

4 REPORT FINDINGS AND NEXT STEPS

This Report sets the stage for the next steps in the Resilient SLO planning process as well as the update to the City's Safety Element by establishing an understanding of existing hazards, populations, and community assets, and how hazards have historically affected these community assets. Included below are important findings from the summary report.

Flooding

- ▶ The San Luis Obispo Creek watershed has a long history of flooding, with a series of storms over the last 50 years that have caused millions of dollars' worth of damage. Damaging flood events have occurred in 1868–1872, 1884, 1897, 1911, 1948, 1952, 1962, 1969, 1973, 1995, 1998, and 2001 (Questa Engineering Corporation 2003; City of San Luis Obispo 2014).
- ▶ For the San Luis Obispo Creek watershed, factors that may directly contribute to flooding are infrastructure-induced flow constrictions, wildfire, and degraded riparian corridors (Questa Engineering Corporation 2003). Post-wildfire runoff represents another risk for flooding because burned areas in the watershed will contribute more runoff and higher sediment loads than vegetated areas.

Extreme Heat and Drought

- ▶ For this report (see Section 2.3.3 for details), an extreme heat day for the City is defined as a day with a maximum temperature of 89.6°F or above. On average, 4 extreme heat days per year occurred in the City during the historic period (1961–1990). Although the City has not historically experienced many extreme heat conditions, the City could be experience increased sensitivity to extreme temperatures because residents are not acclimatized to or prepared for extreme heat conditions.
- ▶ San Luis Obispo County, along with larger areas of California, experience periods of long-term drought that stress the ecosystem and water supplies and, subsequently, impact agriculture, public health, and the economy. The City relies on regional water supplies, the four primary sources including Whale Rock Reservoir, Salinas Reservoir, Nacimiento Reservoir, and recycled water (City of San Luis Obispo 2019a) and has developed and regularly updates the Urban Water Management Plan to help manage the City's water supply.

Wildfire and Associated Impacts

- ▶ The City often experiences high-wind events, such as the Santa Lucia winds, which originate inland and flow westward during the late summer and early fall, counter to the prevailing westerly winds that occur throughout much of the year. The combination of the relatively hot, dry Santa Lucia winds occurring at a time when vegetation in the County and the City is particularly dry following the summer months can contribute to the ignition and spread of large wildfires.
- ▶ The risk of wildfires and subsequent impacts to property and life is greatest at the wildland-urban interface (WUI), which is where urban development borders wildland fuels. Wildfire risk is compounded in areas of the WUI that are also located in or near High or Very High Fire Hazard Severity Zones which can be seen in Figure 2-7 in the Report.
- ▶ While the City is not at very high risk from the direct impacts of wildfires, the City's location makes it susceptible to impacts of wildfire smoke from wildfires in the coastal mountain ranges of central California. Community public health factors that can increase the impacts of wildfire smoke include the prevalence of asthma in children and adults; chronic obstructive pulmonary disease; hypertension; diabetes; obesity; percent of population 65 years of age and older; and indicators of socioeconomic status, including poverty, income, and unemployment.

Sensitive Infrastructure

- ▶ Critical facilities and infrastructure are instrumental in the City's ability to respond to hazards that are affected by climate change. For this reason, they are given special consideration when planning and preparing for hazards so that these critical assets are not damaged and remain operational, especially during emergency events.

- ▶ Transportation systems are designed and constructed to withstand certain variabilities in weather and temperature based on observations of historical weather trends for specific climate regions (Li et al. 2011). The performance of transportation assets may begin to decline when the severity of extreme heat periods exceeds historical ranges, for example, risk of damage to bridges due to thermal expansion increases significantly at temperatures above 100°F (Cambridge Systematics 2015).
- ▶ The City's vulnerability to flooding impacts on the transportation system is largely dependent on the capacity of the City's flood management system to handle large storm events. Impacts on the transportation system from flooding events are generally caused by failures in a City's stormwater management or flood management system.

Vulnerable Populations and Community Functions

- ▶ Around 8 percent of occupied households in the City do not have access to at least one automobile, and around 2 percent of occupied housing units have no telephone service available (U.S. Census Bureau 2018), which can both result in increased risk during evacuation scenarios.
- ▶ Overall, the cost of living in San Luis Obispo is high relative to household income. Approximately 57 percent of renters spend 35 percent or more of their income on rent (U.S. Census Bureau 2018). Those who own homes, in general, have easier access to equity and provide more flexibility in emergency situations and are, therefore, less likely to become homeless from life events (Brookings Institute 2018).
- ▶ Approximately 6 percent of the City's population primarily speaks a language other than English and reports that they are able to speak English less than "very well" (U.S. Census Bureau 2018), which may cause issues with communication during emergency events.
- ▶ In 2018, the largest employment industries in the City were the educational services industry (15 percent), accommodations and services (15 percent), retail trade (12 percent), and health care and social services (12 percent) (U.S. Census Bureau 2018).
- ▶ The City is the economic center of the County with many County residents commuting to the City for employment opportunities. Fourteen of the top 25 employers in the County are located in the City (San Luis Obispo County 2019a).
- ▶ Tourism is one of the most dominant economic strengths of the City, as demonstrated by the City's high employment in retail, arts, entertainment, recreation, and accommodation and food service industries. The City's tourism sector largely relies on transportation infrastructure, weather, public spaces, the health and abundance of natural resources, and local attractions and services to maintain this vital industry.
- ▶ In the City's 2018-19 budget, 25 percent of the City's revenue came from sale tax while 10 percent came from the transient occupancy tax, generated from visitors staying at the various hotels in the City. As a result, the City relies heavily on tourism and regional visitors to provide important services to residents including public safety, street paving, bicycle, and pedestrian improvement, and other City services. Given the City's heavy reliance on the tourism industry, the City is particularly vulnerable to climate impacts (e.g., wildfire) that would affect this industry.

4.1 NEXT STEPS

The next step in the planning process is to use downscaled global climate projections to evaluate how climate change will affect the City in the near-term, by midcentury, and by late century. A detailed analysis will be conducted to assess how existing hazards may be exacerbated by the effects of climate change and how these exacerbated hazards may affect the City and its population. Additionally, a Resilience Roundtable will be developed, composed of experts and community stakeholders to inform the planning. These steps will result in the preparation of a full hazards report, which will describe the project activities to date and help inform what resilience strategies should be included in the City's Safety Element update to mitigate the current and future impacts of climate change.

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