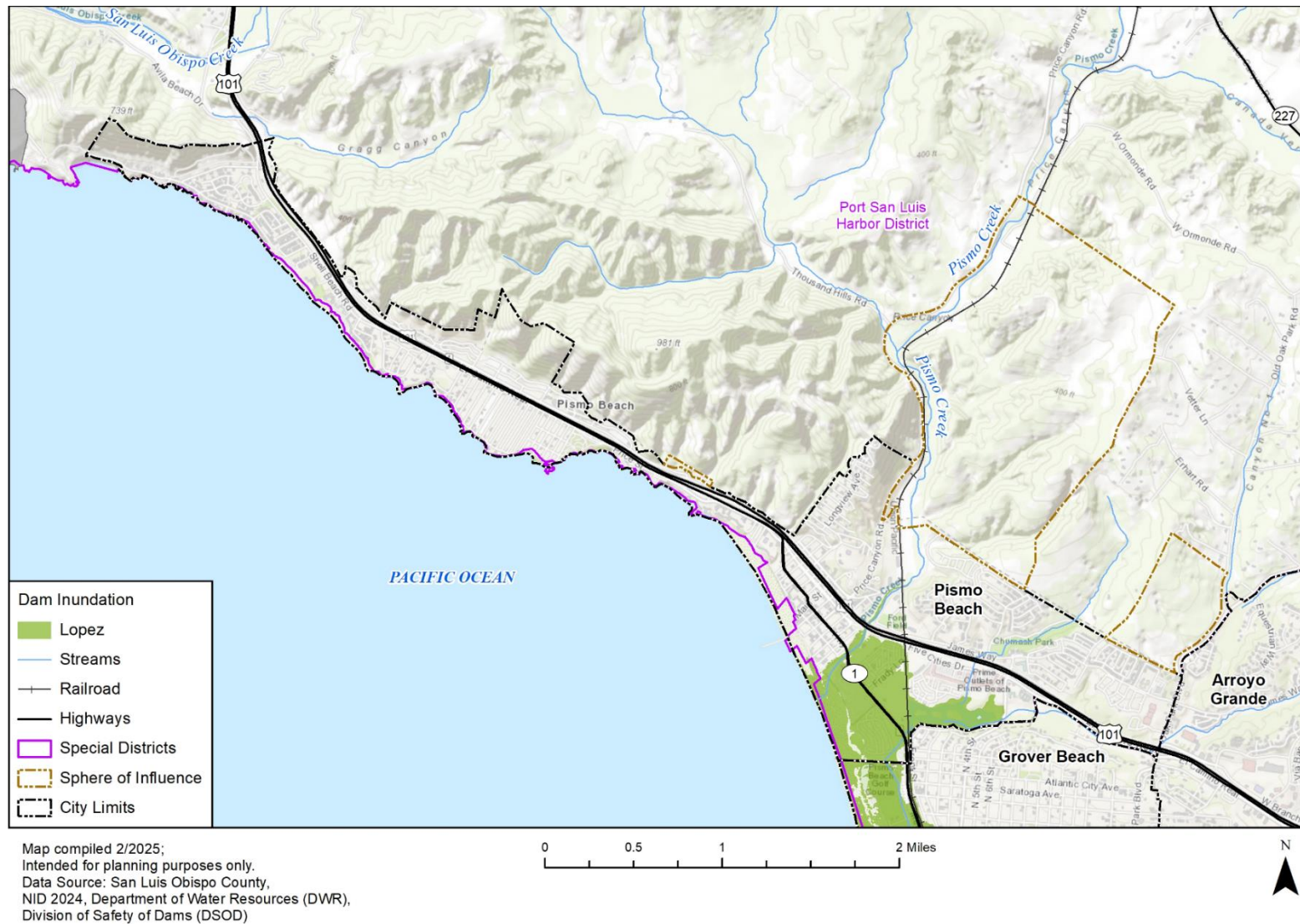
Table F-12 Critical Facility Assets Exposed to Dam Inundation by FEMA Lifeline

COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
-	-	-	-	-	-	2	-	2

Source: San Luis Obispo Assessor Data 2024, Division of Safety of Dams, Department of Water Resources, WSP GIS Analysis



Figure F-2 Dam Inundation Extents in the City of Pismo Beach





F.3.3.5 Drought and Water Shortage

The City of Pismo Beach has a variety of water sources that support the City's water supply, including Lopez Lake, the State Water Project, and groundwater resources. The City owns and operates two wells that pump from the Santa Maria Valley Groundwater Basin, and have a combined pumping capacity of 1,550 gallons per minute.

After multiple years of drought, the City has made efforts to reduce its reliance on existing groundwater supplies through alternative water opportunities. In 2015, the City announced plans for a water recycling project that will serve the South County area. The Central Coast Blue Project is a regional recycled water project that will treat water from the City's and the South San Luis Obispo County Sanitation District's wastewater treatment plant to produce purified water through a three-step filtration process that will be pumped to injection wells and injected into the Santa Maria Groundwater Basin. This will give an additional drinking water source and help prevent seawater intrusion into the groundwater basin.

The City is projecting to receive a consistent amount of water supply from wholesale suppliers (Lopez Reservoir and the State Water Project) and increase the City's water supply through the regional recycled water project. Currently, in the event of an emergency the City has emergency connections with the Cities of Arroyo Grande and Grover Beach as well as an opportunity to purchase more allocations from Lopez Lake through the County Flood and Water Conservation District.

The City reported non-revenue water losses (leaks, system inefficiencies) of 166 acre-feet per year (AFY) in 2020. While this is lower than previous years, there is room for further reduction through leak detection technologies, pipeline replacement programs, and enhances metering infrastructures. However, a five-year Drought Risk Assessment (DRA) indicates that even under extended drought conditions, the City can meet demand through stored water and conservation measures, with specific supply and demand totals shown in Table F-13 below.

Table F-13 Multiple Dry Year Supply and Demand Comparison

DROUGHT YEAR	SUPPLY/DEMAND	2025	2030	2035	2040	2045
First Year	Supply Totals	2,560	2,560	2,560	2,560	2,560
	Demand Totals	1,648	1,696	1,744	1,795	1,845
	Difference	912	864	816	765	715
Second Year	Supply Totals	2,288	2,288	2,288	2,288	2,306
	Demand Totals	1,648	1,696	1,744	1,795	1,845
	Difference	640	592	544	493	461
Third Year	Supply Totals	1,648	1,696	1,744	1,795	1,845
	Demand Totals	1,648	1,696	1,744	1,795	1,845
	Difference	0	0	0	0	0
Fourth Year	Supply Totals	1,827	1,827	1,827	1,827	1,845
	Demand Totals	1,648	1,696	1,744	1,795	1,845
	Difference	179	131	83	32	0
Fifth Year	Supply Totals	2,471	2,471	2,471	2,471	2,471
	Demand Totals	1,648	1,696	1,744	1,795	1,845
	Difference	823	775	727	676	626

Source: 2020 Pismo Beach Urban Water Management Plan

F.3.3.6 Earthquake and Liquefaction

There are no mapped active faults in the City of Pismo Beach planning area, although the area is exposed to seismic hazards from movement along several regional faults. Historically, the faults that have caused seismic activity in Pismo Beach have originated from movement along the southern segment of the San Andreas Fault, approximately 42 miles northeast of the City.



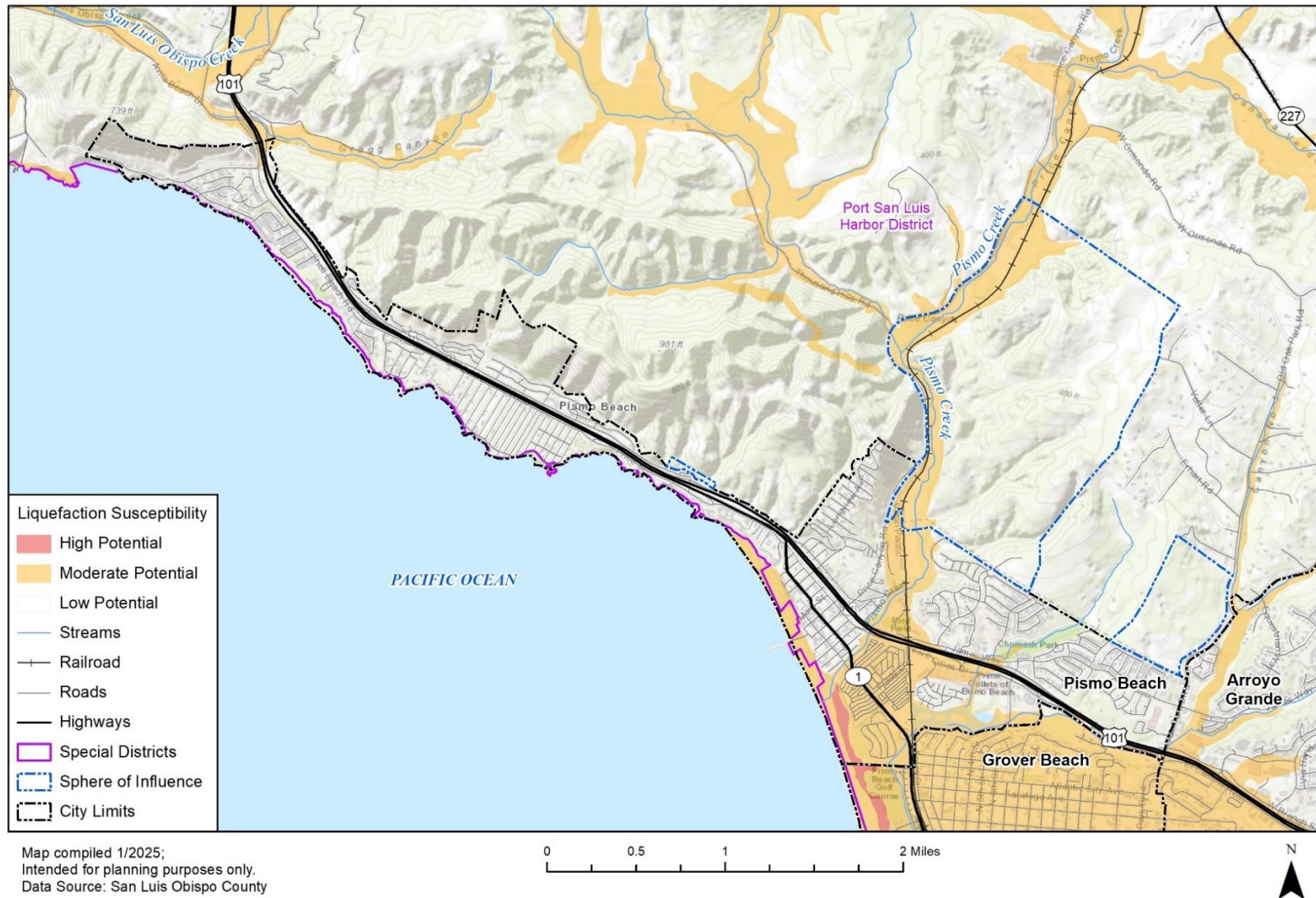
The Wilmar Avenue fault is the only fault that goes through the City of Pismo Beach and is exposed in a sea cliff near the City limits. The Wilmar Avenue Fault is considered potentially active but poses a moderate risk of fault rupture hazard to the Cities of Grover Beach and Arroyo Grande. The largest historical earthquake that impacted the City of Pismo Beach was the Bryson earthquake, a magnitude 6.2 event in November of 1952. The Bryson earthquake caused older, brick masonry buildings to be damaged in the City of Pismo Beach, but no deaths or injuries were reported.

As a coastal community liquefaction poses a much greater risk to the City of Pismo Beach. Figure F-3 below shows the areas of Pismo Beach vulnerable to liquefaction hazards, specifically areas along Pismo Creek and the city's Pacific Coastline. Site specific studies are needed to evaluate if a geologic unit actually contains potentially liquefiable materials, and if they require mitigation for development. Refer to Section 5 of the Base Plan for additional details on the City's risk to liquefaction.

Table F-14 shows the types and values of properties located in liquefaction. Based on the vulnerability analysis there are 57 parcels located in moderate susceptibility areas and none exposed to high susceptibility. There are also 31 critical facilities found in liquefaction susceptible areas. These details are summarized in Table F-14 and Table F-15 below.



Figure F-3 City of Pismo Beach Liquefaction Susceptibility



**Table F-14 City of Pismo Beach Improved Properties Exposed to Liquefaction Potential by Property Type**

PROPERTY TYPE	STRUCTURE COUNT HIGH	STRUCTURE COUNT MODERATE	STRUCTURE COUNT LOW	TOTAL STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Agricultural	-	-	-	0	\$0	\$0	\$0	-
Commercial	-	23	182	205	\$355,940,626	\$355,940,626	\$711,881,252	-
Exempt	-	1	14	15	\$7,762,880	\$7,762,880	\$15,525,760	-
Industrial	-	1	-	1	\$9,020,268	\$13,530,402	\$22,550,670	-
Mining	-	-	-	0	\$0	\$0	\$0	-
Mixed Use	-	-	244	244	\$87,866,610	\$87,866,610	\$175,733,220	-
Mobile/ Manufactured Homes	-	3	2	5	\$27,958,196	\$13,979,098	\$41,937,294	10
Multi-Family Residential	-	1	181	182	\$78,122,068	\$39,061,034	\$117,183,102	355
Residential	-	28	4,040	4,068	\$1,385,260,599	\$692,630,300	\$2,077,890,899	7,933
Vacant Improved	-	-	36	36	\$27,931,810	\$0	\$27,931,810	-
Total	0	57	4,699	4,756	\$1,979,863,057	\$1,210,770,950	\$3,190,634,007	8,297

Source: San Luis Obispo Assessor Data November 15, 2024, WSP GIS Analysis

**Table F-15 Critical Facility Assets Exposed to Liquefaction Susceptibility by FEMA Lifeline**

LIQUEFACTION SUSCEPTIBILITY CATEGORY	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
Moderate Liquefaction Susceptibility	-	-	-	-	-	-	6	-	6
Low Liquefaction Susceptibility	3	-	1	-	3	8	9	1	25

Source: San Luis Obispo County, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis

F.3.3.7 Flood

The City of Pismo Beach faces ongoing flood risks driven by coastal storms, high tides, heavy rainfall, and bluff erosion. The HMPC has ranked flooding as **Medium Significance** hazard for the City. In recent years, Pismo Beach has experienced significant storm-related impacts, including severe coastal flooding during the January 2023 storms that damaged infrastructure, eroded coastal bluffs, and closed key areas like the Pismo Beach Pier. High tides and flooding at the North Beach Campground, along with bluff failures along Ocean Boulevard, further highlighted the city's exposure to both immediate storm impacts and long-term coastal erosion. In December 2024, additional high surf events caused nearly \$55,000 in damages to coastal facilities. While the City enforces floodplain management regulations that meet National Flood Insurance Program (NFIP) standards, rising sea levels, storm surge, and high-intensity rain events continue to pose critical challenges. Pismo Beach remains committed to strengthening its flood resilience through updated land use planning, targeted infrastructure projects, and coordination with regional hazard mitigation partners.

Values at Risk

Following the methodology described in Section 5.3.8, a flood map for the City of Pismo Beach was created (see Figure F-4). Table F-16 and Table F-17 summarize the values at risk in the City's 1% annual chance (100-year) floodplain and 0.2% annual chance (500-year) floodplain, respectively. These tables also detail loss estimates for each flood. Note that the potential loss increases significantly with the 500-year or 0.2% annual chance flood.

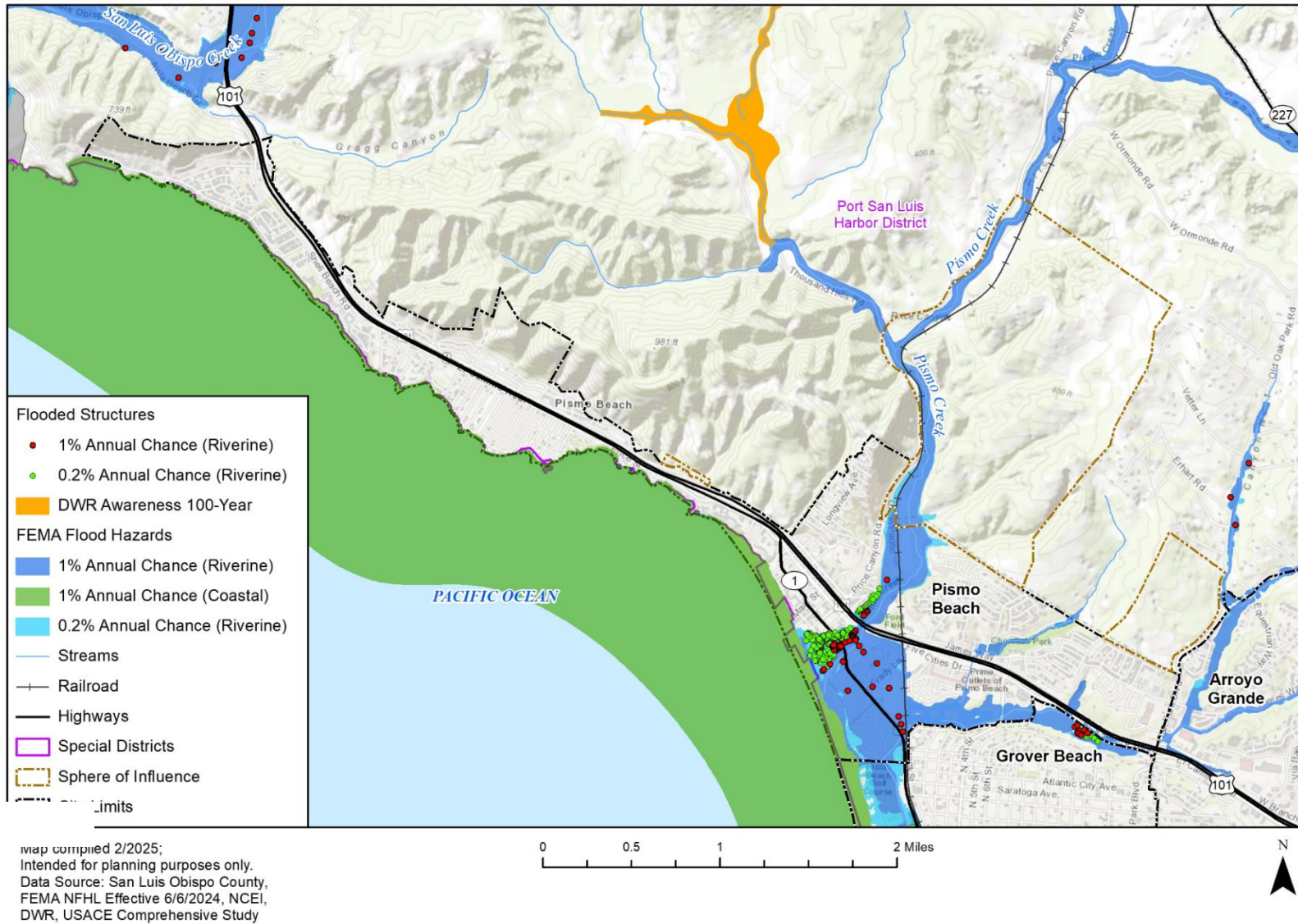
Within the FEMA 1% annual chance flood hazard area, 46 improved parcels in the City of are exposed, representing a combined structural and content value of approximately \$62.7 million. Estimated potential losses for these properties total around \$15.7 million. The largest exposure by value comes from three mobile and manufactured home parcels, representing over \$36 million in combined value. Residential parcels make up a smaller but still significant share, with 24 single-family residential parcels totaling approximately \$9.4 million, followed by 9 multi-family residential parcels valued at approximately \$4.5 million. Commercial properties account for 8 parcels with an estimated \$12 million in total value. One exempt parcel and one mixed-use parcel represent a minor share of the exposure.

Within the FEMA 0.2% annual chance flood hazard area, 169 improved parcels are exposed, representing a combined structural and content value of approximately \$204.3 million. Estimated losses total approximately \$51.1 million. Commercial properties represent the highest value at risk, accounting for over \$133 million in combined value. Residential properties make up the next largest category, with 117 residential parcels totaling approximately \$39.5



million, followed by 24 multi-family residential parcels valued at approximately \$22.2 million. Additional exposure includes 18 mixed-use parcels and one vacant improved parcel with limited value.

Figure F-4 DWR & FEMA Flood Hazards with Flooded Structures





Population at Risk

Population exposure within the FEMA 1% annual chance flood hazard area is estimated at 70 people. Residential parcels account for the majority of the exposed population, with 47 residents estimated on single-family residential parcels and 18 residents associated with multi-family residential parcels. An additional 6 residents are associated with the three mobile and manufactured home parcels at risk. Commercial, exempt, and mixed-use properties are not assigned population exposure.

Within the FEMA 0.2% annual chance flood hazard area, the estimated population exposure increases to approximately 275 people. Residential parcels represent the bulk of this exposure, with 228 residents associated with single-family residential parcels and 47 residents associated with multi-family residential parcels. Commercial and mixed-use parcels do not have associated population estimates for this analysis.

Table F-16 City of Pismo Beach Improved Properties Exposed to FEMA Riverine 1% Flood Hazard by Property Type

PROPERTY TYPE	PARCEL COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	LOSS ESTIMATE	POP.
Commercial	8	\$5,996,221	\$5,996,221	\$11,992,442	\$2,998,111	-
Exempt	1	\$326,141	\$326,141	\$652,282	\$163,071	-
Mixed Use	1	\$12,751	\$12,751	\$25,502	\$6,376	-
Mobile/Manufactured Homes	3	\$24,130,031	\$12,065,016	\$36,195,047	\$9,048,762	6
Multi-Family Residential	9	\$2,968,404	\$1,484,202	\$4,452,606	\$1,113,152	18
Residential	24	\$6,285,183	\$3,142,592	\$9,427,775	\$2,356,944	47
Total	46	\$39,718,731	\$23,026,922	\$62,745,653	\$15,686,413	70

Source: San Luis Obispo Assessor Data November 15, 2024, FEMA NFHL Effective Date 6/6/2024, WSP GIS Analysis

Table F-17 City of Pismo Beach Improved Properties Exposed to FEMA Riverine 0.2% Flood Hazard by Property Type

PROPERTY TYPE	PARCEL COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	LOSS ESTIMATE	POP.
Commercial	9	\$66,801,527	\$66,801,527	\$133,603,054	\$33,400,764	-
Mixed Use	18	\$4,497,126	\$4,497,126	\$8,994,252	\$2,248,563	-
Multi-Family Residential	24	\$14,802,270	\$7,401,135	\$22,203,405	\$5,550,851	47
Residential	117	\$26,318,465	\$13,159,233	\$39,477,698	\$9,869,424	228
Vacant Improved	1	\$13,928	\$0	\$13,928	\$3,482	-
Total	169	\$112,433,316	\$91,859,021	\$204,292,337	\$51,073,084	275

Source: San Luis Obispo Assessor Data November 15, 2024, FEMA NFHL Effective Date 6/6/2024, WSP GIS Analysis

Insurance Coverage, Claims Paid, and Repetitive Losses

The City joined the NFIP on August 1, 1984. The current effective map is dated June 6, 2024. As of May 12, 2025, NFIP records show 76 active flood insurance policies in the City, totaling \$26,872,000 in coverage. Of these, 26 policies are in A zones, and the rest are in B, C, or X zones.

Since joining the NFIP, the City has recorded 16 flood loss claims totaling \$85,644. According to the OpenFEMA dataset accessed in 2024, the City includes one Repetitive Loss (RL) property, and no properties that meet the criteria for Severe Repetitive Loss (SRL). The RL property is categorized as a residential non-condo building with 2, 3, or 4 units seeking insurance on all units.

Pismo Beach does not participate in the Community Rating System (CRS).



Critical Facilities at Risk

The City has five identified critical facilities located in the 1% Annual floodplain. None of the City's identified critical facilities are located in the 0.2% Annual (500-year) Floodplain. Table F-18 shows those critical facility assets by FEMA lifeline exposed to 1% annual chance flooding that includes the wastewater treatment plant; the LPT noted there may be additional utilities assets at risk that are not represented in the analysis.

Table F-18 City of Pismo Beach Critical Facility Assets Exposed to FEMA Riverine 1% Flood Hazards by Jurisdictions and FEMA Lifelines

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
Pismo Beach	-	-	-	-	-	-	4	1	5

Source: San Luis Obispo County, FEMA NFHL Effective Date 6/6/2024, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis

F.3.3.8 Landslides and Debris Flow

In the City of Pismo Beach, landslides and debris flow received a medium ranking. the potential for landslides is present on the hill sides to the north of highway 101 and along the Price Canyon corridor. The potential slope instability is greatest on the western facing slopes directly adjacent to the freeway and Price Canyon Road.

The City of Pismo Beach has had a history of landslide events. County geologists observed earthquake-induced landslides in the foothills after the San Simeon earthquake on December 22, 2003. Minor landsliding was reported along the coastal highway in May 2011 and April 2012. Recent landslide events occurred in 2017 near Spyglass Beach, and in 2018 near Silver Shoals Beach where a 30 by 40-foot section of cliff slid down. The Pismo Beach Public Works Department, in addition to CAL FIRE assisted in the response to both incidents. Winter storms caused many bluff failures along the coast. In February of 2023 a landslide along the northern coast of Pismo Beach closed access to a popular surf spot at Ebb Tide Park. The next month another storm caused a bluff failure at Memory Park. Later that spring in May a landslide caused a power pole to fall along Price Canyon Road leaving 52 houses in the area without power.

