COUNTY OF SAN BENITO, CALIFORNIA

Multi-Jurisdictional Hazard Mitigation Plan

PARTICIPATING JURISDICTIONS:

County of San Benito County, City of Hollister, City of San Juan Bautista, Sunnyslope County Water District, and San Benito County Water District

September 2022

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1 Introduction

1.1 Background

The 2021 San Benito County Multi-Jurisdictional Hazard Mitigation Plan (HMP) update was developed to reduce the San Benito County community's vulnerability to natural and manmade disasters and increase community resilience. Since 2011, the County has maintained a HMP that meets the requirements of the Stafford Act and Title 44 Code of Federal Regulations (CFR) §201.6, with the previous plan update completed in 2016. The 2021 San Benito County Multi-Jurisdictional HMP will serve as a strategy for implementation and maintenance of the mitigation program in San Benito County. The 2021 HMP incorporates lessons learned from recent California wildfires, specifically fires threatening San Benito County in 2018, drought seasons of 2014-2017, intermittent flood events, and the coronavirus disease 2019 (COVID-19) pandemic. Funding for this planning process was obtained through the Federal Emergency Management Association (FEMA) Hazard Mitigation Grant Program.

1.2 Purpose

The purpose of the HMP is to meet and exceed FEMA hazard mitigation planning requirements to maintain eligibility for FEMA's Hazard Mitigation Assistance (HMA) grants. The plan does not have the authority to establish policy or have other legal implications. Rather, the planning process, resulting HMP, and intended mitigation action implementation indicate the County's strategy to increase the resiliency of the community to hazard events.

1.3 Scope

While the San Benito County HMP applies to all communities in San Benito County. A total of five participating jurisdictions are included in the 2021 San Benito County Multi-Jurisdictional HMP: San Benito County, the City of Hollister, the City of San Juan Bautista, San Benito County Water District (SBCWD), and Sunnyslope Water District (SSWD). These jurisdictions fully participated in the planning update process and adopted the Plan to retain eligibility as direct recipients of HMA grants. **Appendix B. Planning Process** summarizes the involvement of representatives from each of these communities in the hazard mitigation planning process.

1.4 Plan Organization

This Plan consists of the Base Plan, its Appendices, and the Jurisdictional Annexes. The Base Plan is comprised of the following sections:

- **Section 1 Introduction** introduces the reader to the Plan and provides context for the information included in the Plan.

- **Section 2 Planning Process** describes the planning process and records the participation of stakeholders in the planning process.
- **Section 3 County Profile** analyzes the demographics, geography, and climate in the County to inform the mitigation planning process.
- **Section 4 Risk Assessment** analyzes the County's and jurisdictions' risks to natural and man-made hazards.
- **Section 5 Lifeline Vulnerability Assessment** analyzes the County's and jurisdictions' vulnerabilities to natural and man-made hazards.
- **Section 6 Capability Assessment** collates the County's capabilities and assesses how these capabilities can support mitigation programs or be improved to support mitigation.
- **Section 7 Mitigation Strategy** describes the County's mitigation strategy, including the Plan's goals for a mitigation program and County specific actions, and provides a road map for the County of how to implement the Plan throughout the planning cycle.

The Base Plan Appendices include tools and data that supported the development of the Plan or will support the implementation of the plan.

2 Planning Process

The following section details the process used to develop the San Benito County HMP. Detailed documentation of this process, including records of meeting attendance, presentations, and the Engagement Strategy can be found in **Appendix J. Planning Process**.

2.1 Stakeholder Organization and Responsibilities

The stakeholders involved in the development of the San Benito County HMP are distributed between three categories, as shown in Figure 1. This tiered structure is outlined by participation in the planning process. More details on the responsibilities of each group and their participation in the planning process are included in the subsections below.

Figure 1: Audience Organization



2.1.1 Planning Committee

The Planning Committee consisted of leadership and advisory support from the California Governor's Office of Emergency Services (Cal OES), California Department of Forestry and Fire Protection (CAL FIRE): San Benito-Monterey Unit, San Benito County OES, SBCWD, SSWD, City of Hollister, and City of San Juan Bautista. This group was responsible for organizing and executing the planning process, directing the development of the HMP, and reviewing drafts of planning documents. They were consulted to make high-level decisions about the purpose and goals of the HMP. This group was also invited to participate in the activities outlined for the Stakeholder Group and public.

The responsibilities of the Planning Committee include:

- Organize and carry out the planning process.
- Make high level decisions about the purpose and goals of the Plan.
- Collect information from the stakeholders to update the Plan.
- Participate in Capabilities Survey in May 2021.
- Develop and finalize drafts of the Plan documents.

Table 1: Members of the Planning Committee

Name	Job Title	Organization
Adam Amaral	Senior Emergency Services Coordinator	Cal OES
Bob Martin del Campo	Fire Chief	Hollister Fire Department
Brett Miller	City Manager	City of Hollister
Charlie Bedolla	Battalion Chief	Hollister Fire Department
Don Reynolds	City Manager	City of San Juan Bautista
Drew Lander	General Manager	SSWD
Garrett Haertel	Deputy District Engineer	SBCWD
Kris Mangano	Emergency Services Manager	San Benito County OES
Madison Mitchell	Staff Analyst	San Benito County OES
Matt Streck	Assistant Chief	CAL FIRE San Benito-Monterey Unit
Michael Meddles	Chief	CAL FIRE West Division
Mike Chambless	Code Enforcement Officer	Hollister Resource Management Agency (RMA)
Reno DiTullio	Unit Chief	CAL FIRE San Benito-Monterey Unit
Rich Brown	Code Enforcement Officer	City of San Juan Bautista
Rob Hillebrecht	Associate Engineer	SSWD

2.1.2 Stakeholder Group

The Stakeholder Group consisted of a larger audience of community representatives. The Planning Committee defined the composition of the Stakeholder Group, which included key entities the County regularly interacts with, including:

- Law enforcement groups;
- Regional and federal agencies;
- Community risk reduction groups (e.g., San Benito Fire Council);
- Neighboring jurisdictions;
- Utility providers;
- Cultural and faith-based organizations; and
- County and City departments that manage economic development, land use, housing, health and social services, infrastructure, and natural resources.

The Stakeholder Group was invited to provide feedback on drafted plan sections. They provided input on the development of the plan given their understanding of local community needs and values. As needed, Planning Committee consulted with individuals in the Stakeholder Group for subject matter expertise on specific topics. This group will also be invited to participate in the activities outlined for the public.

The responsibilities of the Stakeholder Group include:

- Maintain awareness of the plan update process.
- Provide subject matter expertise as requested.
- Participate in Community Hazards Survey in February 2021.
- Participate in Mitigation Strategy Workshop in July 2021.
- Participate in the Plan Review Webinar in September 2021.
- Review draft Plan during the stakeholder review period in November 2021.
- Participate in Plan-to-Project Workshop in February 2021.

Table 2: Invited Members of the Stakeholder Group

Jurisdiction	Organizations
Federal	• FEMA Region X • Environmental Protection Agency (EPA)
State	• CAL FIRE • Cal OES
Regional	• Santa Cruz County OES • Monterey County OES • City of Morgan Hill
Local	• City of Hollister Animal Care & Services • City of Hollister Police Department • San Benito County Administrative Officer • San Benito County Agriculture Commissioner • San Benito County Business Council • San Benito County GIS • San Benito County Health and Human Services Agency (HHSA) • San Benito County Integrated Waste Management Department • San Benito County Local Transportation Authority • San Benito County Office of Education • San Benito County RMA • San Benito County Sherriff's Office • Seniors Council of Santa Cruz and San Benito Counties

Jurisdiction	Organizations
Private / Nonprofit	• American Red Cross of the Central Coast • Community Food Bank San Benito County • Community Services Development Corporation • Hazel Hawkins Memorial Hospital • Pacific Gas & Electric Company (PG&E) • San Benito Fire Safe Council • United Way of San Benito County

2.1.3 Public

The Public consisted of the residents of San Benito County. The Public was invited to participate in surveys to document their understanding of community hazards and capabilities to mitigate those hazards. They also had the opportunity to directly review and provide feedback on the completed HMP prior to its submission to FEMA.

The responsibilities of the Public include:

- Participate in Community Hazards Survey in February 2021.
- Participate in the Public Review Webinar in November 2021.
- Review draft Plan during public review period in November and December 2021.

2.2 Plan Update Process

2.2.1 Jurisdictional Participation

The HMP includes the five participating jurisdictions including: San Benito County, the City of Hollister, the City of San Juan Bautista, SBCWD, and SSWD. All five jurisdictions contributed to and participated in the collaborative planning process to produce the multi-jurisdictional plan. In addition to participation in the collaborative County planning process, the City of Hollister conducted a comprehensive hazard mitigation planning process in conjunction with their Hollister 2040 General Plan update. This work is incorporated into the HMP and included as a jurisdictional annex to the HMP in **Appendix I. Hollister Jurisdictional Annex**. Hollister chose to complete a comprehensive jurisdictional annex in addition to participating in the collaborative planning process to ensure alignment between the City's general plan and widely reflects the vision and priorities of the City. Participation in the HMP indicates the commitment of the five jurisdictions to mitigate risk to and increase the resilience of the whole San Benito County community.

2.2.2 Planning Meetings

The planning process included various included bi-weekly meetings to engage the Planning Committee and collect necessary information to develop the Plan. Table 3 provides an overview of the meetings conducted during the planning process and describes the purpose of each

meeting. Documentation from each of these meetings, including agendas, presentation materials, and notes, are included in **Appendix J. Planning Process**.

Table 3: Planning Meetings and Workshops

Title	Date	Purpose
Kick-Off Meeting	1/13/2021	• Introduce the hazard mitigation planning process • Review project schedule and deliverables • Discuss approach to the Risk Assessment
Planning Committee Meeting	2/10/2021	• Discuss proposed hazards for the risk assessment • Introduce community lifelines concept • Discuss engagement strategies for various audiences
Planning Committee Meeting	2/24/2021	• Discuss Community Hazards Survey distribution methods • Identify members for the stakeholder group
Planning Committee Meeting	3/20/2021	• Confirm Community Hazards Survey distribution logistics • Prepare for the Risk Assessment Meeting • Request data to support the Risk Assessment
Planning Committee Meeting	3/24/2021	• Past significant hazard events • Discuss significant past hazard events and their direct and cascading impacts on the County • Identify community assets to be protected • Conduct an initial prioritization of hazards
Planning Committee Meeting	4/7/2021	• Review Risk Assessment Meeting agenda and logistics • Introduce contents of Risk Assessment • Discuss process for Risk Assessment Draft distribution and feedback collection
Planning Committee Meeting	4/28/2021	• Review Risk Assessment Meeting • Collect additional feedback on the Risk Assessment Draft • Introduce Capability Assessment Survey
Planning Committee Meeting	5/12/2021	• Remind Planning Committee to fill out the Capability Assessment Survey • Review Capability Assessment Webinar agenda and logistics
Planning Committee Meeting	6/15/2021	• Review Capability Assessment Webinar • Discuss upcoming planning process milestones
Planning Committee Meeting	7/8/2021	• Discuss approach to evaluating previous mitigation actions • Review Mitigation Strategy Workshop agenda and logistics
Planning Committee Meeting	7/28/2021	• Review Mitigation Strategy Workshop • Discuss outstanding items for Plan development
Planning Committee Meeting	8/25/2021	• Determine approach to Plan Review Meeting • Review upcoming community engagement activities
Planning Committee Meeting	9/8/2021	• Discuss the upcoming Plan Review Meeting • Review remaining project deliverables
Planning Committee Meeting	10/6/2021	• Identify outstanding information for the Mitigation Strategy • Discuss approval and adoption requirements

2.2.3 Outreach

To promote participation of the whole community in the planning process, San Benito County conducted outreach throughout plan development. This section details different aspects and components of this outreach. **Appendix J. Planning Process** includes documentation of this engagement.

2.2.3.1 ENGAGEMENT STRATEGY

At the beginning of the planning process, the Planning Committee developed an Engagement Strategy to identify goals for the engagement, define the various audiences, and describe different methods that will be considered and utilized during the planning, execution, and evaluation of various outreach activities. The objectives identified in the Engagement Strategy are as follows:

- Increase community knowledge about relevant hazards and related mitigation activities;
- Collect comprehensive feedback and input; and
- Promote collaboration among stakeholders that may extend beyond the HMP process.

These objectives were established to focus the planning process on effectively engaging the whole community.

2.2.3.2 WORKSHOPS AND WEBINARS

The Planning Committee and Stakeholder Group were invited to participate in five workshops or webinars over the course of the planning process. The purpose of these events was to engage the participants, gather information needed to develop the Plan, and collect feedback on drafted deliverables. The evolving COVID-19 pandemic directed the nature of engagement and limited the ability of the Planning Committee, Stakeholder Group, and public to meet in person. The format of engagement was conducted in compliance with local and State public health safety regulations.

Table 4 provides an overview of the workshops and webinars offered to the Planning Committee and Stakeholder Group, including the date, purpose, and format of the event.

Table 4: Planning Meetings and Workshops

Title	Date	Format	Purpose
Risk Assessment Meeting	4/14/2021	Virtual Webinar	• Introduce the purpose and process of hazard mitigation planning • Discuss the initial findings of the Risk Assessment • Collect community context for hazard impacts on community lifelines
Capability Assessment Webinar	5/26/2021	Virtual Webinar	• Review project progress • Discuss the initial findings of the Capability Assessment • Identify additional resources to build mitigation capacity

Title	Date	Format	Purpose
Mitigation Strategy Workshop	7/13/2021	In-person Workshop	• Identify mitigation goals that will guide the mitigation strategy • Design mitigation actions that will address hazard risks, leverage County capabilities, and advance the mitigation goals
City Council Meeting	9/21/2021	Virtual Presentation	• Introduce the purpose and process of hazard mitigation planning • Review the planning process for the HMP
Plan Review Meeting	9/22/2021	Virtual Webinar	• Review structure of the full drafted HMP • Advise the Planning Committee and Stakeholder Group on the type of feedback needed during the plan review period
Public Review Meeting	3/23/2022	In-person Presentation	• Review content and purpose of the HMP • Describe how residents can provide feedback on the drafted HMP

2.2.3.3 MONTHLY NEWSLETTERS

The Planning Committee developed and shared monthly newsletters with the Stakeholder Group through the online platform MailChimp. These newsletters provided a method for clear and consistent communication with the Stakeholder Group and were utilized to inform the stakeholders of planning progress, invite the group to upcoming workshops and other engagement activities, and share relevant information related to hazard mitigation planning and projects. A total of 14 newsletters were sent out throughout the planning process. Figure 2 provides an example of the newsletter format, all the newsletters are provided in **Appendix J. Planning Process**.

Figure 2: Sample Newsletter



View this email in your browser

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

October Newsletter

Welcome to the *San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update Newsletter*, an e-publication that curates news about the development of the plan, innovations in mitigation, and opportunities to get involved!

Planning Progress Update

Since the Plan Review Meeting, the Planning Committee has been

2.2.3.4 COMMUNITY HAZARDS SURVEY

A community hazards survey was developed to collect information on the community's perspective of hazards and vulnerabilities in the County and priorities for mitigation. The survey was distributed through the County's social media platforms by the County's Public Information Officer. The survey was available from March 9 to April 16, 2021 and collected responses from 137 County residents.

2.2.3.5 PUBLIC COMMENT PERIOD

San Benito County shared its draft HMP with the public by posting the Plan on the County website between February 28 and March 28, 2022. The public comment period was publicized

through the San Benito County OES's social media, the County website, the Stakeholder Group webinar, a presentation to the San Benito County Board of Supervisors, and during the Public Review Meeting on March 23, 2022. The Public Review Survey, which was posted alongside the draft HMP, is included in **Appendix J. Planning Process**. Three comments were received from the public during the comment period. These comments were reviewed and addressed through revisions or additions to the Plan, as appropriate.

2.2.4 Data Sources

The Planning Committee utilized various data sources, plans, and documentation throughout the planning process. Collected information was used for various ways, including the analysis of hazard risks, detailing community assets and vulnerabilities, and identifying priorities for the County and is residents. Data was sourced from federal, state, and local databases, including the following:

Federal Resources

- National Oceanic and Atmospheric Administration (NOAA) National Centers for Environmental Information (NCEI) Storm Events Database
- U.S. Geological Survey (USGS) Database
- United States Census Data

State Resources

- CAL FIRE
- California Department of Transportation (Caltrans)
- Cal OES
- State Hazard Mitigation Plan

Local Resources

- Community Hazards Survey Responses
- Geographic Information Systems (GIS) Data
- Public Comment Period Responses

3 County Profile

The County Profile identifies the characteristics of all participating jurisdictions that are relevant when developing the risk assessment and mitigation actions to address hazards. The information presented in this section is representative of the entire County. While the information utilized to develop this section is the most recent data available, it was primarily collected prior to the onset of the COVID-19 pandemic and thus may not reflect the current situation of the County at the time of publication of this plan. Some trends that have been observed nationwide due to the COVID-19 pandemic, that are not reflected in the information below, include increased unemployment rates, additional strain on medical resources and social services, and an increase in populations experiencing homelessness. For example, in January 2020, San Benito County reported a 6.2% unemployment rate, which increased to 18.8% in April 2020 and has slowly decreased since then.[1] Predicted impacts of these trends on County assets are estimated as appropriate in the sections below.

3.1 Location

San Benito County is in the California central coastal area, approximately 65 miles east of Monterey Bay and 85 miles south of San Jose. San Benito County is one of three counties in the Monterey Bay area, which also include Santa Cruz and Monterey counties. The County is considered a member of the San Jose-Sunnyvale-Santa Clara metropolitan statistical area. San Benito County has a total area of 1390 square miles, only 0.14% of which is water resources. The limited available surface water emphasizes the need to strategically plan for hazards, especially drought.

Only 0.14% of San Benito County jurisdictional area consists of water resources.

The County is comprised of two cities, two water districts, and ten unincorporated communities as identified in Table 5 below.[2]

Table 5: Jurisdictions of San Benito County

Cities	Unincorporated Communities		Special Districts
• City of Hollister • City of San Juan Bautista	• Aromas • Bitterwater • Dunneville • Hudner • Paicines	• Panoche • Ridgemark • River Oaks • San Benito • Tres Pinos	• SBCWD • SSWD

[1] United States Bureau of Labor Statistics. 2021. "BLS Data Finder 1.1." https://beta.bls.gov/dataQuery/search.
[2] United States Census Bureau. 2019. "San Benito County, California; California; United States." QuickFacts. https://www.census.gov/quickfacts/fact/table/CA,sanbenitocountycalifornia,US/PST045219.

Figure 3, Figure 4, Figure 5, Figure 6, and Figure 7 below illustrate the geographic area of San Benito County, City of Hollister, City of San Juan Bautista, SBCWD, and SSWD, respectively. The sphere of influence is also outlined, which describes the unincorporated areas of the County that is serviced by a city in some capacity (e.g., sewer). There are significant rates of private land ownership in the County, which limit the impact that municipal level mitigation actions may have. The ratio of private to public land ownership places increasing emphasis on the importance of resilient and updated building codes and land use controls to protect private development from risk.

Figure 3: San Benito County Jurisdictional Boundaries

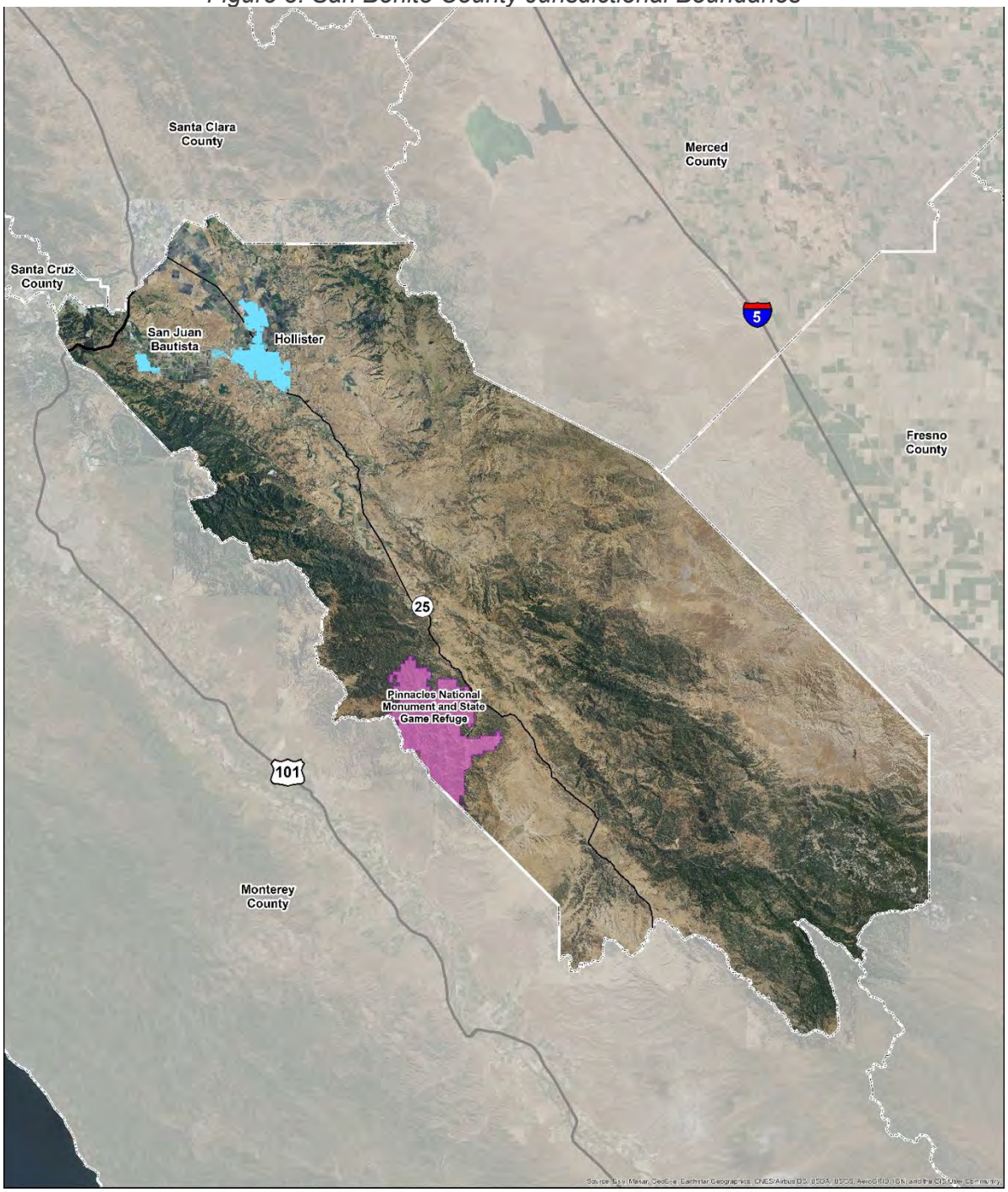


Figure 4: City of Hollister Jurisdictional Boundaries

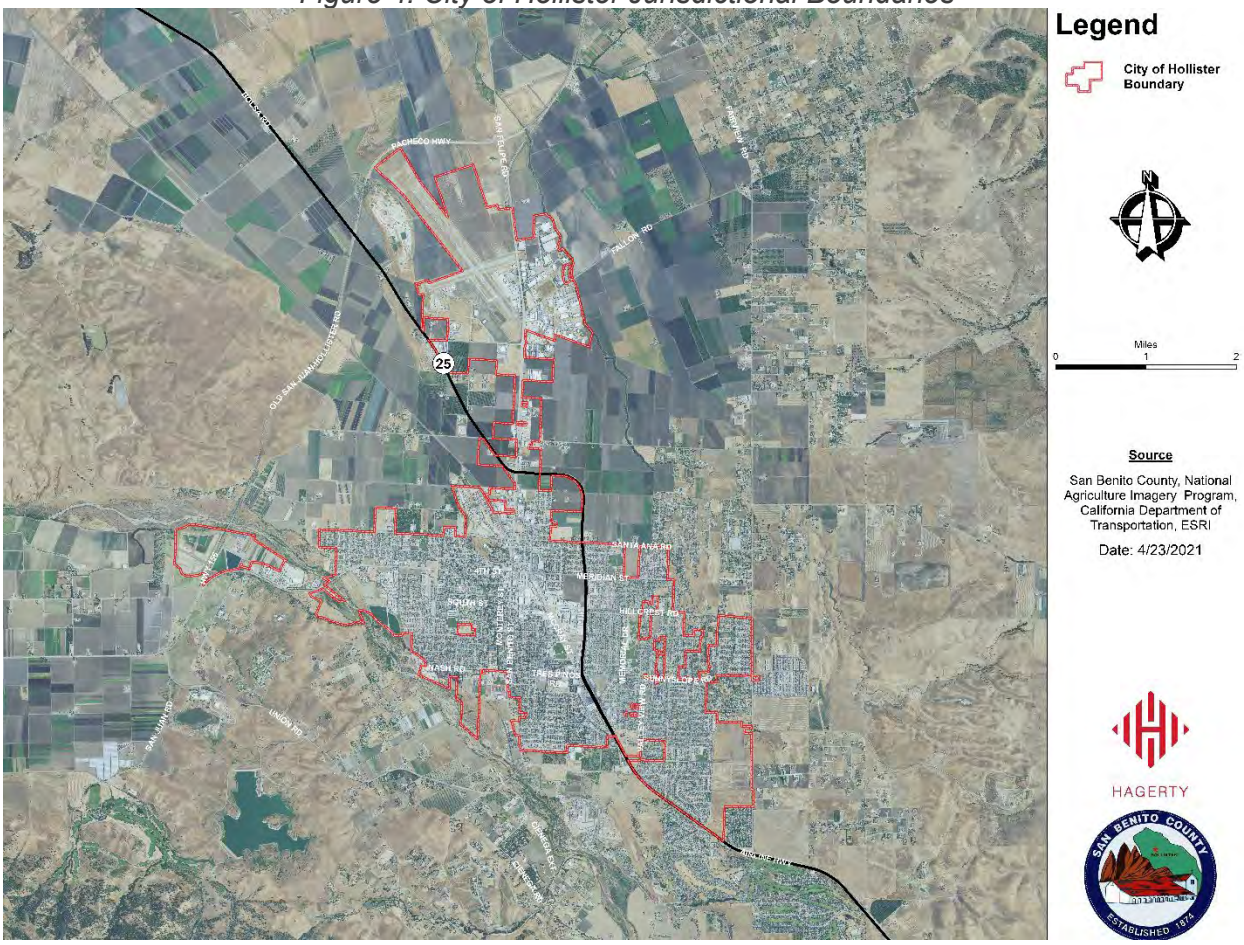


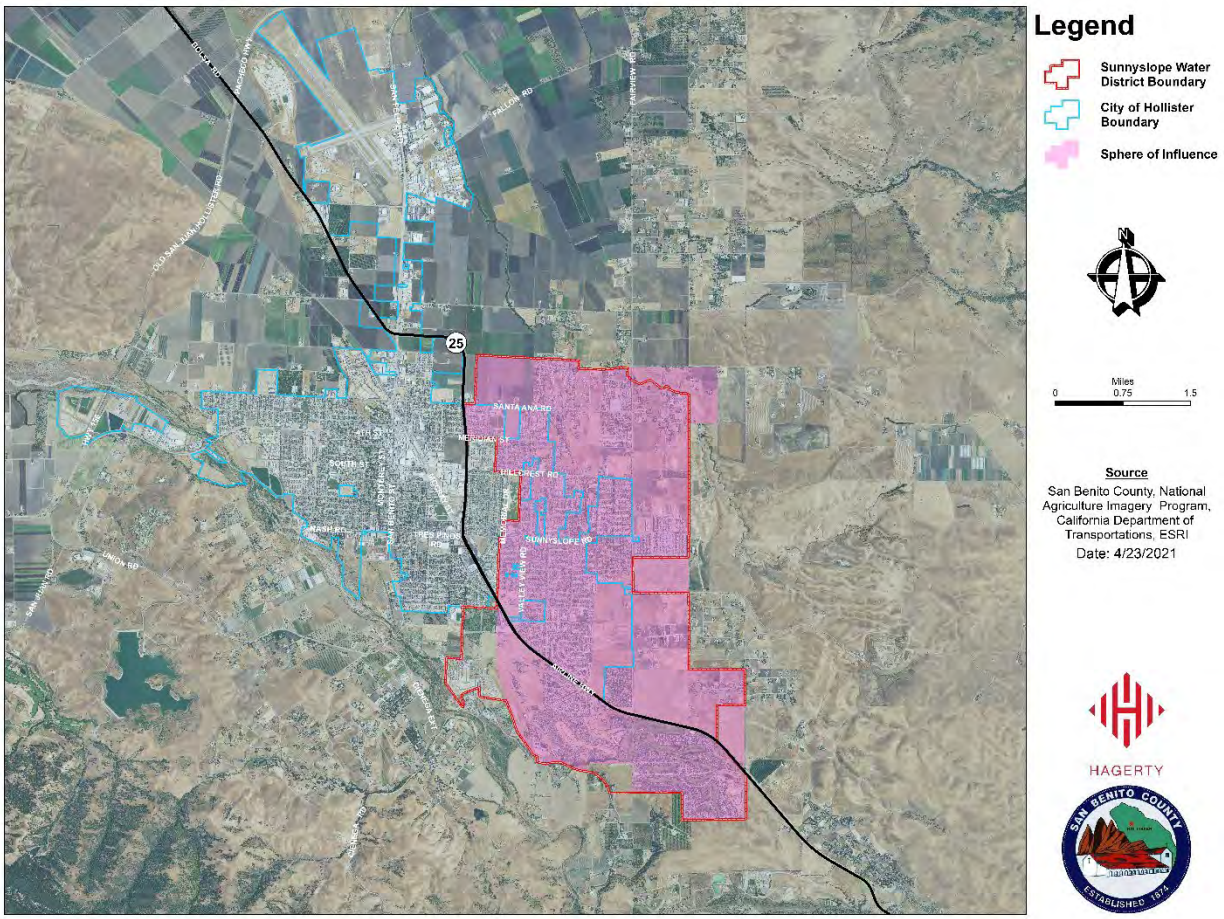
Figure 5: City of San Juan Bautista Jurisdictional Boundaries



Figure 6: SBCWD Service Boundaries



Figure 7: SSWD Service Boundary



3.2 Community

3.2.1 Population

Understanding the size and location of various populations, cultural differences, and existing medical or access needs will help San Benito County better identify and implement mitigation projects to lessen the impact of disasters on their community. Demographic information about the vulnerable populations in each of the County's jurisdictions are included in the following sections, as appropriate.

3.2.1.1 POPULATION DENSITY

San Benito County has a population of 62,800 people, which has grown approximately 13.6%, or 7500 people, since the census was conducted in 2010. This growth rate is more than double

the State (6.1%) and national (6.3%) averages.[3] The rapid and significant increase in population demonstrates the need to plan more effectively for emergency operations that become more complex with more persons to service. For example, evacuations from wildfires and sheltering operations during extreme temperature events will require additional resources and coordination to accommodate the additional citizens who may need services.

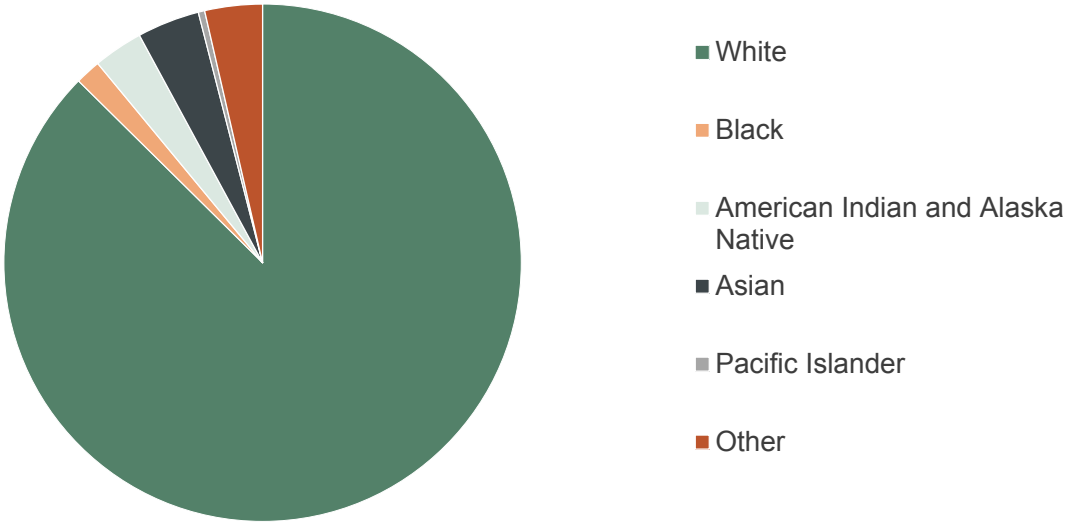
The average population density in the County is approximately 40 persons per square mile, with housing concentrated in the cities' boundaries. The population density of San Benito County is significantly lower than neighboring Monterey County (127 persons per square mile), Merced County (132 persons per square mile), and Fresno County (156 persons per square mile).[4] According to the classifications established by the U.S. Department of Agriculture, San Benito County classifies as a rural county.[5] The rural nature of the County has built a strong community network as it applies to emergency management, with the expectation that "neighbors help neighbors" during times of crisis. This network includes formal neighborhood or jurisdictional associations, including the San Benito Fire Safe Council, and more informal organizations, such as faith-based volunteer groups. The County' mitigation program should consider ways to leverage these community support systems for implementing and sustaining actions to reduce community disaster risk.

3.2.1.2 RACE, ETHNICITY, AND LANGUAGE

The population of San Benito County primarily identifies as white (87.4%), with the next most significant demographic being Asian (3.9%) and other (3.6%). Figure 8 below illustrates the variability in race and ethnicity in the County.[6]

[3] United States Census Bureau. 2019. "San Benito County, California; California; United States." QuickFacts. https://www.census.gov/quickfacts/fact/table/CA,sanbenitocountycalifornia,US/PST045219.
[4] United States Census Bureau. 2019. "Monterey County, California; Merced County, California; Fresno County, California; San Benito County, California." QuickFacts. https://www.census.gov/quickfacts/fact/table/montereycountycalifornia,mercedcountycalifornia,fresnocountycalifornia,sanbenitocountycalifornia/PST045219.
[5] USDA. 2021. "What is Rural?" Economic Research Service. https://www.ers.usda.gov/topics/rural-economy-population/rural-classifications/what-is-rural/.
[6] United States Census Bureau. 2019. "San Benito County, California; California; United States." QuickFacts. https://www.census.gov/quickfacts/fact/table/CA,sanbenitocountycalifornia,US/PST045219.

Figure 8: Race and Ethnicity in San Benito County



Approximately 39.7% individuals over the age of five in the County speak a language other than English at home, the most prominent of which is Spanish (35.7% of the total population). As such, the bilingual rate of individuals in San Benito County is less than that of the State (44.2%), but greater than the national average (21.6%). Over 16.6% of individuals in the County speak English "less than well," indicating a need for translated emergency preparedness and response materials and available translation resources.[7]

3.2.1.3 AGE AND DISABILITIES

Approximately 12.5% of County residents are over the age of 65 and 6.4% of residents are under the age of 5. An estimated 9% of County residents live with a disability, which is slightly less than the State average of 10.6%. Nearly 3% of individuals under the age of 5 have a disability and over 30% of individuals over the age of 65 have a disability.[8] These individuals may need additional or specialized assistance during emergency response operations and should be given specific consideration during emergency management planning processes.

Nearly 20% of San Benito County residents in an age bracket considered vulnerable by the Centers for Disease Control and Prevention (CDC).

[7] United States Census Bureau. 2019. "San Benito County, California." American Community Survey. http://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/.
[8] United States Census Bureau. 2019. "San Benito County, California." American Community Survey. http://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/.

3.2.2 Social Vulnerability

Social vulnerability describes the way a community may be negatively affected by external stresses on human health. Understanding the social vulnerability within San Benito County enables the County to implement effective mitigation strategies that consider the access and functional needs (AFN) of the community.

3.2.2.1 SOCIAL VULNERABILITY INDEX

The CDC developed a mapping system to visually display varying social vulnerabilities, as part of their 2016 Social Vulnerability Index (SVI) estimates. The SVI assigns numerical values from zero to one with increasing vulnerability to four known indicators of social vulnerability:

- **Socioeconomic Status**: poverty level, unemployment status, income, level of education
- **Household Composition & Disability**: aged 65 or older, aged 17 or younger, older than age 5 with a disability, single-parent households
- **Minority Status & Language**: minority ethnicity or race, English proficiency
- **Housing & Transportation**: multi-unit structures, mobile homes, home density, vehicle access, group quarters

These four individual measures are then averaged to create a composite SVI score. The CDC assigned a composite SVI value of 0.5245 to the overall County, which indicates a moderate to high level of vulnerability. This is a lower estimate of vulnerability compared to neighboring Monterey, Fresno, or Merced Counties, but a higher estimated level of vulnerability than Santa Clara County.[9] Decreased social vulnerability reflects a greater capacity of the community to be resilient to disasters.

3.2.2.2 ACCESS AND FUNCTIONAL NEEDS

Comprehensive mitigation planning requires an understanding and acknowledgement of individuals with AFN. Populations with AFN may refer to individuals with disabilities, senior adults, young children, individuals who speak English as a second language, and those with limited transportation or internet access. These individuals experience additional vulnerabilities to disasters and may require additional support during emergencies and should be a focus of preparedness and mitigation efforts. Table 6 below summarizes data related to AFN in the County as it compares to State and national averages, as well as how these statistics impact planning for preparedness and mitigation.[10]

[9] CDC. 2018. “SVI Interactive Map.” CDC’s Social Vulnerability Index. https://svi.cdc.gov/map.html.
[10] United States Census Bureau. 2019. “San Benito County, California.” American Community Survey. http://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/.

Table 6: Summary of Access and Functional Needs in San Benito County

Category	*County*	*California*	*United States*	Planning Considerations
Residents who speak English less than well	16.6%	17.8%	8.4%	Emergency communications need to be translated to effectively reach the community. This is a high priority for the County as it has nearly double the number of residents with limited English proficiency compared to the national average.
Residents who have a computer	94.7%	93%	90.3%	Emergency service outreach methods need to be accessible without requiring digital or internet access. While this is a priority for the County, most residents are able to access a computer and/or broadband access in their place of residence.
Residents who have broadband internet access	90.2%	86.7%	82.7%	
Residents who are senior citizens (age 65 or older)	12.3%	13.9%	15.5%	Emergency planning should consider how to support these individuals who may require specific accommodations to prepare for, respond to, and recovery from disasters. This is a high priority for the County in order to protect their whole community from disasters, although procedures to accommodate residents who are five years old or younger is a likely focus.
Senior citizens who live with a disability	30.4%	34.5%	34.5%	
Residents who live with a disability	9%	10.6%	12.6%	
Residents who are five years or younger	6.4%	6.2%	6.1%	
Households who do not have car access	2.6%	7.1%	8.6%	Emergency planning should consider how to support these individuals who may have a more difficult time recovering from the impacts of a disaster. While access to transportation and economic recovery are key considerations for vulnerable populations in the County, housing recovery for individuals who do not own their home may be a greater priority.
Households who do not own their residence	36.3%	45.2%	36%	
Residents living below the poverty line	8.4%	13.4%	13.4%	

The previous Population section and the following sections detail aspects of the community that indicate AFN. Considerations of AFN are critical to integrate into the planning process to create a plan that effectively serves the whole community.

3.3 Safety and Security

3.3.1 Emergency Services

Emergency services in the County are managed by the San Benito County OES and Emergency Medical Services. The County Office of the Sheriff, including Search and Rescue (SAR) operations, and Hollister Police Department share public policing duties for the County. The City of Hollister Fire Department services the entire County. They service four distinct fire districts in the County. San Benito County has a total of eight fire stations, two police stations (i.e., San Benito County Sheriff, Hollister Police Department), one correctional facility (i.e., San Benito County Jail), and one emergency operations facility.[11] During extreme wildfires and other disasters, the CAL FIRE San Benito-Monterey Unit may supplement the efforts of Hollister Fire to protect the County and its residents.

3.3.2 Community Services

In addition to the government provided emergency services, residents of San Benito County participate in various activities to support emergency preparedness and response. These community-based emergency services include:

- **Community Emergency Response Team**: Program for community volunteers to learn about disaster preparedness and obtain disaster response skills (e.g., fire safety, SAR, first aid).
- **San Benito County Amateur Radio Association (SBCARA) and Radio Amateur Civil Emergency Services (RACES)**: Organizations of residents who train to use amateur radios to support local disaster preparedness and response (e.g., severe weather observations, SAR operations, public events). SBCARA and RACES members are registered as Disaster Service Workers with the County and provide communications support during local emergencies as required.[12, 13]
- **San Benito Fire Safe Council**: Local grassroots organization whose goal is to decrease the community's vulnerability to wildfire. The Council provides local education programs and implements smaller mitigation projects (e.g., fuel breaks, firebreaks) to better prepare the community for wildfire events.

[11] Hazus report and San Benito County. "Office of the Sherriff." http://sbso.us/corrections-jail.
[12] SBCARA. 2021. "San Benito County Amateur Radio Association: Radio Communications for Everyday or Emergency Use." https://sbcara.org/.
[13] San Benito County OES. 2022. "Radio Amateur Civil Emergency Preparedness Service (RACES)." https://www.cosb.us/departments/office-of-emergency-services-oes-and-emergency-medical-services/emergency-management/radio-amateur-civil-emergency-preparedness-services-races

3.4 Economy

3.4.1 Employment

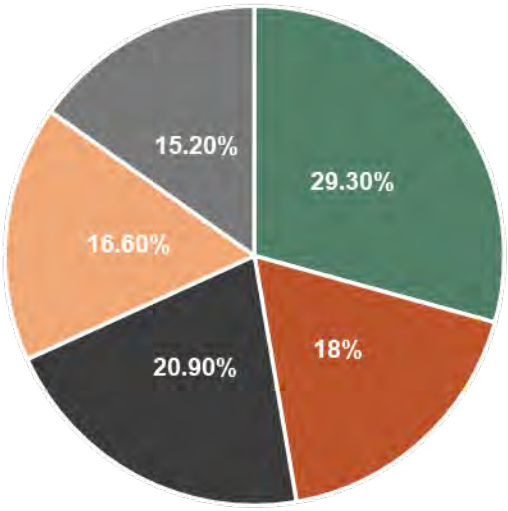
The employed population of San Benito County is approximately 57.8% of the total population over the age of 16. The largest job sector is Healthcare and Social Assistance, which has approximately 8,300 employees. Other statistics related to employment sectors are shown in Figure 9 below.[14]

Figure 9: Economy in San Benito County

The primary industries in San Benito County are:

- **Healthcare and Social Assistance** *19.5% Workforce*
- **Manufacturing** *12.9% Workforce*
- **Construction** *11.4% Workforce*

Employment by Occupation in San Benito County



- Management, Business, Science, and Arts Occupations
- Service Occupations
- Sales and Office Occupations
- Natural Resources, Construction, and Maintenance Occupations
- Production, Transportation, and Material Moving Occupations

The major employers in San Benito County are:

- Amazon
- Earthbound Farm
- Hazel Hawkins Memorial Hospital
- Milgard
- Nob Hill Foods
- Pacific Scientific
- Target
- Trical
- True Leaf Farm
- San Benito High School

Multiple groups in the County support economic development and business growth in the community, including the following:

[14] United States Census Bureau. 2019. "San Benito County, California." American Community Survey. http://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/.

- **Economic Development Corporation of San Benito County**: Group responsible for promoting economic growth in the community who support businesses and employees through business retention, attraction, and expansion.
- **San Benito County Business Council**: Organization that focuses their efforts on facilitating collaboration among businesses, agency, and government leaders, growing the community job base, and promoting economic the sustainability.
- **San Benito County HHSA CSWD Division**: County agency that provides workforce development training and other employment support to prepare and connect individuals to job opportunities.

3.4.2 Income

In San Benito County, the average household income is approximately $106,600. This value is similar to the average for California ($106,900). As of 2019, approximately 8.4% of County residents live below the federal poverty level. This rate is especially high among families with a single-mother (21.8%).[15] This rate is anticipated to have increased since the beginning of COVID-19 due to the widespread business closures, furloughing, and loss of jobs. Individuals who have had a decrease in income may have a similarly decreased capability to prepare for or recover from disasters and should be considered in County emergency planning.

3.5 Health and Medical

3.5.1 Medical Resources

The San Benito County HHSA manages health and medical services provided by the County. The HHSA provides public health support, children and adult services, community services and workforce development support, and public assistance to the community. The community also has one hospital, the Hazel Hawkins Memorial Hospital, and various other health clinics, including two skilled nursing homes and various facilities in San Juan Bautista and Hollister operated by the Hazel Hawkins Memorial Hospital, the Sunnyslope Health Clinic, and various private providers (e.g., Urgent Care). Together, these facilities operate a total of 181 beds.[16] Over 92% of individuals in the County have health insurance (65% private insurance, 35% public insurance).[17]

[15] United States Census Bureau. 2019. “San Benito County, California.” American Community Survey. http://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/.
[16] Hazus data
[17] United States Census Bureau. 2019. “San Benito County, California.” American Community Survey. http://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/.

3.5.2 Social Services

Approximately 8.7% of County residents have received Supplemental Nutrition Assistance Program (SNAP) benefits (e.g., food stamps) in the last year.[18] Food access and other social services needs are supplemented in San Benito County by various non-governmental organizations, including Salvation Army, Community Food Bank of San Benito, and Community Foundation for San Benito. Individuals experiencing food insecurity may require additional assistance following disasters.

3.6 Infrastructure

3.6.1 Water and Wastewater

Water services in San Benito County are primarily provided and managed by the SBCWD and the SSWD. Small portions of the County receive water services as maintained by the City of Hollister Management Services: Water Utility Department and the City of San Juan Bautista Water Department. The County's wastewater is delivered to one of the four wastewater treatment plants in the County or to the City of Hollister's Reclamation Plant.

SBCWD owns two surface water treatment facilities, the West Hills Water Treatment Plant and Lessalt Water Treatment Plant. Surface water is stored locally in the County in three above-ground reservoirs: the Hernandez Reservoir, the San Justo Reservoir, and the Paicines Reservoir, which combined hold approximately 31,000 acre-feet of water. The County also has a 500,000 acre-feet groundwater basin. This basin is significantly used for potable drinking water and helps maintain the water security of the region. However, treated surface water is the preferred source of drinking and irrigation water as groundwater has high mineral and salinity content. SBCWD manages water provided by the San Felipe Distribution System and San Benito River system. Additionally, SBCWD utilizes resources from the United States Bureau of Reclamation that it shares with the Santa Clara Valley Water District including: the Pacheco Tunnel, the Pacheco Pumping Plant, and the Pacheco Conduit, all of which support importing water to the region.

The City of San Juan Bautista operates three wells that provide drinking water to 810 customers within and beyond City limits. Additionally, the City maintains a water storage tank with a capacity of 1.2 million gallons to provide emergency water to customers and for water prevention. This tank can service the City via gravity-fed water for up to 24 hours if necessary. Additionally, the City operates their own wastewater plant, which can process up to 160,000 gallons of wastewater daily. Input wastewater is sourced from 800 residential users and three large agricultural companies (i.e., Taylor Foods, True Leaf, and Coke Farms) located outside of City limits.

[18] United States Census Bureau. 2019. "San Benito County, California." American Community Survey. http://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/.

SSWD primarily provides services to the east side of the City of Hollister. The district services more than 6,900 water customers and 1,250 wastewater customers. SSWD provides wastewater and water services to customers across the County. SSWD operates both the West Hills Water Treatment Plant and Lessalt Water Treatment Plant, which deliver drinking water to their service areas. The City of Hollister owns three active water wells and SSWD owns five active wells. Each agency is responsible for the managing and operating their own wells.

3.6.2 Energy

The San Benito County electric services are provided by both Central Coast Community Energy (CCCE) and PG&E. CCCE services Hollister and offers two types of electricity options: a combination of hydroelectric and other renewable energy sources or renewable energy sources other than hydroelectric. Locally, electricity systems are maintained by the County RMA, City of Hollister Management Services, and City of San Juan Bautista Public Works Department.

Gas utility services are provided by PG&E through a combined infrastructure system with electricity. One main natural gas pipeline runs horizontally through San Benito County, which then is diverted to different areas of the County for household distribution. Natural gas distribution and pipelines directly managed by the County are estimated to have a replacement value of $142,862,800.

3.6.3 Communications

Communications services, including broadband and internet connection, are provided by private companies in the County. It is estimated that San Benito has approximately $472,000 in communications infrastructure assets.[19] Approximately 6% of households in the County do not have access to a computer, and approximately 10% do not have broadband internet subscriptions. Although the County has greater accessibility to computers and internet than the State the lack of communication access across the community creates barriers to emergency information and should be considered in mitigation planning.[20]

3.6.4 Transportation

3.6.4.1 ROADWAYS

Caltrans maintains five state highways in San Benito County (Routes 25, 101, 129, 146, and 156). These routes are all maintained by Caltrans. Local transportation infrastructure in San Benito County is managed by the County RMA Public Works Division. Two of these roadways are central to intra-County transportation services: State Route (SR) 25, which traverses the entire length of the County from the junction of SR 198 near King City through Paicines, Tres

[19] Hazus data
[20] United States Census Bureau. 2019. “San Benito County, California.” American Community Survey. http://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/.

Pinos, and Hollister, and SR 156, which runs east-west through the City of Hollister. In the event of an emergency evacuation, most County residents will rely on these two routes.

Caltrans classifies SR 25 as a minor arterial, and the route is primarily a rural two-lane facility, except for a short, 1/3-mile section in Hollister where it is four lanes. SR 156 provides a connection to US highway 101, the major north-south freeway between the San Francisco Bay Area and the Monterey Peninsula. In 1995, SR 156 was widened to four lanes through San Juan Bautista and a traffic signal was installed at The Alameda. Average daily traffic volume in 2017 at the San Benito County and Santa Clara County border was approximately 15,800 vehicles per day.[21] Secondary access to the City is provided by San Juan Highway and Salinas Road.

3.6.4.2 AIR TRAVEL

The Hollister Municipal Airport (CVH) is a local regional airport located in the northern portion of the County. The airport covers an area of 343 acres (0.54 square miles) and maintains two asphalt paved runways. The airport averages approximately 150 daily aircraft operations. The airport is owned and operated by the City of Hollister.[22] In the event of an emergency, the CVH would be used to receive any needed supplies and is location of the CAL FIRE Air Attack Base, helping coordinate wildfire response teams for six surrounding counties.

3.6.4.3 PUBLIC TRANSPORTATION

Local public transportation is San Benito County is provided by the San Benito County Express. The County Express operates three local routes (i.e., Green Line, Blue Line, Red Line) in the City of Hollister and an intercounty route that connects the City of Hollister and City of San Juan Bautista with the City of Gilroy. Additionally, the County Express offers an Americans with Disabilities Act paratransit and Dial-A-Ride services.[23] The Council of San Benito County Governments supports strategic planning for public transportation and other transportation assets in the County.

3.7 Housing

3.7.1 Homeownership

There are approximately 19,000 total housing units in San Benito County. Approximately 64% of the County population are homeowners and 36% are renters. The median home value in the County is $551,000, which is 8% above the state average of $505,000. Most homes exist as singular, detached units (78.9%). Other common housing types are single attached units

[21] Caltrans. 2021. “2017 Traffic Volumes : Route 134-161.” https://dot.ca.gov/programs/traffic-operations/census/traffic-volumes/2017/route-134-161.
[22] City of Hollister. 2021. “Airport.” http://hollister.ca.gov/government/city-departments/airport/.
[23] County Express. 2021. http://www.sanbenitocountyexpress.org/index.php.

(4.8%), 3 or 4 attached units (4.8%), and mobile homes (3.8%).[24] Different housing types may experience a variety of impacts depending on the nature of the hazard event.

3.7.2 Unhoused Population

According to a point-in-time count completed in 2019, there are approximately 300 individuals who are unhoused within San Benito County. The coordinated effort was led by CSWD division within the HHSA, Whole Person Care, Community Homeless Solutions, and other community partners to meet a biannual U.S. Department of Housing and Urban Development (HUD) requirement for Consortium of Care communities.[25] Typically, a point-in-time count underestimates the number of homeless individuals in a jurisdiction. Individuals who are unhoused may need specific considerations and support in planning for disaster response and recovery.

3.8 Natural and Cultural Resources

3.8.1 Climate

San Benito is located in the central coast of California, where the climate is primarily classified as Mediterranean, with warm, dry summers and cool, wet winters. The average annual temperature of the County ranges from highs of 91°F in the summer months to lows of 39°F in the winter months. The average precipitation is approximately 19 inches a year, primarily made of rain and occurring December through March.[26]

3.8.2 Land Cover

The most common land cover is San Benito County is agricultural land, spanning 865,443 acres or approximately 97% of the County. The County is primarily occupied by agricultural land and the cities are more developed. The cities' jurisdictional areas are primarily zoned as residential housing, including low-, medium-, and high-density residential and single and multifamily housing. The maps in Figure 10, Figure 11, and Figure 12 below illustrate the different types of land use in San Benito County, the City of Hollister, and the City of San Juan Bautista, respectively.

[24] United States Census Bureau. 2019. "San Benito County, California." American Community Survey. http://www.census.gov/acs/www/data/data-tables-and-tools/data-profiles/.
[25] BenitoLink. 2019. "San Benito County's homeless census report." https://benitolink.com/san-benito-countys-homeless-census-report/.
[26] WeatherWX.com. 2021. "San Benito County, California Climate Averages." https://www.weatherwx.com/hazardoutlook/ca/san+benito+county.html.

Figure 10: San Benito County Land Use Map

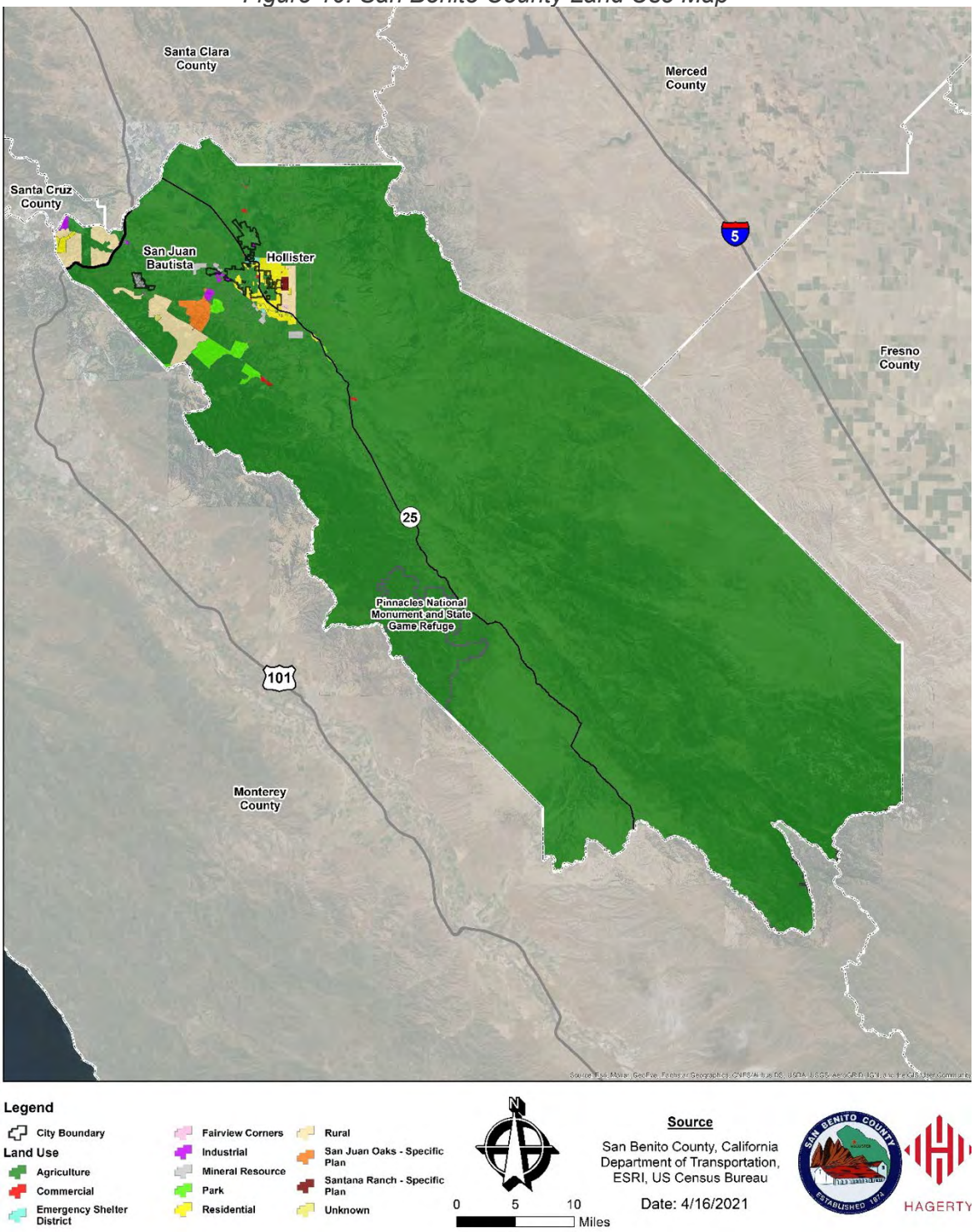


Figure 11: City of Hollister Land Use Map

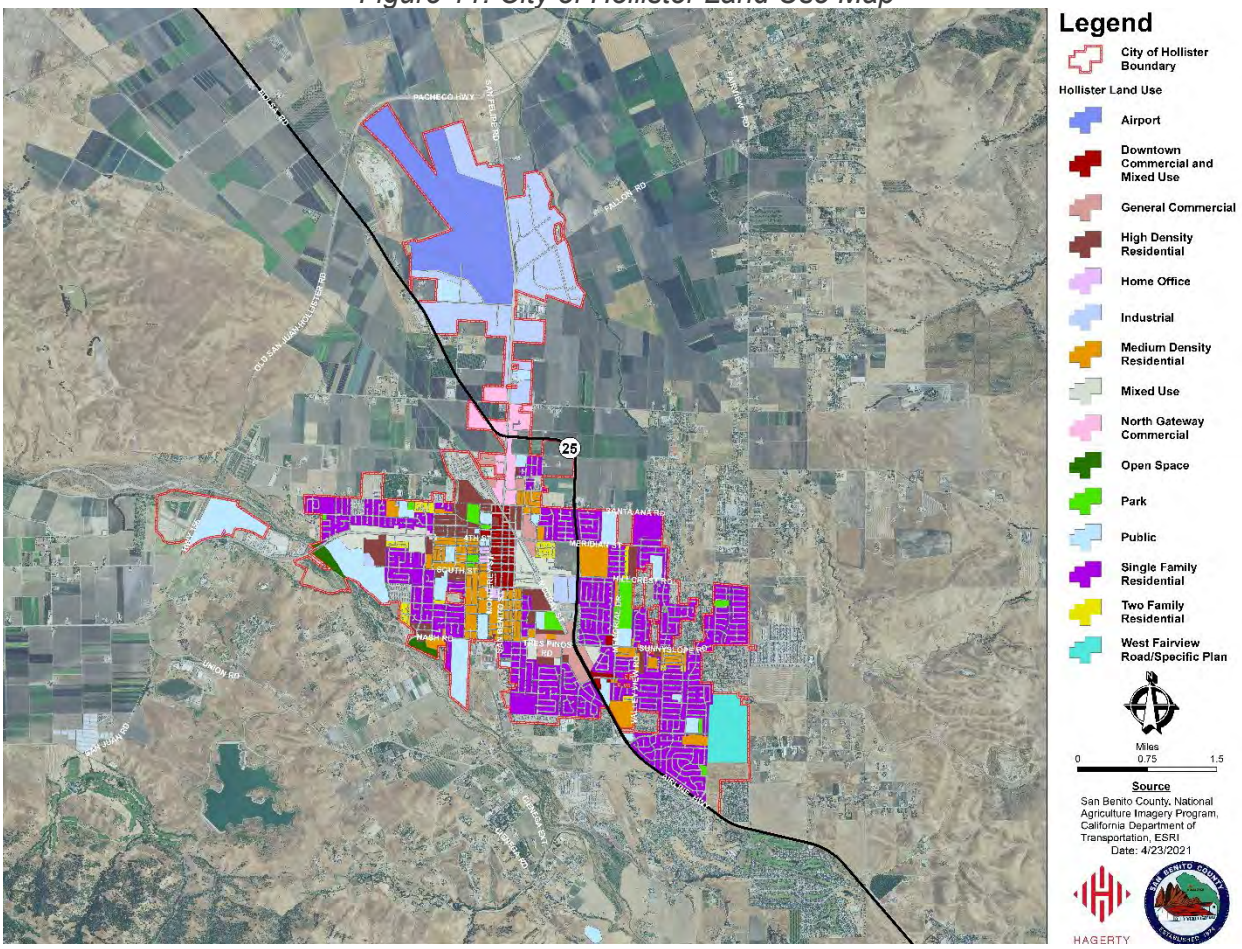
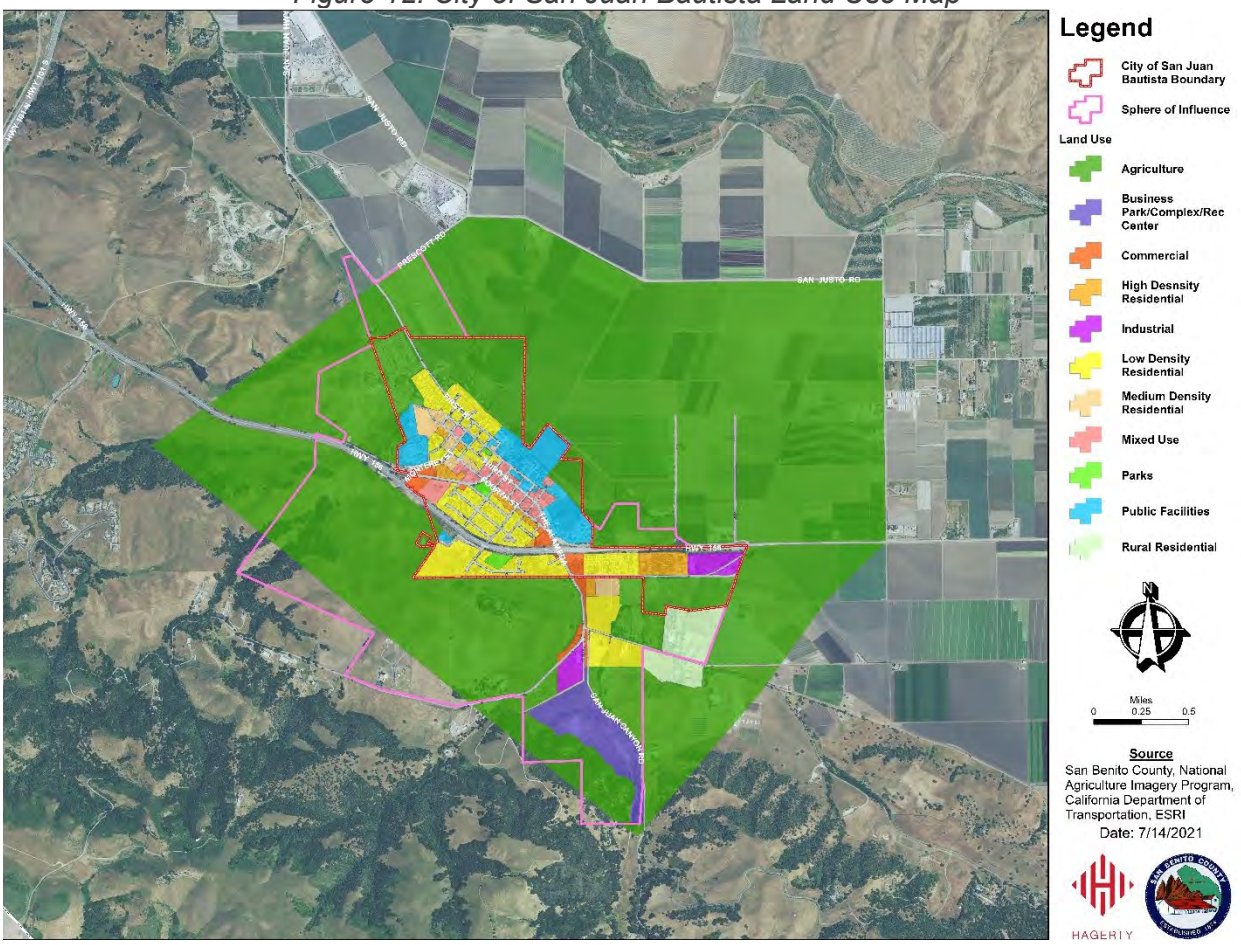


Figure 12: City of San Juan Bautista Land Use Map



3.8.3 Parks and Recreation

San Benito County is home to multiple local, state, and federal parks. The San Benito County Parks & Recreation Commission is responsible for managing County parks (e.g., Veterans Memorial Park) and the Hollister Recreation Division is responsible for managing City parks (e.g., Brigantino Park, Vista Park).[27] Hollister Hills State Vehicular Recreation Area, a 6,800 acre plot that offers hiking, bicycling, and all-terrain vehicle trails, and the San Juan Bautista Historic Park, home to the first mission in California, are managed by the California Department of Parks and Recreation.[28] Additionally, the Clear Creek Management Area and Laguna Mountain Recreation Area, located in the southern portion of the County, are maintained by the U.S. Bureau of Land Management (BLM) and a portion of Pinnacles National Park, managed by the U.S. National Parks Service lies within County boundaries.

[27] San Benito County GIS. 2021. "Parks in San Benito County, CA." https://cosb.maps.arcgis.com/apps/StoryMapBasic/index.html?appid=3f1dc703b9a94fb58b4022adba146255.
[28] California Department of Parks and Recreation. 2021. "Hollister Hills State Vehicular Recreation Area." http://ohv.parks.ca.gov/?page_id=1179.

The San Benito County Agricultural Land Trust was established to help preserve lands for open space and agricultural uses by encouraging landowners to create conservational land easements on their properties. The Land Trust currently maintains approximately 6,749 acres of property for open space preservation.

4 Risk Assessment

4.1 Methodology, Data, and Tools

4.1.1 Methodology

4.1.1.1 HAZARD IDENTIFICATION

Hazards included in the HMP were primarily identified from the 2015 San Benito County Multi-Jurisdictional HMP. The identification process also considered hazards included 2018 State of California HMP[29] and guidance from the FEMA. Table 7 provides justification for the 11 hazards selected for the 2021 San Benito County Multi-Jurisdictional HMP base plan and how they connect to the hazards in the 2015 San Benito County HMP.

Table 7: Hazards Identified in the 2021 San Benito Multi-Jurisdictional Hazard Mitigation Plan

Hazard	Reason for Inclusion	Connection to 2015 Plan
Climate and Weather Hazards		
Drought	History of occurrence of hazard events in San Benito County	Included in the 2015 Plan
Extreme Temperatures	History of occurrence of hazard events in San Benito County	Previously: Severe Weather
Flood	History of occurrence of hazard events in San Benito County	Previously: Flooding
Communicable Disease	Impact of COVID-19	Previously: Biological Including Agriculture and Vector
Severe Weather	History of occurrence of hazard events in San Benito County	Previously: Severe Weather
Wildfire	History of occurrence of hazard events in San Benito County	Previously: Wild Land/Urban Interface Fires
Geologic Hazards		
Earthquake	Proximity of County assets to fault lines	Included in the 2015 Plan
Landslide	Proximity of County assets to fault lines	Previously: Severe Weather
Technological Hazards		
Dam Failure	Presence of multiple dams in the County	Included in the 2015 Plan
Hazardous Materials (HAZMAT) Incident	Proximity of County assets to major transportation routes Presence of facilities handling hazardous materials in the County	Previously: Hazardous Materials

[29] Cal OES. 2018. "California State Hazard Mitigation Plan." https://www.caloes.ca.gov/cal-oes-divisions/hazard-mitigation/hazard-mitigation-planning/state-hazard-mitigation-plan

Hazard	Reason for Inclusion	Connection to 2015 Plan
Threat and Disturbance Hazards		
Terrorism	Ongoing national threat observed Indicated for inclusion by the County	Previously: Weapons of Mass Destruction/Terrorism

The following hazards from the 2015 San Benito County Multi-Jurisdictional HMP are not included in the Plan Update and are integrated into the **Lifeline Vulnerability Assessment**.

- Data Telecommunication Loss and Technological Hazard
- Substation/Electrical/Underground Gas Utility Loss
- Economic Disruption
- Water/Wastewater Disruption
- Transportation Loss

Some hazards profiled in the 2018 California State Plan are not included in the 2021 San Benito County Multi-Jurisdictional HMP. These hazards were not selected as they are not applicable to the planning area (e.g., coastal flooding) or they do not have a historical or anticipated future impact on the planning area (e.g., avalanche). **Hazards Excluded from the San Benito Multi-Jurisdictional HMP** details why specific hazards in the 2018 California State Plan were excluded from the Plan. The non-natural hazards listed in the appendix were either integrated into the Lifeline Vulnerability Assessment, not considered a concern by the County, or addressed by other means.

Each of the hazards identified in the table applies to each of the participating jurisdictions. As a part of the comprehensive hazard mitigation planning process that the City of Hollister conducted in conjunction with their Hollister 2040 General Plan update, the city identified a series of ten hazard types and associated subcategories which complement and supplement the HMP. The hazard types and subcategories are listed in Table 8. Hollister's hazard identification includes several hazards not identified in the HMP, including Aircraft Incident, Agricultural Pests, Erosion, Civil Disturbance, and Cyber Threats. As mentioned in the preceding paragraph, these hazards were not considered to be applicable to the planning area or do not have a historical or anticipated future impact on the planning area.

Table 8: Hazards Identified in the Hollister Jurisdictional Annex

Hazard Type	Subcategory
Aircraft Incident	
Diseases and Pests	Agricultural Pests; Epidemic / Vector-Borne Disease
Drought	
Flooding	Dam Inundation
Geologic Hazards	Landslide; Erosion
Hazardous Materials Release	
Human-Caused Hazards	Mass-Causality Incident (Terrorism); Civil Disturbance; Cyber Threats
Seismic Hazards	Fault Rupture; Seismic Shaking; Liquefaction
Severe Weather	Extreme Heat; Severe Wind; Wildfire

4.1.1.2 HAZARD PRIORITIZATION

As part of the hazard identification process, the Planning Committee ranked the hazards identified for the 2021 San Benito County HMP from most to least concerning based on frequency, level of impact, recent hazard history, and other associated risks.

This ranking is illustrated in Figure 13 below.

Figure 13: Planning Committee Hazard Prioritization



The Planning Committee identified the ranking of hazards as follows:

- High Priority Hazards: earthquakes, severe weather, and wildfires
- Medium Priority Hazards: dam failures, floods, extreme temperatures, and communicable diseases
- Low Priority Hazards: drought, landslide, HAZMAT Incidents, and terrorism

The ranking completed by the Planning Committee aligns with the community's hazards concerns, as collected during the Community Hazards Survey. Information from this ranking exercise was incorporated into the hazard profiles and helped frame future discussions regarding hazard risk, disaster impacts, and priorities for mitigation.

4.1.1.3 HAZARD PROFILE DEVELOPMENT

Hazard profiles were prepared for each of the identified hazards to present the results of the risk assessment and support the evaluation of overall hazard risk for San Benito County. Table 9 describes the subsections included in each hazard profile of this Plan and identifies which

FEMA Local HMP requirements these subsections meet. Following this table, the remainder of the section details how sections of the hazard profile were developed.

Table 9: Hazard Profile Subsections

Hazard Profile Subsection	Description	FEMA Planning Requirement
Characteristics	Provides information regarding the type of the specific hazard in the profile	Element B1 [44 CFR § 201.6(c)(2)(i)]
Location and Extent	Describes the geographic area that is impacted by the specific hazard, magnitude of that event, and the scale on which the magnitude is measured by	Element B1 [44 CFR § 201.6(c)(2)(i)]
Recent Occurrences	Lists hazard events that occurred in San Benito County	Element B2 [44 CFR § 201.6(c)(2)(i)]
Probability	Estimates how often the specific hazard is likely to occur	Element B2 [44 CFR § 201.6(c)(2)(i)]

A description of hazard vulnerability and impact as required by Element B3 or [44 CFR § 201.6(c)(2)(ii)] is located in the **Lifeline Vulnerability Assessment.**

4.1.1.4 CALCULATION OF PROBABILITY

Probability of occurrence is a key consideration for evaluating and understanding the level of risk associated with each hazard. The probability of occurrence was estimated based on best available information, including:

- Number of historical occurrences in a given time period;
- Scientific study; and
- Projections for future hazard events, especially due to climate change.

Using this estimation, each hazard was categorized into three probability groups: **highly likely**, **likely**, or **unlikely**. The probabilities of each profiled are summarized in Table 10 below.

Table 10: Hazard Probability Summary

Probability Category	Category Definition	Hazards
Highly Likely	A hazard that occurs one or more times per year.	• Drought • Severe Weather: Wind • Wildfire
Likely	A hazard that occurs at least once every five years.	• Extreme Temperatures: Extreme Cold • Extreme Temperatures: Extreme Heat • Flood • Landslide • Severe Weather: Hail

Probability Category	Category Definition	Hazards
Unlikely	A hazard that occurs less than once every five years	• Communicable Disease • Earthquake • Dam Failure • HAZMAT Incident • Severe Weather: Tornado • Terrorism

4.1.2 Data and Tools

Note: FEMA's loss estimation software, Hazus-MH 4.2 (Hazus), was used to model the damage and estimate the losses associated with flooding and earthquakes in San Benito County. The results of this analysis were integrated into the Lifeline Vulnerability Analysis.

4.1.2.1 GEOGRAPHIC INFORMATION SYSTEM

The GIS software ArcGIS is a tool developed by the Environmental Systems Research Institute (ESRI). ArcGIS can visualize sets of data, complete geospatial analysis, and develop various levels of mapping. In the HMP, ArcGIS was utilized to aggregate and analyze geographic data to develop maps and illustrate data.

4.1.2.2 STORM EVENTS DATABASE

Records of historical occurrences for several hazards were retrieved from the NOAA Storm Events Database, a resource maintained by the NCEI. This database maintains reports of hazard occurrences across the United States and information about the estimated impacts of the events. The data obtained from NOAA Storm Events Database for the purposes of the Plan are for events that occurred between January 2011 and December 2020 that occurred within the San Benito County jurisdictional boundaries.

4.1.2.3 OTHER DATA SOURCES

Other data sources were used to collect information on community characteristics (e.g., vegetation mapping) and recent hazard occurrences. Other data sources included in the Plan are:

- San Benito County;
- U.S. Drought Monitor;
- ESRI;
- CAL FIRE, including the Fire and Resource Assessment Program;
- Caltrans;
- Metropolitan Transportation Commission;
- USGS;
- California Geological Survey (CGS); and
- Earth Resources Observation and Science Center.

Data from these sources were used to understand geographic characteristics, transportation infrastructure, and historical occurrences of hazard events.

4.1.3 Climate Change

The risk assessment and following lifeline vulnerability assessment incorporate considerations for the impact of climate change. Climate change is a term that refers to increased variability and evolving average properties of climate over an extended period of time.[30] Global warming, or the rising average temperatures, is the most commonly observed aspect of the climate change phenomena. Climate change is caused by an increased presence of greenhouse gases (GHGs), such as methane, carbon dioxide, and nitrous oxide, in the atmosphere. GHGs are the byproducts of various human activities, including burning fossil fuels, treating water and wastewater, and processing coal.[31] GHGs increase the impacts of climate change by contributing to the greenhouse effect, which has increased the average temperature of the planet 1.8°F in the last 150 years of industrialization.[32,33]

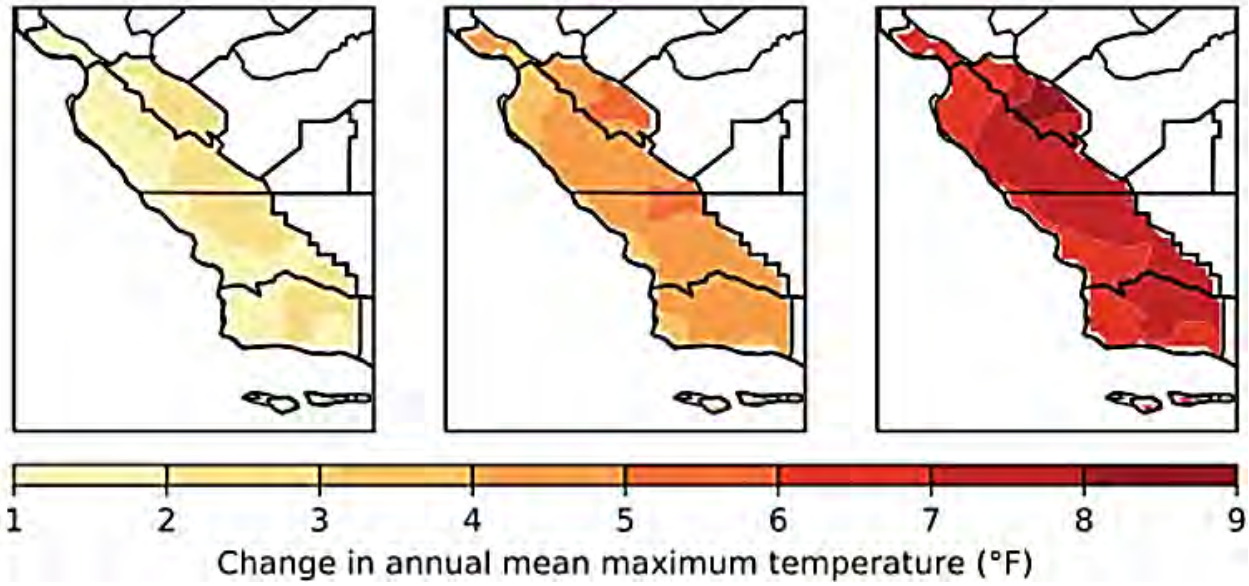
In *California's Fourth Climate Change Assessment*, the California Energy Commission details recorded changes to the climate across the State and anticipated changes in the next 100 years. The report predicts that if GHG emissions continues at the current rates, California will likely experience an increase of temperatures up to 8.8°F by 2100.[34]

The *Central Coast Region Report* section of the *Climate Change Assessment* models how these climate impacts may affect the Central Coast Region, which includes San Benito County. *Figure 14* depicts the anticipated increases in average temperature in the region.

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[30] Cal OES. 2020. "California Adaptation Planning Guide." https://www.caloes.ca.gov/HazardMitigationSite/Documents/CA-Adaptation-Planning-Guide-FINAL-June-2020-Accessible.pdf.
[31] U.S. Environmental Protection Agency. "Overview of Greenhouse Gases." Greenhouse Gas Emissions. https://www.epa.gov/ghgemissions/overview-greenhouse-gases.
[32] BBC News. 2020. "What is climate change?." https://www.bbc.com/news/science-environment-24021772.
[33] NOAA. 2021. "Climate Change: Global Temperature." Climate.gov. https://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature.
[34] California Energy Commission. 2018. "California's Fourth Climate Change Assessment: California's Changing Climate 2018." https://www.energy.ca.gov/sites/default/files/2019-11/20180827_Summary_Brochure_ADA.pdf.

Figure 14: Expected Temperature Changes throughout the Central Coast Region[35]



The three images show projected temperature increases throughout the region if the current rate of GHG emissions were to continue, using the RCP8.5 climate model. The left image represents anticipate temperature increases from 2006 – 2039, averaging approximately 3 °F in San Benito County. The middle image represents anticipate temperature increases from 2040 – 2069, ranging from approximately 4 - 6 °F in San Benito County. The right image represents anticipate temperature increases from 2070 – 2100, ranging from approximately 6 - 9 °F in San Benito County.

In addition to changing the average temperature of the planet, climate change impacts ecosystems, sea level rise, weather patterns, and the location and extent of community vulnerabilities. The cascading effects of climate change on hazard events and their impacts are of greatest concern in the risk assessment. Climate change has and is expected to increase the frequency, extent, and variability of natural hazards, lessening the effectiveness of historical hazard occurrences as an indicator of future hazard probability and impact. In California, climate change will significantly impact drought and wildfire events. As precipitation decreases and evaporation rates increase due to rising temperatures, the length and magnitude of droughts are expected to extend. Longer and more severe droughts and more extreme temperatures will reduce the moisture content in vegetation, establishing conditions that are more conducive for wildfires to ignite and grow.[36]

The conclusions in the following sections of the Risk Assessment may be exasperated as outlined above; disasters are likely to increase in frequency and intensity beyond the trends established by historical data, either as a direct impact (e.g., extreme temperatures) or indirect impact (e.g., communicable disease) of climate change. The impacts of these disasters are

[35] California Energy Commission. 2018. "California's Fourth Climate Change Assessment: The Central Coast Region Report." https://www.energy.ca.gov/sites/default/files/2019-11/Reg_Report-SUM-CCCA4-2018-006_CentralCoast_ADA.pdf.
[36] U.S. Environmental Protection Agency. 2016. "What Climate Change Means for California." https://www.epa.gov/sites/production/files/2016-09/documents/climate-change-ca.pdf.

likely to become more severe in accordance with the increased risk, which is captured in the Lifeline Vulnerability Assessment.

4.2 Drought



The following section outlines the drought risk assessment for San Benito County. Drought was identified as a high-risk priority hazard in the 2015 San Benito County HMP.