The City of Pismo Beach is among the communities in the County of San Luis Obispo that has the most properties in the Moderate and High landslide potential areas; these properties are located primarily near the hills north of the City (refer to Figure F-5 below). The city has 4,700 properties exposed to landslide potential with a total value of over \$3 billion as shown in Table F-19 Improved Properties Exposed to Landslide Potential in Pismo Beach. Areas around Highway 101, along the coast, as well as around Pismo Creek have a high potential for landslides. The city center has a moderate potential for landslide as shown in Figure F-5 below. The LPT noted that the map appears to overstate the actual risk. Pismo Beach has 31 critical facilities exposed to landslide potential, 23 with high potential, 2 with moderate, and 6 with low potential.

Table F-19 Improved Properties Exposed to Landslide Potential in Pismo Beach

PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Agricultural	0	\$0	\$0	\$0	-



PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Commercial	182	\$312,172,478	\$312,172,478	\$624,344,956	-
Exempt	14	\$7,436,739	\$7,436,739	\$14,873,478	-
Industrial	1	\$9,020,268	\$13,530,402	\$22,550,670	-
Mining	0	\$0	\$0	\$0	-
Mixed Use	244	\$87,866,610	\$87,866,610	\$175,733,220	-
Mobile/Manufactured Homes	2	\$3,828,165	\$1,914,083	\$5,742,248	4
Multi-Family Residential	181	\$78,059,737	\$39,029,869	\$117,089,606	353
Residential	4,040	\$1,382,358,163	\$691,179,082	\$2,073,537,245	7,878
Vacant Improved	36	\$27,931,810	\$0	\$27,931,810	-
Total	4,700	\$1,908,673,970	\$1,153,129,262	\$3,061,803,232	8,235

San Luis Obispo Assessor Data November 15, 2024, WSP GIS Analysis

Table F-20 Critical Facility Assets Exposed to Landslide Potential

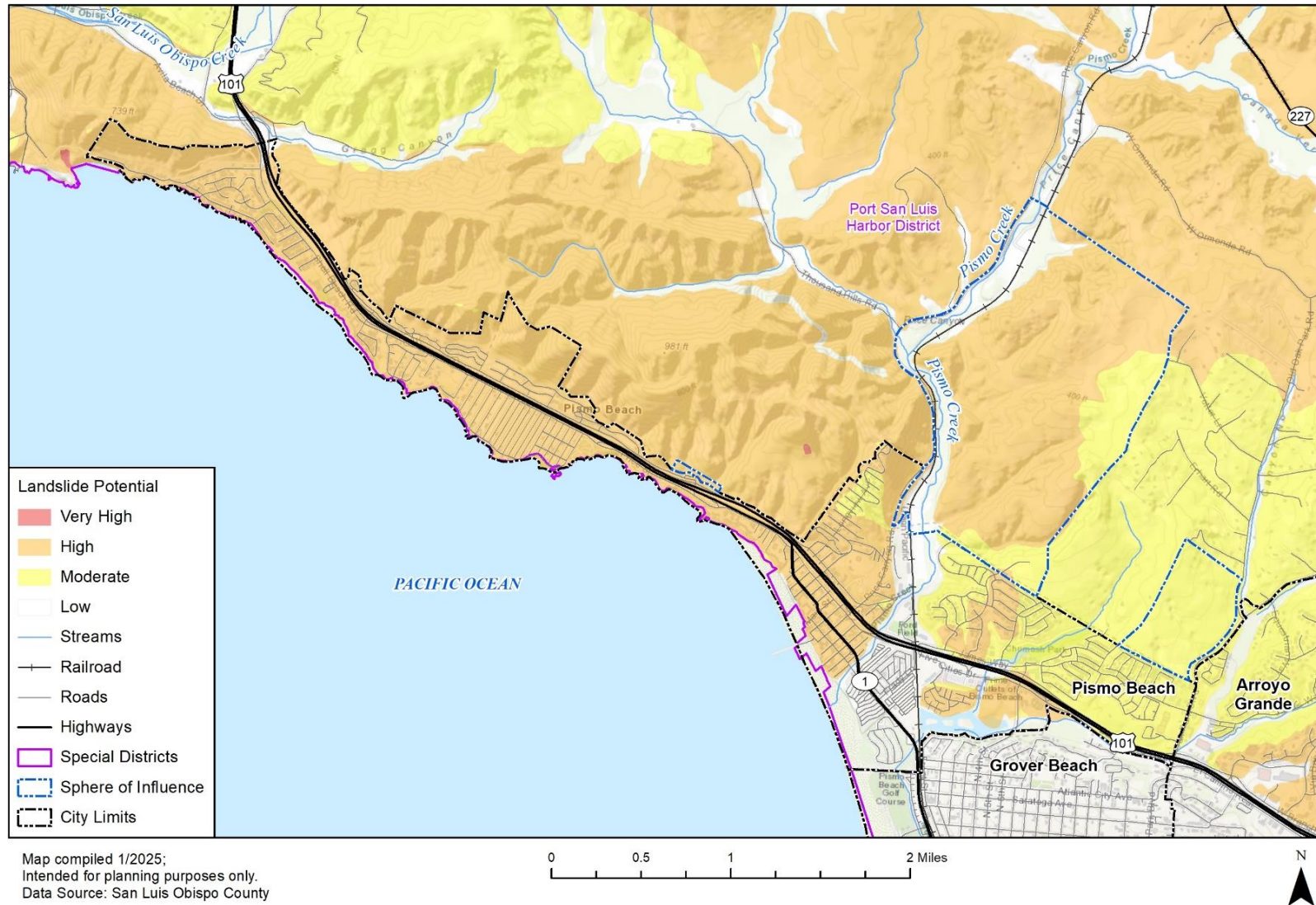
LANDSLIDE POTENTIAL	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
High	2	-	1	-	2	8	9	1	23
Moderate	1	-	-	-	1	-	-	-	2
Low	-	-	-	-	-	-	6	-	6
Total									31

Source: San Luis Obispo County, CAL FIRE, FRAP, TMTF October 2022, CalARP, HIFLD, NBI, NID, WSP Analysis

The potential for slope instability in the sloping terrain can mostly be mitigated by applying building code requirements that provide minimum requirements for building construction and grading on sloping ground, as these areas are not known to be underlain by large landslide features or notoriously unstable formations. Steep slopes have been a controlling influence in the shaping of the City of Pismo Beach by constraining the location of development. City policies prohibit development on slopes over 30 percent in all areas except Pismo Heights. In addition to this policy, there are several other policies related to landslide risk and mitigation noted in the SLO 2035 General Plan.



Figure F-5 Areas with Potential Landslide Risk in Pismo Beach





F.3.3.9 Coastal Storm/Coastal Erosion/Sea Level Rise

Pismo Beach, a low-lying coastal community, faces increasing exposure to coastal storms, erosion, and sea level rise. These hazards are projected to worsen over time, with sea level rise increasing the frequency and severity of flooding, bluff erosion, and infrastructure damage. Coastal storms bring extreme wave action, high surf, storm surge, and strong winds that threaten public infrastructure, private property, and natural resources. Development located near the shoreline remains at risk from landward bluff and beach erosion, which accelerates during major storm events. The 1982–83 El Niño season caused widespread damage to coastal structures, including the Pismo Beach Pier, recreational facilities, and seawalls, with estimated replacement costs exceeding \$5.5 million.

Since the last hazard mitigation plan update, Pismo Beach has experienced several damaging coastal storms. In January 2023, severe storm events caused bluff erosion along Highway 1 near the Butterfly Grove and it contributed to localized flooding. In December 2023, high surf events produced waves up to 25 feet, damaging beach access infrastructure and coastal recreational facilities. These events highlight the ongoing vulnerability of coastal infrastructure and the increasing impacts of sea level rise. The City's shoreline includes sandy beaches, dunes, and bluffs ranging from 10 to 100 feet in height along a five-mile stretch. Bluff erosion rates vary significantly, averaging approximately two inches per year where bedrock is present and up to 12 inches per year in vulnerable areas such as Indio Drive and Ocean Blvd. According to the 1992 Bluff Erosion Study Update, more than 60 homes are located within the bluff retreat hazard zone and may be subject to damage or loss by 2100, with increased risks anticipated under accelerated sea level rise scenarios.

As sea levels continue to rise, low-lying coastal areas and developments on eroding bluffs face heightened risk from flooding and inundation. Episodic coastal erosion events that currently occur during major storm wave events could become regular occurrences during high tides, impacting public beaches, accessways, and coastal infrastructure. See Section 5.3.4 Coastal Storm/Coastal Erosion/Sea Level Rise in the base plan for more details on the scenarios and data sources used for this analysis. The LPT noted that the City conducted sea level rise and storm flood hazards studies as part of the City Vulnerability study prepared in support of the ongoing (as of 2025) General Plan (GP) update. The draft GP sea level rise maps include additional detail on inundation and shoreline erosion. The maps and analysis shown below are consistent with the countywide analyses and associated data, and aligns with the State of California's sea level rise guidance updated by the Ocean Protection Council (OPC) in 2024.

Table F-21 and Table F-22 summarize the number of Pismo Beach properties and associated improved values projected to be inundated under sea level rise scenarios alone and under sea level rise combined with the 1% annual chance coastal flood scenario.

Table F-21 City of Pismo Beach Properties Inundated by Sea Level Rise and Sea Level Rise with 1% Annual Chance Flood

PROPERTY TYPE	25-CM SLR	75-CM SLR	300-CM SLR	25-CM SLR W/1% FLOOD	75-CM SLR W/1% FLOOD	300-CM SLR W/1% FLOOD
Commercial	-	1	16	3	5	18
Industrial	-	-	1	-	-	1
Mixed Use	-	-	9	-	2	13
Mobile/Manufactured Homes	-	-	3	-	2	3
Multi-Family Residential	-	-	26	-	1	28
Residential	1	3	101	3	12	120



PROPERTY TYPE	25-CM SLR	75-CM SLR	300-CM SLR	25-CM SLR W/1% FLOOD	75-CM SLR W/1% FLOOD	300-CM SLR W/1% FLOOD
Total	1	4	156	6	22	183

Source: San Luis Obispo County Assessor Data November 15, 2024, USGS CoSMoS v3.1, WSP GIS Analysis

Table F-22 Improved Values of Properties Inundated by Sea Level Rise and Sea Level Rise with 1% Annual Chance Flood

PROPERTY TYPE	25-CM SLR	75-CM SLR	300-CM SLR	25-CM SLR W/1% FLOOD	75-CM SLR W/1% FLOOD	300-CM SLR W/1% FLOOD
Commercial	-	\$2,470,679	\$74,361,081	\$3,531,886	\$3,653,101	\$75,686,482
Industrial	-	-	\$9,020,268	-	-	\$9,020,268
Mixed Use	-	-	\$1,879,169	-	\$162,974	\$3,544,886
Mobile/Manufactured Homes	-	-	\$24,130,031	-	\$23,098,527	\$24,130,031
Multi-Family Residential	-	-	\$16,262,011	-	\$2,595,655	\$16,497,012
Residential	\$194,149	\$774,682	\$24,831,857	\$774,682	\$2,631,470	\$30,280,695
Total	\$194,149	\$3,245,361	\$150,484,417	\$4,306,568	\$32,141,727	\$159,159,374

Source: San Luis Obispo County Assessor Data November 15, 2024, USGS CoSMoS v3.1, WSP GIS Analysis

Sea level rise modeling for the City shows increasing exposure to property inundation under higher sea level rise scenarios. Under the 25-centimeter scenario, only one residential parcel is affected. By the 75-centimeter scenario, four parcels are impacted, including residential and commercial properties. Under the 300-centimeter sea level rise scenario, exposure expands significantly, with 156 parcels affected across a range of property types, including residential, commercial, industrial, mixed-use, mobile/manufactured homes, and multi-family residential structures.

When sea level rise is combined with a 1% annual chance coastal flood, the number of affected parcels increases further. Under the combined 300-centimeter scenario, 183 parcels are at risk. This includes 120 residential parcels, 28 multi-family residential parcels, 18 commercial parcels, 13 mixed-use parcels, 3 mobile/manufactured home parcels, and 1 industrial parcel. The total improved property value exposed under the 300-centimeter sea level rise scenario alone is approximately \$150.5 million. When combined with a 1% annual chance flood, this exposure increases to approximately \$159.2 million. Assets at risk include residential neighborhoods, commercial centers, manufactured home parks, mixed-use developments, and critical industrial sites. The analysis highlights the growing vulnerability of Pismo Beach's built environment to future sea level rise and coastal flooding scenarios.

Figure F-6 and Figure F-7 illustrate the mapped extents of sea level rise scenarios, showing areas at risk from tidal inundation alone and from tidal inundation combined with the 1% annual chance coastal flood. Additionally, Table F-23 provides the critical facility assets exposed to sea level rise for flood and no flood scenarios, below.

**Table F-23 City of Pismo Beach Critical Facility Assets Exposed to Sea Level Rise for Flood and No Flood Scenarios**

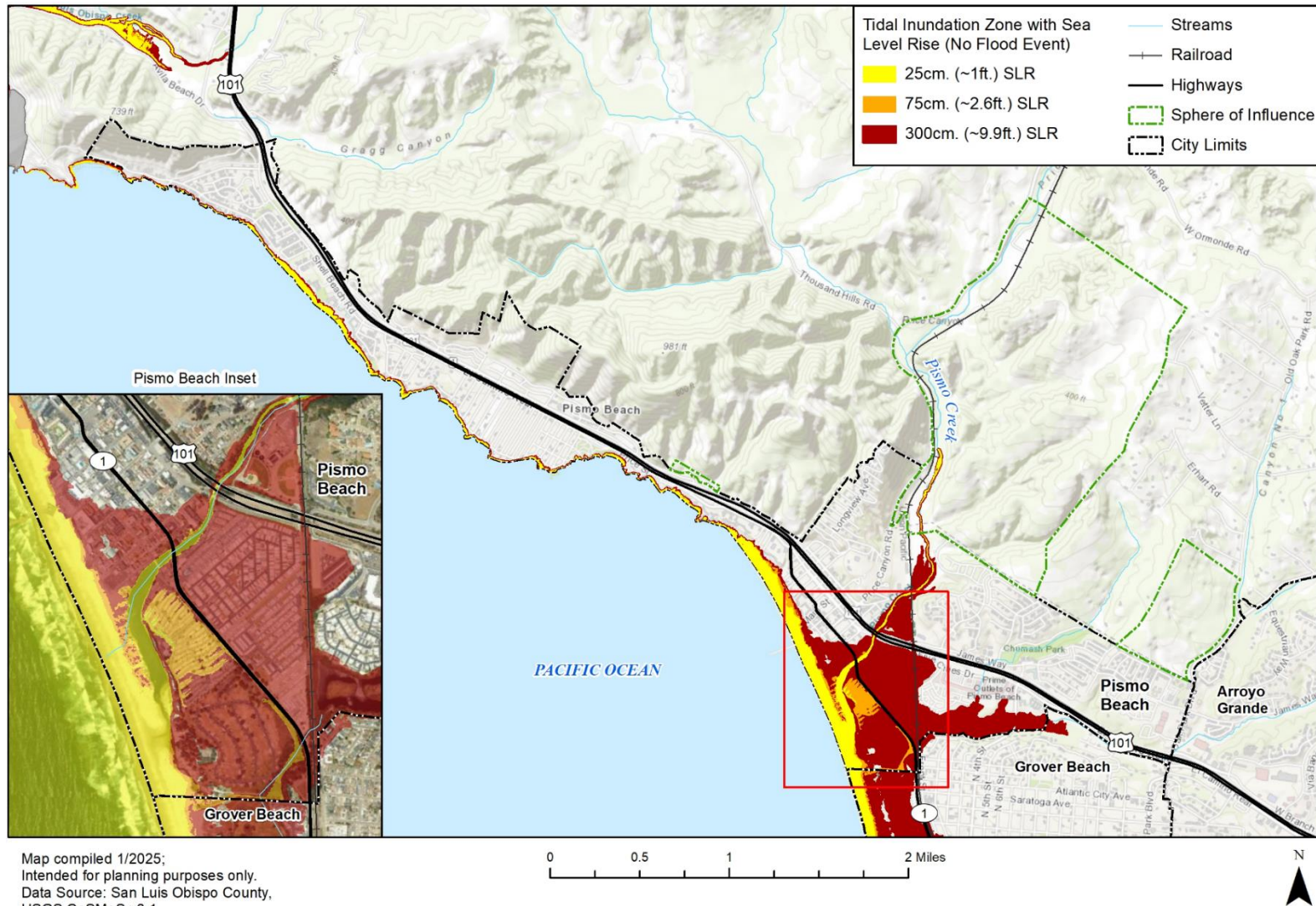
FEMA LIFELINE	25-CM SLR	75-CM SLR	300-CM SLR	25-CM SLR W/ 1% FLOOD	75-CM SLR W/ 1% FLOOD	300-CM SLR W/ 1% FLOOD
Communications	-	-	-	-	-	-
Energy	-	-	-	-	-	-
Food, Hydration, Shelter	-	-	-	-	-	-
Hazardous Material	-	-	-	-	-	-
Health and Medical	-	-	-	-	-	-
Safety and Security	-	-	-	-	-	-
Transportation	2	2	3	2	2	5
Water Systems	-	-	-	-	-	-
Total	2	2	3	2	2	5

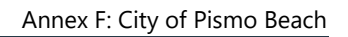
Source: San Luis Obispo County, USGS CoSMoS v3.1, CalARP, HIFLD, NBI, NID, WSP Analysis

Sea level rise modeling for Pismo Beach shows limited exposure of critical facilities at lower sea level rise scenarios. Transportation infrastructure is the only FEMA Lifeline category impacted. Under the 25-centimeter and 75-centimeter sea level rise scenarios, two transportation facilities are at risk. Exposure increases to three facilities under the 300-centimeter scenario. When sea level rise is combined with the 1% annual chance coastal flood, two transportation facilities are at risk under the 25- and 75-centimeter scenarios, increasing to five facilities under the 300-centimeter combined scenario. No other FEMA Lifeline sectors show facility exposure under the assessed sea level rise or combined flood scenarios.



Figure F-6 Pismo Beach Sea Level Rise Scenario Analysis: Tidal Inundation Only





Tidal Inundation Zone with Sea Level Rise and 100-Year Flood Event

- 25cm. (~1ft.) SLR plus 100-Year Flood
- 75cm. (~2.6ft.) SLR plus 100-Year Flood
- 300cm. (~9.9ft.) SLR plus 100-Year Flood

Legend:

- Streams
- Railroad
- Highways
- Sphere of Influence
- City Limits

Pismo Beach Inset

PACIFIC OCEAN

Pismo Beach

Grover Beach

Arroyo Grande

Scale: 0 0.5 1 2 Miles

Note: SLR = Sea Level Rise



F.3.3.10 Tsunami

Tsunami inundation poses a risk to all coastal communities in the County of San Luis Obispo. Offshore faults and related seismic activity could generate a tsunami event off the coast of Morro Bay, even if the fault rupture occurs thousands of miles away. Historically, significant tsunamis on the Central Coast of California have been infrequent. The City has recorded a history of tsunami events, listed in Table F-24 below. In the last 147 years there have been eight observed tsunami events. Most of these events resulted in little to no wave run-up, except for the event in 1927 which resulted in wave run-ups of 6 feet, over 4 feet wave run-ups in 1960 and under 4 feet in 2010 and 2011.

Table F-24 Pismo Beach Historic Tsunami Events, 1878 – 2025

DATE	ORIGIN	SOURCE TYPE	RUN-UP (FEET)
November 22, 1878	Southern California	Probably Submarine Landslide	Observed
December 9, 1907	Japan	Unknown Sized Earthquake	Observed
November 4, 1927	Southern California	7.3M Earthquake	6
April 1, 1947	Southern California	8.6M Earthquake	Observed
May 22, 1960	South Central Chile	9.5M Earthquake	4.5
March 28, 1964	Prince William Sound, Alaska	9.2M Earthquake	Observed
February 27, 2010	Maule Region, Chile	8.8M Earthquake	3.9
March 11, 2011	Honshu, Japan	9.0M Earthquake	3.3

Source: City of Pismo Beach Local Planning Team, Data Collection Workbook, 2019

Pismo Beach's coastal bluffs (the Pismo Bluffs) in general provide protection from coastal hazards, although the low-lying areas where Pismo Creek meets the ocean are considered to be at moderate risk of tsunami hazards. The following areas were noted in the City's 2015 LHMP as being the highest risk to tsunamis:

- Development located near the mouth of Pismo Creek
- State Parks North Beach Campground
- State Route 1 to the Pacific Ocean from Franklin to Hinds
- US 101 to the Pacific Ocean from Hinds to Price Canyon
- James Way to the Pacific Ocean from Price Canyon to 4th Street

Figure F-8 below illustrates these areas. The following table breaks down the tsunami risk for the City of Pismo Beach by property type. Pismo Beach has the greatest estimated property value at risk to tsunami out of all cities in the county.

**Table F-25 City of Pismo Beach Improved Properties Exposed to Tsunami Hazard Areas by Property Type**

PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Commercial	60	\$122,157,396	\$122,157,396	\$244,314,792	-
Exempt	2	\$0	\$0	\$0	-
Industrial	1	\$9,020,268	\$13,530,402	\$22,550,670	-
Mixed Use	26	\$8,559,554	\$8,559,554	\$17,119,108	-
Mobile/ Manufactured Homes	3	\$24,130,031	\$12,065,016	\$36,195,047	6
Multi-Family Residential	33	\$17,757,765	\$8,878,883	\$26,636,648	64
Residential	286	\$77,834,379	\$38,917,190	\$116,751,569	558
Vacant Improved	2	\$33,416	\$0	\$33,416	-
Total	413	\$259,492,809	\$204,108,440	\$463,601,249	628

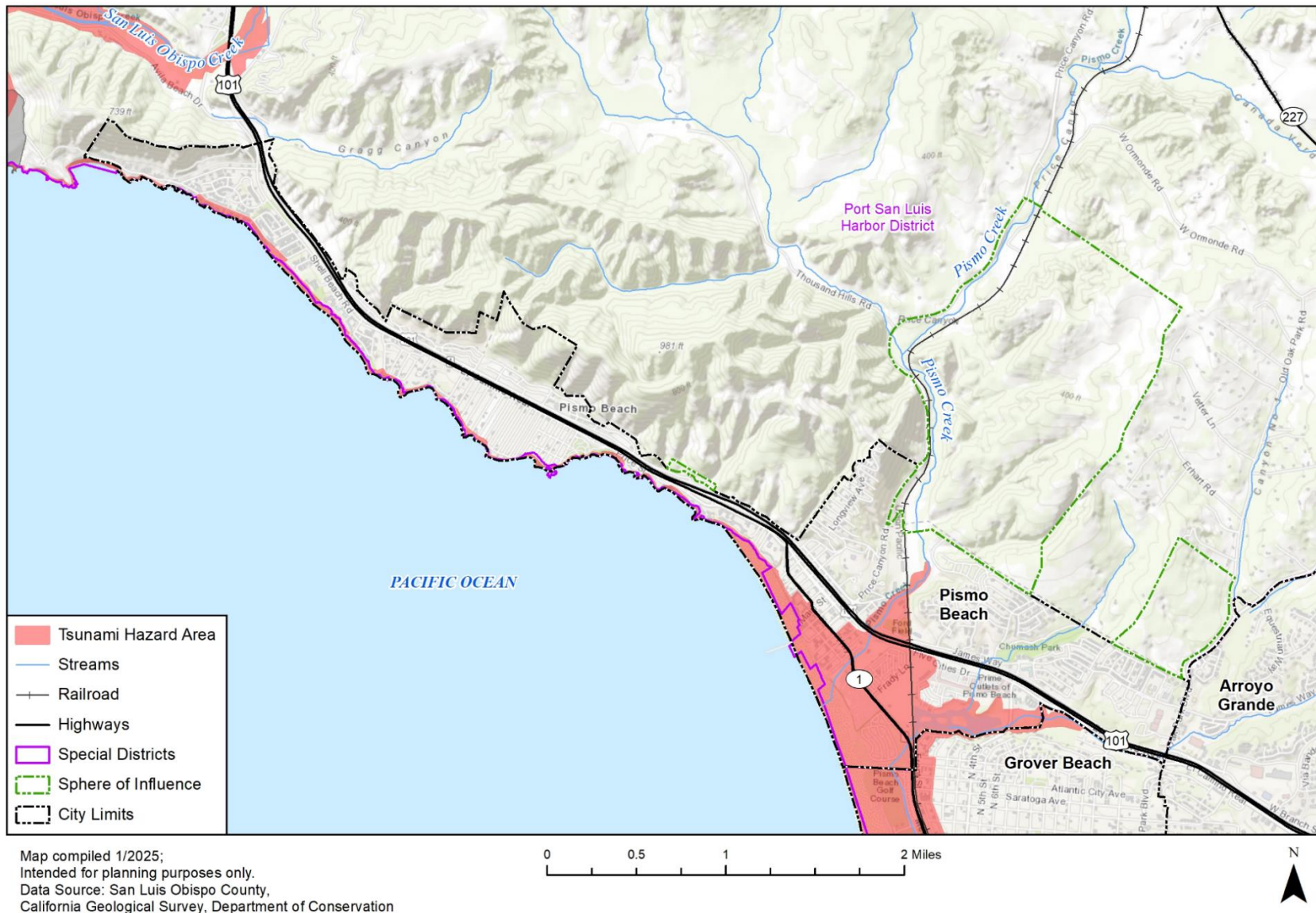
Source: San Luis Obispo Assessor Data November 15, 2024, California Geological Survey, Dept. of Conservation, WSP GIS Analysis

Based on this analysis all of the City of Pismo Beach coastline is at significant risk to a tsunami event, particularly the southern portion of the City limits. There are 413 structures with a combined value of over \$463.6 million vulnerable to the impacts of a tsunami. Of the properties at risk, 322 are residential properties (includes mobile/manufactured homes). There is a population of 628 at risk of tsunami events, although the LPT noted this number increases drastically in the summer months when the City and the surrounding attractions are filled with tourists, who may not be familiar with the risk posed by tsunamis or the local geography and safe areas of refuge. Critical Facilities were also overlaid with the tsunami inundation layers in GIS. This analysis yielded a total of 5 facilities found at risk, with each of these being within the Transportation Community Lifeline. Additionally, an important asset specific to Pismo Beach are five lifeguard towers with a value around \$70,000 each. The LPT also noted that many of the City's Utilities assets would be impacted, as well as the corporation yard where all public works assets and equipment are stored. This could compromise the equipment and vehicles needed to help clear and remove debris to reopen roads.

Refer to Section 5 of the Base Plan for additional information related to the past tsunami events and analysis on future vulnerability.



Figure F-8 City of Pismo Beach Areas of Potential Tsunami Inundation





F.3.3.11 Wildfire

Wildfires are a common occurrence in San Luis Obispo County, with some of the most significant wildfire events occurring in the Los Padres National Forest, approximately 22-miles east of the City limits. CAL FIRE has designated the City of Pismo Beach as being at an increased risk from wildfires, and a priority community to work with to prepare and mitigate potential fire risk. According to the County's Community Wildfire Protection Plan (2019), the prevailing wind patterns, especially the Santa Ana Winds which are accompanied by warm temperatures, high wind speeds and low humidities, is another dominant factor that influences the wildfire risk in Pismo Beach. A fire that originates in the Los Osos area or at the Diablo Canyon Power Plant could be pushed by prevailing winds southeast towards the Pismo Beach community.

Following the methodology described in the wildfire hazard Section 5.3.15 Wildfire of the Base Plan, along with the GIS parcel analysis discussed in more detail under Section 5.2 Asset Summary, a wildfire vulnerability analysis for the City of Pismo Beach was completed. The assessment was performed using GIS, and results indicate that there were neither parcels nor critical facilities in wildfire severity hazard zones within the boundaries of the City of Pismo Beach. However, wildfire hazards have been rated by the City's planning team as holding **Medium Significance** based on the community's experience and historical evidence.

In the City of Pismo Beach, 3,306 properties are situated within fire hazard severity zones ranging from moderate to very high. Of these, 1,641 are located in the Very High Fire Hazard Severity Zone, while 1,292 properties fall within the High Fire Hazard Severity Zone. Across all severity ratings, these properties represent a total assessed value of \$2,248,635,310 and impact approximately 5,696 residents across all fire hazard severity zones. Table F-25 shows the properties in the City exposed to Fire Hazard Severity Zones. Figure F-9 depicts the Fire Hazard Severity Zones in the City of Pismo Beach.

**Table F-26 City of Pismo Beach Improved Properties Exposed to Fire Hazard Severity Zone by Property Type**

PROPERTY TYPE	STRUCTURE COUNT VERY HIGH	STRUCTURE COUNT HIGH	STRUCTURE COUNT MODERATE	TOTAL STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Commercial	34	53	39	126	\$172,905,359	\$172,905,359	\$345,810,718	-
Exempt	4	3	4	11	\$7,282,803	\$7,282,803	\$14,565,606	-
Industrial	-	1	-	1	\$9,020,268	\$13,530,402	\$22,550,670	-
Mixed Use	141	45	33	219	\$77,405,479	\$77,405,479	\$154,810,958	-
Mobile/Manufactured Homes	1	-	1	2	\$20,225,716	\$10,112,858	\$30,338,574	4
Multi-Family Residential	64	39	23	126	\$59,876,905	\$29,938,453	\$89,815,358	246
Residential	1,383	1,141	269	2,793	\$1,051,550,002	\$525,775,001	\$1,577,325,003	5,446
Vacant Improved	14	10	4	28	\$13,418,423	\$0	\$13,418,423	-
Total	1,641	1,292	373	3,306	\$1,411,684,955	\$836,950,355	\$2,248,635,310	5,696

Source: San Luis Obispo Assessor Data November 15, 2024, CAL FIRE - FHSZ Phase 3 March 10, 2025, WSP GIS Analysis



Figure F-9 City of Pismo Beach Areas of Very High Severity

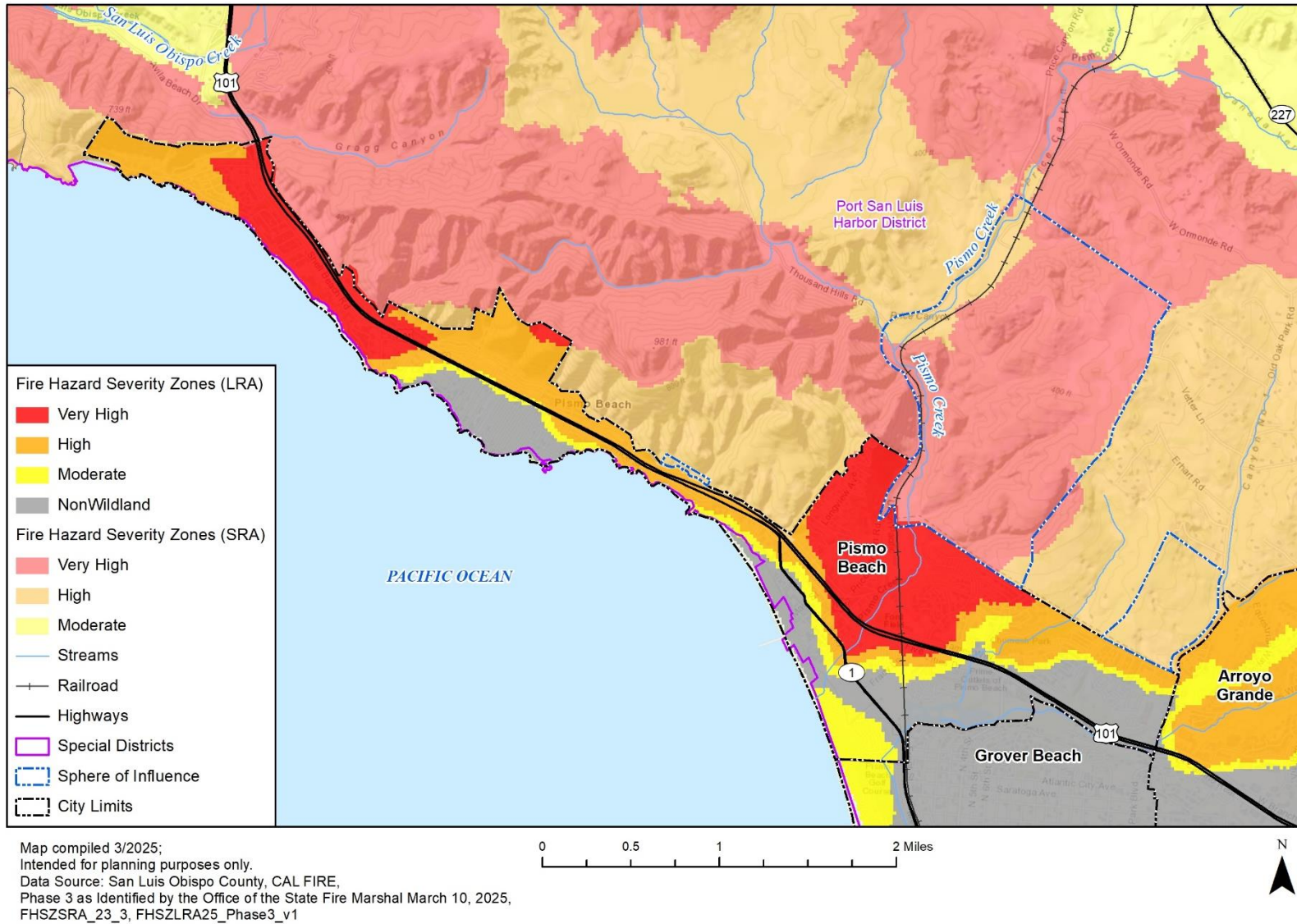




Table F-26 shows critical facilities in Pismo Beach that are exposed to fire hazard severity zones, categorizing them by severity zone and facility type. The exposure of these critical assets to wildfire hazards poses significant risks to transportation and safety/security. The table below shows that a total of 26 critical facilities exposed to fire hazard severity zones, eighteen (18) of which fall in the very high fire hazard severity zones rating, and eight (8) are exposed to a high fire hazard severity zones.

Table F-27 City of Pismo Beach Facilities Exposed to Fire Hazard Severity Zone by Property Type

FIRE HAZARD SEVERITY ZONE	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
Very High	-	-	1	-	2	5	9	1	18
High	2	-	-	-	-	1	5	-	8
Moderate	-	-	-	-	-	-	-	-	0
Total	2	0	1	0	2	6	14	1	26

Source: San Luis Obispo County, CAL FIRE - FHSZ Phase 3 March 10, 2025, CalARP, HIFLD, NBI, NID, WSP Analysis

F.3.3.12 Human Caused: Hazardous Materials

The Pismo Beach LPT rated hazardous materials incidents as having **medium** overall significance. The City has potential for transportation related incidents due to the two highways (Hwy 1 and Hwy 101) and rail system within City limits. The Cal OES Spill Release Reporting Center reports 21 hazardous materials incidents in the City of Pismo Beach from January 1st, 2019 through December 20th, 2024. This likely excludes a number of unreported minor spills. The 21 reported incidents constitutes 4.63% of the hazardous materials incidents reported countywide during the same time frame and averages out to roughly 3.5 incidents per year.

There are no significant hazardous materials facilities located in the City. However, Pismo Beach sits within the Emergency Planning Zone for the Diablo Canyon Nuclear Power Plant.

F.4 Capability Assessment

Capabilities are the programs and policies currently in use to reduce hazard impacts, or that could be used to implement hazard mitigation activities. This capability assessment is divided into five sections: regulatory mitigation capabilities, administrative and technical mitigation capabilities, fiscal mitigation capabilities, mitigation outreach and partnerships, and other mitigation efforts.

To develop this capability assessment, the jurisdictional planning representatives used a matrix of common mitigation activities to inventory which of these policies or programs were in place. The team then supplemented this inventory by reviewing additional existing policies, regulations, plans, and programs to determine if they contributed to reducing hazard-related losses.

During the plan update process, this inventory was reviewed by the jurisdictional planning representatives and WSP consultant team staff to update information where applicable and note ways in which these capabilities have improved or expanded. In summarizing current



capabilities and identifying gaps, the jurisdictional planning representatives also considered their ability to expand or improve upon existing policies and programs as potential new mitigation strategies. The City of Pismo Beach's updated capabilities are summarized below.

F.4.1 Regulatory Mitigation Capabilities

Table F-28 City of Pismo Beach Regulatory Mitigation Capabilities

REGULATORY TOOL	YES/NO	COMMENTS
General plan	Yes	
Zoning ordinance	Yes	
Subdivision ordinance	Yes	
Growth management ordinance	No	
Floodplain ordinance	Yes	
Other special purpose ordinance (stormwater, water conservation, wildfire)	Yes	Stormwater Ordinance
Building code and Type/Year	Yes	
Building Code Effectiveness Grading System and Rating (if applicable)	Yes	
Fire department ISO rating	Yes	
Erosion or sediment control program	Yes	
Stormwater management program	Yes	
Site plan review requirements	Yes	
Capital improvements plan	Yes	
Economic development plan	No	
Local emergency operations plan	Yes	
Other special plans	Yes	NPDES UWMP for water and wastewater
Flood Insurance Study or other engineering study for streams	Yes	
Elevation certificates (for floodplain development)	Yes	

F.4.1.1 Discussion on Existing Building Codes, Land Use and Development Regulations

The Pismo Beach Building Division provides plan review, permit issuance, building inspection, and code enforcement services for the city, including enforcement of the following adopted codes:

- 2022 California Administrative Code
- 2022 California Building Code (Volumes 1 and 2)
- 2022 California Residential Code
- 2022 California Electrical Code
- 2022 California Mechanical Code
- 2022 California Plumbing Code
- 2022 California Energy Code
- 2022 California Green Building Code
- 2022 California Historical Building Code
- 2022 California Fire Code
- 2022 California Existing Building Code



- 2022 California Referenced Standards Code
- 2021 International Property Maintenance Code

The city is integrating new estimates for future growth and development as a part of its General Plan Update that is currently in process. During the review process for these new infill developments, the city plans to consider the 10-, 50- or 100-year floodplain, Wildland Urban Interface (WUI) requirements, prohibition of new lots on slopes greater than 30%, and further studies and limitations for development on blufftop lots in regard to Sea level Rise Studies. At this time there is no new map that will indicate potential/planned growth areas.

The City of Pismo Beach Planning Division is responsible for implementing the following ordinances and/or regulations which govern land use:

- California Coastal Act
- City of Pismo Beach
- General Plan / Local Coastal Program
- 1983 Zoning Code (Coastal)
- 1998 Zoning Code (Non-Coastal)
- City of Pismo Beach Municipal Code

F.4.2 Administrative/Technical Mitigation Capabilities

Table F-29 identifies the personnel responsible for activities related to mitigation and loss prevention in Pismo Beach.

Table F-29 City of Pismo Beach Administrative/Technical Mitigation Capabilities

PERSONNEL RESOURCES	YES/NO	DEPARTMENT/POSITION OR 2024 CHANGES/OPPORTUNITIES
Planner/engineer with knowledge of land development/land management practices	Yes	Community Development – Associate Planners Public Works – City Engineer
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Public Works – City Engineer
Planner/engineer/scientist with an understanding of natural hazards	Yes	Community Development – Associate Planners Public Works – City Engineer
Personnel skilled in GIS	Yes	Full Time GIS analyst
Full time building official	Yes	Community Development – Building Official
Floodplain manager	Yes	Community Development – Community Development Director
Emergency manager	Yes	City Manager
Grant writer	Yes	Duties are decentralized to each applicable department.
Other personnel	N/A	
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	Yes	Contracted Service County of San Luis Obispo Resources
Warning Systems/Services (Reverse 9-1-1, cable override, outdoor warning signals)	Yes	Police Department – Police Chief



PERSONNEL RESOURCES	YES/NO	DEPARTMENT/POSITION OR 2024 CHANCES/OPPORTUNITIES
		Fire Department (CAL FIRE) - Battalion Chief

Fiscal Mitigation Capabilities Table F-30 identifies financial tools or resources that the City could potentially use to help fund mitigation activities.

Table F-30 City of Pismo Beach Fiscal Mitigation Capabilities

FINANCIAL RESOURCES	ACCESSIBLE/ELIGIBLE TO USE (YES/NO)
Community Development Block Grants	Yes
Capital improvements project funding	Yes
Authority to levy taxes for specific purposes	Yes
Fees for water, sewer, gas, or electric services	Yes
Impact fees for new development	Yes
Incur debt through general obligation bonds	Yes - with voter approval
Incur debt through special tax bonds	Yes
Incur debt through private activities	Yes
Withhold spending in hazard prone areas	No

F.4.3 Mitigation Outreach and Partnerships

The City of Pismo Beach Public Works Department conducts several water programs related to water usage and water conservation. Their website provides information for residents related to water wise gardening and links to “how to garden in a drought.” The Department also has a stormwater program which includes public outreach related to water pollution and how to improve discharges from individual residences within the City of Pismo Beach. The City of Pismo Beach website has a “Community Emergency & Disaster Preparedness” page which contains resources and information for individuals, families, and businesses on how to prepare for an emergency. The Preparedness web page also contains information specific to individuals with various disabilities including mobility, vision, hearing, and special medical needs.

Table F-31 City of Pismo Beach Mitigation Outreach and Partnerships

CAPABILITY TYPE	YES/NO
Hazard Awareness/Education Campaigns	Yes
Firewise	Yes
Storm Ready	No
Severe Weather Awareness Week	No
School programs	No
Other	N/A
Methods Used to Communicate Hazard Info. to the Public	Yes
Local News	Yes
Social media	Yes
Community Newsletters	Yes



CAPABILITY TYPE	YES/NO
Utility Bill Inserts	Yes
Community Events	Yes
Other	N/A
Organizations that represent or work with underserved or vulnerable communities	No
American Red Cross	Yes
Salvation Army	Yes
Veterans Groups	No
Environmental/Conservation Groups	Yes
Homeowner/Neighborhood Associations	Yes
Chamber of Commerce	Yes
Community Organizations (Lions, Kiwanis, etc.)	Yes

F.4.4 National Flood Insurance Program

In the City of Pismo Beach, the Director of Community Development is designated as the Floodplain Administrator (FPA). Local floodplain management regulations are actively implemented and enforced by the Director of Community Development to regulate and permit development within Special Flood Hazard Areas (SFHAs). This includes reviewing construction and land use permits to confirm compliance with elevation, structural, and zoning requirements aimed at reducing flood risk to properties and residents. Pismo Beach also consistently adopts the latest effective Flood Insurance Rate Map (FIRM) provided by FEMA, updating local floodplain management practices to align with newly identified flood risks. This helps to ensure the community is aware of the most recent flood hazard data for planning and development purposes.

Following flood or other damage events, the City of Pismo Beach enforces substantial improvement/substantial damage provisions by evaluating damaged properties to determine if they meet thresholds requiring them to comply with updated floodplain management standards. If substantial damage is determined, properties must undergo upgrades to meet current floodplain standards before they can be repaired or rebuilt. This process helps to reduce future risk by ensuring that post-event repairs and reconstructions contribute to long-term flood resilience. The city does not participate in the NFIP's Community Rating System (CRS). More information about the city's participation is found in Table F-32 below.

Table F-32 The City of Pismo Beach National Flood Insurance Program Participation

NFIP TOPIC	COMMENTS
Regulation	
Does the Community Participate in the NFIP?	Yes
How does the community enforce local floodplain regulations and monitor compliance?	Ensuring that development is mitigated in accordance with the regulations during the permit review process.
Do floodplain development regulations meet or exceed FEMA or state minimum requirements? If so, in what ways?	The regulations meet the requirements.



NFIP TOPIC	COMMENTS
Explain the permitting process.	The process of compliance includes adopting a floodplain management ordinance that meets the NFIP standards, agreeing to utilize flood hazard maps designated by FEMA to determine the flood risk within the City's jurisdiction and require floodplain certification documentation to be provided during the permitting and construction phases of development projects.
Compliance History	
Are there any outstanding compliance issues? (i.e., current violations)?	No
Does the community intend to continue to comply with NFIP requirements?	Yes
How does the community identify substantially damaged/improved structures? What is the process to make sure these structures are brought into compliance post-disaster event?	The permit application, review and inspection process identify structures that must be brought into compliance.
Staff Resources	
Please note the department and position responsible for floodplain management. Do they serve any roles other than Community Floodplain Administrator (FPA)?	The Director of Community Development is responsible for floodplain management. This person also serves as the Director of the Community Development Department which includes planning, building, and code enforcement.
Explain NFIP administration services (e.g., permit review, GIS, inspections, engineering capability).	This process is integrated into the existing plan review and inspection process that is used by the Community Development Department.
What are the barriers to running an effective NFIP program in the community, if any?	None
Community Rating System (CRS)	
Does the community participate in CRS? If so, what is the community's CRS Class Ranking?	No
What categories and activities provide CRS points, and how can the class be improved?	N/A
Does the plan include CRS planning requirements?	N/A

F.4.5 Other Mitigation Efforts

The City has designated 550 Frady Lane as the Pismo Beach Sandbag Station location, and provides bags and shovels at the site. The LPT also shared the following mitigation projects as past or ongoing projects:

- Worked on Five Cities Drive Lift station floodproofing to reduce impacts to the critical facility.
- Coordination with FEMA related to the update of FIRM maps for the city, finalized in 2024.
- Vegetation reeducation and weed abatement ordinance for fuel reeducation are ongoing.



- Public Works has been coordinating with County OES regarding consistent Tsunami warning signage with the County.

Another local mitigation effort has been the formation of the Local Pismo Beach Fire Safe Focus Group, who are seeking funding for the 2025 Grant Cycle to help reduce vegetation on the border of SRA and LRA Lands. This effort was emphasized after the 2020 Avila Fire and the 2024 Preserve Fire.

F.4.6 Opportunities for Enhancement

Based on the capability assessment, the City of Pismo Beach has several existing mechanisms in place that already help to mitigate hazards. In addition to these existing capabilities, there are also opportunities for the City to expand or improve on these policies and programs to further protect the community. Future improvements may include providing training for staff members related to hazards or hazard mitigation grant funding in partnership with the County and Cal OES. Additional training opportunities will help to inform City staff members on how best to integrate hazard information and mitigation projects into their departments. Expanding outreach and partnerships with organizations that represent or work with underserved or vulnerable communities is another opportunity which would increase the reach and efficacy of mitigation efforts. The City also has the opportunity to become a StormReady and a TsunamiReady community which can provide training resources for City staff as well as public outreach and educational opportunities.

The city also documented several potential partnerships with the following entities, which may be valuable partners in mitigation activities identified in this plan, as well as supporting future plan updates:

- Community-Based Organizations:
 - 5Cities Homeless Coalition
 - People's Self-Help Housing
 - Housing Authority of San Luis Obispo (HASLO)
 - Shell Beach Improvement Group (SBIG)
 - Pismo Beach Fire Safe Focus Group
- Academic Institutions:
 - Allan Hancock College
 - California Polytechnic State University, San Luis Obispo
 - Cuesta College
- Local or Federal Government Agencies:
 - City of Arroyo Grande
 - City of Grover Beach
 - County of San Luis Obispo
 - CAL FIRE
- Private or Non-Profit Organizations
 - 5Cities Homeless Coalition (Also Community Based Organization)
 - People's Self-Help Housing (Also Community Based Organization)
 - Housing Authority of San Luis Obispo (HASLO)
 - Pismo Beach Chamber of Commerce
 - Pismo Preserve



- Rotary Club of Pismo Beach / Five Cities
- Shell Beach Improvement Group (SBIG)

F.5 Mitigation Strategy

F.5.1 Mitigation Goals and Objectives

During the 2025 Planning Process the Pismo Beach LPT reviewed the mitigation goals from the 2019 LHMP and determined to move forward with the overall goals noted in the Base Plan and noted below.

- Strengthen risk reduction and resilience by minimizing risks to life, property, infrastructure, and the environment through comprehensive, community-wide strategies.
- Boost outreach and capacity to improve disaster resilience for vulnerable communities.
- Promote regional collaboration to reduce hazard vulnerability and strengthen community resilience.
- Reduce injury, loss of life, and damage to critical facilities and infrastructure from natural hazards.
- Enhance public education and engagement to boost awareness and preparedness for natural, human-health, and human-caused hazards.
- Use the best science and data to guide resilience efforts and prioritize mitigation projects for natural hazards and climate change impacts.

F.5.1.1 Continued Compliance with the National Flood Insurance Program

The City has been an NFIP participating community since 1984. In addition to the mitigation actions identified herein the City will continue to comply with the NFIP. This includes ongoing activities such as enforcing local floodplain development regulations, including issuing permits for appropriate development in Special Flood Hazard Areas, and ensuring that this development is mitigated in accordance with the regulations. This will also include periodic reviews of the floodplain ordinance to ensure that it is clear and up to date and reflects new or revised flood hazard mapping. The City of Pismo Beach does not currently have any Repetitive Loss or Severe Repetitive Loss properties.

F.5.2 Progress on 2019 Mitigation Actions

During the 2025 planning process the City of Pismo Beach LPT reviewed all the mitigation actions from the previous HMP. The review indicated the city has completed one mitigation action since 2019, making continued progress in implementing mitigation projects and building the community's resilience to disasters. The completed action has reduced vulnerability to hazards and increased local capability to implement additional mitigation actions. Table F-33 below show the mitigation actions that have been completed or deleted since 2019.