4.2.1 Characteristics

Drought is defined by an extended period of dryness in a region that impacts soil moisture and water resource availability. Type of drought are characterized by their origins and impacts.[37] There are four different types of drought San Benito County may experience, either as individual or combined occurrences:

- **Meteorological drought** is a period of dryness caused by climate and weather variability. It is most likely to originate from limited precipitation and high temperatures and is the precursor to agricultural or hydrological drought.
- **Agricultural drought** is a period of dryness known for its impacts on agricultural activities by reducing groundwater resources, soil moisture content, and plant biomass. It lasts for a longer period than meteorological drought.
- **Hydrological drought** is a period of dryness that impacts the water levels of streams, reservoirs, and other water bodies. It may reduce the flow rates of rivers, limit drinking water resources, or dry out wetlands. Hydrological drought may last for years past the beginning of a meteorological drought.
- **Socioeconomic drought** is a period in which the demand for goods is greater than the supply due to the impacts of meteorological, agricultural, and/or hydrological drought. For example, if a hydrological drought reduces the discharge rates of a stream, the electricity output of a hydroelectric dam may not meet the demand from a community. The resulting electricity blackouts are caused by this socioeconomic drought.

4.2.2 Location and Extent

Drought may occur anywhere in San Benito County, although variances in geology and topography may slightly alter the drought severity in the area. Drought is often a regional occurrence and will likely impact neighboring jurisdictions simultaneously.

The extent of drought may be measured by the Drought Severity Index, as shown in Table 11. The U.S. Drought Monitor uses this tool to categorize droughts from D0 – D4 with increasing

[37] National Geographic Society. "Drought." National Geographic: Resource Library. https://www.nationalgeographic.org/encyclopedia/drought/.

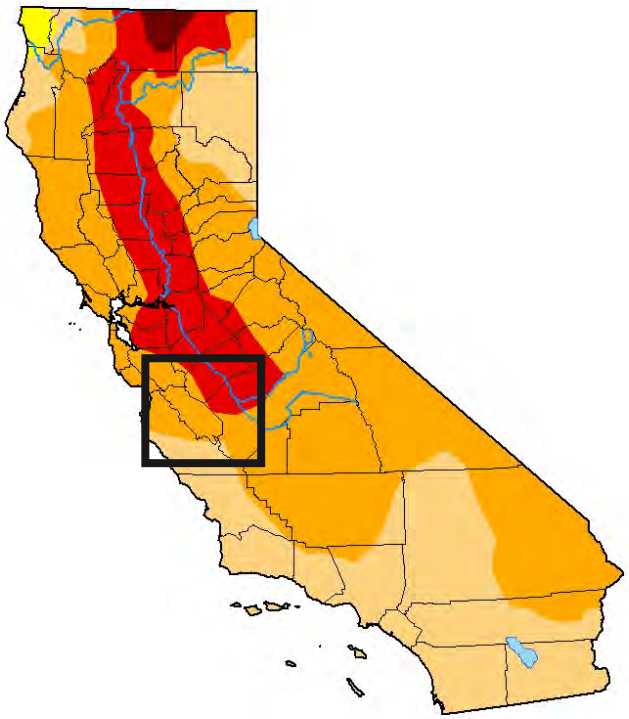
severity. Drought categories are assigned by comparing soil moisture, groundwater levels, reservoir storage, and vegetation density to normal conditions for the region.[38]

Table 11. Drought Severity Index[39]

Category		Description
	D0	Abnormally Dry
	D1	Moderate Drought
	D2	Severe Drought
	D3	Extreme Drought
	D4	Exceptional Drought

An example of how the U.S. Drought Monitor uses the Drought Severity Index is shown in Figure 15, which shows a map of the anticipated drought risk in the State of California. San Benito County is located within the dark outlined box.

Figure 15: U.S. Drought Monitor for the State of California, valid January 6, 2022[40]

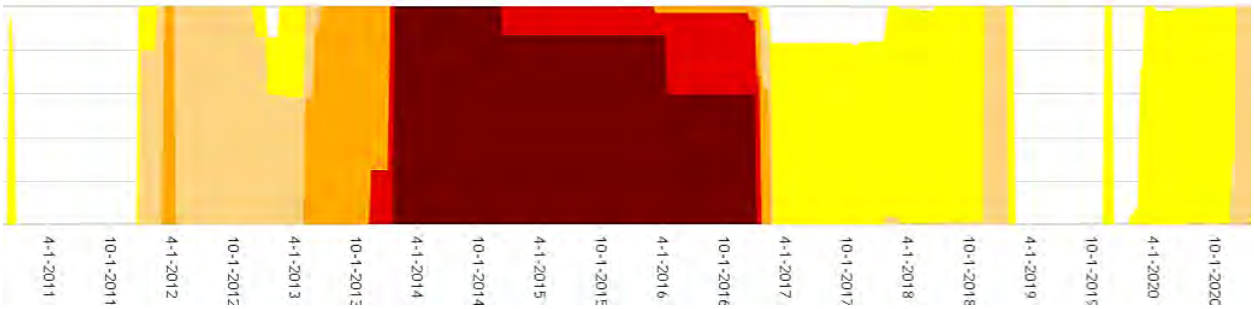


[38] National Drought Mitigation Center. United States Drought Monitor. https://droughtmonitor.unl.edu/.
[39] National Drought Mitigation Center. United States Drought Monitor. https://droughtmonitor.unl.edu/.
[40] National Drought Mitigation Center. United States Drought Monitor. https://droughtmonitor.unl.edu/.

4.2.3 Recent Occurrences

San Benito County has experienced several intense periods of drought between 2011 and 2020, as depicted in the time series in Figure 16. In the time series graphic, the color scheme as identified in Table 11 indicates the severity of the drought and the height of the vertical lines indicates the percent area of the County impacted by the drought. The droughts extending from 2014 to 2017 were so significant that the State instituted mandates to limit residential and agricultural water use and burn bans to limit potential occurrences of wildfires.[41]

Figure 16: U.S. Drought Monitor for San Benito County, 2010-2020



4.2.4 Probability

The probability of a drought occurring in San Benito County is **highly likely**, meaning it has a frequency of occurrence of at least once a year. This was calculated using historical data, in which at least one drought has occurred every year for the last ten years.

[41] South Valley. 2015. "Burn Ban Declared Due to Drought." *SanBenito.com*. https://sanbenito.com/burn-ban-declared-due-to-drought/.

4.3 Extreme Temperatures



The following section outlines the extreme temperatures risk assessment for San Benito County. The extreme temperatures profile includes both extreme heat and extreme cold hazards. Extreme heat and extreme cold were identified as high-risk priority hazards in the 2015 San Benito County HMP under the severe weather hazard profile.

4.3.1 Characteristics

4.3.1.1 EXTREME HEAT

Extreme heat is as an event in which excessively high temperatures occur concurrently with high humidity, resulting in temperatures and perceived temperatures that are much higher than expected for a region and time of year. The State of California HMP notes extreme heat combined with increased humidity as one of the deadliest natural hazards. Extreme heat is most likely to occur during summer months, when temperatures are already the warmest of the year.[42] The NOAA Storm Events Database considers events with heat index values that meet or exceed regionally established heat warning thresholds as a heat hazard event.[43]

4.3.1.2 EXTREME COLD

Extreme cold is an event in which excessively low temperature occur concurrently with high winds, resulting in temperatures and perceived temperatures that are much lower than expected for a region and time of year. The State of California HMP notes that extended cold temperatures may create health risks for vulnerable populations and have severe impacts on agriculture.[44] The NOAA Storm Events Database considers events with extremely low temperatures or wind chill temperatures that meet or exceed regionally established warning criteria as a cold hazard event.[45]

4.3.2 Location and Extent

4.3.2.1 EXTREME HEAT

Given the nature of the hazard, all areas of San Benito County are equally likely to experience extreme heat. However, more developed areas of the County are likely to experience slightly

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[42] Cal OES. 2018. "California State Hazard Mitigation Plan: Chapter 9 - Other Hazards." https://www.caloes.ca.gov/HazardMitigationSite/Documents/012-2018%20SHMP_FINAL_Ch%209.pdf.
[43] NOAA. 2016. "National Weather Service Instruction: Storm Data Preparation." https://www.ncdc.noaa.gov/stormevents/pd01016005curr.pdf.
[44] Cal OES. 2018. "California State Hazard Mitigation Plan: Chapter 9 - Other Hazards." https://www.caloes.ca.gov/HazardMitigationSite/Documents/012-2018%20SHMP_FINAL_Ch%209.pdf.
[45] NOAA. 2016. "National Weather Service Instruction: Storm Data Preparation." https://www.ncdc.noaa.gov/stormevents/pd01016005curr.pdf.

higher temperatures due to the heat island effect. The heat island effect describes the phenomenon in which urban areas with increased heat-absorptive surfaces (e.g., pavement, sidewalks), increased heat-generating activities (e.g., cars emitting fossil fuels), and decreased vegetation have 1-7 °F higher temperatures than surrounding forests and water bodies. Urban areas will likely have exacerbated impacts from heat events.[46]

There are a variety of methodologies used to measure the extent of an extreme heat event, including the National Weather Service (NWS) Heat Products, NWS Heat Index, and NWS Heat Risk. These tools typically measure daytime and nighttime temperature, relative humidity, length of event, and regional conditions to determine the magnitude of an event.

The 2018 California State HMP utilizes the NWS Heat Risk platform to classify the extent of an extreme heat event. This product aims to provide an appropriate evaluation of the extent of an extreme heat event based a wider range of factors, including:

- The significance above the normal temperature;
- The time of year;
- The duration of the increased temperature; and
- The potential impact of the increased temperature.

Table 12 outlines the categories indicating the extent of extreme heat.

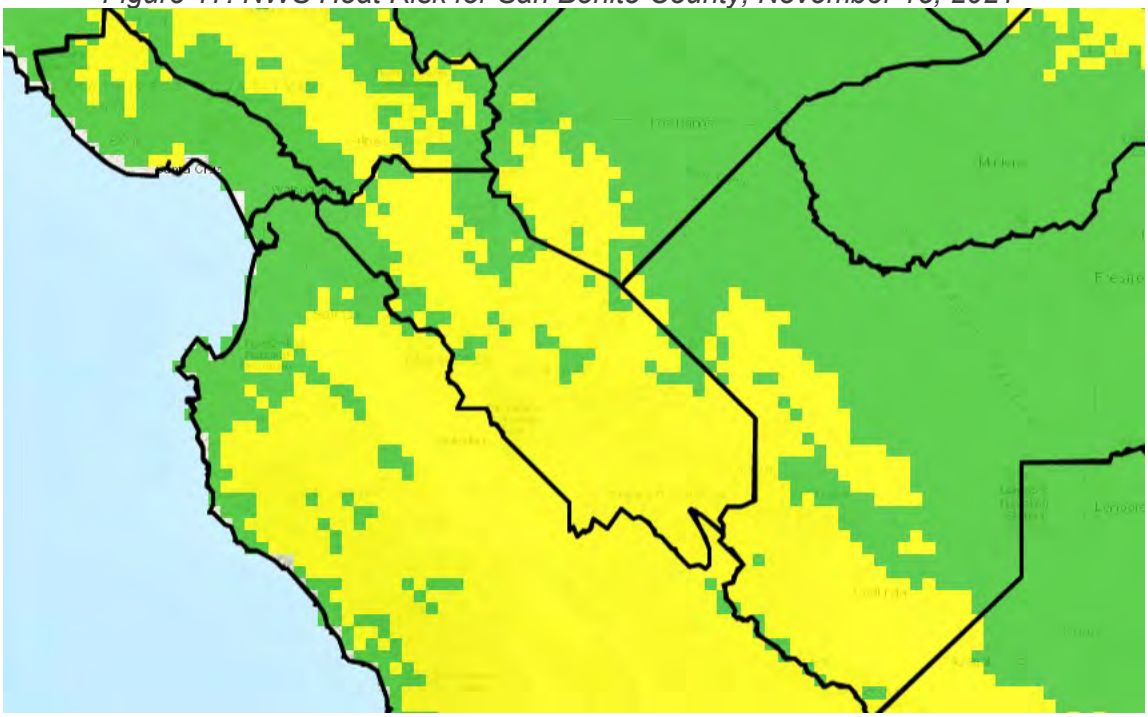
Table 12: NWS Heat Risk Index[47]

Heat Risk Category		Level	Meaning
	Green	0	No elevated risk.
	Yellow	1	Low risk for those extremely sensitive to heat, especially those without effective cooling and/or adequate hydration.
	Orange	2	Moderate risk for those who are sensitive to heat, especially those without effective cooling and/or adequate hydration.
	Red	3	High risk for much of the population, especially those who are heat sensitive and those without effective cooling and/or adequate hydration.
	Magenta	4	Very high risk for entire population due to long duration heat, with little to no relief overnight.

Figure 17 below provides an example of how heat risk may be measured in San Benito County using the Heat Risk Index. The map is valid for November 15, 2021, and represents low to no risk of extreme heat in the County.

[46] EPA. 2021. “Heat Island Effect.” https://www.epa.gov/heatislands.
[47] Cal OES. 2018. "California State Hazard Mitigation Plan: Chapter 9 - Other Hazards." https://www.caloes.ca.gov/HazardMitigationSite/Documents/012-2018%20SHMP_FINAL_Ch%209.pdf.

Figure 17: NWS Heat Risk for San Benito County, November 15, 2021[48]



Note: The key for this risk map is indicated in Table 12.

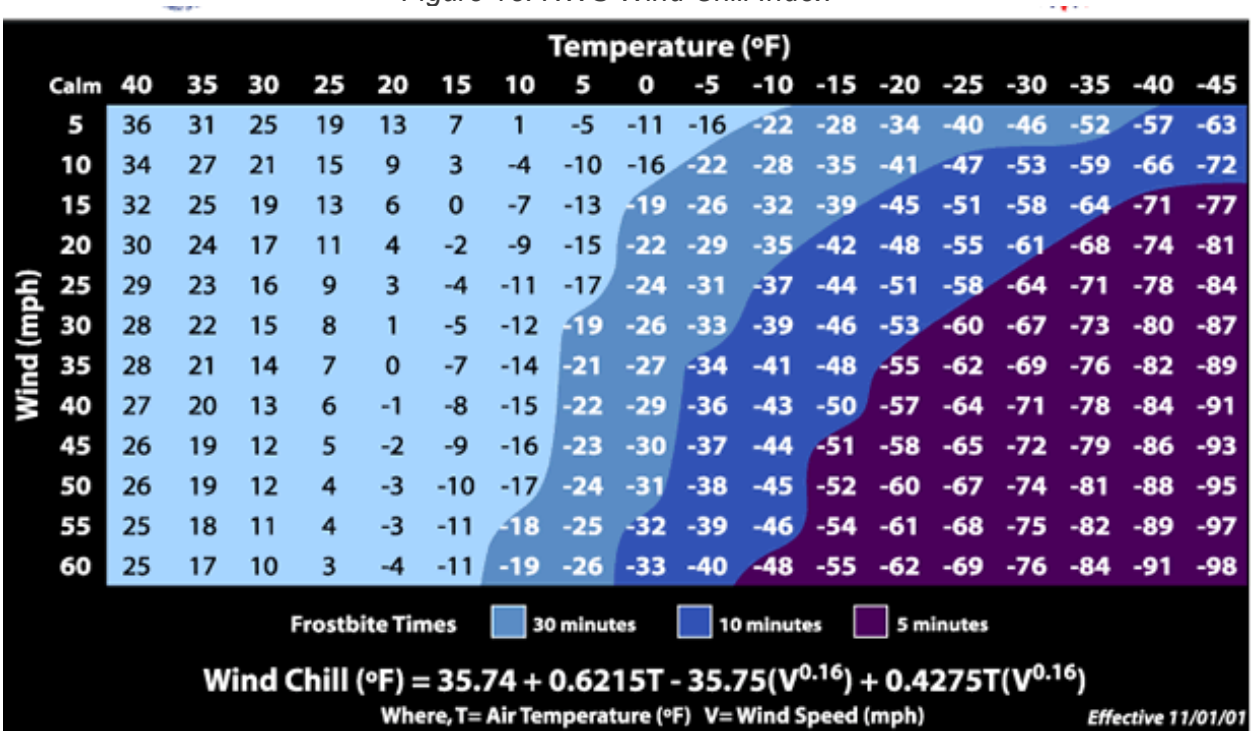
4.3.2.2 EXTREME COLD

Given the nature of the hazard, all areas of San Benito County are equally likely to experience extreme cold. However, areas with at higher elevations in the County are likely to experience higher winds and slightly lower temperatures.[49]

The extent of extreme cold is typically quantified by combining measurements of the temperature and wind to establish the temperature of the environment that individuals experience. The NWS Wind Chill Index, shown in Figure 18, quantifies the cooling effect of wind when combined with cold outside air temperatures. The calculated wind chill temperature represents how cold people and animals feel depending on the rate of heat lost from exposed skin.[50]

[48] NWS. 2021. "NWS Experimental Heat Risk." *NOAA*. https://www.wrh.noaa.gov/wrh/heatrisk/.
[49] Nels, Janet. 2019. "The Effects of Topography on the Climate." *Sciencing*. https://sciencing.com/the-effects-of-topography-on-the-climate-12508802.html.
[50] NWS. "Wind Chill Chart." NOAA. https://www.weather.gov/safety/cold-wind-chill-chart.

Figure 18: NWS Wind Chill Index[51]



4.3.3 Recent Occurrences

4.3.3.1 EXTREME HEAT

Between January 2011 and December 2020, the NOAA Storm Events Database recorded one extreme heat event in October 2012. Temperatures reached above 100 degrees, and farm workers were severely impacted by the event. One farm worker in the region died due to health impacts from the extreme heat.[52]

Additionally, San Benito County experienced an extreme heat event in August 2020 during a heat wave caused by a high-pressure weather system in the desert. Temperatures reached a peak of 111 degrees on August 16 in Pinnacles National Park and an Excessive Heat Warning was issued. In response to the event, the San Benito County OES established a cooling center at the San Benito County Library for the community.[53]

4.3.3.2 EXTREME COLD

The NOAA Storm Events database lists six unique frost or freeze events between January 2011 and December 2020, as recorded in Table 13. All of these events were recorded in the

[51] NWS. “Wind Chill Chart.” NOAA. https://www.weather.gov/safety/cold-wind-chill-chart
[52] NCEI. 2021. "Storm Events Database." *NOAA*. https://www.ncdc.noaa.gov/stormevents.
[53] Reyes, Juan. 2020. “Heatwave torches San Benito County.” *SanBenito.com.* https://sanbenito.com/heatwave-torches-san-benito-county/.

Mountains of San Benito County Zone, which includes Pinnacles National Park. The coldest event was recorded on January 1, 2019, when the weather station reported temperatures as low as 17 degrees.

Table 13: Recent Occurrences of Extreme Cold in San Benito County[54]

Date	Temperature Range (°F)
12/28/2018	22 – 28
12/29/2018	28
1/1/2019	17 – 28
10/31/2019	23 – 26
2/3/2020	19 – 28
2/4/2020	22 - 28

4.3.4 Probability

The probability of an extreme heat event occurring in San Benito County is **likely**, meaning it has a frequency of occurrence of at least once every five years. The probability of an extreme cold event occurring in San Benito County is **likely**, meaning it has a frequency of occurrence of at least once every five years. As climate change is anticipated to create greater variability in temperatures, the frequency of an extreme temperature event is likely to increase in the future.

[54] NCEI. 2021. "Storm Events Database." NOAA. https://www.ncdc.noaa.gov/stormevents.

4.4 Flood



4.4.1 Characteristics

Flooding is defined as the flow of water into an area that is not typically inundated. Flooding is categorized by its cause and location, including riverine flooding and flash flooding. **Riverine flooding** originates from excessive precipitation or snowmelt and occurs when water overflows the embankments of a waterway (e.g., river, stream). Riverine flooding typically occurs in the floodplain, or the area that may be inundated by floodwater. **Flash flooding** is caused by excessive rainfall in a short time period and spreads quickly atop the surface. Flash flooding may also be prevalent when land is extremely dry, such as after a long drought, or where there is reduction in vegetation on land, such as after a wildfire, and the soil is unable to absorb the water quickly enough, causing water to flow above the surface.[55]

Flooding is more likely to occur when precipitation is more likely to occur. In San Benito County, approximately 80% of annual precipitation occurs often occurs in the winter (November through March). Extensive precipitation during these months, particularly during the month of January, increases the depth of the water table and creates conditions more suitable for riverine and flash flooding.[56]

4.4.2 Location and Extent

Flood extent can be characterized by its generalized impacts on a community. The three categories of flood extent, as categorized by the NWS, are:

- **Minor Flooding**: Riverbanks overflow into low-lying areas. Property is minimally damaged.
- **Moderate Flooding**: Some transportation infrastructure may be flooded. Evacuations may be necessary for those living at lower elevations.
- **Major Flooding**: Buildings and infrastructure experience substantial flooding and associated damage. Evacuations are necessary for a significant portion of the population.

This categorization of flood extent may be used to compare the impacts of flood events but does not measure the depth of flooding ("flood stage") during a hazard event.[57]

Location and annual probability of flooding is typically indicated by FEMA flood insurance rate maps (FIRMs). FIRMs represent different areas of flood risk that correlate to flood insurance premiums under the National Flood Insurance Program (NFIP). The flood insurance premiums are reflective of the annual probability an area will flood. FIRMs distinguish between the 1% and 0.2% annual chance flood zones.[58] Table 14 provides an overview of the FEMA flood

[55] National Severe Storms Laboratory. "Severe Weather 101: Floods." https://www.nssl.noaa.gov/education/svrwx101/floods/.
[56] NCEI. 2021. "Climate Data Online." NOAA. https://www.ncdc.noaa.gov/cdo-web/.
[57] NWS. "High Water Level Terminology." https://www.weather.gov/aprfc/terminology.
[58] Previously different terminology was used to indicate the 1% annual chance flood zone (100-year floodplain) and 0.2% annual chance flood zone (500-year floodplain), but these terms are considered outdated as they do not accurately represent the risk.

designations which further define sub-types of the 1% and 0.2% annual chance floodplains. The flood zone designations for the County are displayed in Figure 19, Figure 20, and Figure 21, which indicate the locations of different floodplains, and therefore potential areas of flooding, in San Benito County, the City of Hollister, and San Juan Bautista accordingly.

Table 14: FEMA Flood Zone Designations[59]

Zone	Definition	Risk
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.	High
AE	The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones. These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a base floodplain extent (old format).	High
AH	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.	High
AO	River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.	High
AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply, but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with Zone AR floodplain management regulations.	High
A99	Areas with a 1% annual chance of flooding that will be protected by a Federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.	High
B and X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 1% annual chance and 0.2% annual chance floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 1% annual chance flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.	Moderate

Flooding may occur in areas of the County outside of these flood zones, as FIRMs may be out of date and do not reflect the anticipated impacts of climate change.

[59] FEMA. “Definitions of FEMA Flood Zone Designations.” https://snmapmod.snco.us/fmm/document/fema-flood-zone-definitions.pdf.

Figure 19: Flood Zones in San Benito County

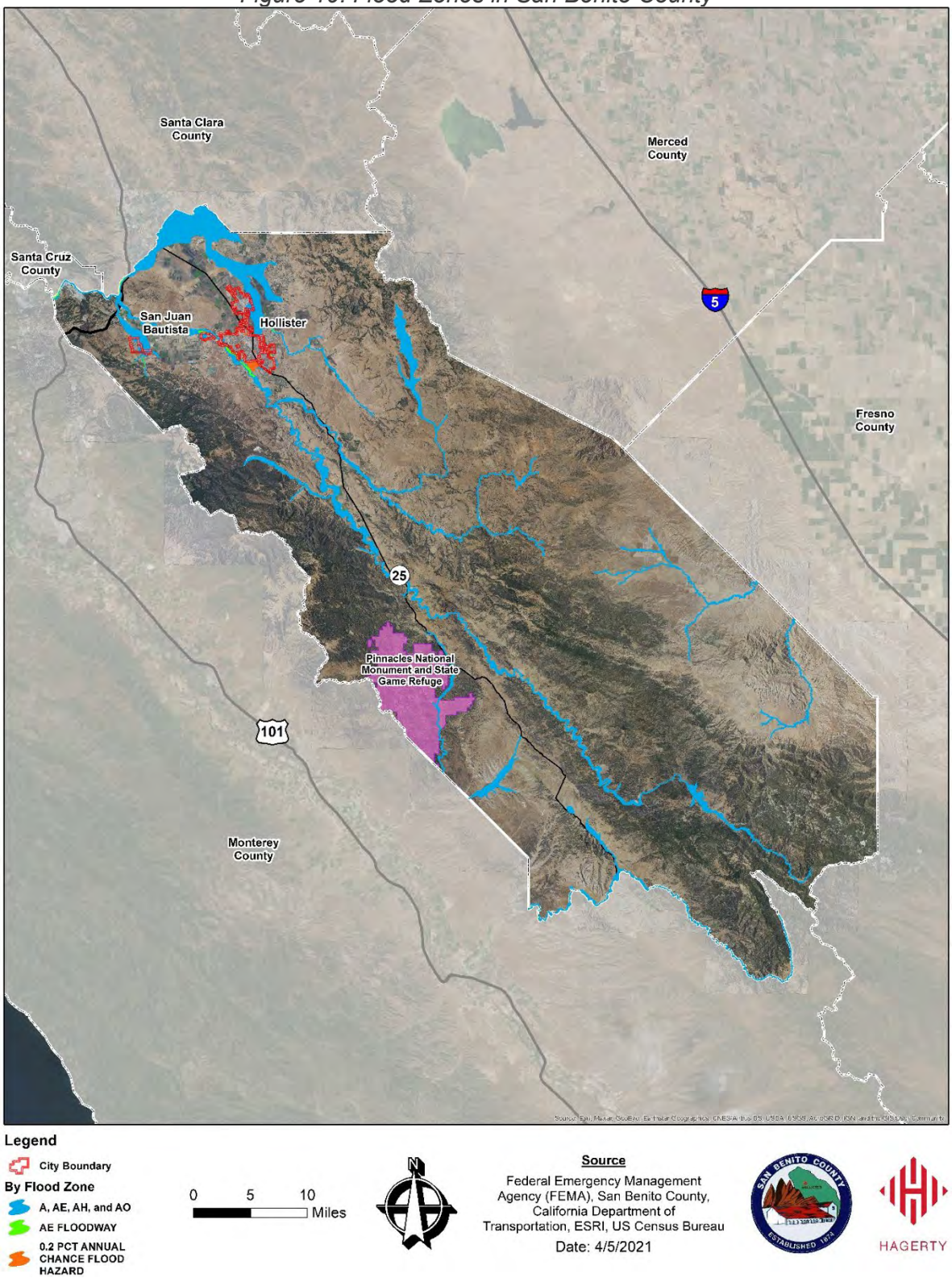


Figure 20: Flood Zones in the City of Hollister

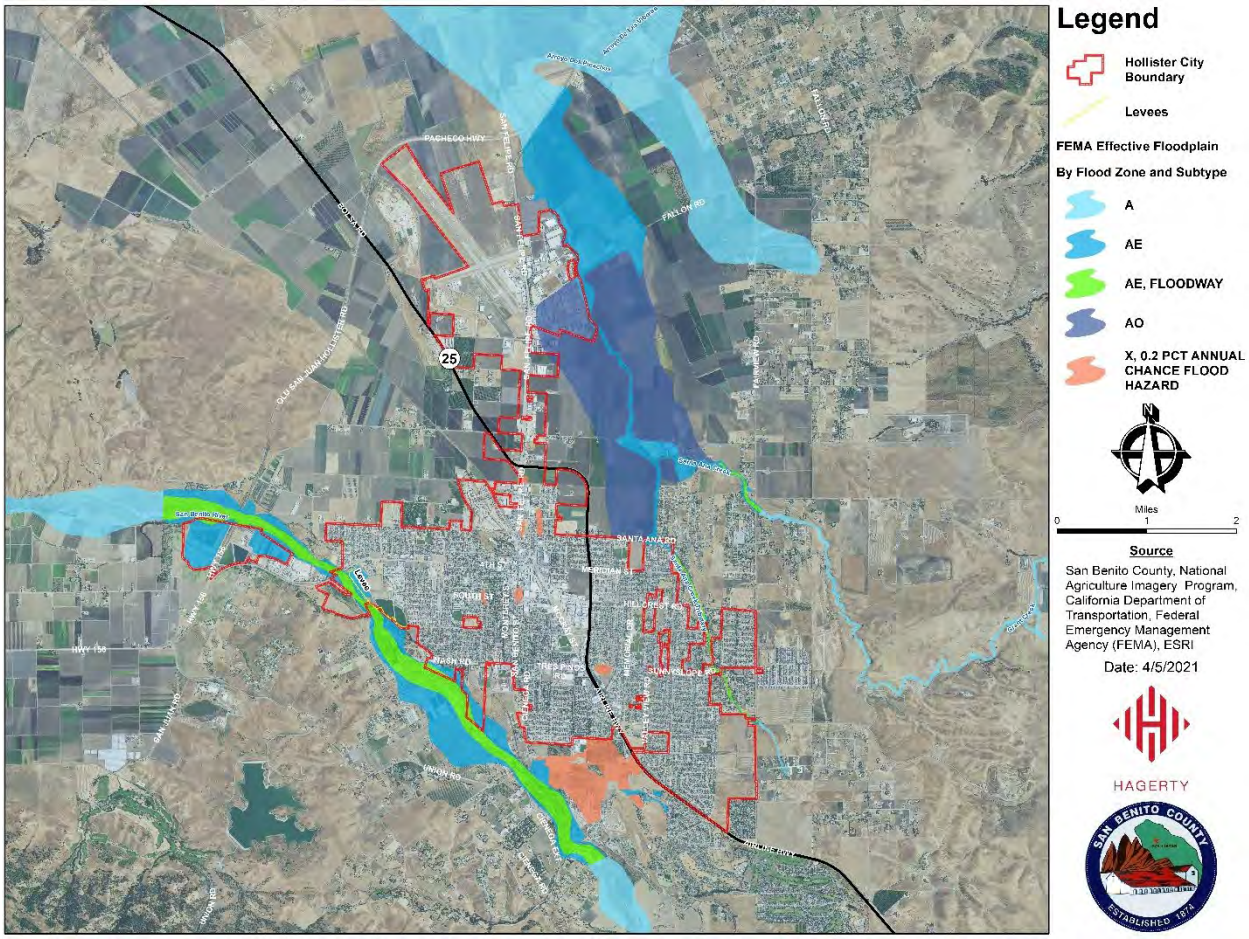
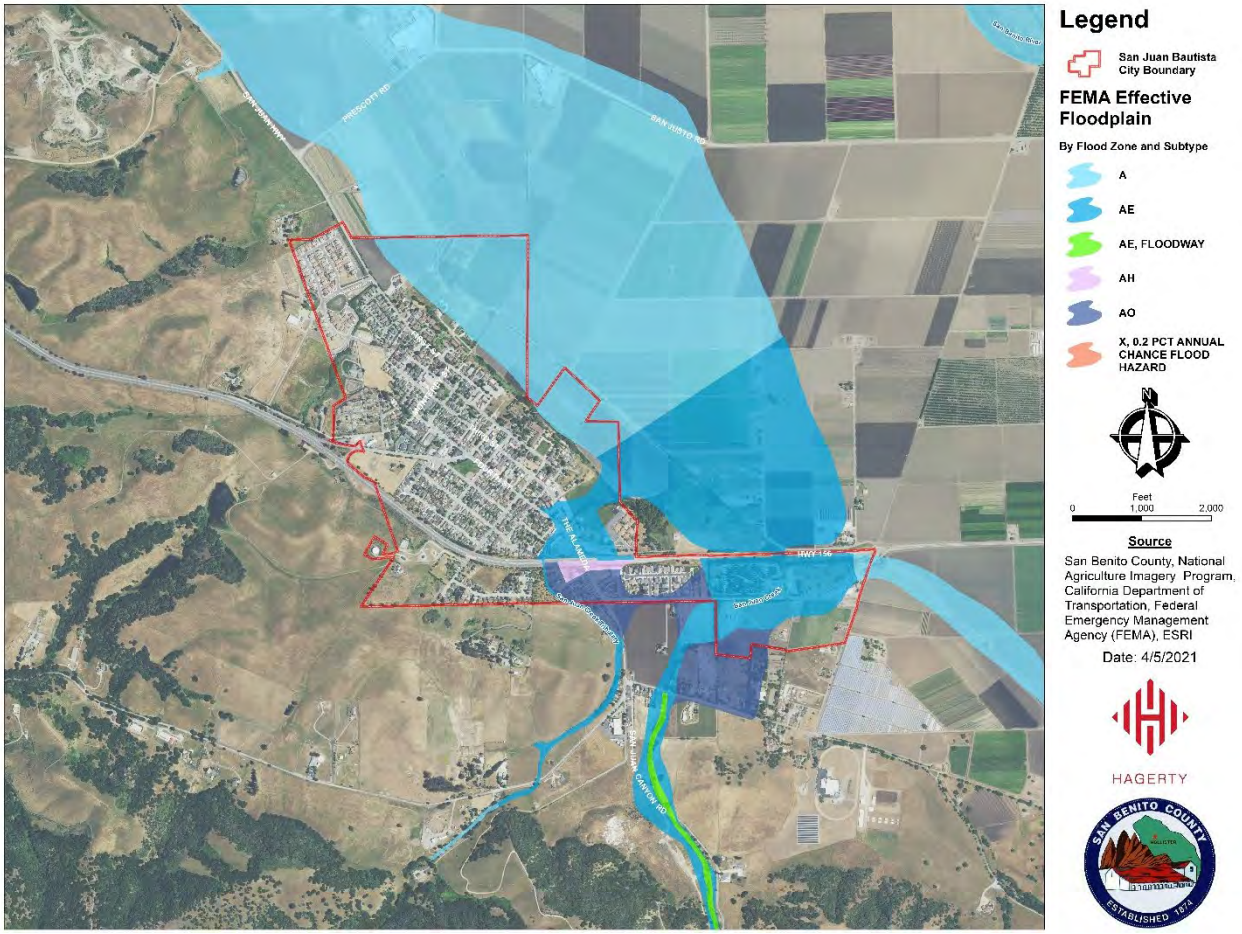


Figure 21: Flood Zones in the City of San Juan Bautista



4.4.3 Recent Occurrences

According to the NOAA Storm Events database, San Benito County has had four total flood events reported over the last ten years, as shown in Table 15 below.

Table 15: Recent Occurrences of Floods in San Benito County[60]

Date	Event Type	Impacted Areas	Description
10/28/2016	Flood	Tres Pinos	Heavy rain flooded roads on CA SR 25.
1/20/2017	Flash Flood	San Felipe, Hudner	Pacheco Creek rose above the flood stage and flooded the surrounding areas.
1/22/2017	Flash Flood	Dunneville Corners, Hudner	Pacheco Creek rose above the flood stage and flooded the surrounding areas.
2/9/2017	Flood	Dunneville Corners and Hollister	Eastbound CA SR 152 flooded just west of Lovers Lane. Southbound Union Rd/Union Heights flooded.

[60] NCEI. 2021. "Storm Events Database." NOAA. https://www.ncdc.noaa.gov/stormevents.

Date	Event Type	Impacted Areas	Description
2/20/2017	Flood and Flash Flood	Dunneville Corners, Hollister Apartment	Pacheco Creek near Dunneville above flood stage.

In January 2017, the Pacheco Creek flooded and caused widespread flooding in Hollister, California, and 49 people had to be rescued from their homes overnight.[61] Two weeks later, the same neighborhood flooded once again after a 75-foot-wide break in the levee was discovered. 21 swift water rescues were conducted.[62]

There were additional flooding events reported in the last ten years in San Benito County. In December 2019, heavy rains caused flooding again in Hollister, prompting the evacuation of the Mabie Northside Skilled Nursing Facility.[63]

4.4.3.1 NATIONAL FLOOD INSURANCE PROGRAM

The NFIP was established by Congress with the passage of the National Flood Insurance Reform Act of 1968. Through this program, federally backed flood insurance is made available to homeowners, renters, and businesses in a community if that community adopts and enforces a floodplain management ordinance to reduce future flood damage within its floodplains. This includes not only preventative measures for new development, but also corrective measures for existing development. In addition to providing flood insurance, the NFIP also studies and maps the nation's floodplains, preparing its findings in FIRMs and Flood Insurance Studies (FISs).

San Benito County, the City of Hollister, and City of San Juan Bautista participate in the NFIP. SSWD and SBCWD are not eligible for NFIP. Management of the NFIP for these jurisdictions has been inconsistent since the last Plan update. This has resulted in incomplete data regarding NFIP policies and claims. The County is actively working on building floodplain administration capability as reflected in this Plan. The County's Floodplain Administer identified that there are currently 128 NFIP policies in force in the County. Since 1978, there have been 66 paid losses in the County with total claims of $1,574,310. The City of Hollister's Floodplain Administrator identified that there are 20 NFIP policies in force in the City. Total insurance coverage for these policies amounts to $6.35 million. No information is known regarding NFIP policies for San Juan Bautista.

Some communities in San Benito County have high number of properties that have recurrent losses. "Repetitive loss properties" are any insurable buildings that have incurred at least two flood losses of greater than $1,000 each in any rolling ten-year period since 1978. In total, these

[61] Sanchez, Kris. 2017. "Floods Swallow Up Homes, Cattle in Hollister, Dozens Rescued." *NBC Bay Area*. https://www.nbcbayarea.com/news/local/crews-rescue-22-people-from-rising-creek-near-hollister/14368/.
[62] Larson, Amy. 2017. "21 Rescued as Pacheco Creek in Hollister floods again." *KSBW 8 Action News.* https://www.ksbw.com/article/pacheco-creek-in-hollister-flooding-again/8622426.
[63] Copitch, Josh. "Hollister nursing facility evacuated due to flooding, San Benito County warns of more." *KSBW 8 Action News.* https://www.ksbw.com/article/san-benito-county-warns-of-flooding-offers-sandbags/30126414.

repetitive loss properties have experienced 19,700 repetitive losses. “Severe repetitive loss properties” are single family properties insured through the NFIP that have received:

- Four or more (separate) flood-related insurance claim payments through their NFIP coverage, with the amount of each claim payment exceeding $5,000 and with cumulative amount of such claim payments exceeding $20,000; or
- Two or more separate claim payments with the cumulative amount exceeding the reported value of the property.[64]

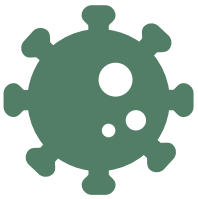
The City of Hollister’s Floodplain Administrator identified 7 repetitive loss properties, which have had a total of $223,287 in claim payments. No information was available regarding repetitive loss and severe repetitive loss properties in the County or City of San Juan Bautista.

4.4.4 Probability

The probability of a flooding event occurring in San Benito County is **likely**, meaning it has a frequency of occurrence of at least once every five years. This estimate was calculated using historical occurrences, in which at least one flood event has occurred every five years, on average.

[64] FEMA. “National Flood Insurance Program Terminology Index.” https://www.fema.gov/flood-insurance/terminology-index.

4.5 Communicable Disease



The following section outlines the communicable disease risk assessment for San Benito County. Biological/health emergencies was identified as a high-risk priority hazard in the 2015 San Benito County HMP.

4.5.1 Characteristics

Communicable diseases are caused by an infectious agent, such as a virus. These illnesses may be categorized by how they spread. Methods of transmission for the communicable diseases included in this Plan are:

- Human-to-human transmission
- Insect-to-human transmission
- Animal-to-human transmission
- Other transmission agents

Types of communicable diseases that may impact San Benito County include influenza, coronavirus, and vector-borne illnesses. These diseases were selected from the County's previous HMP and the 2018 California State HMP.[65]

4.5.1.1 INFLUENZA

The influenza virus causes the influenza disease. Symptoms of influenza disease include sudden fever, cough, headache, muscle and joint pain, sore throat, and runny nose. Influenza cases range from mild to severe and cause approximately 6,000 annual fatalities in California. The disease typically spreads via human-to-human transmission, but influenza that has spread from an animal to a human is often more severe as humans have less immunity to these variations of the disease.

Influenza virus are categorized into four types: Type A, Type B, Type C, and Type D. Types A and B are often referred to as "seasonal flu" and appear as annual global epidemics. Persons diagnosed with Type C influenza often have mild symptoms and Type D is common in cattle. Influenza occurs as a pandemic when a new virus strain evolves and spreads globally. Historically, influenza pandemics have only been classified as Type A.[66]

4.5.1.2 CORONAVIRUS

Coronavirus diseases may have symptoms in humans ranging from mild to lethal. The lethal varieties of coronavirus, including Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS), are of greatest concern for the San Benito County HMP. The

[65] Cal OES. 2018. "California State Hazard Mitigation Plan: Chapter 9 - Other Hazards." https://www.caloes.ca.gov/HazardMitigationSite/Documents/012-2018%20SHMP_FINAL_Ch%209.pdf.
[66] CDC. 2021. "Pandemic Influenza." https://www.cdc.gov/flu/pandemic-resources/index.htm.

SARS-CoV virus causes SARS, and SARS symptoms include shortness of breath, fever, cough, and general malaise. Two strains of SARS-CoV have been identified:

- SARS-CoV-1, which caused the global outbreak of SARS from 2002 – 2004; and
- SARS-CoV-2 (2019-nCoV), which caused the ongoing[67] global pandemic of COVID-19.

More information about the COVID-19 Pandemic is included in Section 4.5.3.2.

The MERS-CoV virus causes MERS. MERS symptoms include shortness of breath, fever, and cough. The first confirmed case of MERS was reported in 2012. As of January 2020, a total of 2519 cases and 866 deaths have been reported.[68, 69]

4.5.1.3 VECTOR-BORNE ILLNESSES

Vector-borne illnesses are those that result from an animal-to-human transmission from mosquitos, ticks, or fleas.

Lyme Disease

The western black-legged tick transmits Lyme Disease to humans and animals throughout California. San Benito County is not located in the region with the highest concentration of Lyme Disease in the State, although western black-legged ticks and other incidents of Lyme Disease have been reported in the County.

West Nile Virus

West Nile Virus is carried by mosquitos, birds, humans, and horses, and is spread through the bird-mosquito cycle, where a bird hosts and amplifies the virus and reinfects mosquitos. Since 2003, approximately 6,000 human cases and 250 deaths related to West Nile Virus have been reported in the State. No incidences have been reported in San Benito County, but nearby Santa Clara, Merced, and Santa Cruz counties have reported animal cases and Fresno County has reported animal and human cases.

Other Vector-Borne Illnesses

Aedes aegypti, *Aedes albopictus*, *Anopheles*, *Culiseta*, *Culex Tarsalis*, and *Culex Pipiens* species are invasive mosquitos known to spread various diseases, including Zika, Dengue, Chikungunya, and Yellow Fever. These diseases are endemic to Central and South America, the Caribbean, and Asia. The listed mosquito species thrive in water and have been reported in wetlands, drainage areas, and standing water in fields and other low-lying areas. While no cases of these diseases have been reported in California, these invasive mosquitos remain a public health concern.[70]

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[67] As of April 2021.
[68] World Health Organization (WHO). 2020. " MERS situation update, January 2020." https://www.emro.who.int/pandemic-epidemic-diseases/mers-cov/mers-situation-update-january-2020.html
[69] CDC. 2021. "Pandemic Influenza." https://www.cdc.gov/flu/pandemic-resources/index.htm.
[70] California Department of Public Health. 2020. "Infectious Disease Branch." https://www.cdph.ca.gov/Programs/CID/DCDC/Pages/IDB.aspx.

Other mosquitos reported throughout San Benito County that may cause disease include *Ocherotatus Melanimon*, *Ochierotatus Nigromaculis*, and *Aedes Vexans*. Similarly, these mosquitos breed in wetlands and flooded areas.

4.5.2 Location and Extent

Communicable disease is a risk to all of San Benito County. Depending on the nature of the disease and its method of transmission, certain areas of the community may be more at risk. For example, if the communicable disease is spread from person to person, areas with higher population density or locations where people gather are more likely to transmit the disease. Additionally, diseases spread by mosquitos are more likely to occur in areas where that mosquito species breeds, such as wetlands or marshes.

Communicable diseases are classified by comparison to average levels of disease in the region. Table 16 identifies categories for communicable disease and the geographic spread of the event.

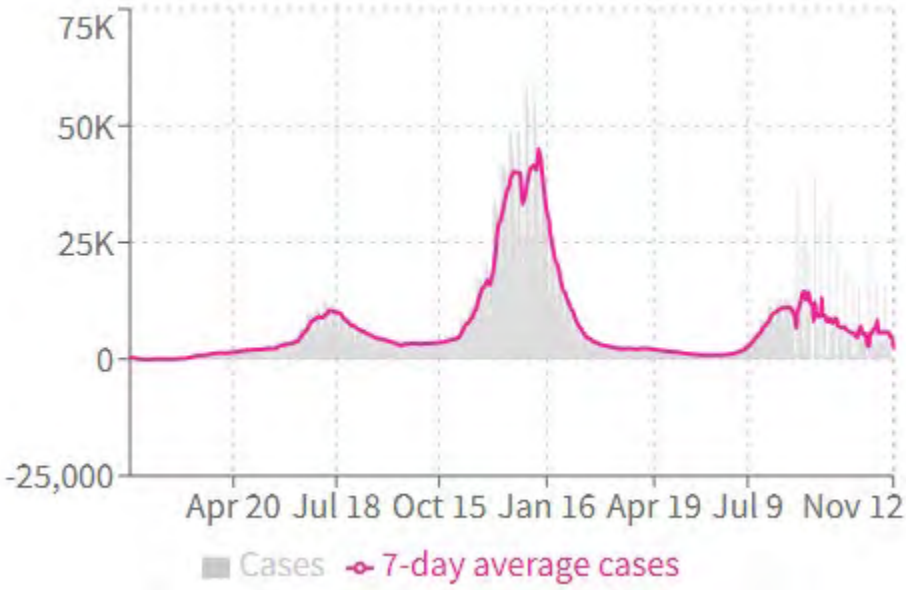
Table 16: Classification of Communicable Disease Events[71]

Category	Definition	Geographic Scope
Sporadic	Disease which occurs infrequently or sporadically.	Community
Endemic	Disease which is commonly present or expected to be present.	Community
Hyperendemic	Disease which is commonly present at a high level.	Community
Outbreak	An increase in a particular disease above the endemic level in an isolated geographic area.	Community
Epidemic	An increase in a particular disease above the endemic level.	National
Pandemic	An increase in a particular disease above the endemic level across multiple countries.	International

Communicable diseases often occur in various phases or waves of increased disease transmission. Disease waves are particularly common in pandemics, as demonstrated in Figure 22 for the COVID-19 pandemic. Each spike in cases represents the peak of a COVID-19 wave.

[71] CDC. 2011. "An Introduction to Applied Epidemiology and Biostatistics." Principles of Epidemiology in Public Health Practice. https://www.cdc.gov/csels/dsepd/ss1978/lesson1/section11.html.

Figure 22: COVID-19 Waves in California (2020 – 2021)[72]



Each wave has an interval of increased and decreased disease transmission and confirmed cases, as well as a lull in cases known as the preparation interval, in which public health professionals and communities recover from the previous wave and prepare for the next one. Each interval of a pandemic wave has associated public health interventions to help mitigate the spread and impact of the disease. Government mandates and public health measures should adapt accordingly to the phases of the disease and anticipated level of community spread.[73]

4.5.3 Recent Occurrences

4.5.3.1 INFLUENZA

Table 17 outlines recent occurrences of influenza virus in the United States since 1918, whose extent is beyond that of an endemic. The information in the table is generalized to the Country, as more specific information for the region is not readily available.

Table 17: Recent Occurrences of Non-Endemic Influenza in the United States[74]

Year	Influenza Type	Extent	Description
1918	H1N1	Pandemic	The 1918 influenza pandemic is the most severe recorded pandemic of the 20th century. The origin of the virus is unknown, although the first recorded case in the United States was in Fort Riley, Kansas. One-third of the world's population is estimated to have been infected by the virus.

[72] USAFacts. 2021. "California Coronavirus Cases and Deaths." https://usafacts.org/visualizations/coronavirus-covid-19-spread-map/state/california
[73] CDC. 2021. "Pandemic Influenza." https://www.cdc.gov/flu/pandemic-resources/index.htm.
[74] CDC. 2011. "An Introduction to Applied Epidemiology and Biostatistics." Principles of Epidemiology in Public Health Practice. https://www.cdc.gov/csels/dsepd/ss1978/lesson1/section11.html.

Year	Influenza Type	Extent	Description
1957-1958	H2N2	Pandemic	The 1957-1958 pandemic originated from a new strain of the H2N2 influenza found in Singapore in February 1957. The first recorded case in the United States was in the summer of 1957. The virus is reported to have caused 116,000 deaths in the United States.
1968	H3N2	Pandemic	The first case of the 1968 pandemic in the United States was recorded in September 1968. The virus is reported to have caused 100,000 deaths nationally. While the pandemic has ended, the H3N2 virus continues to spread annually as the influenza A virus.
2009-2010	H1N1	Pandemic	The 2009-2010 pandemic, known as the Swine Flu Pandemic, was first detected in the United States in 2009. This new H1N1 strain (H1N1pdm09) quickly spread across the globe. The CDC estimates that the Swine Flu Pandemic caused 60.8 million cases worldwide and 12,500 deaths in the United States. While the pandemic has ended, the H1N1 virus continues to spread annually as a seasonal flu.

4.5.3.2 CORONAVIRUS

Severe Acute Respiratory Syndrome Outbreak

The first case of the SARS-CoV-1 virus was reported in China in February 2003. While never declared a pandemic, the SARS outbreak spread across North America, South America, Europe, and Asia. Eight official and 19 probable cases were recorded in the United States. Globally, over 8,000 cases of SARS were recorded during the outbreak and 774 deaths were reported.

Coronavirus Disease 2019

The SARS-CoV-2 strain was first identified in Wuhan Province, China in December 2019. Since then, COVID-19 has spread globally and is an ongoing pandemic.[75] The first known case of COVID-19 in the United States was recorded in January 2020, although it is suspected that the disease was present prior to that date. Table 18 details the COVID-19 cases as of January 2022.

Table 18: COVID-19 Pandemic Cases, as of January 7, 2022[76]

Location	Confirmed Cases	Confirmed Cases per 100,000 population	Confirmed Deaths	Confirmed Deaths per 100,000 population
San Benito County	9,080	14,500	83	132
California	5.89 million	14,900	77,000	195
United States	58.5 million	17,800	833,000	253

[75] As of January 2022
[76] Johns Hopkins. 2021. "COVID-19 Dashboard." Coronavirus Resource Center. https://coronavirus.jhu.edu/map.html.

Location	Confirmed Cases	Confirmed Cases per 100,000 population	Confirmed Deaths	Confirmed Deaths per 100,000 population
Worldwide	300 million	3,800	5.5 million	70

In March 2020, much of the United States entered a government-sanctioned lockdown; non-essential businesses and services were closed, individuals were encouraged to only leave their homes for essential activities (e.g., buying groceries), and public safety mandates were put into effect (e.g., mask mandates that require individuals to wear face coverings when outside of the home, limitations on size of gatherings). The cascading impacts of these events include business closures, hiring freezes, and job furloughs.

4.5.4 Probability

Occurrences of outbreaks, epidemics, and pandemics are variable and difficult to predict. Global public health organizations have developed active monitoring and surveillance tools to identify potential disease spread early. For example, the CDC developed the Influenza Risk Assessment Tool to monitor and evaluate identified viruses for evolving pandemic risk.[77]

Using historical occurrences and scientific study as an indicator, the probability of a non-endemic communicable disease occurrence in San Benito County is **unlikely**, meaning it has a frequency of occurrence of less than once every five years.

Scientists have established a link between increased communicable disease transmission and climate change, in part due to warming climates that are more suitable for infectious disease agents, growing global populations, and increased travel. The frequency of climate change is expected to increase as the climate continues to change.[78]

[77] CDC. 2021. "Pandemic Influenza." https://www.cdc.gov/flu/pandemic-resources/index.htm.
[78] WHO. "Climate Change and Infectious Diseases." *Climate Change and Human Health: Risks and Responses.* https://www.who.int/globalchange/climate/en/chapter6.pdf.

4.6 Severe Weather



The following section outlines the severe risk assessment for San Benito County. Severe weather was identified as a high-risk priority hazard in the 2015 San Benito County HMP.

4.6.1 Characteristics

For this plan, severe weather is characterized as hail, high wind, strong wind, heavy rains, or tornadoes. These events may occur as individual, concurrent, or cascading weather events. Table 19 further defines these events and how they are categorized.

Table 19: Severe Weather Event Types[79]

Event Type	Description	NOAA Definition
Hail	Frozen precipitation that forms and falls from cumulonimbus clouds.	Showery precipitation in the form of irregular pellets or balls of ice more than 5 millimeters in diameter, falling from a cumulonimbus cloud.
High Winds	Wind events occurring separately from tornadoes and severe thunderstorms, typically developing with strong pressure gradients and gusty frontal passages.	Sustained wind speeds of 40 mph or greater lasting for 1 hour or longer, or winds of 58 mph or greater for any duration.
Strong Winds		Sustained wind speeds less than 40 mph or non-convective wind speeds less than 58 mph.
Tornado	A violently rotating column of air extending from a thunderstorm to the ground.	A violently rotating column of air, usually pendant to a cumulonimbus, with circulation reaching the ground.

4.6.1.1 HAIL

Hail is a form of precipitation that consists of solid ice forming inside thunderstorm updrafts. Hail has the potential to cause significant property damage and can be deadly to livestock and people. Hail starts as raindrops, which are caught in thunderstorm updrafts and freeze. These hailstones then grow as they collide with liquid raindrops that freeze on its surface. These hailstones continue to grow until they become heavy enough to resist the thunderstorm updraft and fall to earth. If winds are strong, hail may fall horizontally or vertically.[80]

[79] NOAA. 2016. "National Weather Service Instruction: Storm Data Preparation." https://www.ncdc.noaa.gov/stormevents/pd01016005curr.pdf.
[80] National Severe Storms Laboratory. "Severe Weather 101: Hail Basics." https://www.nssl.noaa.gov/education/svrwx101/hail/forecasting/.

4.6.1.2 HIGH WINDS AND STRONG WINDS

High winds and strong winds include several different types of severe wind events that produce winds at a higher-than-average speed. High winds are often associated with thunderstorms or other severe weather, while strong winds are associated with less impactful hazard events. Wind events can be caused by outflows from thunderstorm downdrafts, by rain-cooled air clashing with warmer thunderstorm inflow, or by larger bands of rapidly moving showers or thunderstorms.[81] High speed winds can cause serious damage to property as well as present risks to people living in non-weatherized homes, such as mobile homes that are not properly fortified against high wind.[82]

4.6.1.3 TORNADO

A tornado is a narrow, violently rotating column of air extending from a thunderstorm to the ground. Tornadoes often occur during May, June, or July but can occur at any time of year. Tornadoes are thought to form from rotating thunderstorms called supercells. Tornados are also believed to form due to temperature differences between downdraft air and the air in the supercell. Tornadoes may be invisible until they pick up dust and other debris, showing a conical shape as the air circulates.[83]

4.6.2 Location and Extent

4.6.2.1 HAIL

Hail events may occur anywhere within San Benito County. The extent of hail is determined by the diameter of the hail pellet, which is often compared to the size of common objects (e.g., nickel, golf ball). Table 20 outlines the scale for measuring hail extent. Hail in which the pellets have a diameter of at least one inch, approximately the size of a quarter, are considered a severe weather event.[84] San Benito County is likely to experience small hail, measuring below 0.5 inches, based on previous occurrences.

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[81] National Severe Storms Laboratory. "Severe Weather 101: Types of Damaging Winds." https://www.nssl.noaa.gov/education/svrwx101/wind/types/
[82] National Severe Storms Laboratory. "Severe Weather 101: Damaging Winds Basics." https://www.nssl.noaa.gov/education/svrwx101/wind/
[83] National Severe Storms Laboratory. "Severe Weather 101: Tornado Basics." https://www.nssl.noaa.gov/education/svrwx101/tornadoes/
[84] National Severe Storms Laboratory. "Severe Weather 101: Hail Basics." https://www.nssl.noaa.gov/education/svrwx101/hail/forecasting/

Table 20: Hail Extent Scale

Hail Size (in.)	Object Analog Reported
0.50	Marble; Moth ball
0.75	Penny
0.88	Nickel
1.00	Quarter
1.25	Half dollar
1.50	Walnut; Ping pong
1.75	Golf ball

Hail Size (in.)	Object Analog Reported
2.00	Hen egg
2.50	Tennis ball
2.75	Baseball
3.00	Teacup
4.00	Grapefruit
4.50	Softball

4.6.2.2 HIGH WINDS AND STRONG WINDS

High winds and strong winds events can occur anywhere within San Benito County. The extent of a wind event can be measured using the Beaufort Scale. The Beaufort Scale assigns a number value to wind events; the assigned number relates the wind speed to observed conditions on land or at sea. Table 21 shows the Beaufort Scale and how it is used to measure wind extent. San Benito County is most likely to experience high winds between 8 and 9 on the Beaufort Scale based on previous occurrences.

Table 21: Beaufort Scale for Measuring Wind Extent[85]

Beaufort Number	Range (mph)	Terminology	Description
0	0	Calm	Calm. Smoke rises vertically.
1	1-3	Light air	Wind motion visible in smoke.
2	4-7	Light breeze	Wind felt on exposed skin. Leaves rustle.
3	8-12	Gentle breeze	Leaves and smaller twigs in constant motion.
4	13-18	Moderate breeze	Dust and loose paper are raised. Small branches begin to move.
5	19-24	Fresh breeze	Smaller trees sway.
6	25-31	Strong breeze	Large branches in motion. Whistling heard in overhead wires. Umbrella use becomes difficult.
7	32-38	Near gale	Whole trees in motion. Some difficult when walking into the wind.
8	39-46	Gale	Twigs broken from tress. Cars veer on road.

[85] NWS. "Beaufort Wind Scale." NOAA. https://www.weather.gov/mfl/beaufort.

Beaufort Number	Range (mph)	Terminology	Description
9	47-54	Severe gale	Light structure damage.
10	55-63	Storm	Trees uprooted. Considerable structural damage.
11	64-73	Violent storm	Widespread structural damage.
12	74-95	Hurricane	Considerable and widespread damage to structures.

4.6.2.3 TORNADO

Tornadoes can occur anywhere within San Benito County and can cover significant ground during severe events. The extent of a tornado is measured using the Enhanced Fujita (EF) scale. The EF scale shown in Table 22 assigns a number to tornado events, signifying the strength of a measured 3 second gust during the tornado event.

Table 22: EF Scale for Measuring Tornado Damage[86]

EF Number	3 Second Gust (mph)
0	65 – 85
1	86 – 110
2	111 – 135
3	136 – 165
4	166 – 200
5	Over 200

4.6.3 Recent Occurrences

There have been 25 unique[87] recorded occurrences of heavy rain, hail, strong winds, high winds, and/or tornados in San Benito County between 2011 and 2020. Some of these events have occurred concurrently, such as three strong wind events recorded on February 13, 2019. The most significant events were a strong wind event in 2012 that caused $11,000 in property damage, and a tornado in 2016 that caused $75,000 in crop damage.

Table 23 below provides a summary of the recent severe weather occurrences. A more comprehensive list of can be found in **Recent Hazard Occurrences**.

Table 23: Recent Occurrences of Severe Weather in San Benito County[88]

Event	No. of Unique Occurrences	Total No. of Occurrences	Total Property Damage	Total Crop Damage
Hail[89]	2	2	N/A	N/A

[86] NWS. "The Enhanced Fujita Scale (EF Scale)." NOAA. https://www.weather.gov/oun/efscale.
[87] Some events had multiple recorded occurrences on the same day or started as strong winds and became high winds. There were 48 total records reported in the NOAA database from 2011 – 2020.
[88] NCEI. 2021. "Storm Events Database." NOAA. https://www.ncdc.noaa.gov/stormevents.
[89] All recorded hail events measured below .25 inches and are therefore not considered severe events.

Event	No. of Unique Occurrences	Total No. of Occurrences	Total Property Damage	Total Crop Damage
Strong Winds	12	28	$14,500	N/A
High Winds	8	14	N/A	N/A
Tornado	1	2	N/A	$75,000

4.6.4 Probability

The probability that a hail event occurs in San Benito County is **likely**, meaning it has a frequency of occurrence of at least once a every five years. The probability that a high or strong wind event occurs in San Benito County is **highly likely**, meaning it has a frequency of occurrence of at least once a year. The probability that a tornado event occurs in San Benito County is **unlikely**, meaning it has a frequency of occurrence of less than once every five years.

4.7 Wildfire



The following section outlines the wildfire risk assessment for San Benito County. Wildland Urban Interface (WUI) Fires was identified as a moderate-risk priority hazard in the 2015 San Benito County HMP.

4.7.1 Characteristics

A wildfire is an uncontrolled fire that burns a natural area, often a forest or grassland, and may extend into developed areas. Wildfire cause is often difficult to determine, although events may originate from other natural hazards, such as lightning, or human activity, such as campfires or arson. Wildfires are classified by three main categories depending on their fuel source:

- **Ground Fire**: burns in soils with a significant composition of organic matter
- **Surface Fire**: burns low-lying and dry vegetation, fallen branches and logs, and other surface-level fuels
- **Crown Fire**: burns the tops of tree foliage and is the most intense type of wildfire[90,91]

High temperatures, excessively dry conditions, strong winds, steep slope gradients, and dense and dry vegetation will increase the frequency, scope, and magnitude of wildfires.[92] In particular, droughts create conditions more conducive to wildfire spread by limiting moisture content of vegetation and therefore increasing the likelihood vegetation will burn.

4.7.2 Location and Extent

Wildfire extent is measured by the area burned by an event. The National Wildfire Coordinating Group uses a class scale to categorize fires, ranging from Class A to G with increasing scope. Table 24 identifies these seven wildfire classes.

Table 24. Wildfire Class Size[93]

Class	Minimum Burn Area	Maximum Burn Area
A	Greater than 0 acres	0.25 acres
B	0.25 acres	10 acres
C	10 acres	100 acres
D	100 acres	300 acres
E	300 acres	1,000 acres
F	1,000 acres	5,000 acres

[90] World Health Organization. "Wildfires." https://www.who.int/health-topics/wildfires#tab=tab_1.
[91] National Geographic Society. "Wildfires." *National Geographic: Resource Library.* https://www.nationalgeographic.org/encyclopedia/wildfires/.
[92] National Park Service. 2017. "Wildland Fire Spread and Suppression." https://www.nps.gov/articles/wildland-fire-spread-and-suppression.htm.
[93] National Wildfire Coordinating Group. "Size Class of Fire." https://www.nwcg.gov/term/glossary/size-class-of-fire.

Class	Minimum Burn Area	Maximum Burn Area
G	5,000 acres	N/A

The location of wildfires also depends on various land features, including availability of dry vegetation as fuels. Wildfires are likely to be in areas with high densities of vegetation. Certain types of vegetation, particularly those with low moisture levels and greater surface area, are more easily burned and increase the vulnerability of an area to wildfires.[94] Figure 23 illustrates the location of different types of vegetation in San Benito County, developed using various wildfire fuel models that identify the vegetation burned by a fire event.

The WUI area is the region where urban areas and undeveloped land intersect. WUIs indicate locations where wildfires both may occur and cause a high impact the community because they are the region where high concentrations of vegetation interact with buildings, development, and other critical facilities.[95] Figure 24 below identifies the location of two types of WUIs in San Benito County:

- WUI Interface: region where housing development is integrated into an area with a high concentration of vegetation.
- WUI Intermix: region with a high concentration of housing development adjacent to vegetation.[96]

[94] Alberta Government. 2012. "How different tree species impact the spread of wildfire." https://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/formain15744/$FILE/tree-species-impact-wildfire-aug03-2012.pdf.
[95] U.S. Fire Administration. 2021. "Wildland Urban Interface (WUI)." https://www.usfa.fema.gov/wui/.
[96] CAL FIRE. 2021. "Fire and Resource Assessment Program." . https://frap.fire.ca.gov/.

Figure 23: Types of Vegetation in San Benito County

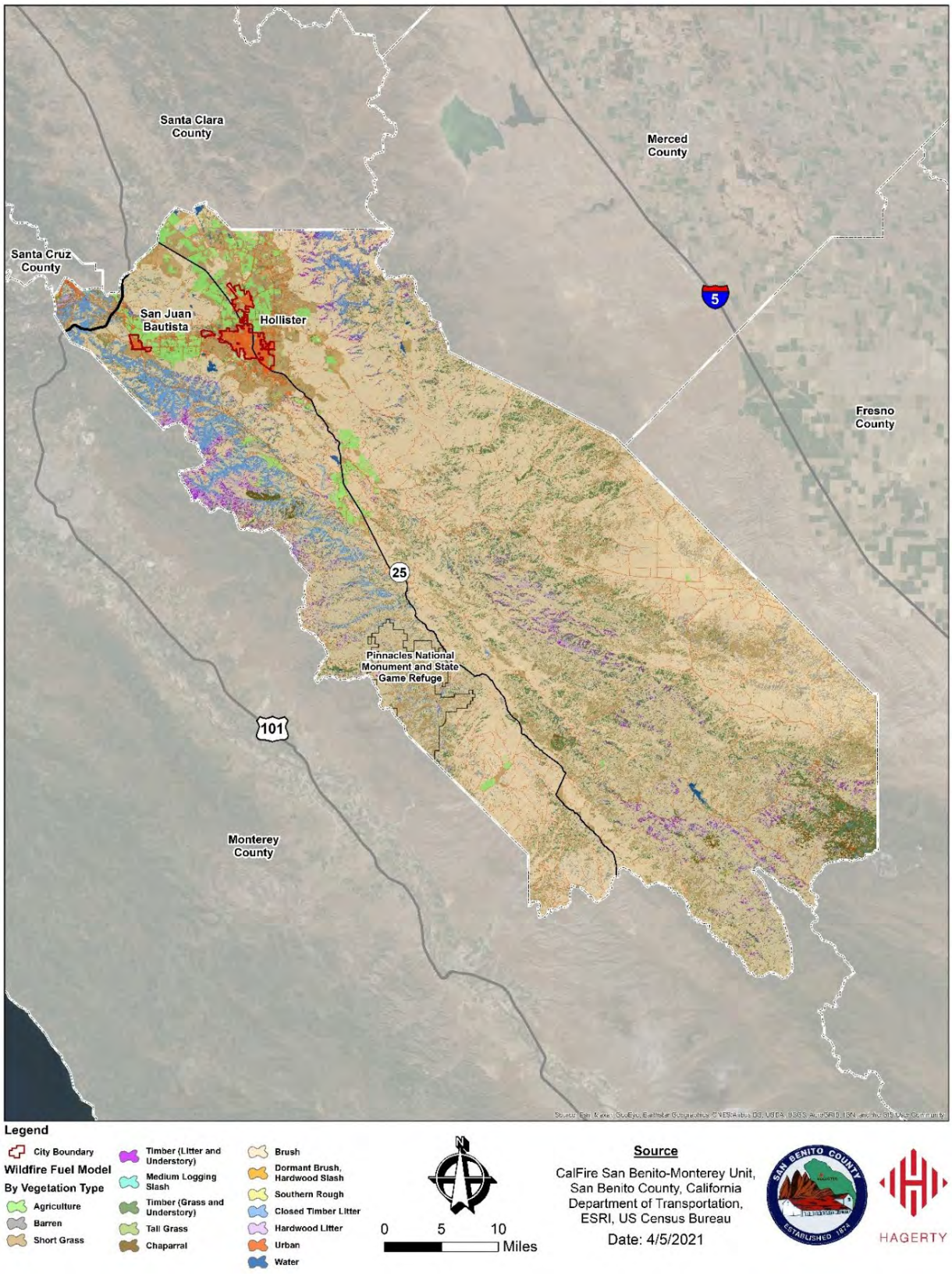
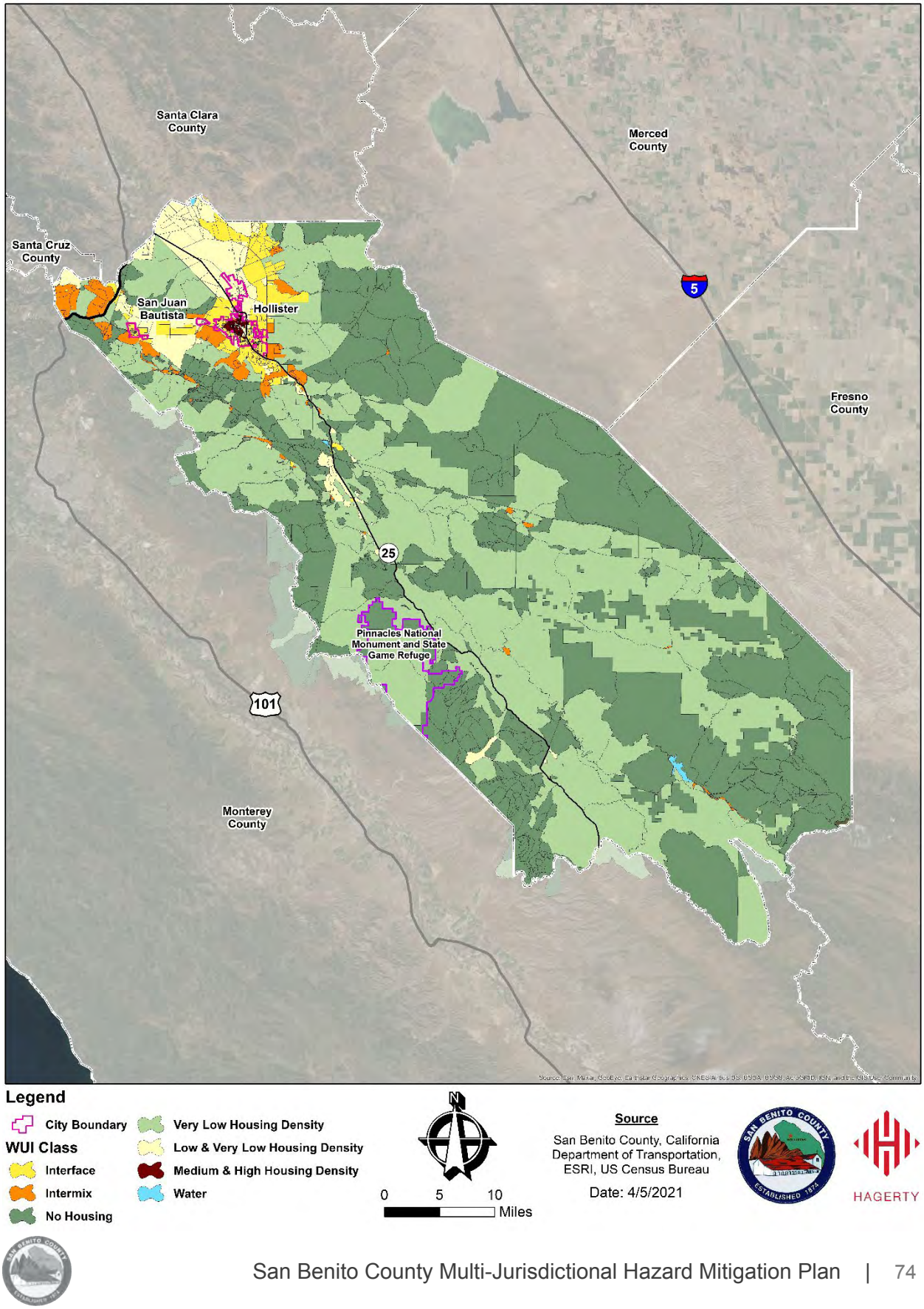


Figure 24: WUI Zones in San Benito County



4.7.3 Recent Occurrences

CAL FIRE reports that 26 wildfires occurred within County boundaries between 2011 and 2020, burning 9,312 acres in the region. The most significant recent occurrences of wildfires are detailed in Table 25 below. A comprehensive list of wildfires is included in **Appendix B. Risk Assessment**.

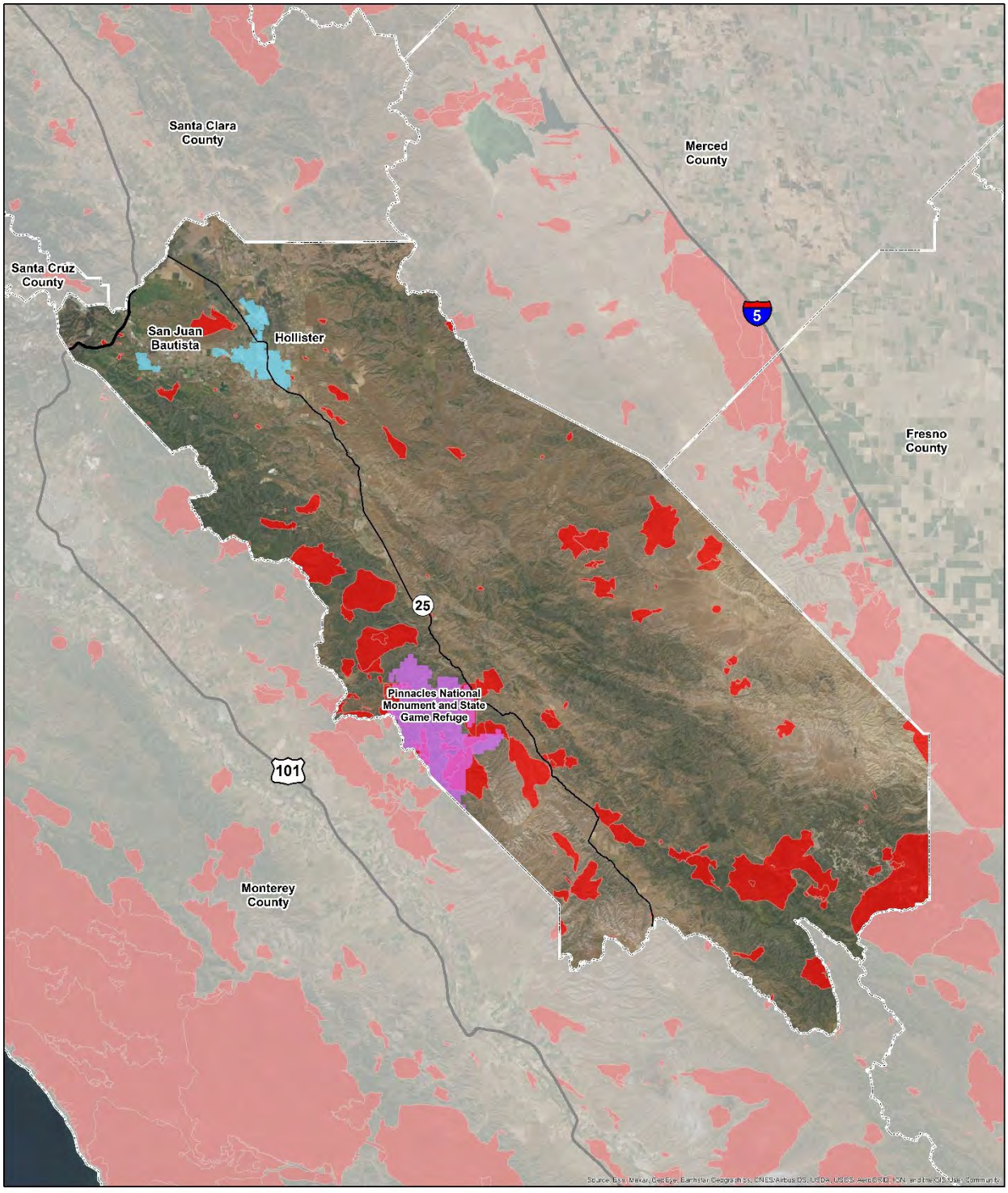
Table 25. Significant Recent Occurrences of Wildfires in San Benito County, 2011 – 2020[97]

Start Date	Name	Length of Event	Acres Burned
5/3/2013	Tres Pinos Fire	1 day	354
10/12/2015	Cienega Fire	4 days	670
6/4/2018	Eastern Fire	213 days	513
6/4/2018	Airline Fire	213 days	1,314
6/12/2018	Beaver Fire	206 days	215
7/11/2018	Panoche Fire	177 days	278
7/12/2018	Idria Fire	178 days	116
6/26/2019	Lonoak Fire	1 day	2,546[98]
9/2/2019	Antelope Fire	1 day	167
6/16/2020	Bitter Fire	6 days	895
7/15/2020	Coyote Fire	3 days	1,508

Figure 25 below illustrates the perimeters of these wildfires, as well as historical wildfires since 1950, in the San Benito County region.

[97] CAL FIRE. 2021. “Incident Database.” https://www.fire.ca.gov/incidents/IncidentSearch?q=san+benito+county.
[98] The Lonoak Fire burned areas of both San Benito and Monterrey counties.

Figure 25: Historical Occurrences of Wildfire in the San Benito County Region



4.7.4 Probability

The probability of a wildfire occurring in San Benito County is **highly likely**, meaning it has a frequency of occurrence of at least once a year. This was calculated using historical data, in which 26 wildfires have occurred in the County boundaries over the last 10 years.

4.8 Earthquake

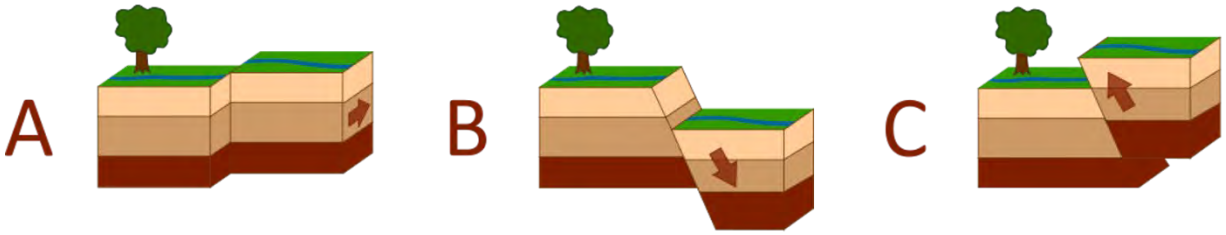
The following section outlines the earthquake risk assessment for San Benito County. Earthquake was identified as a high-risk priority hazard in the 2015 San Benito County HMP.

4.8.1 Characteristics

The earth's crust is made up of tectonic plates, which are large, irregularly shaped rocks that fit together beneath the earth's surface. Tectonic plates meet at boundaries called faults and are in constant but insignificant motion along the faults. When two tectonic plates shift rapidly and significantly; they create seismic waves that rise to the surface and cause an earthquake.

Earthquakes may be categorized by their fault type, which are defined by how the tectonic plates move along the fault plane. Figure 26 depicts how plates will move along different faults.[99]

Figure 26: Types of Faults[100]



In Image A, plates are shifting laterally against each other at a strike-slip or transverse fault. In Image B, the hanging tectonic plate is sinking at a normal fault. In Image C, the hanging plate is rising at a reverse fault.

4.8.2 Location and Extent

Earthquakes may be measured by the Richter Scale or Modified Mercalli (MM) Intensity Scale. The Richter Scale categorized earthquakes depending on the seismic energy created by an event. Seismographs record the amplitude of seismic waves produced by an earthquake and those values are analyzed to calculate a magnitude. The Richter Scale assigns a magnitude of 1.0 to 9.0 to events with increasing logarithmic severity, meaning that an increased magnitude of 1.0 is equivalent to a ten-fold increase in strength. For example, a 5.0 magnitude earthquake is 10 times as intense as a 4.0 earthquake and 100 times as intense as a 3.0 earthquake.[101]

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[99] USGS. "What is a fault and what are the different types?." https://www.usgs.gov/faqs/what-a-fault-and-what-are-different-types?qt-news_science_products=7#qt-news_science_products.
[100] USGS. "Fault." *Earthquake Glossary*. https://earthquake.usgs.gov/learn/glossary/?term=fault.
[101] USGS. "Richter Scale." *Earthquake Glossary*. https://earthquake.usgs.gov/learn/glossary/?term=Richter%20scale.