**Table F-33 City of Pismo Beach Completed Mitigation Actions**

2019 ACTION ID	HAZARD(S) ADDRESSED	MITIGATION ACTION TITLE	LEAD AGENCY	ACTION STATUS NOTES
PB.1	Flood; Coastal Storm, Sea Level Rise Dam Incidents, Tsunami	Rehabilitate Bello Bridge to withstand flooding and tsunami hazards.	Public Works	Completed
PB.9	Wildfire	Develop and provide funding and/or incentives for defensible space measures (e.g., free chipping day, free collection day for tree limbs).	Fire Department	Completed; Fire Safe Focus Group provides this to the community when requested.
PB.10	Wildfire	Implement a fuel modification program, which also includes residential maintenance requirements and enforcement, plan submittal and approval process, guidelines for planting, and a listing of undesirable plant species. Require builders and developers to submit their plans, complete with proposed fuel modification zones, to the local fire department for review and approval prior to beginning construction.	Fire Department	Completed; included implementation through a weed abatement ordinance

F.5.3 Mitigation Actions

The City of Pismo Beach identified 17 mitigation actions for their 2025 Mitigation Action Plan, including 13 continued actions and 4 new. The LPT for the City of Pismo Beach identified and prioritized the following mitigation actions based on the risk assessment. Actions were prioritized using the process described in Section 7.2.1 of the Base Plan. Background information and information on how each action will be implemented and administered, such as ideas for implementation, responsible office, potential funding, estimated cost, and timeline are also included. Actions with an asterisk (*) are those that mitigate losses to future development.



Table F-34 City of Pismo Beach 2025 Mitigation Action Plan

MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
PB-1	Flood	Work with FEMA Region IX to address any floodplain management issues that may have arisen/arise from the countywide Digital Flood Insurance Rate Map (DFIRM), Community Assessment Visits, and/or the Department of Water Resources (DWR).	Community Development, Public Works	Less than \$10,000. Staff Time/Dept. Budget	Medium	Ongoing	Not Started. Discuss with the County, create signage, fabricate, and install.
PB-2	Tsunami	Display standardized and easy to read signs alerting community members of tsunami hazard zones, evacuation routes, and evacuation sites.	Public Works, Police, Fire	Little to no cost. FEMA HMA	Medium	1 yr.	Not Started. Create social media strategy and/or mailer campaign to inform property owners.
PB-3	Dam Failure	Develop a public outreach program that informs property owners located in the dam or levee inundation areas about voluntary flood insurance.	Fire, Community Development, Public Works	Little to no cost. Staff Time/Dept. Budget	Medium	2-3 yrs.	Not Started. Create social media strategy and/or mailer campaign to inform property owners.
PB-4	Earthquake	Develop an “Earthquake Education Program” for residents which illustrates what steps the individual can take to prepare for an earthquake and mitigate the effects of an earthquake. Coordinate with Community Emergency Response Teams (CERT) where applicable.	Community Development	Little to no cost. Staff Time/Dept. Budget	Medium	1 yr.	Not Started. Discuss options with PG&E.
PB-5	Earthquake	Target old pipelines in seismic areas for upgrades and automatic seismic shut-off switches that cut off natural gas to customers	Community Development, Public Works	\$500,000 to \$1,000,000. FEMA HMA	Medium	More than 5 yrs.	Not Started. Create social media strategy and/or mailer campaign to inform property owners.
PB-6	Hazmat	Conduct a public awareness and educational campaign to raise awareness about the presence of hazardous materials throughout the City.	Fire, Police	Little to no cost. Community Action Renewed Environment (CARE) and FEMA HMA	Medium	1 yr.	Not Started. Assess what additional studies will be needed. Then establish a timeline, funding source and action plan.



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
PB-7*	Landslide	Stabilize landslide-prone areas through stability improvement measures, including interceptor drains, in situ soil piles, drained earth buttresses, and subdrains.	Community Development, Public Works	\$500,000 to \$1,000,000. FEMA HMA	Medium	More than 5 yrs.	Not Started. Discuss with City and CAL FIRE staff about opportunities to create a program or augment the existing program.
PB-8	Wildfire	Create a vegetation management program that provides vegetation management services to elderly, disabled, or low-income property owners who lack the resources to remove flammable vegetation from around their homes.	Fire	Little to no cost. FEMA HMA	High	2-3 yrs.	Not Started. Discuss with City and CAL FIRE staff about opportunities to create a program or augment the existing program.
PB-9	Wildfire	Provide assistance to private property owners for brush and weed abatement	All cities, Fire, county Fire, CalFire	Little to no cost. State wildfire grants; Federal grants	High	Annual	Not Started. Discuss with City and CAL FIRE staff about opportunities to create a program or augment the existing program.
PB-10	Drought	Develop additional water efficient landscape measures for new construction, including the encouragement xerophytic landscape designs.	Community Development Department	Little to no cost. TBD	Low	2-3 yrs.	In Progress.. The Cash for Grass Began on February 7, 2023 and will reimburse residents \$2.00 for every square foot of lawn removed and replaced with drought tolerant landscaping, with a maximum rebate of the lesser amount between \$10,000 or 50% of the total project cost.
PB-11	Drought	Continue to monitor reservoir and well water levels. Develop and enact a tiered water restriction program in the event of drought conditions or other water availability emergency, including possible limits on new construction.	Community Development Department	Little to no cost. TBD	Low	2-3 yrs.	In Progress. City staff continues work to update the General Plan / Local Coastal Program.



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
PB-12	Flood / Coastal Storm / Sea Level Rise; Adverse Weather: Thunderstorm/ Heavy Rain/ Lightning	Build upon the sea level rise vulnerability assessment and associated adaptation plan that will complement the Safety Element of the General Plan / Local Coastal Program Update.	Community Development, Public Works	\$250,000. FEMA HMA, State grants, Federal Grants, In kind Match, City Funding	Medium	2-3 yrs.	New in 2025. City staff will create a plan to source and acquire the necessary infrastructure.
PB-13	Wildfire / Earthquake / Flood	Plan for and purchase necessarily infrastructure to support all critical city and utility infrastructure.	Community Development, Fire, Police, Public Works	\$100,000. FEMA HMA, State grants, Federal Grants, City Funding	High	3-5 yrs.	New in 2025.
PB-14	Adverse Weather: Thunderstorm/ Heavy Rain/ Lightning/ Dense Fog/ Freeze; Adverse Weather: High Wind and Tornado,, Landslides and Debris Flow, Coastal Storm/ Coastal Erosion/Sea Level Rise, Subsidence, Tsunami and Seiche	Sea Level Rise Adaptation Reassessment and Implementation Plan. This action builds upon the City's 2020 Sea Level Rise Adaptation Plan (Plan) that will reassess vulnerabilities to coastal hazards expected from sea level rise and identify possible actions to prepare for and adapt to sea level rise. Possible solutions from this action include: Evaluate the Sea Level Rise Adaptation Plan amend or create administrative policies, procedures, initiatives and staffing to implement the Plan updating the City's General Plan, Local Coastal Program and Municipal Code to implement Plan policies Incorporate actions into the City's Capital Improvement Program Monitor rising sea levels, beach erosion, and flooding events Study options to optimize existing coastal surface conditions Study options for renovation, relocation and/or flood proofing major wastewater, water, and utility infrastructure Public outreach and education associated with the Plan.	Community Development, Fire, Police, Public Works Departments, FEMA, State of California, County of SLO	\$100,000 to \$500,000. FEMA Hazard Mitigation Assistance Grant, Local Funds, In-Kind, Private Non-Profit	High	1-5 years	New in 2025.



MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
PB-16	Adverse Weather: Thunderstorm/ Heavy Rain/ Lightning/ Dense Fog/ Freeze, Adverse Weather: High Wind/ Tornado, Adverse Weather: Extreme Heat, Biological Incidents, Dam Incidents, Earthquake, Flooding Dam/ Levee Failure, Landslides and Debris Flow, Tsunami and Seiche, Wildfire, Hazardous Materials Incident	Critical Infrastructure Support Plan. This action will evaluate all critical City facilities to determine if each have the capability to operate in a 24-hour environment should a hazardous event occur. Possible solutions from this action include: perform a feasibility analysis for all critical city locations based on the hazards and vulnerabilities evaluate City equipment and make recommendations to upgrade or renovate source and procure equipment for critical infrastructure involve stakeholders that may include residents, businesses and relevant organizations in the planning process.	Community Development, Fire, Police, Public Works Departments, FEMA, State of California, County of SLO	\$100,000 to \$500,000. FEMA Hazard Mitigation Assistance Grant, Local Funds, In-Kind, Private Non-Profit	High	1-3 years	New in 2025



F.6 Implementation and Maintenance

Moving forward, the city will use the mitigation action table in the previous section to track progress on implementation of each project. Much progress has been made since the plan was originally developed. Implementation of the plan overall is discussed in Section 8 in the Base Plan.

F.6.1 Incorporation into Existing Planning Mechanisms

The information contained within this plan, including results from the Vulnerability Assessment, and the Mitigation Strategy will be used by the City to help inform updates and the development of local plans, programs and policies. City staff may utilize the hazard information when implementing preparing and implementing the City's Ten-Year Capital Improvement Program. Within the City's Community Development Department, the Planning and Building Divisions may utilize the hazard information when reviewing a site plan or other type of development applications. The City will also incorporate this LHMP into the Safety Element of their General Plan, as recommended by Assembly Bill (AB) 2140.

As noted in Section 8 Plan Implementation and Monitoring, the HMPC representatives from Pismo Beach will report on efforts to integrate the hazard mitigation plan into local plans, programs and policies and will report on these efforts at the annual HMPC plan review meeting.

F.6.2 Monitoring, Evaluation and Updating the Plan

The City will follow the procedures to monitor, review, and update this plan in accordance with San Luis Obispo County as outlined in Section 8 of the Base Plan. The City will continue to involve the public in mitigation, as described in Section 8.3 of the Base Plan. The City's Community Development Director will be responsible for representing the City in the County HMPC, and for coordination with City staff and departments during plan updates. The City realizes it is important to review the plan regularly and update it every five years in accordance with the Disaster Mitigation Act Requirements as well as other State of California requirements.

Annex G City of San Luis Obispo

G.1 Community Profile

G.1.1 Mitigation Planning History and 2025 Process

This annex was updated in 2025 to build upon the previous version created for the 2019 San Luis Obispo Hazard Mitigation Plan update. This 2025 Jurisdictional Annex also includes input from the previous versions of the 2014 and the 2019 City of San Luis Obispo Local Hazard Mitigation Plan (LHMP). Although the 2014 mitigation plan was not integrated into the City's General Plan, the updated 2019 version was successfully incorporated, and the upcoming 2025 update is also planned for inclusion.

The city had representation on the County multi-jurisdictional Hazard Mitigation Planning Committee and utilized a Local Planning Team (LPT) subcommittee to develop input into the annex.

Table G-1 City of San Luis Obispo Local Planning Team

DEPARTMENT	TITLE
Fire Department	Fire Chief
Fire Department	Emergency Manager
Administration	Natural Resource Manager
Administration	Sustainability Manager
Community Development	Assistant Planner
Community Development	Principal Planner

Additionally, the plan must document opportunities for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies with the authority to regulate development, as well as businesses, academia, and other private and non-profit interests, to actively participate in the planning process. Stakeholder groups are listed below in Table G-2.

More details on the planning process and how the jurisdictions, services districts and stakeholders participated can be found in Chapter 3 of the Base Plan, along with how the public was involved during the 2025 update.

Table G-2 City of San Luis Obispo Stakeholder Groups, Neighboring Communities, and Local Agencies

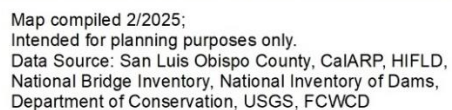
STAKEHOLDER CATEGORY	ORGANIZATION
Agencies involved in hazard mitigation activities:	City of San Luis Obispo
Agencies that have the authority to regulate development:	City Community Development
Neighboring Communities:	San Luis Obispo County OES
Representatives of business academia, and other private orgs:	California Polytechnic State University SLO; San Luis Obispo Chamber of Commerce; Downtown
Representatives supporting underserved communities:	Housing Authority of the City of San Luis Obispo; People's Self-Help Housing; Community Action Partnership of San Luis Obispo County

G.1.2 Geography and Climate

The City is located in California's Central Coast region approximately 200 miles north of Los Angeles and 230 miles south of San Francisco. The City is situated to the west of the Santa Lucia Mountains and is located eight miles east of the Pacific Ocean. The San Luis Obispo Creek originates from the mountains and flows westward in confluence with the Pacific Ocean at Avila Beach. The mountain ranges from a natural barrier to development in San Luis Obispo. The City is an estimated 10.7 square miles and is surrounded by protected open space and productive agricultural lands. San Luis Obispo is regionally accessible via US Highway 1, US Highway 101, and State Route 227 (Broad Street). The City terrain stands at an average elevation of 300 feet above sea level, with prominent peaks such as Cerro San Luis and Bishop Peak at 1,292 and 1,559 feet, respectively, above sea level.

The City's Sphere of Influence includes approximately 5,930+/- acres outside of the City limits and includes nine unincorporated areas: Cal Poly, Florita-Alrita, Orcutt, Broad Street, Airport, Chevron, Los Osos Valley Road/US Highway 101, San Luis Ranch, and Cerro San Luis area. All lands outside of the City's Sphere of Influence are regulated by the San Luis Obispo County General Plan and zoning designations. State law requires that cities maintain plans for areas outside of their immediate jurisdiction if the areas have a direct relationship to planning needs.

San Luis Obispo is characterized by a Mediterranean climate with an average temperature of 70.2 degrees Fahrenheit. While generally considered a mild climate, weather patterns and events have historically observed both unseasonably warm periods and cold spells. The City receives an average precipitation of 19 inches per year, with increased amounts of rainfall in the winter and spring months between November and April (US Climate Data 2019). Due to its close proximity to the Pacific Ocean, San Luis Obispo is also subject to coastal weather influences such as dense fog that typically rolls into the City through the Chorro Valley, steady onshore wind patterns, and coastal storms. For general details on climate characteristics of the region refer to the Adverse Weather Section of the Risk Assessment in the HMP (Section 5.3.1).



G.1.3 History

The native Chumash Tribe was the first known settled human population in the City of San Luis Obispo area. The Chumash established a network of villages along the San Luis Obispo Creek. Spanish Colonization of the area began in 1769 with the founding of Mission San Luis Obispo de Tolosa in 1772 by Father Junipero Serra, resulting in devastating impacts to the Chumash culture. Diseases and significant alterations of culture due to the establishment of the mission caused a significant decrease in the Native American population. Spanish and Mexican ranchos were established in the area in the late 1700s. The development of the area of San Luis Obispo has historically been connected to the San Luis Obispo Creek, where the first settlements could be found, and to the emphasis on agricultural production by the Mission and later the adjacent ranchos.

The California Land Act of 1851 caused a shift to residential development in San Luis Obispo. By 1870, the community had grown to a population of 1,579 and it became a charter city in 1876. Historic influences on the growth and development of San Luis Obispo include the City's beginnings as a center for agricultural productivity, the extension of the Southern Pacific Railroad in 1894, and the establishment of California Polytechnic State University (Cal Poly) in 1901.

Agriculture, transportation, government, and education related activities continue to play a significant role in the demographic, economic, land use, and development characteristics of the City. These characteristics and proactive protection of the City's natural and scenic resources contribute to the small-town charm and high quality of life of the City's residents.

G.1.4 Economy

As the civic, economic, and cultural hub of the Central Coast, the City serves as the seat of the County of San Luis Obispo. With major regional employers such as Cal Poly, state agencies, PG&E, Tenet Health Care, and the County of San Luis Obispo, the City has an estimated daytime population of more than 70,000 people. The San Luis Obispo Chamber of Commerce and the Downtown Association are active collaborators and leaders in supporting the retention and expansion of local businesses in the City. The City's leading industries include hospitality, food services, retail, professional services, health care, information and technology, public administration, and educational sectors.

To support the high quality of life and economic vitality of the community, San Luis Obispo is considered a full-service city, providing police, fire, water, sewer, streets, transit, parking, planning, building, engineering, and parks and recreation services to the community.

Select estimates of economic characteristics for the City of San Luis Obispo are shown in Table G-3.

Table G-3 and Table G-4 show the occupational and industry breakdown of the City of San Luis Obispo's labor force based on estimates from the 2023 American Community Survey.

Table G-3 City of San Luis Obispo's Employment by Industry, 2023

OCCUPATION	# EMPLOYED	% EMPLOYED
Sales and Office Occupations	4,395	17%
Management, Business, Science, and Arts Occupations	12,723	49.3%
Natural Resources, Construction, and Maintenance Occupations	1,137	4.4%
Production, Transportation, and Material Moving Occupations	1,871	7.3%
Service Occupations	5,674	22%
Total	27,661	

Source: U.S. Census Bureau American Community Survey 2023, www.census.gov/

*Excludes armed forces'

Table G-4 City of San Luis Obispo's Employment by Industry, 2023

INDUSTRY	# EMPLOYED	% EMPLOYED
Population (2023)	12,687	
In Labor Force	6,892	63.6%
Agriculture, forestry, fishing and hunting, and mining	280	1.1%
Construction	1,062	4.1%
Manufacturing	1,883	7.3%
Wholesale trade	199	.8%
Retail trade	2,828	11%
Transportation and warehousing, and utilities	855	3.3%
Information	297	1.2%
Finance and insurance, and real estate and rental and leasing	740	2.9%
Professional, scientific, management, administrative, and waste mgmt. services	4,229	16.4%
Educational services, health care, and social assistance	6,719	266%
Arts, entertainment, recreation, and accommodation and food services	4,408	17.1%
Other services, except public administration	1,047	4.1%
Public administration	1,253	4.9%
Unemployed	1,838	4.2%

Source: U.S. Census Bureau American Community Survey 2023, www.census.gov/

G.1.5 Population

The City of San Luis Obispo has a population of 48,039 persons as of January 2023, which accounts for approximately 17% of the County's population. The City experienced a growth of 4% from 47,160 residents from January 2018. The U.S. Census Bureau's American Community Survey 2023 5-Year Estimates provide select demographic and social characteristics and changes from 2018 to 2023 for the City of San Luis Obispo (Table G-5).

Table G-5 City of San Luis Obispo's Demographic and Social Characteristics, 2018 to 2023

CHARACTERISTIC	2018	2023	% CHANGE
Population	47,160	48,039	+4%
Median Age	26.2	26.2	0
Total Housing Units	20,550	21,783	+6%
Housing Occupancy Rate	91%	92%	+1%
% of Housing Units with no Vehicles Available	7.8%	7.4%	+5%
Median Home Value	\$617,200	\$896,500	+45%
Unemployment	2.3%	4.2%	+82%
Mean Travel Time to Work (minutes)	15.8	15.6	-1.3%
Median Household Income	\$114,688	\$158,444	+38%
Per Capita Income	\$31,917	\$45,462	+42%
% of Individuals Below Poverty Level	31.8%	30%	-5%
# of Households	18,708	20,005	+6%
Average Household Size	2.45	2.34	+5%
% of Population Over 25 with High School Diploma	92.7%	96%	+3.5%

CHARACTERISTIC	2018	2023	% CHANGE
% of Population Over 25 with Bachelor's Degree or Higher	52.6%	34.0%	-35%
% with Disability	9%	9.4%	+4.4%
% Speak English less than "Very Well"	5.7%	3%	-47.4%

Source: U.S. Census Bureau American Community Survey 2018-2023 5-Year Estimates, www.census.gov/

Between 1950 and 1990, the City grew from a population of 14,180 to just under 42,000. Since 1990, the City has maintained an average growth rate of less than one percent per year. Owner-occupied housing units account for 39% of all households, while approximately 61% of households are renter-occupied. The City's population is growing steadily at a relatively slow rate at approximately 1% or less per year with an estimated of 4% growth since the 2018 American Community Survey. The SLO 2035 Land Use and Circulation Elements projected population of 48,826 in 2020, where the actual population was less at 47,402.

C.1.6 Development Trends

Table G-6 City of San Luis Obispo Population Growth

YEAR	APPROXIMATE MAXIMUM NUMBER OF HOUSING UNITS	PROJECTED POPULATION
2013	20,697	45,541
2015	21,113	46,456
2020	22,190	48,826
2025	23,322	51,317
2030	24,512	53,934
2035	25,762	56,686

The City of San Luis Obispo has traditionally expanded through annexation of County lands and increased development of diverse land uses; these include low to high density residential, general retail and commercial, services, and manufacturing uses bordering the San Luis Obispo Regional Airport, and dispersed undeveloped open space. With Mission Plaza and downtown at the heart of the City, development trends have included transition from the historic neighborhoods immediately adjacent to Downtown, to post-World War II growth in areas along the foothills of the Santa Lucia Mountains, surrounding Laguna Lake, and in the northern areas of town near the growing Cal Poly. Recent development efforts have focused on incorporating additional housing opportunities in the historic downtown core, through the renovation of historic structures and infill development on underutilized and vacant land. The Land Use Element of the City's General Plan provides designated land use and establishes development standards for new and existing structures and uses. The Climate Adaptation and Safety Element (CASE) further identifies hazards that may influence the locations and types of proposed land uses and provides policies that reduce exposure to hazards. These policies have also encouraged changes to development in San Luis Obispo's hazard prone/vulnerable areas, decreasing the City's vulnerability. Any future development within the City will be informed by the most up to date hazard maps as well as state and local development ordinances (e.g. floodplain) that restrict development in hazard prone areas to minimize risk.

Specific to hazards, analysis of parcels developed between 2019-2024 (since the last update of this HMP) indicated some growth in areas prone to flood (1% and 0.2% annual chance zone), landslide, liquefaction, and wildfire (see Development Trends subsections in base plan Chapter 5 for specific counts). While these trends may indicate some increase in community

vulnerability, they do not account for site specific investigations or compliance with local regulations that may reduce risk during development.

In recent years, more residents and visitors are staying and living in the downtown core. This change in demographic could impact response capabilities if a hazard impacts the downtown core. The City also has a greenbelt protection program and have acquired thousands of acres of land around the City to minimize development in areas around the City. Thus, the redevelopment of already developed areas or infill development is likely to be the trend in the future.

Specific to hazards, continuing moderate population growth is increasing exposure to earthquake hazards, though new or re-developed areas built to modern codes will be more resistant to collapse and damage.

G.2 Hazard Identification and Summary

San Luis Obispo's planning team identified the hazards that affect the region and summarized their frequency of occurrence, spatial extent, potential magnitude, and significance specific to the City (see Table G-7). There are no hazards that are unique to the City. The overall hazard significance takes into account the geographic area, probability and magnitude as a way to identify priority hazards for mitigation purposes. This is discussed further in the Vulnerability Section (4.3).

Table G-7 City of San Luis Obispo – Hazard Summaries

HAZARD	GEOGRAPHIC AREA	PROBABILITY OF FUTURE OCCURRENCE	MAGNITUDE/ SEVERITY (EXTENT)	OVERALL SIGNIFICANCE
Adverse Weather: Thunderstorm/ Heavy Rain/Hail/Lightning/Dense Fog/Freeze	Extensive	Likely	Limited	Medium
Adverse Weather: High Wind/ Tornado	Extensive	Occasional	Limited	Medium
Adverse Weather: Extreme Heat	Extensive	Occasional	Limited	Medium
Agricultural Pest Infestation and Disease	Limited	Highly Likely	Negligible	Medium
Biological Agents	Extensive	Occasional	Critical	Medium
Drought and Water Shortage	Extensive	Likely	Limited	Medium
Earthquake	Extensive	Occasional	Catastrophic	High
Flood	Limited	Occasional	Limited	Medium
Landslides and Debris Flow	Significant	Likely	Critical	Low
Subsidence	Significant	Occasional	Negligible	Low
Wildfire	Significant	Occasional	Critical	High
Human Caused: Hazardous Materials	Limited	Highly Likely	Negligible	Medium

HAZARD	GEOGRAPHIC AREA	PROBABILITY OF FUTURE OCCURRENCE	MAGNITUDE/ SEVERITY (EXTENT)	OVERALL SIGNIFICANCE
Geographic Area Limited: Less than 10% of planning area Significant: 10-50% of planning area Extensive: 50-100% of planning area Probability of Future Occurrences Highly Likely: Near 100% chance of occurrence in next year or happens every year. Likely: Between 10-100% chance of occurrence in next year or has a recurrence interval of 10 years or less. Occasional: Between 1 and 10% chance of occurrence in the next year or has a recurrence interval of 11 to 100 years. Unlikely: Less than 1% chance of occurrence in next 100 years or has a recurrence interval of greater than every 100 years.		Magnitude/Severity (Extent) Catastrophic—More than 50 percent of property severely damaged; shutdown of facilities for more than 30 days; and/or multiple deaths Critical—25-50 percent of property severely damaged; shutdown of facilities for at least two weeks; and/or injuries and/or illnesses result in permanent disability Limited—10-25 percent of property severely damaged; shutdown of facilities for more than a week; and/or injuries/illnesses treatable do not result in permanent disability Negligible—Less than 10 percent of property severely damaged, shutdown of facilities and services for less than 24 hours; and/or injuries/illnesses treatable with first aid Significance Low: minimal potential impact Medium: moderate potential impact High: widespread potential impact		

G.3 Vulnerability Assessment

The intent of this section is to assess the City’s vulnerability separately from that of the County as a whole, which has already been assessed in Chapter 5 of the Base Plan. This vulnerability assessment analyzes the population, property, and other assets at risk to hazards ranked of medium or high significance specific to the City.

The information to support the hazard identification and risk assessment was based on a combination of the previous LHMP for the City and jurisdiction specific information collected during the 2025 update. A Local Hazard Mitigation Plan Update Guide and associated worksheets were distributed to each participating municipality or special district to complete during the 2025 update process. Information collected was analyzed and summarized in order to identify and rank all the hazards within the County, as well as to rank the hazards and identify the related vulnerabilities unique to each jurisdiction.

Each participating jurisdiction was in support of the main hazard summary identified in the Base Plan (See Table 5.2). However, the hazard summary rankings for each jurisdictional annex may vary slightly due to specific hazard risk and vulnerabilities unique to each jurisdiction (See Table G-7).

Note: The hazard “Significance” reflects overall ranking for each hazard and is based on the City of San Luis Obispo LPT member input from the Data Collection Guide and the risk assessment developed during the planning process (see Chapter 5 of the Base Plan), which included a more detailed qualitative analysis with best available data.

G.3.1 Other Hazards

The following hazards in the base plan HIRA are not identified within this jurisdictional annex due to no risk and are not considered further for vulnerability assessment or mitigation actions:

- Coastal Storm/ Coastal Erosion/ Sea Level Rise
- Dam Incidents
- Tsunami and Seiche

G.3.2 Assets at Risk

This section considers San Luis Obispo's assets at risk, including values at risk, critical facilities and infrastructure, historic assets, economic assets, and growth and development trends. The HMPC used a variety of data to define a baseline against which all disaster impacts could be compared. If a catastrophic disaster was to occur in the Planning Area, this section describes significant assets exposed or at risk in the City of San Luis Obispo.

G.3.2.1 Values at Risk

The following data on property exposure is derived from the San Luis Obispo County 2024 Parcel and Assessor data. It is important to note that in the event of a disaster, it is generally the value of the infrastructure or improvements to the land that is of concern or at risk. Generally, the land itself is not a loss and is not included in the values below. Table G-8 shows the exposure of properties (e.g., the values at risk) broken down by property type for the City of San Luis Obispo.

Table G-8 City of San Luis Obispo Total Exposure by Property Type

PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE
Commercial	1,266	\$1,580,482,745	\$1,580,482,745	\$3,160,965,490
Exempt	77	\$55,796,301	\$55,796,301	\$111,592,602
Industrial	190	\$268,276,714	\$402,415,071	\$670,691,785
Mining	2	\$844,659	\$844,659	\$1,689,318
Mixed Use	1,211	\$387,479,969	\$387,479,969	\$774,959,938
Mobile/Manufactured Homes	171	\$31,076,092	\$15,538,046	\$46,614,138
Multi-Family Residential	1,203	\$861,685,345	\$430,842,673	\$1,292,528,018
Residential	11,179	\$3,293,935,454	\$1,646,967,727	\$4,940,903,181
Vacant Improved	149	\$75,764,493	-	\$75,764,493
Total	15,448	\$6,555,341,772	\$4,520,367,191	\$11,075,708,963

Source: San Luis Obispo County Assessor Data November 15, 2024, WSP GIS Analysis

G.3.2.2 Critical Facilities and Infrastructure

Critical Facilities are essential in providing utility or direction either during the response to an emergency or during the recovery operation. These facilities typically include hospitals, fire stations, and local law enforcement stations, and according to FEMA special consideration when formulating regulatory hazard mitigation and floodplain management plans should be given. See Section 5.2 of the Base Plan for more details on the definitions and categories of critical facilities.

An inventory of critical facilities in the city is provided in Table G-9 as well as illustrated in Figure G-1. Refer to Section 5.2 of the Base Plan for more information on the Assets used throughout this annex, including the definitions and categories of critical facilities, and the County-wide analyses.

Table G-9 City of San Luis Obispo's Critical Facilities Assets Summary by FEMA Lifeline

FEMA LIFELINE CATEGORY	COUNTS
Communications	19
Energy	-
Food, Hydration, Shelter	4

FEMA LIFELINE CATEGORY	COUNTS
Hazardous Material	4
Health and Medical	18
Safety and Security	36
Transportation	54
Water Systems	1
Total	136

Source: San Luis Obispo County, CalARP, HIFLD, National Bridge Inventory, National Inventory of Dams, FCWCD, WSP Analysis

G.3.2.3 High Potential Loss Facilities

High potential loss facilities are considered critical facilities that present significant risks if damaged and include nuclear power plants, dams, and military installations. The City has one classified high potential loss facility: The San Luis Obispo Wastewater Treatment Plant (WWTP). The WWTP is located within a 100-year floodplain and within a moderate liquefaction risk zone; however, other potential hazard impacts are low.

G.3.2.4 Transportation and Lifeline Facilities

The City contains a network of roadways and public transportation including the Pacific Coast Railway. US Highway 101, Highway 1, and State Route 227 (Broad Street) provide regional access to the City. The San Luis Obispo County Regional Airport serves the City and is located in the southern portion of the jurisdiction.

Lifeline Utility Systems are defined as those systems necessary to provide electric power, natural gas, water and wastewater, and other facilities and services that are essential to the well-being of the City. Lifeline utility systems within the City include:

- AM Transmission Towers (1)
- FM Transmission Towers (1)
- Microwave Service Towers (52)
- Wastewater Treatment Plants (1)
- Energy Commission Facilities (7)

G.3.2.5 Historic and Cultural Resources

The City of San Luis Obispo has a wealth of historic and culturally significant resources due to its rich and varied history. Such resources represent the City's diverse historical context from periods prior to Chumash settlement and Spanish colonization, through early development and mid-century growth that established many of the existing neighborhoods and set a precedent for community design. The City of San Luis Obispo Citywide Historic Context Statement (2014) identifies various historical factors that shaped the development of the area and provides a framework for the continuing process of identifying historic, architectural, and cultural resources in the City. The City has an active historic preservation program, and historic preservation is prioritized throughout City policy. City Zoning Regulations also establish the Historical Preservation Overlay Zone, which describes the allowed uses and property development standards within designated Historic Districts. Historic Districts within the City include Downtown Commercial District, the Mill Street District, the Old Town Neighborhood, the Little Italy District, the Monterey Heights District, the Mount Pleasanton/Anholm District, the Chinatown Historic District, and the Railroad Districts.

Historical resources in the context of the City are also identified by the National Register of Historic Places (NRHP), the California Register of Historic Resources (CRHR), and the County of San Luis Obispo's List of Historic Resources in addition to local designation. Such resources are

buildings, structures, objects, places, and areas that have an association with important persons, events in history, or cultural heritage, or have distinctive architecture, design or construction method. State and local registers of historic resources also identify Historical Points of Interest that have primarily local significance and interest in preservation. The City of San Luis Obispo has several registered national, state, and local sites of historic and cultural significance (Table G-10). County-wide historic resources are further detailed in Chapter 5.2, Asset Summary, of the Base Plan.

Table G-10 Historic Places

HISTORIC SITE	REGISTER	DATE LISTED	ADDRESS
Ah Louis Store	State/National	1965	800 Palm Street
Angel Myron House	National	1982	714 Buchon St.
Corral de Piedra	National	1978	S of San Luis Obispo on Price Canyon Rd.
Dallidet Adobe	State	1960	1185 Pacific Street
Jack Robert House	National	1992	536 Marsh St.
Mission San Luis Obispo De Tolosa	State	1939	751 Palm Street
Monday Club of San Luis Obispo	National	2016	1815 Monterey St.
Pacific Coast Railway Company Grain Warehouse	National	1988	65 Higuera St.
Pereira Octagon Barn	National	2014	4400 Octagon Way
Port San Luis Site	National	1978	Address Restricted
The Powerhouse	National	1993	Junction of S/ Perimeter Rd. and Cuesta Ave
Rancho Canada de los Osos y Pecho y Islay	National	1975	Address Restricted
San Luis Obispo Carnegie Library	National	1995	696 Monterey St.
Tribune Republic Building	National	1993	1763 Santa Barbara St.
William Shipsey House	National	2010	1266 Mill St.
Camp San Luis Obispo	State Point of Interest	1990	NA
Hollister Adobe	State Point of Interest	1972	NA

C.3.2.6 Natural Resources

Natural resources are important to include in benefit-cost analyses for future projects and may be used to leverage additional funding for projects that also contribute to community goals for protecting sensitive natural resources. Awareness of natural assets can lead to opportunities for meeting multiple objectives. For instance, protecting wetlands areas protects sensitive habitat as well as attenuates and stores floodwaters.

The City's landscape is made up of creeks, hills, valleys, and rich farmland that supports a variety of plants and animal species. The San Luis Obispo area contains a diverse array of naturally occurring biological communities and extensive open space areas including the Irish Hills Natural Reserve, the Islay Hills Open Space, South Hills Open Space, Charles A. and Mary R. Maino Open Space, Ferrini Ranch, and the Laguna Lake Park and Open Space. The City's many creeks provide sheltered corridors that allow wildlife to move between dispersed habitats and open space areas.

G.3.2.7 Economic Assets

California Polytechnic State University is the largest employer in the City of San Luis Obispo with nearly 3,000 employees. San Luis Coastal Unified School District employs 384 regular classified employees. The industrial sector including education services, healthcare, and social assistance are the largest employers in the City at approximately 20.2% of the total employers. In 2007, approximately 5,127 individuals were employed in educational services, health care, and social assistance jobs. The General Plan Land Use Element (LUE) for the City includes policies to accommodate a maximum population of 57,200 persons. Assuming a 0.5% growth rate, the City would reach the anticipated residential capacity by year 2057. Tourism is an increasing trend in the City due to the diverse range of activities, small-town appeal and recent development of several hotels near and in the downtown core. Loss of a major employer from a hazard impact would result in a significant rise in unemployment and loss in sales tax revenue.

G.3.3 Estimating Potential Losses

Section G.3.1 above describes San Luis Obispo's overall exposure in terms of number and value of structures. San Luis Obispo County parcel and assessor data were used to calculate the improved value of parcels. The most vulnerable structures are those in the floodplain (especially those that have been flooded in the past), unreinforced masonry buildings, and buildings built prior to the introduction of modern-day building codes. Impacts of past events and vulnerability to specific hazards are further discussed below. (See Base Plan Section 5 Hazard Identification and Risk Assessment for more detailed information about these hazards and their impacts on the County as a whole.)

G.3.3.1 Adverse Weather: Thunderstorm/Heavy Rain/Hail/Lightning/Dense Fog/Freeze

City of San Luis Obispo's overall significance rating for adverse weather is rated as **medium**. Adverse weather in the city usually occurs as localized thunderstorms that bring heavy rains and strong winds, most often during the winter and spring months. Heavy rain has historically produced extensive flooding in the city. Dense fog can result in reduced visibility and slick road conditions that increase the likelihood for traffic accidents. Freeze is rarely a threat to human life in the City but has the potential to impact agricultural operations where crop damage to high value products can be extensive. Over the last decade, the City of San Luis Obispo has experienced some of the warmest years on record, reflecting a broader trend of rising temperatures in the region. The tables below shows key climate variables such as extreme temperatures, precipitation totals, and the frequency of specific weather events.

Table G-11 San Luis Obispo Cal Poly Climate Summary Table – Weather (Period of Record: 10/01/1927 - 04/09/2025)

SUMMARY PERIOD	MONTHLY MEAN MAXIMUM TEMP.	MONTHLY MEAN MINIMUM TEMP.	DAILY EXTREME HIGH TEMP	DAILY EXTREME HIGH DATE	DAILY EXTREME LOW TEMP	DAILY EXTREME LOW DATE	MAXIMUM TEMP. ≥ 90°F MEAN # DAYS	MINIMUM TEMP. ≤ 32°F MEAN # DAYS
Winter	64.2°F	43°F	92°F	12/4/1958	17°F	12/23/1990	0	3.2
Spring	68.4°F	46.2°F	104°F	4/8/1989	28°F	3/1/1962	1.4	0.2
Summer	77.3°F	52.3°F	111°F	7/7/1989	35°F	6/29/1988	5	0
Fall	75.5°F	49.9°F	113°F	9/6/2020	23°F	11/24/2004	7	0.3
Annual	71.3°F	47.9°F	113°F	9/6/2020	17°F	12/23/1990	13.6	3.8

Source: Western Regional Climate Center (WRCC) <https://wrcc.dri.edu/>

* Winter is defined as December, January, and February

** Summer is defined as June, July, and August

Table G-12 San Luis Obispo Cal Poly Climate Summary Table – Precipitation (10/01/1927 - 04/09/2025)

SUMMARY PERIOD	PRECIP. MEAN	PRECIP. HIGH	PRECIP. HIGH YEAR	PRECIP. LOW	PRECIP. LOW YEAR	PRECIP. 1 DAY MAXIMUM	PRECIP. 1 DAY MAXIMUM DATE	PRECIP. ≥ 1.00 IN. MEAN # DAYS
Winter	13.15 in.	43.71 in.	1969	0.43 in.	1907	6.05 in.	1/9/2023	4.3
Spring	5.42 in.	18.36 in.	1995	0.05 in.	1997	4.75 in.	3/7/1911	1.5
Summer	0.18 in.	1.88 in.	1933	0 in.	1893	1.7 in.	6/5/1933	0
Fall	3.1 in.	9.51 in.	1972	0.01 in.	1980	3.58 in.	11/20/1946	0.9
Annual	22.02 in.	48.76 in.	1969	4.56 in.	2013	6.05 in.	1/9/2023	6.9

Source: Western Regional Climate Center (WRCC) <https://wrcc.dri.edu/>

* Winter is defined as December, January, and February

** Summer is defined as June, July, and August

G.3.3.2 Adverse Weather: High Wind/Tornado

The overall significance rating of high wind and tornado in the City of San Luis Obispo is rated **medium**. The city is subject to strong southeasterly winds associated with strong cold fronts and coastal storms, which generally occur during the winter months from November to February. Northwesterly winds that are typical of the central coast of California also occur throughout San Luis Obispo during the spring and summer. Both southeast and northwest wind events can reach sustained wind speeds of 35-45 mph with wind gusts of 65-75 mph within the city. Wind related events can have substantial destructive impacts, especially in urban areas where falling trees and branches can result in considerable property damage. While tornadoes are uncommon, past events demonstrate that the threat is possible in the planning area. Recorded tornadoes since then have typically been low severity and caused minor damage such as broken tree branches and minor structural and roof damage to buildings. Refer to Section 5.3.1 Adverse Weather, in the Base Plan for analysis related to tree mortality in the County of San Luis Obispo.

G.3.3.3 Adverse Weather: Extreme Heat

Extreme heat is a **medium** significance hazard for the City of San Luis Obispo. The average high summer temperature for the Cal Poly NOAA weather station is 77.3°F; however, temperatures up to 113°F have been recorded (see Table G-11). The city's 2024 Health Hazard Vulnerability Analysis identifies extreme summer weather as a frequent hazard, noting that high temperatures can exacerbate wildfire risks and necessitate Public Safety Power Shutoffs (PSPS), which may disrupt access to air conditioning and critical medical devices, particularly affecting rural and mobility-impaired residents. HMPC noted that majority of the residential properties in the city do not have air conditioning systems, and those that do are often equipped with swamp cooler-like systems that are unable to provide adequate cooling during extreme heat events. Additionally, the urban heat island effect, particularly in denser, built-up areas like downtown, can intensify heat exposure by increasing surface and ambient air temperatures, reducing nighttime cooling, and compounding the health risks of prolonged heat waves. Rising temperatures and more frequent heat waves are increasing the likelihood of more extreme heat events in the future.

These events pose a risk to public health, particularly for older adults, children, people with chronic illnesses, and outdoor workers, and can overwhelm local healthcare services. Extreme heat also strains infrastructure, increasing electricity demand and potentially triggering power

shutoffs that can impact cooling systems and medical equipment. Socially vulnerable communities, including low-income households and non-English speakers, are at higher risk due to limited access to resources like air conditioning and access to informational resources. Sectors like agriculture and tourism may also suffer from reduced productivity and visitation.

G.3.3.4 Agricultural Pest Infestation and Disease

The City of San Luis Obispo was given a significance ranking of **medium** by the HMPC for agricultural pest infestation, plant disease, and tree mortality. According to the United States Forest Service over 100 million trees have died in California and more continue to die due to many years of drought that have weakened trees and left millions of acres of forestland highly susceptible to insect attacks. The County of San Luis Obispo Assessor data shows that 11 structures with a total value of \$5,984,243 are in tree mortality hazard zones as shown in Table G-13. The City of San Luis Obispo land use designation is a mix of agriculture, open space, rural lands, and recreation. Having agricultural lands and open space throughout the county can harbor certain pests that target trees and other plants. Diseases such as Sudden Oak Death can spread if not contained, resulting in tree mortality and economic losses for the city as well as making these areas more vulnerable to wildfires and landslides. There are no critical facilities exposed to tree mortality hazard zones in the City of San Luis Obispo.

Table G-13 Properties Exposed to Tree Mortality Hazard Zones in the City of San Luis Obispo

PROPERTY TYPE	STRUCTURE COUNTY	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Commercial	5	\$2,013,882	\$2,013,882	\$4,027,764	
Mixed Use	1	\$10,840	\$10,840	\$21,680	
Residential	5	\$1,289,866	\$644,933	\$1,934,799	12
Total	11	\$3,314,588	\$2,669,655	\$5,984,243	12

Source: San Luis Obispo County, CAL FIRE, FRAP, TMTF October 2022, CalARP, HIFLD, NBI, NID, WSP Analysis

G.3.3.5 Biological Agents (Naturally Occurring)

The City of San Luis Obispo LPT gave biological agents a **medium** overall significance rating. Public health impacts due to biological agents are a recognized potential threat to the city. The city is largely reliant on the County's Emergency Preparedness Program, which supports the Public Health Department in the management and coordination of public health emergencies including natural disasters, technological disasters, bioterrorism incidents, and pandemics. Food and waterborne illnesses are major health problems that present significant health risks to the city as well as threats to regional food and water supply. More information on biological agents can be found in Section 5.3.6 of the base plan.

G.3.3.6 Drought and Water Storage

Periods of drought can have significant environmental, agricultural, health, economic, and social consequences. Prolonged drought has the potential to impact structures due to subsidence and can reduce water quality due to lower water flows and reduced pollutant dilution. The City has invested in a multi-source water supply including the Nacimiento Reservoir, the Whale Rock Reservoir, Santa Margarita Lake, and recycled water for landscape irrigation. Additionally, the City maintains historic groundwater wells in operable, standby positions for emergency use.

The water distribution system in the City of San Luis Obispo consists of 190 miles of pipelines, ten treated water storage tanks, seven pump stations, and over 2,000 fire hydrants. To maintain consistent pressure across the City, the system is divided into 15 pressure zones with

18 pressure regulating valves. The recycled water system is centered around the Water Resource Recovery Facility, which treats wastewater for irrigation and construction uses.

The City's 2020 Urban Water Management Plan identifies several areas for improvement, including again infrastructure and leak reduction. According to the plan, many pipelines have surpassed their expected lifespan, making replacement necessary to prevent leaks and service disruptions. However, the City does not project a supply shortfall under single or multiple dry year scenarios, as shown in Table G-14, due to conservative water planning.

Table G-14 Multiple Dry Year Supply and Demand Comparison

DROUGHT YEAR	SUPPLY/DEMAND	2020 (ACTUAL)	2025	2030	2035	2040
First Year	Supply Totals	10,143	10,337	10,537	10,587	10,637
	Demand Totals	4,817	7,272	7,713	8,191	8,624
	Difference	5,326	3,065	2,824	2,396	2,013
Second Year	Supply Totals	10,143	10,337	10,537	10,587	10,637
	Demand Totals	4,817	7,272	7,713	8,191	8,624
	Difference	5,326	3,065	2,824	2,396	2,013
Third Year	Supply Totals	10,143	10,337	10,537	10,587	10,637
	Demand Totals	4,817	7,272	7,713	8,191	8,624
	Difference	5,326	3,065	2,824	2,396	2,013
Fourth Year	Supply Totals	10,143	10,337	10,537	10,587	10,637
	Demand Totals	4,817	7,272	7,713	8,191	8,624
	Difference	5,326	3,065	2,824	2,396	2,013
Fifth Year	Supply Totals	10,143	10,337	10,537	10,587	10,637
	Demand Totals	4,817	7,272	7,713	8,191	8,624
	Difference	5,326	3,065	2,824	2,396	2,013

Source: City of San Luis Obispo 2020 Urban Water Management Plan

G.3.3.7 Earthquake and Liquefaction

Earthquake events have occurred in the City of San Luis Obispo in the past, including a number of magnitude 5.0 to 7.0 earthquakes. Historically, most of the earthquakes that have occurred near the City have originated from movement along the San Andreas Fault, which lies approximately 35 miles northeast of the City. The most recent major earthquake to affect San Luis Obispo occurred at 11:15:56 am Pacific Standard Time on December 22, 2003. The epicenter of the magnitude 6.5 earthquake was approximately 7 miles northeast of San Simeon at a depth of 4.7 miles (35.706N, 121.102W), 45 miles from San Luis Obispo. The City of San Luis Obispo experienced some minor damage. The main strand of the Los Osos fault zone, also known as the Edna fault zone, traverses the City near the intersection of Los Osos Valley Road and Foothill Boulevard. Field evaluations by the California Geological Survey (CGS) for the main strand of the Los Osos fault found evidence of movement in the last 11,000 years. This evidence of recent activity resulted in the establishment of an Earthquake Fault Zone by CGS in 1989 under the Alquist-Priolo Fault Zoning Act. The Los Osos fault specifically presents a high to very high fault rupture hazard to developments near and southwest of the Los Osos Valley Road area.

Table G-15 Seismic Hazard Designation by Property Type

SEISMIC DESIGNATION	PROPERTY TYPE	PROPERTY COUNT	IMPROVED VALUE
Los Osos Alquist-Priolo	Mixed Use	2	\$913,701
	Residential	34	\$13,886,883

SEISMIC DESIGNATION	PROPERTY TYPE	PROPERTY COUNT	IMPROVED VALUE
Total		36	\$14,800,584

Source: San Luis Obispo Assessor Data November 15, 2024, Dept. of Conservation, WSP GIS Analysis

In addition to being at risk of ground shaking as a result of a fault rupture, the City of San Luis Obispo is also susceptible to the effects of liquefaction. Significant swaths of the city are underlain by alluvium and other liquefiable sediments that may present a risk of liquefaction during ground shaking; however, liquefaction risk is generally classified as low to moderate. Liquefaction risk is visually displayed across the city in Figure G-2 below.

Based on the vulnerability analysis conducted, the city contains 15,448 improved parcels with a total estimated value of over \$11 billion exposed to liquefiable soils. 11,190 of these parcels are in moderate liquefaction susceptibility areas. There are also 136 critical facilities found in liquefaction susceptible areas. These details are summarized in Table G-16 and Table G-17 below.