Typically, an earthquake must be greater than a magnitude of 5.4 to be felt and cause any observable damage.[102]

The MM Intensity Scale categorizes earthquakes by its impacts to people, infrastructure, and the environment. While the Richter Scale relies on mathematical analysis to measure an earthquake, the MM intensity Scale assigns a value to an event depending on its observed or perceived effects. As identified in Table 26, the scores range from one to ten with increasing severity of an event's impacts.[103]

Table 26: MM Intensity Scale

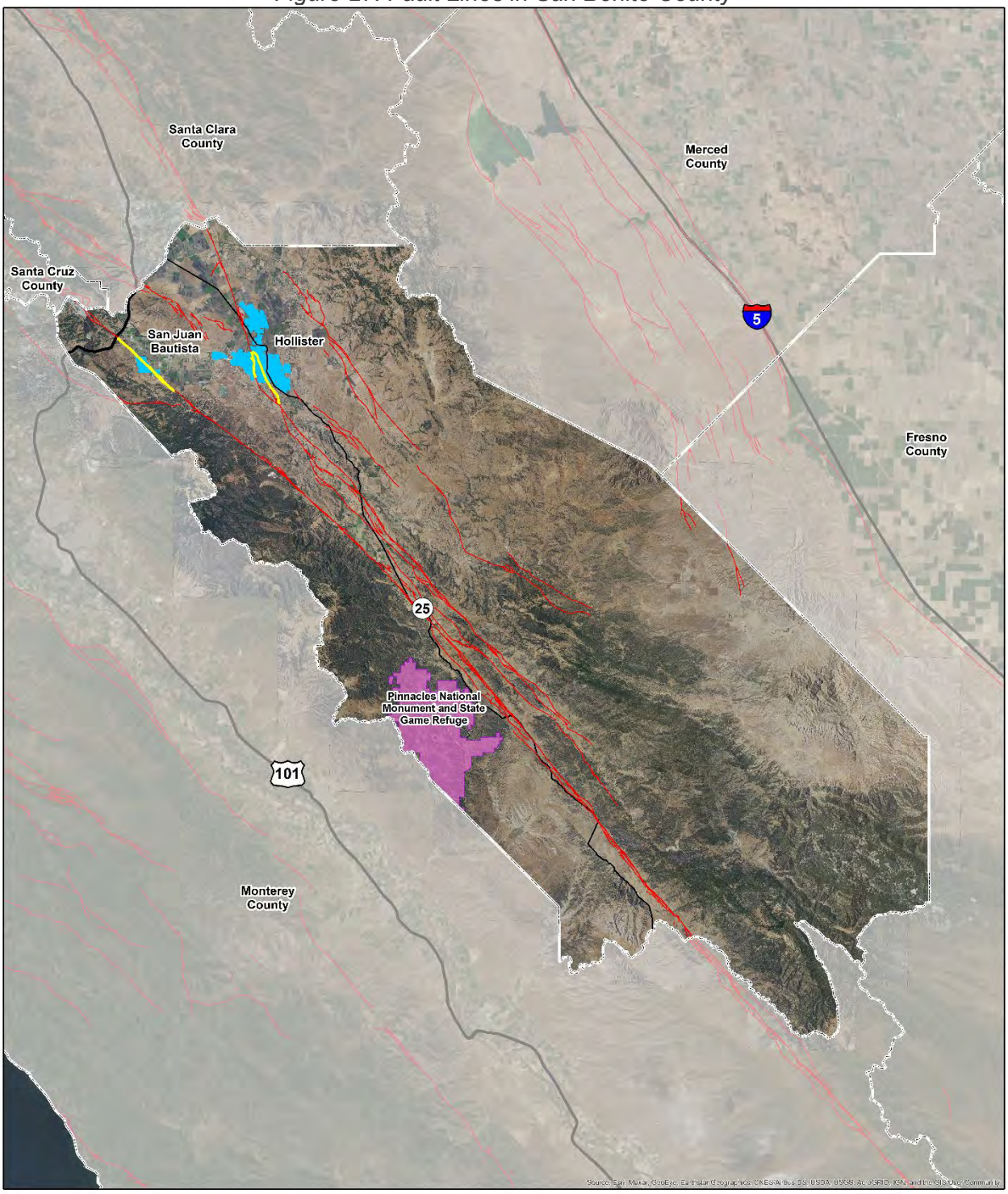
Intensity	Shaking	Damage
I	Not Felt	Event is not felt except by a few individuals in favorable conditions (e.g., upper floors of buildings).
II	Weak	Event is only felt by a few individuals in favorable conditions (e.g., upper floors of buildings).
III	Weak	Event is noticeable by individuals indoors and in other favorable conditions. Most do not recognize the incident as an earthquake. Sitting vehicles rock slightly, similar to the vibrations of a passing truck.
IV	Light	Event is felt by many individuals indoors and some outdoors. At night, some individuals may be woken up by the event. Dishes, windows, and doors may move. Walls make a cracking sound. Sitting vehicles rock noticeably.
V	Moderate	Event is felt nearly everyone. At night, many individuals are woken up by the event. Dishes and windows may break. Unstable objects are overturned.
VI	Strong	Event is felt by everyone and many are frightened. Some heavy furniture may move, and wall plaster may fall. Slight damage is incurred.
VII	Very Strong	Damage is negligible in structures of strong design and construction, slight to moderate in well-built structures, and considerable in poorly-built structures. Some chimneys are broken.
VIII	Severe	Damage is slight in structures of strong design and construction, considerable in well-built structures, and significant in poorly-built structures. Chimneys, factory stacks, columns, monuments, and walls may be damaged. Heavy furniture is overturned.
IX	Violent	Damage is considerable in structures of strong design and construction and significant in other structures, with partial collapses anticipated. Buildings may be shifted off foundations.
X	Extreme	Damage is significant in all structures. Most masonry and frame structures are destroyed with foundations. Railroads are bent.

[102] Michigan Tech. "Earthquake Magnitude Scale." http://www.geo.mtu.edu/UPSeis/magnitude.html.
[103] USGS. "The Modified Mercalli Intensity Scale." https://www.usgs.gov/natural-hazards/earthquake-hazards/science/modified-mercalli-intensity-scale?qt-science_center_objects=0#qt-science_center_objects.

Earthquakes that occur in the planning area are located along fault lines. Two major fault zones transect San Benito County, the San Andreas Fault and the Hayward/Calaveras Fault. The San Andreas Fault extends through the entire length of the County, through the City of San Juan Bautista, and runs along much of the Pacific coast. This fault system is anticipated to produce an earthquake of 6.0 – 8.3 magnitude sometime in the next 100-150 years and is of great concern to the Southern California region.[104] The Hayward/Calaveras Fault is located in the northern section of the County and runs through the City of Hollister. The fault lines located within San Benito County and the region are illustrated in Figure 27 below. In addition to earthquakes that occur in the planning area, the County may also be impacted by earthquakes in the region.

[104] USGS. 2017."Back to the Future on the San Andreas Fault." https://www.usgs.gov/natural-hazards/earthquake-hazards/science/back-future-san-andreas-fault?qt-science_center_objects=0#qt-science_center_objects.

Figure 27: Fault Lines in San Benito County



4.8.3 Recent Occurrences

San Benito County experiences small tremors almost daily. From 2011 to 2020, there were 13 earthquake events recorded in the San Benito County region with a magnitude 4.0 or greater, as identified in Table 27. The largest event was recorded on October 21, 2012 as a 5.29 magnitude earthquake. This event did not cause any recorded damage to the area. No other significant earthquakes above magnitude 5.4 were recorded.

Table 27. Recent Significant Occurrences of Earthquakes in the San Benito County Region[105]

Date	Magnitude	Recorded Region	Global Positioning System Coordinates
01/12/2011	4.5	Pruendale, CA	36.77 N, 121.5 W
08/27/2011	4.64	Pinnacles, CA	36.58 N, 121.18 W
10/21/2012	5.29	Lonoak, CA	36.31 N, 120.86 W
09/28/2014	4.43	South Dos Palos, CA	36.63 N, 120.83 W
11/20/2014	4.23	San Juan Bautista, CA	36.81 N, 121.54 W
01/20/2015	4.43	Greenfield, CA	36.43 N, 120.97 W
03/27/2015	4.11	Coalinga, CA	36.23 N, 120.35 W
07/19/2016	4.22	Ridgemark, CA	36.69 N, 121.33 W
03/31/2017	4.0	Aromas, CA	36.88 N, 121.61 W
11/13/2017	4.58	Gonzales, CA	36.63 N, 121.24 W
11/02/2018	4.11	Tres Pinos, CA	36.68 N, 121.31 W
11/27/2018	4.0	Avenal, CA	36.07 N, 120.19 W
10/15/2019	4.71	Tres Pinos, CA	36.65 N, 121.27 W

4.8.4 Probability

While small tremors may occur daily in the planning area, no significant earthquake events have been recorded in the San Benito County region in the last ten years. Therefore, the probability of an earthquake occurring in San Benito County is **unlikely**, meaning it has a frequency of occurrence of less than once every five years.

[105] USGS. 2021. “Earthquake Catalogue.” https://earthquake.usgs.gov/earthquakes/search/.

4.9 Landslide



The following section outlines the landslide risk assessment for San Benito County. Landslide was identified as a medium-risk priority hazard in the 2015 San Benito County HMP.

4.9.1 Characteristics

A landslide is an event in which a significant mass of rock, debris, or earth moves down a slope. Landslides occur when an outside factor contributes to gravity and other forces pushing a mass towards the ground, such that these downward forces exceed the forces holding the rock, debris, or earth in place. These external forces may be precipitation, snowmelt, stream erosion, groundwater movement, flooding, earthquakes, wildfires, human activity, or a combination of two or more factors.[106,107]

Landslides may be classified in multiple ways, including by their speed or geological material. There are two overarching categories of landslides: shallow and deep-seated. Shallow landslides, colloquially known as "mudslides," occur in a layer of soil and are fast moving. They are typically less than 10-15 feet in depth and may induce intermittent rock fall. Deep-seated landslides occur in bedrock and are slow moving. They often occur after excessive rainfall and may have a significant impact on infrastructure. Deep-seated landslides are often much larger than shallow landslides.[108]

Additionally, landslides may be categorized by the type of rock movement. Table 28 identifies three types of landslides that may occur within San Benito County.

Table 28. Landslides Classifications by Movement Type

Type	Definition	Applicable Sub-Types
Flows	Flows consist of a mix of water, soil, rock, and/or debris that moves rapidly downslope. They are significantly impacted by the water available to them. Flows may additionally be categorized as shallow landslides.	• Earthflows • Debris Flows (e.g., Post-Wildfire Debris Flows) • Soil Creep
Slides	Slides are the downslope movement of soil or rock along the surface. They are exacerbated by steep slopes and rushing water. Slides may be categorized as a shallow or deep-seated landslide depending on their speed and scope.	• Translational slides • Rotational slides • Block slides

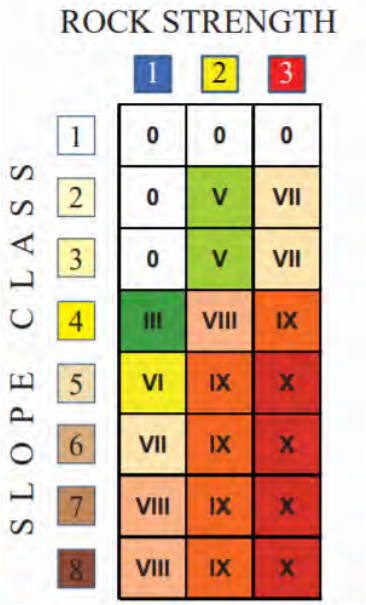
[106] USGS. "What is a landslide and what causes one?" *Natural Hazards*. https://www.usgs.gov/faqs/what-a-landslide-and-what-causes-one?qt-news_science_products=0#qt-news_science_products.
[107] Cal OES. 2018. "California State Hazard Mitigation Plan." https://www.caloes.ca.gov/cal-oes-divisions/hazard-mitigation/hazard-mitigation-planning/state-hazard-mitigation-plan.
[108] Washington Geological Survey. 2017. "What Are Landslides And How Do They Occur?" https://www.dnr.wa.gov/publications/ger_fs_landslide_processes.pdf.

Type	Definition	Applicable Sub-Types
Rockfalls and Topples	Rockfalls and topples describe the rapid downward movement of large masses of rock. They are not significantly impacted by the presence of water. Rockfalls and topples may further be categorized as shallow landslides.	N/A

4.9.2 Location and Extent

Landslide extent is measured by the landslide susceptibility classes. This scale combines existing measurements for rock strength and slope to create a 1 to 10 scale with increasing susceptibility, as shown in Figure 28. The landslide susceptibility classes follow the assumption that weak rocks and steep slopes are most conducive to landslides. As such, areas with higher susceptibility classes represent weaker rock strengths and sharper topography angles.

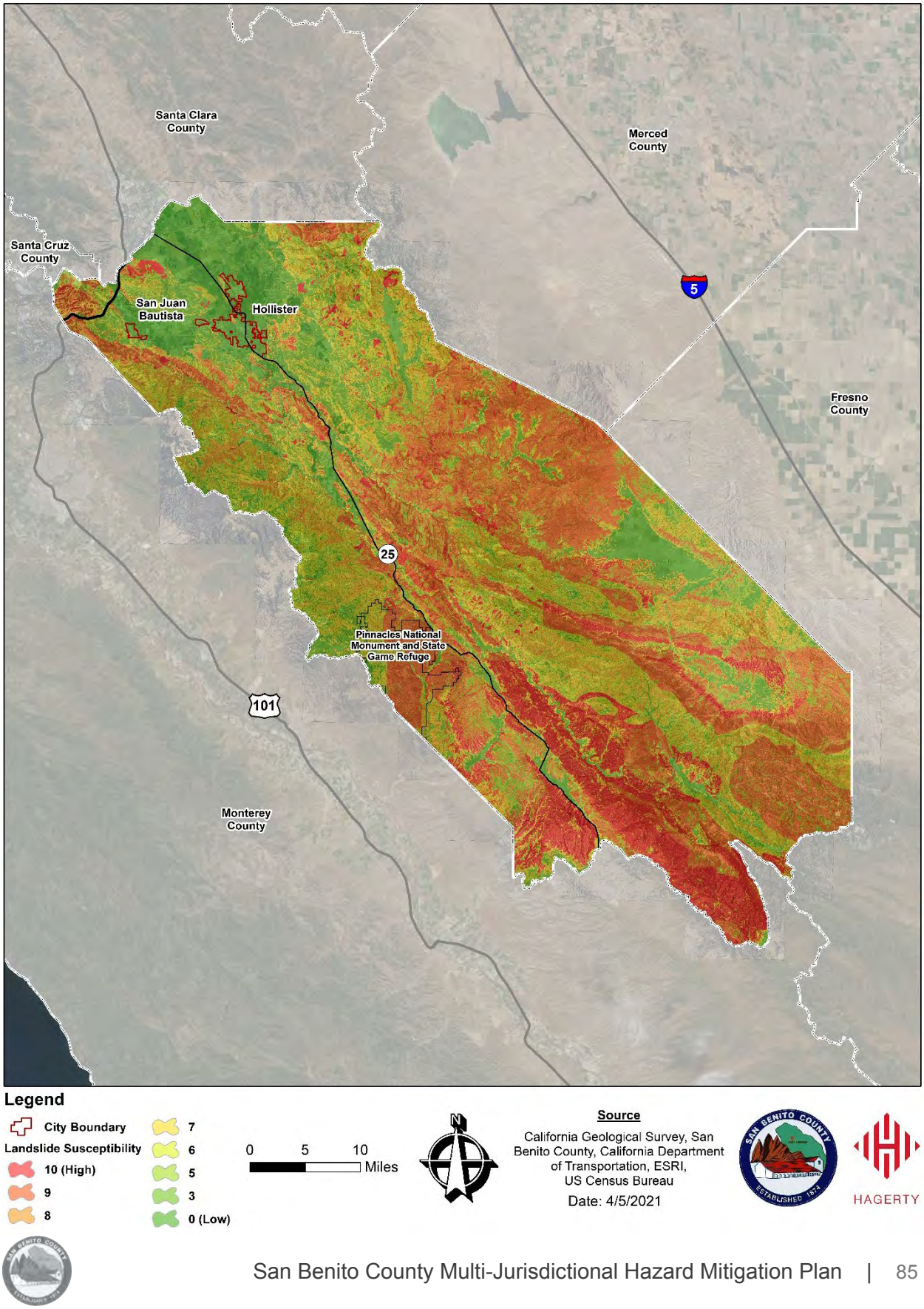
Figure 28: Landslide Susceptibility Classes[109]



Landslide susceptibility varies by location across San Benito County, as shown in Figure 29, mostly ranging from medium to high susceptibility. The highest susceptibility is concentrated in the southeasternmost area of the County, which aligns with identified fault lines and the steepest topographical slopes.

[109] CGS. 2011. "Susceptibility to Deep-Seated Landslides in California." https://www.conservation.ca.gov/cgs/Documents/Publications/Map-Sheets/MS_058.pdf.

Figure 29: Landslide Susceptibility in San Benito County



4.9.3 Recent Occurrences

There have been two known landslides in San Benito County between 2011 and 2021. One occurred in 2014, when a rainstorm hit San Benito County and caused localized flooding and mudslides, which knocked over trees. The second occurred when the slope of a SSWD retention pond broke loose and caused five landslides along Southside Road in 2018.

Additionally, there have been many reported across the region. Figure 30 below identifies recent occurrences of landslides recorded in the San Benito County region, as identified by CGS. Most of these landslides occurred during the 2018 Southern California Mudflows, which occurred after a series of wildfires in 2017 and destroyed hundreds of homes and caused 21 known deaths.[110, 111]

Figure 30: Recent Occurrences of Landslides in the San Benito County Region[112]



4.9.4 Probability

The probability of a landslide occurring in San Benito County is **likely**, meaning it has a frequency of occurrence of at least once every five years. This estimate was calculated using historical occurrences, in which at least one landslide has occurred every five years, on average.

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[110] Dolan, Jack. 2018. "Search teams find 21st victim of Montecito mudslide." *Los Angeles Times*. https://www.latimes.com/local/lanow/la-me-montecito-death-toll-20180121-story.html.
[111] Sterling, Joe. 2018. "3 remain missing in deadly California mudslides." *CNN*. https://www.cnn.com/2018/01/15/us/southern-california-mudslides.
[112] CGS. "Reported California Landslides." https://cadoc.maps.arcgis.com/apps/webappviewer/index.html?id=bc48ad40e3504134a1fc8f3909659041.

4.10 Dam Failure

The following section outlines the dam failure risk assessment for San Benito County. Dam failure was identified as a moderate-risk priority hazard in the 2015 San Benito County HMP.



4.10.1 Characteristics

Dams are defined as any artificial barrier which impounds or diverts water. There are a variety of dam and reservoir types, defined by the intended function and capacity of the dam. Table 29 summarizes some common dam types and their characteristics.

Table 29: Dam Types[113]

Type	Characteristics
Embankment Dams	Embankment dams are the most common dam type in use and are constructed with natural materials such as soil or rock.
Concrete Dams	Concrete dams are a category of dam constructed with concrete, and include gravity, buttress, and arch dams.
Gravity Dams	Gravity dams are constructed of vertical blocks of concrete that use the mass weight of concrete and friction to resist water pressure.
Buttress Dams	Buttress dams are a type of gravity dam which diverts water pressure to the dam foundation.
Arch Dams	Arch dams are typically thin and divert water pressure through arches into the abutments of the dam.

A dam failure occurs when there is a sudden, rapid, and uncontrolled release of impounded water with the potential to cause significant downstream hazards. Dams may fail through various methods. A dam failure may occur due to overtopping when water spills over the top of the dam. Overtopping is often the precursor to larger dam failure and may be caused by inadequate spillway design, debris blockage, or settlement of the dam crest. Significant dam failure may also be caused by foundational defaults or cracking, inadequate maintenance and upkeep that leads to defects in the dam structure, or poor piping infrastructure that can cause seepage and form sinkholes within the dam.[114]

4.10.2 Location and Extent

Dam failure will be located at the site of a dam and/or reservoir. The California Water Code defines dams and reservoirs to be of jurisdictional size if they have a height greater than six feet

[113] Association of State Dam Safety Officials. “Dams 101.” https://damsafety.org/dams101.
[114] Association of State Dam Safety Officials. “Dams Failures and Incidents.” https://damsafety.org/dam-failures.

while impounding 50 acre-feet or more or a height greater than 25 feet with a storage capacity of 15 acre-feet or more. San Benito County has five smaller jurisdictional dams (Hawkins Dam, Hernandez Dam, J. V. De Laveaga Dam, Paicines Dam, Percolation Area Dam) located in remote valleys and two dams (i.e., San Justo Dam and Reservoir, Leroy Anderson Dam) that are larger and closer to populated areas. In September 2019, each of these dams was assessed to be in satisfactory condition. Little damage to existing developed areas or infrastructure is expected from a failure of these dams, but additional damage may occur if development or land use in the surrounding areas changes.

The San Justo Dam and Reservoir is an off-stream storage facility that is 151 feet high with a crest length of 1,116 feet and includes a dike structure 79 feet high with a crest length of 1,296 feet. In total, the reservoir has a capacity of 9,785 acre-feet. The Leroy Anderson Dam is located in Santa Clara County, but depending on the location and type of failure its inundation zone may spread into San Benito County in the event of a dam failure.

The California Department of Water Resources Division of Safety of Dams measures the extent of a dam failure in terms of the potential for downstream hazards, or the ability of a dam to impact life and property downstream in the case of a failure. The downstream hazard potential classifications are described in Table 30.

Table 30: Downstream Hazard Potential Classification[115]

Classification	Potential Downstream Impacts to Life and Property
Low	No probable loss of human life and low economic and environmental losses. Losses are expected to be principally limited to the owner's property.
Significant	No probable loss of human life but can cause economic loss, environmental damage, impacts to critical facilities, or other significant impacts.
High	Expected to cause loss of at least one human life.
Extremely High	Expected to cause loss of at least one human life and one of the following: result in an inundation area with a population of 1,000 or more; or result in the inundation of facilities or infrastructure, the inundation of which poses a significant threat to public safety as determined by the department on a case-by case basis.

The table below identifies the locations of dams in San Benito County and their downstream hazard ranking as assigned by California Department of Water Resources.

[115] State of California Department of Water Resources. 2019. "Dams Within the Jurisdiction of the State of California." https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/All-Programs/Division-of-Safety-of-Dams/Files/Publications/2019-Dams-Within-Jurisdiction-of-the-State-of-California-Alphabetically-by-County_a_y20.pdf.

Table 31: Downstream Hazard Potential Classification[116, 117]

Dam Name	Location	Ownership	Downstream Hazard Ranking
Hawkins Dam	36.96, -121.31	Ausaymas Cattle Company	Significant
Hernandez Dam	36.40, -120.84	San Benito County Water District	High
J. V. De Laveaga Dam	36.86, -121.20	Las Aguilas Corporation	Low
Paicines Dam	36.72, -121.28	San Benito County Water District	High
Percolation Area Dam	36.84, -121.20	Las Aguilas Corporation	Low
San Justo Dam	36.49, -121.26	U.S. Bureau of Reclamation (Owner) San Benito County Water District (Operator)	High
Leroy Anderson Dam	37.17, -121.63	Santa Clara Valley Water District	Extremely High

The inundation maps for each of these dams are provided in **Appendix B. Risk Assessment**. Inundation maps for the J.V. De Laveaga Dam and Percolation Area Dam were not produced, in accordance with Senate Bill 92 which does not require owners of dams to prepare inundation maps for dams classified as low hazard.[118]

4.10.3 Recent Occurrences

There are no known recent occurrences of dam failure in San Benito County.

4.10.4 Probability

A dam failure event in San Benito County is **unlikely**, meaning it has a frequency of occurrence of less than once every five years based on known risk and historical occurrences.

[116] State of California Department of Water Resources. September 2021. "Dams Within Jurisdiction of the State of California Listed Alphabetically by Dam Name." https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/All-Programs/Division-of-Safety-of-Dams/Files/Publications/Dams-Within-Jurisdiction-of-the-State-of-California-Listed-Alphabetically-by-Name-September-2021.pdf
[117] USACE. July 2020. "National Inventory of Dams: San Justo." https://nid.usace.army.mil/#/dams/system/465748/inspections.
[118] State of California Department of Water Resources. "General FAQs." https://water.ca.gov/Programs/All-Programs/Division-of-Safety-of-Dams/FAQs.

4.11 Hazardous Materials Incident

The following section outlines the HAZMAT incident risk assessment for San Benito County. Hazardous materials were identified as a high-risk priority hazard in the 2015 San Benito County HMP.

4.11.1 Characteristics

A HAZMAT incident is an event in which hazardous materials are released from safe, normal containment into the environment. A hazardous material is any substance with the ability to harm people, animals, property, or the environment. The U.S. Department of Transportation categorizes hazardous materials into nine classes, identified in Table 32, depending on the phase of the material (i.e., solid, liquid, gas) and the way in which it reacts with the environment.[119]

Table 32. Types of Hazardous Materials[120]

Class		Description	Examples
	Class 1: Explosives	Substances that rapidly detonate, per a chemical reaction.	Ammunition, airbag inflators, fireworks
	Class 2: Gases	Gaseous substances at standard atmospheric conditions.	Aerosols, fire extinguishers, natural gas, propane
	Class 3: Flammable Liquids	Liquids, solutions of liquids and solids, and mixtures that may combust at standard atmospheric conditions.	Alcohol, diesel fuel, gasoline
	Class 4: Flammable Solids	Solids that may combust at standard atmospheric conditions and those experienced during material transport.	Matches, metal powders, sodium batteries, activated carbon

[119] Levins, Cory. 2018. "Hazard Class 101: Know How to Categorize Your Hazardous Materials." Air Sea Containers. https://www.airseacontainers.com/blog/hazard-class-101-know-how-to-categorize-your-hazardous-materials/.
[120] U.S. Department of Transportation. 2013. "Nine Classes of Hazardous Materials." https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/docs/Nine_Classes_of_Hazardous_Materials-4-2013_508CLN.pdf.

Class		Description	Examples
	Class 5: Oxidizers and Organic Peroxides	Substances that cause combustion by producing high yields of oxygen during chemical reactions or are highly reactive due to changes in chemical structure during reactions	Oxygen generators, ammonium nitrate fertilizers, sodium nitrate
	Class 6: Poison and Infectious Substances	Substances that may cause serious injury or death to a human if inhaled, swallowed, or in contact with the skin and often contain pathogens (e.g., viruses, bacteria, parasites).	Medical and biological waste, tear gas, acids, chloroform
	Class 7: Radioactive	Materials that are highly likely to react and/or combust at standard atmospheric conditions and emit radiation that is dangerous to humans.	Radioactive ores, depleted uranium, density gauges
	Class 8: Corrosive	Substances that degrade other materials through chemical action upon contact.	Acids, batteries, dyes, paints
	Class 9: Miscellaneous	Hazardous materials that do not fit into other categories, including genetically modified organisms, materials that pose a risk to the environment, and magnetized substances.	Dry ice, lithium-ion batteries, fuel cell engines

Within the classes, the hazardous materials range in impacts on individuals. Some materials are safe for use and only become dangerous if consumed or inhaled, while others are immediately hazardous if exposed to the atmosphere. HAZMAT incidents may occur throughout the manufacturing process, including production, storage, transportation, use, and disposal of materials.[121] HAZMAT incidents that are caused by individuals with the intent to harm persons, property, and/or the environment are often classified as a terrorist attack using chemical agents.

4.11.2 Location and Extent

The magnitude of a HAZMAT incident is measured by the material and amount spilled, area impacted, and level of response required. One scale to measure the extent of an event is by the number of individuals impacted, as shown in Table 33.

[121] FEMA. 2019. "Hazardous Materials Incidents: Guidance for State, Local, Tribal, Territorial, and Private Sector Partners." https://www.fema.gov/sites/default/files/2020-07/hazardous-materials-incidents.pdf.

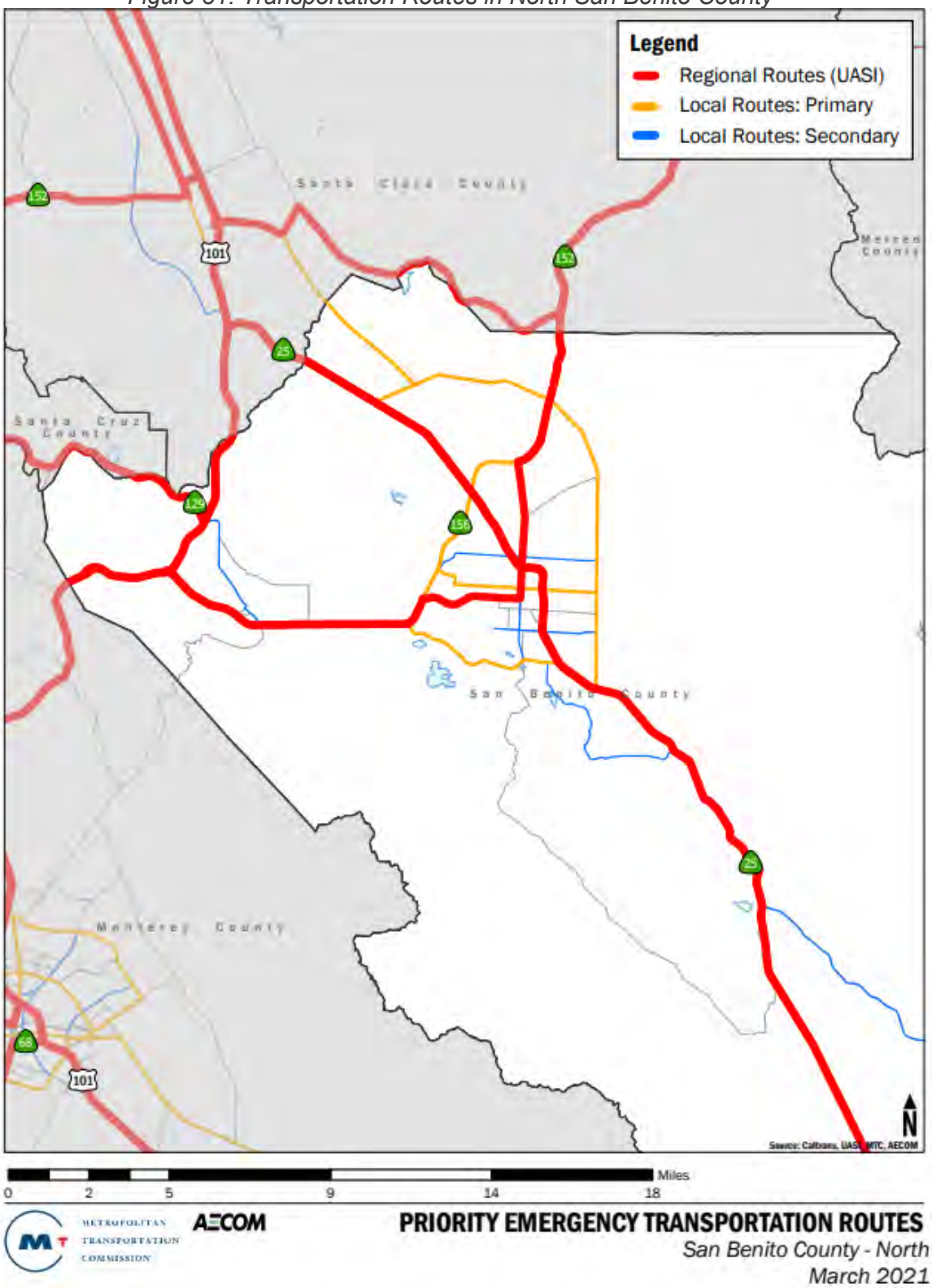
Table 33: Extent of a HAZMAT Incident[122]

Scope	Description	Impact
Individual Patient	One individual is impacted and must be transported to an emergency department for treatment. The incident may occur at a workplace, public place, or at home.	Incident is manageable for areas with robust hospitals and medical care facilities but challenging for smaller facilities with less experience in HAZMAT incidents.
Multi-Casualty	Multiple individuals are impacted by an event at a single location. The incident often occurs near or along transportation routes but may occur in any place where people gather.	Incident has the same feasibility of management as an individual patient incident but places more strain on the healthcare and emergency response system.
Mass Casualty[123]	A significant number of individuals are impacted and require significant medical and emergency support. This event likely involves several locations and will significantly disrupt community activities and services.	A mass casualty event has the potential to overwhelm emergency responder and medical facilities. Multiple levels of aid and support may be requested to meet the needs of those impacted.

HAZMAT incidents may occur anywhere within the planning area, although they will likely occur near transportation routes or at localized sites. Transportation routes are particularly vulnerable to HAZMAT spills because there may be accidents involving tractor-trailers, tankers, or other vehicles carrying hazardous materials.[124] Route CA-156 runs north-south through the county and Route CA-101/156 runs west-east across the northern area of the County, through the cities of Hollister and San Juan Bautista. HAZMAT spills may occur along these roads. Figure 31 and Figure 32 illustrate the location of these transportation routes in northern and southern areas of the County.

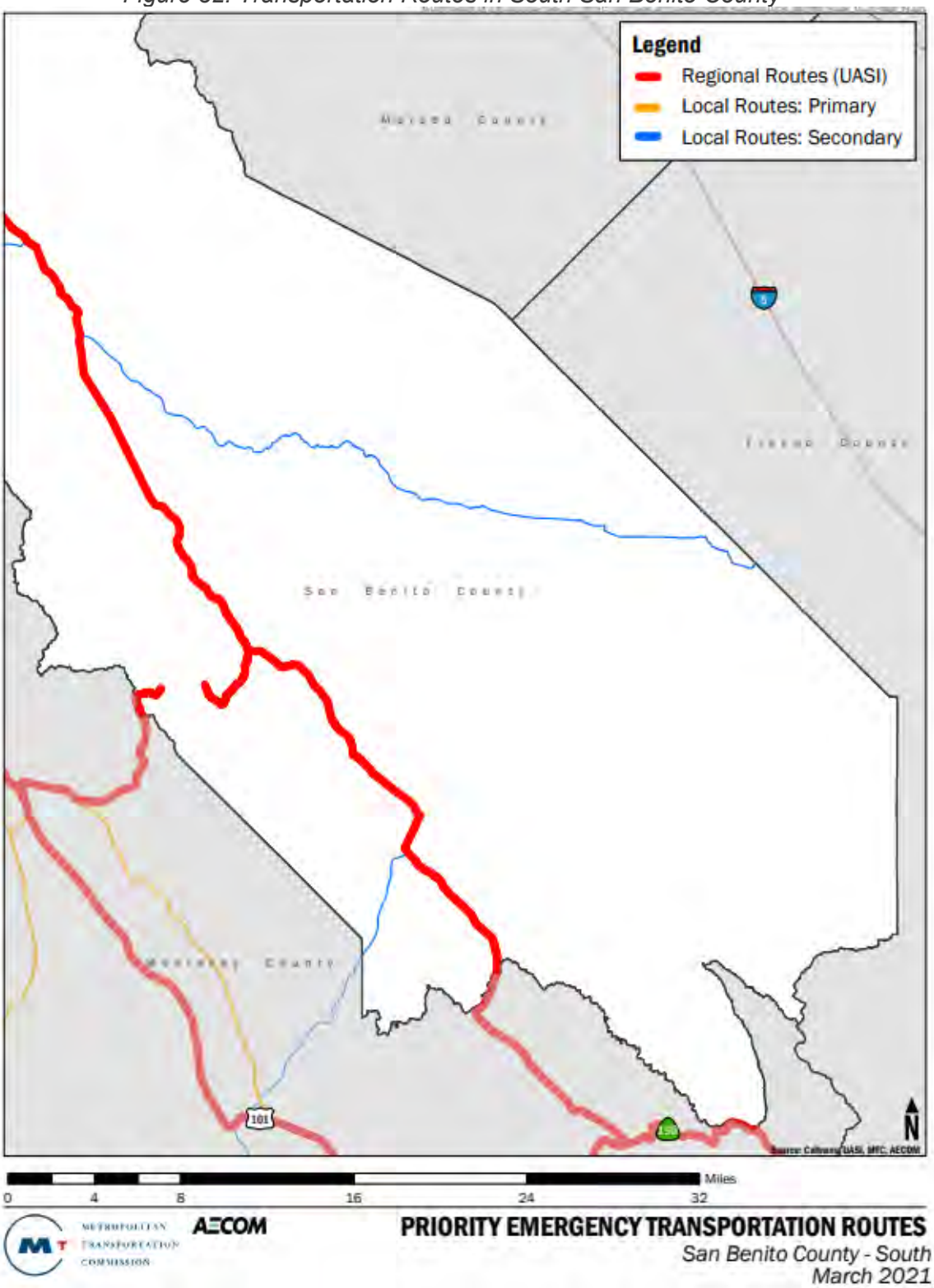
[122] U.S. Department of Health and Human Services. 2001. "Managing Hazardous Materials Incidents." https://www.atsdr.cdc.gov/mhmi/mhmi_v1_2_3.pdf.
[123] Mass casualty incidents completed with the intent to harm people, infrastructure, or the environment are considered an act of terrorism.
[124] NOAA. 2021. "What is HAZMAT?" https://oceanservice.noaa.gov/facts/hazmat.html.

Figure 31: Transportation Routes in North San Benito County[125]



[125] Provided by San Benito County.

Figure 32: Transportation Routes in South San Benito County[126]



[126] Provided by San Benito County.

Additionally, HAZMAT incidents may be located at specific sites that work with hazardous materials. There are no State-designated hazardous waste sites in San Benito County, but there are a few businesses and locations known to handle hazardous materials, including:

- Asgrow Seed Company;
- Harris Moran Seed Company;
- Amycel Mushroom Plant;
- TriCal Incorporated;
- General Chemical Corporation;
- GAF Leatherback Corporation;
- Local gas stations;
- Auto dismantlers; and
- Local farms.

Risks from these locations include underground gas leaks, particularly for gas stations, or accidental mishandling of materials. Farms throughout the planning area are known to use pesticides, herbicides, and fertilizer, which pose a risk to the groundwater system through soil contamination. These materials may also impact locations adjacent to farmland, as substances that sprayed can easily be transported through the air by wind.

4.11.3 Recent Occurrences

There are no known recent occurrences of HAZMAT incidents in San Benito County.

4.11.4 Probability

The probability of a HAZMAT incident occurring in San Benito County is **unlikely**, meaning it has a frequency of occurrence of less than once every five years.

4.12 Terrorism



The following section outlines the terrorism risk assessment for San Benito County. Weapons of mass destruction/terrorism was identified as a moderate-risk priority hazard in the 2015 San Benito County HMP.

4.12.1 Characteristics

Terrorism is an attack that endangers human life and is completed to intentionally intimidate and coerce a population and/or policy of the government. These attacks may affect the conduct of a government through mass destruction, assassination, or kidnapping.[127]

Terrorism may be committed by individuals or groups of national or foreign citizens. Table 34 identifies five major categories of terrorist attacks. It is very difficult to anticipate when, where, and how terrorist attacks will occur as terrorists often rely on the element of surprise to execute their attacks.

Table 34. Types of Terrorist Attacks[128]

Type of Attack	Description
Chemical Weapons	Chemical terrorist attacks use chemical substances to cause severe detrimental impacts on people, animals, and the environment. Terrorists may use chemical agents that vary in material type, exposure, mechanism, peak concentration, and state (e.g., solid, liquid, gas). These attacks require support to plan, execute, and finance the attack, so they often rely on the backing of a terrorist organization. Chemical weapon attacks are targeted at people and are intended to incapacitate individuals or cause death. Examples of this type of weapon include sarin gas, mustard agent, and cyanide.
Biological Weapons	Biological terrorist attacks use infectious toxins or microorganisms to cause severe detrimental impacts on people and animals. Terrorists may use various biological agents, including water threats, food threats, and airborne diseases. These attacks require support to plan, execute, and finance the attack, so they often rely on the backing of a terrorist organization. Biological weapon attacks are targeted at people and are intended to incapacitate individuals or cause death. Examples of this type of weapon include anthrax, cholera, and salmonella.
Radioactive and Nuclear Weapons	Radioactive and nuclear weapon attacks are the use of radioactive or nuclear material to make a bomb, missile, or other weapon. Terrorists may use uranium, plutonium, or other materials that easily react and explode to make their weapons. This attack type requires support to plan, execute, and finance the attack, so terrorists often rely on the backing of a terrorist organization. Radioactive and nuclear weapon attacks are targeted at people and property and have the potential to cause extensive damage and mass casualties. Examples of this type of attack include atomic bombings and nuclear missiles.

[127] 8 U.S.C. § 2331
[128] Terrorism Research. "Types of Terrorist Incidents." http://www.terrorism-research.com/incidents/.

Type of Attack	Description
Guns	Terrorist attacks using guns are a common act of terrorism globally. They are particularly common in the United States, where weapons may be obtained easily and without extensive background checks in many locations. Gun attacks are targeted at people and rarely impact property and have the capacity to inflict significant injury and casualties within a relatively short time frame. Examples of this type of attack include mass shootings, sniper attacks, and school shootings.
Bombs and Explosives	Bomb and explosive attacks are a common act of terrorism globally. They require support to plan, execute, and finance the attack, so they often rely on the backing of a terrorist organization. Bombs and explosives are targeted at people and property and has the potential to cause extensive damage to an area. Examples of this type of attack include car bombs and suicide bombings.

4.12.2 Location and Extent

A terrorist attack may occur anywhere within San Benito County. Since the motivation of a terrorist attack is often to cause physical harm to as many people as possible and attack symbols of a community, a terrorist attack is likely to occur in locations with high population density or areas of historical, cultural, or religious significance. Attacks may also occur during events that surge the population of a region, such as political or group rallies (e.g., Fourth of July Independence Rally).

The extent of terrorism is measured by the number of individuals affected and the severity of damage incurred. Extent may also be measured by length of the incident, type of attack, proximity to community assets, and level of response required (e.g., local, state, federal).[129]

4.12.3 Recent Occurrences

There are no known recent occurrences of terrorism in San Benito County.

4.12.4 Probability

Due to the infrequency of terrorism in California and relatively small population compared to other metropolitan areas, the probability of a terrorist attack occurring in San Benito County is **unlikely**, meaning it has a frequency of occurrence of less than once every five years.

[129] Pennsylvania Emergency Management Agency. 2018. "2018 Commonwealth of Pennsylvania State Hazard Mitigation Plan Update." https://pahmp.com/wp-content/uploads/2018/10/Chapter-4-Risk-Assessment-Human-made-Hazards.pdf.

5 Lifeline Vulnerability Assessment

5.1 Introduction

The Lifelines Vulnerability Assessment section provides a framework for understanding the vulnerability of San Benito County to natural hazards and the potential impacts of hazards on the planning area. The assessment utilizes FEMA's Community Lifelines construct as the framework to develop an outcome-based vulnerability assessment and mitigation planning process. This section is designed to meet the FEMA planning requirement Element B3 or 44 CFR § 201.6(c)(2)(ii).

5.1.1 FEMA's Community Lifeline Framework

FEMA's Community Lifelines were developed as an operational tool to support effectiveness in coordination between FEMA and local jurisdictions. These lifelines were selected because they are considered the most fundamental services to communities. These lifelines are the priority for FEMA during the initial response period after an incident. There are seven community lifelines, each with characterizing components to support response operations post-incident.

Figure 33. FEMA's Community Lifelines



5.1.2 Hazus

FEMA's loss estimation software, Hazus-MH 4.2 ("Hazus"), was used to model the damage and estimate the losses associated with floods and earthquakes in San Benito County. Hazus incorporates user-supplied hazard data and information to accurately estimate losses and

damage associated with various natural hazards. The results produced by Hazus can help quantify critical risk related information needed for planning purposes, including:

- **Physical Damage:** Number of impacted buildings and critical facilities, as well as induced damage (e.g., type and amount of debris).
- **Social Impacts:** Estimated displaced households and short-term shelter requirements.
- **Economic Losses:** Building related (e.g. value of contents) and business interruption losses (e.g., lost wages and relocation expenses).

5.1.2.1 HAZUS ANALYSIS

The estimated losses from the Hazus analysis are derived from default national databases and may contain inaccuracies. The damaged building counts generated are susceptible to errors, as they are developed from 2010 census block data. Errors associated with building counts, as well as additional potential errors associated with hydrologic and hydraulic modeling within Hazus, are detailed below. Due to the presence of these inaccuracies in the data and modeling systems, all loss and damage estimates from this analysis should be used for planning applications only. The risk reports for each analysis are available in **Hazus Risk Reports**.

Flood Analysis

To analyze the flood risk within San Benito County, we developed a custom elevation dataset to accurately reflect the ground surface, called a Digital Elevation Model (DEM). The DEM was then imported into Hazus and the floodplains for the 1% and 0.2% annual chance flood events were developed using stream discharge data and additional built-in calculations within Hazus.

The flood analysis performed was a Level 1 flood analysis. One limitation of the Hazus software is that it assumes an even distribution of population and buildings over a census block; although flooding may occur in a small portion of the area where no building or people are located, the model assumes equal damage to the entire census block. Additionally, potential discrepancies may exist in the extent and/or depth of the generated floodplains due to the terrain cell size used in the analysis. The analysis incorrectly assumes that flood losses are not present in other areas of the County by only calculating losses in 100-year and 500-year depth grids, which also limits the accuracy of the analysis.

Despite these limitations, the results from the Hazus Level 1 flood analysis adequately describe the impacts and vulnerabilities associated with flood hazards. In the future, a full Hazus Level II analyses based on local building inventory, higher resolution terrain data, and additional digital floodplain data could be used to refine and improve the accuracy of the results and losses discussed in the Plan.

Earthquake Analysis

The earthquake analysis conducted was a standard Level 1 analysis using a USGS ShakeMap scenario called the "Calaveras: CS+CE"[130] with a magnitude of 6.94. Hazus is uniquely

[130] USGS. “M 6.9 Scenario Earthquake - Calaveras: CS+CE.” https://earthquake.usgs.gov/scenarios/eventpage/bssc2014calaverascsceellbgeo_m6p94_se/executive.

designed for use with USGS ShakeMaps, the results are more accurate because the built-in damage functions within Hazus are specifically designed to work with ShakeMaps. Instead of assigning ground motion to one location within the census tract, (as with the standard Hazus approach) ShakeMaps uses ground motion data that is weighted and averaged across the entire census tract to develop more accurate results. This analysis used default hazard, inventory, and damage information. Direct economic and social losses associated with the general building stock and essential facilities were computed.

Limitations of the results due to model assumptions include that average soil condition is assumed to be standard across the entire study region and the effects of liquefaction and landslide hazards are not incorporated into the analysis. As described previously, these damage and loss estimates can be imprecise and inaccurate when limited to the baseline data, and uncertainty is large with these results. This type of Level 1 analysis is suitable for comparisons and preliminary estimates to help assess potential mitigation actions in the County.

5.1.2.2 INTEGRATION INTO LIFELINE VULNERABILITY ASSESSMENT

Information from the Hazus analyses is integrated throughout the section to assess how flooding and earthquakes may impact the County's lifelines. Table 35 describes how the Hazus software defines elements of the community lifelines framework and how the results were integrated into the Lifelines Vulnerability Assessment.

Table 35: Integration of Hazus into Lifeline Vulnerability Assessment

Component	Description	Associated Community Lifeline
Essential Facilities	Hospitals; Medical clinics; Schools; Fire stations; Police stations; Emergency operations facilities	Safety and Security; Health and Medical
High Potential Loss Facilities	Dams; Levees; Military installations; Nuclear power plants; and Hazardous Material sites	Safety and Security; Food, Water, Shelter; Energy; Hazardous Materials
Transportation Lifeline Systems	Highways; Railways; Light rail; Bus; Ports; Ferry; Airports	Transportation
Utility Lifeline Systems	Potable water; Wastewater; Natural gas; Crude and refined oil; Electric power; Communications	Food, Water, Shelter; Energy; Communications
General Building Stock	Residential; Commercial; Industrial; Agricultural; Religion; Government; Education	Safety and Security; Other
Shelter Requirements	N/A	Food, Water, Shelter
Economic losses	N/A	Other

5.2 Summary of Impact and Vulnerabilities

The table below summarizes anticipated hazard impacts and vulnerabilities on San Benito County, as further described in the following sections.

Table 36: Summary of Hazard Impacts and Vulnerabilities on San Benito County

Hazard	Impacts and Vulnerability
Drought	Drought is a low-priority hazard to the County. Notable vulnerabilities to and potential impacts from drought include the following: • Drought, as a part of its nature, reduces the amount of water available to the County. Water services in the County, which are jointly provided by SBCWD, SSWD, Hollister Management Services: Water Utility Department, and the San Juan Bautista Water Department, may experience extensive stress and have limited available potable water, impacting all 62,500 County residents. The San Benito County Board of Supervisors may need to enact water conservation measures for potable and non-potable water usage. • Drought can reduce the availability of food. Specifically, drought can limit growing seasons for agriculture or create low-to-no crop yields either due to water scarcity or crop infestation. Livestock may also be impacted due to water scarcity further limiting food availability. Recycled water and runoff that may be utilized during extended periods of drought may carry pollutants that can further contaminate agriculture. Agricultural companies, including Earthbound Farm and True Leaf Farm, are some of top employers in San Benito County. Negative on the agricultural sector will have direct effects on residents who are their employees and their families. • The community is also at risk of increased health impacts due to drought. There is an increased risk to communicable disease, specifically vector-borne illnesses, due to decreased water levels, increased water contamination, increased contact with wildlife and insects, and changes in air quality. Communities in San Benito County with pre-existing health conditions, including the 7,700 residents who are 65 years or older and the 5,600 residents who live with a disability, may be more susceptible to health impacts from droughts. • Drought will reduce stream and river flows and lake and reservoir levels, such as in the Hernandez Reservoir, San Justo Reservoir, and Paicines Reservoir. This will result in an associated increase in water temperatures. Plants and wildlife will be stressed as water scarcity increases. • There are a variety of cascading impacts on the community resulting from drought. The fire season may become longer with greater intensity. Critical industries relying on water, such as healthcare and tourism, may be impacted. The County has experienced a 13.6% increase in population and corresponding increase in development. The increase in development and population expands the reliance on available water resources and increases the vulnerability of the County to drought.

Hazard		Impacts and Vulnerability
Extreme Temperatures	Extreme Heat	Extreme heat is a medium-priority hazard to the County. Notable vulnerabilities to and potential impacts from extreme heat include the following: • Community health is the major impact of concern during extreme heat events. Extreme heat can cause illness or death from heat stroke and other related disease. Extreme heat might also exacerbate other conditions such as cardiovascular disease, respiratory disease, or mental illness. Older adults, infants and children, individuals with chronic health conditions, low-income individuals, and outdoor workers, such as those working in the agriculture sector, are particularly vulnerable to the impacts of extreme heat either due to their body's limited ability to cool itself effectively or their inability to go to a cool environment. • Extreme heat negatively impacts agriculture. Plant growth is reduced or stopped in extreme temperatures. Livestock can be stressed due to extreme heat. Agricultural companies, including Earthbound Farm and True Leaf Farm, are some of top employers in San Benito County and are susceptible to direct impacts of extreme heat. Negative effects on the agricultural sector will have direct effects on residents who are their employees and their families. • There are a variety of cascading impacts on the community resulting from extreme heat. Extreme heat can exacerbate drought and wildfire hazards, as well as decrease air quality. • The energy lifeline is likely to be impacted by extreme heat. Power is used to keep the community cool and power essential appliances/equipment, such as medical equipment at Hazel Hawkins Memorial Hospital and the Mabie Northside Skilled Nursing Facility. Extreme heat can consequently increase the strain on the local energy grids both in terms of demand and transmission. Increased demands can overwhelm energy grids powered by PG&E and can even strain the gas utilities supplied by Central Coast Community Energy. The County has experienced a 13.6% increase in population and corresponding increase in development. Since developed areas (e.g., concrete walkways, asphalt roads) absorb heat, known as the urban heat island effect, development will increase the County's vulnerability to extreme heat. However, this increase in vulnerability is not significant.
	Extreme Cold	Extreme cold is a medium-priority hazard to the County. Notable vulnerabilities to and potential impacts from extreme cold include the following: • Community health is a major impact of concern during extreme cold events. Extreme cold temperatures can lead to numerous health concerns including frostbite, hypothermia, and other life-threatening health outcomes. Older adults, infants and children, individuals with chronic health conditions, low-income individuals, and outdoor workers, are particularly vulnerable to the impacts of extreme cold either due to their body's limited ability to keep itself warm or their inability to go to a warm environment. The County's 30.4% of senior citizens who live with a disability would be disproportionately impacted as well. Cold temperatures can also cause property damage (including freezing pipes that may burst and cause water damage inside homes and businesses) and infrastructure damage (including frozen bridges and roads or downed power lines). Cold temperatures may also trigger activation of community warming centers for more vulnerable populations such as the 8.4% of residents who live below the poverty line and the 2.6% of households who do not have car access in San Benito County.

Hazard	Impacts and Vulnerability
	• There are a variety of cascading impacts on the community resulting from extreme cold. Extreme cold events that impact transportation may limit the community's ability to access emergency services. Extreme cold weather events may also cause partial roadway closures and limit public transportation along the lines run by the San Benito County Express. These events may also cause increased injuries and deaths due to transportation accidents. • The energy lifeline is likely to be impacted by extreme cold. Power is used to keep the community warm, so extreme cold can increase the strain on the energy grid. Moreover, direct damage to the energy infrastructure in the community can limit energy transmission The County has experienced a 13.6% increase in population and corresponding increase in development. The increase in development and population, especially areas at higher elevations in San Benito County, which are more likely to experience higher winds and slightly lower temperatures, increases the vulnerability of the County to cold. However, this increase in vulnerability is not significant.
Flood	Flooding is a medium-priority hazard to the County. Flooding can loss of life and injury to individuals in the County, damage to infrastructure, and cascading impacts across the community. To better understand the potential impacts of a flooding event, a Hazus analysis was conducted (see **Appendix B. Risk Assessment**). Key results of the Hazus analysis are the following: • Both the 1% annual chance and 0.2% annual chance flood Hazus analysis resulted in no damage to police, fire, hospital, or school facilities. • Hazus modeling suggested that in the 1% annual chance flood scenario, there will be limited people seeking shelter (i.e., less than 0.05% of the total population) and approximately 2% of the population displaced. During the 0.2% annual chance flood scenario, there will be an increase of individuals seeking shelter, but this number is still estimated to be less than 0.1% of the total population. Approximately 3% of the population will be displaced. • For the 1% annual chance flood scenario it is estimated that there would be approximately $745,688,000 in damage to residential structures which will account for approximately 70.9% of the total damage cost from the incident. For the 0.2% flood scenario, the level of damage was estimated to increase to $846,882,000 or 71.3% of the total damage from the incident. Other notable vulnerabilities to and potential impacts from flooding include the following: • The transportation lifeline is heavily impacted by flooding. Flooding can cause road damage and closures that require repair and impact ingress and egress routes. During past flood events, some access roads have been cutoff due to floodwaters over SR-25. Vulnerable communities with access and functional needs, such as the 9% of County residents who live with a disability and the 8.4% of residents living below the poverty line are significantly impacted as they have unequal access to resources need to prepare and recover from the damages of floods. • There are a variety of cascading impacts on the community resulting from flooding. Flooding can adversely impact the water system for San Benito County. Rain can increase the pollutant concentration in surface water and wastewater. • Rain events of small magnitudes may create significant problems for the wastewater and water systems in the County. The volume of combined runoff

Hazard	Impacts and Vulnerability
	and wastewater may become too large for sewage treatment plants, such as the West Hills Water Treatment Plan and Lessalt Water Treatment Plan, to manage, and flow is diverted to outfall points that discharge raw sewage, toxic industrial waste and floatable such as garbage and syringes. There has been no significant change to the County's vulnerability to flooding resulting from increased structural development and population. However, without future strategic development, increased investment in infrastructure and housing will create new vulnerabilities for the community.
Communicable Disease	Communicable disease is a medium-priority hazard to the County. Notable vulnerabilities to and potential impacts from communicable disease include the following: • Community health is the major impact of concern for communicable disease, but as illustrated by the ongoing COVID-19 pandemic there are a series of cascading impacts impacting the community. Communicable diseases, by nature, cause mild to severe illness. More severe illnesses may potentially result in long-term or permanent impacts and may even result in death. • Continuity of operations may be disrupted by a communicable disease event, and community members may find themselves working in environments that may be dangerous to their health. Frontline workers, specifically those belonging to the healthcare industry, which makes up 19.5.% of the County's workforce, are most likely to be impacted This poses a significant challenge for co-response efforts involving multiple incidents, such as effectively responding to a wildfire incident during a communicable disease outbreak. This also may cause unforeseen challenges if schools close, complicating caretakers' ability to work. • Communicable diseases could significantly strain the local healthcare infrastructure and overwhelm hospital systems. As the sole hospital in San Benito County, the Hazel Hawkins Memorial Hospital and other local medical support service providers may have limited staff and equipment and as a result find their resources being negatively impacted. • As proven by the COVID-19 pandemic, communicable diseases can also cause regional shutdowns and public safety ordinances causing economic disruption and loss of revenue for the County. Impacted individuals' incomes by reducing working hours, limiting work availability, or causing mass job furloughs, which reduce individuals' capacity to contribute to the economy. A significant portion of the County's population, specifically the 8,300 employees working in the Healthcare and Social Assistance sector would be negatively impacted. • The global and local supply chain may be disrupted by a communicable disease or other hazard event. The event may impact the availability of food, cleaning supplies, and medical resources, such as personal protective equipment, medications, disease testing supplies, vaccinations, and other equipment to support treatment. • Communicable disease events may cause public distrust and fear of government agencies and health care professionals. Communicable disease events may last for months or even years, placing strain on professionals and organizations responding to the event. Communicable diseases may also have an extensive impact on the emotional and mental wellbeing of individuals who lose members of the community, are displaced from their homes by a hazard event, or are affected in other ways.

Hazard		Impacts and Vulnerability
		The County has experienced a 13.6% increase in population and corresponding increase in development. The increase in development and population, has contributed to higher population densities and therefore increased risk of disease transmission from one individual to another. This has increased the County's vulnerability to communicable disease.
Severe Weather	Hail	Severe weather, specifically hail, is a high-priority hazard to the County. Notable vulnerabilities to and potential impacts from hail include the following: • A primary impact of hail is property damage. Roofs and windows of homes, governmental facilities, and private businesses can be damaged by hailstorms. Hail can also damage windshields, sunroofs, and the body of automobiles. Areas in the county with higher density of housing stock and generally larger populations, such as San Juan Bautista and Hollister, are more susceptible to damage. • Additionally, agriculture and livestock can be damaged or injured by the impacts of hailstorms. Crops and equipment belonging to local agricultural companies such as Earthbound Farm and True Leaf Farms may experience varying extents of damage based on the severity of hail events. Negative impacts on the agricultural sector will also have direct effects on residents who are their employees and their families. • Hail can also injure members of the community when it occurs without notice or individuals are unable to seek shelter. Depending on the size and scope of the storm incident, it can take several months for the community to recovery. The County has experienced a 13.6% increase in population and corresponding increase in development. The increase in development and population, especially an increase in housing stock and the overall number of structures can increase the County's vulnerability to hail. However, this increase in vulnerability is not significant.
	High Winds	Severe weather, specifically high winds, are a high-priority hazard to the County. Notable vulnerabilities to and potential impacts from high winds include the following: • Extreme winds pose a significant threat to the community, public and private property, and vital utilities. This can be directly from the wind or due to flying debris, such as rocks, lumber, fuel drums, sheet metal and loose gear of any type that can be picked up by the wind. • Individuals who work outside during a severe weather event are more vulnerable to impacts of high winds. Workers in the construction industry, which makes up 11.4% of the County's workforce, are at higher risk of being injured by flying debris on job sites. • Vulnerability increases in areas that have more structures of light construction, particularly manufactured homes, which suffer more damage from high winds. Moreover, older buildings, especially those that were built prior to when the County adopted modern building codes, are susceptible to damage from straight-line winds. These buildings are less likely to have enough design to mitigate wind damage. Even structurally sound buildings can suffer costly damage with potential for secondary impacts, such as broken windows. • High winds can knock down trees and power lines, resulting in power outages across the County. Further, power supplied by PG&E may temporarily be shut off during high-wind events as a precautionary measure to prevent cascading effects such as wildfires sparked by loose live wires. Remote areas of the County such as the unincorporated communities in the

Hazard		Impacts and Vulnerability
		southern area of the County including San Benito and Bitterwater, may be more susceptible to high winds that are knocking out power. The County has experienced a 13.6% increase in population and corresponding increase in development. The increase in development and population, especially in an increase in housing stock and overall number of structures associated with growth can increase the County's vulnerability to high winds. However, this increase in vulnerability is not significant.
	Tornado	Severe weather, specifically tornadoes, are a high-priority hazard to the County. Notable vulnerabilities to and potential impacts from tornadoes include the following: • Tornadoes typically cause acute, severe damage. The severe cyclonic winds impact structures and property, trees, utilities, and transportation infrastructure. As the severity of the tornado increases, the result would be increased structural damage and an increased likelihood of debris becoming dangerous projectiles. Homes that that were built prior to current building codes and manufactured homes would be highly vulnerable to tornado events. • Based on the severity of the tornadoes, mass evacuations may be called for. Evacuations also can cause the sudden need for sheltering, which can burden the San Benito County OES and other agencies coordinating sheltering operations; San Benito County HHSA, Community Foundation for San Benito, and other organizations providing social services; and the greater community, depending on the size and scope of the disaster. • Transportation infrastructure can be heavily impacted by tornado hazards due to extensive debris and downed street signals. The County does not have extensive transportation infrastructure to support a mass evacuation due to a hazard event, with only one road, SR 25, serving as the major ingress and egress route out of the County. The Hollister Municipal Airport is major asset during response operations to access supplies given the limitations of other transportation. • Power outages can be caused by downed utility poles and utility structural damage, impacting communications, wastewater services, hospitals, and other emergency response operations. Water services in the County, which are jointly provided by SBCWD, SSWD, Hollister Management Services: Water Utility Department, and the San Juan Bautista Water Department, may experience extensive stress and have limited available potable water, impacting all 62,500 County residents. The County has experienced a 13.6% increase in population and corresponding increase in development. The increase in development and population, especially in an increase in housing stock and the overall number of building structures can increase the County's vulnerability to tornadoes. However, this increase in vulnerability is not significant.
Wildfire		Wildfires are a high-priority hazard to the County. Notable vulnerabilities to and potential impacts from wildfires include the following: • Wildfires can damage homes, buildings, and other facilities across the County. Structures and communities in the WUI interface and intermix regions, including the City of Hollister and County critical facilities located within the city boundaries, northwest region of the County along CA-101, and northeast region of the County along Fairview Rd, are particularly vulnerable to the impacts of wildfire. There are areas in the County that are isolated from the cities, specifically the unincorporated communities in the southern

Hazard	Impacts and Vulnerability
	area of the County including San Benito and Bitterwater. It would take longer for fire services to respond to these communities, so they have increased vulnerabilities. • Wildfire can cause major health impacts, including death and injuries, due to smoke inhalation. First responders, especially those from the Hollister Fire Department, are particularly vulnerable to these health impacts. Other agencies and organizations who may be involved in an active response, including the San Benito County OES and Emergency Medical Services, SAR operations, and Community Emergency Response Team, may be at higher risk. Communities in San Benito County with pre-existing health conditions, including the 7,700 residents who are 65 years or older and the 5,600 residents who live with a disability, may be more susceptible to health impacts from wildfires. • Wildfires are likely to cause significant evacuations across and out of the County. The County does not have extensive transportation infrastructure to support a mass evacuation due to a hazard event, with only one road, SR-25, serving as the major ingress and egress route out of the County. The Hollister Municipal Airport is major asset during response operations to access supplies given the limitations of other transportation. Communities in San Benito County with functional and access issues, including the 7,700 residents who are 65 years or older, the 1,600 residents who do not have car access, and the 5,300 residents living below the poverty line, may have a more difficult time evacuating and recovering from a disaster. Evacuations also can cause the sudden need for sheltering, which can burden the San Benito County OES and other agencies coordinating sheltering operations; San Benito County HHSA, Community Foundation for San Benito, and other organizations providing social services; and the greater community, depending on the size and scope of the disaster. • Wildfires can cause water quality and availability issues. Water services in the County, which are jointly provided by SBCWD, SSWD, Hollister Management Services: Water Utility Department, and the San Juan Bautista Water Department, may experience extensive stress and have limited available potable water, impacting all 62,500 County residents. • Wildfires can impact communities for significant periods of time, as made evident by recent fires across the State. Complete destruction of critical lifelines can result in years of recover and community members not returning to the community. Extended fire seasons can strain fire services provided by Hollister Fire, healthcare services provided by San Benito County HHSA, and cause consistent power outages to infrastructure managed by the CCCE and PG&E and maintained by the County RMA, City of Hollister Management Services, and City of San Juan Bautista Public Works Department, even if a fire is not directly impacting the County. The County has experienced a 13.6% increase in population and corresponding increase in development. The increase in development and population, especially in the WUI region or areas that are particularly remote, increases the vulnerability of the County to wildfires.
Earthquake	Earthquakes are a medium-priority hazard to the County. Earthquakes can impact San Benito County on the local and regional level. Depending on the severity of each incident these impacts could be limited and isolated or contribute to significant destruction. To better understand the potential impacts of an earthquake event, a

Hazard	Impacts and Vulnerability
	Hazus analysis was conducted (see **Appendix B. Risk Assessment**). Key results of the Hazus analysis for a M6.9 Calveras scenario are the following • Seven schools, the County EOC, one police stations, and one fire station will sustain at least moderate damage. Only 33% of hospital beds will be available for use on the day of the earthquake. Within one week, nearly 80% of the beds will be available for use. • All utility services are anticipated to be impacted, including potable water and electric power services to households. On the first day of the earthquake, 17% of households are expected to lose water service and 51% of households are expected to lose electricity service. Within one week, 12% of households are expected to remain without water service and 29% of households without electricity service. • Hazus modeling suggested approximately 2.3% of the total population displaced and there will be limited people seeking shelter (i.e., approximately 0.6% of the total population). • The total estimated building-related damage, including residential, commercial, and industrial buildings, were $859,000,000. The most significantly impacted building type were single-family residential occupancies, which were estimated at $444,610,000 of (i.e., 61% of the building related-damage). • The total estimated transportation and utility lifeline damage was $134,640,000. This includes $8,350,000 in highway damage, $3,724,000 in railways damage, $4,520,000 in airport damage, $5,325,000 in potable water systems damage, $111,703,000 in wastewater systems damage, $917,000 in natural gas systems damage, and $101,000 in communications facilities damages. Other notable vulnerabilities to and potential impacts from earthquakes include the following: • Earthquakes can heavily impact the built environment, causing damage or destruction to buildings. Given the results of the County's lifeline analysis, single family residences are likely to incur the most earthquake damage. However, all buildings in the County, including the San Benito County Administration Building, Hollister High School, Hazel Hawkins Memorial Hospital, and other businesses, could be damaged in an earthquake. Significant damage to housing in the community would likely require temporary and long-term recovery housing solutions, disrupting community services and operations for years. • Earthquakes can disrupt utility infrastructure (e.g., power, water, communication). Earthquakes can result in downed power lines, which may cause power outages or fires. Without adequate backup power sources, there may be extensive disruption of critical community services (e.g., healthcare, water, temperature control). Socially vulnerable members, including the 9% of residents who live with a disability, 2.6% of households without car access, and the 8.4% of residents living below the poverty line, are particularly at risk due to a power outage. Earthquakes also may directly damage water and wastewater infrastructure, by breaking water pipes or damaging drinking water and wastewater facilities, such as the Lessalt and West Hills Water Treatment Plans. Depending on the size and scope of the disaster, it may also be difficult to get bulk potable water or deal with waste in the absence of these systems.

Hazard	Impacts and Vulnerability
	• Communications infrastructure, can be either damaged, destroyed, or overwhelmed in the event of an earthquake. This may impact emergency response, community recovery, and banking operations. Response times and effort by agencies and organizations who may be involved in active response operations, including the San Benito County OES and Emergency Medical Services, and Community Emergency Response Team, may be significantly impacted. Continuity of operations may be disrupted and residents' access to community resources may be greatly limited. • Damage to transportation infrastructure may involve direct structural damage, collapse of overpasses, landslides, liquefaction and lateral spreading of road surfaces and blockage by collapsed building debris. All of the roads in San Benito County are at risk from earthquake, including SR-25 and SR-101. A major earthquake would be expected to cause considerable damage to transportation systems. Damage to major transportation routes may hamper response and recovery operations, as San Benito County OES, Hollister Fire, and other response agencies may have difficulty accessing areas of the County. Additionally, damage to transportation routes around the County may hamper the ability to receive additional outside resources needed for response and recovery operations. Community members who are already isolated in the County, such as those who live in the unincorporated communities in the southern area of the County including San Benito and Bitterwater, are most vulnerable to the impacts of damage to transportation infrastructure. • Most significantly, earthquakes can loss of life and injury to individuals in the County. Hazards often strain communities and create great uncertainty among individuals, when the end of an incident or the length of recovery is unknown. Disasters may also have an extensive impact on the emotional and mental wellbeing of individuals who lose members of the community, are displaced from their homes by a hazard event, or are affected in other ways. There has been no significant change to the County's vulnerability to earthquakes resulting from increased structural development and population. However, without future strategic development, increased investment in infrastructure and housing will create new vulnerabilities for the community.
Landslide	Landslides are a low-priority hazard to the County. Notable vulnerabilities to and potential impacts from landslides include the following: • Landslides can loss of life and injury to individuals in the County and damage to structures and infrastructure. Communities in San Benito County with functional and access issues, including the 7,700 residents who are 65 years or older and the 1,600 residents who do not have car access, may have a more difficult time evacuating in the event of a landslide. The impacts of landslides tend to be acute but can be felt across the community depending on the size, scope, and location of the incident. • Landslides may damage or destroy utilities (i.e., wastewater infrastructure) and roads/bridges. Water services in the County, which are jointly provided by SBCWD, SSWD, Hollister Management Services: Water Utility Department, and the San Juan Bautista Water Department may also experience damage and decrease the amount of potable water available, thus impacting all 62,500 County residents. This can also destroy or pollute natural ecosystems – impacting communities for years to come. • Landslides can easily isolate portions of the County, having major health and economic implications for community members and the County overall. In the

Hazard	Impacts and Vulnerability
	event of a severe landslide with high numbers of injured civilians, the County's local healthcare infrastructure and hospital systems may be overwhelmed. As the sole hospital in San Benito County, the Hazel Hawking Memorial Hospital and other local medical support service providers may have limited staff and equipment and as a result find their resources being negatively impacted. There has been no change to the County's vulnerability to landslides resulting from increased structural development and population.
Dam Failure	Dam failure is a medium-priority hazard to the County. Dam inundation maps are located **Appendix B. Risk Assessment**. Notable vulnerabilities to and potential impacts from dam failures include the following: • Dam failure can cause downstream flooding in the inundation area leading to loss of life or injury to individuals in the County, damage to infrastructure, and cascading impacts across the community. Failure of the Hawkins Dam would result in flooding along Arroyo De Las Vibras in San Benito County north and northeast of Hollister flooding farmland, houses, roads, and open land. Failure of the Hernandez Dam would result in flooding along the San Benito River along California State Route 25, primarily impacting open space south of Pinnacles, blocking California State Route 25 just north of Pinnacles, and then farmland, houses, roads, and other infrastructure south and east of the City of Hollister. Failure of the Paicines Dam would result in flooding through the Paicines community impacting farmland, businesses, roads, and Willow Grove Elementary School. Failure of the San Justo Dam would result in flooding spanning east and north of San Juan Bautista primarily impacting roads (including California State Route 156) and farms including farmland and farm facilities. Failure of the Leroy Anderson Dam would result in flooding along SR 101, initially impacting Santa Clara County schools and the Saint Louise Health Center before reaching San Benito County, where it would impact the northern section of County along SR 25. The impacts of dam failure and are most likely to be felt by members of the community living, working, and visiting the inundation area for that specific dam. • Dam failures may also reduce the amount of water available to the City. Water services in the County, which are jointly provided by SBCWD, SSWD, Hollister Management Services: Water Utility Department, and the San Juan Bautista Water Department, may experience extensive stress and have limited available potable water, impacting all 62,500 County residents. • Dam failure may result in loss of habitat, ecosystems, or recreational areas in the reservoir upstream or downstream from the dam. Depending on the scope of the failure, reconstruction may also be a significant financial expense. Depending on the function of the dam, the power or water and wastewater system may be impacted in the long-term. The County has experienced a 13.6% increase in population and corresponding increase in development. The increase in development and population, increases the vulnerability of the County to dam failures. If there is increased development in the dam inundation area, this increases the vulnerability to the community.
HAZMAT Incident	HAZMAT Incidents are a low-priority hazard to San Juan Bautista. Notable vulnerabilities to and potential impacts from HAZMAT Incidents include the following: • HAZMAT incidents can impact human health, infrastructure, and the environment. HAZMAT incidents impact the whole community, but certain professions and geographies are more likely to be impacted. Those residing along SR-25, which are central to intra-City transportation services, are more

Hazard	Impacts and Vulnerability
	susceptible to feel the negative impacts of major HAZAMT incidents on both their health and the environment. • Transportation carriers and agencies involved in active response, such as San Benito County OES and Emergency Medical Services, are most likely to be exposed to hazardous materials as they are the first responders tasked with responding to a HAZMAT spill. • Buildings and facilities where hazardous materials are stored or locations near major transportation routes are most likely to be impacted by HAZMAT incidents. Local businesses such as Earthbound Farm and True Leaf Farm, are susceptible to HAZMAT incidents as they are known to handle potentially hazardous materials such as fertilizers. Major transportation routes that run through the County where there are increased chances of HAZMAT Incidents to occur include SR-156 and SR-25. The impacts of HAZMAT incidents will depend on the materials involved in the incident. This can include thermal injury, radiological injury, asphyxiation, chemical injury, biological exposure, and physical injury. There has been no change to the City's vulnerability to HAZMAT incidents resulting from increased structural development and pollution.
Terrorism	Terrorism is a low-priority hazard to the County. Notable vulnerabilities to and potential impacts from terrorism include the following: • Terrorism can have extensive and far-reaching impacts. These impacts can be uniquely felt based on both real or perceived threats of terrorism. These impacts may include injury and loss of life and damage to property and infrastructure, damage to the community and individual mental health, and economic losses. Critical infrastructure that may be impacted include roadways/bridges, electricity and gas, and water and wastewater systems. Attacks on the County's existing communications structure exacerbate the impacts of a terrorist attack. Chemical, biological, radioactive/nuclear, guns, and/or bombs and explosives are all types of potential attacks that can occur and significantly impact the infrastructure and population of San Benito County. An attack on any one of these systems has the potential for larger cascading impacts. • Terrorism incidents can range in size and scope, impacting the extent of these impacts. Terrorist attacks are likely to occur in locations with high population densities and areas that experience movement of larger groups of individuals, such as the Hollister Municipal Airport and along local public transportation routes such as those operated by the San Benito County Express. Attacks may also occur in areas of historical or cultural significance, during events that surge population in the region (e.g., Fourth of July Independence Rally), and at government buildings, such as the County government buildings located in Hollister. There has been no change to the County's vulnerability to terrorism resulting from increased structural development and population.

5.3 Safety and Security

The Safety and Security lifeline considers assets related to law enforcement and security, fire services, search and rescue, government services, and community safety. The following section outlines the vulnerabilities of and the potential impacts to the County from hazards. Additional information regarding the Safety and Security lifeline assets can be found in the **Safety and Security** section of the County Profile.

5.3.1 Law Enforcement

San Benito County has two police stations, the San Benito County Sheriff and Hollister Police Department, and one correctional facility, the San Benito County Jail.[131] Structural vulnerabilities of law enforcement facilities may limit the ability of personnel to perform critical duties during and after a disaster. The Hazus earthquake analysis showed that one out of two police stations would incur at least moderate damage greater than 50% in the result of an earthquake hazard scenario.[132] On the other hand, the Hazus flood analysis showed that neither of the facilities would be damaged in either the 1% or 0.2% scenario.[133] Severe weather can cause unpredictable impacts to the law enforcement structures in the County.

Additionally, hazards such as drought, extreme temperatures, communicable disease, and terrorism can indirectly impact law enforcement in the County. Drought and extreme temperatures may require personnel to perform critical duties under dangerous conditions, such as not having adequate water supply available or working through extreme temperatures that may threaten human health. The recent COVID-19 pandemic has exposed the array of impacts from communicable disease. COVID-19 has increased the risks to employees' health when working in environments with proximity to colleagues and has increased the difficult to maintain law enforcement services. Additionally, the County is at risk for looting during earthquakes and civil disturbance events. This may stress the law enforcement and public service operations or require law enforcement and public services to operate out of secondary locations.

5.3.2 Fire Services

Fire services in San Benito County are provided by Hollister City Fire Department, CAL FIRE, and the BLM. The results of the Hazus analysis indicate that given the earthquake scenario, one fire facility would have at least moderate damage greater than 50% and three would have functionality of greater than 50%.[134] Both the 1% annual chance and 0.2% annual chance flood Hazus analysis resulted in no damage to fire facilities.

Cascading impacts to fire services may be the most significant vulnerability related to fire services for the County. The County's overall vulnerability to wildfires may increase if fire

[131] Hazus report and San Benito County. "Office of the Sherriff." http://sbso.us/corrections-jail.
[132] Hazus report
[133] Hazus report
[134] Hazus report

facilities were to incur physical damage from a hazard, such as an earthquake or severe weather event, or staff availability to provide fire services were limited, such as during a communicable disease event. These impacts may be magnified depending on concurrent hazard events in the region, such that mutual aid is reduced or unavailable.

5.3.3 Government Services

Government services include emergency operations, additional government services, schools, and cultural or historical resources. Hazus reported that San Benito County manages a County Emergency Operations Center (EOC) and 32 schools. Given the Hazus earthquake scenario, the EOC may have at least moderate damage greater than 50%. Seven schools may have at least moderate damage greater than 50% and five would have functionality of greater than 50%.[135] No facilities are reported to have damage from a flood incident in the Hazus flooding scenario.[136]

Hazards may cause unforeseen impacts to government services. COVID-19 impacted government services and how employees can work. As demonstrated during the COVID-19 pandemic, communicable disease events may cause schools to close to in-person instruction, impact the education of children in the community, and complicate caretakers' ability to work. Additionally, communicable disease events may cause public distrust and fear of government agencies and health care professionals. This type of hazard event may last for months or even years, placing strain on professionals and organizations responding to the event. If another hazard were to occur concurrently, the capacity of the community to respond would be limited and require more effort than anticipated for an individual hazard event.

5.4 Food, Water, Shelter



The Food, Water, Shelter lifeline considers assets related to food, water, shelter, and agriculture. Additional information regarding the Food, Water, Shelter lifeline assets can be found in the **Infrastructure** and **Housing** sections of the Community Profile.

5.4.1 Food and Agriculture

Food and agriculture can be heavily impacted by the different hazards outlined in the HMP. The County produced $396,323,500 in crops and livestock in 2019.[137] Hazards can impact agricultural production by damaging or destroying crops, injuring or killing livestock, and impact other agricultural infrastructure. Certain types of hazard events, such as severe weather, are more likely to cause isolated impacts to crops and livestock. Other types of hazard events, such as drought, are more likely to cause widespread impacts to crops and livestock. This can result

[135] Hazus report
[136] Hazus report
[137] San Benito County, 2019. "San Benito County Crops and Agriculture Report." https://www.cosb.us/home/showpublisheddocument/6203/637413906956070000

in cascading impacts on individual farmers as well as cause broader impacts to the supply chain and economy. Food shortages may result from hazards, either through widespread agricultural impacts, such as drought, or hazards that cause mass panic, such as communicable disease. Food shortages may be caused by hazards occuring within and external to the County depending on where food is coming from and whether the food supply or distribution network are impacted. Food shortages are likely to impact the most vulnerable members of the County community. Food shortages may be exacerbated by limitations in access to resources such as local food banks or programs such as SNAP.

5.4.2 Water

The SBCWD, SSWD, the City of Hollister, and the City of San Juan Bautista manage the water resources for the County. The County maintains a multi-source strategic approach to sustainably manage the water available and mitigate the impacts of future water-stress scenarios. The County sources its water both through local surface water resources and imported water from the Central Valley Project.

The water system distribution system managed by SBCWD includes four pumping facilities and distribution lines with a total replacement value of $123,629,100 according to the Hazus database.[138] The Hazus analysis notes that the total replacement value of the County's wastewater system, which includes assets from the City of Hollister and City of San Juan Bautista, is $728,624,300. The system's distribution lines and facilities are $74,177,500 and $654,446,800, respectively.

The County is vulnerable to the water lifeline being impacted by hazards outlined in the HMP either due to direct damage to infrastructure or water scarcity and decreased water quality. Hazards, such as severe weather or earthquake, may directly damage water and wastewater infrastructure. In addition, water infrastructure is vulnerable to threat and disturbance hazards such as terrorism. These hazards impact this lifeline by contaminating water systems, breaking water pipes, or damaging facilities that support water systems or provide food and shelter. The results of the Hazus earthquake analysis indicated that two wastewater facilities would have at least moderate damage.[139] Zero wastewater facilities would have functionality greater than 50% on day 1 and all wastewater facilities would have functionality greater than 50% by day 7 after the earthquake.[140] The Hazus data does not analyze drinking water facilities, so the lack of results related to this damage is not indicative of insignificant impacts on drinking water infrastructure from to a disaster. The Hazus analysis also indicates expected pipeline damage due to an earthquake scenario. Among 3,841 miles of potable water pipelines, 1183 leaks and 296 breaks are anticipated to occur. The analysis also noted that among the 2,305 miles of wastewater pipelines, 594 leaks and 149 breaks would occur. Lastly, the Hazus analysis models how the community's accessibility to water services may be disrupted by a potential hazard

[138] Hazus
[139] Hazus report
[140] Hazus report

event. The analysis suggests that on day 1 after an earthquake, approximately 17% of households in the County would not have potable water service. Only 11% would not have access by day 3, only 3% by day 7, and all households would have access to water services again by day 30.

Flooding can indirectly adversely impact the water system for San Benito County. Rain can increase the pollutant concentration in surface water and wastewater. Moreover, rain events of small magnitudes may create significant problems for the wastewater and water systems in the County. The volume of combined runoff and wastewater may become too large for sewage treatment plants to manage, and flow is diverted to outfall points that discharge raw sewage, toxic industrial waste and floatable such as garbage and syringes. Water quality issues have been encountered after wildfires, where products of the wildfire (e.g., debris) flows into the watershed.

The County's water system is also vulnerable to a potential terrorist threat, as attacks on water infrastructure have a high potential for cascading impacts. The magnitude and method of the attack would determine the long-term impact on the County and potential associated losses.

Drought, as a part of its nature, reduces the amount of potable water available to the County. Water scarcity and decreased water quality can occur through both the direct and indirect impacts of hazards. During the planning process, the Planning Team identified drought as a critical priority for mitigating risk to a sustainable water supply. Damage to any part of the water system can result in limited potable water for parts of the community. This limitation may exist across multiple counties and challenge the region's sustainable water management practices. Climate change is anticipated to increase the impacts of drought on water scarcity in the County.

The water system can be adversely impacted by cascading impacts from the energy lifeline. California has experienced many power outages from natural disasters such as wildfires, floods, earthquakes, and rainstorms. Water and wastewater systems rely on energy in order for the systems to run correctly and require adequate secondary electrical support to sustain operations during extended electric outages independent of rolling blackouts.

5.4.3 Shelter

The shelter lifeline is comprised of community housing and emergency sheltering operations. Both community housing and emergency sheltering operations are impacted directly and indirectly by hazards outlined in the HMP. For the purposes of hazard mitigation planning, this assessment primarily considers the impacts to single family homes and other residential structures.

The impacts of hazards on emergency sheltering operations are complex due to the variation in the size and scope each disaster. Hazus modeling suggested that in the 1% annual chance flood scenario, there will be limited people seeking shelter (i.e., less than 0.05% of the total

population). During the 0.2% annual chance flood scenario, there will be an increase of individuals seeking shelter, but this number is still estimated to be less than 0.1% of the total population. The number of individuals impacted could heavily vary based on the size and scope of other hazards. Wildfire, for example, has created a sudden and great need for shelters across the State of California in the past.

Residential structures can be heavily impacted directly by hazard. San Benito County has a higher percentage of homes directly and indirectly exposed to fire hazard compared to the State average.[141] According to the Hazus earthquake model, residential structures, specifically single family homes, are vulnerable to earthquake damage compared with other structures in the County. Single family residences made up approximately 90% of the structures with slight damage and 80% of the structures with moderate damage. The difference in impacts may reflect a particular vulnerability of housing to earthquakes in the County. A Hazus model was also run for the one percent flood scenario to consider potential damage. In this scenario it is estimated that there would be approximately $745,688,000 in damage to residential structures which will account for approximately 70.9% of the total damage cost from the incident. For the 0.2% flood scenario, the level of damage was estimated to increase to $846,882,000 or 71.3% of the total damage from the incident.

5.5 Health and Medical

Health and medical facilities are a critical lifeline frequently used to support directly in the response and recovery efforts post-incident. There is one hospital located in San Benito County, the Hazel Hawkins Memorial Hospital, as well as various other health and medical support services providers. Additional information regarding the Health and Medical lifeline assets can be found in the **Health and Medical** section of the County Profile.

The Health and Medical Lifeline is uniquely vulnerable to hazards. Proximity and access to medicine and healthcare is a persistent challenge in the San Benito County community separate from a hazard event. Health and medical resources are limited (e.g., ambulances, personnel) and may easily be overrun during a hazard event. Hospitals can be directly impacted by hazard events, indirectly impacted by hazard events, or suffer from cascading impacts from hazards.

Hospitals can be directly impacted by hazard events. The Hazus model estimated that only 33% of hospitals beds would be available after the earthquake outlined in the model. According to this estimation the number would rapidly increase however, to 79% after one week and 98% after 30 days. A more severe earthquake could result in additional damage to hospitals. The Hazus model indicated however that there would be limited impacts of flooding on either hospital in the region.

[141] Headwaters Economics. 2021. “A Profile of Wildfire Risk – Selected Geographies: San Benito County, CA.”

Hospitals are vulnerable to the indirect impacts of hazard incidents. Hospitals rely heavily on water and power in order to maintain their quality of care for their patients. Depending on the size and scope of the disaster, hospitals may be hubs for highly valuable medical materials and without adequate safety and security infrastructure, hospitals may become a target for looting and violence.

Another consideration is the cascading impacts on the health and medical system. For example, a hazard incident could result in a rapidly increased use of the hospital system. A key example of cascading impacts is the COVID-19 pandemic, which has resulted in increased use of hospital beds across the Country. During a catastrophic hazard affecting the region (e.g., earthquake along the San Andreas Fault), the County may need to be self-sufficient due to competing resources and lack of mutual aid. Similarly, localized hazard events within the region may interrupt access to health and medical services in neighborhoods within the County that are further from the cities.

5.6 Energy



For power, San Benito County is serviced by PG&E. The Hazus database considers natural gas, oil systems, and electrical power. Additional information regarding the Energy lifeline assets can be found in the **Infrastructure** section of the County Profile.

High winds are one of the primary hazard to impact the energy lifeline. High wind events may cause trees and other debris to fall and knock down power lines, resulting in power outages. This can impact the energy lifeline when this occurs within the County or outside the County if the impacted power line is supplying energy to the County. Additionally, when high wind events occur, PG&E may institute public safety power shut-offs as a precautionary measure to prevent potential wildfires and severe weather events. This can result in a sudden loss of power primarily impacting residential or non-essential structures. Impacts creating power outages can be similar experienced from other hazards including fires, floods, earthquakes, and flooding. Critical facilities must have a secondary power source (e.g., solar energy, generator) to support operations during a hazard event, including facilities that may serve as Department Operations Centers and other secondary locations.

The Hazus analysis indicated that the County is also vulnerable to the impacts from the earthquake scenario. An earthquake can impact energy facilities and infrastructure. For example, the analysis indicated that there would be 13 leaks and three breaks across the 74 miles of natural gas pipeline. The Hazus analysis can provide context for the potential impact of such an event on the community. The analysis suggests that after day 1 of the earthquake, approximately 50% of households in the County would not have access to electric power. This number would drop to approximately 30% by day 3, to about 11% by day 7, and less than 1% by day 30.

The County's energy system is also vulnerable to a potential terrorist threat. The magnitude and method of the attack would determine the long-term impact on the County and potential associated losses, but due to the high potential for long-term cascading impacts energy infrastructure is commonly considered a target across the United States.

The energy lifeline is vulnerable to large impacts from small breaks in the power system, due to the complexity of each grid system. Recently, the grid system at a mobile home park in the County was damaged, causing all 300 residents to lose power. Each individual home initially ran its own generator. However, once better analyzing the grid system, only 30 units were truly out of power and the County was able to support them with one commercial generator until the grid was fixed. The energy lifeline, similar to water, is vulnerable to energy shortages magnified by certain hazards. For example, average temperatures are anticipated to rise due to climate change, which will increase the strain on the energy grid as the community uses power to keep cool. This can again be exaggerated by regional limitations on energy production which put a strain on potential out-of-state resources. Lastly, California has continued to experience population increases which will put a further strain on the grid and continue to magnify the impacts of hazards.

5.7 Communications



The County's Communications lifeline is vulnerable to the direct and indirect impacts of hazards. Communication infrastructure is a key lifeline during an emergency and for our daily lives. Additional information regarding the Communications lifeline assets can be found in the **Infrastructure** section of the County Profile.

Similar to the energy lifeline, communications infrastructure may be impacted during wildfire and severe weather events. Depending on the type of hazard, components of the physical communications infrastructure could be damaged or destroyed due to the impacts of that hazard. For example, the Planning Committee provided an example where a small fire under a bridge interrupted 911 services. The County utilized their alternate dispatch center and cell phones as needed to respond to calls. There are examples across the State of California of how wildfire can impact communications infrastructure and cause cascading impacts for communities. The Hazus analysis indicated three out of four facilities with at least moderate damage due to the earthquake scenario. High wind events could damage or destroy above ground telephone lines impacting communication abilities across the community.

Additionally, communications infrastructure has the potential to become overwhelmed in an extreme disaster by calls within the County and from the outside. Indirectly, a hazard event could lead to a power outage or shortage, which without adequate backup power sources may lead to communication outages. Particular consideration of the interconnections with the communications lifeline allows for additional vulnerabilities to be uncovered. For example, most financial services such as banking and electronic payment processing services rely heavily on communications infrastructure. If there were to be communications infrastructure outages, this may lead to unforeseen impacts on the community and lead to increased recovery times. The

vulnerabilities of the communications lifeline illustrates the need for back up communication resources.

5.8 Transportation



The transportation lifeline is comprised of roadways, highways, railways, and airports. The major roadways in San Benito include SR 25, 101, 129, 145, and 156. The County also operates the CVH and a public transportation service. Additional information regarding the Transportation lifeline assets can be found in the **Infrastructure** section of the County Profile.

Parts of San Benito County are at risk of being isolated and inaccessible. This would cause severe economic hardship on the County and put the ability for emergency responders to move from one part of the County to another in a timely manner at risk. Damage to major land transportation routes may hamper response and recovery operations. Damage may involve direct structural damage, collapse of overpasses, landslides, liquefaction and lateral spreading of road surfaces and blockage by collapsed building debris. Damage to transportation routes around the County may hamper the ability to receive additional outside resources needed for response and recovery operations.

The County has approximately $1,048,547,700 in highway assets, $73,779,500 in railway assets, and $161,427,700 in airport assets. Depending on the size and scope of the disaster, transportation infrastructure can be impacted in a variety of different ways.

A major transportation disaster involving truck, bus, small plane, helicopter, a number of automobiles, train (freight or passenger), or any combination of vehicles can cause casualties and a major road blockage. The time of day will compound the problems of traffic control and the ability of emergency response teams to minimize suffering, disability, and death by treatment and transportation of victims to hospitals.

One of the most impactful hazards related to the transportation lifeline is flooding. Flooding can cause road closures and road damage creating damage that requires repair or requires a change in mobility. Flooding events can cause accessibility issues and cause cascading impacts on other lifelines. During flood events, some access roads have been cutoff due to floodwaters over SR 25.

All of the highways in San Benito County are at risk from earthquake. A major earthquake would be expected to cause considerable damage to transportation systems. Roads, bridges and highway overpasses are susceptible to damage or failure in the event of a major earthquake. Landslides would be intensified as a result of ground shaking and could affect portions of the roadway system located in landslide potential area. The Hazus model for the earthquake scenario suggested limited damage to transportation infrastructure, with all facilities operational greater than 50% on day one and only three locations sustaining moderate damage. This type of earthquake scenario would most likely result in regional

The County's transportation system, particularly the airport, is also vulnerable to a potential terrorist threat. The magnitude and method of the attack would determine the long-term impact on the County and potential associated losses, but due to the high potential for long-term cascading impacts transportation infrastructure is commonly considered a target across the United States.

Hazards directly impact the transportation lifeline by damaging roadways or be indirectly impacted during a hazard event by creating challenges to navigate out of the County during an evacuation event. The County does not have extensive transportation infrastructure to support a mass evacuation due to a hazard event. The airport is major asset during response operations to access supplies given the limitations of other transportation.

5.9 Hazardous Materials



The HAZMAT lifeline analysis aligns with the HAZMAT Incident hazard profile. In addition to the impacts identified in the hazard profile, this lifeline analysis is inclusive of cascading impacts on other lifelines. For example, road closures may limit the mobility within and out of the County, which can reduce resource availability and impact drivers to the economy. A HAZMAT incident may also impact the water system, power system, or other lifelines depending on the location, size, and scope of an incident. Specifically, the police department is directly next to a facility that handles hazardous materials illustrating an increased vulnerability for the safety and security lifeline. Additionally, there are several underground pipelines throughout the County that may be impacted by a HAZMAT event or other hazards that cause underground damage (e.g., earthquake).

5.10 Other Vulnerabilities

San Benito County is vulnerable to other impacts not explicitly included in the Community Lifelines framework. These additional vulnerabilities are further discussed below.

5.10.1 Community

The residents and community members of San Benito County are vulnerable to the impacts of hazards. Most significantly, hazards can loss of life and injury to individuals in the County. Hazards often strain communities and create great uncertainty among individuals, when the end of an incident or the length of recovery is unknown. Disasters may also have an extensive impact on the emotional and mental wellbeing of individuals who lose members of the community, are displaced from their homes by a hazard event, or are affected in other ways. Additionally, civil unrest, should it become violent, may have a significant impact on the community. The COVID-19 pandemic is an example of how hazards can impact all aspects of society; they change the way people interact with others, travel, and work. These long-term impacts to the community are unquantifiable but remain relevant to mitigation.

5.10.2 Economy

Depending on the size, scope, and location of a hazard event, the economy of the County can be severely impacted. Hazards such as flood or wildfire may displace residents for long periods of time, thus limiting who can contribute to the economy. Additionally, a variety of hazards can cause direct damage to businesses and other drivers of the economy. The COVID-19 pandemic is an example of how regional shutdowns and public safety ordinances due to a hazard event cause economic disruption and loss of revenue for the County. COVID-19 impacted individuals' incomes by reducing working hours, limiting work availability, or causing mass job furloughs, which reduce individuals' capacity to contribute to the economy. In addition to economic disruption, the global and local supply chain may be disrupted by a communicable disease or other hazard event. The disaster may impact the availability of food, cleaning supplies, and medical resources, such as personal protective equipment, medications, disease testing supplies, vaccinations, and other equipment to support treatment.

6 Capability Assessment

The following section summarizes the existing capabilities of San Benito County, City of Hollister, City of San Juan Bautista, SBCWD, and SSWD to support a hazard mitigation program. The capacity of the County and participating jurisdictions is built upon existing resources, including plans, ordinances, staff, financial resources, and outreach and education efforts.

The Capability Assessment supports the identification of mitigation actions described in the Mitigation Strategy. The purpose of this section is not to evaluate the County and participating jurisdictions based on their capabilities, but rather to understand the current capabilities that exist in the County and how they can be leveraged to implement mitigation projects and how the Plan can bolster mitigation capabilities. The capabilities specific to each participating jurisdiction are listed in **Appendix C. Capability Assessment**.

6.1 Legal and Regulatory Capabilities

Legal and regulatory capabilities detail the ordinances, plans, and other regulations that may be utilized to implement mitigation projects and sustain a mitigation program. Developing or expanding upon any existing capabilities may be classified as a mitigation action itself.

Legal and regulatory capabilities that may support a mitigation program include:

- AFN plans
- Building codes
- Climate action plans
- Comprehensive plans
- Economic development plans
- Emergency response plans
- Emergency recovery plans
- Growth management plans
- Disaster recovery ordinances
- Real estate disclosure requirements
- Resilience plans
- Site plan review requirements
- Transportation plans
- Zoning ordinances

Table 37 identifies the legal and regulatory capabilities of the County and participating jurisdictions in the Regulatory Tool column. The other columns are used to indicate which jurisdictions benefit from a particular resource. If a resource is maintained by a jurisdiction, the cell is filled in with dark green.

Table 37: Existing Legal and Regulatory Capabilities

Regulatory Tool	San Benito County	City of Hollister	City of San Juan Bautista	San Benito County Water District	Sunnyslope County Water District
Codes and Ordinances					
Building Code	■	■	■	■	
Growth Management Ordinance	■				
Land and Zoning Ordinances	■	■	■		
NFIP Flood Damage Prevention Ordinance	■		■	N/A	N/A
Post-Disaster Recovery Ordinance	■		■		
Real Estate Disclosure Ordinance	■				
Special Purposes Ordinance	■	■	■	■	■
Subdivision Ordinance	■	■	■		
Water Use Ordinance	■	■	■	■	■
Development and General Plans					
Capital Improvement Plan	■	■	■	■	■
Comprehensive / Master Plan	■	■	■	■	■
Economic Development Plan	■				
Floodplain Management / Basin Plan	■	■	■	■	
Site Plan Review Requirements	■	■	■		■
Hazard-Specific Plans					
Active Shooter Response Plan	■	■	■	■	■
Dam Failure Response or Mitigation Plan	■	■	■	■	■
Drought Response or Mitigation Plan	■	■	■	■	■
Earthquake Response or Mitigation Plan	■	■	■	■	■
HAZMAT Response or Mitigation Plan	■	■	■	■	■
Landslide Response or Mitigation Plan	■	■	■	■	■
Pandemic Response or Preparedness Plan	■	■	■	■	■
Stormwater Management Plan / Ordinance	■	■	■	■	
Wildfire Response or Mitigation Plan	■	■	■	■	■
Response and Recovery Plans					
Emergency Evacuation Plans	■	■	■	■	■
Emergency Operations Plan	■	■	■	■	■
Emergency Sheltering Plans	■	■	■	■	■
Post-Disaster Recovery Plan	■	■	■	■	■

6.2 Administrative and Technical Capabilities

Administrative and technical capabilities represent the County's and participating jurisdictions capabilities to develop and implement a mitigation program. The assessment of these capabilities may also identify additional expertise needed for certain mitigation actions. Administrative and technical capabilities that may support a mitigation program include:

- Emergency managers
- Engineers, planners, or other professionals trained in construction practices
- Engineers, planners, or other professionals with an understanding of hazards
- Engineers, planners, or other professionals with knowledge of land development and management practices
- Grant writers
- Personnel skilled in GIS
- Surveyors

Table 38 lists the existing administrative and technical capabilities of the County and participating jurisdictions in the Capability column. The other columns are used to indicate which jurisdictions benefit from a particular resource. If a resource is maintained by a jurisdiction, the cell is filled in with dark green.

Table 38: Existing Administrative and Technical Capabilities

Capability	San Benito County	City of Hollister	City of San Juan Bautista	San Benito County Water District	Sunnyslope County Water District
Emergency Manager	■		■	■	
Engineers or professionals trained in construction practices related to buildings and/or infrastructure	■	■	■	■	■
Grant Writers	■		■		
Health care professionals trained in preparedness and response to pandemics	■	■	■		
NFIP Floodplain Administrator	■	■	■	N/A	N/A
Personnel skilled or trained in GIS applications	■	■	■	■	■
Planners or Engineers with an understanding of natural hazards	■	■	■	■	■
Planners or Engineers with knowledge of land development and land management practices	■	■	■	■	■
Scientist familiar with natural hazards	■			■	
Staff with expertise in benefit-cost analysis	■	■	■	■	■
Surveyors	■				

6.3 Fiscal Capabilities

Fiscal capabilities describe the County's and participating jurisdiction's access to financial resources to implement and manage a mitigation program. Fiscal capabilities that may support a mitigation program include:

- Ability to incur debt through general obligation bonds
- Authority to withhold public expenditures in hazard prone areas
- Authority to utilize user fees for utility services
- Ability to incur dept through special tax bonds
- Authority to levy taxes for specific purposes
- Impact fees for home buyers and/or developers
- Capital improvement project funding
- State and Federal mitigation grant programs

Table 39 lists the existing fiscal capabilities of the County and participating jurisdictions in the Capability column. The other columns are used to indicate which jurisdictions benefit from a particular resource. If a resource is maintained by a jurisdiction, the cell is filled in with dark green.

Table 39: Existing Fiscal Capabilities

Capability	*San Benito County*	*City of Hollister*	*City of San Juan Bautista*	*San Benito County Water District*	*Sunnyslope County Water District*
Authority to levy taxes for special purposes	■		■	■	
Capital Improvements Project funding	■	■	■	■	■
Community Development Block Grant (CDBG)	■	■	■		
Federal grant programs	■	■	■	■	■
Fees for water, sewer, gas, or electric service	■	■	■	■	■
Impact fees for home buyers or developers for new developments	■		■		■
Incur debt through general obligation funds	■		■	■	■
Incur debt through private activity bonds	■		■	■	■
Incur debt through special tax and revenue bonds	■		■	■	■
State mitigation grant programs (e.g., Cal OES, CAL FIRE)	■	■	■	■	■
Withhold spending in hazard-prone areas	■				

6.4 Education and Outreach Capabilities

Education and outreach capabilities describe the County's and participating jurisdiction's existing programs and methods to communicate hazard-related information to the community and implement a mitigation program. Education and outreach capabilities that may support a mitigation program include:

- Firewise USA certification
- Local citizen groups or non-profit organizations focused on emergency preparedness and supporting vulnerable populations
- Natural disaster or safety related school programs
- Ongoing public education or information program
- Public-private partnership initiatives addressing disaster-related issues
- Seasonal emergency management and mitigation outreach
- StormReady certification

Table 39 lists the existing education and outreach capabilities of the County and participating jurisdictions in the Capability column. The other columns are used to indicate which jurisdictions benefit from a particular resource. If a resource is maintained by a jurisdiction, the cell is filled in with dark green.

Table 40: Existing Education and Outreach Capabilities

Capability	*San Benito County*	*City of Hollister*	*City of San Juan Bautista*	*San Benito County Water District*	*Sunnyslope County Water District*
Local citizen groups or non-profit organizations focused on emergency preparedness and supporting vulnerable populations					
Natural disaster or safety related school programs					
Ongoing public education or information program					
Public-private partnership initiatives addressing disaster-related issues					
Seasonal emergency management and mitigation outreach					
StormReady certification					

6.5 Certifications

6.5.1 Community Classifications

Community classifications are assessed during the Capability Assessment to better understand existing efforts to promote risk reduction, and they may impact and bolster capabilities listed in previous sections. classifications that may support a mitigation program include:

- Building Code Effectiveness Grading Schedule
- Public Protection Classification Program
- Community Rating System
- Firewise USA
- StormReady

The community classification currently maintained by the County and participating jurisdictions is the StormReady Communities program. Administered by the NWS, the StormReady Communities program supports localities in preparing for extreme weather events. San Benito County is a member of this program.

6.5.2 National Flood Insurance Program

The NFIP incentivizes communities to enforce minimum codes and ordinances that regulate development in floodplains. Residents and business owners in communities that regulate such development may become eligible for flood insurance administered by FEMA. Individuals may only receive insurance through the NFIP if their community participates in the program.

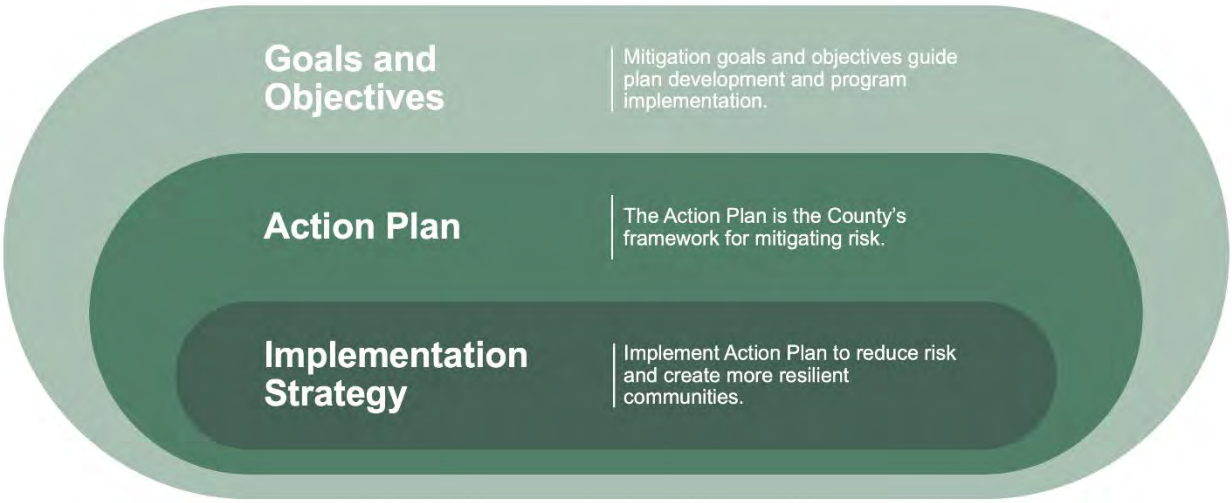
The City of Hollister, City of San Juan Bautista, and San Benito County all participate in the NFIP program. They have all adopted floodplain management ordinances and administer NFIP at a local level. SSWD and SBCWD are not eligible for NFIP.

Management of the NFIP for these jurisdictions has been inconsistent since the last Plan update. This has resulted in incomplete data regarding NFIP policies and claims. The County is actively working on building floodplain administration capability as reflected in this Plan. The County's Floodplain Administer identified that there are currently 128 NFIP policies in force in the County. Since 1978, there have been 66 paid losses in the County with total claims of $1,574,310. The City of Hollister's Floodplain Administrator identified that there are 20 NFIP policies in force in the City. Total insurance coverage for these policies amounts to $6.35 million. No information is known regarding NFIP policies for San Juan Bautista. The City of Hollister's Floodplain Administrator identified 7 repetitive loss properties, which have had a total of $223,287 in claim payments. No information was available regarding repetitive loss and severe repetitive loss properties in the County or City of San Juan Bautista.

7 Mitigation Strategy

This section presents the Mitigation Strategy for the 2021 San Benito County Multi-Jurisdictional HMP. Figure 34 below summarizes the different components of the Mitigation Strategy: the goals of the County's Mitigation Program, the review and development of the Mitigation Action Plan (MAP), and the implementation strategy. The Mitigation Strategy applies to the County and all participating jurisdictions of the San Benito County HMP. As a part of the development of the City of Hollister Jurisdictional Annex, the city defined and refined its own mitigation goals, evaluation and prioritization of mitigation actions, and mitigation actions. This Annex complements with the strategy outlined in this section, and aligns with City's planning processes.

Figure 34: Summary of Mitigation Strategy



7.1 Mitigation Strategy Goals

The Mitigation Strategy Goals guide the development of the Plan and program implementation. The Planning Committee, in combination with the larger Stakeholder Group, reviewed and adjusted the 2015 Mitigation Goals to better align with the current priorities of the County and participating jurisdictions. The updated risk and vulnerability assessment and updated capability assessment were used as the basis for revising the mitigation goals. Objectives were omitted to simplify the Mitigation Strategy and make it more accessible for its users. Figure 35 below outlines the County's five mitigation goals.

Figure 35: San Benito County Hazard Mitigation Goals



The City of Hollister included six separate goals for their annex which align with the goals identified in Figure 35 but better reflect the City's priorities and operations for the purposes of mitigation planning.

7.2 Summary of Mitigation Progress

7.2.1 Update to Mitigation Goals

The planning process identified a series of new mitigation goals for the Mitigation Strategy. The goals were updated to become non-hazard specific, more direct, and better align with the State of California 2018 Goals. Table 41 outlines the changes to the goals in the Mitigation Strategy. These changes were presented and validated by the Planning Committee and stakeholders at the Mitigation Strategy Workshop.

Table 41: Previous San Benito County and Current State of California Mitigation Goals

COUNTY 2015 MITIGATION GOALS	CALIFORNIA 2018 MITIGATION GOALS
• Promote economic development consistent with seismic, floodplain, and risk management guidance as developed by San Benito County and its allied agencies and organizations. • Provide for an effective public awareness program for natural and technological hazards present in San Benito County. • Encourage scientific study and the development of data to support mitigation strategies for those hazards that are a threat to San Benito County. • Promote the recognition of the real value of hazard mitigation to public facilities, public safety, and welfare of all citizens of San Benito County. • Support the mitigation efforts of local governments, private citizens, non-profit organizations, and private businesses throughout the San Benito County Operational Area.	• Significantly reduce life loss and injuries. • Minimize damage to structures and property and minimize interruption of essential services an activities. • Protect the environment. • Promote community resilience through integration of hazard mitigation with public policy and standard business practices.

7.2.2 County-wide Hazard Mitigation Process

Since the 2015 plan was approved, the County and participating jurisdictions have made progress promoting mitigation in the County. To understand the specific progress made, select members of the Planning Committee reviewed the 2015 actions. Notable progress to implement local mitigation projects include but are not limited to:

- SSWD has established and continues to maintain multiple processes to ensure water is safe and available. These efforts include secondary power generation for wells, utilization of a computerized control and monitoring system, and daily testing of water quality at various sites to create redundancy in their water system.
- The Pajaro River Watershed Flood Prevention Authority, which maintains representation from San Benito County and SBCWD, actively assesses flooding risk and water management considerations within San Benito County and across the region. They recently produced the Pajaro River Watershed Integrated Regional Water Management Plan, which evaluates the Pajaro River floodplain and associated risks to the San Benito County areas.
- The Lessalt Water Treatment Plant was upgraded in 2014 and the West Hills Water Treatment Plant was built in 2017 to diversify the local water supply and to provide better quality drinking water. The Crosstown Pipeline was constructed to bring that better quality water directly to City of Hollister and SSWD wells for blending with groundwater as it enters the water system. As areas have developed, the water systems have become more gridded and interconnected which increases reliability.
- Multiple agencies and organizations within the County are engaged in efforts to educate residents on water saving techniques. The San Benito Water Resources Association conducts regular outreach regarding water conservation, and each May the SSWD, the City of Hollister, and the City of San Juan Bautista conduct outreach programming for Water Awareness Month. San Benito County promotes public education for water conservation during months that are high risk for droughts.

Following the review of the 2015 actions, targeted outreach to individuals and jurisdictions was conducted to further clarify action status. Evaluation of previous mitigation actions aimed to:

- Clarify to purpose of the previous mitigation actions;
- Identify previous mitigation action status; and,
- Evaluate previous action relevancy.

This resulted in 6 actions being determined to be completed, 7 actions being removed, and 31 actions being carried forward to the Plan update.

7.2.3 Public Engagement to Promote Mitigation

Public engagement related to hazard mitigation was conducted during the previous planning cycle. The County and participating jurisdictions have consistently recognized opportunities to provide public education related to mitigating risk during high-risk seasons and holidays and

involve residents and other community members in these efforts. Figure 36 provides two examples of this mitigation outreach.

Figure 36: Examples of Public Engagement





7.3 Mitigation Action Plan Development

7.3.1 Action Identification

The Planning Committee members, who represent all participating jurisdictions, met collectively, and worked independently to identify, develop, and prioritize mitigation strategies. Figure 37 summarizes methodologies used to develop actions for the MAP.

Figure 37: Mitigation Action Development



The Planning Committee considered actions from the previous Plan and those identified during the Mitigation Strategy Workshop to develop an initial list of mitigation actions. The Planning Committee reviewed the actions from the previous Plan to evaluate if they are incomplete, ongoing, or complete. After this status was identified, each action was evaluated for its

relevance and utility to the County. The actions identified as incomplete/ongoing and still relevant/useful to the County were included in the list of potential actions for the Plan Update.

The Planning Committee and Stakeholder Group utilized the Mitigation Strategy Workshop to brainstorm additional actions for the Plan. The Workshop provided an opportunity for members of both audiences to collaboratively discuss the County and participating jurisdictions' vulnerabilities to hazards and ideas for mitigation, especially opportunities for mitigation based on the COVID-19 pandemic. Lastly, the Planning Committee conducted a gap analysis based on the mitigation projects identified from the previous Plan, the projects generated from the Workshop, the risk assessment, the lifeline vulnerability assessment, and the capabilities assessment. The analysis identified additional actions for the MAP. All actions identified aligned with the hazard mitigation goals and the priorities of the community.

7.3.2 Action Plan Development

After actions were identified, the content of the action plan was developed. Table 42 outlines the details of how the MAP was developed by the Planning Committee. The MAP was designed to be flexible, such that during the update process as more information becomes available the content can be edited and updated.

Table 42: MAP Development Information

Action Plan Category	Action Plan Description
Action Title and Number	The action title and number are unique for each action. The mitigation actions in the 2014 plan were not numbered; a new numbering system has been implemented for this Plan update.
Action Description	The action description provides additional information to guide implementation for each project. This will include a description of the problem and solution related to each action, how the action aligns with one or more of the goals identified in the Plan, and implementation information (e.g., is a critical facility impacted by this project?).
Priority	This category establishes the priority of each action. The priority is a subjective categorization developed by the Planning Committee using criteria such as action feasibility, action benefit and cost, and other considerations. The categories presented in the Plan are the following: • **High Priority**: An action that is feasible, has a high benefit/cost ratio, and no additional considerations. • **Medium Priority**: An action that is less feasible, has a high benefit/cost ratio, and no additional considerations. • **Low Priority**: An action that is less feasible, has a low benefit/cost ratio, and may have other considerations associate with the action. These actions reflect the priority from the most recent Plan update, either the main five-year planning cycle or during the planning cycle if there is an update.
Project Lead	Lead department, agency, or organization
Project Partners	Other departments, agencies, organizations, or other stakeholders involved in project implementation

Action Plan Category	Action Plan Description
Cost	This category establishes the cost category of each action. The cost is an estimation of the significance of the cost for the project. The cost may be updated as projects are developed as the Plan is implemented. Cost categories will include high, medium, and low.
Funding Sources	Potential funding sources for the actions. Options will include sources of funding at the local, State, and Federal level (**Appendix E. Mitigation Strategy Implementation**).
Benefits	A description of the estimated benefits, either quantitative and/or qualitative.
Timeline	The time required for completion of the project upon implementation. Timeline categories will include: • **Short-Term:** completed in less than one year • **Medium-Term:** completed between one and three years • **Long-Term:** completed in longer than three years
Hazard(s) Mitigated	Hazard(s) mitigated through implementation of the action. Options will include: • Drought • Flood • Extreme Temperature • Communicable Disease • Severe Weather • Wildfire • Earthquake • Landslide • Dam Failure • HAZMAT • Terrorism
Jurisdiction(s) Impacted	Jurisdiction(s) impacted by the implementation of the action. Options will include San Benito County, City of Hollister, City of San Juan Bautista, Sunnyslope Water District, and San Benito County Water District.

7.4 Mitigation Action Plan

The following section presents the 2021 San Benito County Multi-Jurisdictional MAP. The MAP in this document is presented as a series of MAP tables, which provides a simple and detailed view for implementation.

1 Develop and implement a sustainable groundwater plan.

IN PROGRESS | **HIGH PRIORITY**

ACTION DESCRIPTION

Finish developing and implement a sustainable groundwater plan as required by the Sustainable Groundwater Management Act. This document will assess water quality and quantity and implement management activities to reach groundwater sustainability. This plan should integrate the core principles of the San Benito County Multi-Jurisdictional Hazard Mitigation Plan. For more information on progress towards this action see: https://www.sbcwd.com/sustainable-groundwater-management/.

MEDIUM COST

FUNDING SOURCES

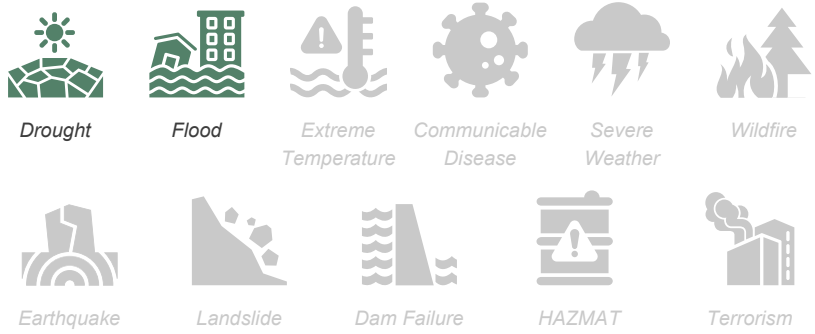
- Integrated Regional Water Management Grant Programs (California Department of Water Resources)
- Small Community Drought Relief Program (California Department of Water Resources)
- Fees collected through the San Benito County Water District's Groundwater Sustainability Agencies (Project and program implementation)

BENEFITS

This action addresses a State of California legal requirement and captures existing work being conducted by the participating jurisdictions. Development and implementation of the Plan will support ensuring there is adequate quantity and quality of water to the San Benito County community and agricultural needs.

This action supports mitigating risk to the **Food, Water, Shelter** community lifeline.

HAZARDS MITIGATED



PROJECT LEAD

San Benito County Water District

PROJECT PARTNERS

- San Benito County Office of Emergency Services
- California Department of Water Resources

TIMELINE

Plan development is ongoing and expected to be completed by **early 2022**.

Timeline for implementation for this action will be **long-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☒ Sunnyslope Water District
- ☒ San Benito County Water District

2 Foster participation in the County's hazard mitigation program throughout the planning cycle.

IN PROGRESS | **HIGH PRIORITY**

ACTION DESCRIPTION

In order to foster participation in the County's and participating jurisdictions' hazard mitigation program, the project lead will conduct actions such as:

- Schedule regular meetings with the Planning Committee
- Make mitigation and resilience a regular topic at the County Intergovernmental Committee
- Improve collaboration with State and Federal agencies related to wildfire mitigation and response planning
- Improve County-wide mitigation communications via the public information officer.

LOW COST

FUNDING SOURCES

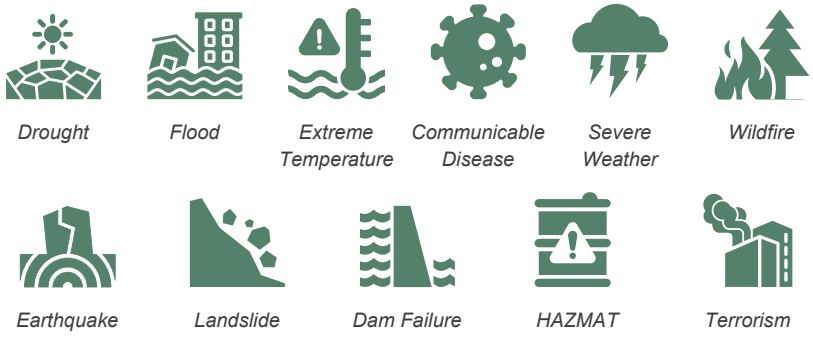
- Local Budget

BENEFITS

The Planning Committee has invested in fostering relationships during the hazard mitigation planning process to promote mitigation and resilience. This activity included local relationships, but also relationships with regional, State, and federal partners. Direct benefits from this action have already been witnessed, and further action will only work to streamline future plan development and implementation.

This action supports mitigating risk to **all community lifelines**.

HAZARDS MITIGATED



PROJECT LEAD

San Benito County Office of Emergency Services

PROJECT PARTNERS

- City of Hollister
- City of San Juan Bautista
- San Benito County Water District
- Sunnyslope County Water District
- California Governor's Office of Emergency Service
- Federal Emergency Management Agency

TIMELINE

Timeline for implementation for this action will be **short-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☒ Sunnyslope Water District
- ☒ San Benito County Water District

3 Expand participation in the National Flood Insurance Program.

NOT STARTED | **HIGH PRIORITY**

ACTION DESCRIPTION

Additional participation in the National Flood Insurance Program can support mitigation of risk across the County to flooding. The project lead and partners will meet to identify and implement further strategies to accomplish this action, but examples of specific tasks related to this action will include:

- Support development of public awareness campaigns to enhance participation in the program
- Identify incentives for homeowners to participate in the National Flood Insurance Program
- Provide technical assistance to local jurisdictions regarding the regulatory processes

LOW COST

FUNDING SOURCES

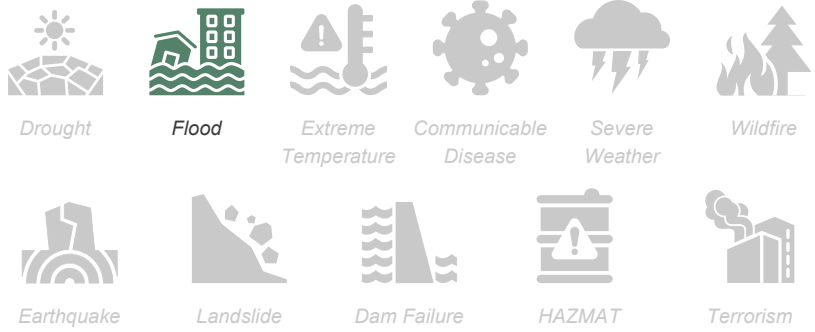
- Floodplain Management, Protection, and Risk Awareness Grant Program (California Department of Water Resources)
- Local Budget

BENEFITS

This action will support mitigating financial risk to flooding to residents. Additionally, expansion of National Flood Insurance Program will also benefit the community by continuing to inform community members of the risk of flooding, especially to those most with property at risk of flooding.

This action supports mitigating risk to the **Food, Water, Shelter** community lifeline.

HAZARDS MITIGATED



PROJECT LEAD

San Benito County Resource Management Agency

PROJECT PARTNERS

- San Benito County Office of Emergency Services
- City of Hollister
- City of San Juan Bautista

TIMELINE

Timeline for implementation for this action will be **medium-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☐ Sunnyslope Water District
- ☐ San Benito County Water District

4 Increase the capacity of the San Benito County Floodplain Manager.

IN PROGRESS | **HIGH PRIORITY**

ACTION DESCRIPTION

San Benito County has had staff turnover related to floodplain management. The Plan prioritizes ensuring that staff has the appropriate training and education to support floodplain management and the National Flood Insurance Program. Specific tasks under this action may include:

- Coordination with State and Federal counterparts to review responsibilities and initiate workplace training
- Enroll in training courses related to the National Flood Insurance Program via the California Governor's Office of Emergency Services, American Society of Certified Floodplain Managers, and Federal Emergency Management Agency
- Network with peers to identify additional opportunities for training and further education

LOW COST

FUNDING SOURCES

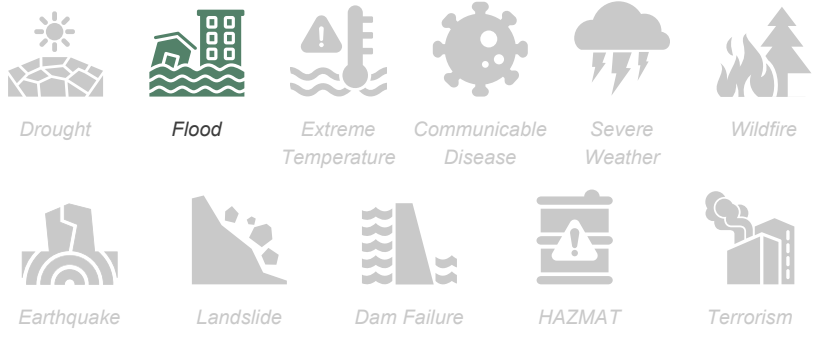
- Local Budget

BENEFITS

The role of floodplain manager is required in order to participate in the National Flood Insurance Program. Investment in staff to fill this role will ensure program compliance and advance community resilience.

This action supports mitigating risk to the **Food, Water, Shelter** community lifeline.

HAZARDS MITIGATED



PROJECT LEAD

San Benito County Resource Management Agency

PROJECT PARTNERS

- San Benito County Office of Emergency Services
- California Governor's Office of Emergency Services
- Federal Emergency Management Agency

TIMELINE

Timeline for implementation for this action will be **short-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☐ City of Hollister
- ☐ City of San Juan Bautista
- ☐ Sunnyslope Water District
- ☐ San Benito County Water District

5 Assess status and vulnerabilities of community lifelines across all participating jurisdictions.

IN PROGRESS | **HIGH PRIORITY**

ACTION DESCRIPTION

This action will assess the status of community lifelines to identify direct and indirect risks to lifeline assets. This analysis will include both lifelines within the jurisdictions and those serving the and participating jurisdictions County. The type of assessment will consider what the asset is, how it is used, under what conditions it can be disrupted, what the implications of disruption are, and any additional considerations. Emphasis will be placed on ensuring potential disproportionate impacts on vulnerable populations. This assessment should also identify ownership of assets to clarify responsibilities during response operations and for mitigation.

LOW COST

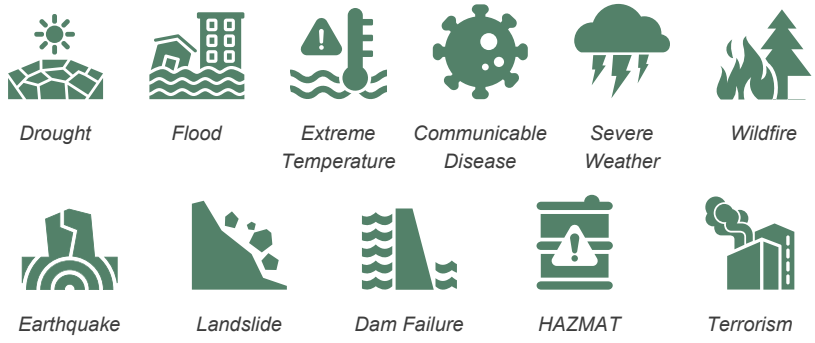
FUNDING SOURCES

- State and Local Implementation Grant Program (United States Department of Commerce)
- Sustainable Communities Grants (California Department of Transportation)
- California Health Center Security Grant Program (California Governor's Office of Emergency Management)
- Local Budget

BENEFITS

This action will build upon the lifelines-focused mindset initiated from this planning process to understand direct and indirect risks on lifeline assets. This will allow for prioritization of time and resources and continuous identification of ongoing mitigation projects. This action supports mitigating risk to **all community lifelines**.

HAZARDS MITIGATED



PROJECT LEAD

San Benito County Office of Emergency Services and City of Hollister Engineering

PROJECT PARTNERS

- City of Hollister
- City of San Juan Bautista
- San Benito County Water District
- Sunnyslope County Water District
- Council of San Benito County Governments
- Private and Non-profit organizations

TIMELINE

Timeline for implementation for this action will be **medium-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☒ Sunnyslope Water District
- ☒ San Benito County Water District

6 Evaluate critical County ingress and egress routes for hazard risk and reduce vulnerability of essential County roads.

NOT STARTED | **HIGH PRIORITY**

ACTION DESCRIPTION

The San Benito County, City of Hollister, and City of San Juan Bautista community recognizes the difficulty of entering and exiting the region due to the limitations in transportation networks. The existing routes availlable to the community are well known, but potential cascading impacts to these ingress and egress routes during or following a hazard event are not widely understood. This action focuses on understanding risks to these critical evacuation/access routes and mitigating these risks to create a more resilient community. This action will prioritize high hazard risk areas and consider non-traditional access routes (e.g., the new river park trail).

LOW COST

FUNDING SOURCES

- Local budget
- Building Resilient Infrastructure and Communities Program (Federal Emergency Management Agency)
- Sustainable Communities Grants (California Department of Transportation)
- Private Funding

BENEFITS

Evaluating and mitigating risk to critical County roads will allow the County to bounce-back after a disaster incident to better maintain continuity of operations and access to community resources. This will also allow for mutual aid and other resources to be more likely to be brought into the county, as needed. This action supports mitigating risk to the **Safety and Security** and **Transportation** community lifelines.

HAZARDS MITIGATED





PROJECT LEAD

San Benito County Office of Emergency Services

PROJECT PARTNERS

- San Benito County Sherriff's Office
- City of Hollister
- Hollister Fire Department
- Hollister Police Department
- City of San Juan Bautista
- San Benito County Water District
- Sunnyslope County Water District
- Council of San Benito County Goverments

TIMELINE

Timeline for implementation for this action will be **medium-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☐ Sunnyslope Water District
- ☐ San Benito County Water District

7 Develop and implement a public education program related to community lifeline disruption.

NOT STARTED | **MEDIUM PRIORITY**

ACTION DESCRIPTION

This action will build understanding of the community's role to mitigate risk to lifeline disruptions. The community lifelines to be assessed are as follows:



This education program should be catered to various community roles (e.g., households, employers, schools, farmers, developers). The following are examples of specific topics for the program:

- Preparing for power outages and energy resiliency
- Coping with water/wastewater infrastructure disruption
- Considerations for homebuyers or purchasing other property

LOW COST

FUNDING SOURCES

- Local Budget
- Floodplain Management, Protection, and Risk Awareness Grant Program (California Department of Water Resources)
- Integration with the Communtiy Emergency Response Team program

BENEFITS

This action will promote community hazard awareness and understanding how to mitigate risk to hazards.

This action supports mitigating risk to **all community lifelines**.

HAZARDS MITIGATED





PROJECT LEAD

San Benito County Office of Emergency Services

PROJECT PARTNERS

- San Benito County Resource Management Agency
- San Benito Water Resources Association
- Hollister Fire Department
- San Benito County Fire Safe Council

TIMELINE

Timeline for implementation for this action will be **medium-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☐ Sunnyslope Water District
- ☐ San Benito County Water District

8 Review and update local codes, regulations, provisions, and ordinances for new and existing buildings to address hazard risks.

NOT STARTED | **MEDIUM PRIORITY**

ACTION DESCRIPTION

This action will review and revise local codes, regulations, and ordinances to ensure they meet and/or exceed State and Federal requirements and best practice. This review may consider specific hazard risk areas such as earthquake, landslide, or flood and also general land use areas such as hillside development or wildland urban interface areas. This review can also be used to influence a schedule for upgrading County-owned and City-owned buildings and infrastructure. The Plan will be updated if any specific projects are identified through this review and revision.

MEDIUM COST

FUNDING SOURCES

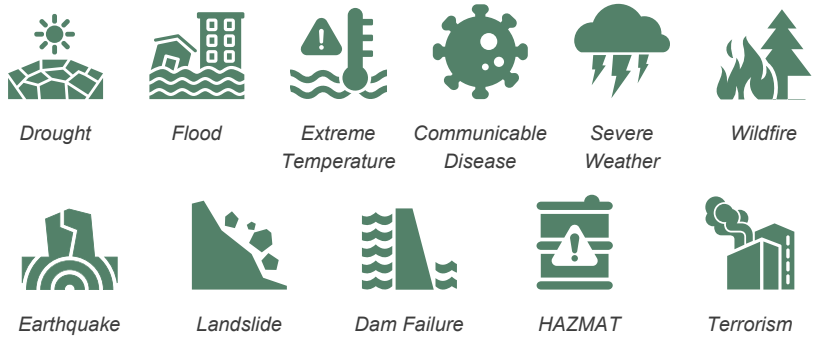
- Local Budget

BENEFITS

This review will demonstrate how the County and Cities are planning for the future to ensure existing and upcoming development considers hazard-conscious construction methods. This action will improve community safety by increasing the resilience of assets.

This action supports mitigating risk to the **Safety and Security** community lifeline.

HAZARDS MITIGATED



PROJECT LEAD

San Benito County Office of Emergency Services

PROJECT PARTNERS

- City of Hollister Development Services: Building Divison
- City of San Juan Bautista: Planning Department
- San Benito County Risk Management Agency: Building Code Enforcement Division
- San Benito County Economic Development Corporation

TIMELINE

Timeline for implementation for this action will be **medium-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☐ Sunnyslope Water District
- ☐ San Benito County Water District

9 Review community-wide water control measures.

NOT STARTED | **MEDIUM PRIORITY**

ACTION DESCRIPTION

This action will review and revise water control measures at the County, City, and Water District level to align with State requirements and best practice. This review will consider measures such as: water consumption limits, limits to watering landscape and other outdoor water use, and runoff considerations. This action will entail collaboration with high volume commercial users of water resources. The Plan will be updated if any specific projects are identified through this review and revision.

LOW COST

FUNDING SOURCES

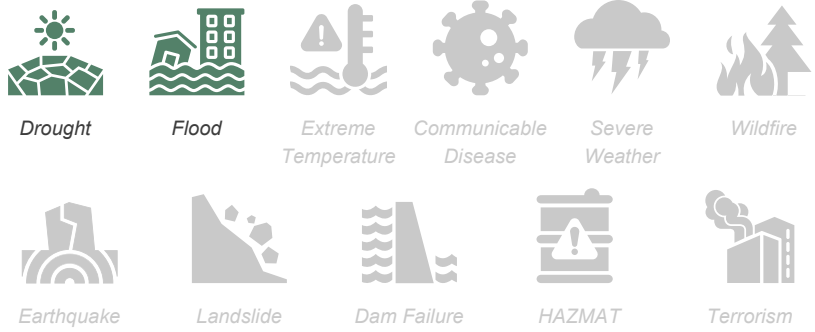
- Local Budget

BENEFITS

This action will ensure that the water control measures that the County, Cities, and Water Districts are utilizing are up-to-date and well socialized across the community.

This action supports mitigating risk to the **Food, Water, and Shelter** community lifeline.

HAZARDS MITIGATED



PROJECT LEAD

San Benito County Resource Management Agency

PROJECT PARTNERS

- San Benito County Office of Emergency Services
- City of Hollister
- City of San Juan Bautista
- San Benito County Water District
- Sunnyslope County Water District

TIMELINE

Timeline for implementation for this action will be **medium-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☒ Sunnyslope Water District
- ☒ San Benito County Water District

10 Review and revise the community fire risk reduction program.

NOT STARTED | **MEDIUM PRIORITY**

ACTION DESCRIPTION

This action will review and revise the County, City, and Water District fire risk reduction program to ensure it is up-to-date and aligned with best practice from the California Department of Forestry and Fire Protection and federal guidance. This review will consider measures such as: defensible space requirements, road width requirements, fire equipment access requirements, access road maintainance requirements, fire risk citations/laws, and identification of temporary refuse areas. This action should also assess how the fire risk reduction program addresses the cascading impacts from fire (e.g., post-wildfire debris flow and flooding).

LOW COST

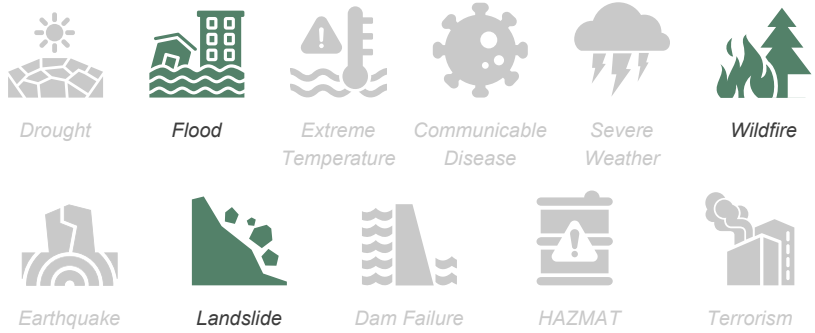
FUNDING SOURCES

- Local Budget
- California Climate Investments Fire Prevention Grant Program (California Department of Forestry and Fire Protection)
- California Forest Improvement Program (California Department of Forestry and Fire Protection)
- Assistance to Firefighters Grant Program (Federal Emergency Management Agency)

BENEFITS

This action will ensure that fire risk reduction in the County, Cities, and Water Districts is utilizing industry best practice and the community is working together with the government to mitigate risk. This action supports mitigating risk to the **Safety and Security**, **Food, Water, and Shelter,** and **Energy** community lifelines.

HAZARDS MITIGATED



PROJECT LEAD

San Benito County Office of Emergency Services

PROJECT PARTNERS

- Hollister Fire Department
- California Department of Forestry and Fire Protection
- San Benito Fire Safe Council
- National Wildfire Coordinating Group
- United States Fire Administration

TIMELINE

Timeline for implementation for this action will be **medium-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☐ Sunnyslope Water District
- ☐ San Benito County Water District

11 Incorporate and adopt San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update into participating jurisdictions' General Plan safety element.

IN PROGRESS | **HIGH PRIORITY**

ACTION DESCRIPTION

This action entails integrating the Plan into the appllicable jurisdiction's General Plan and specifically adopting the mitigation plan into the Safety Element section. The State of California incentivizes counties and cities to adopt their current, FEMA-approved hazard mitigation plans into the Safety Element of their General Plans through Assembly Bill 2140 (Government Code 56302.6). The adoption allows the County/City to be considered for up to all of the Public Assistance local-share costs be funded by the state through the California Disaster Assistance Act.

LOW COST

FUNDING SOURCES

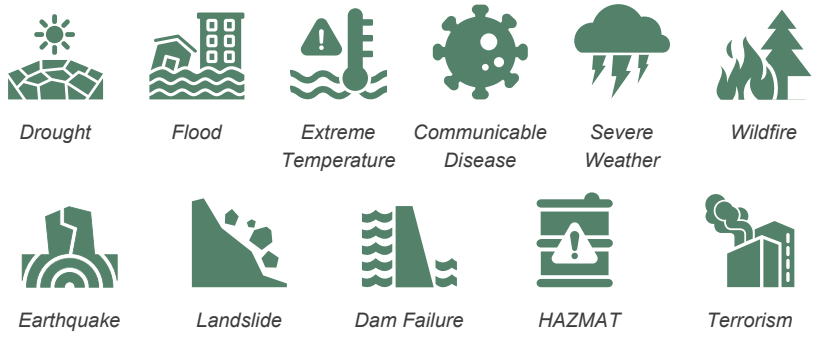
- Local Budget

BENEFITS

Plan integration will ensure that goals, actions, and priorities are consistent across different plans. In this action specifically, aligning and adopting the local hazard mitigation plan into the General Plan will reduce the burden of future disasters on the County and Cities of Hollister and San Juan Bautista.

This action supports mitigating risk to **all community lifelines**.

HAZARDS MITIGATED



PROJECT LEAD

- San Benito County Office of Emergency Services
- City of Hollister
- City of San Juan Bautista

PROJECT PARTNERS

- California Department of Forestry and Fire Protection Land Use Planning Program
- California Governor's Office of Emergency Services: Hazard Mitigation Division

TIMELINE

Timeline for implementation for this action will be **short-term**.

This action is already initiated by the City of Hollister as part of the planning process.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☐ Sunnyslope Water District
- ☐ San Benito County Water District

12 Mitigate flooding risk from the Pajaro River Flood Plain to San Benito County and participating jurisdictions.

IN PROGRESS | **MEDIUM PRIORITY**

ACTION DESCRIPTION

The Pajaro River Watershed Flood Prevention Authority actively assesses flooding risk and water management considerations across the region. The Authority produced the Pajaro River Watershed Integrated Regional Water Management Plan in 2019 to support risk mitigation and water management. This action will review risk reduction strategies identified in the Pajaro River Watershed Integrated Regional Water Management Plan that will reduce risk to the community and develop and prioritize projects to integrate into this mitigation plan.

HIGH COST

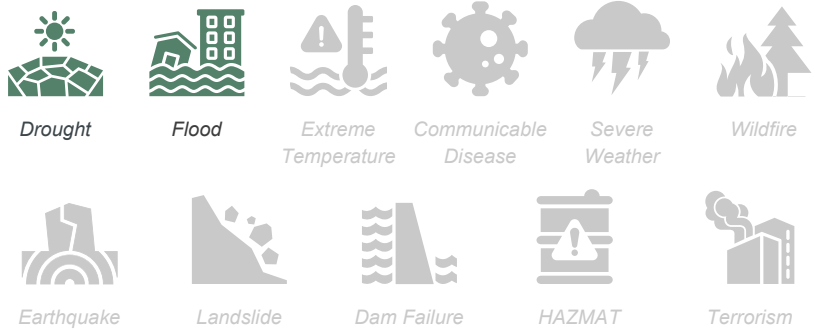
FUNDING SOURCES

- California Department of Water Resources Integrated Regional Water Management Grant Programs (California Department of Water Resources)
- Floodplain Management, Protection, and Risk Awareness Grant Program (California Department of Water Resources)
- Small Communities Flood Risk Reduction Program (California Department of Water Resources)

BENEFITS

Collaborating with the Pajaro River Watershed Flood Prevention Authority to mitigate risk to the community from the Pajaro River Watershed. Integration of the projects from the integrated regional water management plan with the hazard mitigation plan will allow for additional funding opportunities. This action supports mitigating risk to **all community lifelines**.

HAZARDS MITIGATED



PROJECT LEAD

- San Benito County Water District
- San Benito County Resource Management Agency

PROJECT PARTNERS

- Monterey County
- Santa Clara County
- Santa Cruz County
- Monterey County Water Resources Agency
- Santa Clara Valley Water District
- Santa Cruz County Flood Control
- Water Conservation District Zone 7
- Pajaro River Watershed Flood Prevention Authority

TIMELINE

Timeline for implementation for this action will be **short-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☐ Sunnyslope Water District
- ☒ San Benito County Water District

13 Apply for the National Flood Insurance Program's Community Rating System.

NOT STARTED | **LOW PRIORITY**

ACTION DESCRIPTION

The National Flood Insurance Program's Community Rating System is an incentive program that encourages communities to implement floodplain management practices that exceed the minimum requirements of the National Flood Insurance Program. The program offers discounted flood insurance premium rates to participating jurisdictions. In order to implement this action, the project lead will review the Community Rating System's Coordinator's Manual then develop a strategy for meeting program requirements and applying to the program.

MEDIUM COST

FUNDING SOURCES

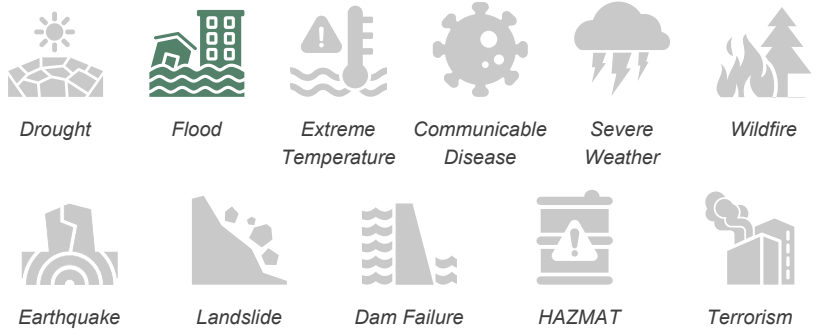
- Local budget (for the assessment)
- Various funding sources for projects required to meet Federal Emergency Management Agency requirements, including the Building Resilient Infrastructure and Communities and Flood Mitigation Assistance program

BENEFITS

Implementation of the Community Rating System will have two primary benefits to the community. First, the Community Rating System's requirements promote community-wide flood mitigation. Additionally, implementation of this action will also reduce the financial burden of flood insurance premiums across the community.

This action supports mitigating risk to the **Food, Water and Shelter** community lifeline.

HAZARDS MITIGATED



PROJECT LEAD

San Benito County Resource Management Agency

PROJECT PARTNERS

- San Benito County Office of Emergency Services
- City of Hollister
- City of San Juan Bautista

TIMELINE

Timeline for implementation for this action will be **medium-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☐ Sunnyslope Water District
- ☐ San Benito County Water District

14 Review San Benito County COVID-19 after action report to identify effective and appropriate communicable disease mitigation actions.

NOT STARTED | **MEDIUM PRIORITY**

ACTION DESCRIPTION

The ongoing COVID-19 pandemic continue to cause unprecidented impacts to the community. Capturing lessons learned via an after action reporting process will identify critical lessons learned for integration into this hazard mitigation plan. The timelines of the hazard mitigation planning and after action reporting processes did not allow for direct inclusion of recommendations from the after action report into the mitigation action plan, but the Plan will be updated accordingly with specific projects when the report becomes available.

LOW COST

FUNDING SOURCES

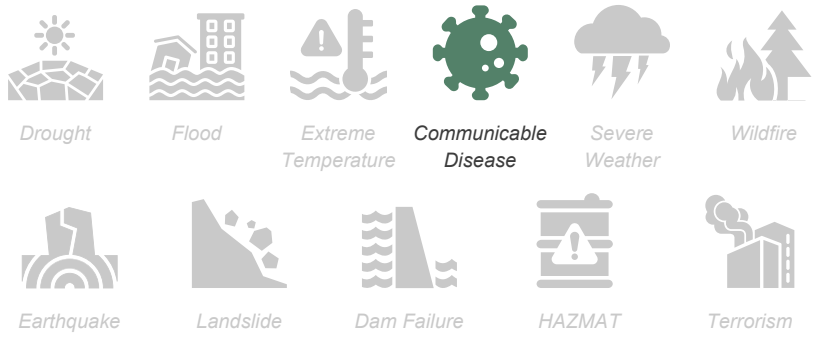
- California Health Center Security Grant Program (California Governor's Office of Emergency Services)
- Local Budget

BENEFITS

The impacts of the COVID-19 pandemic were unforeseen by the County. By capturing lessons learned via the after action report and prioritizing mitigation actions that can mitigate future risk, the County and participating jurisdictions will be better prepared and lesson the impacts to future communicable diseases on the community.

This action supports mitigating risk to **all community lifelines**.

HAZARDS MITIGATED



PROJECT LEAD

San Benito County Health and Human Services Agency

PROJECT PARTNERS

- San Benito County Office of Emergency Services
- City of Hollister
- City of San Juan Bautista
- San Benito County Water District
- Sunnyslope County Water District
- Hazel Hawkins Memorial Hospital
- Hollister Fire Department
- San Benito County Office of Education

TIMELINE

Timeline for implementation for this action will be **medium-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☒ Sunnyslope Water District
- ☒ San Benito County Water District

15a Evaluate and implement projects at critical facilities to mitigate against earthquakes.

NOT STARTED | **LOW PRIORITY**

ACTION DESCRIPTION

The Planning Team recognized that during a catastrophic earthquake event, it will be challenging to obtain resources and assistance to support operations, which is exacerbated by transportation and power disruption. This action focuses on understanding how an earthquake event and cascading impacts will affect new and existing buildings. The jurisdictions will evaluate critical facilities to determine which are best poised for mitigation activities, which may include:

- Conducting seismic retrofitting for critical local government facilities most at risk to earthquakes.
- Requiring bracing of generators, elevators, and other vital equipment in hospitals.

HIGH COST

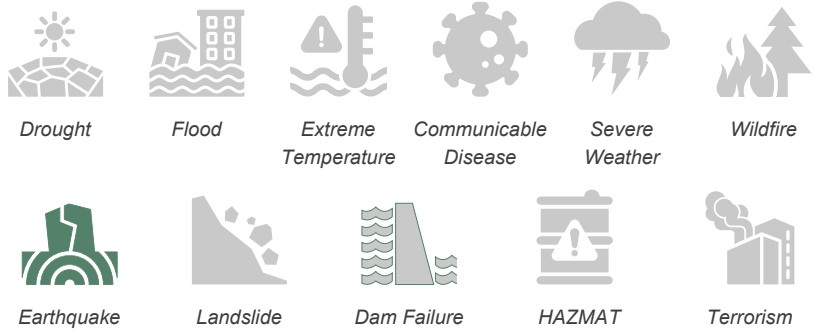
FUNDING SOURCES

- Local Budget
- Grants from the California Energy Commission
- Private Funding (e.g., Pacific Gas & Electric Better Together Resilient Communities Grant Program)
- Other State or Federal grants

BENEFITS

This action would support the County, Cities, and Water Districts by promoting self-sustaining practices to limit the reliance on outside support. This action will also promote the community's overall sustainability and resilience. This action supports mitigating risk to the **Energy** and **Transportation** community lifelines.

HAZARDS MITIGATED



PROJECT LEAD

- San Benito County Resource Management Agency
- Hollister Management Services
- Hollister Engineering
- San Juan Bautista Public Works Department

PROJECT PARTNERS

- San Benito County Office of Emergency Services
- City of Hollister
- City of San Juan Bautista
- San Benito County Water District
- Sunnyslope County Water District
- Pacific Gas and Electric Company

TIMELINE

Timeline for implementation for this action will be **short-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☒ Sunnyslope Water District
- ☒ San Benito County Water District

15b Evaluate and implement projects at critical facilities to mitigate against severe weather events.

NOT STARTED | **LOW PRIORITY**

ACTION DESCRIPTION

The Planning Team recognized that during a catastrophic severe weather event, it will be challenging to obtain resources and assistance to support operations, which is exacerbated by transportation and power disruption. This action focuses on understanding how an event and cascading impacts will affect new and existing buildings. The jurisdictions will evaluate critical facilities to determine which are best poised for mitigation activities, which may include:

- Retrofitting buildings with load-path connectors to strengthen the structural frames.
- Replacing existing non-ductile infrastructure with ductile infrastructure to reduce their exposure to hazardous events.
- Anchoring roof-mounted heating, ventilation, and air conditioning units

HIGH COST

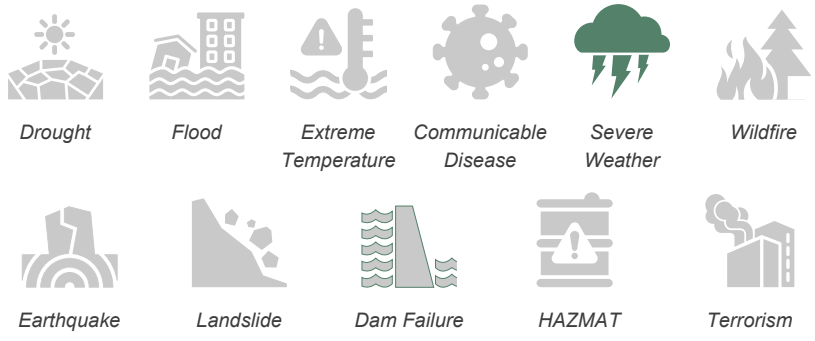
FUNDING SOURCES

- Local Budget
- Grants from the California Energy Commission
- Private Funding (e.g., Pacific Gas & Electric Better Together Resilient Communities Grant Program)
- Other State or Federal grants

BENEFITS

This action would support the County, Cities, and Water Districts by promoting self-sustaining practices to limit the reliance on outside support. This action will also promote the community's overall sustainability and resilience. This action supports mitigating risk to the **Energy** and **Transportation** community lifelines.

HAZARDS MITIGATED



PROJECT LEAD

- San Benito County Resource Management Agency
- Hollister Management Services
- Hollister Engineering
- San Juan Bautista Public Works Department

PROJECT PARTNERS

- San Benito County Office of Emergency Services
- City of Hollister
- City of San Juan Bautista
- San Benito County Water District
- Sunnyslope County Water District
- Pacific Gas and Electric Company

TIMELINE

Timeline for implementation for this action will be **short-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☒ Sunnyslope Water District
- ☒ San Benito County Water District

15c Evaluate and implement projects at critical facilities to mitigate against wildfires.

NOT STARTED | **LOW PRIORITY**

ACTION DESCRIPTION

The Planning Team recognized that during a catastrophic wildfire event, it will be challenging to obtain resources and assistance to support operations, which is exacerbated by transportation and power disruption. This action focuses on understanding how a wildfire event and cascading impacts will affect new and existing buildings. The jurisdictions will evaluate critical facilities to determine which are best poised for mitigation activities, which may include:

- Installing wall components that conform to ignitation-resistant construction standards
- Installing roof coverings, sheathing, flashing, skylights, roof and attic vents, eaves, and gutters that conform to ignition-resistant construction standards
- Purchasing and installing external water hydration systems and dedicated power sources.

HIGH COST

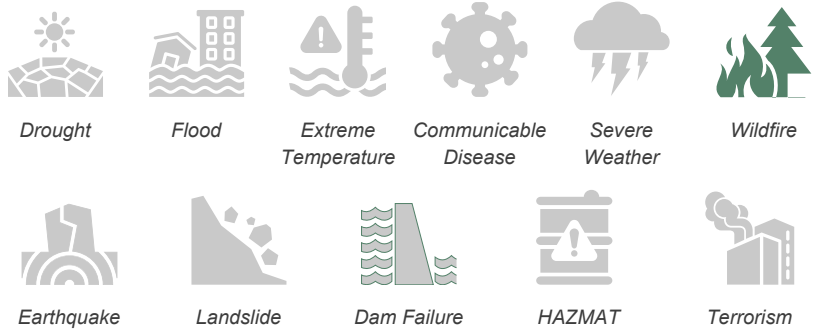
FUNDING SOURCES

- Local Budget
- Grants from the California Energy Commission
- Private Funding (e.g., Pacific Gas & Electric Better Together Resilient Communities Grant Program)
- Other State or Federal grants

BENEFITS

This action would support the County, Cities, and Water Districts by promoting self-sustaining practices to limit the reliance on outside support. This action will also promote the community's overall sustainability and resilience. This action supports mitigating risk to the **Energy** and **Transportation** community lifelines.

HAZARDS MITIGATED



PROJECT LEAD

- San Benito County Resource Management Agency
- Hollister Management Services
- Hollister Engineering
- San Juan Bautista Public Works Department

PROJECT PARTNERS

- San Benito County Office of Emergency Services
- City of Hollister
- City of San Juan Bautista
- San Benito County Water District
- Sunnyslope County Water District
- Pacific Gas and Electric Company

TIMELINE

Timeline for implementation for this action will be **short-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☒ Sunnyslope Water District
- ☒ San Benito County Water District

16 Create resilience hubs to support resilience across the community.

NOT STARTED | **LOW PRIORITY**

ACTION DESCRIPTION

The "resilience hub" is a community facility augmented to support community resilience. They provide an opportunity to promote emergency and climate preparedness and mitigation while supporting social equity and community development. This action will include evaluation of "resilience hub" locations and developing/enhancing selected locations to improve hub capacity. More information can be found at: http://resilience-hub.org/.

LOW COST

FUNDING SOURCES

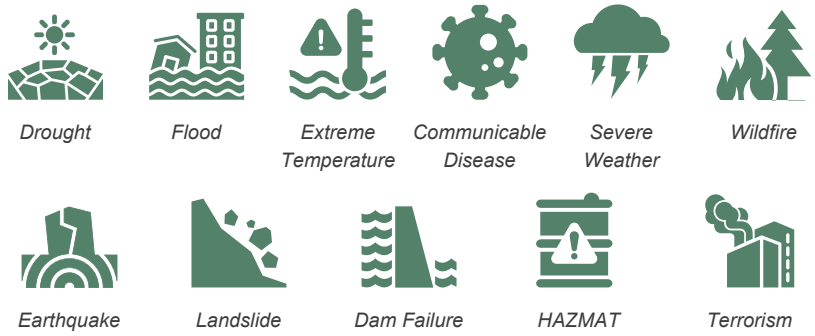
- Local Budget
- Private Funding (e.g., Pacific Gas & Electric Better Together Resilient Communities Grant Program)
- State Grant Programs
- Federal Grant Programs (e.g., the United States Department of Housing and Urban Development Community Development Block Grant – Disaster Recovery and the Federal Emergency Management Agency's Building Resilient Infrastructure and Communities)

BENEFITS

Implementing the resilience hub concept across the County will support community resilience. Resilience hubs will support integration of mitigation into other County operations and mitigate lifeline disruption. Resilience hubs will also support other preparedness and other mitigation strategies.

This action supports mitigating risk to **all community lifelines**.

HAZARDS MITIGATED



PROJECT LEAD

San Benito County Office of Emergency Services

PROJECT PARTNERS

- City of Hollister
- City of San Juan Bautista
- Urban Sustainability Directors Network
- California Governor's Office of Emergency Services: Hazard Mitigation Division

TIMELINE

Timeline for implementation for this action will be **long-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☐ Sunnyslope Water District
- ☐ San Benito County Water District

17 Educate residents and property owners about extreme temperature risks.

NOT STARTED | **LOW PRIORITY**

ACTION DESCRIPTION

This action will increase awareness of extreme temperature risk and safety of residents and educate property owners about risks associated with this hazard. In times of extreme cold, notifying residents that letting water drip from their faucets can prevent pipes from freezing and bursting. Property owners can take steps to insulate or locate pipes in areas of the home that are not susceptible to extreme changes in temperature. During extreme heat events residents can learn of ways to protect themselevs from heat related illnesses while property owners can actively mitigate water pipe leaks to conserve water.

LOW COST

FUNDING SOURCES

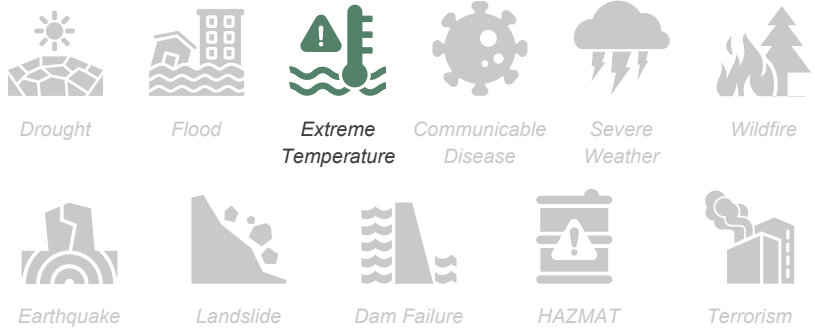
- Local Budget

BENEFITS

This action will reduce damage to infrastructure, the number of related illnesses, and the loss of life. Educating residents and property owners about associated risks during extreme temperature events will ensure these benefits come to fruition.

This action supports mitigating risk to the **Safety and Security**, **Food, Water, Shelter**, and **Health and Medical** community lifelines.

HAZARDS MITIGATED



PROJECT LEAD

San Benito County Office of Emergency Services

PROJECT PARTNERS

- San Benito County Water District
- City of Hollister
- City of San Juan Bautista
- Sunnyslope Water District

TIMELINE

Timeline for implementation for this action will be **medium-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☒ Sunnyslope Water District
- ☒ San Benito County Water District

18 Map and assess vulnerability to San Justo Dam and Leroy Anderson Dam.

NOT STARTED | **MEDIUM PRIORITY**

ACTION DESCRIPTION

The San Justo Dam in Hollister and the Leroy Anderson Dam in Morgan Hill have the potential to cause catastrophic damage to infrastructure and life. Mapping and assessing the County's and participating jurisdiction's vulnerability to potential dam failure, expanding upon the inunation maps, will create a situtational awareness of current capabilities of the County. The results of this assessment may aid in the development of evacuation routes, warning systems, strengthened land use controls, and regular monitoring of dam condition.

MEDIUM COST

FUNDING SOURCES

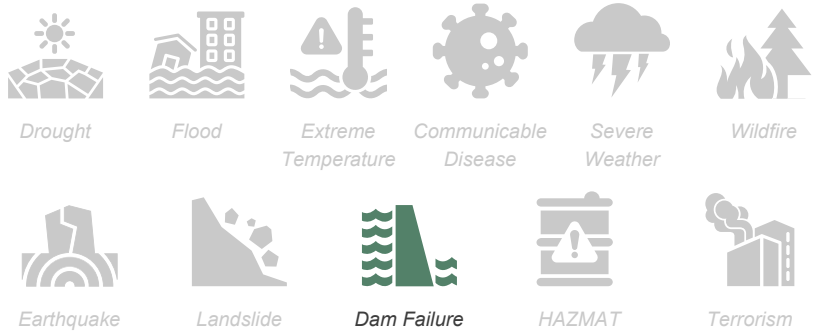
- Local Budget
- FEMA National Dam Safety Program

BENEFITS

This action will inform the Project Lead and Project Partners on the vulnerability of the County and participating jurisdictions in the event of a dam failure. The results of this vulnerability assessment may also result in the implementation of future mitigaiton actions.

This action supports mitigating risk to the **Safety and Security**, **Food, Water, Shelter**, **Health and Medical**, and **Transportation** community lifelines.

HAZARDS MITIGATED



PROJECT LEAD

San Benito County Office of Emergency Services

PROJECT PARTNERS

- San Benito County Water District
- City of Hollister
- City of San Juan Bautista
- Sunnyslope Water District
- Santa Clara County Office of Emergency Management
- Santa Clara Valley Water District
- California Department of Water Resources, Division of Safety of Dams

TIMELINE

Timeline for implementation for this action will be **long-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☒ Sunnyslope Water District
- ☒ San Benito County Water District

19 Protect buildings and infrastructure from severe weather damage.

NOT STARTED | **MEDIUM PRIORITY**

ACTION DESCRIPTION

Damage to buildings and other infrastructure from hail, high winds, and tornadoes can impact critical facilities and the socioeconomic well-being of residents. This action focuses on adopting and enforcing building codes and site and building design standards to reduce the negative impacts of severe weather. Ensuring that buildings and infrastructure can withstand the effects of hail, high winds, and tornadoes will increase the resilience of the County and participating jurisdictions.

HIGH COST

FUNDING SOURCES

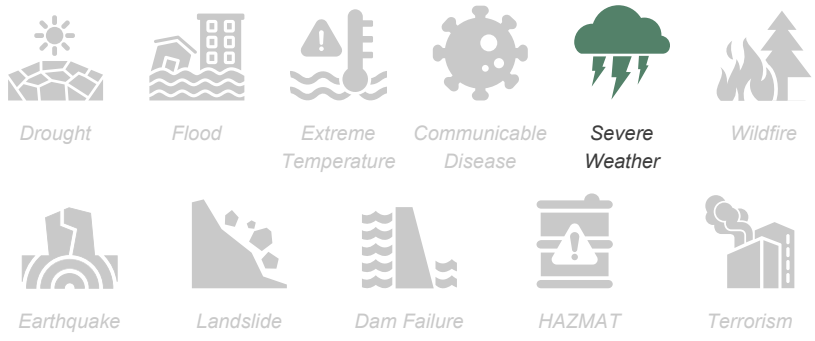
- Local Budget
- State Grant Programs (e.g., California Department of Housing and Community Development – Community Development Block Grant)
- FEMA Building Resilient Infrastructure and Communities Grant

BENEFITS

This action will reduce damage to buildings and infrastructure. Developing and enforcing buidling codes and site and building design standards will increase the resilience of these structures.

This action supports mitigating risk to the **Food, Water, Shelter**, **Energy**, **Communications**, and **Hazardous Materials** community lifelines.

HAZARDS MITIGATED



PROJECT LEAD

San Benito County Resource Management Agency, Building & Code Enforcement Division

PROJECT PARTNERS

- San Benito County Water District
- City of Hollister
- City of San Juan Bautista
- Sunnyslope Water District
- San Benito County Office of Emergency Services

TIMELINE

Timeline for implementation for this action will be **long-term**.

JURISDICTIONS IMPACTED

- ☒ San Benito County
- ☒ City of Hollister
- ☒ City of San Juan Bautista
- ☒ Sunnyslope Water District
- ☒ San Benito County Water District

7.5 Implementing the Mitigation Strategy

The San Benito County Mitigation Program consists of implementing the hazard mitigation projects outlined in this plan, building hazard mitigation capabilities over time, and updating the hazard mitigation plan every five years. The Planning Committee will implement the Mitigation Program by completing mitigation projects and meeting regularly to maintain the Plan according to the five-year cycle outlined.

7.5.1 Plan Adoption

The County and participating jurisdictions adopt the Plan to demonstrate their intent to implement the Plan, in accordance with regulations outlined in the Stafford Act and Title 44 CFR § 201.6. Each participating jurisdiction will provide documentation to Cal OES and FEMA (e.g., a resolution) demonstrating that the Plan was formally adopted by its governing body.

Table 43: Plan Adoption Procedures

RESPONSIBILITY	FREQUENCY
Planning Committee representatives, including: • San Benito County Emergency Services Manager, Kris Mangano • Hollister City Manager • San Juan Bautista City Manager • Sunnyslope Water District General Manager • San Benito Water District Deputy District Engineer	Once per planning cycle[142] **SUPPORT TOOLS** **Appendix E. Mitigation Strategy Implementation** (Sample Adoption Resolution)

7.5.2 Plan Maintenance

The plan maintenance process is established to understand the effectiveness of plan implementation and make the Plan update process more efficient and effective. This process also allows the Planning Committee to maintain momentum to promote implementation and pivot to make changes if challenges are identified.

7.5.2.1 MONITORING

Plan monitoring includes tracking and reporting on mitigation project completion over the five-year San Benito County Mitigation Program cycle. San Benito County OES will be primarily responsible for managing and implementing plan monitoring procedures on a bi-annual basis. San Benito will be responsible for monitoring the plan annually for updates to goals, objectives, and action items. If needed, participants will coordinate through the County's HMP Planning

[142] All participating jurisdictions need to adopt the Plan after Approval Pending Adoption is received from FEMA to be considered as approved.

Team to integrate these updates into the Plan. Kris Mangano from San Benito County OES will be responsible for monitoring the overall Planfor updates on an annual basis. The Planning Team will reconvene the Hazard Mitigation Planning Committee as needed to make these updates.