Figure G-2 Liquefaction Risk in the City of San Luis Obispo

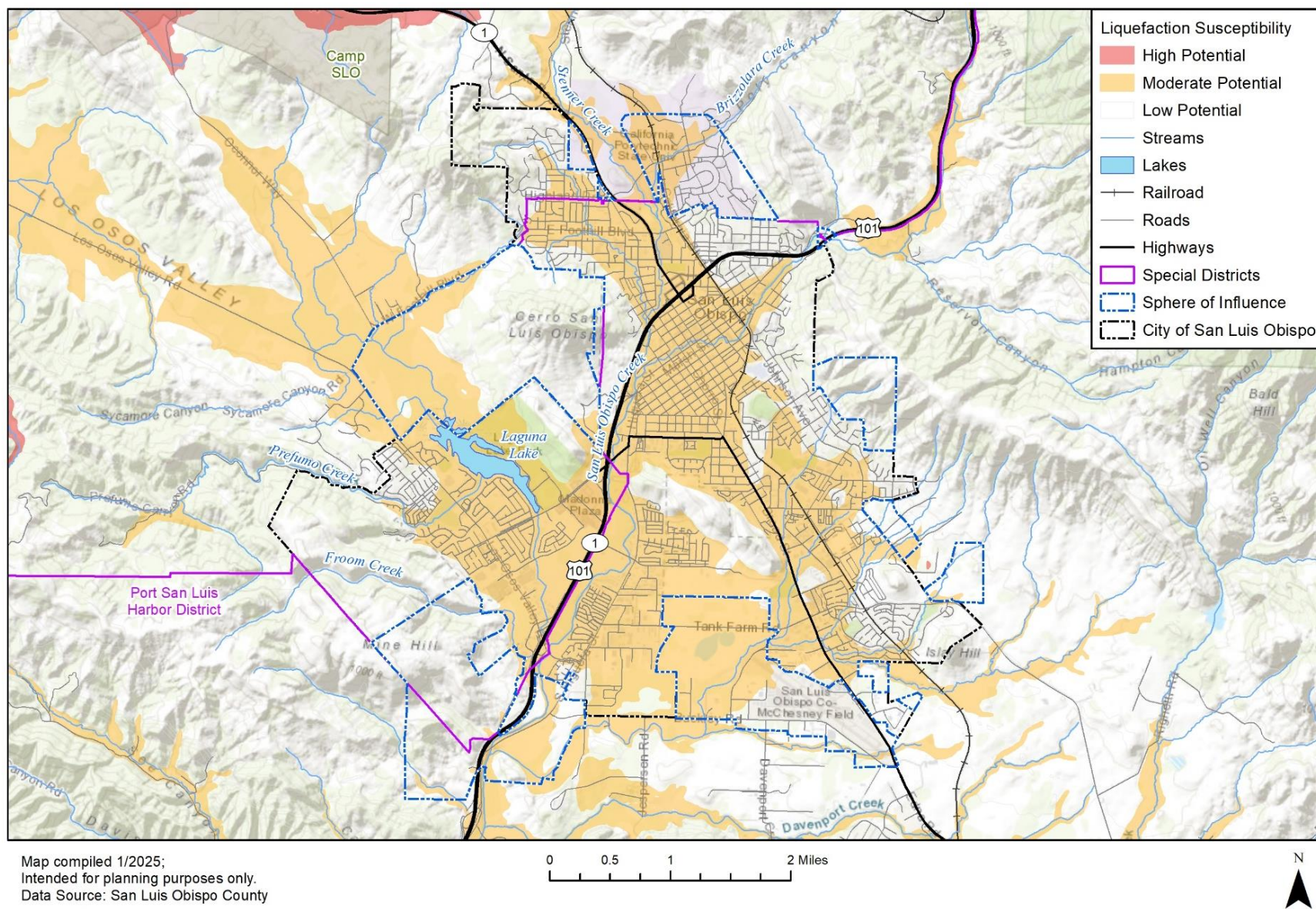


Table G-16 City of San Luis Obispo Improved Properties Exposed to Liquefaction Potential by Property Type

PROPERTY TYPE	STRUCTUR E COUNT HIGH	STRUCTUR E COUNT MODERAT E	STRUCTUR E COUNT LOW	TOTAL STRUCTUR E COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATIO N
Agricultural	-	-	-	0	\$0	\$0	\$0	-
Commercial	-	1,165	101	1,266	\$1,580,482,745	\$1,580,482,745	\$3,160,965,490	-
Exempt	-	59	18	77	\$55,796,301	\$55,796,301	\$111,592,602	-
Industrial	-	171	19	190	\$268,276,714	\$402,415,071	\$670,691,785	-
Mining	-	2	-	2	\$844,659	\$1,266,989	\$2,111,648	-
Mixed Use	-	910	301	1,211	\$387,479,969	\$387,479,969	\$774,959,938	-
Mobile/Manufactured Homes	-	162	9	171	\$31,076,092	\$15,538,046	\$46,614,138	409
Multi-Family Residential	-	1,009	194	1,203	\$861,685,345	\$430,842,673	\$1,292,528,018	2,875
Residential	-	7,577	3,602	11,179	\$3,293,935,454	\$1,646,967,727	\$4,940,903,181	26,718
Vacant Improved	-	135	14	149	\$75,764,493	\$0	\$75,764,493	-
Total	0	11,190	4,258	15,448	\$6,555,341,772	\$4,520,789,520	\$11,076,131,292	30,002

Source: San Luis Obispo Assessor Data November 15, 2024, WSP GIS Analysis

Table G-17 Critical Facility Assets Exposed to Liquefaction Susceptibility by FEMA Lifeline

LIQUEFACTION SUSCEPTIBILITY CATEGORY	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
Moderate Liquefaction Susceptibility	18	-	3	4	14	28	49	1	117
Low Liquefaction Susceptibility	1	-	1	-	4	8	5	-	19

Source: San Luis Obispo County, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis

C.3.3.8 Flood

The City remains highly vulnerable to both riverine and flash flooding. Riverine flooding, also known as overbank flooding, continues to be the most common type of flood hazard, typically resulting from storms that exceed the capacity of local creeks and drainage systems. Riverine floodplains in San Luis Obispo vary from narrow, confined channels in the hills to broader, flatter flood-prone areas within the City. The extent and intensity of flooding is influenced by watershed size, topography, local climate patterns, and urban development.

In addition to riverine flooding, San Luis Obispo is susceptible to flash flooding. Flash floods are characterized by a rapid rise in water levels, high flow velocities, and significant debris movement. These events can cause sudden, severe damage to trees, bridges, buildings, and transportation infrastructure. Contributing factors include intense rainfall, steep terrain, modified drainage networks, and post-wildfire conditions. Wildfire burn scars, which alter soil permeability and vegetation cover, further increase the risk of flash flooding and debris flows. Although dam failure is a potential flood risk in many areas, dam inundation mapping confirms that there are no dam failure zones located within the City.

The City has experienced significant flood events historically, including major floods in 1868, 1884, 1897, 1911, 1948, 1952, 1962, 1969, 1973, 1993, 1995, 1998, and 2001. The January and March 1995 floods caused extensive damage across the City, overtopping SLO Creek near Marsh and Higuera Streets, and resulting in nearly \$2.3 million in damages. The 1969 flooding event remains one of the most severe on record, with 39.79 inches of rain recorded over a two-month period and approximately \$6.92 million in damages within the SLO Creek watershed. The 1973 flood was even more damaging, with an estimated \$13.6 million in losses concentrated along Stenner Creek, Brizziolari Creek, Prefumo Creek, and See Canyon Creek.

Recent flooding events further highlight the City's ongoing exposure. In January 2023, widespread flooding occurred across San Luis Obispo, causing approximately \$30 million in damages to City facilities and infrastructure. Significant impacts to local businesses, transportation routes, and waterways were reported, with multiple road closures and long-term infrastructure repair needs identified. FEMA reimbursement was submitted for the public damages incurred during the 2023 storm.

San Luis Obispo continues to adapt its flood mitigation strategies, including updating its Climate Action and Safety Element in 2023, restoring San Luis Creek corridors impacted by the 2023 floods, and pursuing projects that enhance flood resilience while protecting natural floodplain functions.

The figure below illustrates parcels within the City that remain at risk of flooding during a 1% annual chance (100-year) or 0.2% annual chance (500-year) event based on the latest FEMA flood hazard maps, below.

Table G-18 City of San Luis Obispo 1% Annual Chance (100-Year) and 0.2% Annual Chance (500-Year) Flooding by Population and Parcel Type

PARCEL TYPE	PARCEL COUNT	IMPROVED VALUE	CONTENT VALUE	TOTAL VALUE	LOSS ESTIMATE	POP.
1% ANNUAL CHANCE (
Commercial	321	\$369,216,712	\$369,216,712	\$738,433,424	\$184,608,356	-
Exempt	18	\$7,326,945	\$7,326,945	\$14,653,890	\$3,663,473	-
Industrial	21	\$18,772,799	\$28,159,199	\$46,931,998	\$11,732,999	-
Mixed Use	85	\$41,335,514	\$41,335,514	\$82,671,028	\$20,667,757	-
Mobile/Manufactured Homes	6	\$925,141	\$462,571	\$1,387,712	\$346,928	14
Multi-Family Residential	103	\$67,536,190	\$33,768,095	\$101,304,285	\$25,326,071	246
Residential	406	\$107,862,728	\$53,931,364	\$161,794,092	\$40,448,523	970
Vacant Improved	13	\$30,430,549	\$0	\$30,430,549	\$7,607,637	-
Total	973	\$643,406,578	\$534,200,399	\$1,177,606,977	\$294,401,744	1,231
0.2% ANNUAL CHANCE (
Commercial	125	\$140,603,693	\$140,603,693	\$281,207,386	\$70,301,847	-
Exempt	4	\$16,441,274	\$16,441,274	\$32,882,548	\$8,220,637	-
Industrial	11	\$20,280,470	\$30,420,705	\$50,701,175	\$12,675,294	-
Mixed Use	64	\$14,435,912	\$14,435,912	\$28,871,824	\$7,217,956	-
Mobile/Manufactured Homes	1	\$274,003	\$137,002	\$411,005	\$102,751	2
Multi-Family Residential	168	\$72,657,952	\$36,328,976	\$108,986,928	\$27,246,732	402
Residential	1,122	\$287,505,983	\$143,752,992	\$431,258,975	\$107,814,744	2,682
Vacant Improved	14	\$3,939,335	\$0	\$3,939,335	\$984,834	-
TOTAL	1,509	\$556,138,622	\$382,120,553	\$938,259,175	\$234,564,794	3,085

Source: San Luis Obispo Assessor Data November 15, 2024, FEMA NFHL Effective Date 6/6/2024, WSP GIS Analysis

Values at Risk

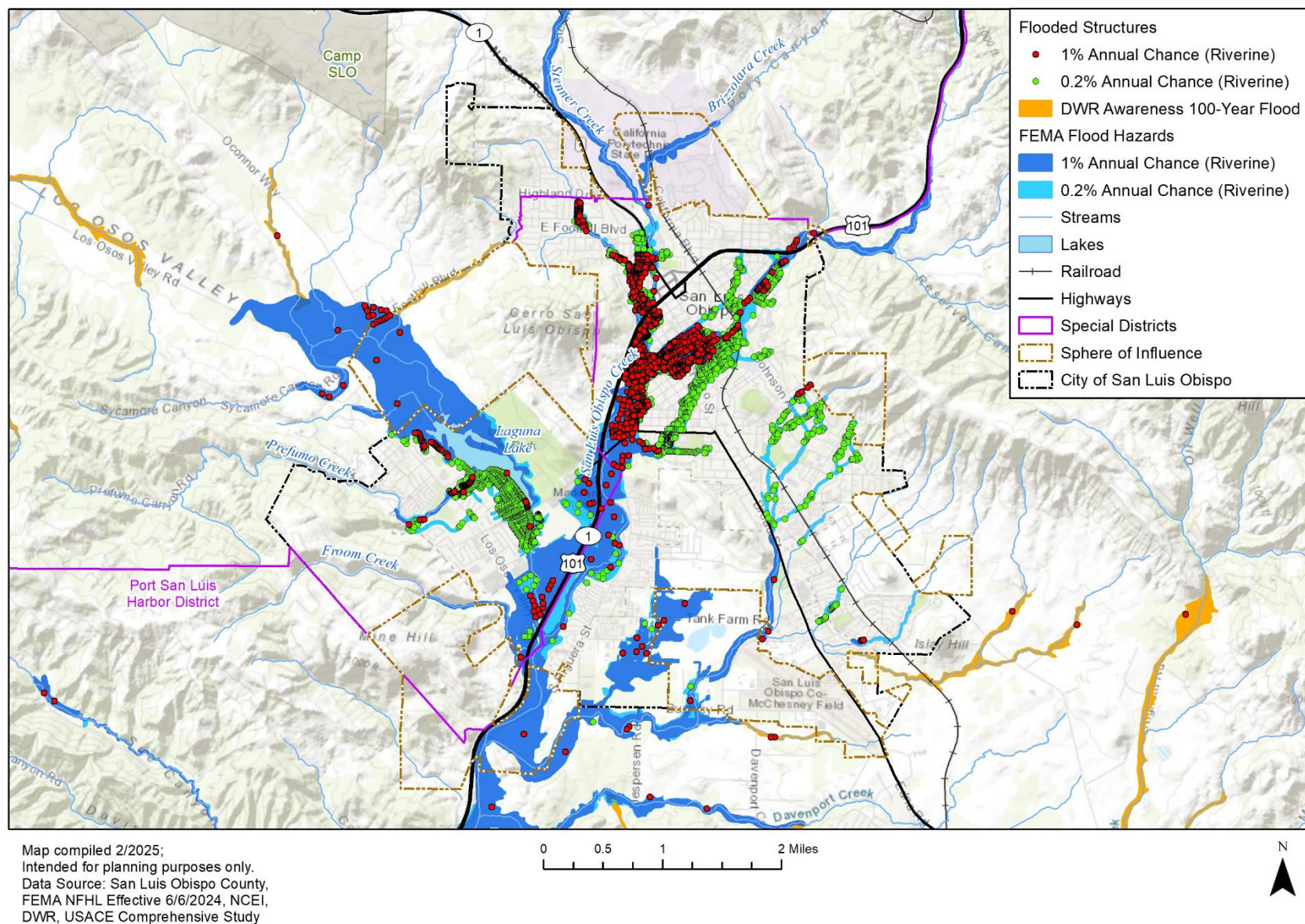
Under the 1% annual chance (100-year) flood scenario, 973 parcels in the City of San Luis Obispo are at risk, with a combined improved and content value of approximately \$1.18 billion. Estimated potential losses are approximately \$294.4 million. The largest share of value at risk is associated with commercial properties, representing over \$738 million in total value, followed by residential parcels with approximately \$162 million. Multi-family residential and mixed-use properties also contribute significantly to the overall exposure. Mobile and manufactured homes, while representing a small portion of the total value, are also at risk.

Under the 0.2% annual chance (500-year) flood scenario, exposure increases to 1,509 parcels with a total combined value of approximately \$938.3 million. Estimated potential losses are approximately \$234.6 million. Residential parcels represent the largest exposure under this scenario, accounting for approximately \$431 million in combined value. Commercial properties, multi-family residential, and industrial parcels also contribute significantly to overall risk.

Population at Risk

Under the 1% annual chance (100-year) flood event, an estimated 1,231 residents are at risk. The majority of the population exposure is associated with residential parcels, with approximately 970 residents at risk, followed by multi-family residential units contributing an estimated 246 residents. Mobile and manufactured homes account for an additional 14 residents at risk.

Under the 0.2% annual chance (500-year) flood event, the estimated population at risk increases to approximately 3,085 residents. Residential parcels again represent the largest share, with approximately 2,682 residents at risk. Multi-family residential parcels account for approximately 402 residents, and mobile/manufactured homes contribute 2 residents to the total population at risk.

Figure G-3 City of San Luis Obispo DWR & FEMA Flood Hazards with Flooded Structures

Insurance Coverage, Claims Paid, and Repetitive Losses

The City joined the NFIP on April 16, 1979. The current effective map is dated June 6, 2024. As of May 12, 2025, NFIP records show 430 active flood insurance policies in the City, totaling \$140,599,00 in coverage. Of these, 308 policies are in A zones, and the rest are in B, C, or X zones.

Since joining the NFIP, the City has recorded 155 flood loss claims totaling \$811,001. According to the OpenFEMA dataset accessed in 2024, the City does not currently have any Repetitive Loss (RL) or Severe Repetitive Loss (SRL) properties. Two repetitive loss properties were noted in the previous version of this plan.

The City of San Luis Obispo joined the Community Rating System (CRS) on October 1, 1991. Currently the City has a Class 7 rating, providing a 15% discount.

Critical Facilities at Risk

Table G-19 and Table G-20 show critical facility assets exposed to 1% and 0.2% flood hazards by FEMA lifeline.

Table G-19 City of San Luis Obispo Critical Facility Assets Exposed to FEMA Riverine 1% Flood Hazards by FEMA Lifelines

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
City of San Luis Obispo	11	-	-	-	2	1	31	1	46
Total	11	-	-	-	2	1	31	1	46

Source: San Luis Obispo County, FEMA NFHL Effective Date 6/6/2024, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis

Table G-20 City of San Luis Obispo Critical Facility Assets Exposed to FEMA Riverine 0.2% Flood Hazards by FEMA Lifelines

JURISDICTION	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
City of San Luis Obispo	1	-	1	-	1	3	10	-	16
Total	1	-	1	-	1	3	10	-	16

Source: San Luis Obispo County, FEMA NFHL Effective Date 6/6/2024, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis

Under the FEMA 1% annual chance (100-year) riverine flood hazard, a total of 46 critical facilities in the City of San Luis Obispo are at risk. The largest exposure is within the Transportation sector, with 31 facilities identified. Communications infrastructure accounts for 11 facilities at risk, while Health and Medical, Safety and Security, and Water Systems sectors each have smaller numbers of exposed assets. No critical facilities in the Energy, Food, Hydration, Shelter, or Hazardous Material sectors are identified within the 1% floodplain.

Under the 0.2% annual chance (500-year) flood hazard, 16 critical facilities are exposed. Transportation again represents the largest sector, with 10 facilities at risk. Additional exposure includes three Safety and Security facilities, one Communications facility, one Health and Medical facility, and one Food, Hydration, and Shelter facility. No critical facilities in the Energy, Hazardous Material, or Water Systems sectors are identified under the 0.2% flood scenario. The analysis shows that Transportation infrastructure is consistently the most vulnerable critical facility sector under both flood scenarios, underscoring the importance of targeted mitigation efforts for essential roadways and transit facilities.

G.3.3.9 Landslides and Debris Flow

The City of San Luis Obispo LPT gave the City of San Luis Obispo a **low** overall significance rating for landslide risk. The City of San Luis Obispo along with most of the other jurisdictions was greatly impacted by the winter storms that happened in 2023 and 2024. Multiple parts of the county had flooded roads and debris flow incidents as atmospheric rivers caused intense precipitation. The City of San Luis Obispo is surrounded by areas with a high potential for a landslide incident as shown in Figure G-4. There are 5,319 structures with a total value of over \$3.9 billion exposed to landslide potential as shown in Table G-21. There are 136 critical facilities in the City of San Luis Obispo, with 19 structures in high landslide potential zones as shown in Table G-22.

Table G-21 Improved Properties Exposed to Landslide Potential

PROPERTY TYPE	STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Agricultural	0	\$0	\$0	\$0	-
Commercial	122	\$304,565,160	\$304,565,160	\$609,130,320	-
Exempt	18	\$13,203,078	\$13,203,078	\$26,406,156	-
Industrial	20	\$32,756,005	\$49,134,008	\$81,890,013	-
Mining	0	\$0	\$0	\$0	-
Mixed Use	422	\$174,269,209	\$174,269,209	\$348,538,418	-
Mobile/Manufactured Homes	15	\$10,831,722	\$5,415,861	\$16,247,583	36
Multi-Family Residential	220	\$244,077,438	\$122,038,719	\$366,116,157	526
Residential	4,489	\$1,635,021,290	\$817,510,645	\$2,452,531,935	10,729
Vacant Improved	13	\$8,321,239	\$0	\$8,321,239	-
Total	5,319	\$2,423,045,141	\$1,486,136,680	\$3,909,181,821	11,290

Source: San Luis Obispo Assessor Data November 15, 2024, WSP GIS Analysis

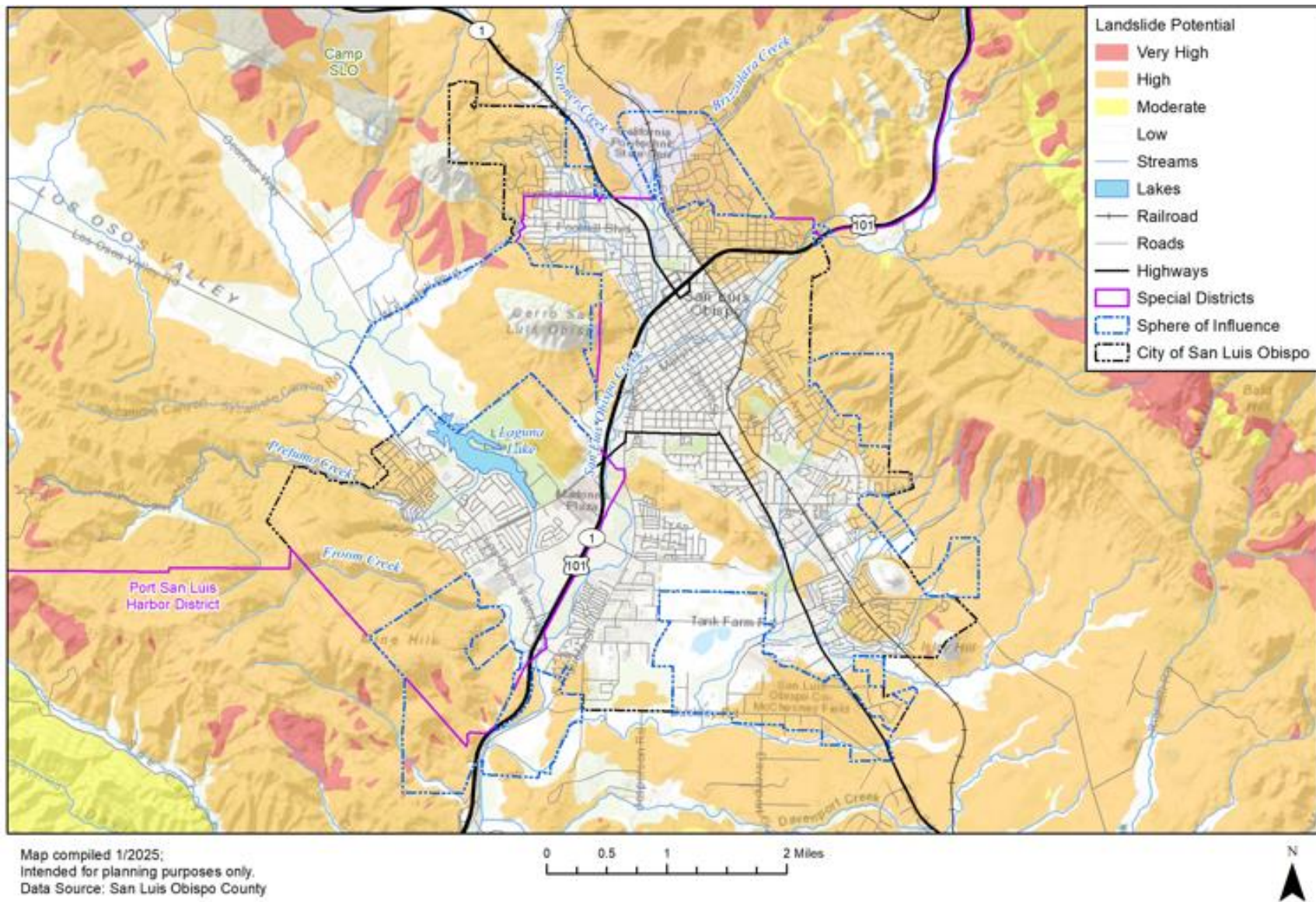
Table G-22 Critical Facility Assets Exposed to Landslide Potential by FEMA Lifelines

LANDSLIDE POTENTIAL	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
High	1	-	1	-	4	8	5	-	19

LANDSLIDE POTENTIAL	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
Low	18	-	3	4	14	28	49	1	117
TOTAL									136

Source: San Luis Obispo County, CalARP, HIFLD, NBI, NID, FCWCD, WSP Analysis

Figure G-4 City of San Luis Obispo Landslide Potential



G.3.3.10 Subsidence

The City of San Luis Obispo LPT gave subsidence a **low** overall significance rating. The City of San Luis Obispo is leading the Groundwater Cleanup Project, an initiative to ensure responsible use of groundwater in the San Luis Obispo Valley Groundwater Basin (Basin). Although subsidence isn't a major concern for the City of San Luis Obispo and is rated low, it will still be important to monitor groundwater extraction, as this is the main cause of subsidence in California. This cleanup project will help to monitor extraction, as well as expand local water use through the building of two new groundwater supply wells, with expected full operation in 2026. This work is being funded by a \$6.6 million grant from the California State Water Resources Control Board. Additionally, land elevation should also be monitored to prevent any subsidence-related hazards in the city.

G.3.3.11 Wildfire

The risk of wildland fires is greatest near the City limits where development meets rural areas of combustible vegetation. Most of the community is within one mile of a High or Very High Fire Hazard Severity Zone, which indicates significant risk to wildland fire. The City of San Luis Obispo is confronted with one of the more hazardous wildfire risks in the County due to its location near the foothills of the Santa Lucia Mountains and the Irish Hills, with increased wildfire risk in these foothills as well as on Chumash Peak, Bishop Peak, Cerro San Luis, and Islay Hill.