Table 44 identifies the details of the plan monitoring procedures for San Benito County and all participating jurisdictions.

Table 44: Plan Monitoring Procedures

RESPONSIBILITY	FREQUENCY
• Lead: San Benito County OES, Kris Mangano • Support: Planning Committee representatives • Support: Representatives from Lead Agencies identified in the MAP	Bi-Annually
	SUPPORT TOOLS
	Appendix E. Mitigation Strategy Implementation (Plan Maintenance Tool, Progress Reporting Tool)

7.5.2.2 EVALUATING

Plan evaluation assesses how effectively the Plan has been supporting the San Benito County Mitigation Program. San Benito County OES will be primarily responsible for managing and implementing plan evaluation procedures on a bi-annual basis. The Plan will be evaluated by the HMP Planning Team at least every three years to determine the effectiveness of programs, and to reflect changes in land development or programs that may affect mitigation priorities. The Plan will also be re-evaluated by County and participating jurisdictional department heads of their selected representatives based on the initial plan criteria used to draft goals, objectives, and action items for this plan. Action items will be reviewed to determine their relevance to changing situations in the county, as well as changes in state or federal regulations and policies. The county will conduct an assessment of each portion of the plan to determine if this information should be updated or modified given any new available data. Plan will be evaluated via qualitative discussion across the Planning Team about how the plan meets the jurisdictions' goals, utilizing the tool in **Appendix E. Mitigation Strategy Implementation** to guide the discussion. Kris Mangano from San Benito County OES will be responsible for monitoring the Plan evaluation process. Table 45 identifies the details of the plan evaluation procedures for San Benito County and all participating jurisdictions.

Table 45: Plan Evaluation Procedures

RESPONSIBILITY	FREQUENCY
• Lead: San Benito County OES. Kris Mangano • Support: Planning Committee representatives	Bi-Annually
	SUPPORT TOOLS
	Appendix E. Mitigation Strategy Implementation (Plan Maintenance Tool)

7.5.2.3 UPDATING

Plan updating includes reviewing and revising the Plan's content to reflect changes in development, progress in local mitigation efforts, changes in priorities, and new/changing hazard risks. San Benito County OES will organize other jurisdictional and community representatives to review the previous planning process and establish the plan update process. All jurisdictional participants will be responsible for providing the committee chairperson with department-level updates to the plan when/if necessary. Jurisdictions will utilize progress tracking tools identified in **Appendix E. Mitigation Strategy Implementation** to guide plan development as well as address any changes to the mitigation strategy of the County and participating jurisdictions. Every five years the updated plan will be submitted to the State of California and FEMA for review. Upon adoption of the plan, the jurisdictional participants can use the plan as a baseline of information on the natural impact of the region. Kris Mangano from San Benito County OES will be responsible for overseeing the process for Plan updates. Table 43 identifies the details of the plan updating procedures for San Benito County and all participating jurisdictions.

Table 46: Plan Updating Procedures

RESPONSIBILITY	FREQUENCY
• Lead: San Benito County OES, Kris Mangano • Support: Planning Committee representatives and other jurisdiction representatives • Support: Regional stakeholders, non-profit and community organizations, and community members	Once every five years.[143]
	SUPPORT TOOLS
	Appendix E. Mitigation Strategy Implementation

7.5.3 Project Prioritization

Members of the Planning Committee will meet annually to prioritize projects. The Planning Committee recognizes that the needs and priorities of the community will influence how projects are prioritized. Factors like the feasibility of the action, its value, and considerations for next steps will help determine these priorities. Jurisdictions may include additional factors to help further refine the prioritization (Figure 38).

[143] To maintain compliance with the Stafford Act, the Plan needs to undergo a comprehensive update every five years. However, the Plan should also be updated to account for major hazard events or changes in community priorities.

Figure 38: Action Prioritization Considerations

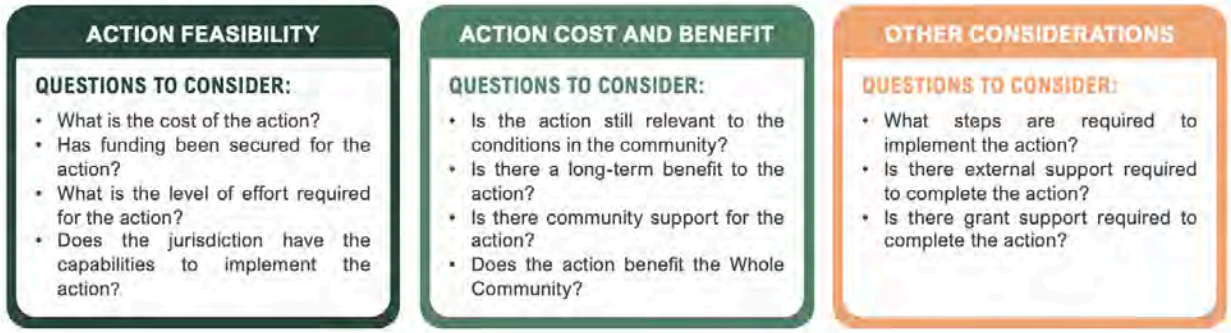


Table 47 identifies the details of the project prioritization procedures for San Benito County and all participating jurisdictions.

Table 47: Project Prioritization Procedures

RESPONSIBILITY	FREQUENCY
Planning Committee representatives	Ongoing
	SUPPORT TOOLS
	N/A

7.5.4 Project Implementation

Planning Committee members will implement the mitigation actions contained in this Plan to reduce San Benito County's long-term risk to natural hazards. The project implementation process varies based on the funding source, existing priorities of the community, and type of project identified. Figure 39 summarizes the project implementation process.

Figure 39: Action Prioritization Considerations



Table 48 identifies the details of the project implementation procedures for San Benito County and all participating jurisdictions.

Table 48: Project Implementation Procedures

RESPONSIBILITY	FREQUENCY
Planning Committee representatives	Ongoing
	SUPPORT TOOLS
	Appendix E. Mitigation Strategy Implementation (Project Funding Support Tool)

7.5.5 Public Engagement

Public engagement will be conducted regularly to support the San Benito County Mitigation Program. This engagement will ensure the Plan is consistently addressing the needs of stakeholders and community members who are experiencing the impacts of natural hazards. The public will be engaged on an ongoing basis by the Planning Committee through an annual public survey regarding hazards and by integrating hazard mitigation considerations and updates into existing public meetings (e.g., Board of Supervisors Meetings).

Table 49 identifies the details of the public engagement procedures for San Benito County and all participating jurisdictions.

Table 49: Public Engagement Procedures

RESPONSIBILITY	FREQUENCY
• Lead: San Benito County OES • Support: Planning Committee representatives and other jurisdiction representatives	Ongoing
	SUPPORT TOOLS
	N/A

7.5.6 Plan Integration

San Benito County and participating jurisdictions will use voluntary and required updates to planning documents as opportunities to integrate relevant information from this Plan into other local planning mechanisms. Mechanism for accomplishing this process of integration may include, but are not limited to:

- Integration by the County and participating jurisdictions into the general plan safety element in accordance with provision of Assembly Bill 2140, General Plans: Safety Element (Hancock, 2006) (Gov. Code § 65302.6);
- Develop and update Capital Improvement Plans using the results of the HMP.
- Identification of mitigation projects in the participating jurisdictions' strategic plans, budgets, and capital improvement plans;
- Utilization of risk assessment data to inform land use decisions; and
- Aligning plan priorities to ensure regional economic development has a hazard-aware approach.

Table 50 identifies the details of the plan integration procedures for San Benito County and all participating jurisdictions.

Table 50: Plan Integration Procedures

RESPONSIBILITY	FREQUENCY
• Planning Committee representatives	Ongoing
	SUPPORT TOOLS

• Other representatives from participating jurisdictions • Regional stakeholders	• FEMA's guide "Plan Integration: Linking Local Planning Efforts" • Cal OES Local Mitigation Program • Governor's Office of Planning and Research General Plan Guidelines and Technical Advisories

Appendices

Appendix A. Acronyms

Acronym	Definition
AFN	Access and Functional Needs
BLM	U.S. Bureau of Land Management
CAL FIRE	California Department of Forestry and Fire Protection
Cal OES	California Governor's Office of Emergency Services
Caltrans	California Department of Transportation
CCCE	Central Coast Community Energy
CDBG	Community Development Block Grant
CDC	Centers for Disease Control and Prevention
CFR	Code of Federal Regulations
CGS	California Geological Survey
COVID-19	Coronavirus Disease 2019
CSWD	Community Services and Workforce Development
CVH	Hollister Municipal Airport
EF Scale	Enhanced Fujita Scale
EOC	Emergency Operations Center
EPA	U.S. Environmental Protection Agency
ESRI	Environmental Systems Research Institute
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
GHG	Greenhouse Gas
GIS	Geographic Information System
HAZMAT	Hazardous Materials
HHSA	Health & Human Services Agency
HMP	Hazard Mitigation Plan
HUD	U.S. Department of Housing and Urban Development
MAP	Mitigation Action Plan
MERS	Middle East Respiratory Syndrome
MM	Modified Mercalli
NCEI	National Centers for Environmental Information
NFIP	National Flood Insurance Program

Acronym	Definition
NOAA	National Oceanic and Atmospheric Administration
NWS	National Weather Service
OES	Office of Emergency Services
PG&E	Pacific Gas and Electric Company
RACES	Radio Amateur Civil Emergency Preparedness Service
RMA	Resource Management Agency
SAR	Search and Rescue
SARS	Severe Acute Respiratory Syndrome
SBCARA	San Benito County Amateur Radio Association
SBCWD	San Benito County Water District
SNAP	Supplemental Nutrition Assistance Program
SR	State Route
SSWD	Sunnyslope County Water District
SVI	Social Vulnerability Index
USGS	United States Geological Survey
WUI	Wildfire Urban Interface

Appendix B. Risk Assessment

Recent Hazard Occurrences

RECENT OCCURRENCES OF WILDFIRE

The table below outlines historical wildfire occurrences in San Benito County from 2011-2020.[144]

Date	Start Date	County	Acres Burned
8/6/2011	Rosa Fire	San Benito	73
8/6/2011	Barn Fire	San Benito and Monterey	36
8/11/2012	Lonoak Fire	San Benito	90
5/3/2013	Tres Pinos Fire	San Benito	354
7/7/2014	Interlake Fire	San Benito and San Luis Obispo	47
7/20/2015	Betabel Fire	San Benito	25
10/12/2015	Cienega Fire	San Benito	670
6/3/2016	Hidden Fire	San Benito	30
6/12/2016	Old Fire	San Benito	83
7/9/2016	Mercury Fire	San Benito	95
5/22/2017	Bitterwater Fire	San Benito	21
7/4/2017	Valley Fire	San Benito	34
11/25/2017	Bitterwater Fire	San Benito	47
6/3/2018	Fairview Fire	San Benito	35
6/4/2018	Airline Fire	San Benito	1314
6/4/2018	Eastern Fire	San Benito	513
6/4/2018	Panoche Fire	San Benito	64
6/12/2018	Beaver Fire	San Benito	215
7/11/2018	Panoche Fire	San Benito	278
7/12/2018	Idria Fire	San Benito	116
7/25/2018	Hidden Fire	San Benito	39

[144] CAL FIRE. “Incident Database.” https://www.fire.ca.gov/incidents/IncidentSearch?q=san+benito+county.

Date	Start Date	County	Acres Burned
6/26/2019	Lonoak Fire	Monterey	2546
9/2/2019	Antelope Fire	San Benito	167
9/4/2019	Foster Fire	San Benito	17
6/16/2020	Bitter Fire	San Benito	895
7/15/2020	Coyote Fire	San Benito	1508

RECENT OCCURRENCES OF SEVERE WEATHER

The table below outlines historical severe weather occurrences in San Benito County from 2011-2020.[145]

Date	Event Type	Zone	Property Damage	Crop Damage
1/23/2012	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	$11,000	0
4/8/2013	High Wind	Mountains of San Benito County and Interior Monterey County Including Pinnacles National Monument (Zone)	0	0
4/8/2013	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	$1,000	0
10/27/2013	High Wind	Mountains of San Benito County and Interior Monterey County Including Pinnacles National Park (Zone)	0	0
2/28/2014	High Wind	Mountains of San Benito County and Interior Monterey County Including Pinnacles National Park (Zone)	0	0
2/28/2014	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	$2,500	0
2/9/2015	Heavy Rain	San Benito Co.	0	0
1/6/2016	Tornado	San Benito Co.	0	0
1/6/2016	Tornado	San Benito Co.	0	$75,000
2/17/2017	High Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
2/17/2017	High Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
2/17/2017	High Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0

[145] NCEI. 2021. "Storm Events Database." NOAA. https://www.ncdc.noaa.gov/stormevents.

Date	Event Type	Zone	Property Damage	Crop Damage
2/17/2017	High Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
2/17/2017	High Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
2/20/2017	High Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
2/20/2017	High Wind	Mountains of San Benito County and Interior Monterey County Including Pinnacles National Park (Zone)	0	0
2/20/2017	High Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
3/22/2017	Hail	San Benito Co.	0	0
4/6/2017	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
3/20/2018	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
4/12/2018	Hail	San Benito Co.	0	0
1/15/2019	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
1/16/2019	High Wind	Mountains of San Benito County and Interior Monterey County Including Pinnacles National Park (Zone)	0	0
1/16/2019	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
1/16/2019	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
1/17/2019	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
2/2/2019	High Wind	Mountains of San Benito County And Interior Monterey County Including Pinnacles National Park (Zone)	0	0
2/2/2019	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
2/2/2019	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
2/13/2019	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
2/13/2019	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
2/13/2019	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0

Date	Event Type	Zone	Property Damage	Crop Damage
2/13/2019	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
2/13/2019	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
2/14/2019	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
11/26/2019	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
11/26/2019	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
11/26/2019	Strong Wind	Mountains of San Benito County and Interior Monterey County Including Pinnacles National Park (Zone)	0	0
11/29/2019	Heavy Rain	San Benito Co.	0	0
11/30/2019	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
11/30/2019	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
12/1/2019	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
12/2/2019	Strong Wind	Mountains of San Benito County and Interior Monterey County Including Pinnacles National Park (Zone)	0	0
12/6/2019	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
12/22/2019	High Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
12/22/2019	Strong Wind	Mountains of San Benito County and Interior Monterey County Including Pinnacles National Park (Zone)	0	0
11/8/2020	Strong Wind	Northern Salinas Valley / Hollister Valley / Carmel Valley (Zone)	0	0
11/8/2020	Strong Wind	Mountains of San Benito County and Interior Monterey County Including Pinnacles National Park (Zone)	0	0

Hazards Excluded from the San Benito Multi-Jurisdictional HMP

The table below identifies the hazards from the 2018 State of California HMP that were excluded from the San Benito County HMP. The reason for exclusion is additionally identified for each hazard.

Hazard	Reason for Exclusion
Climate and Weather Hazards	
Agricultural and Silvicultural Pests and Disease	Hazard is not expected to greatly impact San Benito County.
Air Pollution	Hazard is not expected to greatly impact San Benito County.
Aquatic Invasive Species	Hazard is not applicable to the San Benito County topography or geography.
Avalanches	Hazard is not applicable to the San Benito County topography or geography.
Energy Shortage and Energy Resiliency	Hazard is considered in the Lifeline Vulnerability Assessment.
Levee Failure	Hazard is considered as part of the Dam Failure hazard profile.
Sea Level Rise, Coastal Flooding, and Coastal Erosion	Hazard is not applicable to the San Benito County topography or geography.
Tree Mortality	Hazard is not expected to greatly impact San Benito County.
Tsunami and Seiche	Hazard is not applicable to the San Benito County topography or geography.
Urban Fire	Hazard is considered in the Wildfire hazard profile.
Geological Hazards	
Volcano	Hazard is not applicable to the San Benito County topography or geography.
Technological Hazards	
Natural Gas Pipeline Hazards	Hazard is considered in the Lifeline Vulnerability Assessment.
Oil Spills	Hazard is considered as part of the HAZMAT Incident hazard profile.
Radiological Accidents	Hazard is considered as part of the HAZMAT Incident hazard profile.
Train Accidents Resulting in Explosions or Toxic Releases	Hazard is not applicable to the San Benito County topography or geography.
Well Stimulation and Hydraulic Fracturing Hazards	Hazard is not expected to greatly impact San Benito County.
Threat and Disturbance Hazards	
Cyber Threats	Hazard is not expected to greatly impact San Benito County.
Civil Disorder	Hazard is not expected to greatly impact San Benito County.

Hazus Risk Reports

The following reports were developed to support the Risk Assessment and Vulnerability Assessment of the San Benito County HMP. This section includes the following:

- Hazus: Earthquake Global Risk Report
- Hazus: Flood Global Risk Report – 100YR
- Hazus: Flood Global Risk Report – 500YR

Hazus: Earthquake Global Risk Report

Region Name: SBCo_EQ

Earthquake Scenario: M6.9-Calaveras: CS+CE v14

Print Date: February 09, 2021

Disclaimer:

This version of Hazus utilizes 2010 Census Data.

Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific earthquake. These results can be improved by using enhanced inventory, geotechnical, and observed ground motion data.

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General Description of the Region

Hazus-MH is a regional earthquake loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences. The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The earthquake loss estimates provided in this report was based on a region that includes 1 county(ies) from the following state(s):

California

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is 1,390.11 square miles and contains 11 census tracts. There are over 16 thousand households in the region which has a total population of 55,269 people (2010 Census Bureau data). The distribution of population by Total Region and County is provided in Appendix B.

There are an estimated 17 thousand buildings in the region with a total building replacement value (excluding contents) of 6,771 (millions of dollars). Approximately 92.00 % of the buildings (and 83.00% of the building value) are associated with residential housing.

The replacement value of the transportation and utility lifeline systems is estimated to be 1,283 and 995 (millions of dollars) , respectively.

Building and Lifeline Inventory

Building Inventory

Hazus estimates that there are 17 thousand buildings in the region which have an aggregate total replacement value of 6,771 (millions of dollars) . Appendix B provides a general distribution of the building value by Total Region and County.

In terms of building construction types found in the region, wood frame construction makes up 87% of the building inventory. The remaining percentage is distributed between the other general building types.

Critical Facility Inventory

Hazus breaks critical facilities into two (2) groups: essential facilities and high potential loss facilities (HPL). Essential facilities include hospitals, medical clinics, schools, fire stations, police stations and emergency operations facilities. High potential loss facilities include dams, levees, military installations, nuclear power plants and hazardous material sites.

For essential facilities, there are 2 hospitals in the region with a total bed capacity of 181 beds. There are 32 schools, 8 fire stations, 2 police stations and 1 emergency operation facilities. With respect to high potential loss facilities (HPL), there are no dams identified within the inventory. The inventory also includes 12 hazardous material sites, no military installations and no nuclear power plants.

Transportation and Utility Lifeline Inventory

Within Hazus, the lifeline inventory is divided between transportation and utility lifeline systems. There are seven (7) transportation systems that include highways, railways, light rail, bus, ports, ferry and airports. There are six (6) utility systems that include potable water, wastewater, natural gas, crude & refined oil, electric power and communications. The lifeline inventory data are provided in Tables 1 and 2.

The total value of the lifeline inventory is over 2,278.00 (millions of dollars). This inventory includes over 134.22 miles of highways, 78 bridges, 6,219.30 miles of pipes.

Table 1: Transportation System Lifeline Inventory

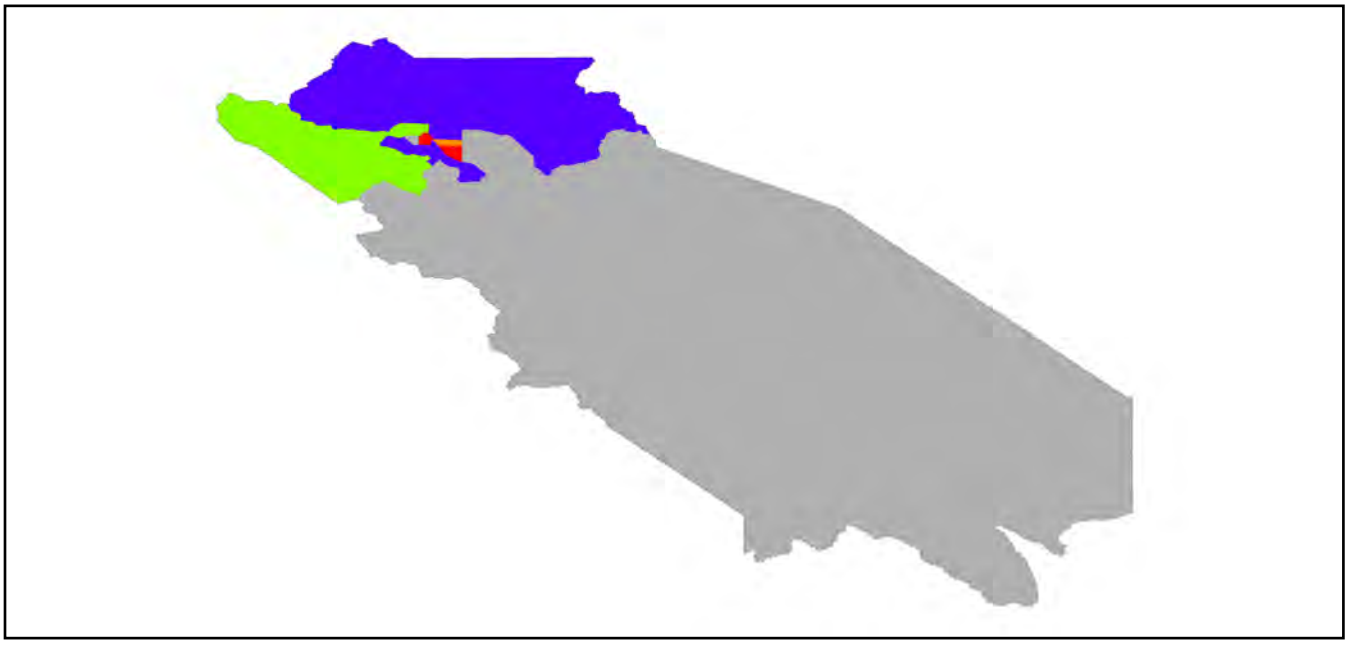
System	Component	# Locations/ # Segments	Replacement value (millions of dollars)
Highway	Bridges	78	192.8963
	Segments	85	855.6704
	Tunnels	0	0.0000
		Subtotal	**1048.5667**
Railways	Bridges	6	34.3241
	Facilities	0	0.0000
	Segments	21	39.4554
	Tunnels	0	0.0000
		Subtotal	**73.7795**
Light Rail	Bridges	0	0.0000
	Facilities	0	0.0000
	Segments	0	0.0000
	Tunnels	0	0.0000
		Subtotal	**0.0000**
Bus	Facilities	0	0.0000
		Subtotal	**0.0000**
Ferry	Facilities	0	0.0000
		Subtotal	**0.0000**
Port	Facilities	0	0.0000
		Subtotal	**0.0000**
Airport	Facilities	2	11.4413
	Runways	4	149.9964
		Subtotal	**161.4377**
		Total	**1,283.80**

Table 2: Utility System Lifeline Inventory

System	Component	# Locations / Segments	Replacement value (millions of dollars)
Potable Water	Distribution Lines	NA	123.6291
	Facilities	0	0.0000
	Pipelines	0	0.0000
		Subtotal	**123.6291**
Waste Water	Distribution Lines	NA	74.1775
	Facilities	4	654.4468
	Pipelines	0	0.0000
		Subtotal	**728.6243**
Natural Gas	Distribution Lines	NA	49.4516
	Facilities	0	0.0000
	Pipelines	15	93.4112
		Subtotal	**142.8628**
Oil Systems	Facilities	0	0.0000
	Pipelines	0	0.0000
		Subtotal	**0.0000**
Electrical Power	Facilities	0	0.0000
		Subtotal	**0.0000**
Communication	Facilities	4	0.4720
		Subtotal	**0.4720**
		Total	**995.60**

Earthquake Scenario

Hazus uses the following set of information to define the earthquake parameters used for the earthquake loss estimate provided in this report.



Scenario Name	M6.9-Calaveras: CS+CE v14
Type of Earthquake	
Fault Name	NA
Historical Epicenter ID #	NA
Probabilistic Return Period	NA
Longitude of Epicenter	0.00
Latitude of Epicenter	0.00
Earthquake Magnitude	6.94
Depth (km)	0.00
Rupture Length (Km)	0.00
Rupture Orientation (degrees)	0.00
Attenuation Function	

Direct Earthquake Damage

Building Damage

Hazus estimates that about 4,982 buildings will be at least moderately damaged. This is over 29.00 % of the buildings in the region. There are an estimated 371 buildings that will be damaged beyond repair. The definition of the 'damage states' is provided in Volume 1: Chapter 5 of the Hazus technical manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 below summarizes the expected damage by general building type.

Damage Categories by General Occupancy Type

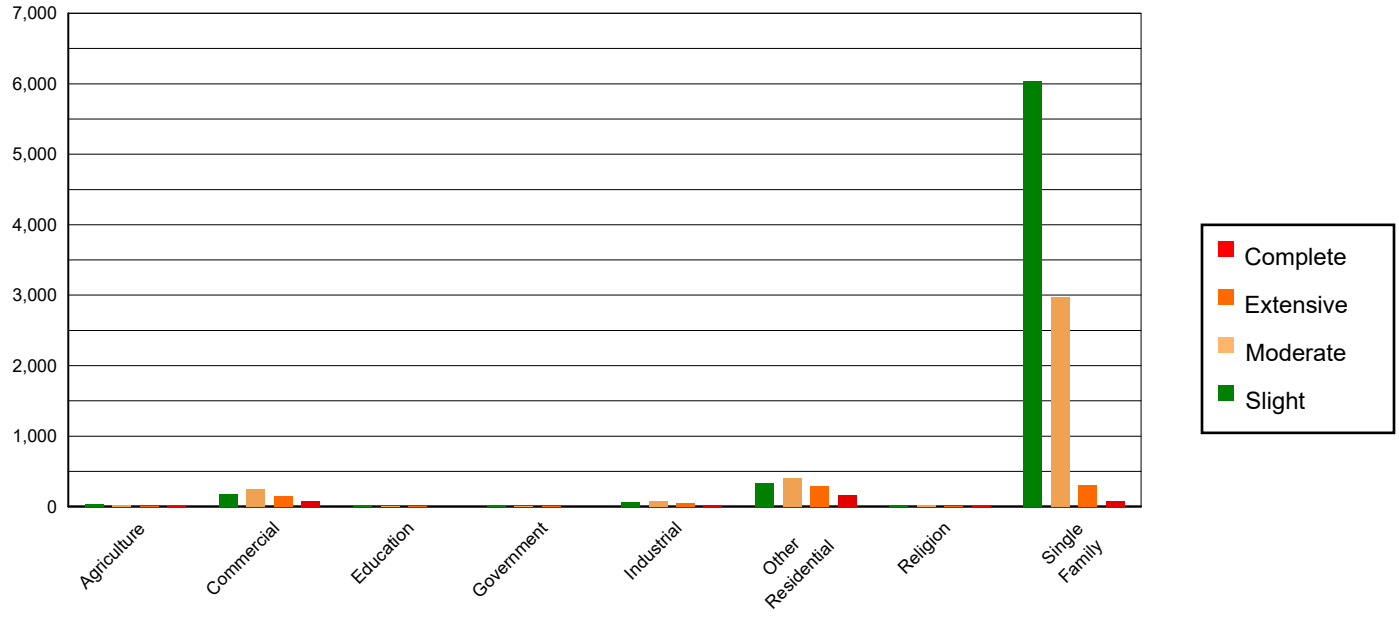


Table 3: Expected Building Damage by Occupancy

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Agriculture	42.60	0.74	31.50	0.47	25.90	0.69	10.90	1.30	5.11	1.37
Commercial	179.26	3.13	183.85	2.75	249.27	6.61	156.23	18.60	83.39	22.43
Education	12.54	0.22	10.49	0.16	9.17	0.24	4.10	0.49	1.70	0.46
Government	7.87	0.14	6.01	0.09	6.61	0.18	4.14	0.49	2.38	0.64
Industrial	67.43	1.18	59.45	0.89	79.36	2.10	46.72	5.56	24.04	6.47
Other Residential	230.76	4.03	339.55	5.08	398.67	10.57	296.33	35.28	164.69	44.30
Religion	18.11	0.32	18.39	0.28	20.15	0.53	12.46	1.48	6.89	1.85
Single Family	5169.13	90.25	6034.02	90.29	2981.26	79.07	309.00	36.79	83.60	22.49
Total	**5,728**		**6,683**		**3,770**		**840**		**372**	

Table 4: Expected Building Damage by Building Type (All Design Levels)

	None		Slight		Moderate		Extensive		Complete	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Wood	5362.84	93.63	6311.03	94.43	3123.00	82.83	321.53	38.28	95.02	25.56
Steel	56.59	0.99	50.59	0.76	93.04	2.47	72.01	8.57	38.78	10.43
Concrete	55.89	0.98	60.25	0.90	67.40	1.79	45.33	5.40	25.62	6.89
Precast	51.22	0.89	49.67	0.74	80.13	2.13	48.40	5.76	22.76	6.12
RM	133.90	2.34	89.49	1.34	129.69	3.44	78.63	9.36	26.46	7.12
URM	10.75	0.19	13.36	0.20	22.03	0.58	16.37	1.95	17.05	4.59
MH	56.51	0.99	108.87	1.63	255.10	6.77	257.61	30.67	146.10	39.30
Total	**5,728**		**6,683**		**3,770**		**840**		**372**	

*Note:

RM Reinforced Masonry
URM Unreinforced Masonry
MH Manufactured Housing

Essential Facility Damage

Before the earthquake, the region had 181 hospital beds available for use. On the day of the earthquake, the model estimates that only 60 hospital beds (33.00%) are available for use by patients already in the hospital and those injured by the earthquake. After one week, 79.00% of the beds will be back in service. By 30 days, 98.00% will be operational.

Table 5: Expected Damage to Essential Facilities

Classification	Total	# Facilities		
		At Least Moderate Damage > 50%	Complete Damage > 50%	With Functionality > 50% on day 1
Hospitals	2	0	0	0
Schools	32	7	0	5
EOCs	1	1	0	0
PoliceStations	2	1	0	0
FireStations	8	1	0	3

Transportation Lifeline Damage

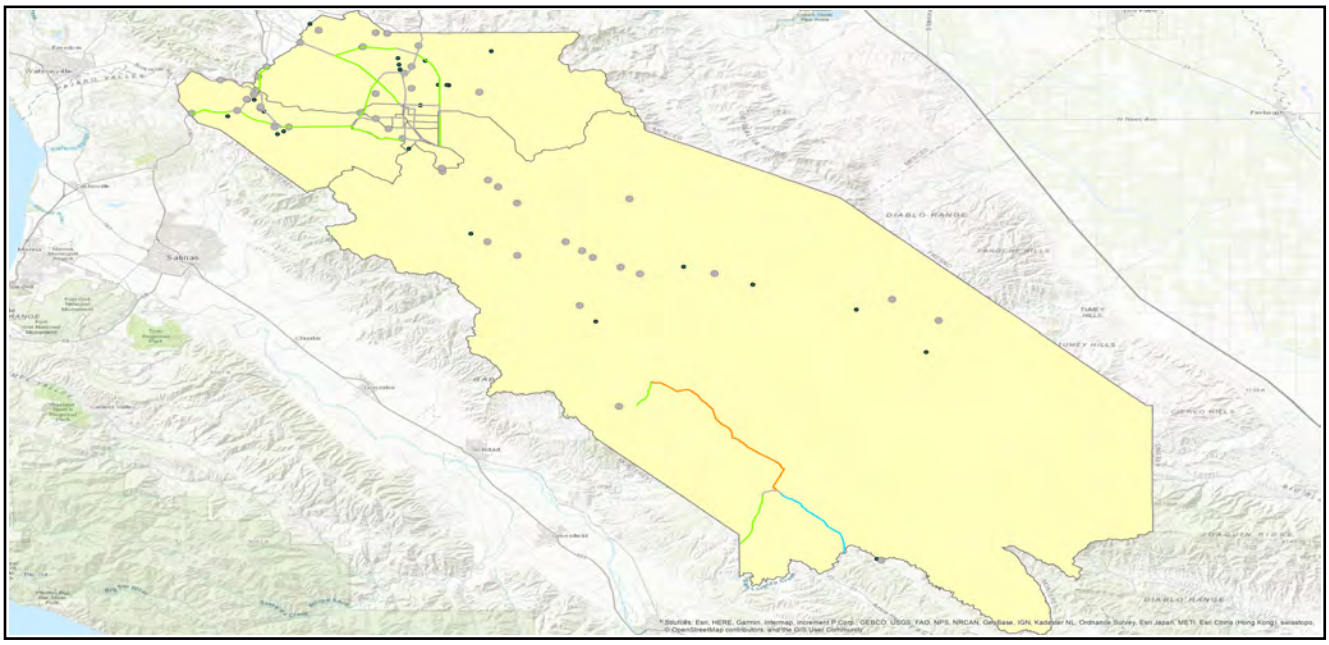


Table 6: Expected Damage to the Transportation Systems

System	Component		Number of Locations			
		Locations/ Segments	With at Least Mod. Damage	With Complete Damage	With Functionality > 50 %	
					After Day 1	After Day 7
Highway	Segments	85	0	0	85	85
	Bridges	78	1	0	77	77
	Tunnels	0	0	0	0	0
Railways	Segments	21	0	0	21	21
	Bridges	6	0	0	6	6
	Tunnels	0	0	0	0	0
	Facilities	0	0	0	0	0
Light Rail	Segments	0	0	0	0	0
	Bridges	0	0	0	0	0
	Tunnels	0	0	0	0	0
	Facilities	0	0	0	0	0
Bus	Facilities	0	0	0	0	0
Ferry	Facilities	0	0	0	0	0
Port	Facilities	0	0	0	0	0
Airport	Facilities	2	2	0	2	2
	Runways	4	0	0	4	4

Table 6 provides damage estimates for the transportation system.

Note: Roadway segments, railroad tracks and light rail tracks are assumed to be damaged by ground failure only. If ground failure maps are not provided, damage estimates to these components will not be computed.

Tables 7-9 provide information on the damage to the utility lifeline systems. Table 7 provides damage to the utility system facilities. Table 8 provides estimates on the number of leaks and breaks by the pipelines of the utility systems. For electric power and potable water, Hazus performs a simplified system performance analysis. Table 9 provides a summary of the system performance information.

Table 7 : Expected Utility System Facility Damage

System	# of Locations				
	Total #	With at Least Moderate Damage	With Complete Damage	with Functionality > 50 %	
				After Day 1	After Day 7
Potable Water	0	0	0	0	0
Waste Water	4	2	0	0	4
Natural Gas	0	0	0	0	0
Oil Systems	0	0	0	0	0
Electrical Power	0	0	0	0	0
Communication	4	3	0	4	4

Table 8 : Expected Utility System Pipeline Damage (Site Specific)

System	Total Pipelines Length (miles)	Number of Leaks	Number of Breaks
Potable Water	3,841	1183	296
Waste Water	2,305	594	149
Natural Gas	74	13	3
Oil	0	0	0

Table 9: Expected Potable Water and Electric Power System Performance

	Total # of Households	Number of Households without Service				
		At Day 1	At Day 3	At Day 7	At Day 30	At Day 90
Potable Water	16,805	2,788	1,900	462	0	0
Electric Power		8,561	4,935	1,814	312	13

Induced Earthquake Damage

Fire Following Earthquake

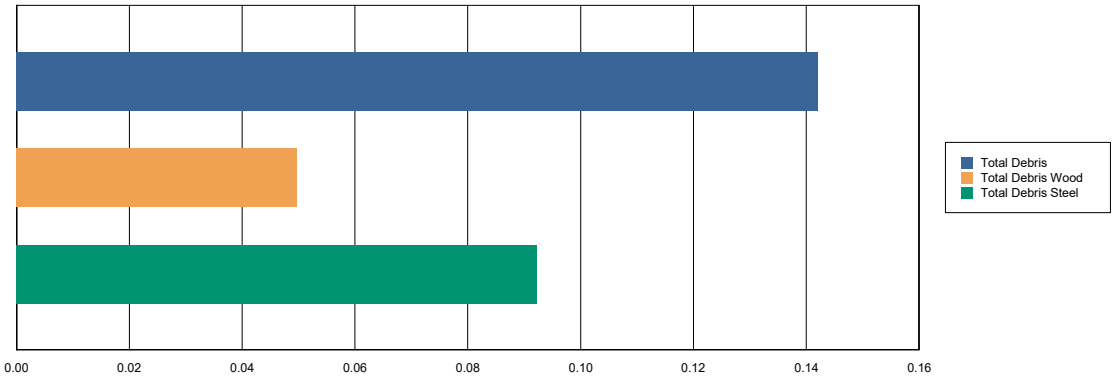
Fires often occur after an earthquake. Because of the number of fires and the lack of water to fight the fires, they can often burn out of control. Hazus uses a Monte Carlo simulation model to estimate the number of ignitions and the amount of burnt area. For this scenario, the model estimates that there will be 0 ignitions that will burn about 0.00 sq. mi 0.00 % of the region's total area.) The model also estimates that the fires will displace about 0 people and burn about 0 (millions of dollars) of building value.

Debris Generation

Hazus estimates the amount of debris that will be generated by the earthquake. The model breaks the debris into two general categories: a) Brick/Wood and b) Reinforced Concrete/Steel. This distinction is made because of the different types of material handling equipment required to handle the debris.

The model estimates that a total of 142,000 tons of debris will be generated. Of the total amount, Brick/Wood comprises 35.00% of the total, with the remainder being Reinforced Concrete/Steel. If the debris tonnage is converted to an estimated number of truckloads, it will require 5,680 truckloads (@25 tons/truck) to remove the debris generated by the earthquake.

Earthquake Debris (millions of tons)



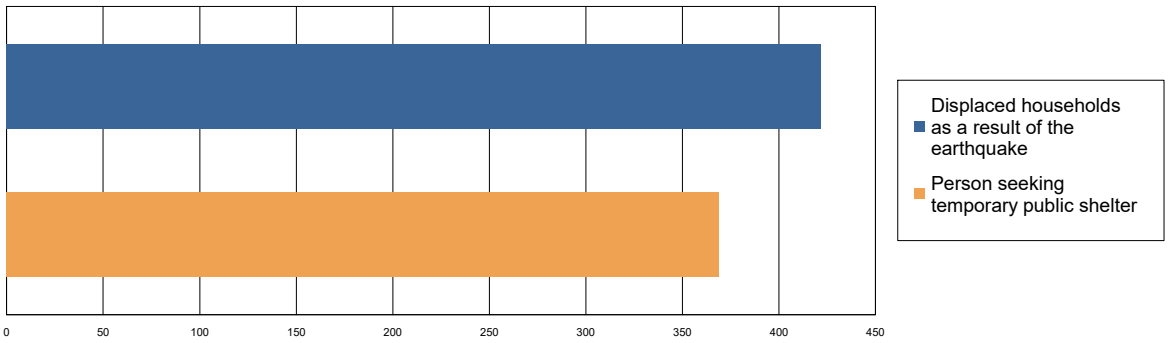
Brick/ Wood	Reinforced Concrete/Steel	Total Debris	Truck Load
0.05	0.09	0.14	5,680 (@25 tons/truck)

Social Impact

Shelter Requirement

Hazus estimates the number of households that are expected to be displaced from their homes due to the earthquake and the number of displaced people that will require accommodations in temporary public shelters. The model estimates 422 households to be displaced due to the earthquake. Of these, 369 people (out of a total population of 55,269) will seek temporary shelter in public shelters.

Displaced Households/ Persons Seeking Short Term Public Shelter



Displaced households as a result of the earthquake	Persons seeking temporary public shelter
422	369

Casualties

Hazus estimates the number of people that will be injured and killed by the earthquake. The casualties are broken down into four (4) severity levels that describe the extent of the injuries. The levels are described as follows;

- Severity Level 1: Injuries will require medical attention but hospitalization is not needed.
- Severity Level 2: Injuries will require hospitalization but are not considered life-threatening
- Severity Level 3: Injuries will require hospitalization and can become life threatening if not promptly treated.
- Severity Level 4: Victims are killed by the earthquake.

The casualty estimates are provided for three (3) times of day: 2:00 AM, 2:00 PM and 5:00 PM. These times represent the periods of the day that different sectors of the community are at their peak occupancy loads. The 2:00 AM estimate considers that the residential occupancy load is maximum, the 2:00 PM estimate considers that the educational, commercial and industrial sector loads are maximum and 5:00 PM represents peak commute time.

Table 10 provides a summary of the casualties estimated for this earthquake

Table 10: Casualty Estimates

		Level 1	Level 2	Level 3	Level 4
2 AM	Commercial	3.88	1.11	0.18	0.35
	Commuting	0.01	0.02	0.03	0.01
	Educational	0.00	0.00	0.00	0.00
	Hotels	0.00	0.00	0.00	0.00
	Industrial	8.05	2.23	0.33	0.65
	Other-Residential	52.41	12.66	1.34	2.50
	Single Family	61.14	8.88	0.47	0.83
	Total	**125**	**25**	**2**	**4**
2 PM	Commercial	231.05	65.79	10.59	20.78
	Commuting	0.13	0.17	0.29	0.06
	Educational	82.80	23.73	3.91	7.66
	Hotels	0.00	0.00	0.00	0.00
	Industrial	59.26	16.40	2.44	4.73
	Other-Residential	9.89	2.40	0.26	0.47
	Single Family	11.91	1.75	0.11	0.16
	Total	**395**	**110**	**18**	**34**
5 PM	Commercial	175.58	49.84	8.05	15.58
	Commuting	2.50	3.22	5.58	1.07
	Educational	6.50	1.86	0.31	0.60
	Hotels	0.00	0.00	0.00	0.00
	Industrial	37.03	10.25	1.52	2.95
	Other-Residential	19.43	4.72	0.52	0.94
	Single Family	23.65	3.47	0.21	0.32
	Total	**265**	**73**	**16**	**21**

Economic Loss

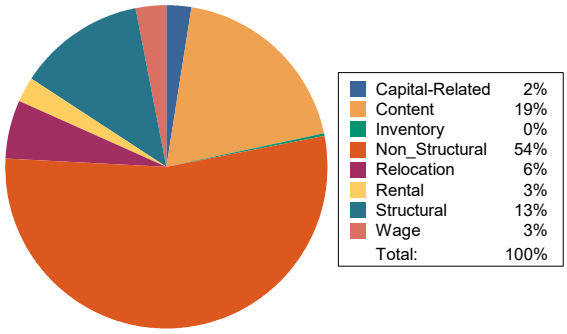
The total economic loss estimated for the earthquake is 993.76 (millions of dollars), which includes building and lifeline related losses based on the region's available inventory. The following three sections provide more detailed information about these losses.

Building-Related Losses

The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the earthquake. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the earthquake.

The total building-related losses were 859.12 (millions of dollars); 14 % of the estimated losses were related to the business interruption of the region. By far, the largest loss was sustained by the residential occupancies which made up over 61 % of the total loss. Table 11 below provides a summary of the losses associated with the building damage.

Earthquake Losses by Loss Type ($ millions)



Earthquake Losses by Occupancy Type ($ millions)

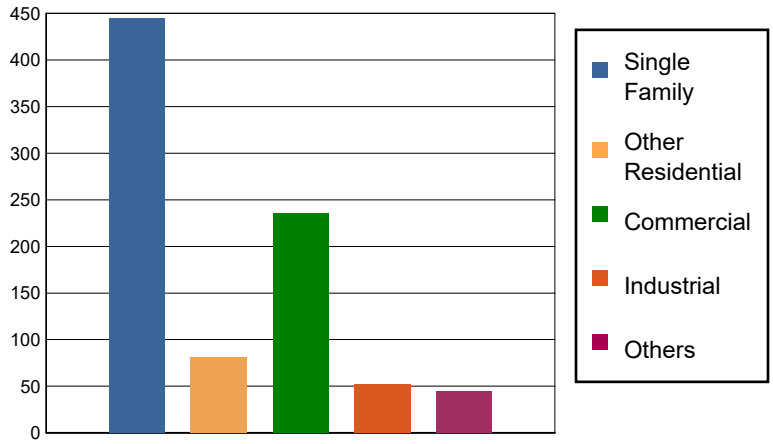


Table 11: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Single Family	Other Residential	Commercial	Industrial	Others	Total
Income Losses							
	Wage	0.0000	0.7737	22.3811	1.0372	0.9532	25.1452
	Capital-Related	0.0000	0.3293	19.8221	0.6210	0.2711	21.0435
	Rental	7.2678	3.6906	9.8106	0.3027	0.5158	21.5875
	Relocation	26.4113	4.0768	15.0911	1.4854	4.1919	51.2565
	Subtotal	**33.6791**	**8.8704**	**67.1049**	**3.4463**	**5.9320**	**119.0327**
Capital Stock Losses							
	Structural	53.9334	10.0993	30.5347	7.0233	8.4463	110.0370
	Non_Structural	272.0101	50.9735	94.1868	24.2718	20.1892	461.6314
	Content	84.9877	11.3918	43.0012	15.2488	9.9612	164.5907
	Inventory	0.0000	0.0000	0.9614	2.5781	0.2865	3.8260
	Subtotal	**410.9312**	**72.4646**	**168.6841**	**49.1220**	**38.8832**	**740.0851**
	Total	**444.61**	**81.34**	**235.79**	**52.57**	**44.82**	**859.12**

Transportation and Utility Lifeline Losses

For the transportation and utility lifeline systems, Hazus computes the direct repair cost for each component only. There are no losses computed by Hazus for business interruption due to lifeline outages. Tables 12 & 13 provide a detailed breakdown in the expected lifeline losses.

Table 12: Transportation System Economic Losses
(Millions of dollars)

System	Component	Inventory Value	Economic Loss	Loss Ratio (%)
Highway	Segments	855.6704	0.0000	0.00
	Bridges	192.8963	8.3490	4.33
	Tunnels	0.0000	0.0000	0.00
	Subtotal	**1048.5667**	**8.3490**	
Railways	Segments	39.4554	0.0000	0.00
	Bridges	34.3241	3.7235	10.85
	Tunnels	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	Subtotal	**73.7795**	**3.7235**	
Light Rail	Segments	0.0000	0.0000	0.00
	Bridges	0.0000	0.0000	0.00
	Tunnels	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	Subtotal	**0.0000**	**0.0000**	
Bus	Facilities	0.0000	0.0000	0.00
	Subtotal	**0.0000**	**0.0000**	
Ferry	Facilities	0.0000	0.0000	0.00
	Subtotal	**0.0000**	**0.0000**	
Port	Facilities	0.0000	0.0000	0.00
	Subtotal	**0.0000**	**0.0000**	
Airport	Facilities	11.4413	4.5184	39.49
	Runways	149.9964	0.0000	0.00
	Subtotal	**161.4377**	**4.5184**	
	Total	**1,283.78**	**16.59**	

Table 13: Utility System Economic Losses

(Millions of dollars)

System	Component	Inventory Value	Economic Loss	Loss Ratio (%)
Potable Water	Pipelines	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	Distribution Lines	123.6291	5.3254	4.31
	Subtotal	**123.6291**	**5.3254**	
Waste Water	Pipelines	0.0000	0.0000	0.00
	Facilities	654.4468	109.0276	16.66
	Distribution Lines	74.1775	2.6751	3.61
	Subtotal	**728.6243**	**111.7027**	
Natural Gas	Pipelines	93.4112	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	Distribution Lines	49.4516	0.9165	1.85
	Subtotal	**142.8628**	**0.9165**	
Oil Systems	Pipelines	0.0000	0.0000	0.00
	Facilities	0.0000	0.0000	0.00
	Subtotal	**0.0000**	**0.0000**	
Electrical Power	Facilities	0.0000	0.0000	0.00
	Subtotal	**0.0000**	**0.0000**	
Communication	Facilities	0.4720	0.1013	21.46
	Subtotal	**0.4720**	**0.1013**	
	Total	**995.59**	**118.05**	

Appendix A: County Listing for the Region

San Benito,CA

Appendix B: Regional Population and Building Value Data

State	County Name	Population	Building Value (millions of dollars)		
			Residential	Non-Residential	Total
California					
	San Benito	55,269	5,619	1,152	6,771
Total Region		**55,269**	**5,619**	**1,152**	**6,771**

Hazus: Flood Global Risk Report

Region Name: SBCo_Flood

Flood Scenario: 100YR

Print Date: Monday, February 22, 2021

Disclaimer:
This version of Hazus utilizes 2010 Census Data.
Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Flood. These results can be improved by using enhanced inventory data and flood hazard information.

FEMA

RiskMAP
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General Description of the Region

Hazus is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- California

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is approximately 1,390 square miles and contains 2,650 census blocks. The region contains over 17 thousand households and has a total population of 55,269 people (2010 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 17,393 buildings in the region with a total building replacement value (excluding contents) of 6,771 million dollars. Approximately 92.03% of the buildings (and 82.99% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

Hazus estimates that there are 17,393 buildings in the region which have an aggregate total replacement value of 6,771 million dollars. Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	5,619,281	83.0%
Commercial	664,940	9.8%
Industrial	279,353	4.1%
Agricultural	69,100	1.0%
Religion	71,075	1.0%
Government	20,649	0.3%
Education	47,019	0.7%
Total	**6,771,417**	**100%**

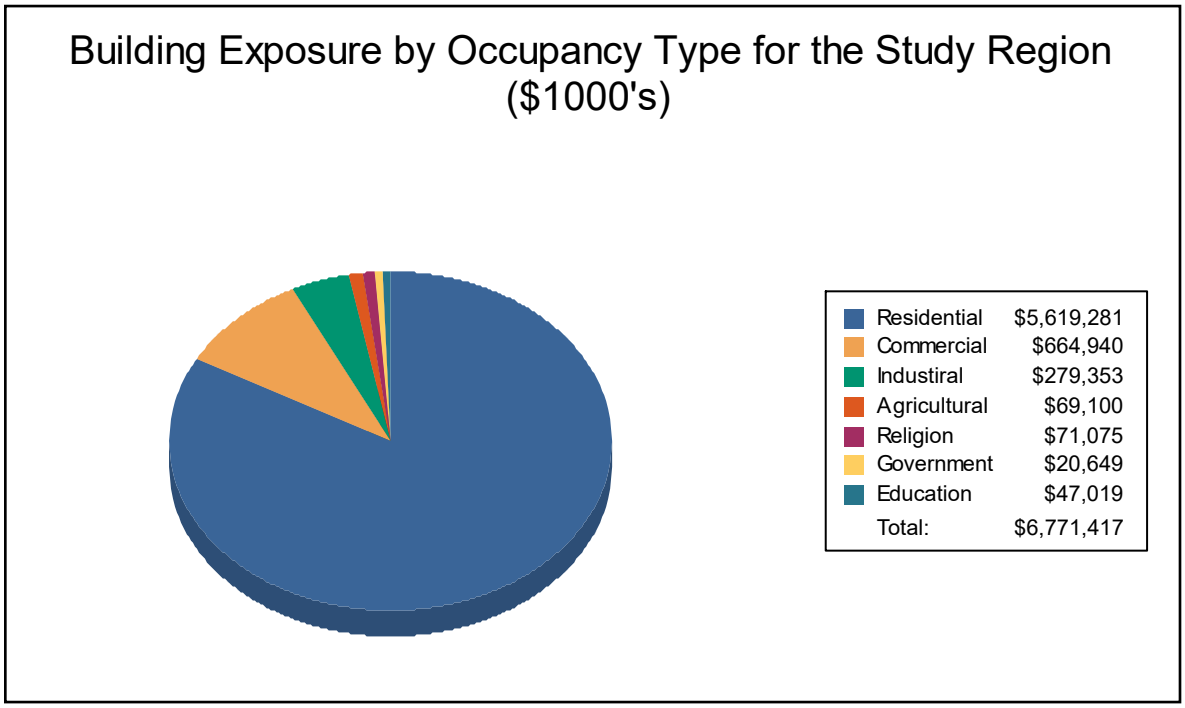
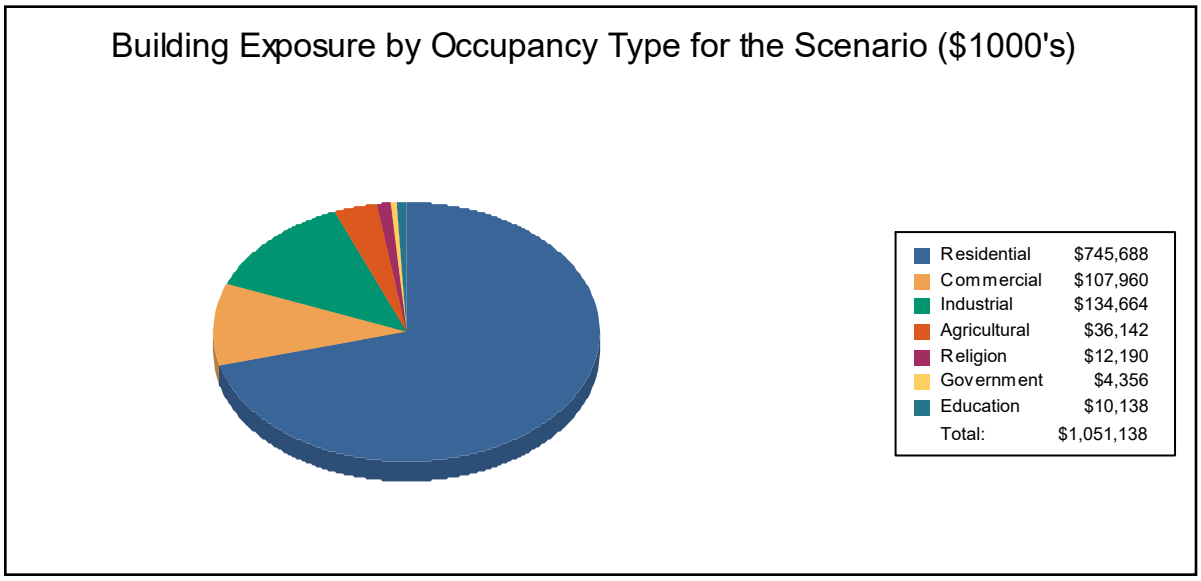


Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	745,688	70.9%
Commercial	107,960	10.3%
Industrial	134,664	12.8%
Agricultural	36,142	3.4%
Religion	12,190	1.2%
Government	4,356	0.4%
Education	10,138	1.0%
Total	**1,051,138**	**100%**



Essential Facility Inventory

For essential facilities, there are 2 hospitals in the region with a total bed capacity of 181 beds.
There are 32 schools, 8 fire stations, 2 police stations and 1 emergency operation center.

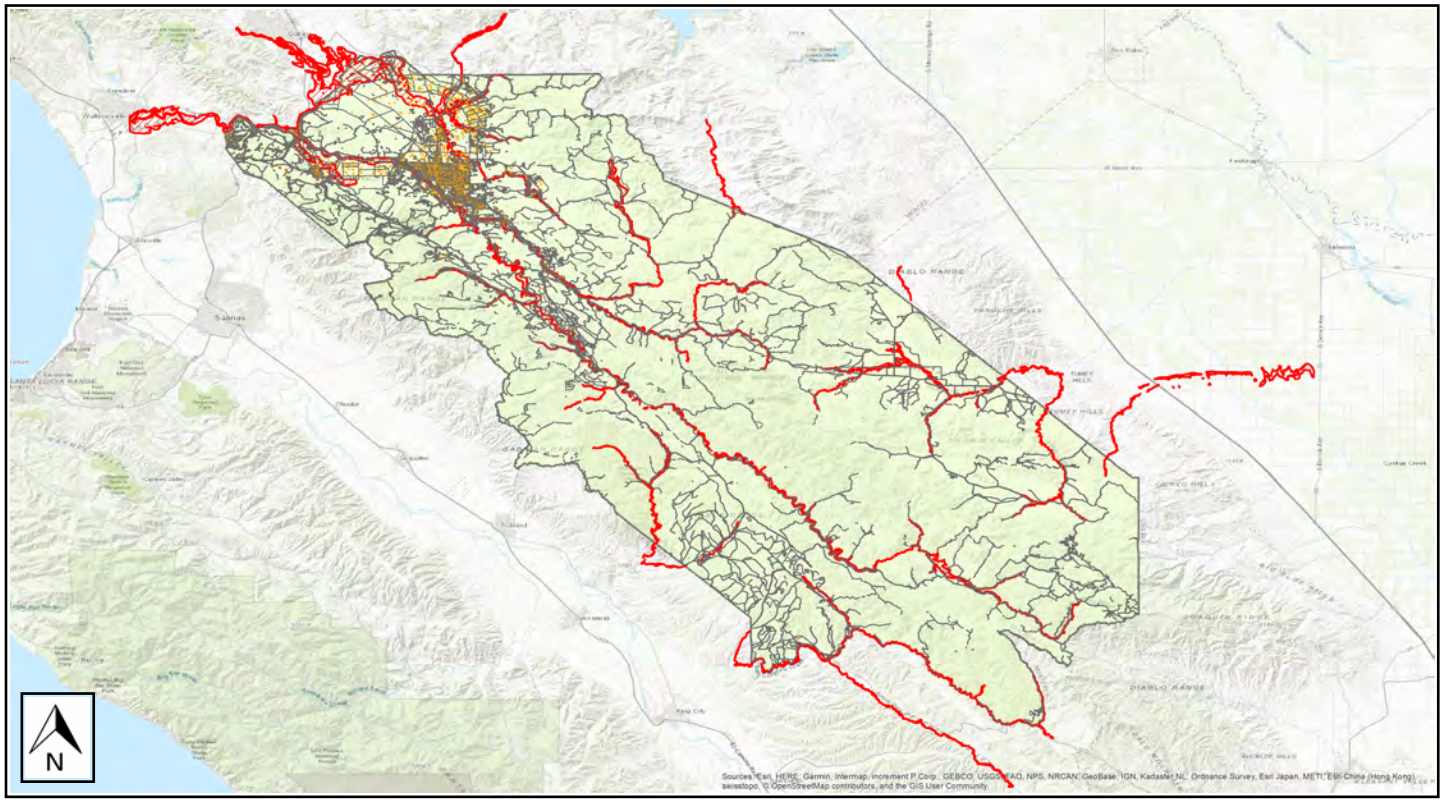
Flood Scenario Parameters

Hazus used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	SBCo_Flood
Scenario Name:	100YR
Return Period Analyzed:	100
Analysis Options Analyzed:	No What-Ifs

Study Region Overview Map

Illustrating scenario flood extent, as well as exposed essential facilities and total exposure



Building Damage

General Building Stock Damage

Hazus estimates that about 53 buildings will be at least moderately damaged. This is over 62% of the total number of buildings in the scenario. There are an estimated 6 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus Flood Technical Manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Total Economic Loss (1 dot = $300K) Overview Map

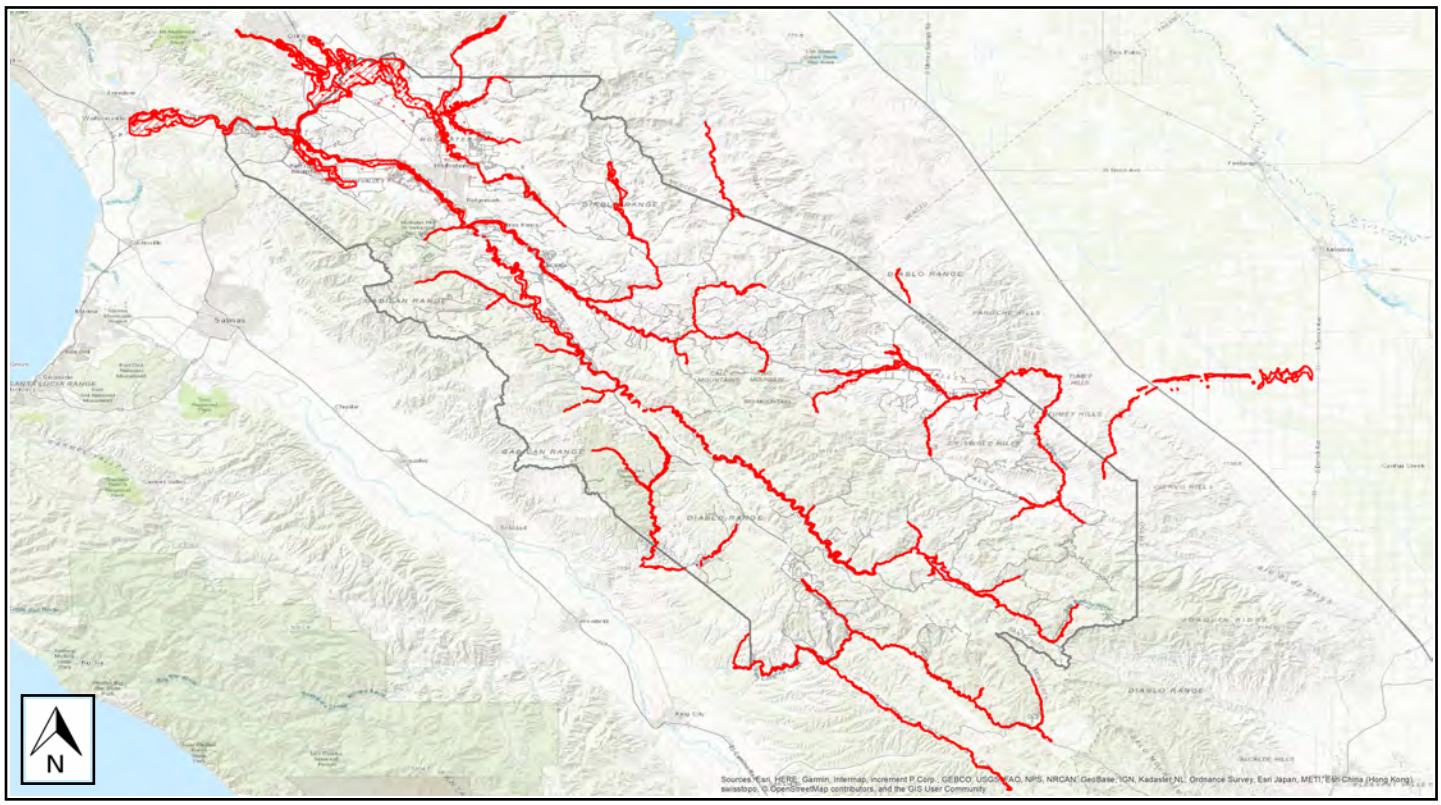


Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		>50	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0
Commercial	0	0	0	0	0	0	0	0	0	0	0	0
Education	0	0	0	0	0	0	0	0	0	0	0	0
Government	0	0	0	0	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0	0	0	0	0
Religion	0	0	0	0	0	0	0	0	0	0	0	0
Residential	15	22	32	47	6	9	8	12	1	1	6	9
Total	**15**		**32**		**6**		**8**		**1**		**6**	

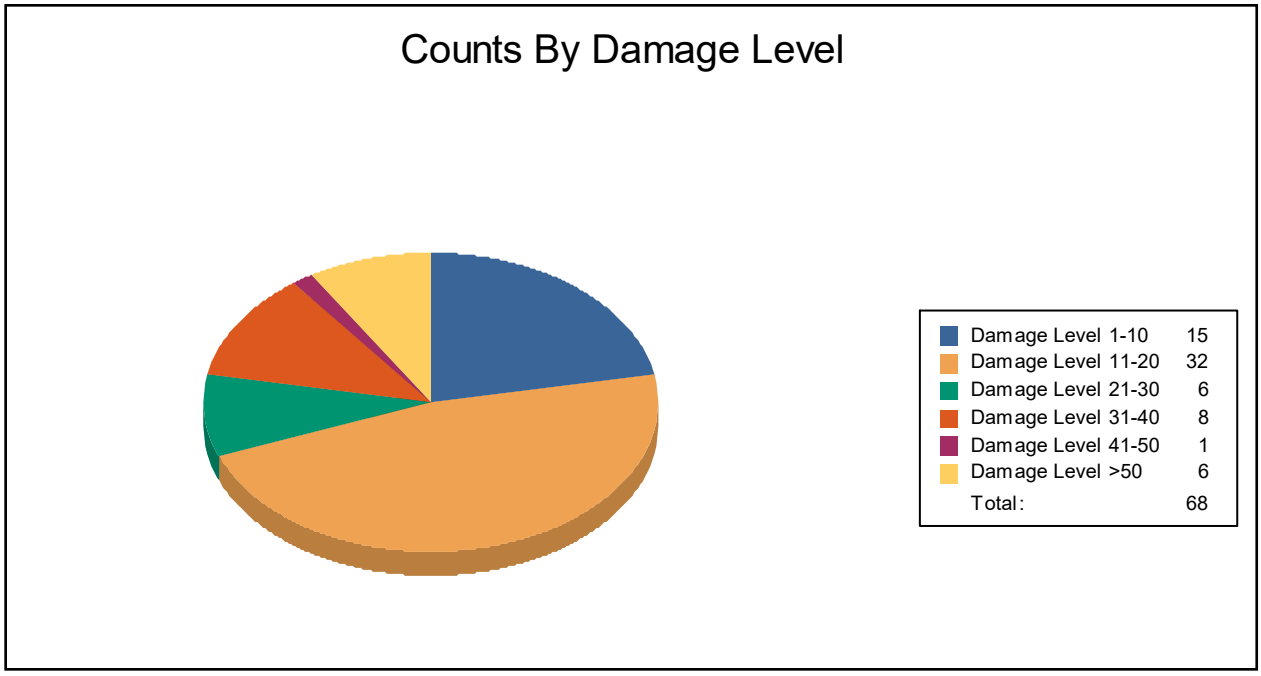


Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		>50	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	0	0	0	0	0	0	0	0	0	0	0	0
ManufHousing	0	0	0	0	0	0	0	0	0	0	0	0
Masonry	0	0	0	0	0	0	0	0	0	0	0	0
Steel	0	0	0	0	0	0	0	0	0	0	0	0
Wood	15	22	32	47	6	9	8	12	1	1	6	9

Essential Facility Damage

Before the flood analyzed in this scenario, the region had 181 hospital beds available for use. On the day of the scenario flood event, the model estimates that 181 hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Emergency Operation Centers	1	0	0	0
Fire Stations	8	0	0	0
Hospitals	2	0	0	0
Police Stations	2	0	0	0
Schools	32	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

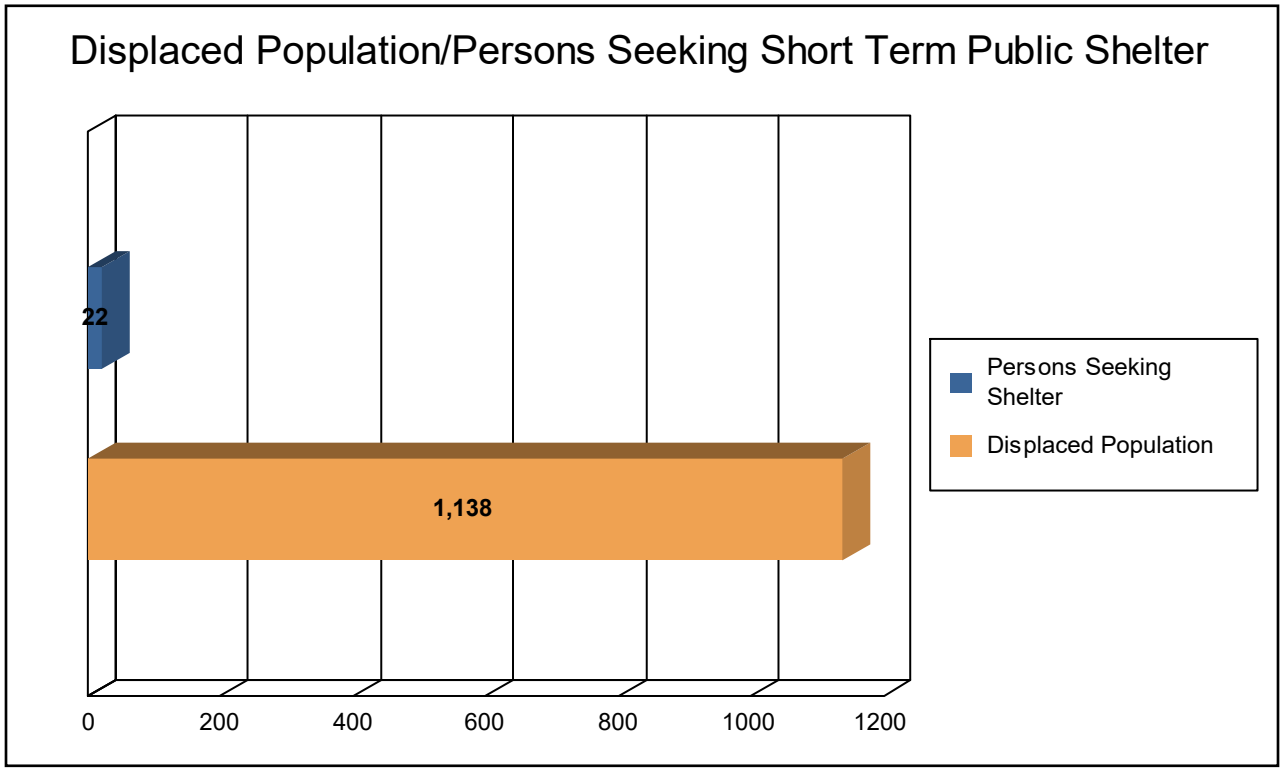
Hazus estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

Analysis has not been performed for this Scenario.

Social Impact

Shelter Requirements

Hazus estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. Hazus also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 379 households (or 1,138 of people) will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 22 people (out of a total population of 55,269) will seek temporary shelter in public shelters.



Economic Loss

The total economic loss estimated for the flood is 86.53 million dollars, which represents 8.23 % of the total replacement value of the scenario buildings.

Building-Related Losses

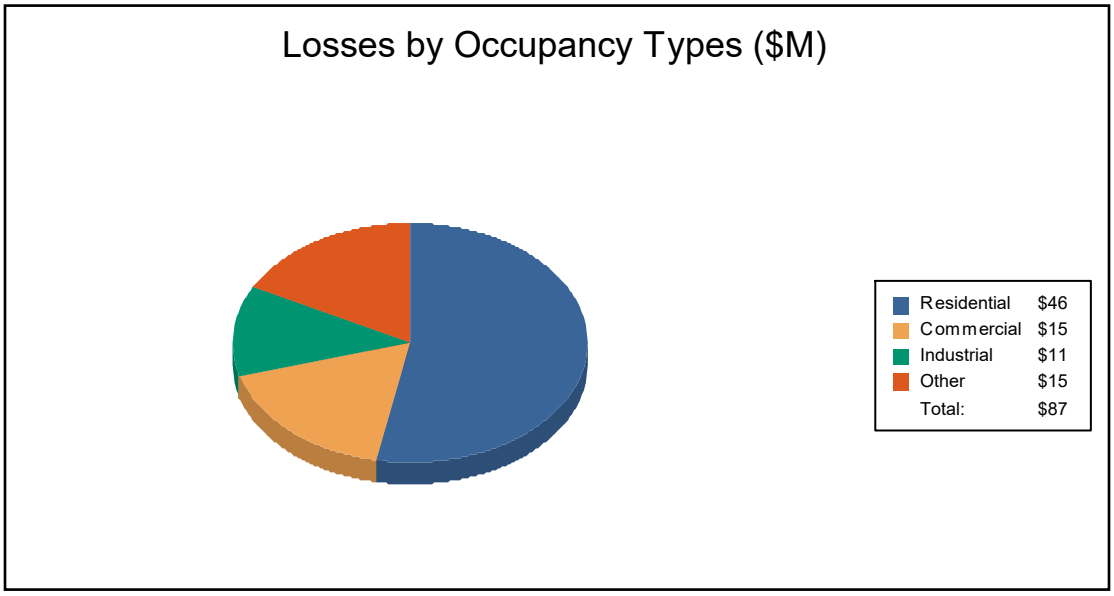
The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 63.49 million dollars. 27% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 53.06% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	25.58	2.09	2.59	1.39	31.64
	Content	13.66	4.89	6.50	5.56	30.60
	Inventory	0.00	0.11	0.93	0.21	1.25
	Subtotal	**39.24**	**7.09**	**10.02**	**7.15**	**63.49**
Business Interruption						
	Income	0.11	3.73	0.18	1.78	5.80
	Relocation	4.81	0.57	0.15	0.59	6.13
	Rental Income	1.51	0.43	0.04	0.04	2.01
	Wage	0.25	3.31	0.30	5.25	9.11
	Subtotal	**6.68**	**8.04**	**0.67**	**7.66**	**23.04**
ALL	**Total**	**45.91**	**15.12**	**10.69**	**14.81**	**86.53**





Appendix A: County Listing for the Region

California

- San Benito

Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
California				
San Benito	55,269	5,619,281	1,152,136	6,771,417
Total	**55,269**	**5,619,281**	**1,152,136**	**6,771,417**
Total Study Region	**55,269**	**5,619,281**	**1,152,136**	**6,771,417**

Hazus: Flood Global Risk Report

Region Name: SBCo_Flood

Flood Scenario: 500YR

Print Date: Thursday, February 25, 2021

Disclaimer:
This version of Hazus utilizes 2010 Census Data.
Totals only reflect data for those census tracts/blocks included in the user's study region.

The estimates of social and economic impacts contained in this report were produced using Hazus loss estimation methodology software which is based on current scientific and engineering knowledge. There are uncertainties inherent in any loss estimation technique. Therefore, there may be significant differences between the modeled results contained in this report and the actual social and economic losses following a specific Flood. These results can be improved by using enhanced inventory data and flood hazard information.

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General Building Stock	7
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General Description of the Region

Hazus is a regional multi-hazard loss estimation model that was developed by the Federal Emergency Management Agency (FEMA) and the National Institute of Building Sciences (NIBS). The primary purpose of Hazus is to provide a methodology and software application to develop multi-hazard losses at a regional scale. These loss estimates would be used primarily by local, state and regional officials to plan and stimulate efforts to reduce risks from multi-hazards and to prepare for emergency response and recovery.

The flood loss estimates provided in this report were based on a region that included 1 county(ies) from the following state(s):

- California

Note:
Appendix A contains a complete listing of the counties contained in the region.

The geographical size of the region is approximately 1,390 square miles and contains 2,650 census blocks. The region contains over 17 thousand households and has a total population of 55,269 people (2010 Census Bureau data). The distribution of population by State and County for the study region is provided in Appendix B.

There are an estimated 17,393 buildings in the region with a total building replacement value (excluding contents) of 6,771 million dollars. Approximately 92.03% of the buildings (and 82.99% of the building value) are associated with residential housing.

Building Inventory

General Building Stock

Hazus estimates that there are 17,393 buildings in the region which have an aggregate total replacement value of 6,771 million dollars. Table 1 and Table 2 present the relative distribution of the value with respect to the general occupancies by Study Region and Scenario respectively. Appendix B provides a general distribution of the building value by State and County.

Table 1
Building Exposure by Occupancy Type for the Study Region

Occupancy	Exposure ($1000)	Percent of Total
Residential	5,619,281	83.0%
Commercial	664,940	9.8%
Industrial	279,353	4.1%
Agricultural	69,100	1.0%
Religion	71,075	1.0%
Government	20,649	0.3%
Education	47,019	0.7%
Total	**6,771,417**	**100%**

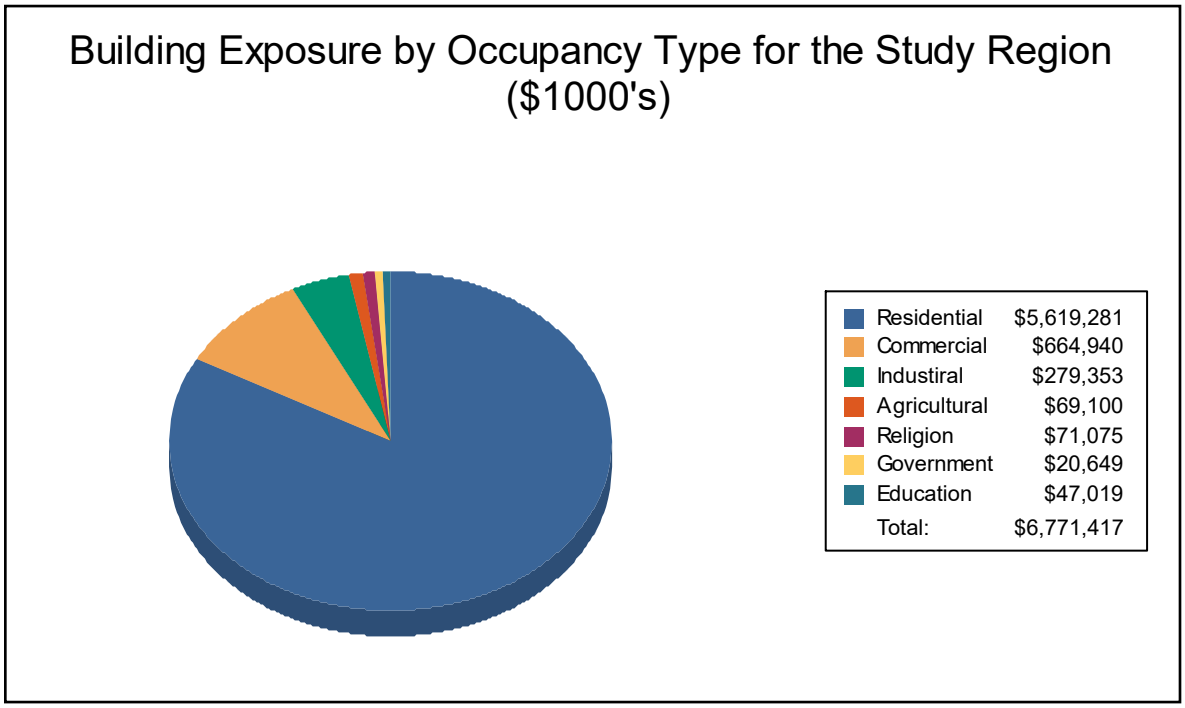
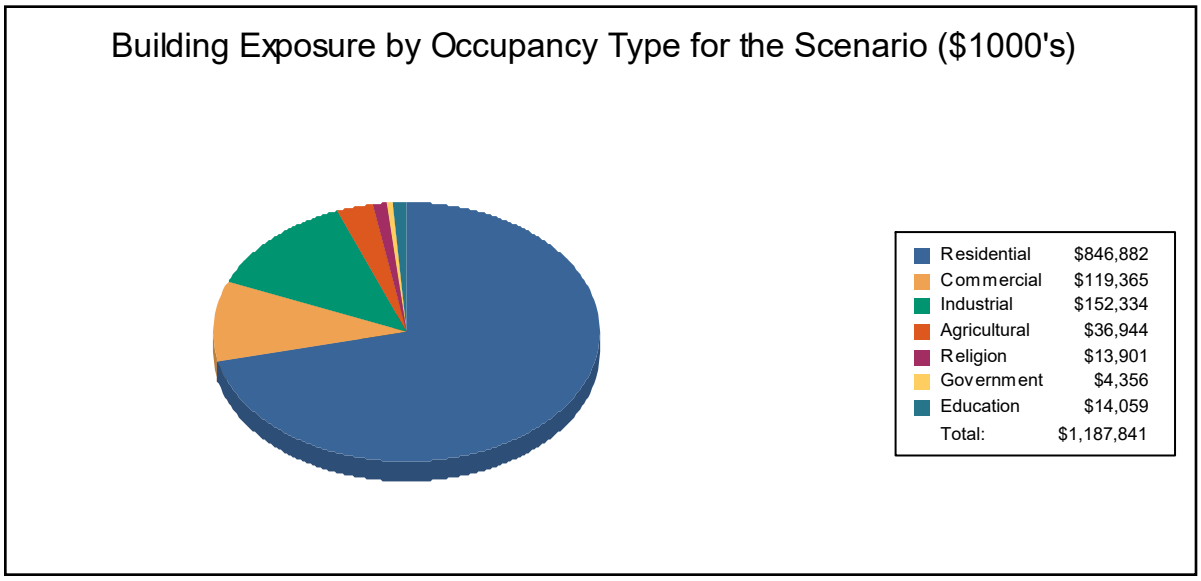


Table 2
Building Exposure by Occupancy Type for the Scenario

Occupancy	Exposure ($1000)	Percent of Total
Residential	846,882	71.3%
Commercial	119,365	10.0%
Industrial	152,334	12.8%
Agricultural	36,944	3.1%
Religion	13,901	1.2%
Government	4,356	0.4%
Education	14,059	1.2%
Total	**1,187,841**	**100%**



Essential Facility Inventory

For essential facilities, there are 2 hospitals in the region with a total bed capacity of 181 beds.
There are 32 schools, 8 fire stations, 2 police stations and 1 emergency operation center.