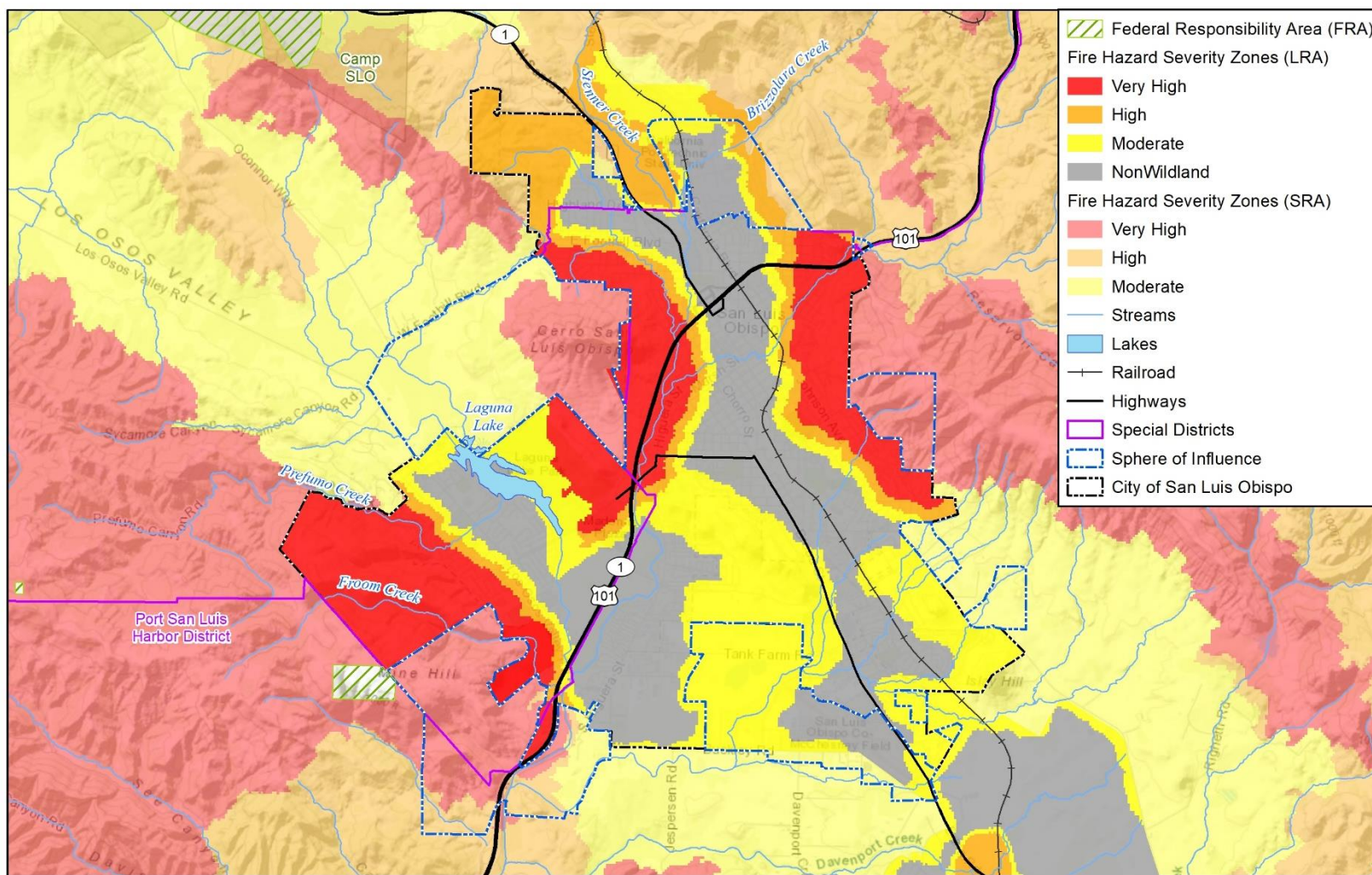
Following the methodology described in the wildfire hazard Section 5.3.15 Wildfire of the Base Plan, along with the GIS parcel analysis discussed in more detail under Section 5.2 Asset Summary, a wildfire vulnerability analysis for the City of San Luis Obispo was completed. The assessment was performed using GIS, and results indicate that there were neither parcels nor critical facilities in wildfire severity hazard zones within the boundaries of the City of San Luis Obispo. However, wildfire hazards have been rated by the City's planning team as holding **High Significance** based on the community's experience and historical evidence.

In the City of San Luis Obispo, 7,705 properties are situated within wildfire hazard severity zones ranging from moderate to very high. Of these 2,443 are located in the Very High Fire Severity Zone, while 1,502 properties fall within the High Fire Severity Zone. Collectively, these properties represent a total assessed value of \$5,578,627,912 and impact approximately 15,870 residents across all fire hazard severity zones. Table G-23 shows the properties in the City Exposed to Fire Severity. Figure G-5 depicts the Fire Hazard Severity Zones in the City of San Luis Obispo.

Table G-23 City of San Luis Obispo Improved Properties Exposed to Fire Hazard Severity Zone by Property Type

PROPERTY TYPE	STRUCTURE COUNT VERY HIGH	STRUCTURE COUNT HIGH	STRUCTURE COUNT MODERATE	TOTAL STRUCTURE COUNT	IMPROVED VALUE	ESTIMATED CONTENT VALUE	TOTAL VALUE	POPULATION
Commercial	179	82	216	477	\$773,728,409	\$773,728,409	\$1,547,456,818	-
Exempt	18	9	12	39	\$35,641,898	\$35,641,898	\$71,283,796	-
Industrial	12	5	36	53	\$71,015,340	\$106,523,010	\$177,538,350	-
Mixed Use	49	45	310	404	\$130,108,028	\$130,108,028	\$260,216,056	-
Mobile/Manufactured Homes	5	3	48	56	\$14,350,406	\$7,175,203	\$21,525,609	134
Multi-Family Residential	108	130	177	415	\$294,574,455	\$147,287,228	\$441,861,683	992
Residential	2,058	1,216	2,895	6,169	\$2,006,784,285	\$1,003,392,143	\$3,010,176,428	14,744
Vacant Improved	14	12	66	92	\$48,569,173	\$0	\$48,569,173	-
Total	2,443	1,502	3,760	7,705	\$3,374,771,994	\$2,203,855,918	\$5,578,627,912	15,870

Source: San Luis Obispo Assessor Data November 15, 2024, CAL FIRE - FHSZ Phase 3 March 10, 2025, WSP GIS Analysis

Figure G-5 City of San Luis Obispo Fire Hazard Severity Zones

Map compiled 3/2025;
 Intended for planning purposes only.
 Data Source: San Luis Obispo County, CAL FIRE,
 Phase 3 as Identified by the Office of the State Fire Marshal March 10, 2025,
 FHSZSRA_23_3, FHSZLRA25_Phase3_v1

0 0.5 1 2 Miles



Table G-24 shows critical facilities in City of San Luis Obispo that are exposed to fire hazard severity, categorizing them by severity level and facility type. The exposure of these critical assets to wildfire hazards poses significant risks to transportation. The table below shows that there is a total of seventy (70) critical facilities exposed to fire hazard severity zones, thirty-four (34) of which fall in the very high fire severity zone rating.

Table G-24 Critical Facilities Assets Exposed to Fire Hazard Severity Zones

FIRE HAZARD SEVERITY ZONE	COMMUNICATIONS	ENERGY	FOOD, HYDRATION, SHELTER	HAZARDOUS MATERIAL	HEALTH AND MEDICAL	SAFETY AND SECURITY	TRANSPORTATION	WATER SYSTEMS	TOTAL COUNT
Very High	4	-	1	-	5	8	15	1	34
High	1	-	1	-	4	6	4	-	16
Moderate	2	-	-	1	2	3	12	-	20
Total	7	0	2	1	11	17	31	1	70

Source: San Luis Obispo County, CAL FIRE - FHSZ Phase 3 March 10, 2025, CalARP, HIFLD, NBI, NID, WSP Analysis

G.3.3.12 Human Caused: Hazardous Materials

The City of San Luis Obispo LPT rated hazardous materials incidents as having **medium** overall significance. The Cal OES Spill Release Reporting Center reports 134 hazardous materials incidents in the City of San Luis Obispo from January 1st, 2019 through December 20th, 2024. This likely excludes a number of unreported minor spills. The 134 reported incidents constitutes 29.5% of the hazardous materials incidents reported countywide during the same time frame and averages out to roughly 22.3 incidents per year.

There is one CalARP regulated facilities and no EPA Risk Management Plan (RMP) facilities located in the city. Additionally, the city sits within the Emergency Planning Zone for the Diablo Canyon Nuclear Power Plant.

G.4 Capability Assessment

Capabilities are the programs and policies currently in use to reduce hazard impacts or that could be used to implement hazard mitigation activities. This capability assessment is divided into six sections: regulatory mitigation capabilities, administrative and technical mitigation capabilities, fiscal mitigation capabilities, mitigation outreach and partnerships, other mitigation efforts, and opportunities for enhancement.

To develop this capability assessment, the jurisdictional planning representatives used a matrix of common mitigation activities to inventory policies or programs in place. The team then supplemented this inventory by reviewing additional existing policies, regulations, plans, and programs to determine if they contributed to reducing hazard-related losses.

During the plan update process, this inventory was reviewed by the jurisdictional planning representatives and WSP consultant team staff to update information where applicable and note ways in which these capabilities have improved or expanded. In summarizing current capabilities and identifying gaps, the jurisdictional planning representatives also considered their ability to expand or improve upon existing policies and programs as potential new mitigation strategies. The City of San Luis Obispo's updated capabilities are summarized below.

G.4.1 Regulatory Mitigation Capabilities

Table G-25 City of San Luis Obispo Regulatory Mitigation Capabilities

REGULATORY TOOL (ORDINANCES, CODES, PLANS)	YES/NO	COMMENTS
General Plan	Yes	Land Use Element, Circulation Element, Housing Element, Noise Element, Safety Element, Conservation and Open Space Element, Parks and Recreation Element, and Water and Wastewater Element
Zoning ordinance	Yes	Title 17: Zoning Regulations of the City of San Luis Obispo Municipal Code
Subdivision ordinance	Yes	Title 16: Subdivisions, Subdivision Regulations
Growth management ordinance	Yes	Chapter 17.144: Residential Growth Management Regulations
Floodplain ordinance	Yes	Chapter 17.78: Flood Damage Prevention
Other special purpose ordinance (stormwater, steep slope, wildfire)	Yes	<p>Ordinance 1543: Chapter 12.08 Urban Storm Water Quality Management and Discharge Control</p> <p>Ordinance 1490: Chapter 16.20 Physical Improvement Standards and Procedures - 16.20.040 Grading plan</p> <p>Ordinance 1490: Chapter 16.18 General Subdivision Design Standards</p> <p>Chapter 17.70.090: Hillside Development Standards</p> <p>Ordinances 1630 (part) and 1595 (part), Chapter 15.04 Construction and Fire Prevention Regulations</p> <p>A Stormwater Control Plan is required to be submitted for all projects to demonstrate exemption or level of compliance required. Post Construction Regulation outlines Stormwater Control Plan content in Performance Requirement 2 - Sections B.3.c, Performance Requirement 3 - Section B.4.g, and Performance Requirement 4 - Section B.5.b. Through the Stormwater Control Plan submittal, applicants demonstrate compliance with Post Construction Requirements or exemption status.</p> <p>Drainage Design Manual (Design Manual) has been developed to provide criteria and planning procedures for floodplains, waterways, channels, and closed conduits in the San Luis Obispo Creek watershed. This Drainage Manual will be used by the City of San Luis Obispo and San Luis Obispo County Flood Control and Water Conservation District Zone 9 (SLO/Zone 9) staff in their internal design of stormwater drainage, flood management and bank stabilization and restoration projects.</p>

REGULATORY TOOL (ORDINANCES, CODES, PLANS)	YES/NO	COMMENTS
Building code	Yes	Title 15, Buildings and Construction of the City of San Luis Obispo Municipal Code. California Building Codes: CA Residential Code (2016); CA Plumbing Code (2015 UPC); CA Mechanical Code (2015 UMC); CA Electrical Code (2014 NEC); CA Energy Code (2016); CA Green Building Code (2016); CA Fire Code (2015 IFC); CA Reference Standards Code (2016)
Fire department ISO rating	Yes	2
Erosion or sediment control program	Yes	Chapter 17.78 Flood Damage Prevention Chapter 12.08 Urban Storm Water Quality Management and Discharge Control Chapter 16.20 Physical Improvement Standards and Procedures Ordinance 1543, Code Section 12.08.150 Requirement to prevent, control, and reduce storm water and pollutants City of SLO Waterway Management Plan and Drainage Design Manual Annual silt removal to maintain hydraulic capacity in San Luis Obispo creek beds to reduce flooding. City has 14 total sites in the management plan and complete silt removal on a rotating basis.
Stormwater management program	Yes	Chapter 12.08: Stormwater Regulations & Requirements
Site plan review requirements	Yes	Title 22 Article 3
Capital improvements plan	Yes	Department of Public Works 5-Year Strategic Plan
Economic development plan	Yes	5-Year Economic Development Strategic Plan Updated in 2015
Local emergency operations plan	Yes	City of San Luis Obispo Emergency Operations Plan (2011)
Other special plans	Yes	Open Space Conservation Plans, Climate Action Plan, Urban Water Management and Water Shortage Contingency Plans, Waterway Management Plan, Utilities Department Emergency Plan, Unreinforced Masonry Hazard Mitigation Program, Disaster Preparedness Program, Community Wildfire Preparedness Plan, Greenbelt Protection Program
Flood insurance study or other engineering study for streams	Yes	2012 updated in 2024
Elevation certificates (for floodplain development)	Yes	Chapter 17.78: Flood Damage Prevention

REGULATORY TOOL (ORDINANCES, CODES, PLANS)	YES/NO	COMMENTS
Other	Yes	Water System Vulnerability Assessment, Floodplain Management Educational Program

Discussion on Existing Building Codes, Land Use and Development Regulations

The City of San Luis Obispo enforces a comprehensive set of building codes, policies, and development regulations. Building construction is regulated under the 2023 San Luis Obispo Building Construction and Fire Prevention Code, which incorporates the California Building Standards Code (Title 24), as well as the 2021 International Building Codes. The City's Building & Safety Division manages plan reviews permits, and inspections to enforce compliance. Land use is governed by Title 17 of the Municipal Code, which defines zoning districts such as residential, commercial, industrial, and mixed use. Also, development projects are reviewed for consistency with the General Plan and applicable zoning regulations and may require approval from administrative staff, the Planning Commission, or the City Council. See also discussion in Development Trends subsection.

G.4.2 Administrative/Technical Mitigation Capabilities

There are several key departments and staff within the City organization that serve a specific role in developing and implementing hazard mitigation activities. City government consists of approximately 399 full-time equivalent employees and 10 departments: Police, Fire, Public Works, Public Utilities, Community Development, Parks and Recreation, Human Resources, Finance and Information Technology, City Administration, and the City Attorney's Office. With a clear set of policies in place and a diverse range of staff available to mitigate identified hazards within the City, the City has many staff with specific training on the use of specialized equipment or particular areas of expertise that are essential in implementing mitigation actions. Technical resources are considered to be physical infrastructure or equipment available to the City to aid in implementing hazard mitigation or disaster response activities. The table below identifies the personnel resources and technical resources that increase capabilities related to mitigation and loss prevention in the City.

Table G-26 City of San Luis Obispo Administrative/Technical Mitigation Capabilities

PERSONNEL RESOURCES	YES/NO	DEPARTMENT/POSITION
Planner/engineer with knowledge of land development/land management practices	Yes	Staff with knowledge of land development practices and local land development patterns.
Engineer/professional trained in construction practices related to buildings and/or infrastructure	Yes	Professionals trained in construction practices associated with buildings and infrastructure and in storm water compliance during construction and operation of buildings and infrastructure projects.
Planner/engineer/scientist with an understanding of natural hazards	Yes	
Personnel skilled in GIS	Yes	Provide accurate and comprehensive Geographic Information System for managing resources, make informed decisions, and expedite work processes.
Full time building official	Yes	Community Development Department, Chief Building Official

PERSONNEL RESOURCES	YES/NO	DEPARTMENT/POSITION
Floodplain manager	Yes	Community Development Department, Supervising Civil Engineer
Emergency manager	Yes	Accomplished through contract services. City maintains funding for the 2019-21 Financial Plan to maintain an Emergency Manager position equivalent to 0.5 FTE.
Grant writer	Yes	Accomplished through Contract Services. The City maintains two-year contracts with both a local grant writing firm and grant advocate firm based out of Irvine, CA.
Mutual Aid Agreements	Yes	Establishes agreements among local jurisdictions to assist in emergency response efforts in neighboring jurisdictions during times of need. San Luis Obispo currently participates in the following mutual aid agreements: 1. California Master Mutual Aid Agreement, 2. SLO County Fire and Rescue Mutual Aid Agreement, 3. California Fire Assistance Agreement, 4. Region 1A Law Enforcement Mutual Aid Agreement, 5. Public Works Mutual Aid Agreement, 6. California Emergency Managers Mutual Aid Agreement, 7. Regional Disaster Medical/Health Coordination.
Code Enforcement and Neighborhood Services	Yes	Staff with training and expertise in identifying hazards to health, safety, and welfare, and assisting property owners with achieving code and policy compliance.
Fire Marshal	Yes	Measure G funded position, manages and directs the activities of the Fire Prevention Bureau. Oversees fire safety inspections for all facilities in the City. Ensures that development in the City meets fire safety standards. Obtains funding and implements wildland fuel reduction projects. Directs and oversees fire investigations.
Fire Inspectors	Yes	Professionals trained in fire prevention techniques and construction practices associated with buildings and infrastructure. Inspect all multi-family residential buildings and public assembly buildings. Review building plans and inspect construction projects for fire and life safety and proper installation of fire protection systems. Investigate fire for cause and origin.
Hazardous Materials Coordinator		Staff designated to inspect facilities and containers storing hazardous materials. There are approximately 244 facilities located within the City that are permitted for the use of hazardous materials.
Network Administrators	Yes	Provide technical support for wired/wireless network and radios.
Park Rangers	Yes	Staff familiar with brush clearance requirements and conditions of City-owned open space.
Police Officers	Yes	Emergency response to provide protection of life, property and address community safety/security needs. Work cooperatively with other first responders for an organized response to disaster mitigation plans.

PERSONNEL RESOURCES	YES/NO	DEPARTMENT/POSITION
Dispatchers	Yes	Provide communication links to responding personnel to transfer emergency information and direct resources as needed.
Construction Inspection	Yes	Ensures storm water compliance during construction of City projects, and private grading and encroachment projects.
Public Works Department – Department Operations Centers (DOC)	Yes	The Public Works DOC coordinates responses to road flooding and related problems during a storm with road crews, the County, Caltrans, and the California Highway Patrol. They also support other emergency response operations coordinated through the City's EOC.
Storm Water Compliance	Yes	Staff responsibility assigned to ensure storm water compliance during construction and operation of buildings and infrastructure projects.
Other personnel	Yes	Operations: Field staff provide assistance to Public Works DOC for flood response, and City EOC for general emergency response.
GIS Data Resources (Hazard areas, critical facilities, land use, building footprints, etc.)	Yes	
Warning systems/services (Reverse 9-11, outdoor warning signals)	Yes	
Voluntary Organizations Active in Disaster	Yes	Provides disaster preparedness courses to residents and community members and provides care and shelter to those threatened or impacted by natural hazards. Volunteer and private agencies are essential to the area's mutual aid system by providing for the care and shelter needs of disaster victims. Organizations active in San Luis Obispo include the American Red Cross and Salvation Army.

G.4.3 Fiscal Mitigation Capabilities

There are multiple financial and funding opportunities for the City to mitigate or respond to natural hazards. These capabilities include local revenues from the general fund, or the receipt of grant funds from state or federal agencies. The City's financial planning process includes a two-year goal setting and budget development based on community and council priorities. The City's five-year fiscal forecast identifies the City's forecast of revenues, expenditures, and changes in fund balance. The general fund receives revenues from a variety of sources including taxes (sales, property, transient occupancy, business, utility users), subventions and grants (vehicle license fees, gas tax, and other subventions), service charges (development review fees, recreation fees), and other revenues (fines, interest earnings, and rents). The City has and will continue to utilize the two-year goal setting and budget process to prioritize expenditures needed to mitigate future hazards. In the event of a natural disaster and a need for immediate City response, the City has the financial capacity to utilize reserve funds, when authorized by the City Council. The City has previously utilized the following financial resources to implement hazard mitigation activities. The added revenues to the General Fund from Measure "G" have allowed the City to financially support major improvements in the areas of public safety, flood protection, and open space preservation. Financial resources to mitigate

hazards: the following table identifies financial tools or resources that the City could potentially use to help fund mitigation activities.

Table G-27 City of San Luis Obispo Fiscal Mitigation Capabilities

FINANCIAL RESOURCES	ACCESSIBLE/ELIGIBLE TO USE (YES/NO)	COMMENTS
Community Development Block Grants	Yes	The City continues to seek grant opportunities through the CDBG program and identify potential eligible projects that would fund mitigation activities to benefit the health and welfare of the community.
Capital improvements project funding	Yes	The Capital Improvement Plan (CIP) enables the City to plan, schedule, and finance capital projects to ensure cost effectiveness and conformance with established plans and policies. The City's budget process guides the capital priorities through community input, Council goal setting, Local Revenue Measure priorities, and the biennially adopted Major City Goal work programs. The City's CIP includes all planned infrastructure projects over a five-year period. The first two years identify those projects that are planned to be funded and/or completed during the adopted two-year financial plan. The latter three years serve as the framework for future Financial Plans' capital budgets. The plan represents a phased approach to funding the projects needed to maintain the City's infrastructure and major facilities over the entire five-year period.
Authority to levy taxes for specific purposes	Yes	Taxes for specific purposes can be levied with authorization from the City Council and further approval through a local ballot measure.
Fees for water, sewer, gas, or electric services	Yes	The City's utilities department provides water and wastewater services to the residents and businesses of San Luis Obispo. Water and sewer revenues are collected to support operations and capital improvements, with rates reviewed on an annual basis and approved by the City Council. These revenues from customer water and sewer use are utilized by the utilities department to maintain, improve, expand and replace components of the City's water and wastewater infrastructure system, including improvements made to protect from natural hazards.
Impact fees for new development	Yes	New development projects proposed in the City affect the City's ability to provide adequate essential services (e.g. transportation, water and wastewater, and open space). To ensure these essential services can adequately serve the City's existing and future community needs, a series of development impact fees are levied on new development projects.
Incur debt through general obligation bonds	Yes	Debt can be incurred through general obligation bonds with authorization from the City Council and further approval through a local ballot measure.
Incur debt through special tax bonds	Yes	Debt can be incurred through special tax bonds with authorization from the City Council and further approval through a local ballot measure.

FINANCIAL RESOURCES	ACCESSIBLE/ELIGIBLE TO USE (YES/NO)	COMMENTS
Incur debt through private activities	Yes	City Financial Policy allows debt to be incurred through private activities with approval from City Council
Withhold spending in hazard prone areas	Yes	Policy is accessible with authorization from City Council.
General Fund (including Measure G Funding)	Yes	In 2006, City voters approved measure Y to preserve and enhance essential City services by establishing a 1/2 –cent City sales tax. In the 2011/12 fiscal year, measure Y generated approximately \$6.2 million in revenue. This funding has been used in recent years for public safety, infrastructure maintenance, traffic congestion relief, neighborhood code enforcement and open space acquisition project. Many of the projects funded through measure Y revenues are considered to help mitigate hazard throughout the community. In 2014 Measure Y was approved to be extended through ballot measure G, which will sunset in 2022 unless a new measure is passed to continue the collection of additional sales tax.
Reserve Funds	Yes	The City's budget and fiscal policies includes a requirement to maintain adequate fund reserves for both general and enterprise funds. The minimum reserve level is 20% of annual operating expenditures.
Building Permit Inspection and Review Fees	Yes	Fees are collected by the planning and building divisions of the community development department to inspect and review construction documents on proposed projects within the City. The collection of these fees ensures buildings are designed and constructed in a manner consistent with applicable components of the municipal code and helps the department to recover staff costs associated with review and inspection.

G.4.4 National Flood Insurance Program

The City has been an NFIP participating community since 1973 and will continue to comply with the NFIP. This includes ongoing activities such as enforcing local floodplain development regulations, including issuing permits for appropriate development in Special Flood Hazard Areas and ensuring that this development is mitigated in accordance with the regulations. This will also include periodic reviews of the floodplain ordinance to ensure that it is clear and up to date and reflects new or revised flood hazard mapping. The goals of the NFIP are to reduce future flood damage through floodplain management and to provide people in participating communities with flood insurance. Community participation is voluntary. The city is also part of the Community Rating System (CRS), currently rated at Class 7. The goals of the CRS are to reduce flood damages to insurable property, strengthen and support the insurance aspects of the NFIP, and encourage a comprehensive approach to floodplain management. The City of San Luis Obispo maintains full compliance with the NFIP through Sections 17.84.010- 17.84.170 within Chapter 17.84 Flood Damage Prevention Regulations of the San Luis Obispo Municipal Code, which sets forth means to reduce losses from floods. These standards focus on areas located within or near the 100-year floodplain. Section 8.12.010-8.12.010 of the Municipal Code

provides a mechanism for the City to require the removal of dangerous obstructions in streambeds that have the potential to obstruct water flow.

Following flood or other damage events, the City of San Luis Obispo enforces substantial improvement/ substantial damage provisions by evaluating damaged properties to determine if they meet thresholds requiring them to comply with updated floodplain management standards. If substantial damage is determined, properties must undergo upgrades to meet current floodplain standards before they can be repaired or rebuilt. This process helps to reduce future risk by ensuring that post-event repairs and reconstructions contribute to long-term flood resilience.

FEMA insures properties against flooding losses through the NFIP. As part of the process to reduce or eliminate repetitive flooding to structures across the United States, FEMA has developed an official Repetitive Loss Strategy. The purpose behind the national strategy is to identify, catalog, and propose mitigation measures to reduce flood losses due to the relatively few structures that represent the majority of claims from the National Flood Insurance Fund. A Repetitive Loss property is defined by FEMA as a “property for which two or more NFIP losses of at least \$1,000 each have been paid within any 10-year period since 1978.” The City of San Luis Obispo has two Repetitive Loss properties. As a CRS requirement, the City Public Works Department sends community outreach notifications and letters to property owners in repetitive loss areas, including the City’s Mid Higuera Area, to inform residents of flooding and to offer ways in which property owners can prepare for and reduce the damage from repetitive flooding. In addition, the Public Works Department conducted storm drain improvements as part of a Capital Improvements Project that helped with flood control in the Mid Higuera Area, an area of repetitive flooding. FEMA also defines Severe Repetitive Loss properties; however, the City does not have any Severe Repetitive Loss properties.