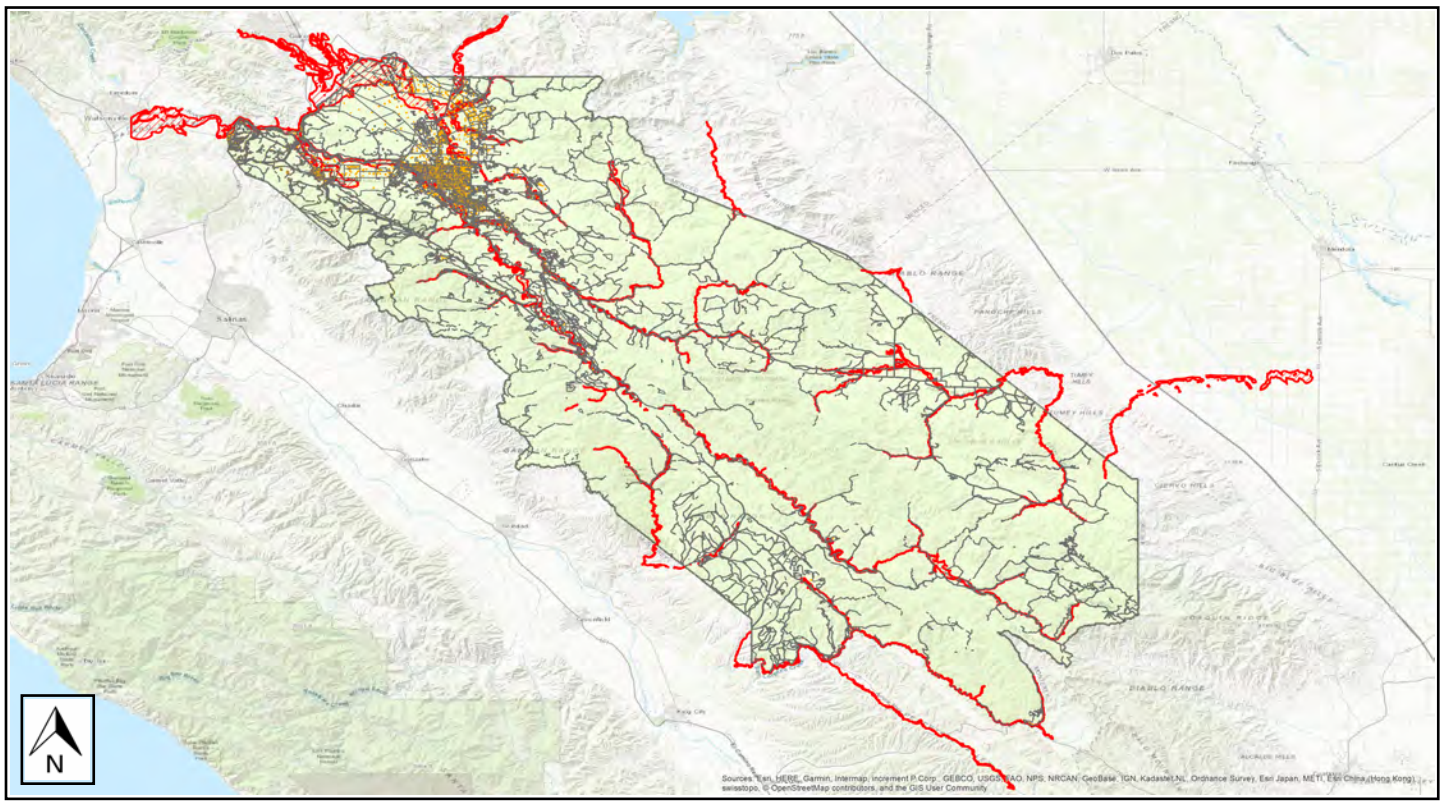
Flood Scenario Parameters

Hazus used the following set of information to define the flood parameters for the flood loss estimate provided in this report.

Study Region Name:	SBCo_Flood
Scenario Name:	500YR
Return Period Analyzed:	500
Analysis Options Analyzed:	No What-Ifs

Study Region Overview Map

Illustrating scenario flood extent, as well as exposed essential facilities and total exposure



Building Damage

General Building Stock Damage

Hazus estimates that about 108 buildings will be at least moderately damaged. This is over 48% of the total number of buildings in the scenario. There are an estimated 28 buildings that will be completely destroyed. The definition of the 'damage states' is provided in the Hazus Flood Technical Manual. Table 3 below summarizes the expected damage by general occupancy for the buildings in the region. Table 4 summarizes the expected damage by general building type.

Total Economic Loss (1 dot = $300K) Overview Map

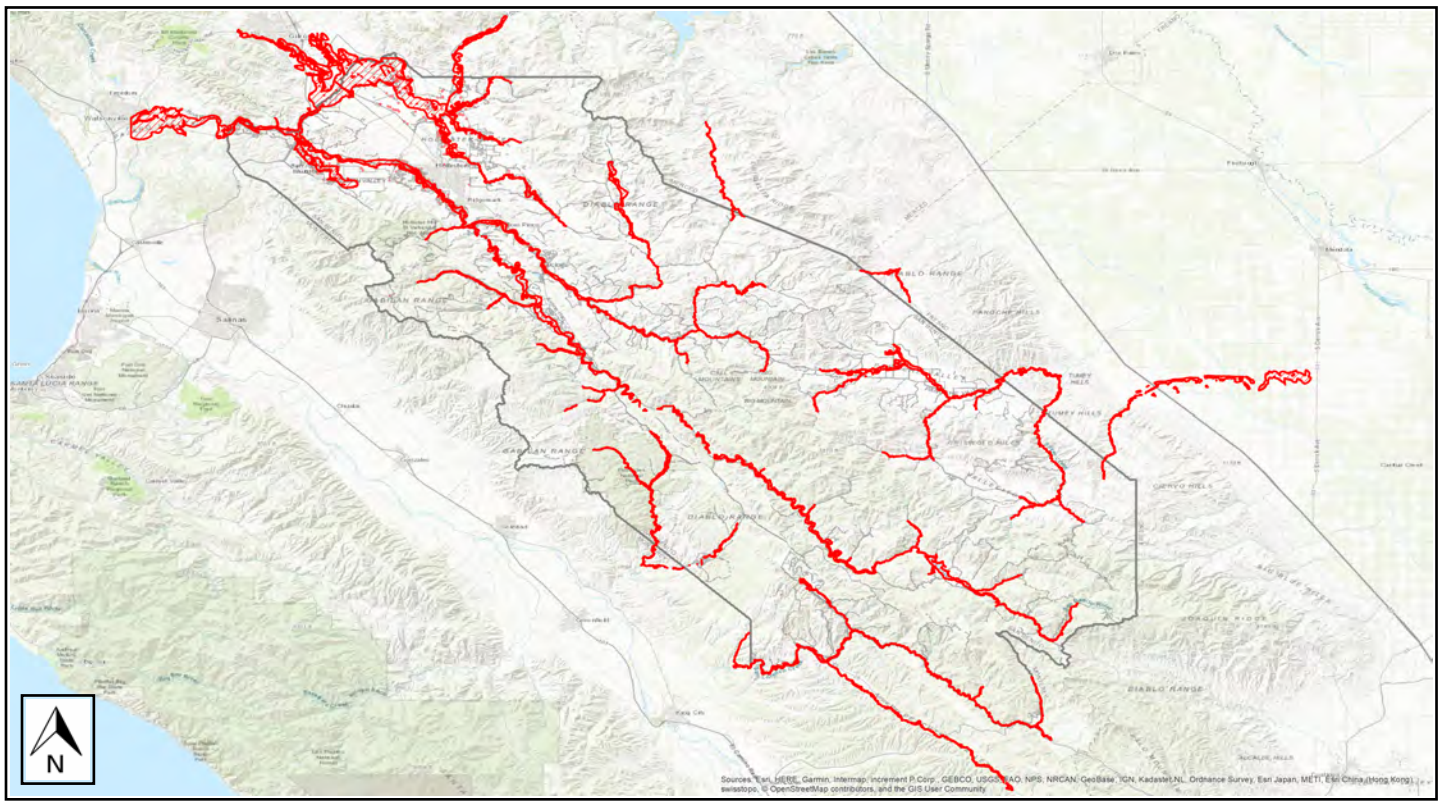


Table 3: Expected Building Damage by Occupancy

	1-10		11-20		21-30		31-40		41-50		>50	
Occupancy	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**	**Count**	**(%)**
Agriculture	0	0	0	0	0	0	0	0	0	0	0	0
Commercial	0	0	0	0	0	0	0	0	0	0	0	0
Education	0	0	0	0	0	0	0	0	0	0	0	0
Government	0	0	0	0	0	0	0	0	0	0	0	0
Industrial	0	0	0	0	0	0	0	0	0	0	0	0
Religion	0	0	0	0	0	0	0	0	0	0	0	0
Residential	17	14	40	32	15	12	14	11	11	9	28	22
Total	**17**		**40**		**15**		**14**		**11**		**28**	

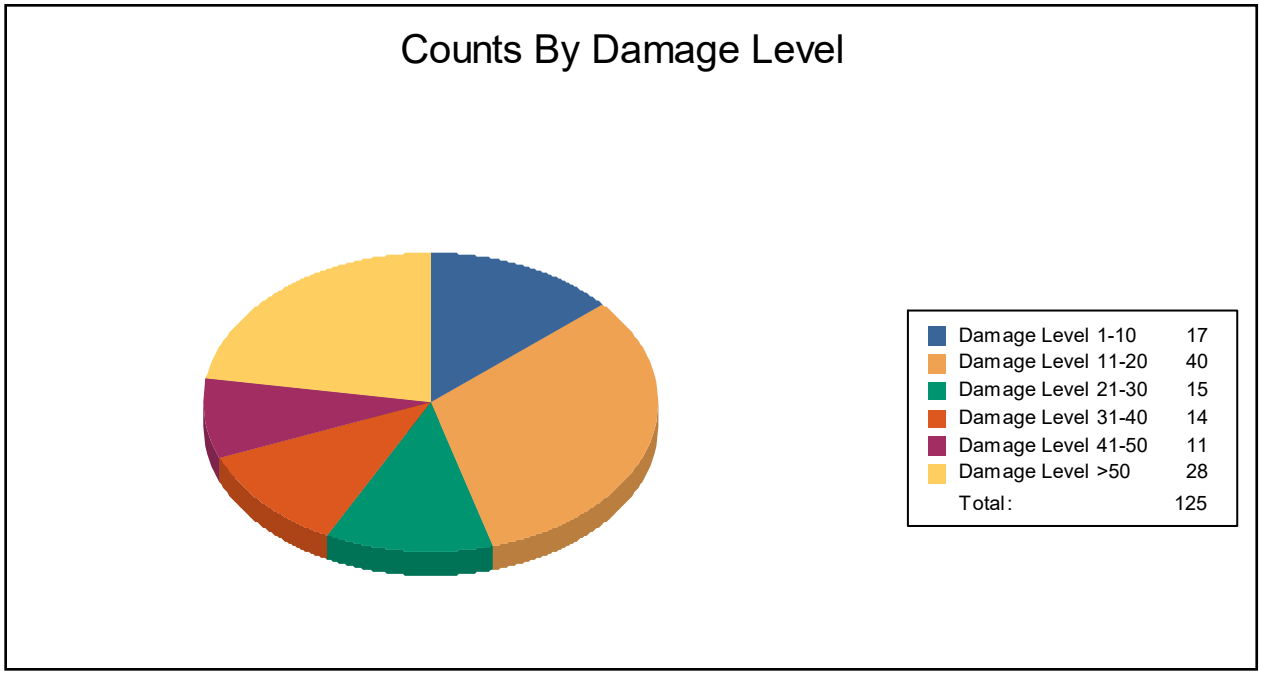


Table 4: Expected Building Damage by Building Type

Building Type	1-10		11-20		21-30		31-40		41-50		>50	
	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)	Count	(%)
Concrete	0	0	0	0	0	0	0	0	0	0	0	0
ManufHousing	0	0	0	0	0	0	0	0	0	0	13	100
Masonry	0	0	0	0	0	0	0	0	0	0	0	0
Steel	0	0	0	0	0	0	0	0	0	0	0	0
Wood	17	15	40	36	15	13	14	13	11	10	15	13

Essential Facility Damage

Before the flood analyzed in this scenario, the region had 181 hospital beds available for use. On the day of the scenario flood event, the model estimates that 181 hospital beds are available in the region.

Table 5: Expected Damage to Essential Facilities

		# Facilities		
Classification	Total	At Least Moderate	At Least Substantial	Loss of Use
Emergency Operation Centers	1	0	0	0
Fire Stations	8	0	0	0
Hospitals	2	0	0	0
Police Stations	2	0	0	0
Schools	32	0	0	0

If this report displays all zeros or is blank, two possibilities can explain this.

(1) None of your facilities were flooded. This can be checked by mapping the inventory data on the depth grid.

(2) The analysis was not run. This can be tested by checking the run box on the Analysis Menu and seeing if a message box asks you to replace the existing results.

Induced Flood Damage

Debris Generation

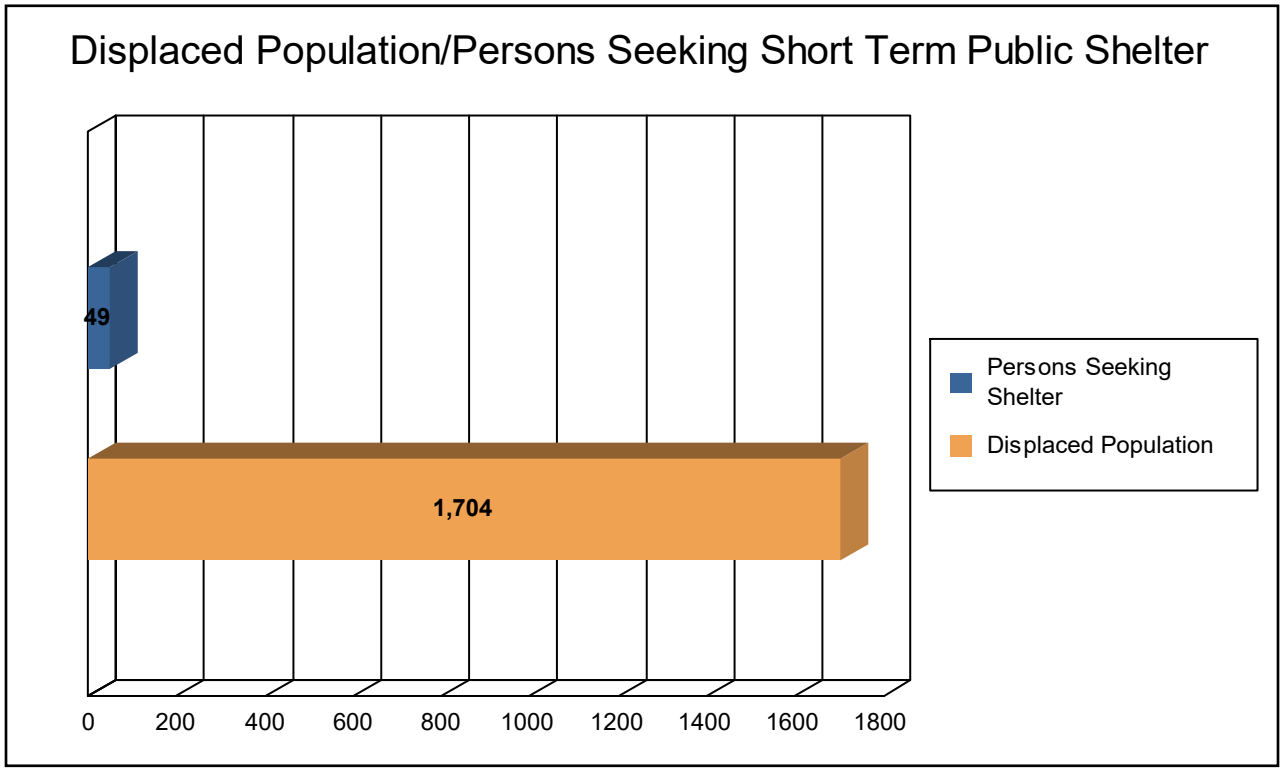
Hazus estimates the amount of debris that will be generated by the flood. The model breaks debris into three general categories: 1) Finishes (dry wall, insulation, etc.), 2) Structural (wood, brick, etc.) and 3) Foundations (concrete slab, concrete block, rebar, etc.). This distinction is made because of the different types of material handling equipment required to handle the debris.

Analysis has not been performed for this Scenario.

Social Impact

Shelter Requirements

Hazus estimates the number of households that are expected to be displaced from their homes due to the flood and the associated potential evacuation. Hazus also estimates those displaced people that will require accommodations in temporary public shelters. The model estimates 568 households (or 1,704 of people) will be displaced due to the flood. Displacement includes households evacuated from within or very near to the inundated area. Of these, 49 people (out of a total population of 55,269) will seek temporary shelter in public shelters.



Economic Loss

The total economic loss estimated for the flood is 134.39 million dollars, which represents 11.31 % of the total replacement value of the scenario buildings.

Building-Related Losses

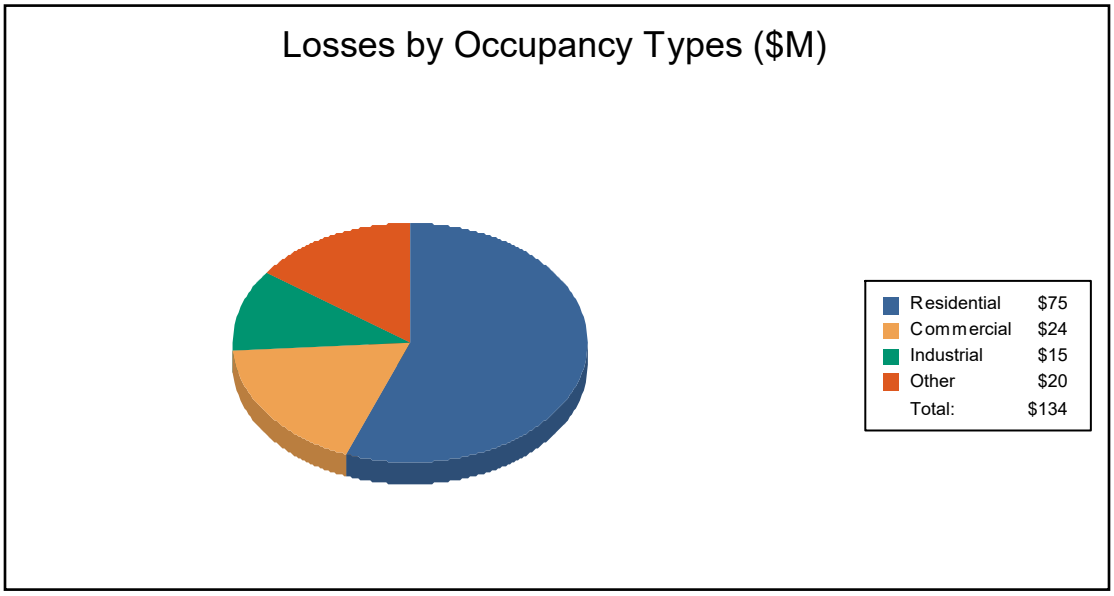
The building losses are broken into two categories: direct building losses and business interruption losses. The direct building losses are the estimated costs to repair or replace the damage caused to the building and its contents. The business interruption losses are the losses associated with inability to operate a business because of the damage sustained during the flood. Business interruption losses also include the temporary living expenses for those people displaced from their homes because of the flood.

The total building-related losses were 101.15 million dollars. 25% of the estimated losses were related to the business interruption of the region. The residential occupancies made up 55.92% of the total loss. Table 6 below provides a summary of the losses associated with the building damage.

Table 6: Building-Related Economic Loss Estimates

(Millions of dollars)

Category	Area	Residential	Commercial	Industrial	Others	Total
Building Loss						
	Building	42.38	3.93	3.55	2.20	52.05
	Content	22.63	8.18	9.00	7.51	47.31
	Inventory	0.00	0.20	1.28	0.31	1.79
	Subtotal	**65.01**	**12.30**	**13.83**	**10.02**	**101.15**
Business Interruption						
	Income	0.12	5.50	0.25	2.31	8.17
	Relocation	7.43	0.90	0.24	0.77	9.34
	Rental Income	2.32	0.68	0.07	0.05	3.11
	Wage	0.28	4.95	0.42	6.96	12.62
	Subtotal	**10.15**	**12.02**	**0.98**	**10.09**	**33.24**
ALL	**Total**	**75.15**	**24.32**	**14.81**	**20.10**	**134.39**





Appendix A: County Listing for the Region

California

- San Benito

Appendix B: Regional Population and Building Value Data

	Population	Building Value (thousands of dollars)		
		Residential	Non-Residential	Total
California				
San Benito	55,269	5,619,281	1,152,136	6,771,417
Total	**55,269**	**5,619,281**	**1,152,136**	**6,771,417**
Total Study Region	**55,269**	**5,619,281**	**1,152,136**	**6,771,417**

Dam Inundation Mapping

This section of the appendix consists of inundation mapping for the following dams located in San Benito County:

- Hawkins Dam
- Hernandez Dam
- Paicines Dam
- San Justo Dam
- Leroy Anderson Dam

HAWKINS DAM INUNDATION MAP (SUNNY DAY FAILURE SCENARIO)

Sheet 1 of 1

DSOD Dam # 651-0
San Benito County

XS_7	Value
Distance from Dam Conn	65,500 ft
Leading Edge Arrival Time	387 min
Travel Time of Peak	474 min
Max Velocity	13.6 ft/sec

XS_1	Value
Distance from Dam Conn	1,044 ft
Leading Edge Arrival Time	2 min
Travel Time of Peak	6 min
Max Velocity	31.6 ft/sec

XS_2	Value
Distance from Dam Conn	17,800 ft
Leading Edge Arrival Time	15 min
Travel Time of Peak	16 min
Max Velocity	11.2 ft/sec

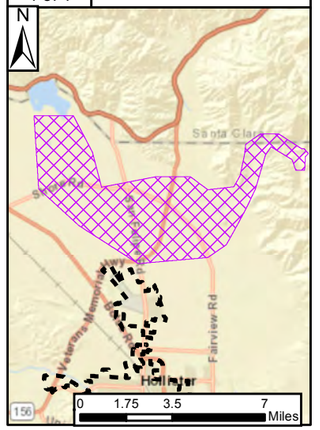
XS_4	Value
Distance from Dam Conn	34,253 ft
Leading Edge Arrival Time	36 min
Travel Time of Peak	42 min
Max Velocity	7.7 ft/sec

XS_6	Value
Distance from Dam Conn	60,225 ft
Leading Edge Arrival Time	250 min
Travel Time of Peak	340 min
Max Velocity	4.9 ft/sec

XS_5	Value
Distance from Dam Conn	44,942 ft
Leading Edge Arrival Time	110 min
Travel Time of Peak	166 min
Max Velocity	6.1 ft/sec

XS_3	Value
Distance from Dam Conn	29,707 ft
Leading Edge Arrival Time	28 min
Travel Time of Peak	31 min
Max Velocity	11.3 ft/sec

HAWKINS DAM
ARROYO DE LAS VIBORAS
SHORE RD
SAN FELIPE RD
HWY 156
TEQUISQUITA SLOUGH
FAIRVIEW RD
CITY OF HOLLISTER
Hollister Police Department on 395 Apollo Way
Santa Clara
San Benito
San Felipe Lake
San Felipe Lake
San Felipe Lake



Legend

Max Depth (ft)

- 1 - 1.5
- 1.6 - 2
- 2.1 - 3
- 3.1 - 4
- 4.1 - 5
- 5.1 - 10
- 11 - 15
- 16 - 20
- 21 - 25
- 26 - 32

- Cross Section
- Dam Crest
- Inundation Boundary
- Police Department
- Reservoir
- City Boundary
- County Parcels

Notes:
A) National Dam ID: CA00694
B) Model Simulation Date: 05/07/2021
C) High flows may continue beyond the inundation boundary.

Schaaf & Wheeler
CONSULTING CIVIL ENGINEERS
1171 HOMESTEAD ROAD
SANTA CLARA, CA 95050
408-246-4848

APPROVED:

DATE

ENGINEER

REV.	DATE	DRAWN BY
0	08/02/2021	CM

BENGARD RANCH
PO Box 80090
Salinas, CA 93901
(831) 422-9021

N

0 1,500 3,000 6,000 Feet

1 in = 1 miles

SOURCES: National Elevation Dataset, Coastal Conservance DEM, and Alameda County Contour/LiDAR. Inundation data generated by Schaaf & Wheeler; Parcel data fromAlameda County database.
ArcGIS aerial imagery basemaps with Alameda County Street data

DISCLAIMER: Data for this map are derived from various sources. Locations depicted are approximate and are not accurate to surveying or engineering standards.The maps are provided for illustration purposes only and are not suitable for site-specific decision-making. The information shown is approximate and should be used as a guideline for emergency preparation and response. Security-sensitive infrastructure may not be shown on this map.

Name: Hawkin_InundationMap | September 2021

Cross Section	Distance from Dam (ft)	Distance from Dam (mi)	Station	Initial Wave Arrival Time, 1 Foot (hh:mm)	Time to Peak (hh:mm)	Peak Inundation Depth (ft)	Peak Velocity (fps)	Peak Discharge (cfs)	Peak Water Elevation (ft)	Location Description
1	4,661	0.9	46+61	0:11	0:37	43	17	201,703	2,323	near McCoy Creek
2	14,187	2.7	141+87	0:27	0:50	75	18	189,847	2,223	near Rattlesnake Glutch
3	24,527	4.6	245+27	0:39	0:56	33	21	188,277	2,014	
4	32,450	6.1	324+50	0:38	1:03	23	22	184,470	1,949	near Lorenzo Vasquez Canyon
5	46,197	8.7	461+97	1:15	1:38	32	18	145,967	1,876	near Fire Station (near James Creek)
6	62,904	11.9	629+04	1:51	2:15	22	12	121,935	1,779	Coalinga Rd and Old Hernandez Rd
7	78,148	14.8	781+48	2:19	2:49	10	17	106,774	1,716	near Devils Canyon
8	92,315	17.5	923+15	2:56	3:39	35	9	85,452	1,651	near Rock Springs Creek
9	106,434	20.2	1064+34	3:31	4:04	16	11	82,207	1,567	

Disclaimer:
Info shown on this map is approximate and should be used as a guideline for emergency response and preparation purposes.

Notes:

1. This map is part of the emergency action plan for Hernandez Dam.

2. The results presented herein do not reflect the structural integrity of the dam and are not a statement of the dam's safety. The analysis presented is based on a hypothetical dam failure using 2D modeling software.

3. Cross Section Values:
Distance from Dam and **Stationing** are reckoned from the centerline of Hernandez Dam along the Flow Path. **Distance from Dam** is in miles and **Stationing** is in feet (Stationing 12+34 = 1,234').
Initial Wave Arrival Time, 1 Foot is the time to achieve 1 foot of water depth after initiation of the dam break. **Time to Peak** is the time to achieve the maximum water depth after initiation of the dam break.
Peak Inundation Depth is the maximum water depth. **Peak Velocity** is the maximum velocity. **Peak Discharge** is an estimate of the maximum flow rate integrated over the entire cross section line.
Peak Water Elevation is the maximum water surface elevation. **Location Description** indicates major roads that cross, or are near, the Flow Path at that cross section.

4. The values displayed in the table for each cross section are the maximum for that parameter along each cross section line, except for the **Initial Wave Arrival Time, 1 Foot** and **Time to Peak** which are the minimum for that parameter along each cross section line.

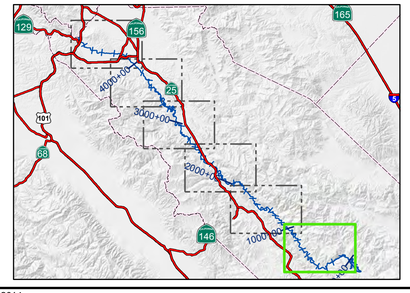
5. For other details refer to the supporting report "Hernandez Dam Failure and Inundation Study" March 2016.

6. Structures are shown in the aerial photo on the maps but may not clearly display all possible structures potentially within the inundation limits.

7. Map projection: Universal Transverse Mercator, Zone 10, Feet, North American Datum 1983. **Reference Points** and border tics display these coordinate values. All elevations are referenced to North American Vertical Datum 1988.

School
Licensed Healthcare Facility
Bridge
River
Cross Section
Flow Path with Stationing (ft)
Approx. Time to 1 Foot Depth (Rounded to next whole hour)
Approx. Inundation Extent
Incorporated City
County
Hernandez Sheet Index

Maximum Inundation Depth (feet)
≤ 2
>2 to 5
>5 to 10
>10 to 20
>20



0 0.25 0.5 1 Miles
0 1,000 2,000 4,000 Feet
Scale 1:24,000 or 1 " = 2,000 '

Inundation Depth Map for Fair Weather
Hypothetical Failure of
Hernandez Dam
Federal Dam ID: CA00848 State Dam ID: 1025-002
Sheet 1 of 6
San Benito County
© 2015 San Benito County Water District

Rev	Date	Description	Prepared By	Accepted By
	18 March 2016	FINAL	GEI Consultants	
	No Revisions To Date			

Dam Owner:
San Benito County Water District
30 Mansfield Road
Hollister, CA 95024-0899
Information Contact: Mr. Jeff Cattaneo, (831) 637-8218
Emergency Contact: (831) 634-8218 x122

Inundation Analysis Performed by:
GEI Consultants, Inc.
Chong Vang, PE 80454

Data Sources: Incorporated City Limits from CalFire, December 2014. Licensed Healthcare Facilities from Office of Statewide Health Planning and Development, January 2006. Schools from San Benito County, November 2015. Highways from TIGER, 2013. Aerial Photography from National Agricultural Imagery Program, USDA, 2014.

Z:\Projects\1514090_HernandezPaicines_Dams\HernandezInundation_DRAFT.mxd

Cross Section	Distance from Dam (ft)	Distance from Dam (mi)	Station	Initial Wave Arrival Time, 1 Foot (hh:mm)	Time to Peak (hh:mm)	Peak Inundation Depth (ft)	Peak Veloicty (fps)	Peak Discharge (cfs)	Peak Water Elevation (ft)	Location Description
9	106,434	20.2	1064+34	3:31	4:04	16	11	82,207	1,567	
10	118,115	22.4	1181+15	3:48	4:18	24	16	80,313	1,507	near Smoker Canyon
11	130,212	24.7	1302+12	4:11	4:49	24	12	72,339	1,452	near J & L Ranch
12	148,264	28.1	1482+64	4:38	5:07	15	10	71,541	1,338	San Benito, CA
13	167,234	31.7	1672+34	5:37	6:26	24	8	51,084	1,288	near Shields Canyon

Disclaimer:
Info shown on this map is approximate and should be used as a guideline for emergency response and preparation purposes.

Notes:

1. This map is part of the emergency action plan for Hernandez Dam.

2. The results presented herein do not reflect the structural integrity of the dam and are not a statement of the dam's safety. The analysis presented is based on a hypothetical dam failure using 2D modeling software.

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Initial Wave Arrival Time, 1 Foot is the time to achieve 1 foot of water depth after initiation of the dam break. **Time to Peak** is the time to achieve the maximum water depth after initiation of the dam break.
Peak Inundation Depth is the maximum water depth. **Peak Velocity** is the maximum velocity. **Peak Discharge** is an estimate of the maximum flow rate integrated over the entire cross section line.
Peak Water Elevation is the maximum water surface elevation. **Location Description** indicates major roads that cross, or are near, the Flow Path at that cross section.

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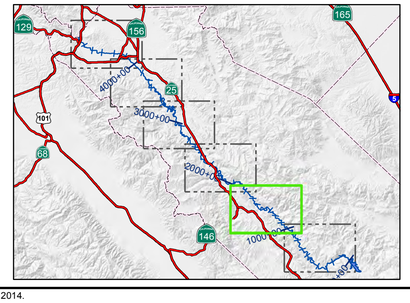
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6. Structures are shown in the aerial photo on the maps but may not clearly display all possible structures potentially within the inundation limits.

7. Map projection: Universal Transverse Mercator, Zone 10, Feet, North American Datum 1983. **Reference Points** and border tics display these coordinate values. All elevations are referenced to North American Vertical Datum 1988.

School
Licensed Healthcare Facility
Bridge
River
Cross Section
Flow Path with Stationing (ft)
Approx. Time to 1 Foot Depth (Rounded to next whole hour)
Approx. Inundation Extent
Incorporated City
County
Hernandez Sheet Index

Maximum Inundation Depth (feet)
≤ 2
>2 to 5
>5 to 10
>10 to 20
>20



0 0.25 0.5 1 Miles
0 1,000 2,000 4,000 Feet
Scale 1:24,000 or 1 " = 2,000 '

Inundation Depth Map for Fair Weather Hypothetical Failure of
Hernandez Dam
Federal Dam ID: CA00848 State Dam ID: 1025-002
Sheet 2 of 6
San Benito County
© 2015 San Benito County Water District

Rev	Date	Description	Prepared By	Accepted By
	18 March 2016	FINAL	GEI Consultants	
	No Revisions To Date			

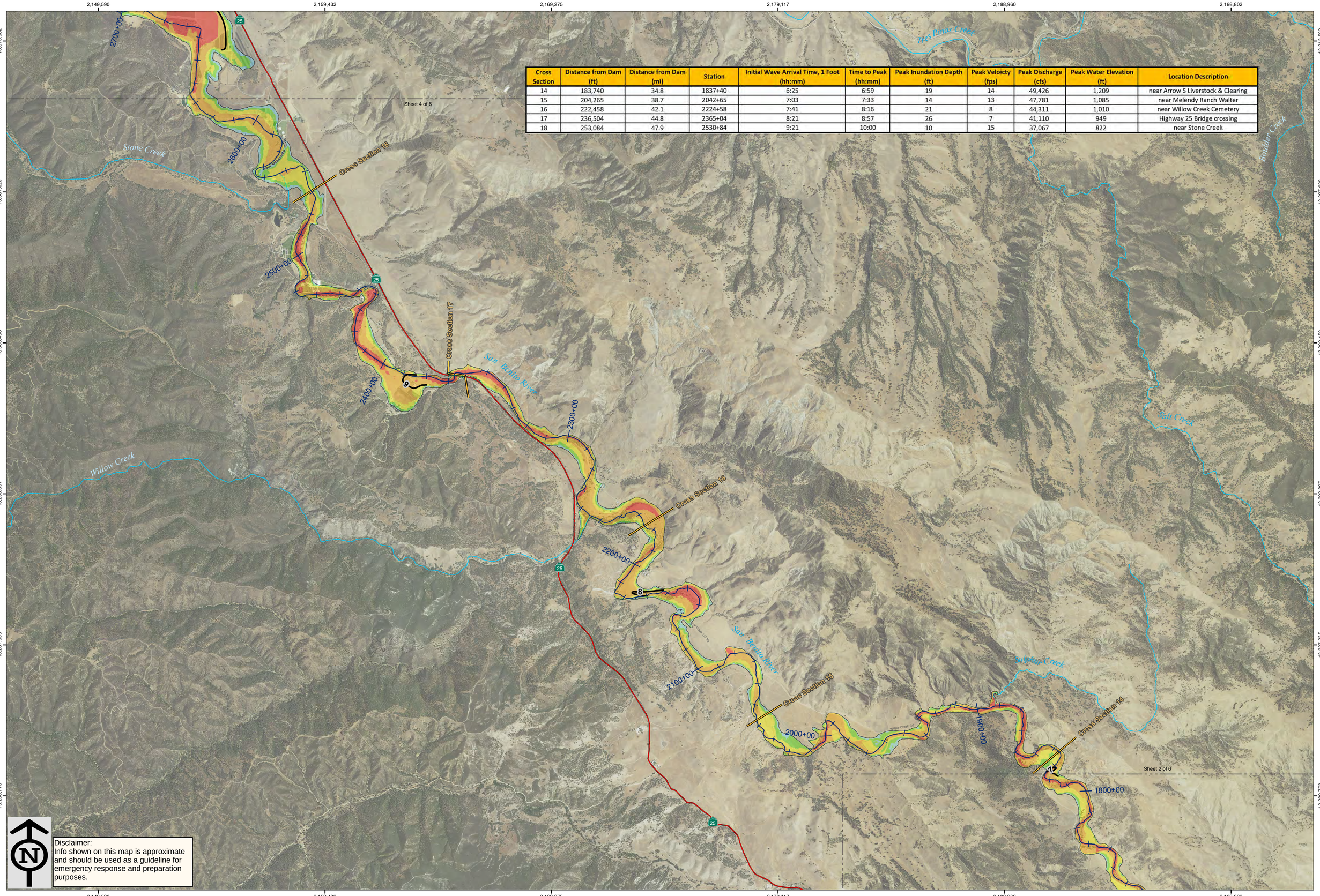
Dam Owner:
San Benito County Water District
30 Mansfield Road
Hollister, CA 95024-0899
Information Contact: Mr. Jeff Cattaneo, (831) 637-8218
Emergency Contact: (831) 634-8218 x122

Inundation Analysis Performed by:
GEI Consultants, Inc.
Chong Vang, PE 80454

Data Sources: Incorporated City Limits from CalFire, December 2014. Licensed Healthcare Facilities from Office of Statewide Health Planning and Development, January 2006. Schools from San Benito County, November 2015. Highways from TIGER, 2013. Aerial Photography from National Agricultural Imagery Program, USDA, 2014.

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Cross Section	Distance from Dam (ft)	Distance from Dam (mi)	Station	Initial Wave Arrival Time, 1 Foot (hh:mm)	Time to Peak (hh:mm)	Peak Inundation Depth (ft)	Peak Veloicty (fps)	Peak Discharge (cfs)	Peak Water Elevation (ft)	Location Description
14	183,740	34.8	1837+40	6:25	6:59	19	14	49,426	1,209	near Arrow S Liverstock & Clearing
15	204,265	38.7	2042+65	7:03	7:33	14	13	47,781	1,085	near Melendy Ranch Walter
16	222,458	42.1	2224+58	7:41	8:16	21	8	44,311	1,010	near Willow Creek Cemetery
17	236,504	44.8	2365+04	8:21	8:57	26	7	41,110	949	Highway 25 Bridge crossing
18	253,084	47.9	2530+84	9:21	10:00	10	15	37,067	822	near Stone Creek



Disclaimer:
Info shown on this map is approximate and should be used as a guideline for emergency response and preparation purposes.

Notes:

1. This map is part of the emergency action plan for Hernandez Dam.

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3. Cross Section Values:
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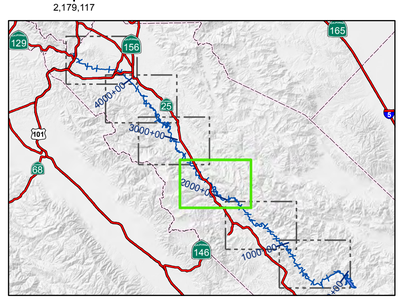
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7. Map projection: Universal Transverse Mercator, Zone 10, Feet, North American Datum 1983. **Reference Points** and border tics display these coordinate values. All elevations are referenced to North American Vertical Datum 1988.

- School
- Licensed Healthcare Facility
- Bridge
- River
- Cross Section
- Flow Path with Stationing (ft)
- –2– Approx. Time to 1 Foot Depth (Rounded to next whole hour)
- Approx. Inundation Extent
- Incorporated City
- County
- Hernandez Sheet Index

Maximum Inundation Depth (feet)

- ≤ 2
- >2 to 5
- >5 to 10
- >10 to 20
- >20



0 0.25 0.5 1 Miles

0 1,000 2,000 4,000 Feet

Scale 1:24,000 or 1 " = 2,000 '

Inundation Depth Map for Fair Weather Hypothetical Failure of

Hernandez Dam

Federal Dam ID: CA00848 State Dam ID: 1025-002

Sheet 3 of 6

San Benito County

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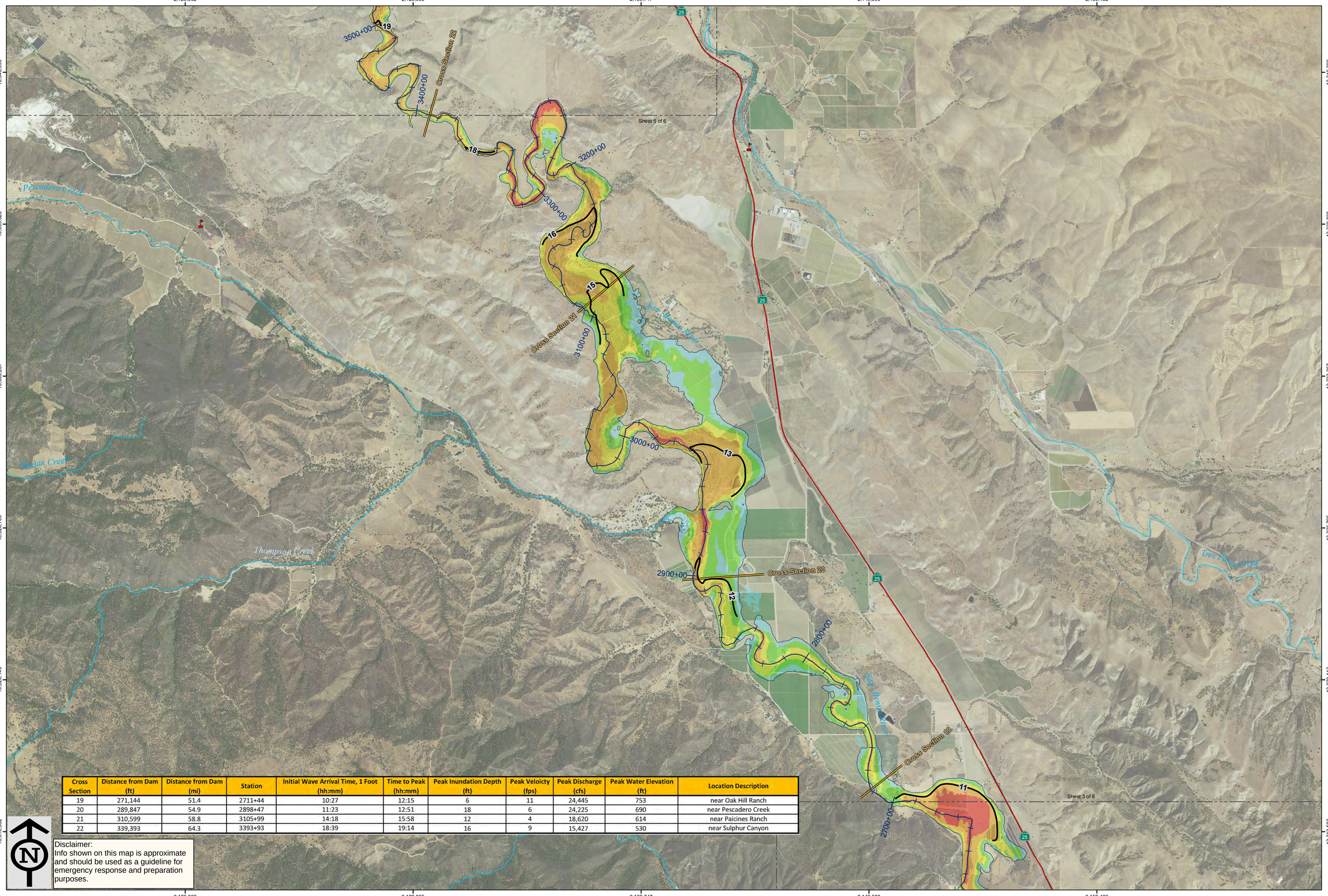
Rev	Date	Description	Prepared By	Accepted By
	18 March 2016	FINAL	GEI Consultants	
	No Revisions To Date			

Dam Owner:
San Benito County Water District
30 Mansfield Road
Hollister, CA 95024-0899
Information Contact: Mr. Jeff Cattaneo, (831) 637-8218
Emergency Contact: (831) 634-8218 x122

Inundation Analysis Performed by:
GEI Consultants, Inc.
Chong Vang, PE 80454

Data Sources: Incorporated City Limits from CalFire, December 2014. Licensed Healthcare Facilities from Office of Statewide Health Planning and Development, January 2006. Schools from San Benito County, November 2015. Highways from TIGER, 2013. Aerial Photography from National Agricultural Imagery Program, USDA, 2014.

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Cross Section	Distance from Dam (ft)	Distance from Dam (mi)	Station	Initial Wave Arrival Time, 1 Foot (hh:mm)	Time to Peak (hh:mm)	Peak Inundation Depth (ft)	Peak Velocity (fps)	Peak Discharge (cfs)	Peak Water Elevation (ft)	Location Description
19	271,144	51.4	2711+44	10:27	12:15	6	11	24,445	753	near Oak Hill Ranch
20	289,847	54.9	2898+47	11:23	12:51	18	6	24,225	690	near Pescadero Creek
21	310,599	58.8	3105+99	14:18	15:58	12	4	18,620	614	near Paicines Ranch
22	339,393	64.3	3393+93	18:39	19:14	16	9	15,427	530	near Sulphur Canyon

Notes:

1. This map is part of the emergency action plan for Hernandez Dam.

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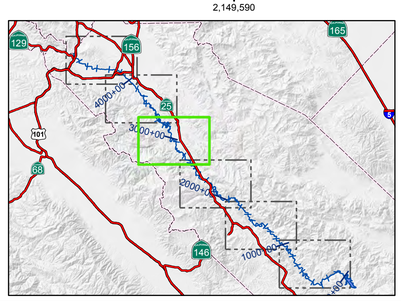
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School
Licensed Healthcare Facility
Bridge
River
Cross Section
Flow Path with Stationing (ft)
-2- Approx. Time to 1 Foot Depth (Rounded to next whole hour)
Approx. Inundation Extent
Incorporated City
County
Hernandez Sheet Index

Maximum Inundation Depth (feet)
≤ 2
>2 to 5
>5 to 10
>10 to 20
>20



0 0.25 0.5 1 Miles
0 1,000 2,000 4,000 Feet
Scale 1:24,000 or 1 " = 2,000 '

Inundation Depth Map for Fair Weather Hypothetical Failure of
Hernandez Dam
Federal Dam ID: CA00848 State Dam ID: 1025-002
Sheet 4 of 6

San Benito County
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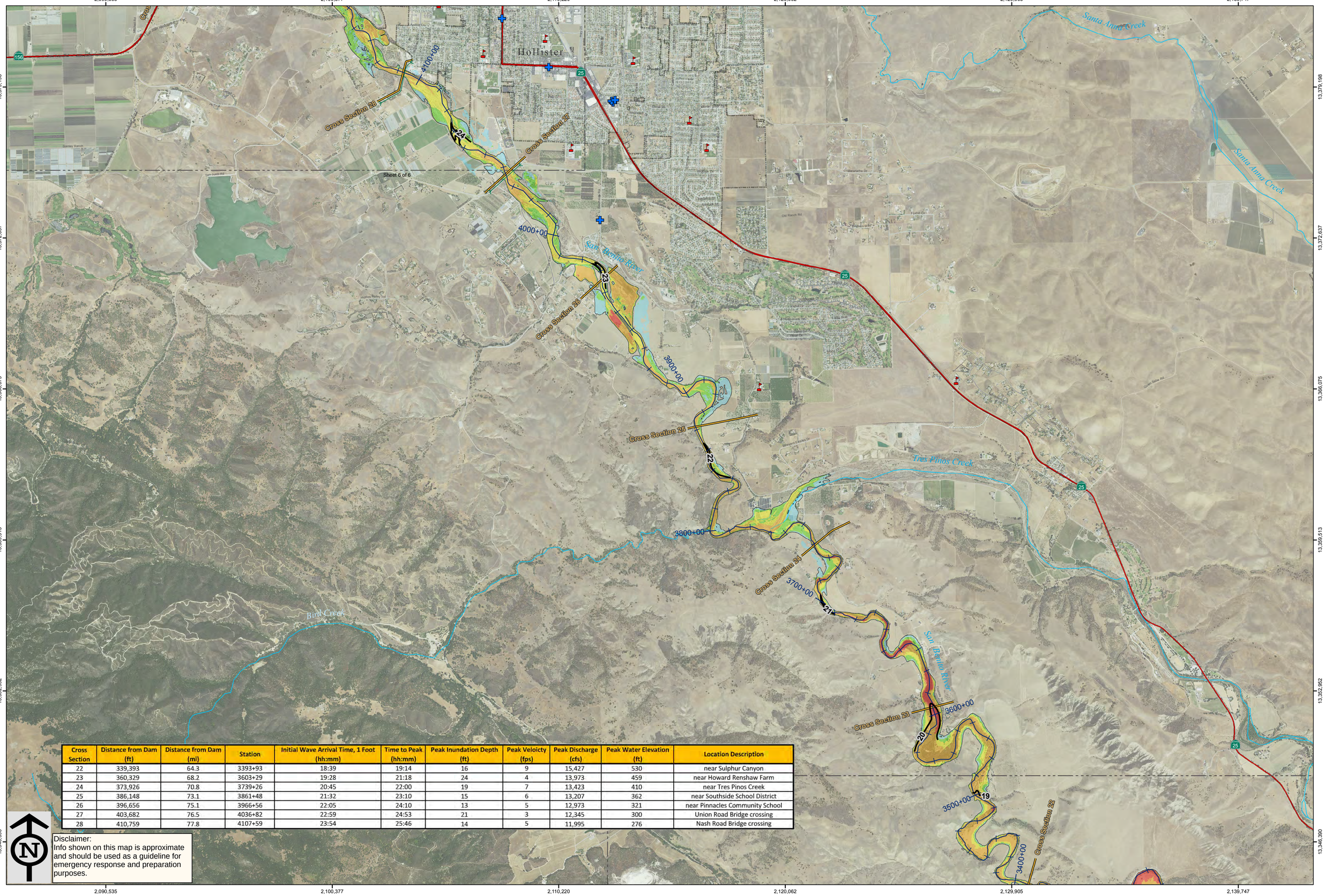
Rev	Date	Description	Prepared By	Accepted By
	18 March 2016	FINAL	GEI Consultants	
	No Revisions To Date			

Dam Owner:
San Benito County Water District
30 Mansfield Road
Hollister, CA 95024-0899
Information Contact: Mr. Jeff Cattaneo, (831) 637-8218
Emergency Contact: (831) 634-8218 x122

Inundation Analysis Performed by:
GEI Consultants, Inc.
Chong Vang, PE 80454

Data Sources: Incorporated City Limits from CalFire, December 2014. Licensed Healthcare Facilities from Office of Statewide Health Planning and Development, January 2006. Schools from San Benito County, November 2015. Highways from TIGER, 2013. Aerial Photography from National Agricultural Imagery Program, USDA, 2014.

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Cross Section	Distance from Dam (ft)	Distance from Dam (mi)	Station	Initial Wave Arrival Time, 1 Foot (hh:mm)	Time to Peak (hh:mm)	Peak Inundation Depth (ft)	Peak Veloicty (fps)	Peak Discharge (cfs)	Peak Water Elevation (ft)	Location Description
22	339,393	64.3	3393+93	18:39	19:14	16	9	15,427	530	near Sulphur Canyon
23	360,329	68.2	3603+29	19:28	21:18	24	4	13,973	459	near Howard Renshaw Farm
24	373,926	70.8	3739+26	20:45	22:00	19	7	13,423	410	near Tres Pinos Creek
25	386,148	73.1	3861+48	21:32	23:10	15	6	13,207	362	near Southside School District
26	396,656	75.1	3966+56	22:05	24:10	13	5	12,973	321	near Pinnacles Community School
27	403,682	76.5	4036+82	22:59	24:53	21	3	12,345	300	Union Road Bridge crossing
28	410,759	77.8	4107+59	23:54	25:46	14	5	11,995	276	Nash Road Bridge crossing

Notes:

1. This map is part of the emergency action plan for Hernandez Dam.

2. The results presented herein do not reflect the structural integrity of the dam and are not a statement of the dam's safety. The analysis presented is based on a hypothetical dam failure using 2D modeling software.

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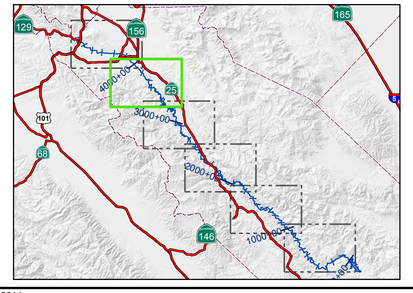
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School
Licensed Healthcare Facility
Bridge
River
Cross Section
Flow Path with Stationing (ft)
-2- Approx. Time to 1 Foot Depth (Rounded to next whole hour)
Approx. Inundation Extent
Incorporated City
County
Hernandez Sheet Index

Maximum Inundation Depth (feet)
≤ 2
>2 to 5
>5 to 10
>10 to 20
>20



0 0.25 0.5 1 Miles
0 1,000 2,000 4,000 Feet
Scale 1:24,000 or 1 " = 2,000 '

Inundation Depth Map for Fair Weather
Hypothetical Failure of
Hernandez Dam
Federal Dam ID: CA00848 State Dam ID: 1025-002
Sheet 5 of 6
San Benito County
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Rev	Date	Description	Prepared By	Accepted By
	18 March 2016	FINAL	GEI Consultants	
	No Revisions To Date			

Dam Owner:
San Benito County Water District
30 Mansfield Road
Hollister, CA 95024-0899
Information Contact: Mr. Jeff Cattaneo, (831) 637-8218
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Cross Section	Distance from Dam (ft)	Distance from Dam (mi)	Station	Initial Wave Arrival Time, 1 Foot (hh:mm)	Time to Peak (hh:mm)	Peak Inundation Depth (ft)	Peak Veloicty (fps)	Peak Discharge (cfs)	Peak Water Elevation (ft)	Location Description
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28	410,759	77.8	4107+59	23:54	25:46	14	5	11,995	276	Nash Road Bridge crossing
29	417,546	79.1	4175+46	24:25	26:22	15	6	11,849	256	Highway 156B Bridge crossing
30	423,238	80.2	4232+38	24:54	26:53	11	5	11,769	237	Highway 156 Bridge crossing
31	435,258	82.4	4352+58	26:17	27:56	9	4	11,586	200	near Ortiz Produce
32	454,205	86.0	4542+05	28:57	29:19	14	3	10,208	161	northeast of True Leaf Farms
33	464,334	87.9	4643+34	28:56	32:06	17	4	9,082	142	Interstate 101 Bridge

2,061,007 2,070,850 2,080,692 2,090,535 2,100,377 2,110,220

13,412,007 13,405,445 13,398,883 13,392,322 13,385,760 13,379,198

SANTA CLARA COUNTY

SANTA CRUZ COUNTY

SAN BENITO COUNTY

Pajaro River

San Benito River

Tres Pinos Creek

Cross Section 32

Cross Section 31

Cross Section 30

Cross Section 29

Cross Section 27

4600+00 4500+00 4400+00 4300+00 4200+00 4100+00

San Juan Bautista

Hollister

Sheet 5 of 6

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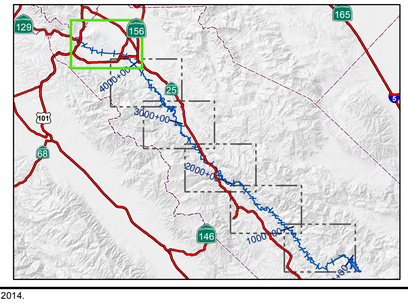
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- School
- Licensed Healthcare Facility
- Bridge
- River
- Cross Section
- Flow Path with Stationing (ft)
- –2– Approx. Time to 1 Foot Depth (Rounded to next whole hour)
- Approx. Inundation Extent
- Incorporated City
- County
- Hernandez Sheet Index

Maximum Inundation Depth (feet)

- ≤ 2
- >2 to 5
- >5 to 10
- >10 to 20
- >20



0 0.25 0.5 1 Miles

0 1,000 2,000 4,000 Feet

Scale 1:24,000 or 1 " = 2,000 '

Inundation Depth Map for Fair Weather
Hypothetical Failure of
Hernandez Dam
Federal Dam ID: CA00848 State Dam ID: 1025-002
Sheet 6 of 6

San Benito County
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Rev	Date	Description	Prepared By	Accepted By
	18 March 2016	FINAL	GEI Consultants	
	No Revisions To Date			

Dam Owner:
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30 Mansfield Road
Hollister, CA 95024-0899
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Cross Section	Distance from Dam (mi)	Station	Initial Wave Arrival Time, 1 Foot (hh:mm)	Time to Peak (hh:mm)	Peak Inundation Depth (ft)	Peak Veloicty (fps)	Peak Discharge (cfs)	Peak Water Elevation (ft)	Location Description
1	0.6	57+53	0:48	1:14	11	4	11,398	652	near Willow Grove Elementary School
2	1.8	126+30	1:36	2:01	19	7	10,809	595	near William Renz & Sons Shop
3	3.5	210+58	2:29	2:50	15	4	8,589	531	Airline Hwy Bridge crossing
4	4.8	279+00	3:22	3:45	11	5	7,706	482	near San Benito County Historical Park
5	6.4	367+26	4:44	5:46	9	3	5,650	433	near Southside Road crossing
6	7.7	429+90	5:33	6:36	13	2	4,797	409	Southside Road and K T Road intersection
7	9.4	554+79	6:57	8:48	11	5	4,394	358	near Southside School District
8	11.3	659+87	7:31	10:06	8	4	3,223	317	near Pinnacles Community School

Notes:

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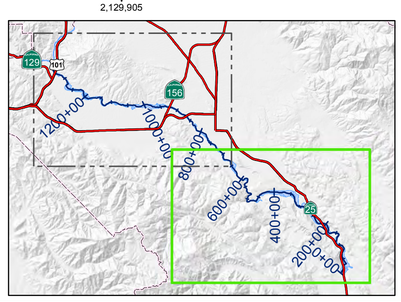
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School
Licensed Healthcare Facility
Bridge
River
Cross Section
Flow Path with Stationing (ft)
Approx. Time to 1 Foot Depth (Rounded to next whole hour)
Approx. Inundation Extent
Incorporated City
County
Paicines Sheet Index

Maximum Inundation Depth (feet)
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0 0.25 0.5 1 Miles

0 1,000 2,000 4,000 Feet

Scale 1:24,000 or 1 " = 2,000 '

Inundation Depth Map for Fair Weather
Hypothetical Failure of
Paicines Dam
State Dam ID: 1025-000
Sheet 1 of 2

San Benito County
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Rev	Date	Description	Prepared By	Accepted By
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Cross Section	Distance from Dam (mi)	Station	Initial Wave Arrival Time, 1 Foot (hh:mm)	Time to Peak (hh:mm)	Peak Inundation Depth (ft)	Peak Veloicty (fps)	Peak Discharge (cfs)	Peak Water Elevation (ft)	Location Description
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9	14.9	730+13	8:39	11:17	12	2	2,604	291	Union Road Bridge crossing
10	17.2	800+90	9:47	12:01	6	3	2,540	268	Nash Road Bridge crossing
11	18.3	868+77	10:47	12:55	8	5	2,413	249	Highy 156B Bridge crossing
12	19.6	925+69	11:33	13:32	6	3	2,382	233	Highy 156 Bridge crossing
13	20.9	1045+89	13:25	15:23	5	3	2,248	196	near Ortiz Produce
14	22.2	1235+36	16:52	18:52	7	2	1,942	155	northeast of True Leaf Farms
15	24.2	1336+65	19:24	23:04	11	2	1,433	137	Interstate 101 Bridge

Notes:

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Distance from Dam and **Stationing** are reckoned from the centerline of Paicines Dam along the Flow Path. **Distance from Dam** is in miles and **Stationing** is in feet (Stationing 12+34 = 1,234').
Initial Wave Arrival Time, 1 Foot is the time to achieve 1 foot of water depth after initiation of the dam break. **Time to Peak** is the time to achieve the maximum water depth after initiation of the dam break.
Peak Inundation Depth is the maximum water depth. **Peak Velocity** is the maximum velocity. **Peak Discharge** is an estimate of the maximum flow rate integrated over the entire cross section line.
Peak Water Elevation is the maximum water surface elevation. **Location Description** indicates major roads that cross, or are near, the Flow Path at that cross section.

4. The values displayed in the table for each cross section are the maximum for that parameter along each cross section line, except for the **Initial Wave Arrival Time, 1 Foot** and **Time to Peak** which are the minimum for that parameter along each cross section line.

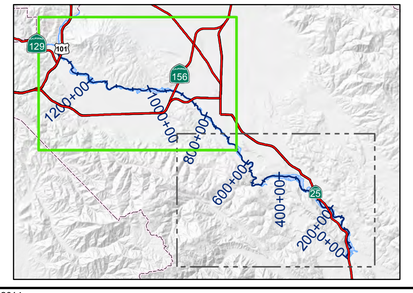
5. For other details refer to the supporting report "Paicines Dam Failure and Inundation Study" March 2016.

6. Structures are shown in the aerial photo on the maps but may not clearly display all possible structures potentially within the inundation limits.

7. Map projection: Universal Transverse Mercator, Zone 10, Feet, North American Datum 1983. **Reference Points** and border tics display these coordinate values. All elevations are referenced to North American Vertical Datum 1988.

School
Licensed Healthcare Facility
Bridge
River
Cross Section
Flow Path with Stationing (ft)
-2- Approx. Time to 1 Foot Depth (Rounded to next whole hour)
Approx. Inundation Extent
Incorporated City
County
Paicines Sheet Index

Maximum Inundation Depth (feet)
≤ 2
>2 to 5
>5 to 10
>10 to 20
>20



0 0.25 0.5 1 Miles
0 1,000 2,000 4,000 Feet
Scale 1:24,000 or 1 " = 2,000 '

Inundation Depth Map for Fair Weather Hypothetical Failure of
Paicines Dam
State Dam ID: 1025-000
Sheet 2 of 2

San Benito County
© 2015 San Benito County Water District

Rev	Date	Description	Prepared By	Accepted By
	18 March 2016	FINAL	GEI Consultants	
	No Revisions To Date			

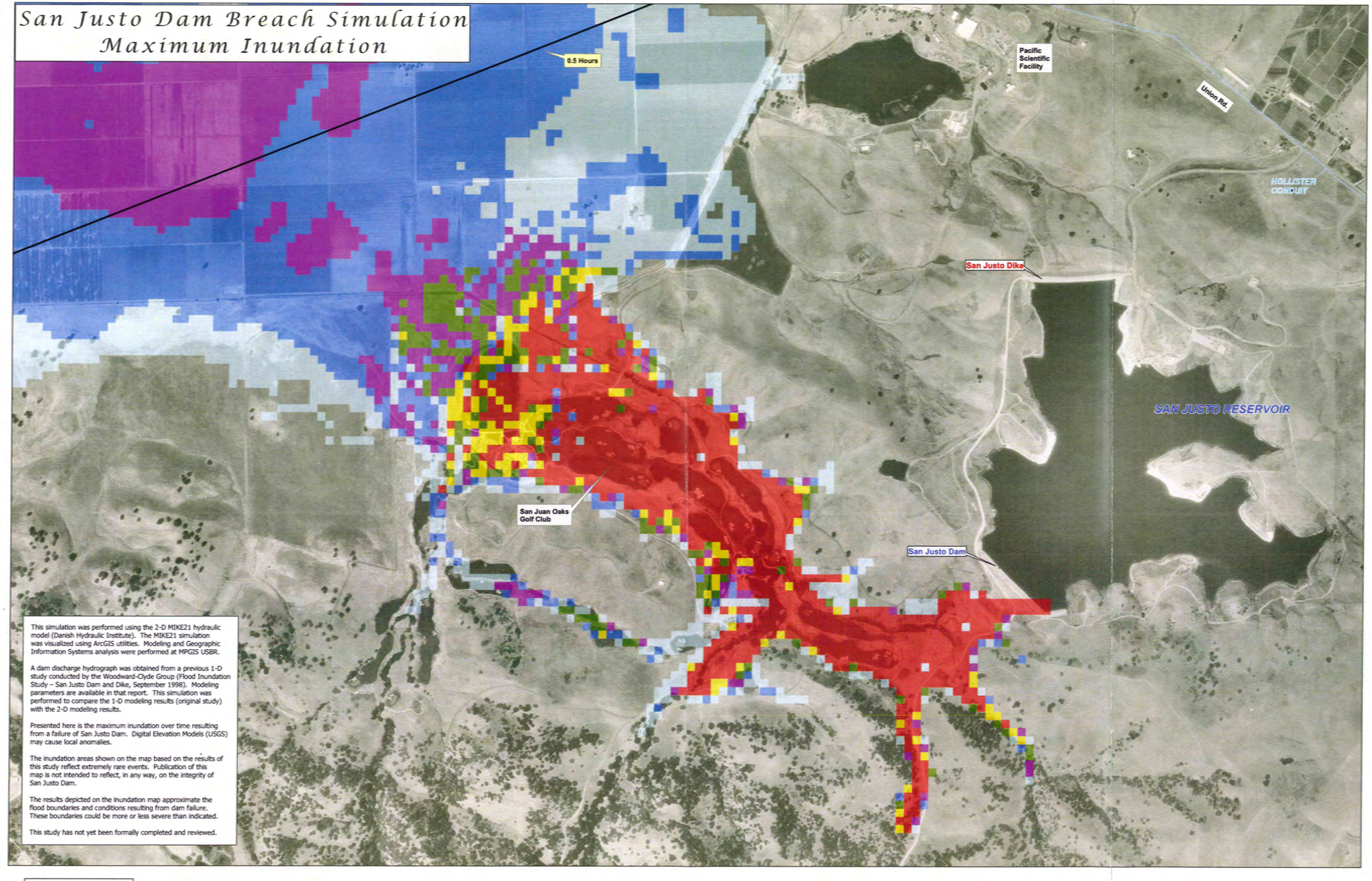
Dam Owner:
San Benito County Water District
30 Mansfield Road
Hollister, CA 95024-0899
Information Contact: Mr. Jeff Cattaneo, (831) 637-8218
Emergency Contact: (831) 634-8218 x122

Inundation Analysis Performed by:
GEI Consultants, Inc.
Chong Vang, PE 80454

Data Sources: Incorporated City Limits from CalFire, December 2014. Licensed Healthcare Facilities from Office of Statewide Health Planning and Development, January 2006. Schools from San Benito County, November 2015. Highways from TIGER, 2013. Aerial Photography from National Agricultural Imagery Program, USDA, 2014.

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San Justo Dam Breach Simulation
Maximum Inundation



This simulation was performed using the 2-D MIKE21 hydraulic model (Danish Hydraulic Institute). The MIKE21 simulation was visualized using ArcGIS utilities. Modeling and Geographic Information Systems analysis were performed at MPGIS USBR.

A dam discharge hydrograph was obtained from a previous 1-D study conducted by the Woodward-Clyde Group (Flood Inundation Study – San Justo Dam and Dike, September 1998). Modeling parameters are available in that report. This simulation was performed to compare the 1-D modeling results (original study) with the 2-D modeling results.

Presented here is the maximum inundation over time resulting from a failure of San Justo Dam. Digital Elevation Models (USGS) may cause local anomalies.

The inundation areas shown on the map based on the results of this study reflect extremely rare events. Publication of this map is not intended to reflect, in any way, on the integrity of San Justo Dam.

The results depicted on the inundation map approximate the flood boundaries and conditions resulting from dam failure. These boundaries could be more or less severe than indicated.

This study has not yet been formally completed and reviewed.

Maximum Depth (meters)
- 1
- 2
- 3
- 4
- 5
- >5

Time Time to Leading Edge

Projection UTM - Zone 10, NAD 27
October, 1999

1:6,000

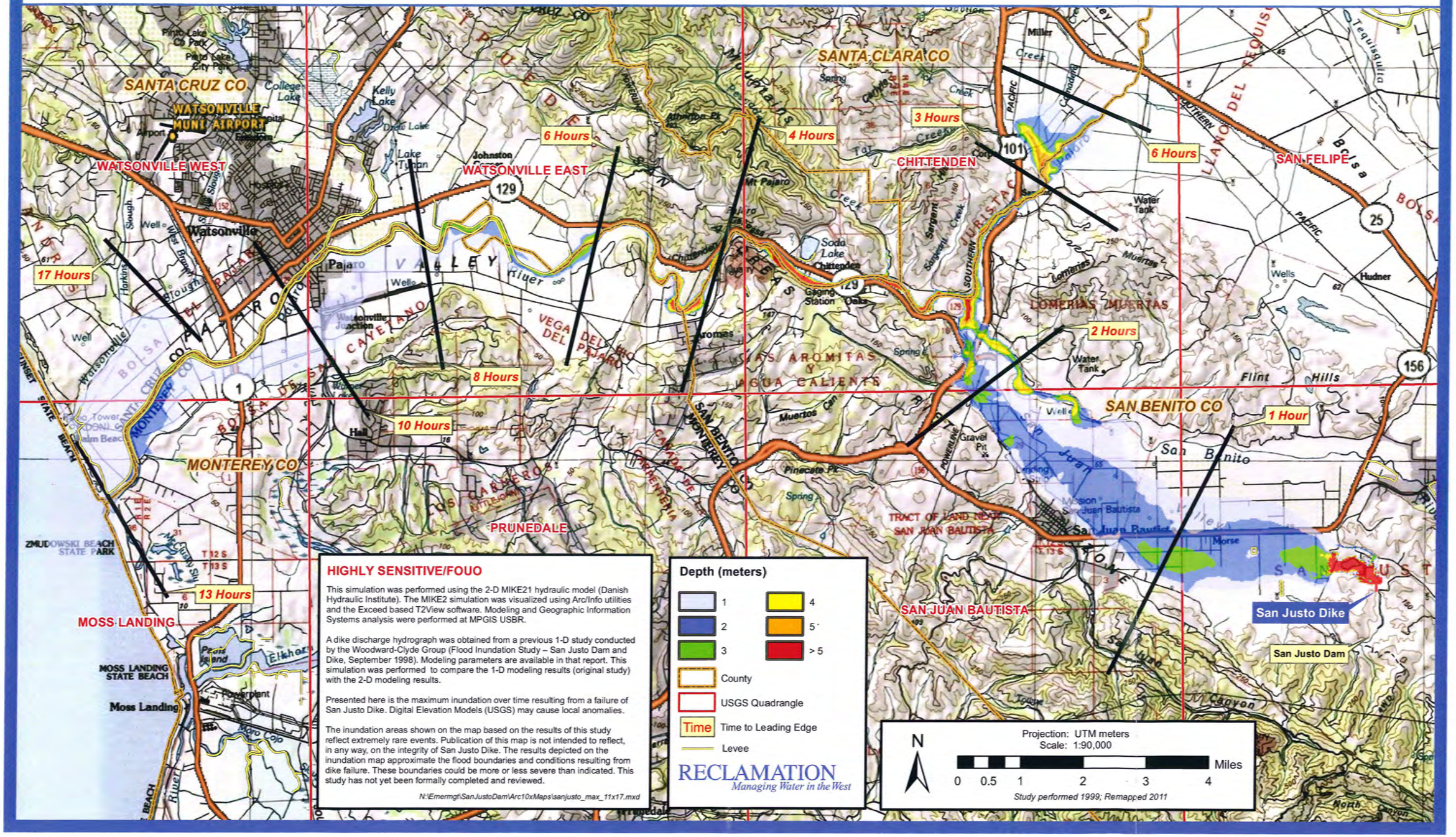
0 0.125 0.25 0.5 0.75 1 Miles

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

RECLAMATION
Managing Water in the West

SAN JUSTO DIKE BREACH SIMULATION

Maximum Inundation and Leading Edge Times



HIGHLY SENSITIVE/FOUO

This simulation was performed using the 2-D MIKE21 hydraulic model (Danish Hydraulic Institute). The MIKE2 simulation was visualized using Arc/Info utilities and the Exceed based T2View software. Modeling and Geographic Information Systems analysis were performed at MPGIS USBR.

A dike discharge hydrograph was obtained from a previous 1-D study conducted by the Woodward-Clyde Group (Flood Inundation Study – San Justo Dam and Dike, September 1998). Modeling parameters are available in that report. This simulation was performed to compare the 1-D modeling results (original study) with the 2-D modeling results.

Presented here is the maximum inundation over time resulting from a failure of San Justo Dike. Digital Elevation Models (USGS) may cause local anomalies.

The inundation areas shown on the map based on the results of this study reflect extremely rare events. Publication of this map is not intended to reflect, in any way, on the integrity of San Justo Dike. The results depicted on the inundation map approximate the flood boundaries and conditions resulting from dike failure. These boundaries could be more or less severe than indicated. This study has not yet been formally completed and reviewed.

N:\Emermgt\SanJustoDam\Arc10xMaps\sanjusto_max_11x17.mxd

Depth (meters)

1 · 2 · 3 · 4 · 5 · > 5

County

USGS Quadrangle

Time — Time to Leading Edge

Levee

RECLAMATION
Managing Water in the West

N

Projection: UTM meters
Scale: 1:90,000

0 0.5 1 2 3 4 Miles

Study performed 1999; Remapped 2011

ANDERSON DAM FLOOD INUNDATION MAPS

LEROY ANDERSON DAM

SHEET 8
SHEET 7
SHEET 6
SHEET 5
SHEET 4
SHEET 9
SHEET 10
SHEET 11
SHEET 12

ALAMEDA
SAN JOAQUIN
SAN MATEO
STANISLAUS
SANTA CLARA
SANTA CRUZ
SAN BENITO
MONTEREY

Pacific Ocean
Elkhorn Slough
Monterey Bay

San Francisco Int'l Airport
Newman Y
Milpitas San Jose Intl

NOTES:

1.˜ USERS OF THESE MAPS ARE ADVISED THAT BECAUSE OF THE METHOD, PROCEDURES, AND ASSUMPTIONS USED TO DEVELOP THE FLOOD AREAS, THE LIMITS OF FLOODING SHOWN AND FLOOD WAVE TRAVEL TIMES ARE APPROXIMATE AND SHOULD BE USED ONLY AS A GUIDELINE FOR ESTABLISHING EVACUATION ZONES. ACTUAL AREAS INUNDATED WILL DEPEND ON ACTUAL FAILURE CONDITIONS AND MAY DIFFER FROM AREAS SHOWN ON THE MAPS.

2.˜ TWO FLOODING SCENARIOS ARE PRESENTED ON THE MAPS; THE “FAIR WEATHER” SCENARIO AND THE “INFLOW DESIGN FLOOD” SCENARIO. THESE SCENARIOS ARE DEFINED AS FOLLOWS:

(A)˜ THE FAIR WEATHER SCENARIO ASSUMES THAT THE DAM FAILURE OCCURS DURING NON-STORM CONDITIONS WITH A NORMAL FULL POOL ELEVATION IN THE RESERVOIR AND NORMAL FLOW CONDITIONS DOWNSTREAM OF THE DAM.

(B)˜ THE INFLOW DESIGN FLOOD SCENARIO ASSUMES THAT THE DAM FAILURE OCCURS DURING A LARGE STORM EVENT WITH A HIGH POOL ELEVATION IN THE RESERVOIR AND HIGH FLOW CONDITIONS DOWNSTREAM OF THE DAM. FOR THIS PARTICULAR DAM, THE INFLOW DESIGN FLOOD IS EQUAL TO THE PROBABLE MAXIMUM FLOOD EVENT. ANTECEDENT FLOW CONDITIONS ASSUME NEAR FULL CREEKS BY USING AS-IS LIDAR TERRAIN DATA (NO GROUND SURVEY).

Esri, HERE, DeLorme, MapmyIndia, © OpenStreet

SCALE 1" = 40000'
SHEET 1

SANTA CLARA VALLEY WATER DISTRICT
5750 ALMADEN EXPWY
SAN JOSE, CA
95118-3614
(408) 265 - 2600

LEROY ANDERSON DAM
FLOOD INUNDATION MAPS

CA DWR DAM ID# 72-009
SANTA CLARA COUNTY

Santa Clara Valley Water District

REVIEWED BY:

ACCEPTED BY:

DATE APR2016
DESIGN JX
DRAWN JX
CHECKED

AFFECTED JURISDICTIONS:
Santa Clara County, San Benito County, Santa Cruz County, Monterey County, City of San Jose, City of Santa Clara, City of Milpitas, City of Sunnyvale, City of Mountain View, City of Gilroy, City of Morgan Hill, City of Watsonville

USGS QUADRANGLES:
Mountain View, Milpitas, San Jose West, San Jose East, Santa Teresa Hills, Morgan Hill, Gilroy, Mount Sizer, Mount Madonna, Chittenden, San Felipe, Watsonville East, Watsonville West, Moss Landing

INFLOW DESIGN FLOOD (NORTH)

XS STA (Miles D/S of Dam)	Maximum Flow (cfs)	Flood-Wave Arrival Time	Peak Elevation Time	Deflood Time	Maximum Depth (ft)	Maximum Elevation (ft)	Maximum Velocity (ft/s)
1	1,360,000	0 HR 30 MIN	0 HR 50 MIN	5 HR 10 MIN	18.88	366.5	11.3
2	1,333,700	0 HR 45 MIN	0 HR 50 MIN	6 HR 30 MIN	20.93	356.1	11.7
3	1,311,100	0 HR 45 MIN	0 HR 55 MIN	10 HR 20 MIN	25.82	337.5	11.9
4	1,296,700	0 HR 50 MIN	0 HR 55 MIN	10 HR 30 MIN	23.40	318.6	9.9
5	1,272,400	0 HR 55 MIN	1 HR 5 MIN	10 HR 25 MIN	26.39	297.1	9.8
6	1,122,900	1 HR 30 MIN	1 HR 45 MIN	13 HR 5 MIN	36.75	290.5	6.2
7	763,900	1 HR 40 MIN	1 HR 50 MIN	12 HR 55 MIN	43.81	288.4	4.8
8	670,600	1 HR 40 MIN	1 HR 55 MIN	14 HR 5 MIN	43.71	284.1	4.2
9	664,600	1 HR 55 MIN	2 HR 10 MIN	13 HR 5 MIN	17.27	232.1	6.7
10	652,000	2 HR 0 MIN	2 HR 20 MIN	12 HR 0 MIN	19.87	222.2	4.8
11	639,000	2 HR 10 MIN	2 HR 30 MIN	12 HR 55 MIN	19.49	209.9	3.9
12	619,200	2 HR 50 MIN	3 HR 20 MIN	15 HR 35 MIN	20.97	189.2	4.2
13	531,700	3 HR 10 MIN	3 HR 45 MIN	17 HR 5 MIN	33.39	186.5	2.4
14	458,000	3 HR 30 MIN	3 HR 20 MIN	1 HR 0 MIN	11.43	164.0	3.0
15	419,900	3 HR 50 MIN	5 HR 25 MIN	5 HR 50 MIN	15.54	154.4	2.7
16	409,000	4 HR 20 MIN	5 HR 15 MIN	9 HR 15 MIN	21.41	147.3	3.8
17	401,400	4 HR 45 MIN	5 HR 15 MIN	13 HR 0 MIN	29.80	137.92	3.3
18	391,200	5 HR 10 MIN	6 HR 0 MIN	20 HR 45 MIN	26.03	117.94	2.6
19	369,600	5 HR 35 MIN	6 HR 10 MIN	18 HR 15 MIN	29.60	105.51	2.3
20	343,300	5 HR 50 MIN	6 HR 30 MIN	19 HR 15 MIN	28.04	90.95	2.4
21	320,900	6 HR 40 MIN	7 HR 20 MIN	21 HR 40 MIN	27.65	74.84	2.2
22	312,300	7 HR 0 MIN	7 HR 50 MIN	19 HR 10 MIN	24.52	62.27	2.4
23	304,300	7 HR 30 MIN	8 HR 15 MIN	19 HR 45 MIN	13.65	49.96	2.2
24	293,400	8 HR 15 MIN	9 HR 5 MIN	22 HR 5 MIN	21.87	38.09	1.8
25	281,500	8 HR 50 MIN	9 HR 45 MIN	20 HR 10 MIN	13.75	29.31	2.0
26	267,600	9 HR 25 MIN	10 HR 20 MIN	20 HR 45 MIN	21.53	23.94	1.6
27	253,800	9 HR 45 MIN	10 HR 55 MIN	20 HR 35 MIN	28.15	16.02	1.8
28	233,800	11 HR 55 MIN	13 HR 10 MIN	18 HR 50 MIN	9.51	9.48	2.5
29	214,900	12 HR 0 MIN	13 HR 25 MIN	18 HR 25 MIN	11.42	9.29	2.3
30	159,000	12 HR 45 MIN	14 HR 40 MIN	10 HR 20 MIN	8.28	7.59	2.4
31	135,500	13 HR 15 MIN	14 HR 55 MIN	12 HR 5 MIN	7.56	7.15	2.1
32	119,500	13 HR 20 MIN	14 HR 55 MIN	11 HR 30 MIN	5.88	7.10	4.6
33	26,000	14 HR 30 MIN	15 HR 50 MIN	2 HR 30 MIN	2.74	5.58	3.2
34	8,400	16 HR 40 MIN	21 HR 15 MIN	5 HR 40 MIN	2.08	4.92	1.5
35	4,100	26 HR 35 MIN	45 HR 20 MIN	N/A	2.35	2.54	1.3

FAIR WEATHER (NORTH)

XS STA (Miles D/S of Dam)	Maximum Flow (cfs)	Flood-Wave Arrival Time	Peak Elevation Time	Deflood Time	Maximum Depth (ft)	Maximum Elevation (ft)	Maximum Velocity (ft/s)
1	974,500	0 HR 45 MIN	1 HR 20 MIN	4 HR 55 MIN	14.92	362.5	9.8
2	962,300	0 HR 40 MIN	1 HR 15 MIN	5 HR 40 MIN	17.59	352.8	9.5
3	951,200	0 HR 45 MIN	1 HR 20 MIN	9 HR 0 MIN	22.27	334.0	10.5
4	943,400	0 HR 55 MIN	1 HR 25 MIN	9 HR 30 MIN	20.80	316.0	8.7
5	930,300	1 HR 0 MIN	1 HR 30 MIN	12 HR 55 MIN	23.12	293.8	8.8
6	821,800	1 HR 10 MIN	1 HR 50 MIN	17 HR 0 MIN	29.45	283.2	6.6
7	608,600	1 HR 20 MIN	2 HR 20 MIN	45 HR 50 MIN	36.12	280.7	6.3
8	429,800	1 HR 25 MIN	2 HR 25 MIN	16 HR 30 MIN	36.56	277.0	6.1
9	420,600	2 HR 5 MIN	2 HR 50 MIN	13 HR 30 MIN	13.03	227.8	5.8
10	406,700	2 HR 15 MIN	3 HR 0 MIN	13 HR 55 MIN	15.40	217.7	4.8
11	393,400	2 HR 30 MIN	3 HR 10 MIN	17 HR 15 MIN	15.75	206.2	3.4
12	367,400	2 HR 50 MIN	4 HR 25 MIN	14 HR 15 MIN	15.63	183.9	3.6
13	271,700	3 HR 5 MIN	4 HR 50 MIN	40 HR 40 MIN	28.23	181.4	2.4
14	232,400	3 HR 10 MIN	4 HR 30 MIN	2 HR 35 MIN	11.14	163.7	2.7
15	194,200	3 HR 25 MIN	5 HR 20 MIN	3 HR 5 MIN	14.72	153.5	2.3
16	186,600	3 HR 45 MIN	7 HR 30 MIN	16 HR 55 MIN	10.84	136.8	2.8
17	181,500	4 HR 5 MIN	7 HR 35 MIN	33 HR 10 MIN	23.06	131.18	2.5
18	177,000	4 HR 30 MIN	8 HR 0 MIN	31 HR 15 MIN	22.30	114.21	2.1
19	162,800	6 HR 45 MIN	8 HR 30 MIN	49 HR 50 MIN	24.73	100.64	1.9
20	149,000	7 HR 15 MIN	8 HR 55 MIN	43 HR 50 MIN	24.13	87.04	1.9
21	137,200	7 HR 35 MIN	10 HR 0 MIN	42 HR 5 MIN	22.52	69.71	1.7
22	132,000	7 HR 55 MIN	10 HR 40 MIN	42 HR 10 MIN	19.80	57.55	1.7
23	128,200	8 HR 45 MIN	11 HR 20 MIN	20 HR 55 MIN	9.60	45.91	1.6
24	122,900	8 HR 50 MIN	12 HR 25 MIN	44 HR 5 MIN	16.75	32.97	1.4
25	117,400	10 HR 25 MIN	13 HR 25 MIN	29 HR 25 MIN	9.53	25.09	1.5
26	110,300	11 HR 15 MIN	14 HR 15 MIN	30 HR 15 MIN	17.32	19.73	1.3
27	103,700	13 HR 5 MIN	15 HR 5 MIN	17 HR 15 MIN	25.22	13.09	1.7
28	88,100	14 HR 15 MIN	21 HR 10 MIN	7 HR 40 MIN	6.84	6.81	2.3
29	70,800	16 HR 0 MIN	21 HR 15 MIN	6 HR 10 MIN	8.86	6.73	2.3
30	55,500	17 HR 55 MIN	23 HR 30 MIN	6 HR 20 MIN	6.19	5.50	2.7
31	51,900	17 HR 30 MIN	24 HR 0 MIN	7 HR 10 MIN	5.62	5.21	1.7
32	47,800	18 HR 30 MIN	24 HR 0 MIN	6 HR 35 MIN	3.97	5.19	3.4
33	1,400	28 HR 55 MIN	31 HR 45 MIN	3 HR 15 MIN	0.81	3.65	1.2
34	0	N/A	N/A	N/A	0.39	3.23	0.1
35	0	N/A	N/A	N/A	0.00	0.19	0.0

INFLOW DESIGN FLOOD (COYOTE)

XS STA (Miles D/S of Dam)	Maximum Flow (cfs)	Flood-Wave Arrival Time	Peak Elevation Time	Deflood Time	Maximum Depth (ft)	Maximum Elevation (ft)	Maximum Velocity (ft/s)
0.5	477,600	0 HR 20 MIN	1 HR 0 MIN	12 HR 20 MIN	81.37	749.9	17.4
1.0	477,500	0 HR 20 MIN	1 HR 0 MIN	12 HR 30 MIN	97.11	744.3	12.0
1.5	477,000	0 HR 20 MIN	1 HR 0 MIN	12 HR 30 MIN	93.91	726.3	12.5
2.0	475,800	0 HR 30 MIN	1 HR 0 MIN	12 HR 30 MIN	60.56	688.4	13.5
2.3	474,800	0 HR 30 MIN	1 HR 0 MIN	12 HR 20 MIN	56.57	687.2	15.0

FAIR WEATHER (COYOTE)

XS STA (Miles D/S of Dam)	Maximum Flow (cfs)	Flood-Wave Arrival Time	Peak Elevation Time	Deflood Time	Maximum Depth (ft)	Maximum Elevation (ft)	Maximum Velocity (ft/s)
0.5	197,600	0 HR 20 MIN	1 HR 20 MIN	3 HR 50 MIN	51.44	719.9	13.4
1.0	196,800	0 HR 20 MIN	1 HR 20 MIN	4 HR 20 MIN	63.45	710.6	11.8
1.5	195,600	0 HR 20 MIN	1 HR 20 MIN	4 HR 20 MIN	59.41	691.8	10.6
2.0	194,900	0 HR 30 MIN	1 HR 20 MIN	5 HR 30 MIN	40.15	668.0	10.4
2.3	194,200	0 HR 30 MIN	1 HR 20 MIN	5 HR 30 MIN	34.95	665.6	12.1

SHEET 2

SANTA CLARA VALLEY WATER DISTRICT
5750 ALMADEN EXPWY
SAN JOSE, CA
95118-3614
(408)265 - 2600

LEROY ANDERSON DAM FLOOD INUNDATION MAPS

CA DWR DAM ID# 72-009 SANTA CLARA COUNTY

Santa Clara Valley Water District

REVIEWED BY:

ACCEPTED BY:

DATE APR2016
DESIGN JX
DRAWN JX
CHECKED

AFFECTED JURISDICTIONS:
Santa Clara County, San Benito County, Santa Cruz County, Monterey County, City of San Jose, City of Santa Clara, City of Milpitas, City of Cupertino, City of Mountain View, City of Gilroy, City of Morgan Hill, City of Watsonville

USGS QUADRANGLES:
Mountain View, Milpitas, San Jose West, San Jose East, Santa Teresa Hills, Morgan Hill, Gilroy, Mount Sizer, Mount Madonna, Chittenden, San Felipe, Watsonville East, Watsonville West, Moss Landing

INFLOW DESIGN FLOOD (SOUTH)

XS STA (Miles D/S of Dam)	Maximum Flow (cfs)	Flood-Wave Arrival Time	Peak Elevation Time	Deflood Time	Maximum Depth (ft)	Maximum Elevation (ft)	Maximum Velocity (ft/s)
1	469,600	0 HR 30 MIN	0 HR 55 MIN	11 HR 0 MIN	21.71	367.65	7.6
2	328,500	0 HR 35 MIN	1 HR 0 MIN	8 HR 45 MIN	19.23	366.14	4.2
3	252,900	0 HR 50 MIN	1 HR 15 MIN	12 HR 55 MIN	18.77	348.45	4.4
4	209,500	0 HR 55 MIN	1 HR 15 MIN	7 HR 55 MIN	11.07	324.76	3.6
5	181,200	1 HR 20 MIN	1 HR 50 MIN	9 HR 30 MIN	10.58	309.42	4.9
6	173,500	1 HR 40 MIN	2 HR 5 MIN	9 HR 55 MIN	12.61	290.02	4.1
7	159,800	1 HR 50 MIN	2 HR 15 MIN	16 HR 30 MIN	16.10	271.48	4.3
8	149,500	2 HR 10 MIN	2 HR 30 MIN	10 HR 20 MIN	14.58	252.52	4.1
9	135,800	2 HR 25 MIN	2 HR 50 MIN	7 HR 10 MIN	12.22	233.10	3.3
10	119,200	2 HR 45 MIN	3 HR 35 MIN	20 HR 30 MIN	14.61	214.23	2.9
11	87,500	3 HR 40 MIN	4 HR 35 MIN	10 HR 20 MIN	10.02	207.00	2.5
12	73,100	3 HR 40 MIN	5 HR 0 MIN	18 HR 20 MIN	19.66	192.44	2.1
13	66,100	3 HR 40 MIN	5 HR 15 MIN	19 HR 10 MIN	18.95	183.11	2.0
14	64,000	4 HR 0 MIN	5 HR 30 MIN	14 HR 40 MIN	14.84	165.73	2.7
15	60,200	4 HR 10 MIN	6 HR 15 MIN	34 HR 25 MIN	13.11	152.47	1.5
16	46,300	5 HR 0 MIN	7 HR 0 MIN	28 HR 15 MIN	7.09	149.84	1.4
17	30,800	5 HR 30 MIN	8 HR 20 MIN	14 HR 5 MIN	3.04	148.32	0.8
18	24,000	5 HR 50 MIN	8 HR 50 MIN	45 HR 5 MIN	18.26	146.46	1.2
19	23,300	6 HR 25 MIN	9 HR 40 MIN	4 HR 20 MIN	19.64	141.43	1.4
20	11,500	7 HR 5 MIN	15 HR 20 MIN	9 HR 25 MIN	21.29	140.74	0.6
21	11,400	7 HR 40 MIN	15 HR 45 MIN	9 HR 15 MIN	23.63	138.45	4.9
22	11,400	8 HR 5 MIN	16 HR 10 MIN	9 HR 15 MIN	24.89	134.84	3.6
23	11,300	8 HR 55 MIN	16 HR 35 MIN	8 HR 45 MIN	16.72	131.67	6.2
24	11,300	9 HR 25 MIN	16 HR 50 MIN	8 HR 30 MIN	18.50	120.41	6.4
25	11,300	10 HR 0 MIN	17 HR 20 MIN	19 HR 25 MIN	6.06	116.03	5.0
26	11,300	10 HR 20 MIN	17 HR 45 MIN	20 HR 5 MIN	24.00	106.98	2.1
27	11,200	11 HR 5 MIN	18 HR 0 MIN	39 HR 50 MIN	18.98	99.80	4.3
28	11,200	11 HR 25 MIN	18 HR 5 MIN	7 HR 50 MIN	19.27	89.21	3.2
29	11,200	12 HR 10 MIN	18 HR 35 MIN	7 HR 40 MIN	21.50	81.04	2.9
30	11,200	12 HR 35 MIN	19 HR 5 MIN	7 HR 35 MIN	20.43	73.71	5.5
31	11,200	13 HR 5 MIN	19 HR 10 MIN	7 HR 15 MIN	16.48	65.29	3.7
32	11,200	13 HR 30 MIN	19 HR 35 MIN	7 HR 15 MIN	16.63	56.55	2.1
33	11,200	14 HR 30 MIN	19 HR 55 MIN	5 HR 30 MIN	2.86	50.06	1.1
34	11,100	15 HR 35 MIN	21 HR 30 MIN	8 HR 0 MIN	17.32	45.30	0.8
35	11,100	16 HR 15 MIN	21 HR 40 MIN	6 HR 30 MIN	18.38	40.56	1.2
36	11,000	16 HR 30 MIN	22 HR 55 MIN	7 HR 30 MIN	18.21	31.77	0.8
37	10,600	17 HR 5 MIN	24 HR 25 MIN	8 HR 25 MIN	19.04	26.49	0.9
38	8,700	17 HR 40 MIN	29 HR 20 MIN	12 HR 45 MIN	17.71	22.02	0.9
39	7,300	18 HR 25 MIN	30 HR 10 MIN	12 HR 50 MIN	11.24	15.23	0.6
40	6,800	19 HR 5 MIN	31 HR 45 MIN	13 HR 45 MIN	8.25	12.31	0.7
41	6,400	24 HR 50 MIN	37 HR 5 MIN	13 HR 20 MIN	6.74	8.77	0.6

FAIR WEATHER (SOUTH)

XS STA (Miles D/S of Dam)	Maximum Flow (cfs)	Flood-Wave Arrival Time	Peak Elevation Time	Deflood Time	Maximum Depth (ft)	Maximum Elevation (ft)	Maximum Velocity (ft/s)
1	199,300	0 HR 50 MIN	1 HR 20 MIN	10 HR 55 MIN	17.70	363.64	5.6
2	134,100	0 HR 55 MIN	1 HR 30 MIN	8 HR 35 MIN	14.97	361.88	2.9
3	101,900	1 HR 20 MIN	1 HR 45 MIN	12 HR 55 MIN	14.94	344.62	2.9
4	77,500	1 HR 25 MIN	2 HR 20 MIN	7 HR 5 MIN	7.79	321.48	2.6
5	67,400	1 HR 55 MIN	2 HR 40 MIN	9 HR 50 MIN	7.67	306.51	3.4
6	62,000	2 HR 30 MIN	3 HR 0 MIN	9 HR 0 MIN	9.21	286.62	3.2
7	58,500	2 HR 40 MIN	3 HR 15 MIN	15 HR 25 MIN	13.05	268.43	3.1
8	52,300	3 HR 10 MIN	3 HR 40 MIN	9 HR 20 MIN	12.10	250.04	2.6
9	45,100	3 HR 30 MIN	4 HR 0 MIN	6 HR 5 MIN	10.57	231.45	2.3
10	36,300	3 HR 55 MIN	4 HR 45 MIN	18 HR 10 MIN	12.42	212.04	2.0
11	30,200	5 HR 50 MIN	7 HR 5 MIN	7 HR 40 MIN	6.69	203.67	1.7
12	27,600	5 HR 15 MIN	7 HR 45 MIN	17 HR 0 MIN	15.38	188.16	2.2
13	23,900	4 HR 50 MIN	6 HR 35 MIN	18 HR 0 MIN	14.96	179.12	2.0
14	22,000	5 HR 20 MIN	6 HR 50 MIN	13 HR 10 MIN	12.74	163.63	1.6
15	19,600	5 HR 40 MIN	8 HR 0 MIN	30 HR 5 MIN	10.25	149.61	1.0
16	13,200	6 HR 40 MIN	9 HR 40 MIN	23 HR 35 MIN	4.99	147.74	0.8
17	10,500	7 HR 0 MIN	9 HR 55 MIN	4 HR 55 MIN	1.50	146.78	1.0
18	9,300	7 HR 30 MIN	12 HR 0 MIN	35 HR 25 MIN	16.34	144.54	0.9
19	8,800	8 HR 15 MIN	13 HR 10 MIN	36 HR 10 MIN	17.38	139.17	0.9
20	5,600	9 HR 5 MIN	17 HR 35 MIN	9 HR 40 MIN	16.24	135.69	0.6
21	5,500	9 HR 50 MIN	17 HR 50 MIN	9 HR 10 MIN	18.48	133.30	4.0
22	5,500	10 HR 20 MIN	18 HR 25 MIN	9 HR 10 MIN	20.26	130.21	2.6
23	5,500	11 HR 20 MIN	18 HR 40 MIN	8 HR 25 MIN	12.85	127.80	5.8
24	5,500	11 HR 55 MIN	19 HR 0 MIN	8 HR 10 MIN	15.20	117.11	2.6
25	5,500	12 HR 30 MIN	19 HR 10 MIN	3 HR 5 MIN	1.44	111.41	5.5
26	5,400	13 HR 0 MIN	19 HR 35 MIN	7 HR 45 MIN	19.22	102.20	1.5
27	5,400	13 HR 55 MIN	20 HR 15 MIN	37 HR 5 MIN	13.90	94.72	3.7
28	5,400	14 HR 15 MIN	20 HR 15 MIN	7 HR 10 MIN	16.18	86.12	3.5
29	5,400	15 HR 15 MIN	20 HR 55 MIN	6 HR 50 MIN	17.75	77.29	3.0
30	5,400	15 HR 45 MIN	21 HR 30 MIN	41 HR 15 MIN	16.06	69.34	5.6
31	5,400	Contained within Pajaro River Levees					

SHEET 3

SANTA CLARA VALLEY WATER DISTRICT
5750 ALMADEN EXPWY
SAN JOSE, CA
95118-3614
(408)265 - 2600

LEROY ANDERSON DAM
FLOOD INUNDATION MAPS

CA DWR DAM ID# 72-009
SANTA CLARA COUNTY

Santa Clara Valley Water District

REVIEWED BY:

ACCEPTED BY:

DATE APR2016 | DESIGN JX | DRAWN JX | CHECKED

AFFECTED JURISDICTIONS:
Santa Clara County, San Benito County, Santa Cruz County, Monterey County, City of San Jose, City of Santa Clara, City of Milpitas, City of Sunnyvale, City of Mountain View, City of Gilroy, City of Morgan Hill, City of Watsonville

USGS QUADRANGLES:
Mountain View, Milpitas, San Jose West, San Jose East, Santa Teresa Hills, Morgan Hill, Gilroy, Mount Sizer, Mount Madonna, Chittenden, San Felipe, Watsonville East, Watsonville West, Moss Landing

Santa Teresa Community Hospital

Station 27
City of San Jose

HS4885

HS2775

HS5239

HS5342

LEROY ANDERSON DAM

HS5363

Saint Louise Health Center

El Toro Station
Santa Clara County

HS2753

11N
10N
9N
8N
7N
6N
5N
4N
3N
2N
1N
1S

Dam Failure Inundation

- Santa Clara County Schools
- Dams
- Hospitals
- Fire Stations
- Cross Sections
- Reference Points
- Fair Weather
- Inflow Design Flood

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SCALE 1" = 4000'
SHEET 4

SANTA CLARA VALLEY WATER DISTRICT
5750 ALMADEN EXPWY
SAN JOSE, CA
95118-3614
(408) 265 - 2600

LEROY ANDERSON DAM
FLOOD INUNDATION MAPS

CA DWR DAM ID# 72-009
SANTA CLARA COUNTY

FINAL DRAFT

Santa Clara Valley Water District

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ACCEPTED BY:

DATE	DESIGN	DRAWN	CHECKED
APR2016	JX	JX	

AFFECTED JURISDICTIONS:
Santa Clara County, San Benito County, Santa Cruz County, Monterey County, City of San Jose, City of Santa Clara, City of Milpitas, City of Sunnyvale, City of Mountain View, City of Gilroy, City of Morgan Hill, City of Watsonville

USGS QUADRANGLES:
Mountain View, Milpitas, San Jose West, San Jose East, Santa Teresa Hills, Morgan Hill, Gilroy, Mount Sizer, Mount Madonna, Chittenden, San Felipe, Watsonville East, Watsonville West, Moss Landing

O'Connor Hospital
Holderman Sanitarium
Station 10
City of San Jose
Santa Clara Valley Medical Center
Station 4
City of San Jose
Station 30
City of San Jose
Station 3
City of San Jose
Station 16
City of San Jose
Station 24
City of San Jose
Station 26
City of San Jose
HS3308
Station 6
City of San Jose
Campbell Station
Santa Clara County
HS2953
Station 13
City of San Jose
Station 18
City of San Jose
Station 17
City of San Jose
HS2967
Station 35
City of San Jose
HS4926
Station 12
City of San Jose
Santa Teresa Community Hospital

19N
18N
17N
16N
15N
14N
13N
12N
11N
10N

Dam Failure Inundation

- Santa Clara County Schools
- Dams
- Hospitals
- Fire Stations
- Cross Sections
- Reference Points
- Fair Weather
- Inflow Design Flood

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LEROY ANDERSON DAM
FLOOD INUNDATION MAPS

CA DWR DAM ID# 72-009
SANTA CLARA COUNTY

SCALE 1" = 4000'
SHEET 5

SANTA CLARA VALLEY WATER DISTRICT
5750 ALMADEN EXPWY
SAN JOSE, CA
95118-3614
(408) 265 - 2600

FINAL DRAFT

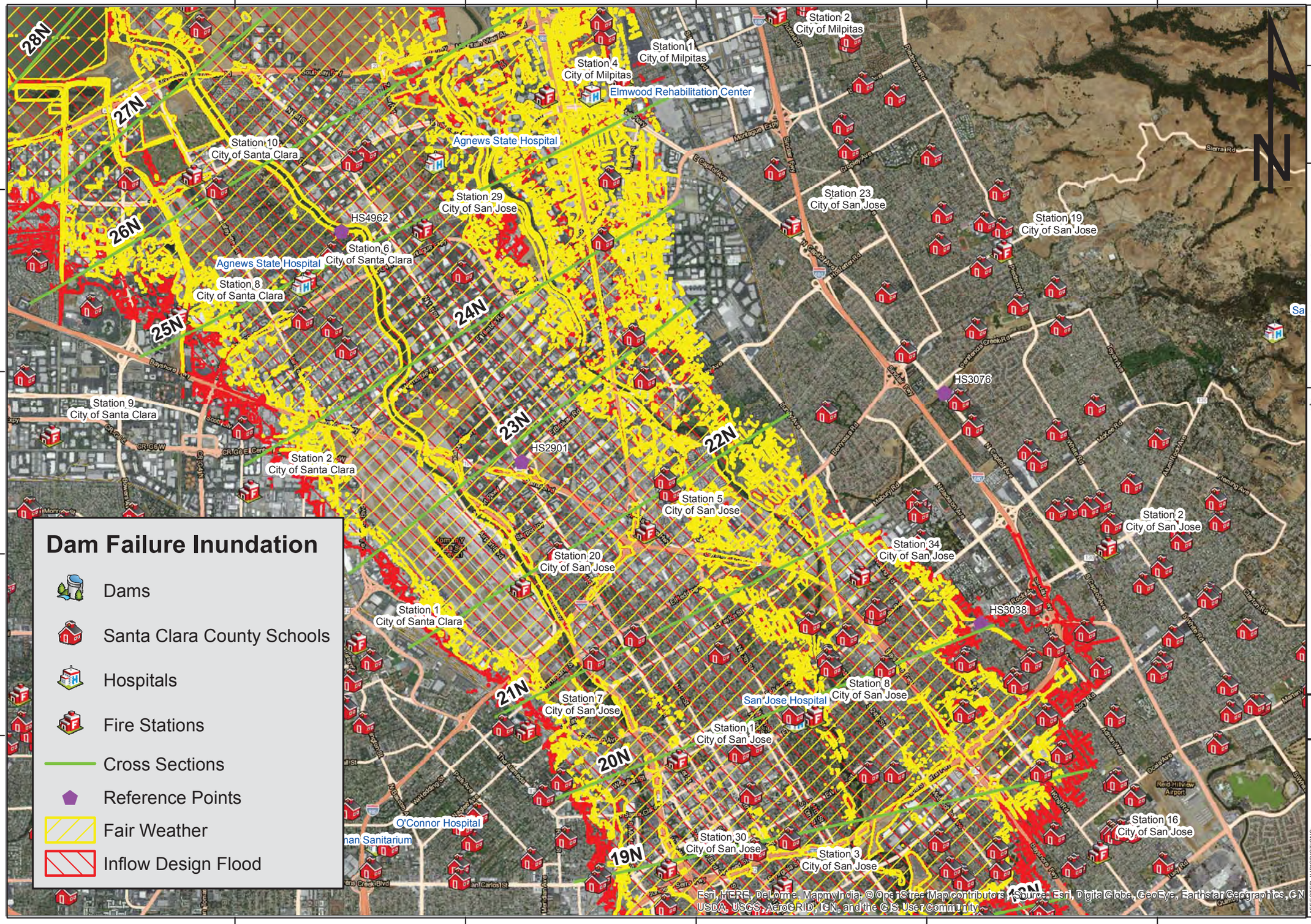
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DATE APR2016
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CHECKED

AFFECTED JURISDICTIONS:
Santa Clara County, San Benito County, Santa Cruz County, Monterey County, City of San Jose, City of Santa Clara, City of Milpitas, City of Sunnyvale, City of Mountain View, City of Gilroy, City of Morgan Hill, City of Watsonville

USGS QUADRANGLES:
Mountain View, Milpitas, San Jose West, San Jose East, Santa Teresa Hills, Morgan Hill, Gilroy, Mount Sizer, Mount Madonna, Chittenden, San Felipe, Watsonville East, Watsonville West, Moss Landing



SCALE 1" = 4000'

SHEET 6

SANTA CLARA VALLEY WATER DISTRICT
5750 ALMADEN EXPWY
SAN JOSE, CA
95118-3614
(408) 265 - 2600

LEROY ANDERSON DAM FLOOD INUNDATION MAPS

CA DWR DAM ID# 72-009 SANTA CLARA COUNTY

FINAL DRAFT Santa Clara Valley Water District

REVIEWED BY:

ACCEPTED BY:

DATE	DESIGN	DRAWN	CHECKED
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AFFECTED JURISDICTIONS:
Santa Clara County, San Benito County, Santa Cruz County, Monterey County, City of San Jose, City of Santa Clara, City of Milpitas, City of Sunnyvale, City of Mountain View, City of Gilroy, City of Morgan Hill, City of Watsonville

USGS QUADRANGLES:
Mountain View, Milpitas, San Jose West, San Jose East, Santa Teresa Hills, Morgan Hill, Gilroy, Mount Sizer, Mount Madonna, Chittenden, San Felipe, Watsonville East, Watsonville West, Moss Landing

Dam Failure Inundation

- Dams
- Santa Clara County Schools
- Hospitals
- Fire Stations
- Cross Sections
- Reference Points
- Fair Weather
- Inflow Design Flood

29N
28N
31N
30N
27N
26N
25N
24N

HS4940
HS4955
HS3002
HS4962

Station 3
City of Milpitas
Station 25
City of San Jose
Station 2
City of Milpitas
Station 1
City of Milpitas
Station 4
City of Milpitas
Elmwood Rehabilitation Center
Station 5
City of Sunnyvale
Station 6
City of Sunnyvale
Station 10
City of Santa Clara
Agnews State Hospital
Station 29
City of San Jose
Station 23
City of San Jose

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SCALE 1" = 4000'
SHEET 7

SANTA CLARA VALLEY WATER DISTRICT
5750 ALMADEN EXPWY
SAN JOSE, CA
95118-3614
(408) 265 - 2600

LEROY ANDERSON DAM
FLOOD INUNDATION MAPS

CA DWR DAM ID# 72-009
SANTA CLARA COUNTY

FINAL DRAFT

REVIEWED BY:

ACCEPTED BY:

DATE APR2016
DESIGN JX
DRAWN JX
CHECKED

AFFECTED JURISDICTIONS:
Santa Clara County, San Benito County, Santa Cruz County, Monterey County, City of San Jose, City of Santa Clara, City of Milpitas, City of Sunnyvale, City of Mountain View, City of Gilroy, City of Morgan Hill, City of Watsonville

USGS QUADRANGLES:
Mountain View, Milpitas, San Jose West, San Jose East, Santa Teresa Hills, Morgan Hill, Gilroy, Mount Sizer, Mount Madonna, Chittenden, San Felipe, Watsonville East, Watsonville West, Moss Landing

Dam Failure Inundation

- Dams
- Santa Clara County Schools
- Hospitals
- Fire Stations
- Cross Sections
- Reference Points
- Fair Weather
- Inflow Design Flood

35N
34N
33N
32N
31N
30N
29N
28N
27N
26N

Station 3
City of Palo Alto
Palo Alto Medical Foundation Clinic
Station 6
City of Palo Alto
Station 4
City of Palo Alto
HT1258
Station 2
City of Palo Alto
HT1233
Station 5
City of Palo Alto
Station 5
City of Mountain View
Station 1
Moffet Field
HS3002
Station 3
City of Mountain View
Station 5
City of Sunnyvale
Station 6
City of Sunnyvale
Station 1
City of Mountain View
HT1628
Administration
City of Mountain View
Station 4
City of Mountain View

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SCALE
1" = 4000'

SHEET
8

SANTA CLARA
VALLEY WATER
DISTRICT

5750 ALMADEN EXPWY
SAN JOSE, CA
95118-3614
(408) 265 - 2600

LEROY ANDERSON DAM
FLOOD INUNDATION MAPS

CA DWR DAM ID# 72-009
SANTA CLARA COUNTY

FINAL DRAFT

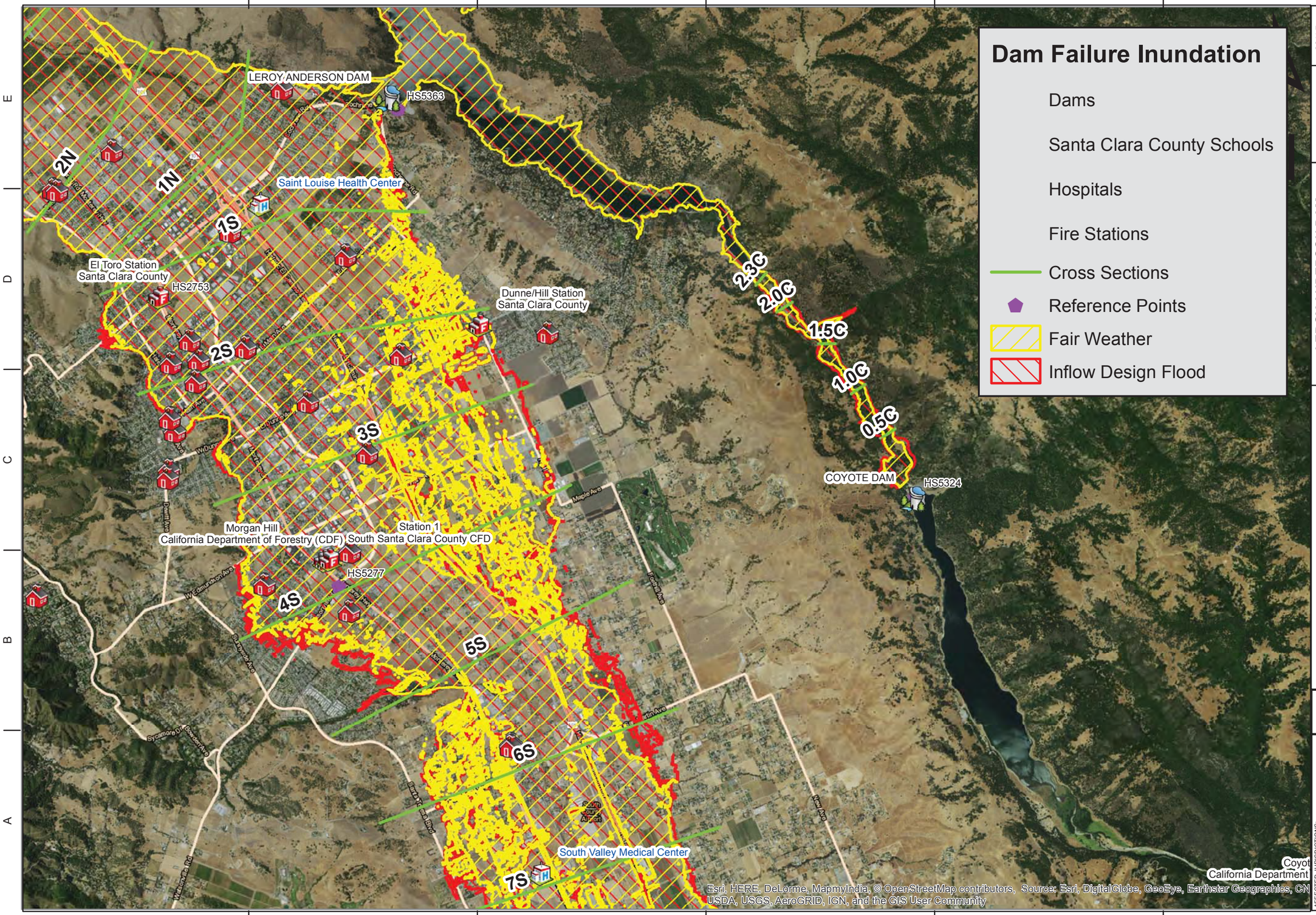
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DATE	DESIGN	DRAWN	CHECKED
APR2016	JX	JX	

AFFECTED JURISDICTIONS:
Santa Clara County, San Benito County, Santa Cruz County, Monterey County, City of San Jose, City of Santa Clara, City of Milpitas, City of Sunnyvale, City of Mountain View, City of Gilroy, City of Morgan Hill, City of Watsonville

USGS QUADRANGLES:
Mountain View, Milpitas, San Jose West, San Jose East, Santa Teresa Hills, Morgan Hill, Gilroy, Mount Sizer, Mount Madonna, Chittenden, San Felipe, Watsonville East, Watsonville West, Moss Landing



SCALE 1" = 4000'

SHEET 9

SANTA CLARA VALLEY WATER DISTRICT
5750 ALMADEN EXPWY
SAN JOSE, CA
95118-3614
(408) 265 - 2600

LEROY ANDERSON DAM FLOOD INUNDATION MAPS

CA DWR DAM ID# 72-009 SANTA CLARA COUNTY

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FINAL DRAFT

DATE APPROVED

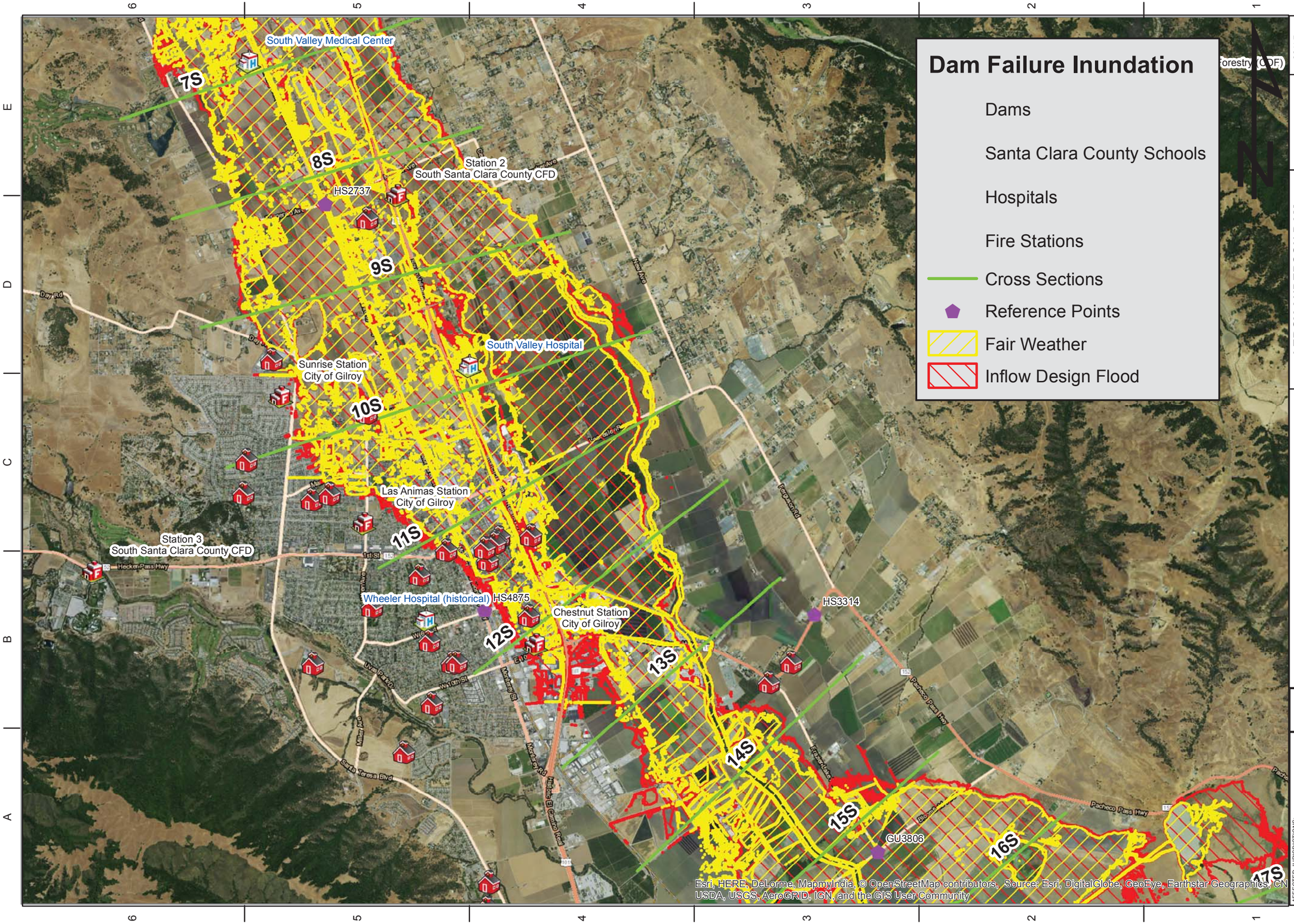
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AFFECTED JURISDICTIONS:
Santa Clara County, San Benito County, Santa Cruz County, Monterey County, City of San Jose, City of Santa Clara, City of Milpitas, City of Sunnyvale, City of Mountain View, City of Gilroy, City of Morgan Hill, City of Watsonville

USGS QUADRANGLES:
Mountain View, Milpitas, San Jose West, San Jose East, Santa Teresa Hills, Morgan Hill, Gilroy, Mount Sizer, Mount Madonna, Chittenden, San Felipe, Watsonville East, Watsonville West, Moss Landing



SCALE 1" = 4000'

SHEET 10

SANTA CLARA VALLEY WATER DISTRICT

5750 ALMADEN EXPWY
SAN JOSE, CA
95118-3614
(408) 265 - 2600

LEROY ANDERSON DAM
FLOOD INUNDATION MAPS

CA DWR DAM ID# 72-009
SANTA CLARA COUNTY

REVIEWED BY:

FINAL DRAFT

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DATE
APR2016

DESIGN
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CHECKED

AFFECTED JURISDICTIONS:
Santa Clara County, San Benito County, Santa Cruz County, Monterey County, City of San Jose, City of Santa Clara, City of Milpitas, City of Sunnyvale, City of Mountain View, City of Gilroy, City of Morgan Hill, City of Watsonville

USGS QUADRANGLES:
Mountain View, Milpitas, San Jose West, San Jose East, Santa Teresa Hills, Morgan Hill, Gilroy, Mount Sizer, Mount Madonna, Chittenden, San Felipe, Watsonville East, Watsonville West, Moss Landing

Dam Failure Inundation

- Dams
- Santa Clara County Schools
- Hospitals
- Fire Stations
- Cross Sections
- Reference Points
- Fair Weather
- Inflow Design Flood

14S 15S 16S 17S 18S 19S 20S 21S 22S 23S 24S 25S 26S 27S 28S

GU3806 GU3801 GU2176 GU2159

Pacheco Pass Hwy 152 | Bloomfield Rd | Santa Teresa Blvd | Hecker Pass Hwy | Hecker/El Camino Real | Hollister Rd | Bolsa Rd | Shore Rd | Monterey Rd 25 | Meridian Rd 129 | El Camino Real 101 | San Juan Hwy

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SCALE 1" = 4000'
SHEET 11

SANTA CLARA VALLEY WATER DISTRICT
5750 ALMADEN EXPWY
SAN JOSE, CA
95118-3614
(408) 265 - 2600

LEROY ANDERSON DAM
FLOOD INUNDATION MAPS

CA DWR DAM ID# 72-009
SANTA CLARA COUNTY

FINAL DRAFT Santa Clara Valley Water District

ACCEPTED BY:

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AFFECTED JURISDICTIONS:
Santa Clara County, San Benito County, Santa Cruz County, Monterey County, City of San Jose, City of Santa Clara, City of Milpitas, City of Sunnyvale, City of Mountain View, City of Gilroy, City of Morgan Hill, City of Watsonville

USGS QUADRANGLES:
Mountain View, Milpitas, San Jose West, San Jose East, Santa Teresa Hills, Morgan Hill, Gilroy, Mount Sizer, Mount Madonna, Chittenden, San Felipe, Watsonville East, Watsonville West, Moss Landing

WATSONVILLE COMMUNITY HOSPITAL

North County Fire District

Aromas Fire

GU2248

GU3209

GU2230

28S

29S

30S

31S

32S

33S

34S

35S

36S

37S

38S

39S

40S

41S

Dam Failure Inundation

- Schools
- Reference Points
- Fire Stations
- Hospitals
- Dams
- Cross Sections
- Fair Weather
- Inflow Design Flood

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SCALE 1" = 4000'

SHEET 12

SANTA CLARA VALLEY WATER DISTRICT

5750 ALMADEN EXPWY
SAN JOSE, CA
95118-3614
(408) 265 - 2600

LEROY ANDERSON DAM FLOOD INUNDATION MAPS

CA DWR DAM ID# 72-009 SANTA CLARA COUNTY

REVIEWED BY:

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FINAL DRAFT

DATE APR2016

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CHECKED

AFFECTED JURISDICTIONS:
Santa Clara County, San Benito County, Santa Cruz County, Monterey County, City of San Jose, City of Santa Clara, City of Milpitas, City of Sunnyvale, City of Mountain View, City of Gilroy, City of Morgan Hill, City of Watsonville

USGS QUADRANGLES:
Mountain View, Milpitas, San Jose West, San Jose East, Santa Teresa Hills, Morgan Hill, Gilroy, Mount Sizer, Mount Madonna, Chittenden, San Felipe, Watsonville East, Watsonville West, Moss Landing

Appendix C. Capability Assessment

San Benito County

The following tables compile capabilities to implement and maintain a mitigation program that are specific to San Benito County. The Source column describes whether this capability is provided by San Benito County or sourced from another jurisdiction and applicable to the County. The Details column identifies the specific resource that provides the capability.

A summary of the capabilities for all jurisdictions are provided in the **Capability Assessment** section.

LEGAL AND REGULATORY CAPABILITIES

Regulatory Tool	Source	Details (if applicable)
Codes and Ordinances		
Building Code	San Benito County	County Code of Ordinances: Title 21 (Building and Engineering)
Growth Management Ordinance	San Benito County	County Code of Ordinances: Title 25 (Zoning)
Land and Zoning Ordinances	San Benito County	County Code of Ordinances: Title 1 (General Provisions & Title 25 (Zoning)
NFIP Flood Damage Prevention Ordinance	San Benito County	County Code of Ordinances: Chapter 19.15 (Flood Damage Prevention)
Post-Disaster Recovery Ordinance	San Benito County	County Board of Supervisors Ordinances No. 783
Real Estate Disclosure Ordinance	San Benito County	County Board of Supervisors Ordinances No. 695
Special Purposes Ordinance	San Benito County	County Board of Supervisors Ordinances No. 692
Subdivision Ordinance	San Benito County	County Code of Ordinances: Title 23 (Subdivisions)
Water Use Ordinance	San Benito County	County Code of Ordinances: Chapter 15.05 (Water)
Development and General Plans		
Capital Improvement Plan	San Benito County	San Benito County Capital Improvement Program
Comprehensive / Master Plan	San Benito County	San Benito County 2035 General Plan, County of San Benito Strategic Plan

Regulatory Tool	Source	Details (if applicable)
Economic Development Plan	San Benito County	San Benito County Economic Development Strategy
Floodplain Management / Basin Plan	San Benito County	El Niño Flood Emergency Action Plan
Site Plan Review Requirements	San Benito County	N/A
Hazard-Specific Plans		
Active Shooter Response Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
Dam Failure Response or Mitigation Plan	San Benito County	El Niño Flood Emergency Action Plan
Drought Response or Mitigation Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
Earthquake Response or Mitigation Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
HAZMAT Response or Mitigation Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
Landslide Response or Mitigation Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
Pandemic Response or Preparedness Plan	San Benito County	Pandemic Influenza Response Plan
Stormwater Management Plan / Ordinance	San Benito County	Flood Hazard Prevention Ordinances
Wildfire Response or Mitigation Plan	San Benito County	San Benito County Community Wildfire Protection Plan
Response or Recovery Plans		
Emergency Evacuation Plans	San Benito County	San Benito County Mass Care and Shelter Plan
Emergency Operations Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
Emergency Sheltering Plans	San Benito County	San Benito County Mass Care and Shelter Plan
Post-Disaster Recovery Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan

Additional potential legal and regulatory capabilities not currently maintained by San Benito County include an Open Space Plan. The County of San Benito may choose to expand upon their legal and regulatory capabilities by developing an Open Space Plan.

ADMINISTRATIVE AND TECHNICAL CAPABILITIES

Capability	Source	Details (if applicable)
Emergency Manager	San Benito County	Office of Emergency Services
Engineers or professionals trained in construction practices related to buildings and/or infrastructure	San Benito County	RMA
Grant Writers	San Benito County	RMA
Health care professionals trained in preparedness and response to pandemics	San Benito County	HHSA
NFIP Administrator	San Benito County	RMA Assistant Director
Personnel skilled or trained in GIS applications	San Benito County	GIS Department
Planners or Engineers with an understanding of natural hazards	San Benito County	RMA
Planners or Engineers with knowledge of land development and land management practices	San Benito County	RMA
Scientist familiar with natural hazards	San Benito County	RMA
Staff with expertise in benefit-cost analysis	San Benito County	Auditor
Surveyors	San Benito County	County Surveyor

The County of San Benito may choose to expand upon their administrative and technical capabilities by increasing the capacity of the San Benito County Floodplain Manager, as described in the Mitigation Action Plan. The County may facilitate closer coordination between the Floodplain Manager and State and federal counterparts to review responsibilities and initiate workplace training and enrolling the staff member in training courses related to NFIP.

FISCAL CAPABILITIES

Capability	Source	Details (if applicable)
Authority to levy taxes for special purposes	San Benito County	County Code of Ordinances: Title 5 (Finance)
Capital Improvements Project funding	San Benito County	County Board of Supervisors Ordinances No. 574

Capability	Source	Details (if applicable)
CDBG	San Benito County	Eligible for CDBG funding
Federal grant programs	San Benito County	Eligible for federal mitigation grant programs
Fees for water, sewer, gas, or electric service	San Benito County	Fees for water, sewer, gas, and electric service
Impact fees for home buyers or developers for new developments	San Benito County	County Board of Supervisors Ordinances No. 962
Incur debt through general obligation funds	San Benito County	As approved by County Board of Supervisors on a case-by-case basis
Incur debt through private activity bonds	San Benito County	As approved by County Board of Supervisors on a case-by-case basis
Incur debt through special tax and revenue bonds	San Benito County	As approved by County Board of Supervisors on a case-by-case basis
State mitigation grant programs	San Benito County	Eligible for State mitigation grant programs
Withhold spending in hazard-prone areas	San Benito County	County Board of Supervisors Ordinances No. 692

The County of San Benito may choose to expand upon their fiscal capabilities by expanding their applications for state and federal grant programs related to hazard mitigation and increasing allocations from their general fund for mitigation-related projects.

EDUCATION AND OUTREACH CAPABILITIES

Program or Resource	Source	Details (if applicable)
Local citizen groups or non-profit organizations focused on emergency preparedness and supporting vulnerable populations	Local Organizations	San Benito Fire Safe Council, Community Emergency Response Team, American Red Cross of the Central Coast, Community Food Bank San Benito County, and others
Natural disaster or safety related school programs	San Benito County	The Great Shakeout and other hazard response drills (e.g., active threat drill) organized with the local public schools
Ongoing public education or information program	San Benito County	San Benito County OES CodeRed program,
Seasonal emergency management and mitigation outreach	San Benito County	Wildfire, drought, and earthquake education and messaging

Program or Resource	Source	Details (if applicable)
StormReady certification	San Benito County	Maintained by San Benito County OES

Additional potential education and outreach capabilities not currently maintained by San Benito County include a Firewise USA certification. San Benito County may choose to expand upon their education and outreach capabilities by joining the Firewise USA program.

City of Hollister

The following tables compile capabilities to implement and maintain a mitigation program that are specific to the City of Hollister. The Source column describes whether this capability is provided by City of Hollister or sourced from another jurisdiction and applicable to the City. The Details column identifies the specific resource that provides the capability.

A summary of the capabilities for all jurisdictions are provided in the **Capability Assessment** section.

LEGAL AND REGULATORY CAPABILITIES

Regulatory Tool	Source	Details (if applicable)
Codes and Ordinances		
Building Code	City of Hollister	Hollister Code of Ordinances: Title 15 (Buildings and Construction)
Land and Zoning Ordinances	City of Hollister	Hollister Code of Ordinances: Title 17 (Zoning)
Special Purposes Ordinance	City of Hollister	Hollister Code of Ordinances: Title 3 (Revenue and Finance)
Subdivision Ordinance	City of Hollister	Hollister Code of Ordinances: Title 16 (Subdivisions)
Water Use Ordinance	City of Hollister	Hollister Code of Ordinances: Title 13 (Public Services)
Development and General Plans		
Capital Improvement Plan	City of Hollister	Hollister Capital Improvement Program
Comprehensive / Master Plan	City of Hollister	Hollister General Plan
Floodplain Management / Basin Plan	San Benito County	El Niño Flood Emergency Action Plan
Site Plan Review Requirements	San Benito County	N/A
Hazard-Specific Plans		
Active Shooter Response Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
Dam Failure Response or Mitigation Plan	San Benito County	El Niño Flood Emergency Action Plan
Drought Response or Mitigation Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
Earthquake Response or Mitigation Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan

Regulatory Tool	Source	Details (if applicable)
HAZMAT Response or Mitigation Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
Landslide Response or Mitigation Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
Pandemic Response or Preparedness Plan	San Benito County	Pandemic Influenza Response Plan
Stormwater Management Plan / Ordinance	San Benito County	Flood Hazard Prevention Ordinances
Wildfire Response or Mitigation Plan	San Benito County	San Benito County Community Wildfire Protection Plan
Response or Recovery Plans		
Emergency Evacuation Plans	San Benito County	San Benito County Mass Care and Shelter Plan
Emergency Operations Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
Emergency Sheltering Plans	San Benito County	San Benito County Mass Care and Shelter Plan
Post-Disaster Recovery Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan

Additional potential legal and regulatory capabilities not currently maintained by the City of Hollister include the following:

Codes and Ordinances

- Growth Management Ordinance
- NFIP Flood Damage Prevention Ordinance
- Post-Disaster Recovery Ordinance
- Real Estate Disclosure Ordinance

Development and General Plans

- Economic Development Plan
- Open Space Plan

The City of Hollister may choose to expand upon their legal and regulatory capabilities by developing and instituting an NFIP Flood Damage Prevention Ordinance to mitigate potential impacts from flood events.

ADMINISTRATIVE AND TECHNICAL CAPABILITIES

Capability	Source	Details (if applicable)
Engineers or professionals trained in construction practices related to buildings and/or infrastructure	City of Hollister	Management Services Department

Capability	Source	Details (if applicable)
Health care professionals trained in preparedness and response to pandemics	San Benito County	HHSA
NFIP Administrator	San Benito County	RMA Assistant Director
Personnel skilled or trained in GIS applications	San Benito County	GIS Department
Planners or Engineers with an understanding of natural hazards	City of Hollister	Development Services: Engineering Department
Planners or Engineers with knowledge of land development and land management practices	City of Hollister	Development Services: Engineering Department
Staff with expertise in benefit-cost analysis	City of Hollister	Administration Department: Finance Division

Additional potential administrative and technical capabilities not currently maintained by the City of Hollister include the following:

- Emergency manager
- Grant writers
- Scientist familiar with natural hazards
- Surveyors

The City of Hollister may choose to expand upon their administrative and technical capabilities by providing grant writing training to internal City staff or hire grant writers to improve access to funding resources for the mitigation program.

FISCAL CAPABILITIES

Capability	Source	Details (if applicable)
Capital Improvements Project funding	City of Hollister	Grant writing and city manager
CDBG	City of Hollister	Eligible for CDBG funding
Federal grant programs	City of Hollister	Eligible for federal mitigation grant programs
Fees for water, sewer, gas, or electric service	City of Hollister	Water and sewer funding
State mitigation grant programs	City of Hollister	Eligible for State mitigation grant programs

Additional potential fiscal capabilities not currently maintained by the City of Hollister include the following:

- Ability to withhold spending in hazard-prone areas

- Authority to levy taxes for special purposes
- Impact fees for home buyers or developers for new developments
- Incur debt through general obligation funds
- Incur debt through private activity bonds
- Incur debt through special tax and revenue bonds

The City of Hollister may choose to expand upon their fiscal capabilities by establishing or updating an ordinance or other City policy to authorize the ability to withhold spending in hazard-prone areas, therefore encouraging more resilient development.

EDUCATION AND OUTREACH CAPABILITIES

Program or Resource	Source	Details (if applicable)
Local citizen groups or non-profit organizations focused on emergency preparedness and supporting vulnerable populations	Local Organizations	San Benito Fire Safe Council, Community Emergency Response Team, American Red Cross of the Central Coast, Community Food Bank San Benito County, and others
Natural disaster or safety related school programs	San Benito County	The Great Shakeout and other hazard response drills (e.g., active threat drill) organized with the local public schools
Ongoing public education or information program	San Benito County	San Benito County OES CodeRed program,
Seasonal emergency management and mitigation outreach	San Benito County	Wildfire, drought, and earthquake education and messaging
StormReady certification	San Benito County	Maintained by San Benito County OES

Additional potential education and outreach capabilities not currently maintained by the City of Hollister include a Firewise USA certification. The City of Hollister may choose to expand upon their education and outreach capabilities by joining the Firewise USA program.

City of San Juan Bautista

The following tables compile capabilities to implement and maintain a mitigation program that are specific to the City of San Juan Bautista. The Source column describes whether this capability is provided by the City of San Juan Bautista or sourced from another jurisdiction and applicable to the City. The Details column identifies the specific resource that provides the capability.

A summary of the capabilities for all jurisdictions are provided in the **Capability Assessment** section.

LEGAL AND REGULATORY CAPABILITIES

Regulatory Tool	Source	Details (if applicable)
Codes and Ordinances		
Building Code	City of San Juan Bautista	City Code of Ordinances: Chapter 10.1.2019
Land and Zoning Ordinances	City of San Juan Bautista	City Code of Ordinances: Title 11
NFIP Flood Damage Prevention Ordinance	City of San Juan Bautista	City Code of Ordinances: Title 12
Post-Disaster Recovery Ordinance	City of San Juan Bautista	City Code of Ordinances: Chapter 5.33
Special Purposes Ordinance	City of San Juan Bautista	City Code of Ordinances: Title 11
Subdivision Ordinance	City of San Juan Bautista	City Code of Ordinances: Chapter 10.2
Water Use Ordinances	City of San Juan Bautista	City Code of Ordinances: Chapter 6.4
Development and General Plans		
Capital Improvement Plan	City of San Juan Bautista	City Code of Ordinances: Chapter 10.2.1210
Comprehensive / Master Plan	City of San Juan Bautista	Water Master Plan (11/2020) Wastewater Master Plan (11/2020)
Floodplain Management / Basin Plan	City of San Juan Bautista	City Code of Ordinances: Title 12
Site Plan Review Requirements	City of San Juan Bautista	City Code of Ordinances: Chapter 11.06.020 and 10.12
Hazard-Specific Plans		
Active Shooter Response Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan

Regulatory Tool	Source	Details (if applicable)
Dam Failure Response or Mitigation Plan	San Benito County	El Niño Flood Emergency Action Plan
Drought Response or Mitigation Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
Earthquake Response or Mitigation Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
HAZMAT Response or Mitigation Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
Landslide Response or Mitigation Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
Pandemic Response or Preparedness Plan	San Benito County	Pandemic Influenza Response Plan
Stormwater Management Plan / Ordinance	San Benito County	Flood Hazard Prevention Ordinances
Wildfire Response or Mitigation Plan	San Benito County	San Benito County Community Wildfire Protection Plan
Response or Recovery Plans		
Emergency Evacuation Plans	San Benito County	San Benito County Mass Care and Shelter Plan
Emergency Operations Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
Emergency Sheltering Plans	San Benito County	San Benito County Mass Care and Shelter Plan
Post-Disaster Recovery Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan

Additional potential legal and regulatory capabilities not currently maintained by the City of San Juan Bautista include the following:

Codes and Ordinances

- Growth Management Ordinance
- Real Estate Disclosure Ordinance

Development and General Plans

- Economic Development Plan
- Open Space Plan

The City of San Juan Bautista may choose to expand upon their legal and regulatory capabilities by developing and instituting a Real Estate Disclosure Ordinance, which would require sellers of buildings and property to disclose known hazard risk in an area (e.g., if the property is located in a high-risk wildfire zone). This capability would encourage more resilient development in the City.

ADMINISTRATIVE AND TECHNICAL CAPABILITIES

Capability	Source	Details (if applicable)
Emergency Manager	City of San Juan Bautista	City Manager
Engineers or professionals trained in construction practices related to buildings and/or infrastructure	City of San Juan Bautista	City Engineer and Contract Services with CSG
Grant Writers	City of San Juan Bautista	City Staff and Contract Services
Health care professionals trained in preparedness and response to pandemics	San Benito County	HHSA
NFIP Administrator	San Benito County	RMA Assistant Director
Personnel skilled or trained in GIS applications	San Benito County	GIS Department
Planners or Engineers with an understanding of natural hazards	City of San Juan Bautista	Contract Services with Harrison & Associates and PacSci EMC
Planners or Engineers with knowledge of land development and land management practices	City of San Juan Bautista	Contract Services with CSG and CIRI
Staff with expertise in benefit-cost analysis	City of San Juan Bautista	City Manager and Contract Services with CPA

Additional potential administrative and technical capabilities not currently maintained by the City of San Juan Bautista include the following:

- Scientist familiar with natural hazards
- Surveyors

The City of Hollister may choose to expand upon their administrative and technical capabilities by hiring a staff member with knowledge of natural hazards, who can provide insight on hazard risk in City planning efforts and other activities.

FISCAL CAPABILITIES

Capability	Source	Details (if applicable)
Authority to levy taxes for special purposes	City of San Juan Bautista	City Council Proposition 2.18
Capital Improvements Project funding	City of San Juan Bautista	Grant writing contractor and City Manager
CDBG	City of San Juan Bautista	Eligible for CDBG funding
Federal grant programs	City of San Juan Bautista	Eligible for federal mitigation grant programs
Fees for water, sewer, gas, or electric service	City of San Juan Bautista	Water and sewer funding

Capability	Source	Details (if applicable)
Impact fees for home buyers or developers for new developments	City of San Juan Bautista	City Code of Ordinances: Chapter 3.8.210
Incur debt through general obligation funds	City of San Juan Bautista	As approved by City Council on a case-by-case basis
Incur debt through private activity bonds	City of San Juan Bautista	As approved by City Council on a case-by-case basis
Incur debt through special tax and revenue bonds	City of San Juan Bautista	As approved by City Council on a case-by-case basis
State mitigation grant programs	City of San Juan Bautista	Eligible for State mitigation grant programs

Additional potential fiscal capabilities not currently maintained by the City of San Juan Bautista include the ability to withhold spending in hazard-prone areas. The City of San Juan Bautista may choose to expand upon their fiscal capabilities by establishing or updating an ordinance or other City policy to authorize the ability to withhold spending in hazard-prone areas, therefore encouraging more resilient development.

EDUCATION AND OUTREACH CAPABILITIES

Program or Resource	Source	Details (if applicable)
Local citizen groups or non-profit organizations focused on emergency preparedness and supporting vulnerable populations	Local Organizations	San Benito Fire Safe Council, Community Emergency Response Team, American Red Cross of the Central Coast, Community Food Bank San Benito County, and others
Natural disaster or safety related school programs	San Benito County	The Great Shakeout and other hazard response drills (e.g., active threat drill) organized with the local public schools
Ongoing public education or information program	San Benito County	San Benito County OES CodeRed program,
Seasonal emergency management and mitigation outreach	San Benito County	Wildfire, drought, and earthquake education and messaging
StormReady certification	San Benito County	Maintained by San Benito County OES

Additional potential education and outreach capabilities not currently maintained by the City of San Juan Bautista include a Firewise USA certification. The City of San Juan Bautista may choose to expand upon their education and outreach capabilities by joining the Firewise USA program.

San Benito County Water District

The following tables compile capabilities to implement and maintain a mitigation program that are specific to the San Benito County Water District. The Source column describes whether this capability is provided by the San Benito County Water District or sourced from another jurisdiction and applicable to the Water District. The Details column identifies the specific resource that provides the capability.

A summary of the capabilities for all jurisdictions are provided in the **Capability Assessment** section.

LEGAL AND REGULATORY CAPABILITIES

Regulatory Tool	Source	Details (if applicable)
Codes and Ordinances		
Building Code	San Benito County	County Code of Ordinances: Title 21 (Building and Engineering)
Special Purposes Ordinance	San Benito County Water District	California Water Code, Chapter 70 and Statutes of California, Chapter 655, District Act
Water Use Ordinance	San Benito County Water District	California Water Code, Chapter 70 and Statutes of California, Chapter 655, District Act
Development and General Plans		
Capital Improvement Plan	San Benito County Water District	San Benito County Water District Capital Improvement Plan
Comprehensive / Master Plan	San Benito County Water District	Hollister Urban Area Water/Wastewater Master Plan
Floodplain Management / Basin Plan	San Benito County Water District	Hollister Urban Area Water/Wastewater Master Plan
Hazard-Specific Plans		
Active Shooter Response Plan	San Benito County Water District	San Justo Reservoir Emergency Action Plan
Dam Failure Response or Mitigation Plan	San Benito County Water District	San Justo Reservoir Emergency Action Plan
Drought Response or Mitigation Plan	San Benito County Water District	San Justo Reservoir Emergency Action Plan
Earthquake Response or Mitigation Plan	San Benito County Water District	San Justo Reservoir Emergency Action Plan and Earthquake Emergency Response Plan
HAZMAT Response or Mitigation Plan	San Benito County Water District	San Justo Reservoir Emergency Action Plan and Water Main Disinfection Plan

Regulatory Tool	Source	Details (if applicable)
Landslide Response or Mitigation Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
Pandemic Response or Preparedness Plan	San Benito County	Pandemic Influenza Response Plan
Stormwater Management Plan / Ordinance	San Benito County Water District	San Justo Reservoir Emergency Action Plan
Wildfire Response or Mitigation Plan	San Benito County	San Benito County Community Wildfire Protection Plan
Response or Recovery Plans		
Emergency Evacuation Plans	San Benito County	San Benito County Mass Care and Shelter Plan
Emergency Operations Plan	San Benito County and San Benito County Water District	San Benito County Operational Area Emergency Operations Plan, Emergency Response Plan (NIMS/SIMS), and Emergency Notification Plan
Emergency Sheltering Plans	San Benito County	San Benito County Mass Care and Shelter Plan
Post-Disaster Recovery Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan

Additional potential legal and regulatory capabilities not currently maintained by the San Benito County Water District include the following:

Codes and Ordinances

- Growth Management Ordinance
- Land and Zoning Ordinances
- Post-Disaster Recovery Ordinance
- Real Estate Disclosure Ordinance
- Subdivision Ordinance

Development and General Plans

- Economic Development Plan
- Open Space Plan
- Site Plan Review Requirements

The San Benito County Water District may choose to expand upon their legal and regulatory capabilities by developing and instituting a Real Estate Disclosure Ordinance, which would require sellers of buildings and property to disclose known hazard risk in an area (e.g., if the property is located in a high-risk wildfire zone). This capability would encourage more resilient development in the water district.

ADMINISTRATIVE AND TECHNICAL CAPABILITIES

Capability	Source	Details (if applicable)
Emergency Manager	San Benito County Water District	Deputy District Engineer

Capability	Source	Details (if applicable)
Engineers or professionals trained in construction practices related to buildings and/or infrastructure	San Benito County Water District	Staff Engineers
Personnel skilled or trained in GIS applications	San Benito County Water District	Staff Engineers
Planners or Engineers with an understanding of natural hazards	San Benito County Water District	Staff Engineers
Planners or Engineers with knowledge of land development and land management practices	San Benito County Water District	Staff Engineers
Scientist familiar with natural hazards	San Benito County Water District	Staff Engineers
Staff with expertise in benefit-cost analysis	San Benito County Water District	Assistant Manager and Administrative/Finance Staff

Additional potential administrative and technical capabilities not currently maintained by the San Benito County Water District include the following:

- Grant Writers
- Health care professionals trained in preparedness and response to pandemics
- Surveyors

The San Benito County Water District may choose to expand upon their administrative and technical capabilities by providing grant writing training to internal water district staff or hire grant writers to improve access to funding resources for the mitigation program.

FISCAL CAPABILITIES

Capability	Source	Details (if applicable)
Authority to levy taxes for special purposes	San Benito County Water District	California Water Code, Chapter 70 and Statutes of California, Chapter 655, District Act
Capital Improvements Project funding	San Benito County Water District	Capital Improvements funding
Federal grant programs	San Benito County Water District	Eligible for federal mitigation grant programs
Fees for water, sewer, gas, or electric service	San Benito County Water District	San Benito County Water District Code of Regulations: Chapter 4
Incur debt through general obligation funds	San Benito County Water District	California Water Code, Chapter 70 and Statutes of California, Chapter 655, District Act

Capability	Source	Details (if applicable)
Incur debt through private activity bonds	San Benito County Water District	California Water Code, Chapter 70 and Statutes of California, Chapter 655, District Act
Incur debt through special tax and revenue bonds	San Benito County Water District	California Water Code, Chapter 70 and Statutes of California, Chapter 655, District Act
State mitigation grant programs	San Benito County Water District	Eligible for State mitigation grant programs

Additional potential fiscal capabilities not currently maintained by the San Benito County Water District include the following:

- CDBG
- Impact fees for home buyers or developers for new developments
- Withhold spending in hazard-prone areas

The San Benito County Water District may choose to expand upon their fiscal capabilities by establishing or updating an ordinance or other policy to authorize the ability to withhold spending in hazard-prone areas, therefore encouraging more resilient development.

EDUCATION AND OUTREACH CAPABILITIES

Program or Resource	Source	Details (if applicable)
Local citizen groups or non-profit organizations focused on emergency preparedness and supporting vulnerable populations	Local Organizations	San Benito Fire Safe Council, Community Emergency Response Team, American Red Cross of the Central Coast, Community Food Bank San Benito County, and others
Natural disaster or safety related school programs	San Benito County Water District	Offer school programs regarding conservation, including fieldtrips to a water treatment plant and wastewater facility
Ongoing public education or information program	San Benito County Water District	Workshops and education regarding conservation and sustainable groundwater management
Seasonal emergency management and mitigation outreach	San Benito County Water District	Education and messaging on drought conditions and conservation

The San Benito County Water District may choose to expand upon their education and outreach capabilities by enhancing their ongoing public education program to include more information on effective drought and conservation methods.

Sunnyslope County Water District

The following tables compile capabilities to implement and maintain a mitigation program that are specific to the Sunnyslope County Water District. The Source column describes whether this capability is provided by the Sunnyslope County Water District or sourced from another jurisdiction and applicable to the Water District. The Details column identifies the specific resource that provides the capability.

A summary of the capabilities for all jurisdictions are provided in the **Capability Assessment** section.

LEGAL AND REGULATORY CAPABILITIES

Regulatory Tool	Source	Details (if applicable)
Codes and Ordinances		
Special Purposes Ordinance	Sunnyslope County Water District	Sunnyslope County Water District Ordinances No. 4 and 79
Water Use Ordinances	Sunnyslope County Water District	Sunnyslope County Water District Code: Title 3 (Water Service System)
Development and General Plans		
Capital Improvement Plan	Sunnyslope County Water District	5 Year Water & Wastewater Capital Improvement Plan (2017 – 2022)
Comprehensive / Master Plan	Sunnyslope County Water District	Sunnyslope County Water District 5 Year Strategic Plan
Site Plan Review Requirements	Sunnyslope County Water District	Sunnyslope County Water District Code: Chapter 3.10.020, 3.50, and 4.20 Agreements for Water/Sewer Facilities and Service for Developments Sunnyslope County Water District Ordinances No. 47
Hazard-Specific Plans		
Active Shooter Response Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
Dam Failure Response or Mitigation Plan	San Benito County	El Niño Flood Emergency Action Plan
Drought Response or Mitigation Plan	Sunnyslope County Water District	Sunnyslope Urban Water Management Plan 2020
Earthquake Response or Mitigation Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan

Regulatory Tool	Source	Details (if applicable)
HAZMAT Response or Mitigation Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
Landslide Response or Mitigation Plan	San Benito County	San Benito County Operational Area Emergency Operations Plan
Pandemic Response or Preparedness Plan	San Benito County	Pandemic Influenza Response Plan
Wildfire Response or Mitigation Plan	San Benito County OES	San Benito County Community Wildfire Protection Plan
Response or Recovery Plans		
Emergency Evacuation Plans	Sunnyslope County Water District	Sunnyslope County Water District Emergency Response Plan
Emergency Operations Plan	Sunnyslope County Water District	Sunnyslope County Water District Emergency Response Plan
Emergency Sheltering Plans	San Benito County	San Benito County Mass Care and Shelter Plan
Post-Disaster Recovery Plan	Sunnyslope County Water District	Sunnyslope County Water District Emergency Response Plan

Additional potential legal and regulatory capabilities not currently maintained by the Sunnyslope County Water District include the following:

Codes and Ordinances

- Building Code
- Growth Management Ordinance
- Land and Zoning Ordinances
- Post-Disaster Recovery Ordinance
- Real Estate Disclosure Ordinance
- Stormwater Management Plan/Ordinance
- Subdivision Ordinance

Development and General Plans

- Economic Development Plan
- Floodplain Management / Basin Plan
- Open Space Plan

The Sunnyslope County Water District may choose to expand upon their legal and regulatory capabilities by developing and instituting a Real Estate Disclosure Ordinance, which would require sellers of buildings and property to disclose known hazard risk in an area (e.g., if the property is located in a high-risk wildfire zone). This capability would encourage more resilient development in the water district.

ADMINISTRATIVE AND TECHNICAL CAPABILITIES

Capability	Source	Details (if applicable)
Engineers or professionals trained in construction practices related to buildings and/or infrastructure	Sunnyslope County Water District	District Engineer, Associate Engineer
Personnel skilled or trained in GIS applications	Sunnyslope County Water District	District Engineer, Associate Engineer
Planners or Engineers with an understanding of natural hazards	Sunnyslope County Water District	District Engineer, Associate Engineer
Planners or Engineers with knowledge of land development and land management practices	Sunnyslope County Water District	District Engineer, Associate Engineer
Staff with expertise in benefit-cost analysis	Sunnyslope County Water District	Finance and Human Resources Department

Additional potential administrative and technical capabilities not currently maintained by the Sunnyslope County Water District include the following:

- Emergency Manager
- Grant Writers
- Health care professionals trained in preparedness and response to pandemics
- Scientist familiar with natural hazards
- Surveyors

The Sunnyslope County Water District may choose to expand upon their administrative and technical capabilities by providing grant writing training to internal water district staff or hire grant writers to improve access to funding resources for the mitigation program.

FISCAL CAPABILITIES

Capability	Source	Details (if applicable)
Capital Improvements Project funding	Sunnyslope County Water District	Capital Improvements funding
Federal grant programs	Sunnyslope County Water District	Eligible for federal mitigation grant programs
Fees for water, sewer, gas, or electric service	Sunnyslope County Water District	Sunnyslope County Water District Code 3.40.030 and 4.30.010
Impact fees for home buyers or developers for new developments	Sunnyslope County Water District	Sunnyslope County Water District Code 3.40.030 and 4.30.010
Incur debt through general obligation funds	Sunnyslope County Water District	State of California Municipal Utility District Act

Capability	Source	Details (if applicable)
Incur debt through private activity bonds	Sunnyslope County Water District	State of California Municipal Utility District Act
Incur debt through special tax and revenue bonds	Sunnyslope County Water District	State of California Municipal Utility District Act
State mitigation grant programs	Sunnyslope County Water District	Eligible for State mitigation grant programs, including the California State Revolving Fund

Additional potential fiscal capabilities not currently maintained by the Sunnyslope County Water District include the following:

- Authority to levy taxes for special purposes
- CDBG
- Withhold spending in hazard-prone areas

The Sunnyslope County Water District may choose to expand upon their fiscal capabilities by establishing or updating an ordinance or other policy to authorize the ability to withhold spending in hazard-prone areas, therefore encouraging more resilient development.

EDUCATION AND OUTREACH CAPABILITIES

Program or Resource	Source	Details (if applicable)
Local citizen groups or non-profit organizations focused on emergency preparedness and supporting vulnerable populations	Local Organizations	San Benito Fire Safe Council, Community Emergency Response Team, American Red Cross of the Central Coast, Community Food Bank San Benito County, and others
Ongoing public education or information program	Sunnyslope County Water District	Education regarding water conservation
Seasonal emergency management and mitigation outreach	Sunnyslope County Water District	Education and messaging on drought conditions and conservation

The Sunnyslope County Water District may choose to expand upon their education and outreach capabilities by enhancing their ongoing public education program to include more information on effective drought and conservation methods.

Appendix D. Status of 2015 San Benito County HMP Mitigation Actions

This appendix consists of documentation and connection to the 2015 San Benito County HMP Mitigation Actions. The appendix is separated into the following sections:

- Status of 2015 San Benito County HMP Mitigation Actions
- Connection Between 2015 and 2022 San Benito County HMP Mitigation Actions

2015 HMP Mitigation Action Status

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
General Strategies of all Jurisdictions	1	Study County Road System for potential risk and mitigation strategies. Panoche Road was recommended for consideration as it is a primary evacuation route.	Yes	6	O	The County has made some progress in repairing Panoche Road specifically and the road remains in passable condition. This action is ongoing and staff have applied to include portions of the road in the Federal Land Access Program for ongoing funding for additional improvements.	The action language was updated to be "Evaluate critical County ingress and egress routes for hazard risk and reduce vulnerability of essential County roads." This language was updated for clarity and to reflect progress towards completing the action.

[146] O = Ongoing; R = Removed; NS = Not Started; C = Completed

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
General Strategies of all Jurisdictions	2	Fire Hazard area of Tres Pinos was discussed and the ability to deliver water, mitigation opportunity needs to be followed up.	No	N/A	R	The context for the specific action was not known by the Planning Committee. Participating jurisdictions did not note that a specific hazard area needed to be studied for this plan. The action was removed.	This action was removed.
General Strategies of all Jurisdictions	3	Examine CSA report for mitigation strategies for roads, water and lighting standards.	Yes	5	O	This action is ongoing. The County's full evaluation of infrastructure needs and obligations is set to be completed in 2021. The current focus of the evaluation is on County Water and Sewer Systems.	The action language was updated to be "Assess status and vulnerabilities of community lifelines across all participating jurisdictions." This language was updated to more accurately capture a diverse set of actions being completed by the County.

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
General Strategies of all Jurisdictions	4	Water Delivery Failure prevention from small water districts serving the County.	Yes	5	O	This action is ongoing. Participating water districts have significant redundancy in their water systems to ensure that water is always safe and available. This includes: - Significant storage in water tanks; - Diversity of water sources and treatment facilities; - Backup power generation; - Computerized 24/7 control and monitoring system with alarms signaling; - Gridded water distribution systems; and - Daily testing of water quality at various sites.	The action language was updated to be "Assess status and vulnerabilities of community lifelines across all participating jurisdictions." This language was updated to more accurately capture a diverse set of actions being completed by the County.

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
General Strategies of all Jurisdictions	5	Replace Union Bridge with earthquake and flood mitigation construction	Yes	5	O	This action is ongoing. The County is in the process of acquiring mitigation bank land to support the replacement of Union Bridge.	The action language was updated to be "Assess status and vulnerabilities of community lifelines across all participating jurisdictions." This language was updated to more accurately capture a diverse set of actions being completed by the County.
General Strategies of all Jurisdictions	6	Expand the CRS and Flood Insurance programs.	Yes	3; 13	NS	The County does not participate in the Community Rating System and has not expanded participation in the National Flood Insurance Program in the last five years.	This action This action was separated into two actions to account for the current status of the programs.

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
General Strategies of all Jurisdictions	6.1	Expand Public Information efforts relative to the Flood Insurance and CRS programs.	Yes	7	NS	There are no known public information efforts related to CRS and flood insurance that have been implemented in the last five years.	This action has been merged with other previous actions to form the new action number 7, "Develop and implement a public education program related to community lifeline disruption."
General Strategies of all Jurisdictions	7	Locate and review the mitigation measures and strategies from the post-Loma Prieta earthquake from Santa Cruz County. Reference “What to Expect in Case of Earthquake”. Determine if a similar program can be used in SBC.	No	N/A	R	The Planning Committee did not have context for this specific action. The action was removed.	This action was removed.

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
General Strategies of all Jurisdictions	8	Review the General Plan Safety Element for Hazard Analysis and mitigation recommendations.	Yes	11	O	This action is in progress. This was not formally completed during the previous planning cycle, but is included as an updated action for the current plan.	This action was updated to be "Incorporate and adopt San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update into participating jurisdictions' General Plan safety element."

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
General Strategies of all Jurisdictions	9	Study parasitic infestations in the water systems and the risk they represent. Determine what measures can be taken to prevent it.	No	N/A	R	The San Benito County Water District and Sunnyslope Water District do not have the role of conducting studies related to parasitic infestations in the water systems of the County. The water districts work with the State Water Resources Control Board's Division of Drinking Water, the United States Environmental Protection Agency, the United State Bureau of Reclamation, the Association of California Water Agencies, and American Water Works Association to monitor and study parasitic infestations.	This action was removed.

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
General Strategies of all Jurisdictions	10	Evaluate Tri-Cal Chemical Plant as a potential target to terrorism and assess the threat. Formulate mitigation strategies to reduce the threat to the school and surrounding communities. Map the risk area.	Yes	5	O	The Planning Committee was not aware of any progress having been made towards this action in the last five years.	The action language was updated to be "Assess status and vulnerabilities of community lifelines across all participating jurisdictions." This language was updated to more accurately capture a diverse set of actions being completed by the County.
General Strategies of all Jurisdictions	11	Identify ingress and egress routes for flooding for the City of Hollister, City of San Juan Bautista and for SBC areas affected.	No	N/A	C	The County has developed and maintained an evacuation plan that accounts for ingress and egress routes. This action is therefore considered completed.	This action has been completed. The results of this completed action have resulted in the development of Mitigation Action 6.

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
General Strategies of all Jurisdictions	12	Develop a county-wide Emergency Operations Center as part of the New Public Safety Building.	No	N/A	R	The County's Emergency Operations Center is currently being upgraded to better meet the needs of the community.	This action was removed as the project is implemented.
General Strategies of all Jurisdictions	13	Inventory County and City Buildings that require seismic retrofit.	No	N/A	C	This action has been completed.	This action has been completed.
General Strategies of all Jurisdictions	14	Perform upgrades to the Airport to allow it to receive larger aircraft for regional staging in case of wide-spread disaster or local disaster.	No	N/A	C	This action has been completed.	This action has been completed.

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
General Strategies of all Jurisdictions	15	Identify all the critical facilities in the County and cities.	Yes	5	NS	No progress has been made towards this action in the last five years beyond this hazard mitigation planning process.	The action language was updated to be "Assess status and vulnerabilities of community lifelines across all participating jurisdictions." This language was updated to more accurately capture a diverse set of actions being completed by the County.
General Strategies of all Jurisdictions	16	Update the Flood Ordinance and FEMA Flood Reference Points on the Flood Maps.	Yes	4	NS	No progress has been made towards this action in the last five years beyond this hazard mitigation planning process.	This action should be taken as a part of Action 4: "Increase the capacity of the San Benito County Floodplain Manager."

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
General Strategies of all Jurisdictions	17	Survey County and City buildings for soft seismic safety opportunities such as shelving, ceilings, bracing and tie down activities.	Yes	5	O	This is completed in an ad hoc manner across the jurisdictions. This action is ongoing.	The action language was updated to be "Assess status and vulnerabilities of community lifelines across all participating jurisdictions." This language was updated to more accurately capture a diverse set of actions being completed by the County.
General Strategies of all Jurisdictions	18	Identify and work with utility companies to locate and mitigate critical utility risks throughout the County.	No	N/A	C	The County maintains a good relationship with local utility providers, including Pacific Gas and Electric. The County maintains a power disruption plan with Pacific Gas and Electric which identifies critical utility risks. This action is considered completed.	This action has been completed.

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
General Strategies of all Jurisdictions	19	Assess San Felipe Dam failure scenarios in relation to the San Benito County region.	Yes	5	O	This action has been completed. The County consistently assesses the San Felipe Dam failure scenario to support hazard mitigation.	The action language was updated to be "Assess status and vulnerabilities of community lifelines across all participating jurisdictions." This language was updated to more accurately capture a diverse set of actions being completed by the County.

General Strategies of all Jurisdictions	20	Assess the Pajaro River Flood Plain and its risk to San Benito County areas.	No	N/A	C	This action has been completed. The Pajaro River Watershed Flood Prevention Authority actively assesses flooding risk and water management considerations across the region and includes representation from Monterey County, San Benito County, Santa Clara County, Santa Cruz County, the Monterey County Water Resources Agency, the San Benito County Water District, the Santa Clara Valley Water District, the Santa Cruz County Flood Control, and the Water Conservation District, Zone 7. Most recently the Authority produced the Pajaro River Watershed Integrated Regional Water Management Plan.	This action has been completed. The results of this completed action have resulted in the development of Mitigation Action 12
INFRASTRUCTURE (Multihazard)	22	Assess the vulnerability of critical facilities designated by lifeline operators to damage in natural disasters or security	Yes	5	O	This action is ongoing.	The action language was updated to be "Assess status and vulnerabilities of

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
		threats, including facilities owned outside of the Bay Area that can impact service delivery within the region. Note - Lifeline agencies, departments, and districts are those that operate transportation and utility facilities and networks.					community lifelines across all participating jurisdictions." This language was updated to more accurately capture a diverse set of actions being completed by the County.
INFRASTRUCTURE (Multihazard)	23	Comply with State of California and federal requirements to assess the vulnerability of dams to damage from earthquakes, seiches, landslides, liquefaction, or security threats.	Yes	5	O	Responsibility for this action belongs with the San Benito County Water District which owns the Hernandez Dam and operates the San Justo Dam. Both dams have been recently inspected and comply with all State and Federal requirements. This action is ongoing.	The action language was updated to be "Assess status and vulnerabilities of community lifelines across all participating jurisdictions." This language was updated to more accurately capture a diverse set of actions being completed by the County.

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
INFRASTRUCTURE (Multihazard)	24	Encourage replacing aboveground electric and phone wires and other structures with underground facilities, and use the planning-approval process to ensure that all new phone and electrical utility lines are installed underground.	Yes	5	O	This action is ongoing by the County and utility providers.	The action language was updated to be "Assess status and vulnerabilities of community lifelines across all participating jurisdictions." This language was updated to more accurately capture a diverse set of actions being completed by the County.
INFRASTRUCTURE (Earthquake)	25	Comply with all applicable building and fire codes, as well as other regulations (such as state requirements for fault, landslide, and liquefaction investigations in particular mapped areas) when constructing or significantly remodeling infrastructure facilities.	Yes	8	O	This action has been ongoing since the last Plan update.	This action was reworded to "Review and update local codes, regulations, provisions, and ordinances for new and existing buildings to address hazard risks" to better account for the goals of the Planning Committee.