G.4.5 Mitigation Outreach and Partnerships

Throughout the planning process of the Multi-jurisdictional HMP, the City participated in local outreach by promoting public meetings and circulating the Public Draft of the HMP for public comment and review. Public comments have been addressed and have been incorporated into the final HMP, where applicable. To further support implementation of hazard mitigation activities, the City has established strong partnerships with its neighboring jurisdictions, San Luis Obispo County, and multiple state organizations such as the California Highway Patrol, Cal Poly, CalFire, and Caltrans to collectively address local hazards. These partnerships have been formalized through the following:

- Mutual Aid Agreements
- Voluntary Organizations Active in Disaster
- San Luis Obispo County Community Fire Sage Council
- Department Operations Centers (DOC)

The City of San Luis Obispo also coordinates with many external (local, state, federal, and private sector) agencies which have capabilities to support hazard mitigation activities. Many of these agencies participated in the hazard mitigation planning process to update this plan, including the following:

- County of San Luis Obispo – Airports
- County of San Luis Obispo – Office of Emergency Services
- County of San Luis Obispo – Public Health Department
- Cal Poly – City & Regional Planning Department
- Cal Poly – Administration and Finance
- French Hospital Medical Center

- American Red Cross
- Sierra Vista Regional Medical Center
- San Luis Coastal Unified School District
- California Highway Patrol
- Pacific Gas and Electric Company (PG&E)

G.4.6 Other Mitigation Efforts

In addition to the plan and policy resources available to the City to mitigate hazards, the City has developed or participated in several hazard mitigation programs including:

- Unreinforced Masonry Hazard Mitigation Program
- Disaster Preparedness Program
- Floodplain Management Educational Program
- San Luis Obispo Chamber of Commerce Business Continuity Planning
- County Public Health Emergency Preparedness Advisory Committee
- National Flood Insurance Program (NFIP) and FEMA Repetitive Loss Properties
- Community Wildfire Protection Program
- Greenbelt Protection Program

G.4.7 Opportunities for Enhancement

Based on capability assessment, the city has several existing mechanisms in place that help to mitigate hazards. There are also opportunities for the city to expand or improve on these policies and programs to further protect the community. Future improvements may include providing training for staff members related to hazards or hazard mitigation grant funding in partnership with the County and Cal OES. Additional training opportunities will help to inform city staff members on how best to integrate hazard information and mitigation projects into their departments. Continuing to train city staff on mitigation and the hazards that pose a risk to the City will lead to more informed staff members who can better communicate this information to the public. The City could also consider options to improve the CRS classification to potentially further lower the cost of flood insurance for residents.

G.5 Mitigation Strategy

G.5.1 Mitigation Goals and Objectives

The City of San Luis Obispo Planning Team decided to use the goals provided in its Climate Adaptation and Safety Element as its mitigation goals for this plan update. The following are the City of San Luis Obispo's 2025 mitigation goals:

Goal 1: *Public Safety*. Minimize injury and loss of life, damage to public and private property, and social and economic disruptions resulting from injury, death, and property damage.

Goal 2: *Community Resilience*. All community members are enabled and empowered to prepare for, respond to, and recover from disruptions while seizing opportunities to thrive in changing conditions.

Goal 3: *City Government Resilience*. The City's facilities, infrastructure, and operations are resilient, innovative, and continue to cost-effectively provide core functions and services for all community members in times of acute disaster and ongoing disruptions.

Goal 4: *Environmental Justice*. To foster a diverse, equitable, and healthy community where those who are disproportionately affected by natural hazards and climate change have the resources and capacity to participate in public processes and have an active role in preparing and responding to future impacts.

Goal 5: *Natural Systems*. The natural environment sustains and supports ecological and community health, safety, and natural beauty, provides equitable access to nature, and can adapt and keep pace with a dynamic, changing climate.

Goal 6: *Built Environment*. Community buildings, public spaces and transportation systems can withstand the natural hazards and escalating impacts of climate change, provide places of refuge, foster social cohesiveness, minimize injury and loss of life, and equitably protect personal and community assets.

G.5.1.1 Continued Compliance with the National Flood Insurance Program (NFIP)

The City has been an NFIP participating community since 1973 and will continue to comply with the NFIP. This includes ongoing activities such as enforcing local floodplain development regulations, including issuing permits for appropriate development in Special Flood Hazard Areas and ensuring that this development is mitigated in accordance with the regulations. This will also include periodic reviews of the floodplain ordinance to ensure that it is clear and up to date and reflects new or revised flood hazard mapping.

G.5.2 Completed 2019 Mitigation Actions

During the 2025 planning process the City of San Luis Obispo Local Planning Team reviewed all the mitigation actions from the 2019 LHMP. The review indicated the city has completed two of the 26 mitigation actions from the 2019 LHMP and made continued progress in implementing mitigation projects and building the community's resilience to disasters.

Table G-28 City of San Luis Obispo Completed Mitigation Actions

2019 ACTION ID	HAZARD(S) ADDRESSED	MITIGATION ACTION TITLE	LEAD AGENCY	ACTION STATUS NOTES
SL.5	Adverse Weather: Thunderstorm, Adverse Weather: High Wind, Adverse Weather: Extreme Heat, Biological Agents, Earthquake, Flood, Wildfire, Hazardous Materials	Establish ongoing Disaster Service Worker training program to include training for City staff to deal with emergencies as well as contribute to risk reduction measures.	Fire	Completed. Training on this subject will continue regularly.
SL.14	Earthquake, Flood	Develop and provide managers of mobile home parks with information on how to improve the seismic performance of	Community Development	Completed. Included in the City's Climate Adaption and Safety Element.

2019 ACTION ID	HAZARD(S) ADDRESSED	MITIGATION ACTION TITLE	LEAD AGENCY	ACTION STATUS NOTES
		mobile homes and awareness of flood risk.		

G.5.3 Mitigation Actions

The City of San Luis Obispo Local Planning Team identified and prioritized 17 new mitigation actions based on the 2025 risk assessment and is continuing 24 actions from the 2019 planning process. New and existing actions were prioritized using the process described in Section 7.2.1 of the Base Plan. The mitigation actions are detailed in the table below and identify implementation strategies, the responsible agency, potential funding, estimated cost, and implementation schedule.

Table G-29 City of San Luis Obispo's Mitigation Action Plan

MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
SL.1	Adverse Weather: Thunderstorm, Adverse Weather: High Wind, Adverse Weather: Extreme Heat, Biological Agents, Earthquake, Flood, Wildfire, Haz Mat	Regularly review and continue to maintain consistency between the Safety Element, Municipal Code, zoning regulations, hazard area maps, and LHMP implementation strategies. Added 10/2016: Review the implementation and impacts of SB1069 Land use zoning	Community Development/Public Works /Fire	Little to no cost. Staff Time/Dept. Budget	Medium	1-3 years	Annual Implementation. Safety Element (now the Climate Adaptation and Safety Element) was updated.
SL.2	Adverse Weather: Thunderstorm, Adverse Weather: High Wind, Adverse Weather: Extreme Heat, Biological Agents, Earthquake, Flood, Wildfire, Haz Mat	Train all City employees including fire fighters, police officers, building inspectors, and public works and utilities staff to levels appropriate for their hazard mitigation tasks and responsibilities.	Fire	Little to no cost. Staff Time/Dept. Budget	Low	1-3 years	In Progress. This program will be part of the Emergency Manager job functions throughout the next Financial Plan - FY 25/27
SL.3	Adverse Weather: Thunderstorm, Adverse Weather: High Wind, Adverse Weather: Extreme Heat, Earthquake, Flood, Wildfire, Haz Mat	Provide training for City staff who apply its building regulations and planning standards, emphasizing the lessons learned in locations that have experienced disasters	Fire / Community Development /Public Works	Little to no cost. Staff Time/Dept. Budget	Low	1 yr.	In Progress. No changes to report.

MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
SL.4	Adverse Weather: Thunderstorm, Adverse Weather: High Wind, Adverse Weather: Extreme Heat, Biological Agents, Earthquake, Flood, Wildfire, Haz Mat	Conduct disaster-preparedness exercises for the types of hazards discussed in this LHMP.	Fire	Little to no cost. Staff Time/Dept. Budget	Medium	1 yr.	Annual Implementation.FR-POD have been completed each of the last two years, leveraging personnel from across the organization.
SL.5	Adverse Weather: Thunderstorm, Adverse Weather: High Wind, Adverse Weather: Extreme Heat, Biological Agents, Earthquake, Flood, Wildfire, Haz Mat	Review funding opportunities and establish centralized internal procedures to coordinate efforts for securing funds that support risk reduction measures.	Admin. - Finance	Little to no cost. General Funds/FEMA HMA	High	1 yr.	In Progress. No changes to report.
SL.6	Adverse Weather: Thunderstorm, Adverse Weather: High Wind, Adverse Weather: Extreme Heat Biological Agents, Earthquake, Flood, Wildfire, Haz Mat	Identify hazard mitigation projects eligible for grants as part of the Capital Improvement Program planning process.	Public Works/ Utilities	Little to no cost. Cal OES/FEMA: Up to \$2 Million at WRRF	High	3-5 years	In Progress. Multiple ongoing projects underway including Mid-Higuera bypass, flood risk reduction in Perfumo Creek, San Luis Creek fuels reduction, San Luis Drive retaining wall reconstruction, etc.

MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
SL.7	Adverse Weather: Thunderstorm, Adverse Weather: High Wind, Adverse Weather: Extreme Heat, Earthquake, Flood, Haz Mat	Assess structural capacity of key assets (including bridges) and pursue infrastructure improvements as necessary.	Public Works/ Community Development	Less than \$10,000.General Fund	Medium	3-5 years	In Progress. The City continues to prioritize asset maintenance and replacement. Toward that end, the City has begun work on the Mid-Higuera Bypass project to address flooding in the area.
SL.8	Adverse Weather: Thunderstorm, Adverse Weather: High Wind, Adverse Weather: Extreme Heat Biological Agents, Earthquake, Flood, Wildfire, Haz Mat	Establish a funded program or mechanism to distribute public information regarding risk reduction activities and projects at City-sponsored events. Identify materials available for use at public education workshops. Coordinate messaging with external agencies such as the American Red Cross and Volunteer Organizations Active in Disasters.	Fire	Little to no cost. General Fund	High	1-2 years	In Progress. No changes to report.
SL.9	Adverse Weather: Thunderstorm, Adverse Weather: High Wind, Adverse Weather: Extreme Heat Biological Agents, Earthquake, Flood, Wildfire, Haz Mat	Support the efforts and education of people with access and functional needs to prepare for disasters.	Fire	Little to no cost. Staff Time/Dept. Budget	High	1 yr.	In Progress. No changes to report.

MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
SL.10	Adverse Weather: Thunderstorm, Adverse Weather: High Wind, Adverse Weather: Extreme Heat Biological Agents, Earthquake, Flood, Wildfire, Haz Mat	Educate the community on individual preparedness and response to deal with emergencies at times when professional responders would be overwhelmed.	Fire	Little to no cost. General Fund	High	1-2 years	In Progress. No changes to report.
SL.11	Adverse Weather: Thunderstorm, Adverse Weather: High Wind, Adverse Weather: Extreme Heat Biological Agents, Earthquake, Flood, Wildfire, Haz Mat	Offer seminars and/or resources to assist local / small businesses in planning for continuity of operations and emergency preparedness.	Fire	Little to no cost. General Fund	High	1-2 years	In Progress. Initiate involvement of Emergency Manager along with PD in DTA meetings.
SL.12	Adverse Weather: Thunderstorm, Adverse Weather: High Wind, Adverse Weather: Extreme Heat Biological Agents, Earthquake, Flood, Wildfire, Haz Mat	Continue to enforce local codes, ordinances, and standards pertaining to safe development and resiliency to natural and human-caused hazards.	Community Development/Fire	Little to no cost. General Funds/FEMA HMA	High	1-2 years	In Progress. Reviewing Defensible Space and Home Hardening ordinances as part of the Fire Code adoption in FY 25/26.

MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
SL.13	Earthquake, Wildfire, Adverse Weather: Thunderstorm, Adverse Weather: High Wind, Adverse Weather: Extreme Heat	Invest in redundant facility and equipment energy security at critical facilities throughout the City. By providing grid independent onsite energy, storage, and energy management systems, and by providing a planning and financing framework for future investments, the City will be able maintain uninterrupted operations during times of electricity or natural gas grid instability.	Fire; Police; Public Works; Utilities; Administration; Parks And Recreation	\$1,000,000; California Energy Commission Central Coast Community Energy	Medium	3-5 yrs.	In Progress. A number of the City's critical infrastructure sites are/have been equipped with backup generators.
SL.14	Earthquake	Continue to implement the Unreinforced Masonry Hazard Mitigation Plan and strengthen buildings identified in Levels A and B.	Community Development / Fire	\$10,000 to \$50,000. General Funds/FEMA HMA	Medium	2-3 yrs.	In Progress. See SL. 13 response.
SL.15	Flood	Develop and carry out environmentally sensitive flood reduction programs.	Administration - Natural Resources	\$10,000 to \$50,000.FEMA HMA	Medium	2-3 yrs.	In Progress. No changes to report.
SL.16	Haz Mat	Continue requiring businesses that use, store, or transport hazardous materials to ensure that adequate measures are taken to protect public health and safety.	Fire	Little to no cost. Certified Unified Program Agency (CUPA)	High	Annual implementation	Annual Implementation. Fire Dept. CUPA Participating Agency completes 100% of permitted facility inspections annually to assure compliance with the Fire Code and state regulations. The Fire Dept. is subject to audit by the County CUPA and has passed all recent audits.

MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
SL.17	Haz Mat	Coordinate with allied agencies to prepare for hazardous materials incidents. Reference City EOP and Training and Exercise Plan; Maintain participation in County hazardous materials team	Fire	Less than \$10,000.Certified Unified Program Agency (CUPA)	Medium	1 yr.	Annual Implementation. Fire Dept. continues to remain a part of the County Hazardous Materials Response Team.
SL.18	Haz Mat	Maintain City's web site and other outlets with information regarding the safe handling and disposal of household chemicals.	Fire	Little to no cost. Staff Time/Dept. Budget	Low	1 yr.	In Progress. Utilities Division is heading this effort.
SL.19	Wildfire	Enhance partnerships with CalFire and the local Fire Safe Council for fuel reduction efforts.	Fire	Little to no cost. Cal Fire / FireSafe Grants	Medium	1 yr.	In Progress. Multiple cultural burns conducted as part of fuel reduction efforts on City Open Spaces.
SL.20	Wildfire, Drought	Support ongoing urban forest maintenance and tree trimming programs, to include planting drought-resistant trees and plants.	Public Works - Urban Forestry / Fire / Parks & Recreation / Natural Resources	Less than \$10,000.General Fund	Medium	1-2 yrs.	In Progress. No changes to report.
SL.21	Wildfire	Continue to conduct current fuel management programs and investigate and apply new and emerging fuel management techniques.	Fire/Natural Resources Director/Parks and Recreation	\$10,000 to \$50,000.FEMA and Fire Safe Council grants	High	1 yr.	In Progress. Staff applied for a grant through the Coastal Conservancy for an updated to the CWPP. Also applying for the Federal Community Wildfire Defense Grant.
SL.22	Wildfire	Require an enhanced fire protection plan in Local Very High Fire Severity Zones.	Fire	Less than \$10,000.Staff Time/Dept. Budget	High	1 yr.	In Progress. LRA maps have been released - reevaluating fuel management programs and techniques.

MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
SL.23	Biological Agents	Continue offering free flu vaccines to City employees.	Human Resources	Less than \$10,000. County Program	Low	Annual implementation	Annual Implementation. No changes to report.
SL.24	Biological Agents	Educate and encourage City employees to maintain a healthy work environment by utilizing sick and other leave benefits to avoid coming to work when sick or contagious and encouraging employees to develop plans for caring for sick family members taking care of ill family members.	Human Resources	Little to no cost. General Fund	Low	Annual implementation	Annual Implementation. No changes to report.
SL.25	Adverse Weather: Thunderstorm/Heavy Rain/Hail/Lightning/Dense Fog/Freeze, Landslides and Debris Flow, Wildfire	Assess and Mitigate Post Wildfire Debris Flow. Conduct an assessment to identify key impacts areas in the city from a post-wildfire debris flow scenario and implications on stormwater runoff. Assessment would be used to develop pre-disaster mitigation measures, which could include rapid reforestation and stabilization of burned areas, communication and coordination with residents and businesses, and development of analysis to predict debris flow events.	CDD & Office of Sustainability	\$50,000 to \$100,000. FEMA Hazard Mitigation Assistance Grant (HMGP)	High	3-5 years	New in 2025
SL.26	Adverse Weather: Extreme	Urban Heat Island Mitigation: Develop and implement Urban Heat Island Mitigation programs that provide accessible cooling to the public.	Community Development and Fire	Little to no cost.	Medium	2-3 years	New in 2025

MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
SL.27	Adverse Weather: Thunderstorm/Heavy Rain/Hail/Lightning/Dense Fog/Freeze, Adverse Weather: High Wind/Tornado, Adverse Weather: Extreme Heat, Earthquake, Landslides and Debris Flow, Wildfire	Climate Resilience Hubs: Collaborate across organizations to create Resilience Hubs that will help vulnerable populations during extreme climate events.	Office of Sustainability	Over \$1,000,000.FEMA Hazard Mitigation Assistance Grant (HMGP), Local Funds, Private Non-Profit	Medium	More than 5 years	New in 2025
SL.28	Agricultural Pest Infestation and Disease	Climate Smart Pest Management: Implement Climate-Smart Pest Management practices in City Open Space Properties.	Office of Sustainability	Little to no cost.	High	1-2 years	New in 2025

MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
SL.29	Adverse Weather: Thunderstorm/ Heavy Rain/ Hail/ Lightning/ Dense Fog/ Freeze, Adverse Weather: High Wind/Tornado, Adverse Weather: Extreme Heat, Biological Incidents, Drought and Water Shortage, Earthquake, Flooding Dam/ Levee Failure, Landslides and Debris Flow, Subsidence, Wildfire, Hazardous Materials Incident	Create a Community Resilience Fund to provide grants for organizations and individuals that aim to initiate community efforts in public safety, disaster recovery, and climate change.	Administration	Local Funds, In-Kind (donated), Private Non-Profit	Medium	3-5 Years	New in 2025
SL.30	Wildfire	Implement the Community Wildfire Protection Program and Vegetation Management Plan to protect residents from future wildfires.	Fire Department and Office of Sustainability	Little to no cost.	High	1-2 years	New in 2025

MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
SL.31	Adverse Weather: Thunderstorm/ Heavy Rain/ Hail/ Lightning/ Dense Fog/Freeze	Prepare community members for large storm events by developing an early warning flood monitoring system and neighborhood readiness plans.	Fire and Community Development	Little to no cost.	High	2-3 years	New in 2025
SL.32	Earthquake, Hazardous Materials Incident	Earthquake Design and Planning: Incorporate climate models and hazard impact assessments in the design and planning of maintenance and upgrades of public utility conveyance systems.	Utilities	Little to no cost.	High	3-5 years	New in 2025
SL.33	Adverse Weather: Thunderstorm/ Heavy Rain/ Hail/ Lightning/ Dense Fog/ Freeze, Flooding Dam/ Levee Failure, Landslides and Debris Flow	Flood and Runoff Management: Manage flood risk and stormwater runoff through vegetation management, riparian restoration, and open space conservation.	CDD & Office of Sustainability	Little to no cost.	Medium	1-2 years	New in 2025
SL.34	Adverse Weather: Extreme Heat	Expand the City's Green and Healthy Buildings Program to create safe, cool, and healthy buildings.	Office of Sustainability	Little to no cost.	Low	2-3 years	New in 2025
SL.35	Earthquake, Landslides and Debris Flow	Update the City's Hillside Planning Program to ensure orderly development along with City's hillside areas, prioritizing slope stability, safe access, circulation, and evacuation routes.	Community Development	Little to no cost.	High	2-3 years	New in 2025
SL.36	Adverse Weather: Extreme Heat	Implement a defensible space and home hardening program	Fire Department	Little to no cost.	High	1 year	New in 2025

MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
SL.37	Adverse Weather: Thunderstorm/ Heavy Rain/ Hail/ Lightning/ Dense Fog/ Freeze, Adverse Weather: High Wind/Tornado, Adverse Weather: Extreme Heat, Earthquake, Flooding Dam/ Levee Failure, Wildfire	Evaluate and update critical public infrastructure and City's engineering standards to be better adapted to future changes in climate such as extreme heat, flooding, etc.	Community Development	Little to no cost.	Medium	2-3 years	New in 2025
SL.38	Adverse Weather: Thunderstorm/ Heavy Rain/ Hail/ Lightning/ Dense Fog/ Freeze, Adverse Weather: High Wind/Tornado, Adverse Weather: Extreme Heat, Biological Incidents, Flooding Dam/Levee Failure, Wildfire	Incorporate holistic approaches to open space management to prepare and respond to issues associated with climate change.	Office of Sustainability	Little to no cost.	Medium	1 year	New in 2025

MITIGATION ACTION NUMBER	PRIMARY HAZARD(S) MITIGATED	DESCRIPTIONS/BACKGROUND/BENEFITS	LEAD AGENCY & PARTNERS	ESTIMATED COST & POTENTIAL FUNDING SOURCES	2025 PRIORITY	TIMELINE	STATUS/IMPLEMENTATION NOTES
SL.39	Adverse Weather: Thunderstorm/ Heavy Rain/ Hail/ Lightning/ Dense Fog/ Freeze, Adverse Weather: High Wind/Tornado, Adverse Weather: Extreme Heat, Earthquake, Flooding Dam/Levee Failure, Landslides and Debris Flow, Wildfire, Hazardous Materials Incident	Develop a post disaster management plan to include activities like clearing, collecting, and removing debris after a storm/climate event.	CSG	Little to no cost.	Medium	2-3 years	New in 2025
SL.40	Wildfire	Traditional Ecological Knowledge: Partner with local Tribal bodies to incorporate Traditional Ecological Knowledge in Open Space Management and fuels reduction activities.	Office of Sustainability	Little to no cost.	Medium	1 year	New in 2025
SL.41	Adverse Weather: Thunderstorm/ Heavy Rain/ Hail/ Lightning/ Dense Fog/Freeze, Earthquake	Waterway Management Plan: Update Volumes 1, 2, and 3 of the Waterway Management Plan, and implement critical projects and programs identified therein.	Office of Sustainability	Little to no cost.	Medium	2-3 years	New in 2025

G.6 Implementation and Maintenance

Moving forward, the City will use the mitigation action table in the previous section to track progress on implementation of each project. Implementation of the plan overall is discussed in Section 7 in the Base Plan.

G.6.1 Incorporation into Existing Planning Mechanisms

The information contained within this plan, including results from the Vulnerability Assessment and the Mitigation Strategy, will be used by the city to help inform updates and the development of local plans, programs and policies. The Engineering Division may utilize the hazard information when implementing the City's Community Investment Program and the Planning and Building Divisions may utilize the hazard information when reviewing a site plan or other type of development applications. The city will also incorporate this LHMP into the Safety Element of their General Plan, as recommended by Assembly Bill (AB) 2140. This enables the City of San Luis Obispo to qualify for additional funding through the California Disaster Assistance Act should the State determine there to be a need and/or additional funding to be available.

California State Assembly Bill 162 requires the General Plan Land Use Element to identify existing and proposed uses and flood mitigation strategies within the 100-year floodplain. The HMP should be referenced and used to inform the Land Use Element in order to meet this requirement. California State Senate Bill 1241 requires the Safety Element to incorporate wildfire hazard considerations for State Responsibility Areas (SRAs) and lands within very high fire severity zones. These areas are already depicted within the Safety Element and this Annex. They will be reviewed and updated as appropriate during the future updates to both of these documents. Whenever there are substantive changes to the County HMP or this Annex, those involved in other relevant planning mechanisms in the city will be included in the review process.

As stated in Section 8 of the Base Plan, the HMPC representatives from the City of San Luis Obispo will report on efforts to integrate the hazard mitigation plan into local plans, programs and policies and will report on these efforts at the annual HMPC plan review meeting.

G.6.2 Monitoring, Evaluation and Updating the Plan

The city will follow the procedures to Monitor, review, and update this plan in accordance with San Luis Obispo County as outlined in Section 8 of the Base Plan. The city will continue to involve the public in mitigation, as described in Section 8.3 of the Base Plan. The Administrative Analyst in the City Fire Department will be responsible for representing the city in the County HMPC, and for coordination with the city LPT, including relevant staff and departments during plan updates. The city realizes it is important to review the plan regularly and update it every five years in accordance with the Disaster Mitigation Act Requirements as well as other State of California requirements. In order to ensure that regular review and update of the HMP occurs, the LPT will convene annually to review and discuss mitigation progress and any new concerns that may benefit from mitigation activities. During each annual review, the LPT will review each goal and objective to evaluate its:

- Relevance to the evolving setting and needs of the City of San Luis Obispo
- Consistency with changes in State and Federal policy
- Relevance to current and expected conditions

The LPT will review the Risk Assessment portion of the plan to determine if the information should be updated or modified. The parties responsible for various implementation should be updated or modified. The parties responsible for various implantation actions will report on:

- Status of their projects
- Implementation processes that have worked well
- Any difficulties encountered
- How coordination efforts are proceeding
- Which strategies should be revised