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
INFRASTRUCTURE (Earthquake)	26	Clarify to workers in critical facilities and emergency personnel, as well as to elected officials and the public, the extent to which the facilities are expected to perform only at a life safety level (allowing for the safe evacuation of personnel) or are expected to remain functional following an earthquake.	No	N/A	R	The Planning Committee did not have context for this specific action. The Committee determined that this action was not required and therefore the action was removed.	This action has been removed.
INFRASTRUCTURE (Wild Fire)	27	Develop a defensible space vegetation program that includes the clearing or thinning of (a) non-fire resistive vegetation within 30 feet of access and evacuation roads and routes to critical facilities, or (b) all non-native species (such as eucalyptus and pine, but not necessarily oaks) within 30 feet of access and evacuation roads and routes to critical facilities.	Yes	10	O	This action has been ongoing since the last Plan update, being led by Hollister Fire Code Enforcement.	This action has been merged with other previous actions to form the new action number 10, "Review and revise the County-wide fire risk reduction program."

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
INFRASTRUCTURE (Wild Fire)	28	Enforce minimum road width of 20 feet with an additional 10-foot clearance on each shoulder on all driveways and road segments greater than 50 feet in length in wildfire hazard areas.	Yes	10	O	This action has been ongoing since the last Plan update, being led by Hollister Fire Code Enforcement.	This action has been merged with other previous actions to form the new action number 10, "Review and revise the County-wide fire risk reduction program."
INFRASTRUCTURE (Wild Fire)	29	Require that development in high fire hazard areas provide adequate access roads (with width and vertical clearance that meet the minimum standards of the Fire Code or relevant local ordinance), onsite fire protection systems, evacuation signage, and fire breaks.	Yes	10	O	This action has been ongoing since the last Plan update, being led by Hollister Fire Code Enforcement.	This action has been merged with other previous actions to form the new action number 10, "Review and revise the County-wide fire risk reduction program."
INFRASTRUCTURE (Wild Fire)	30	Ensure adequate fire equipment road or fire road access to developed and open space areas.	Yes	10	O	This action has been ongoing since the last Plan update, being led by Hollister Fire Code Enforcement.	This action has been merged with other previous actions to form the new action number 10, "Review and revise the County-wide fire risk reduction program."

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
INFRASTRUCTURE (Wild Fire)	31	Maintain fire roads and/or public right-of-way roads and keep them passable at all times.	Yes	10	O	This action has been ongoing since the last Plan update, being led by Hollister Fire Code Enforcement.	This action has been merged with other previous actions to form the new action number 10, "Review and revise the County-wide fire risk reduction program."
INFRASTRUCTURE (Flood)	32	Enforce provisions under creek protection, storm water management, and discharge control ordinances designed to keep watercourses free of obstructions and to protect drainage facilities to confirm with the Regional Water Quality Control Board's Best Management Practices	Yes	9	O	This action is ongoing.	This action has been merged with other previous actions to form the new action number 9, "Review County-wide water control measures."

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
INFRASTRUCTURE (Flood)	33	Ensure that utility systems in new developments are constructed in ways that reduce or eliminate flood damage.	Yes	8	O	This action is ongoing.	The action language was updated to be "Review and update local codes, regulations, provisions, and ordinances for new and existing buildings to address hazard risks." This language was updated to more accurately capture a diverse set of actions being completed by the County.
INFRASTRUCTURE (Flood)	34	Work for better cooperation among the patchwork of agencies managing flood control issues.	Yes	2; 9	O	This action is ongoing as the County strives to cultivate cooperation regarding hazard mitigation across critical stakeholders.	This action applies to two actions in the new plan, Action 2 and 9. The language was changed to be more applicable of how action would be taken.

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
INFRASTRUCTURE (Landslides)	35	Include “areas subject to ground failure” in the list of criteria used for determining a replacement schedule (along with importance, age, and type of construction material, size, condition, and maintenance or repair history) for pipelines.	Yes	8	O	Participating jurisdictions noted having extensive plans for pipe line replacement, typically not based on other factors besides "areas subject to ground failure." SBCWD and SSWD both monitor their infrastructure for landslides to support continuity of operations.	The action language was updated to be "Review and update local codes, regulations, provisions, and ordinances for new and existing buildings to address hazard risks." This language was updated to more accurately capture a diverse set of actions being completed by the County.

INFRASTRUCTURE (Climate Change)	36	Study the combined effects of increased atmospheric carbon dioxide and increased temperature on crop water needs, to predict future water needs	Yes	1	O	San Benito County Water District and Sunnyslope Water Districts collaborate with local, State, and Federal partners to support sustainable groundwater management. The districts prioritize understanding current and future water needs and taking action to promote sustainability. Currently the San Benito Water District is developing the Sustainable Groundwater Management Act Groundwater Sustainability Plan that will be completed prior to January 2022. This Groundwater Sustainability Plan will review current and future water needs and provide for sustainability within the water basin.	The action language was updated to be "Develop and implement a sustainable groundwater plan." This language was updated to more accurately capture the sustainable water goals of the jurisdictions.
INFRASTRUCTURE (Landslides)	36	Establish requirements in zoning ordinances to address hillside development	Yes	5	O	This action has been ongoing since the last Plan update.	The action language was updated to be "Assess status and

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
		constraints in areas of steep slopes that are likely to lead to excessive road maintenance or where roads will be difficult to maintain during winter storms due to land sliding.					vulnerabilities of community lifelines across all participating jurisdictions." This language was updated to more accurately capture a diverse set of actions being completed by the County.

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
INFRASTRUCTURE (Building Re-occupancy)	37	Ensure that critical buildings owned or leased by special districts or private utility companies participate in a program similar to San Francisco's Building Occupancy Resumption Program (BORP). The BORP program permits owners of buildings to hire qualified structural engineers [1] to create facility-specific post-disaster inspection plans and allows these engineers to become automatically deputized as City/County inspectors for these buildings in the event of an earthquake or other disaster. This program allows rapid re-occupancy of the buildings. Note - A qualified structural engineer is a California licensed structural engineer with relevant experience.	No	N/A	R	The context for the specific action was not known by the Planning Committee. Participating jurisdictions have representatives who can inspect and certify infrastructure after an emergency. Therefore, this action was removed.	This action was removed.

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
INFRASTURCTURE (Public Education)	38	Provide materials to the public related to planning for power outages.	Yes	7	O	This action is ongoing and being led by Pacific Gas and Electric.	This action has been merged with other previous actions to form the new action number 7, "Develop and implement a public education program related to community lifeline disruption."
INFRASTURCTURE (Public Education)	39	Provide materials to the public related to family and personal planning for delays due to traffic or road closures.	Yes	7	O	No progress has been made towards this action in the last five years.	This action has been merged with other previous actions to form the new action number 7, "Develop and implement a public education program related to community lifeline disruption."

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
INFRASTURCTURE (Public Education)	40	Provide materials to the public related to coping with disrupted storm drains, sewage lines, and wastewater treatment.	Yes	7	O	No progress has been made towards this action in the last five years.	This action has been merged with other previous actions to form the new action number 7, "Develop and implement a public education program related to community lifeline disruption."
INFRASTURCTURE (Public Education)	41	Provide materials to the public related to coping with reductions in water supply or contamination of that supply.	Yes	7	O	No progress has been made towards this action in the last five years.	This action has been merged with other previous actions to form the new action number 7, "Develop and implement a public education program related to community lifeline disruption."

INFRASTRUCTURE (Drought)	42	Enact water control measures, including: - Water customers are required to reduce water consumption by 25% compared to their water use in 2013. - Landscape watering shall be limited and restricted to no more than two (2) days per week. - No watering of landscaping between the hours of 9:00 a.m. and 5:00 p.m. by means other than drip irrigation or hand watering with a quick acting positive shut off nozzle. - No washing down sidewalks, driveways, or other hardscape surfaces. - No watering landscaping in a manner that causes runoff to adjacent property, non-irrigated areas, private and public walkways, roadways, or parking lots. - No washing of cars without the use of quick acting, positive shut off nozzle. - No operation of decorative fountains or other water features unless the water is recirculated.	Yes	9	O	This action is ongoing. The 2015 Hollister Urban Area Urban Water Management Plan has been developed and describes water conservation measures.	This action has been merged with other previous actions to form the new action number 9, "Review County-wide water control measures."

INFRASTRUCTURE (Drought)	43	Retrofit water supply systems	Yes	5	O	The Lessalt Water Treatment Plant was upgraded in 2014 and the West Hills Water Treatment Plant was built in 2017 to diversify the local water supply and to provide better quality drinking water. The Crosstown Pipeline was constructed to bring that better quality water directly to City of Hollister and Sunnyslope wells for blending with groundwater as it enters the water system. As areas have developed, the water systems have become more gridded and interconnected which increases reliability. A new pipeline was constructed to increase flow into and out of one of Sunnyslope's water tanks. Service laterals that sprung leaks have been replaced as they occur. No specific further action is required for this action.	The action language was updated to be "Assess status and vulnerabilities of community lifelines across all participating jurisdictions." This language was updated to more accurately capture a diverse set of actions being completed by the County.

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
INFRASTRUCTURE (Drought)	44	Educate residents on water saving techniques	Yes	7	O	The San Benito Water Resources Association regularly does outreach regarding conservation. The Water Resources Association offers free home water conservation inspections, various rebates, educational programs and more. Each May both Sunnyslope and the City of Hollister declare it to be Water Awareness Month. The County has implemented public outreach to promote water conservation during droughts (e.g., during the 2014 - 2017 drought and during the current 2021 drought).	This action has been merged with other previous actions to form the new action number 7, "Develop and implement a public education program related to community lifeline disruption."

CATEGORY	2015 NUMBER	TEXT	IN 2022 PLAN?	2022 NUMBER	STATUS SUMMARY[146]	ACTION PROGRESS UPDATE	CHANGES TO PREVIOUS ACTION FOR CURRENT PLAN
INFRASTRUCTURE (Drought)	45	Educate farmers on soil and water conservation practices	Yes	7	O	No progress has been made towards this action in the last five years.	This action has been merged with other previous actions to form the new action number 7, "Develop and implement a public education program related to community lifeline disruption."
INFRASTRUCTURE (Drought)	46	Establishing a grazing policy or permitting program to prevent overgrazing	No	N/A	R	Participating jurisdictions did not implement a grazing policy or permitting program to prevent overgrazing as this is not in their jurisidiction.	This action has been removed.
N/A	47	Develop a long-term plan focused upon maintaining and repairing the existing levy system for runoff/wastewater.	No	N/A	C	The 2015 Hollister Urban Area Urban Water Management Plan has been developed and this action has been completed.	This action has been merged with other previous actions to form the new action number 9, "Review County-wide water control measures."

Connection Between 2015 and 2022 Actions

NUMBER	CURRENT ACTION TEXT	PREVIOUS ACTION(S)
1	Develop and implement a sustainable groundwater plan.	36) Study the combined effects of increased atmospheric carbon dioxide and increased temperature on crop water needs, to predict future water needs
2	Foster participation in the County's hazard mitigation program throughout the planning cycle.	34) Work for better cooperation among the patchwork of agencies managing flood control issues.
3	Expand participation in the National Flood Insurance Program.	6) Expand the CRS and Flood Insurance programs.
4	Increase the capacity of the San Benito County Floodplain Manager.	16) Update the Flood Ordinance and FEMA Flood Reference Points on the Flood Maps.

NUMBER	CURRENT ACTION TEXT	PREVIOUS ACTION(S)
5	Assess status and vulnerabilities of community lifelines across all participating jurisdictions.	3) Examine CSA report for mitigation strategies for roads, water and lighting standards. 4) Water Delivery Failure prevention from small water districts serving the County. 5) Replace Union Bridge with earthquake and flood mitigation construction 10) Evaluate Tri-Cal Chemical Plant as a potential target to terrorism and assess the threat. Formulate mitigation strategies to reduce the threat to the school and surrounding communities. Map the risk area. 15) Identify all the critical facilities in the County and cities. 17) Survey County and City buildings for soft seismic safety opportunities such as shelving, ceilings, bracing and tie down activities. 19) Assess San Felipe Dam failure scenarios in relation to the San Benito County region. 22) Assess the vulnerability of critical facilities designated by lifeline operators to damage in natural disasters or security threats, including facilities owned outside of the Bay Area that can impact service delivery within the region. Note - Lifeline agencies, departments, and districts are those that operate transportation and utility facilities and networks. 23) Comply with State of California and federal requirements to assess the vulnerability of dams to damage from earthquakes, seiches, landslides, liquefaction, or security threats. 24) Encourage replacing aboveground electric and phone wires and other structures with underground facilities, and use the planning-approval process to ensure that all new phone and electrical utility lines are installed underground. 36) Establish requirements in zoning ordinances to address hillside development constraints in areas of steep slopes that are likely to lead to excessive road maintenance or where roads will be difficult to maintain during winter storms due to land sliding. 43) Retrofit water supply systems

NUMBER	CURRENT ACTION TEXT	PREVIOUS ACTION(S)
6	Evaluate critical County ingress and egress routes for hazard risk and reduce vulnerability of essential County roads.	1) Study County Road System for potential risk and mitigation strategies. Panoche Road was recommended for consideration as it is a primary evacuation route.
7	Develop and implement a public education program related to community lifeline disruption.	6.1) Expand Public Information efforts relative to the Flood Insurance and CRS programs. 38) Provide materials to the public related to planning for power outages. 39) Provide materials to the public related to family and personal planning for delays due to traffic or road closures. 40) Provide materials to the public related to coping with disrupted storm drains, sewage lines, and wastewater treatment. 41) Provide materials to the public related to coping with reductions in water supply or contamination of that supply. 44) Educate residents on water saving techniques 45) Educate farmers on soil and water conservation practices
8	Review and update local codes, regulations, provisions, and ordinances for new and existing buildings to address hazard risks.	25) Comply with all applicable building and fire codes, as well as other regulations (such as state requirements for fault, landslide, and liquefaction investigations in particular mapped areas) when constructing or significantly remodeling infrastructure facilities. 33) Ensure that utility systems in new developments are constructed in ways that reduce or eliminate flood damage. 35) Include “areas subject to ground failure” in the list of criteria used for determining a replacement schedule (along with importance, age, and type of construction material, size, condition, and maintenance or repair history) for pipelines.

NUMBER	CURRENT ACTION TEXT	PREVIOUS ACTION(S)
9	Review County-wide water control measures.	32) Enforce provisions under creek protection, storm water management, and discharge control ordinances designed to keep watercourses free of obstructions and to protect drainage facilities to confirm with the Regional Water Quality Control Board's Best Management Practices 34) Work for better cooperation among the patchwork of agencies managing flood control issues. 42) Enact water control measures, including: - Water customers are required to reduce water consumption by 25% compared to their water use in 2013. - Landscape watering shall be limited and restricted to no more than two (2) days per week. - No watering of landscaping between the hours of 9:00 a.m. and 5:00 p.m. by means other than drip irrigation or hand watering with a quick acting positive shut off nozzle. - No washing down sidewalks, driveways, or other hardscape surfaces. - No watering landscaping in a manner that causes runoff to adjacent property, non-irrigated areas, private and public walkways, roadways, or parking lots. - No washing of cars without the use of quick acting, positive shut off nozzle. - No operation of decorative fountains or other water features unless the water is recirculated.

NUMBER	CURRENT ACTION TEXT	PREVIOUS ACTION(S)
10	Review and revise the County-wide fire risk reduction program.	27) Develop a defensible space vegetation program that includes the clearing or thinning of (a) non-fire resistive vegetation within 30 feet of access and evacuation roads and routes to critical facilities, or (b) all non-native species (such as eucalyptus and pine, but not necessarily oaks) within 30 feet of access and evacuation roads and routes to critical facilities. 28) Enforce minimum road width of 20 feet with an additional 10-foot clearance on each shoulder on all driveways and road segments greater than 50 feet in length in wildfire hazard areas. 29) Require that development in high fire hazard areas provide adequate access roads (with width and vertical clearance that meet the minimum standards of the Fire Code or relevant local ordinance), onsite fire protection systems, evacuation signage, and fire breaks. 30) Ensure adequate fire equipment road or fire road access to developed and open space areas. 31) Maintain fire roads and/or public right-of-way roads and keep them passable at all times.
11	Incorporate and adopt San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update into participating jurisdictions' General Plan safety element.	8) Review the General Plan Safety Element for Hazard Analysis and mitigation recommendations.
12	Mitigate flooding risk from the Pajaro River Flood Plain to San Benito County.	
13	Apply for the National Flood Insurance Program's Community Rating System.	6) Expand the CRS and Flood Insurance programs.

NUMBER	CURRENT ACTION TEXT	PREVIOUS ACTION(S)
14	Review San Benito County COVID-19 after action report to identify effective and appropriate communicable disease mitigation actions.	
15	A) Evaluate and implement projects at critical facilities to mitigate against earthquakes. B) Evaluate and implement projects at critical facilities to mitigate against severe weather events. C) Evaluate and implement projects at critical facilities to mitigate against wildfires.	
16	Create resilience hubs to support resilience across the community.	
17	Educate residents and property owners about extreme temperature risks.	38) Provide materials to the public related to planning for power outages.
18	Map and assess vulnerability to San Justo Dam and Leroy Anderson Dam.	

NUMBER	CURRENT ACTION TEXT	PREVIOUS ACTION(S)
19	Protect buildings and infrastructure from severe weather damage.	1) Study County Road System for potential risk and mitigation strategies. Panoche Road was recommended for consideration as it is a primary evacuation route. 3) Examine CSA report for mitigation strategies for roads, water and lighting standards. 4) Water Delivery Failure prevention from small water districts serving the County 5) Replace Union Bridge with earthquake and flood mitigation construction 10) Evaluate Tri-Cal Chemical Plant as a potential target to terrorism and assess the threat. Formulate mitigation strategies to reduce the threat to the school and surrounding communities. Map the risk area.

Appendix E. Mitigation Strategy Implementation

Sample Adoption Resolution

The following is a sample resolution for plan adoption from FEMA's Local Mitigation Planning Handbook.

[NAME OF JURISDICTION]
RESOLUTION NO. [NUMBER]
A RESOLUTION OF [NAME OF JURISDICTION] ADOPTING THE
2021 SAN BENITO COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

WHEREAS the [NAME OF JURISDICTION] recognizes the threat that natural hazards pose to people and property within San Benito County; and

WHEREAS the [NAME OF JURISDICTION] has prepared a multi-hazard mitigation plan, hereby known as the Plan, in accordance with the Disaster Mitigation Act of 2000; and

WHEREAS the Plan identifies mitigation goals and actions to reduce or eliminate long-term risk to people and property in [NAME OF JURISDICTION] from the impacts of future hazards and disasters; and

WHEREAS adoption by [LOCAL GOVERNING BODY] demonstrates their commitment to the hazard mitigation and achieving the goals outlined in the Plan.

NOW THEREFORE, BE IT RESOLVED BY [NAME OF JURISDICTION], CALIFORNIA:

1. The Plan is hereby adopted as an official plan of [NAME OF JURISDICTION].
2. The respective officials from [NAME OF JURISDICTION] identified in the mitigation strategy of the Plan are hereby directed to pursue implementation of the recommended actions assigned to them.
3. Future revisions and plan maintenance required by 44 CFR 201.6 and FEMA are hereby adopted as a part of this resolution for a period of five (5) years from the date of this resolution.
4. An annual report on the progress of the implementation elements of the Plan shall be presented to the [LOCAL GOVERNING BODY] by [DATE] of each calendar year.
5. The [NAME OF JURISDICTION] will comply with all applicable Federal statutes and regulations in effect with respect to the periods for which it receives grant funding, including 2 CFR Parts 200 and 3002; and will amend our plan whenever necessary to reflect applicable changes in Tribal or federal laws and statutes.

PASSED AND ADOPTED by the [LOCAL GOVERNING BODY], this [DAY] day of [MONTH], [YEAR].

[PROVIDE SIGNATURE BLOCKS AS REQUIRED]

Project Funding Support Tool

The following table identified local, state, federal, and private funding sources that can be utilized to implement mitigation actions. The table is not comprehensive of all potential opportunities and not all participating jurisdictions may be eligible for these funding opportunities at a given time.

Funding Source	Eligible Activities	Agency
Local Funding Sources		
Capital Improvement Planning	Large-scale mitigation projects, in accordance with the jurisdiction's capital improvement plan.	Varies by jurisdiction
Annual Budget Review	Actions included as line items in County and local budgets.	Varies by jurisdiction
Fees and Taxes	Actions fundable by special fees and taxes.	Varies by jurisdiction
State Funding Sources		
California Climate Investments Fire Prevention Grant Program	Hazardous fuel reduction and removal of dead, dying, or diseased trees, fire prevention planning, and fire prevention education and planning.	CAL FIRE
California Forest Improvement Program	Protection, maintenance, and enhancement of forest systems.	CAL FIRE
California Health Center Security Grant Program	Planning, security equipment and system hardening, security personnel, and related training courses that protect health centers from civil disturbances, terrorism, and other related incidents.	Cal OES
Floodplain Management, Protection, and Risk Awareness Grant Program	Risk reduction activities related to various flooding hazards.	Department of Water Resources
Infrastructure State Revolving Fund Program	Infrastructure and economic development projects.	Infrastructure and Economic Development Bank
Integrated Regional Water Management Grant Programs	Planning and implementation of regional strategies for water resource management.	Department of Water Resources
Regional Forest and Fire Capacity Program	Regional efforts to increase firefighting resilience and capacity and plan and implement related projects.	Department of Conservation
Rural Fire Capacity Grant	Training and minor safety and communications equipment for volunteer firefighters.	CAL FIRE
School Communications Interoperability Grant Program	Technology that protects education institutions from active shooter threats.	Cal OES

Funding Source	Eligible Activities	Agency
Small Communities Flood Risk Reduction Program	Design and construction proposals to reduce flood risk and increase resiliency.	Department of Water Resources
Small Community Clean Water/Wastewater Funding	Design and construction proposals to restore and maintain water quality.	State Water Resources Control Board
Small Community Drought Relief Program	Financial and technical assistance to increase resilience to future drought events.	Department of Water Resources
Strategic Partnerships Grants	Address transportation deficiencies and vulnerabilities.	Caltrans
Sustainable Communities Grants	Planning to increase resiliency of transportation networks, in alignment of California Transportation Commission best practices.	Caltrans
Water Recycling Funding Program	Construction projects that offset or augment local fresh water supplies.	State Water Resources Control Board
Federal Funding Sources		
Airport Improvement Program Matching Grant	Airport development or planning activities.	FAA / Caltrans
Assistance to Firefighters Grant Program	Resources to equip and train local emergency personnel for fire-related emergencies (Assistance to Firefighters Grants), projects to enhance the safety of the public and firefighting personnel (Fire Prevention & Safety), and increase the capacity of volunteer firefighter groups (Staffing for Adequate Fire and Emergency Response).	FEMA
Building Resilient Infrastructure and Communities	Actions that build community capacity and capabilities, encourage innovation, promote partnerships, maintain flexibility, and provide consistency.	FEMA
CDBG Programs	Infrastructure, economic development projects, public facilities, housing rehabilitation, public services, code enforcement, acquisitions, and other activities that support community development and build resilience.	HUD
Clean Water Act Section 319 Grants	Implement non-point source water distribution programs, including support for non-structural watershed restoration activities.	EPA
Clean Water State Revolving Fund Program	Projects to restore and maintain water quality, including promoting sustainable water resources.	EPA / State Water Resources Control Board
Drinking Water State Revolving Fund Program	Efforts to increase the resiliency of public drinking water infrastructure.	EPA / State Water Resources Control Board

Funding Source	Eligible Activities	Agency
Emergency Watershed Protection Program	Technical and financial assistance to protect small watersheds and reduce vulnerabilities of persons and property in watershed areas damaged by severe disasters.	USDA - NRCS
Emergency Management Performance Grant	Building and sustaining core capabilities essential to achieving the National Preparedness Goal of a secure and resilient nation.	FEMA / Cal OES
Environmental Justice Small Grants and Funding Opportunities	Projects that address various environmental and public health concerns that disproportionately affect low-income and minority communities.	EPA / CA EPA
Flood Mitigation Assistance	Reduce or eliminate long-term risk of flood damage to structured insured by NFIP.	FEMA
Hazard Mitigation Grant Program	Long-term hazard mitigation efforts following a federal disaster declaration.	FEMA
Hazardous Materials Emergency Preparedness Grant	Projects that support safe and efficient handling of HAZMAT incidents, enhance community awareness, and increase related training and planning efforts.	DOT / Cal OES
Public Assistance Section 406	Repair and restore damaged infrastructure, public facilities, and essential services following a federal disaster declaration.	FEMA
State and Local Implementation Grant Program	Identify needs, gaps, and priorities for public safety wireless broadband.	US Department of Commerce / Cal OES
Private Funding Sources		
Local Corporations	Community-wide or personal mitigation activities.	N/A
Philanthropic Organizations		
Private Property Owners		

Plan Maintenance Tool

The following tool was modified from FEMA's Local Mitigation Planning Handbook and can be utilized to support the plan maintenance process. This tool can be utilized to both monitor plan progress and evaluate the effectiveness of the plan and may support the County and participating jurisdictions to update their approach to mitigation actions and update sections of the plan as necessary.

SAN BENITO COUNTY HAZARD MITIGATION PLAN MAINTENANCE TOOL		
Date of Review:		**Reviewers:**
Jurisdiction:		
Agency:		
SECTION	**CONSIDERATIONS**	**EXPLANATION**
PLANNING PROCESS	Are new jurisdictions invited to participate in plan updates?	
	Have any internal or external agencies been invaluable to the mitigation strategy?	
	Can any procedures (e.g., meeting announcements, plan updates) be done differently or more efficiently?	
	Has the Planning Team undertaken any public outreach activities?	
	How can public participation be improved?	
	Have there been any changes in public support and/or decision maker priorities related to hazard mitigation?	
	Evaluate the effectiveness of this section of the plan. How will the approach to the Planning Process change for the next plan update?	
COUNTY PROFILE	Have any significant demographic or development changes occurred in the jurisdictions?	
	Are there any changes in the community resources and critical assets that may be impacted by a disaster?	
	Evaluate the effectiveness of this section of the plan. How will the approach to and content of the County Profile change for the next plan update?	

RISK ASSESSMENT	Has a significant natural and/or manmade disaster occurred since the Plan was last adopted?	
	Should the list of hazards addressed in the plan be modified?	
	Are there new data sources and/or additional maps and studies available? If so, what are they and what have they revealed? Should the information be incorporated into plan updates?	
	Evaluate the effectiveness of this section of the plan. How will the approach to and content of the Risk Assessment change for the next plan update? Is there anything to add now?	
VULNERABILITY ASSESSMENT	Do any new community resources or critical assets need to be considered for vulnerabilities?	
	Are there repetitive losses and/or severe repetitive losses to document?	
	Have any changes in development trends occurred that could create additional vulnerabilities?	
	Have any implemented mitigation actions changed the vulnerability critical assets?	
	Evaluate the effectiveness of this section of the plan. How will the approach to and content of the Vulnerability Assessment change for the next plan update? Is there anything to add now?	
CAPABILITY ASSESSMENT	Are there different or additional technical, financial, and human resources available for mitigation planning?	
	Has any jurisdiction adopted new policies, plans, regulations, or reports that could be incorporated into the Plan?	
	Has NFIP participation changed in the participating jurisdictions?	
	Evaluate the effectiveness of this section of the plan. How will the approach to and content of the Capability Assessment change for the	

	next plan update? Is there anything to add now?	
MITIGATION STRATEGY	Is the mitigation strategy being implemented as anticipated? Were the cost and timeline estimates accurate?	
	Should new mitigation actions be added to the Mitigation Action Plan? Should existing mitigation actions be eliminated from the Plan?	
	Are there new obstacles that were not anticipated in the plan that will need to be considered in the next plan update?	
	Are there new funding sources to consider?	
	Have elements of the Plan been incorporated into other planning mechanisms?	
	Evaluate the effectiveness of this section of the plan. How has the progress of mitigation action been monitored since the last plan update? How will the approach to mitigation action development change for the next plan update?	
	Evaluate the effectiveness of this section of the plan. How will the approach to and content of the Mitigation Strategy change for the next plan update? Is there anything to add now?	

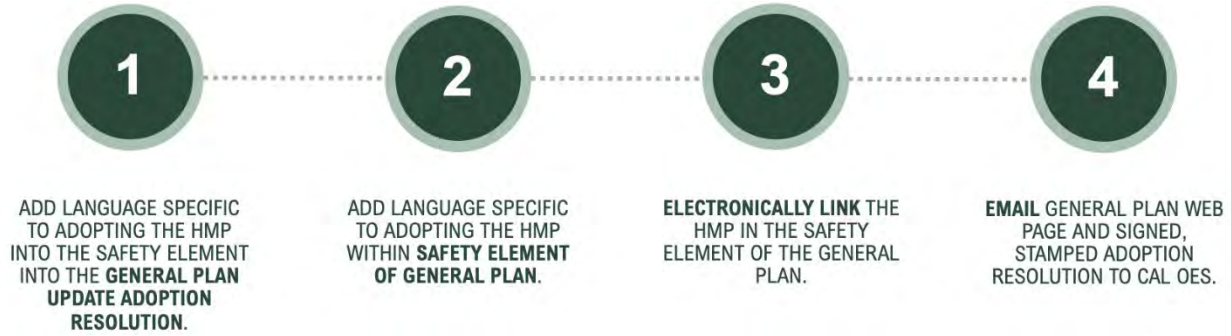
Progress Reporting Tool

The following tool was modified from FEMA's Local Mitigation Planning Handbook and can be utilized to support project reporting.

SAN BENITO COUNTY HAZARD MITIGATION PLAN PROGRESS REPORTING TOOL		
Date of Previous Report:		**Date of Current Report:**
PROJECT INFORMATION	Project Number - Title:	
	Responsible Agency:	
	Contact Name:	
	Contact Phone/Email:	
	Project Status (Check One):	❒ Project Completed Completion Date: ❒ Project Canceled Cancelation Date: ❒ Project on Schedule Anticipated Completion Date: ❒ Project Delayed Anticipated Completion Date:
PROJECT PROGRESS	What was accomplished for this project during this reporting period?	
	What obstacles, problems, or delays did the project encounter?	
	If not completed, is this project still relevant? Should the project be revised?	
	Other Comments:	

General Plan Safety Element Support Tool

The following tool supports participating jurisdictions to become and maintain compliance with Assembly Bill 2140 (Government Code 56302.6). The adoption allows the County/City to be considered for up to all of the Public Assistance local-share costs be funded by the state through the California Disaster Assistance Act. In short, to be compliant with Assembly Bill 2140 jurisdictions need to reference a FEMA approved HMP in their general plan. A summary of the steps to become compliant are outlined in the figure below.



The table below provides the details for jurisdictions to become compliant with Assembly Bill 2140 as provided by Cal OES.

Requirement Number	Details
1	**After updating the general plan, the jurisdiction needs to include language specific to adopting the HMP into the general plan safety element.** This resolution needs to be signed and approved prior to the HMP expiration date. General plan update adoption can occur at the same time as adoption of the HMP update, or any time after the HMP has been approved prior to expiration.
2	**The general plan update must include language specific to the HMP within the safety element of the general plan.** Sample language from Cal OES is provided below: *"The Local Hazard Mitigation Plan (LHMP) for* [NAME OF JURISDICTION] *planning area was developed in accordance with the Disaster Mitigation Act of 2000 (DMA 2000) and followed FEMA's 2011 Local Hazard Mitigation Plan guidance. The LHMP incorporates a process where hazards are identified and profiled, the people and facilities at risk are analyzed, and mitigation actions are developed to reduce or eliminate hazard risk. The implementation of these mitigation actions, which include both short and long-term strategies, involve planning, policy changes, programs, projects, and other activities."*
3	**Jurisdictions must electronically link the HMP to the general plan.** Typically, this is linked in the language specific to the HMP within the safety element (as outlined in Requirement Number 2). The date or year of the current HMP should not be included in the link so the general plan will not need to be updated along with every HMP update.
4	**E-mail the link to the general plan web page and a signed, stamped adoption resolution to Cal OES.** Jurisdictions should email mitigationplanning@caloes.ca.gov and copy Karen McCready (Karen.McCready-Hoover@caloes.ca.gov).

Appendix F. San Juan Bautista Jurisdictional Annex

Risk Assessment

The **Risk Assessment** details the comprehensive risk assessment for hazards applicable to San Juan Bautista. The Planning Team, inclusive of representatives from San Juan Bautista, established the list of hazards that pose the greatest risk to the City. These high priority hazards are:

- Earthquake
- Severe Weather
- Wildfire
- Dam Failure

Vulnerability Assessment

The **Lifeline Vulnerability Assessment** details the comprehensive vulnerability and impact assessment applicable to San Juan Bautista. The table below describes the specific vulnerabilities and impacts that may be experienced by the City, organized by hazard, including a discussion of how development may affect vulnerabilities.

Hazard	Impacts and Vulnerability
Drought	Drought is a low-priority hazard to San Juan Bautista. Notable vulnerabilities to and potential impacts from drought include the following: • Drought, as a part of its nature, reduces the amount of water available to the City. Water services in the City, which are provided by the San Juan Bautista Water Department, may experience extensive stress and have limited available potable water, impacting the 810 current customers. The City maintains a water storage tank with a capacity of 1.2 million gallons that can be utilized following a drought event. • Drought can reduce the availability of food. Specifically, drought can limit growing seasons for agriculture or create low-to-no crop yields either due to water scarcity or crop infestation. Livestock may also be impacted due to water scarcity further limiting food availability. Recycled water and runoff that may be utilized during extended periods of drought may carry pollutants that can further contaminate agriculture. Agricultural companies, including Earthbound Farm and True Leaf Farm, are some of top employers in the region. Negative on the agricultural sector will have direct effects on residents who are their employees and their families. • The community is also at risk of increased health impacts due to drought. There is an increased risk to communicable disease, specifically vector-borne illnesses, due to decreased water levels, increased water contamination, increased contact with wildlife and insects, and changes in air quality. Communities in the City with pre-existing health conditions, including residents who are 65 years or older and residents who live with a disability, may be more susceptible to health impacts from droughts. • There are a variety of cascading impacts on the community resulting from drought. The fire season may become longer with greater intensity. Critical

Hazard		Impacts and Vulnerability
		industries relying on water, such as healthcare and tourism, may be impacted. The City has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the City's vulnerability to drought.
Extreme Temperatures	Extreme Heat	Extreme heat is a medium-priority hazard to the City of San Juan Bautista. Notable vulnerabilities to and potential impacts from extreme heat include the following: • Community health is the major impact of concern during extreme heat events. Extreme heat can cause illness or death from heat stroke and other related disease. Extreme heat might also exacerbate other conditions such as cardiovascular disease, respiratory disease, or mental illness. Older adults, including residents who are 65 years or older, infants and children, individuals with chronic health conditions, low-income individuals, and outdoor workers, such as those working in the agriculture sector, are particularly vulnerable to the impacts of extreme heat either due to their body's limited ability to cool itself effectively or their inability to go to a cool environment. • Extreme heat negatively impacts agriculture. Plant growth is reduced or stopped in extreme temperatures. Livestock can be stressed due to extreme heat. Agricultural companies, including Earthbound Farm and True Leaf Farm, are some of top employers in the region and are susceptible to direct impacts of extreme heat. Negative effects on the agricultural sector will have direct effects on residents who are their employees and their families. • There are a variety of cascading impacts on the community resulting from extreme heat. Extreme heat can exacerbate drought and wildfire hazards, as well as decrease air quality. • The energy lifeline is likely to be impacted by extreme heat. Power is used to keep the community cool and power essential appliances/equipment, and extreme heat can consequently increase the strain on the local energy grids both in terms of demand and transmission. Increased demands can overwhelm energy grids powered by PG&E and can even strain the gas utilities supplied by Central Coast Community Energy. The City has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the City of San Juan Bautista's vulnerability to extreme heat.
	Extreme Cold	Extreme cold is a medium-priority hazard to San Juan Bautista. Notable vulnerabilities to and potential impacts from extreme cold include the following: • Community health is a major impact of concern during extreme cold events. Extreme cold temperatures can lead to numerous health concerns including frostbite, hypothermia, and other life-threatening health outcomes. Older adults, infants and children, individuals with chronic health conditions, low-income individuals, and outdoor workers, are particularly vulnerable to the impacts of extreme cold either due to their body's limited ability to keep itself warm or their inability to go to a warm environment. The City's population of senior citizens who live with a disability would be disproportionately impacted as well. Cold temperatures can also cause property damage (including freezing pipes that may burst and cause water damage inside homes and businesses) and infrastructure damage (including frozen bridges and roads or downed power lines). Cold temperatures may also trigger activation of community warming centers for more vulnerable populations in the City such

Hazard	Impacts and Vulnerability
	as the residents who live below the poverty line or the households who do not have car access. • There are a variety of cascading impacts on the community resulting from extreme cold. Extreme cold events that impact transportation may limit the community's ability to access emergency services. Extreme cold weather events may also cause partial roadway closures and limit public transportation along SR-25. These events may also cause increased injuries and deaths due to transportation accidents. • The energy lifeline run by CCCE, PG&E, and the San Juan Bautista Public Works Department is likely to be impacted by extreme cold. Power is used to keep the community warm, so extreme cold can increase the strain on the energy grid. Moreover, direct damage to the energy infrastructure in the community can limit energy transmission The City has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the City of San Juan Bautista's vulnerability to extreme cold.
Flood	Flooding is a medium-priority hazard to San Juan Bautista. Flooding can loss of life and injury to individuals in the City, damage to infrastructure, and cascading impacts across the community. To better understand the potential impacts of a flooding event, a Hazus analysis was conducted (see **Appendix B. Risk Assessment**). Key results of the Hazus analysis are summarized in the Countywide vulnerability assessment. Other notable vulnerabilities to and potential impacts from flooding include the following: • The transportation lifeline is heavily impacted by flooding. Flooding can cause road damage and closures that require repair and impact ingress and egress routes. During past flood events, some access roads have been cutoff due to floodwaters over SR-25. Vulnerable communities with access and functional needs, such as the residents who live with a disability and those living below the poverty line are significantly impacted as they have unequal access to resources need to prepare and recover from the damages of floods. • There are a variety of cascading impacts on the community resulting from flooding. Flooding can adversely impact the water system for San Juan Bautista. Rain can increase the pollutant concentration in surface water and wastewater. Moreover, rain events of small magnitudes may create significant problems for the wastewater and water systems in the City. The volume of combined runoff and wastewater may become too large for sewage treatment plants operated by the San Juan Bautista Water Department, to manage, and flow is diverted to outfall points that discharge raw sewage, toxic industrial waste and floatable such as garbage and syringes. Water quality and availability issues may impact the 810 current customers of the San Juan Bautista Water Department. There has been no significant change to the City's vulnerability to flooding resulting from increased structural development and population. However, without future strategic development, increased investment in infrastructure and housing will create new vulnerabilities for the community.
Communicable Disease	Communicable disease is a medium-priority hazard to San Juan Bautista. Notable vulnerabilities to and potential impacts from communicable disease include the following: • Community health is the major impact of concern for communicable disease, but as illustrated by the ongoing COVID-19 pandemic there are a series of

Hazard		Impacts and Vulnerability
		cascading impacts impacting the community. Communicable diseases, by nature, cause mild to severe illness. More severe illnesses may potentially result in long-term or permanent impacts and may even result in death. • Continuity of operations may be disrupted by a communicable disease event, and community members may find themselves working in environments that may be dangerous to their health. Frontline workers, specifically those belonging to the healthcare industry, are most likely to be impacted. This poses a significant challenge for co-response efforts involving multiple incidents, such as effectively responding to a wildfire incident during a communicable disease outbreak. This also may cause unforeseen challenges if schools, such as Anzar High School close, it may complicate caretakers' ability to work. • Communicable diseases could significantly strain the local healthcare infrastructure and overwhelm hospital systems. As the sole hospital, the Hazel Hawkins Memorial Hospital and other local medical support service providers may have limited staff and equipment and as a result find their resources being negatively impacted. • As proven by the COVID-19 pandemic, communicable diseases can also cause regional shutdowns and public safety ordinances causing economic disruption and loss of revenue for the City. Impacted individuals' incomes by reducing working hours, limiting work availability, or causing mass job furloughs, which reduce individuals' capacity to contribute to the economy. Communities in the City with pre-existing health conditions, including residents who are 65 years or older and residents who live with a disability, may be more susceptible to health impacts. • The global and local supply chain may be disrupted by a communicable disease or other hazard event. The disaster may impact the availability of food, cleaning supplies, and medical resources, such as personal protective equipment, medications, disease testing supplies, vaccinations, and other equipment to support treatment. • Communicable disease events may cause public distrust and fear of government agencies and health care professionals. Communicable disease events may last for months or even years, placing strain on professionals and organizations responding to the event. Communicable diseases may also have an extensive impact on the emotional and mental wellbeing of individuals who lose members of the community, are displaced from their homes by a hazard event, or are affected in other ways. The City has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the City of San Juan Bautista's vulnerability to communicable disease.
Severe Weather	Hail	Severe weather, specifically hail, is a high-priority hazard to San Juan Bautista. Notable vulnerabilities to and potential impacts from hail include the following: • primary impact of hail is property damage. Roofs and windows of homes, governmental facilities, and private businesses can be damaged by hailstorms. Hail can also damage windshields, sunroofs, and the body of automobiles. Areas in the City with higher density of housing stock and generally larger populations are more susceptible to damage. • Additionally, agriculture and livestock can be damaged or injured by the impacts of hailstorms. Crops and equipment belonging to local agricultural companies such as Earthbound Farm, may experience varying extents of damage based on the severity of hail events. Negative impacts on the

Hazard		Impacts and Vulnerability
		agricultural sector will also have direct effects on residents who are their employees and their families. • Hail can also injure members of the community when it occurs without notice or individuals are unable to seek shelter. Depending on the size and scope of the storm incident, it can take several months for the community to recovery. If businesses or agricultural assets are damaged, then there can be longer-term economic and supply chain impacts. As some of the major employers in San Juan Bautista, are more susceptible to experience these cascading economic effects The City has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the City of San Juan Bautista's vulnerability to hail.
	High Winds	Severe weather, specifically high winds, are a high-priority hazard to San Juan Bautista. Notable vulnerabilities to and potential impacts from high winds include the following: • Extreme winds pose a significant threat to the community, public and private property, and vital utilities. This can be directly from the wind or due to flying debris, such as rocks, lumber, fuel drums, sheet metal and loose gear of any type that can be picked up by the wind. • Individuals who work outside during a severe weather event are more vulnerable to impacts of high winds. Workers in the construction industry, which makes up 11.4% of the County's workforce, are at higher risk of being injured by flying debris on job sites. • Vulnerability increases in areas that have more structures of light construction, particularly manufactured homes, which suffer more damage from high winds. Moreover, older buildings, especially those that were built prior to when the City adopted modern building codes, are susceptible to damage from straight-line winds. These buildings are less likely to have enough design to mitigate wind damage. Even structurally sound buildings can suffer costly damage with potential for secondary impacts, such as broken windows. Communities in the City with functional and access issues, including residents who are 65 years or older, residents who do not have car access, and residents living below the poverty line, may have a more difficult time evacuating and recovering from damages and cascading impacts caused by high winds. • High winds can knock down trees and power lines, resulting in power outages across the City. Further, power supplied by CCCE and PG&E may temporarily be shut off during high-wind events as a precautionary measure to prevent cascading effects such as wildfires sparked by loose live wires. The City has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the City of San Juan Bautista's vulnerability to high winds.
	Tornado	Severe weather, specifically tornadoes, are a high-priority hazard to San Juan Bautista. Notable vulnerabilities to and potential impacts from tornadoes include the following: • Tornadoes typically cause acute, severe damage. The severe cyclonic winds impact structures and property, trees, utilities, and transportation infrastructure. As the severity of the tornado increases, the result would be increased structural damage and an increased likelihood of debris becoming dangerous projectiles. Homes that that were built prior to current building

Hazard		Impacts and Vulnerability
		codes and manufactured homes would be highly vulnerable to tornado events. • Based on the severity of the tornadoes, mass evacuations may be called for. Evacuations also can cause the sudden need for sheltering, which can burden the San Benito County OES and other agencies coordinating sheltering operations; San Benito County HHSA, Community Foundation for San Benito, and other organizations providing social services; and the greater community, depending on the size and scope of the disaster. • Transportation infrastructure can be heavily impacted by tornado hazards due to extensive debris and downed street signals. The City does not have extensive transportation infrastructure to support a mass evacuation due to a hazard event, with only one road, SR 25, serving as the major ingress and egress route out of the City. • Power outages can be caused by downed utility poles and utility structural damage, impacting communications, wastewater services, hospitals, and other emergency response operations. Water services in the City, which are provided by the San Juan Bautista Water Department, may experience extensive stress and have limited available potable water, impacting the City's residents. The City has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the City of San Juan Bautista's vulnerability to tornado.
Wildfire		Wildfires are a high-priority hazard to San Juan Bautista. Notable vulnerabilities to and potential impacts from wildfires include the following: • Wildfires can damage homes, buildings, and other facilities across the City. Structures and communities in the WUI interface and intermix regions, which is most of the City of San Juan Bautista, are particularly vulnerable to the impacts of wildfire. • Wildfire can cause major health impacts, including death and injuries, due to smoke inhalation. First responders are particularly vulnerable to these health impacts. Other agencies and organizations who may be involved in an active response, including the San Benito County Sherriff, may be at higher risk. Communities in the City with pre-existing health conditions, including residents who are 65 years or older and the residents who live with a disability, may be more susceptible to health impacts from wildfires. • Wildfires are likely to cause significant evacuations across and out of the City. The City does not have extensive transportation infrastructure to support a mass evacuation due to a hazard event, with only one road, SR-25, serving as the major ingress and egress route out of the City. Communities in the City with functional and access issues, including residents who are 65 years or older, residents who do not have car access, and residents living below the poverty line, may have a more difficult time evacuating and recovering from a disaster. Evacuations also can cause the sudden need for sheltering, which can burden the San Benito County OES and other agencies coordinating sheltering operations; San Benito County HHSA, Community Foundation for San Benito, and other organizations providing social services; and the greater community, depending on the size and scope of the disaster. • Wildfires can cause water quality and availability issues. Water services, managed by the San Juan Bautista Water Department, may experience extensive stress and have limited potable water, impacting the 810 current

Hazard	Impacts and Vulnerability
	customers. The City maintains a water storage tank with a capacity of 1.2 million gallons that can be utilized following a wildfire event. • Wildfires can impact communities for significant periods of time, as made evident by recent fires across the State. Complete destruction of critical lifelines can result in years of recover and community members not returning to the community. Extended fire seasons can cause consistent power outages to infrastructure managed by the CCCE and PG&E and maintained by the City of San Juan Bautista Public Works Department, even if a fire is not directly impacting the City. The City has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the City's vulnerability to wildfires.
Earthquake	Earthquakes are a medium-priority hazard to the City. Earthquakes can impact San Juan Bautista on the local and regional level. Depending on the severity of each incident these impacts could be limited and isolated or contribute to significant destruction. To better understand the potential impacts of an earthquake event, a Hazus analysis was conducted (see **Appendix B. Risk Assessment**). Key results of the Hazus analysis for a M6.9 Calveras scenario are summarized in the Countywide vulnerability assessment. Other notable vulnerabilities to and potential impacts from earthquakes include the following: • Earthquakes can heavily impact the built environment, causing damage or destruction to buildings. Given the results of the City's lifeline analysis, single family residences are likely to incur the most earthquake damage. However, all buildings in the City, including San Juan Bautista government buildings, Anzar High School, and other, businesses, could be damaged in an earthquake. Significant damage to housing in the community would likely require temporary and long-term recovery housing solutions, disrupting community services and operations for years. • Earthquakes can disrupt utility infrastructure (e.g., power, water, communication). Earthquakes can result in downed power lines, which may cause power outages or fires. Without adequate backup power sources, there may be extensive disruption of critical community services (e.g., healthcare, water, temperature control). Socially vulnerable members, including the residents who live with a disability, households without car access, and those living below the poverty line, are particularly at risk due to a power outage. Earthquakes also may directly damage water and wastewater infrastructure, by breaking water pipes or damaging drinking water and wastewater facilities operated by the San Juan Bautista Water Department. Depending on the size and scope of the disaster, it may also be difficult to get bulk potable water or deal with waste in the absence of these systems. • Communications infrastructure, can be either damaged, destroyed, or overwhelmed in the event of an earthquake. This may impact emergency response, community recovery, and banking operations. Response times and effort by agencies and organizations who may be involved in active response operations, including the San Benito County OES and Emergency Medical Services may be significantly impacted. Continuity of operations may be disrupted and residents' access to community resources may be greatly limited. • Damage to transportation infrastructure may involve direct structural damage, collapse of overpasses, landslides, liquefaction and lateral

Hazard	Impacts and Vulnerability
	spreading of road surfaces and blockage by collapsed building debris. All of the roads San Juan Bautista are at risk from earthquake, including SR-25. A major earthquake would be expected to cause considerable damage to transportation systems. Damage to major transportation routes may hamper response and recovery operations, as San Benito County OES, Hollister Fire, and other response agencies may have difficulty accessing areas of the City. Additionally, damage to transportation routes around the City may hamper the ability to receive additional outside resources needed for response and recovery operations. • Most significantly, earthquakes can loss of life and injury to individuals in the City. Hazards often strain communities and create great uncertainty among individuals, when the end of an incident or the length of recovery is unknown. Disasters may also have an extensive impact on the emotional and mental wellbeing of individuals who lose members of the community, are displaced from their homes by a hazard event, or are affected in other ways. There has been no significant change to the City's vulnerability to earthquakes resulting from increased structural development and population. However, without future strategic development, increased investment in infrastructure and housing will create new vulnerabilities for the community.
Landslide	Landslides are a low-priority hazard to San Juan Bautista. Notable vulnerabilities to and potential impacts from landslides include the following: • Landslides can loss of life and injury to individuals in the City and damage to structures and infrastructure. Communities in San Juan Bautista with functional and access issues, including residents who are 65 years or older or those who do not have car access, may have a more difficult time evacuating in the event of a landslide. The impacts of landslides tend to be acute but can be felt across the community depending on the size, scope, and location of the incident. • Landslides may damage or destroy utilities (i.e., wastewater infrastructure) and roads/bridges. Water services in the City provided by the San Juan Bautista Water Department may also experience damage and decrease the amount of potable water available, thus impacting City residents. This can also destroy or pollute natural ecosystems – impacting communities for years to come. Agricultural companies, including Earthbound Farm and True Leaf Farm, are some of top employers in the region and are susceptible to widespread damage caused by landslides. Negative on the agricultural sector will have direct effects on residents who are their employees and their families. Evacuations also can cause the sudden need for sheltering, which can burden the San Benito County OES and other agencies coordinating sheltering operations; San Benito County HHSA, Community Foundation for San Benito, and other organizations providing social services; and the greater community, depending on the size and scope of the disaster. • Landslides can easily isolate portions of the City, having major health and economic implications for community members and the City overall. In the event of a severe landslide with high numbers of injured civilians, the City's local healthcare infrastructure and hospital systems may be overwhelmed. As the sole hospital, the Hazel Hawking Memorial Hospital and other local medical support service providers may have limited staff and equipment and as a result find their resources being negatively impacted. There has been no change to the City's vulnerability to landslides resulting from increased structural development and population.

Hazard	Impacts and Vulnerability
Dam Failure	Dam failure is a medium-priority hazard to San Juan Bautista. Dam inundation maps are located **Appendix B. Risk Assessment**. Notable vulnerabilities to and potential impacts from dam failures include the following: • Dam failure can cause downstream flooding in the inundation area leading to loss of life or injury to individuals in the City, damage to infrastructure, and cascading impacts across the community. Failure of the San Justo Dam would result in flooding spanning east and north of San Juan Bautista primarily impacting roads (including California State Route 156) and farms including farmland and farm facilities. • Dam failures may also reduce the amount of water available to the City. Water services in the City, which are provided by the San Juan Bautista Water Department, may experience extensive stress and have limited available potable water, impacting the 810 current customers. The City maintains a water storage tank with a capacity of 1.2 million gallons that can be utilized following a drought event. • Dam failure may result in loss of habitat, ecosystems, or recreational areas in the reservoir upstream or downstream from the dam. Depending on the scope of the failure, reconstruction may also be a significant financial expense. Depending on the function of the dam, the power or water and wastewater system may be impacted in the long-term. There has been no change to the City's vulnerability to dam failure resulting from increased structural development and population.
HAZMAT Incident	HAZMAT Incidents are a low-priority hazard to San Juan Bautista. Notable vulnerabilities to and potential impacts from HAZMAT Incidents include the following: • HAZMAT incidents can impact human health, infrastructure, and the environment. HAZMAT incidents impact the whole community, but certain professions and geographies are more likely to be impacted. Those residing along SR-25, which are central to intra-City transportation services, are more susceptible to feel the negative impacts of major HAZAMT incidents on both their health and the environment. • Transportation carriers and agencies involved in active response, such as San Benito County OES and Emergency Medical Services, are most likely to be exposed to hazardous materials as they are the first responders tasked with responding to a HAZMAT spill. • Buildings and facilities where hazardous materials are stored or locations near major transportation routes are most likely to be impacted by HAZMAT incidents. Local businesses such as Earthbound Farm and True Leaf Farm, are susceptible to HAZMAT incidents as they are known to handle potentially hazardous materials such as fertilizers. Major transportation routes that run through the County where there are increased chances of HAZMAT Incidents to occur include SR-156 and SR-25. The impacts of HAZMAT incidents will depend on the materials involved in the incident. This can include thermal injury, radiological injury, asphyxiation, chemical injury, biological exposure, and physical injury. There has been no change to the City's vulnerability to HAZMAT incidents resulting from increased structural development and population.
Terrorism	Terrorism is a low-priority hazard to the San Juan Bautista. Notable vulnerabilities to and potential impacts from terrorism include the following: • Terrorism can have extensive and far-reaching impacts. These impacts can be uniquely felt based on both real or perceived threats of terrorism. These

Hazard	Impacts and Vulnerability
	impacts may include injury and loss of life and damage to property and infrastructure, damage to the community and individual mental health, and economic losses. Critical infrastructure that may be impacted include roadways/bridges, electricity and gas services managed by CCCE, PG&E, and the City of San Juan Bautista Public Works Department, and water and wastewater systems managed by the San Juan Bautista Water Department. Attacks on the City's existing communications structure exacerbate the impacts of a terrorist attack. Chemical, biological, radioactive/nuclear, guns, and/or bombs and explosives are all types of potential attacks that can occur and significantly impact the infrastructure and population of San Juan Bautista. An attack on any one of these systems has the potential for larger cascading impacts. • Terrorism incidents can range in size and scope, impacting the extent of these impacts. Terrorist attacks are likely to occur in locations with high population densities and areas that experience movement of larger groups of individuals and along SR-25 and other public transportation routes. Attacks may also occur in areas of historical or cultural significance, during events that surge population in the region (e.g., Fourth of July Independence Rally), and at government buildings, such as the City government buildings located in San Juan Bautista. There has been no change to the City's vulnerability to terrorism resulting from increased structural development and population.

Capability Assessment

The specific capabilities maintained by San Juan Bautista are detailed in the **Capability Assessment** and **Appendix C. Capability Assessment,** including capabilities they intend to develop and expand upon to better manage and implement a mitigation program. The specific capabilities to be expanded upon include:

- Legal and Regulatory Capabilities: Real Estate Disclosure Ordinance
- Administrative and Technical Capabilities: Staff Member with knowledge of natural hazards
- Fiscal Capabilities: Ability to withhold spending in hazard-prone areas
- Education and Outreach Capabilities: Firewise USA certification

Mitigation Strategy

The **Mitigation Action Plan** comprehensively details the mitigation actions applicable to the participating jurisdictions in the San Benito County HMP. The specific actions to be undertaken by San Juan Bautista, and the hazards mitigated by those actions, are included in the table below.

No.	Description	Hazards Mitigated										
		DROUGHT	FLOOD	EXTREME TEMPERATURE	COMMUNICABLE DISEASE	SEVERE WEATHER	WILDFIRE	EARTHQUAKE	LANDSLIDE	DAM FAILURE	HAZMAT	TERRORISM
1	Develop and implement a sustainable groundwater plan.	■	■									
2	Foster participation in the County's hazard mitigation program throughout the planning cycle.	■	■	■	■	■	■	■	■	■	■	■
3	Expand participation in the National Flood Insurance Program.		■									
5	Assess status and vulnerabilities of community lifelines across all participating jurisdictions.	■	■	■	■	■	■	■	■	■	■	■
6	Evaluate critical County ingress and egress routes for hazard risk and reduce vulnerability of essential County roads.		■				■	■	■	■	■	■
7	Develop and implement a public education program related to community lifeline disruption.	■	■	■	■	■	■	■	■	■	■	■
8	Review and update local codes, regulations, provisions, and ordinances for new and existing buildings to address hazard risks.	■	■	■	■	■	■	■	■	■	■	■
9	Review community-wide water control measures.	■	■									
10	Review and revise the community fire risk reduction program.		■				■		■			
11	Incorporate and adopt San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update	■	■	■	■	■	■	■	■	■	■	■

	into participating jurisdictions' General Plan safety element.	■	■	■	■	■	■	■	■	■	■	■
12	Mitigate flooding risk from the Pajaro River Flood Plain to San Benito County and participating jurisdictions	■	■									
13	Apply for the National Flood Insurance Program's Community Rating System.		■									
14	Review San Benito County COVID-19 after action report to identify effective and appropriate communicable disease mitigation actions.				■							
15a	Evaluate and implement projects at critical facilities to mitigate against earthquakes.							■				
15b	Evaluate and implement projects at critical facilities to mitigate against severe weather events.					■						
15c	Evaluate and implement projects at critical facilities to mitigate against wildfires.						■					
16	Create resilience hubs to support resilience across the community.	■	■	■	■	■	■	■	■	■	■	■
17	Educate residents and property owners about extreme temperature risks.			■								
18	Map and assess vulnerability to San Justo Dam and Leroy Anderson Dam.									■		
19	Protect buildings and infrastructure from severe weather damage.					■						

Appendix G. San Benito County Water District Jurisdictional Annex

Risk Assessment

The **Risk Assessment** details the comprehensive risk assessment for hazards applicable to the San Benito County Water District. The Planning Team, inclusive of representatives from the San Benito County Water District, established the list of hazards that pose the greatest risk to the water district. These high priority hazards are:

- Earthquake
- Severe Weather
- Wildfire
- Dam Failure

Vulnerability Assessment

The **Lifeline Vulnerability Assessment** details the comprehensive vulnerability and impact assessment applicable to the San Benito County Water District. The table below describes the specific vulnerabilities and impacts that may be experienced by the water district, organized by hazard, including a discussion of how development may affect vulnerabilities.

Hazard	Impacts and Vulnerability
Drought	Drought is a low-priority hazard to the water district. Notable vulnerabilities to and potential impacts from drought include the following: • Drought, as a part of its nature, reduces the amount of water available to the jurisdiction. The water district provides services to a section of residents in the northern section of the County and manages surface water stored in the Hernandez Reservoir, San Justo Reservoir, and Paicines Reservoir and water provided by the San Felipe Distribution System. This infrastructure may experience extensive stress and have limited available potable water. • Drought will reduce stream and river flows and lake and reservoir levels, such as in the Hernandez Reservoir, San Justo Reservoir, and Paicines Reservoir. This will result in an associated increase in water temperatures. Plants and wildlife will be stressed as water scarcity increases. The water district has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the San Benito County Water District's vulnerability to drought.

Hazard		Impacts and Vulnerability
Extreme Temperatures	Extreme Heat	Extreme heat is a medium-priority hazard to the San Benito County Water District. Notable vulnerabilities to and potential impacts from extreme heat include the following: • Community health is the major impact of concern during extreme heat events. Extreme heat can cause illness or death from heat stroke and other related disease. Extreme heat might also exacerbate other conditions such as cardiovascular disease, respiratory disease, or mental illness. For the water district, employees who work outdoors are particularly vulnerable to the impacts of extreme heat either due to their body's limited ability to cool itself effectively or their inability to go to a cool environment. • There are a variety of cascading impacts on the community resulting from extreme heat. Extreme heat can exacerbate drought and wildfire hazards. Drought, as a part of its nature, reduces the amount of water available to the jurisdiction. The water district provides services to a section of residents in the northern section of the County and manages surface water stored in the Hernandez Reservoir, San Justo Reservoir, and Paicines Reservoir and water provided by the San Felipe Distribution System. This infrastructure may experience extensive stress and have limited available potable water. • The energy lifeline is likely to be impacted by extreme heat. Power is used to keep the community cool and power essential appliances/equipment,, and extreme heat can consequently increase the strain on the local energy grids both in terms of demand and transmission. Increased demands can overwhelm energy grids. The water district has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to San Benito County Water District's vulnerability to extreme heat.
	Extreme Cold	Extreme cold is a medium-priority hazard to water district. Notable vulnerabilities to and potential impacts from extreme cold include the following: • Community health is a major impact of concern during extreme cold events. Extreme cold temperatures can lead to numerous health concerns including frostbite, hypothermia, and other life-threatening health outcomes. Older adults, infants and children, individuals with chronic health conditions, low-income individuals, and outdoor workers, are particularly vulnerable to the impacts of extreme cold either due to their body's limited ability to keep itself warm or their inability to go to a warm environment. • There are a variety of cascading impacts on the community resulting from extreme cold. Extreme cold events that impact transportation may limit the community's ability to access emergency services. Extreme cold weather events may also cause partial roadway closures on major roads such as CA-101. These events may also cause increased injuries and deaths due to transportation accidents. • The energy lifeline is likely to be impacted by extreme cold. Power is used to keep the community warm, so extreme cold can increase the strain on the energy grid. Moreover, direct damage to the energy infrastructure in the community can limit energy transmission. As a cascading impact, limited to no power to water distribution plants and the San Felipe Distribution System may put increased stress on the availability of potable water. The water district has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the San Benito County Water District's vulnerability to extreme cold.

Hazard	Impacts and Vulnerability
Flood	Flooding is a medium-priority hazard to water district. Flooding can loss of life and injury to individuals in the water district, damage to infrastructure, and cascading impacts across the community. To better understand the potential impacts of a flooding event, a Hazus analysis was conducted (see **Appendix B. Risk Assessment**). Key results of the Hazus analysis are summarized in the Countywide vulnerability assessment. Other notable vulnerabilities to and potential impacts from flooding include the following: • The transportation lifeline is heavily impacted by flooding. Flooding can cause road damage and closures that require repair and impact ingress and egress routes. During past flood events, some access roads have been cutoff due to floodwaters. Vulnerable communities with access and functional needs, such as the residents who live with a disability and those living below the poverty line are significantly impacted as they have unequal access to resources need to prepare and recover from the damages of floods. • There are a variety of cascading impacts on the community resulting from flooding. Flooding can adversely impact the water system for San Benito County Water District. Rain can increase the pollutant concentration in surface water and wastewater. • Rain events of small magnitudes may create significant problems for the wastewater and water systems in the water district. The volume of combined runoff and wastewater may become too large for water treatment plants to manage, and flow is diverted to outfall points that discharge raw sewage, toxic industrial waste and floatable such as garbage and syringes. Water quality and availability issues may impact the customers who receive water through the San Felipe Water Distribution System. There has been no significant change to the water district's vulnerability to flooding resulting from increased structural development and population. However, without future strategic development, increased investment in infrastructure and housing will create new vulnerabilities for the community.
Communicable Disease	Communicable diseases are a medium-priority hazard to the water district. Notable vulnerabilities to and potential impacts from communicable disease include the following: • Community health is the major impact of concern for communicable disease, but as illustrated by the ongoing COVID-19 pandemic there are a series of cascading impacts impacting the community. Communicable diseases, by nature, cause mild to severe illness. More severe illnesses may potentially result in long-term or permanent impacts and may even result in death. • Continuity of operations may be disrupted by a communicable disease event, and water district employees may find themselves working in environments that may be dangerous to their health. Water district employees who work in-person are most likely to be impacted. • The global and local supply chain may be disrupted by a communicable disease or other hazard event. The disaster may impact the availability of food, cleaning supplies, and medical resources, such as personal protective equipment, medications, disease testing supplies, vaccinations, and other equipment to support treatment. • Communicable disease events may cause public distrust and fear of government agencies and health care professionals. Communicable disease events may last for months or even years, placing strain on professionals and organizations responding to the event. Communicable diseases may

Hazard		Impacts and Vulnerability
		also have an extensive impact on the emotional and mental wellbeing of individuals who lose members of the community, are displaced from their homes by a hazard event, or are affected in other ways. The water district has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the San Benito County Water District's vulnerability to communicable disease.
Severe Weather	Hail	Severe weather, specifically hail, is a high-priority hazard to the water district. Notable vulnerabilities to and potential impacts from hail include the following: • A primary impact of hail is property damage. Roofs and windows of water district facilities, including management buildings and Hernandez Reservoir, San Justo Reservoir, and Paicines Reservoir and San Felipe Distribution System, can be severely impacted. • Additionally, agriculture and livestock can be damaged or injured by the impacts of hailstorms. Crops and equipment belonging to local agricultural companies such as Earthbound Farm, may experience varying extents of damage based on the severity of hail events. Negative impacts on the agricultural sector will also have direct effects on residents who are their employees and their families. The water district has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the San Benito County Water District's vulnerability to hail.
	High Winds	Severe weather, specifically high winds, are a high-priority hazard to the San Benito County Water District. Notable vulnerabilities to and potential impacts from high winds include the following: • Extreme winds pose a significant threat to the community, public and private property, and vital utilities. This can be directly from the wind or due to flying debris, such as rocks, lumber, fuel drums, sheet metal and loose gear of any type that can be picked up by the wind. Workers in the construction industry, are at higher risk of being injured by flying debris on job sites. • Extreme winds pose a significant threat to the community, public and private property, and vital utilities. This can be directly from the wind or due to flying debris, such as rocks, lumber, fuel drums, sheet metal and loose gear of any type that can be picked up by the wind. • Water district employees who work outside during a severe weather event are more vulnerable to impacts of high winds. This may be more likely for employees working at the Hernandez Reservoir, San Justo Reservoir, and Paicines Reservoir. • Vulnerability increases in areas that have more structures of light construction, particularly manufactured homes, which suffer more damage from high winds. Moreover, older water district buildings, especially those that were built prior to when the district adopted modern building codes, are susceptible to damage from straight-line winds. These buildings are less likely to have enough design to mitigate wind damage. Even structurally sound buildings can suffer costly damage with potential for secondary impacts, such as broken windows. • High winds can knock down trees and power lines, resulting in power outages across the district. Further, power supply may temporarily be shut off during high-wind events as a precautionary measure to prevent cascading

Hazard		Impacts and Vulnerability
		effects such as wildfires sparked by loose live wires. These activities may all impact the water district's ability to provide services. The water district has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the San Benito County Water District's vulnerability to high winds.
	Tornado	Severe weather, specifically tornadoes, are a high-priority hazard to the water district. Notable vulnerabilities to and potential impacts from tornadoes include the following: • Tornadoes typically cause acute, severe damage. The severe cyclonic winds impact structures and property, trees, utilities, and transportation infrastructure. As the severity of the tornado increases, the result would be increased structural damage and an increased likelihood of debris becoming dangerous projectiles. Water district facilities that were built prior to current building codes and manufactured homes would be highly vulnerable to tornado events. • Based on the severity of the tornadoes, mass evacuations may be called for. Evacuations also can cause the sudden need for sheltering, which can burden the San Benito County OES and other agencies coordinating sheltering operations; San Benito County HHSA, Community Foundation for San Benito, and other organizations providing social services; and the greater community, depending on the size and scope of the disaster. This may impact the availability of critical employees to operate water district facilities. • Transportation infrastructure can be heavily impacted by tornado hazards due to extensive debris and downed street signals. The water district does not have extensive transportation infrastructure to support a mass evacuation due to a hazard event, with only one road, SR 25, serving as the major ingress and egress route out of the district. This may impact the availability of critical employees to operate water district facilities. • Power outages can be caused by downed utility poles and utility structural damage, impacting communications, wastewater services, hospitals, and other emergency response operations. Water services in the County, which are jointly provided by San Benito County Water District, may experience extensive stress and have limited available potable water, impacting all residents who receive water supply from the district. The water district has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the San Benito County Water District's vulnerability to tornado.
Wildfire		Wildfires are a high-priority hazard to the water district. Notable vulnerabilities to and potential impacts from wildfires include the following: • Wildfires can damage infrastructure across the water district. Infrastructure in the WUI interface and intermix regions, including service areas in the northwest region of the County along CA-101 and northeast region of the County along Fairview Rd, the San Justo Reservoir, and the Paicines Reservoir, are particularly vulnerable to the impacts of wildfire. • Wildfires are likely to cause significant evacuations across and out of the County. Mass evacuations of residents may limit the availability of water district staff to operate infrastructure, therefore impacting service provision. • Wildfires can cause water quality and availability issues. The water district provides services to a section of residents in the northern section of the County and manages surface water stored in the Hernandez Reservoir, San

Hazard	Impacts and Vulnerability
	Justo Reservoir, and Paicines Reservoir and water provided by the San Felipe Distribution System. This infrastructure may experience extensive stress and have limited available potable water. • Wildfires can impact communities for significant periods of time, as made evident by recent fires across the State. Complete destruction of critical lifelines can result in years of recover and residents not returning to the community. Extended fire seasons can strain the ability of the water district to provide services to the community, even if a fire is not directly impacting the water district. The water district has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the San Benito County Water District's vulnerability to wildfires.
Earthquake	Earthquakes are a medium-priority hazard to the water district. Earthquakes can impact San Benito County Water District on the local and regional level. Depending on the severity of each incident these impacts could be limited and isolated or contribute to significant destruction. To better understand the potential impacts of an earthquake event, a Hazus analysis was conducted (see **Appendix B. Risk Assessment**). Key results of the Hazus analysis for a M6.9 Calveras scenario are summarized in the Countywide vulnerability assessment. Other notable vulnerabilities to and potential impacts from earthquakes include the following: • Earthquakes can heavily impact the built environment, causing damage or destruction to buildings. Given the results of the water district's lifeline analysis, single family residences are likely to incur the most earthquake damage. However, all buildings in the water district could be damaged in an earthquake. Significant damage to housing in the community would likely require temporary and long-term recovery housing solutions, disrupting community services and operations for years. • Earthquakes can disrupt utility infrastructure (e.g., power, water, communication). Earthquakes can result in downed power lines, which may cause power outages or fires. Without adequate backup power sources, there may be extensive disruption of water district services. Earthquakes also may directly damage water and wastewater infrastructure, by breaking water pipes or damaging water infrastructure from the Hernandez Reservoir, San Justo Reservoir, and Paicines Reservoir and San Felipe Distribution System. Depending on the size and scope of the disaster, it may also be difficult to get bulk potable water or deal with waste in the absence of these systems. • Communications infrastructure, can be either damaged, destroyed, or overwhelmed in the event of an earthquake. Response times and effort by agencies and organizations who may be involved in active response operations may be significantly impacted. Continuity of water district operations may be disrupted and employees' access to facilities be greatly limited. • Damage to transportation infrastructure may involve direct structural damage, collapse of overpasses, landslides, liquefaction and lateral spreading of road surfaces and blockage by collapsed building debris. All of the roads in the San Benito County Water District are at risk from earthquake, including CA-101. A major earthquake would be expected to cause considerable damage to transportation systems. Damage to major transportation routes may hamper response and recovery operations as response agencies may have difficulty accessing areas of the water district. Additionally, damage to transportation routes around the water district may

Hazard	Impacts and Vulnerability
	hamper the ability to receive additional outside resources needed for response and recovery operations. There has been no significant change to the San Benito County Water District's vulnerability to earthquakes resulting from increased structural development and population. However, without future strategic development, increased investment in infrastructure and housing will create new vulnerabilities for the community.
Landslide	Landslides are a low-priority hazard to the water district. Notable vulnerabilities to and potential impacts from landslides include the following: • Landslides can loss of life and injury to individuals in the water district and damage to structures and infrastructure. Communities with functional and access issues, including residents who are 65 years or older or those who do not have car access, may have a more difficult time evacuating in the event of a landslide. The impacts of landslides tend to be acute but can be felt across the community depending on the size, scope, and location of the incident. • Landslides may damage or destroy utilities (i.e., wastewater infrastructure) and roads/bridges. Landslides can cause water quality and availability issues. The water district provides services to a section of residents in the northern section of the County and manages surface water stored in the Hernandez Reservoir, San Justo Reservoir, and Paicines Reservoir and water provided by the San Felipe Distribution System. This infrastructure may experience extensive stress and have limited available potable water. This can also destroy or pollute natural ecosystems – impacting communities for years to come. • Landslides can easily isolate portions of the water district, having major health and economic implications for community members and the water district overall. In the event of a severe landslide with high numbers of injured civilians, the local healthcare infrastructure and hospital systems may be overwhelmed. As the sole hospital, the Hazel Hawking Memorial Hospital and other local medical support service providers may have limited staff and equipment and as a result find their resources being negatively impacted. There has been no change to San Benito County Water District's vulnerability to landslides resulting from increased structural development and population.
Dam Failure	Dam failure is a medium-priority hazard to San Juan Bautista. Dam inundation maps are located **Appendix B. Risk Assessment**. Notable vulnerabilities to and potential impacts from dam failures include the following: • Dam failure can cause downstream flooding in the inundation area leading to loss of life or injury to individuals in the water district, damage to infrastructure, and cascading impacts across the community. Failure of the Hawkins Dam would result in flooding along Arroyo De Las Vibras in San Benito County north and northeast of Hollister flooding farmland, houses, roads, and open land. Failure of the Leroy Anderson Dam would result in flooding along SR 101, initially impacting Santa Clara County schools and the Saint Louise Health Center before reaching San Benito County, where it would impact the northern section of County along SR 25. Failures of both of these dams, while not operated by the water district, have the potential to impact the service area and therefore impact continuity of operations and water district-owned infrastructure. • The water district operates the Hernandez Dam, Paicines Dam, and San Justo Dam. Failure of the Hernandez Dam would result in flooding along the San Benito River along California State Route 25, primarily impacting open

Hazard	Impacts and Vulnerability
	space south of Pinnacles, blocking California State Route 25 just north of Pinnacles, and then farmland, houses, roads, and other infrastructure south and east of the City of Hollister. Failure of the Paicines Dam would result in flooding through the Paicines community impacting farmland, businesses, roads, and Willow Grove Elementary School. Failure of the San Justo Dam would result in flooding spanning east and north of San Juan Bautista primarily impacting roads (including California State Route 156) and farms including farmland and farm facilities. • Dam failures may also reduce the amount of water available. The water district provides services to a section of residents in the northern section of the County and manages surface water stored in the Hernandez Reservoir, San Justo Reservoir, and Paicines Reservoir and water provided by the San Felipe Distribution System. This infrastructure may experience extensive stress and have limited available potable water. • Dam failure may result in loss of habitat, ecosystems, or recreational areas in the reservoir upstream or downstream from the dam. Depending on the scope of the failure, reconstruction may also be a significant financial expense. Depending on the function of the dam, the power or water and wastewater system may be impacted in the long-term. There has been no change to San Benito County Water District's vulnerability to landslides resulting from increased structural development and population.
HAZMAT Incident	HAZMAT Incidents are a low-priority hazard to water district. Notable vulnerabilities to and potential impacts from HAZMAT Incidents include the following: • HAZMAT incidents can impact human health, infrastructure, and the environment. HAZMAT incidents impact the whole community, but certain professions and geographies are more likely to be impacted. Those residing along CA-101, which is central to intra-City transportation services, are more susceptible to feel the negative impacts of major HAZAMT incidents on both their health and the environment. • Buildings and facilities where hazardous materials are stored or locations near major transportation routes are most likely to be impacted by HAZMAT incidents. Major transportation routes that run through the County where there are increased chances of HAZMAT Incidents to occur include CA-101. HAZMAT spills in or near water distribution systems such as those operated by the San Felipe Distribution System may cause long-tern shutdowns of water resources and put additional stress the water system thus limiting the availability of potable water. The impacts of HAZMAT incidents will depend on the materials involved in the incident. This can include thermal injury, radiological injury, asphyxiation, chemical injury, biological exposure, and physical injury. There has been no change to the water district's vulnerability to HAZMAT incidents resulting from increased structural development and population.
Terrorism	Terrorism is a low-priority hazard to the water district. Notable vulnerabilities to and potential impacts from terrorism include the following: • Terrorism can have extensive and far-reaching impacts. These impacts can be uniquely felt based on both real or perceived threats of terrorism. These impacts may include injury and loss of life and damage to property and infrastructure, damage to the community and individual mental health, and economic losses. Critical infrastructure that may be impacted include roadways/bridges, electricity and gas, and water and wastewater systems managed by the San Felipe Distribution System. Large dams, such as the

Hazard	Impacts and Vulnerability
	Hernandez, San Justo, and Paicines Reservoirs also have potential to cause downstream damage in the case they are damaged during and/or are targeted during a terrorist attack. Attacks on the water district's existing communications structure exacerbate the impacts of a terrorist attack. Chemical, biological, radioactive/nuclear, guns, and/or bombs and explosives are all types of potential attacks that can occur and significantly impact the infrastructure and population of the San Benito County Water District. An attack on any one of these systems has the potential for larger cascading impacts. • Terrorism incidents can range in size and scope, impacting the extent of these impacts. Terrorist attacks are likely to occur in locations with high population densities and areas that experience movement of larger groups of individuals, and along local public transportation routes such CA-101 in the northwest region of the County. Attacks may also occur in areas of historical or cultural significance, during events that surge population in the region (e.g., Fourth of July Independence Rally), and at water district operational buildings. There has been no change to the water district's vulnerability to terrorism resulting from increased structural development and population.

Capability Assessment

The specific capabilities maintained by the San Benito County Water District are detailed in the **Capability Assessment** and **Appendix C. Capability Assessment**, including capabilities they intend to develop and expand upon to better manage and implement a mitigation program. The specific capabilities to be expanded upon include:

- Legal and Regulatory Capabilities: Real Estate Disclosure Ordinance
- Administrative and Technical Capabilities: Grant writing training
- Fiscal Capabilities: Ability to withhold spending in hazard-prone areas
- Education and Outreach Capabilities: Enhance ongoing public education program

Mitigation Strategy

The **Mitigation Action Plan** comprehensively details the mitigation actions applicable to the participating jurisdictions in the San Benito County HMP. The specific actions to be undertaken by the San Benito County Water District, and the hazards mitigated by those actions, are included in the table below.

No.	Description	Hazards Mitigated										
		DROUGHT	FLOOD	EXTREME TEMPERATURE	COMMUNICABLE DISEASE	SEVERE WEATHER	WILDFIRE	EARTHQUAKE	LANDSLIDE	DAM FAILURE	HAZMAT	TERRORISM
1	Develop and implement a sustainable groundwater plan.	■	■									
2	Foster participation in the County's hazard mitigation program throughout the planning cycle.	■	■	■	■	■	■	■	■	■	■	■
9	Review community-wide water control measures.	■	■									
12	Mitigate flooding risk from the Pajaro River Flood Plain to San Benito County and participating jurisdictions	■	■									
14	Review San Benito County COVID-19 after action report to identify effective and appropriate communicable disease mitigation actions.				■							
15a	Evaluate and implement projects at critical facilities to mitigate against earthquakes.							■				
15b	Evaluate and implement projects at critical facilities to mitigate against severe weather events.					■						
15c	Evaluate and implement projects at critical facilities to mitigate against wildfires.						■					
17	Educate residents and property owners about extreme temperature risks.			■								
18	Map and assess vulnerability to San Justo									■		

	Dam and Leroy Anderson Dam.											
19	Protect buildings and infrastructure from severe weather damage.											

Appendix H. Sunnyslope County Water District Jurisdictional Annex

Risk Assessment

The **Risk Assessment** details the comprehensive risk assessment for hazards applicable to the Sunnyslope County Water District. The Planning Team, inclusive of representatives from the Sunnyslope County Water District, established the list of hazards that pose the greatest risk to the water district. These high priority hazards are:

- Earthquake
- Severe Weather
- Wildfire
- Dam Failure

Vulnerability Assessment

The **Lifeline Vulnerability Assessment** details the comprehensive vulnerability and impact assessment applicable to the Sunnyslope County Water District. The table below describes the specific vulnerabilities and impacts that may be experienced by the water district, organized by hazard, including a discussion of how development may affect vulnerabilities.

Hazard	Impacts and Vulnerability
Drought	Drought is a low-priority hazard to the water district. Notable vulnerabilities to and potential impacts from drought include the following: • Drought, as a part of its nature, reduces the amount of water available to the County. The water district provides services to residents in the City of Hollister and manages the Lessalt Water Treatment Plant and West Hills Water Treatment Plant. This infrastructure may experience extensive stress and have limited available potable water. • Drought will reduce stream and river flows and lake and reservoir levels, including incoming water that the water district manages. This will result in an associated increase in water temperatures. Plants and wildlife will be stressed as water scarcity increases. The water district has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the Sunnyslope County Water District's vulnerability to drought.

Hazard		Impacts and Vulnerability
Extreme Temperatures	Extreme Heat	Extreme heat is a medium-priority hazard to the Sunnyslope County Water District. Notable vulnerabilities to and potential impacts from extreme heat include the following: • Community health is the major impact of concern during extreme heat events. Extreme heat can cause illness or death from heat stroke and other related disease. Extreme heat might also exacerbate other conditions such as cardiovascular disease, respiratory disease, or mental illness. For the water district, employees who work outdoors are particularly vulnerable to the impacts of extreme heat either due to their body's limited ability to cool itself effectively or their inability to go to a cool environment. • There are a variety of cascading impacts on the community resulting from extreme heat. Extreme heat can exacerbate drought and wildfire hazards. Drought is likely to impact the environment. There will be reduced stream and river flows and reduction in lake and reservoir levels, including incoming water that the water district manages. This will result in an associated increase in water temperatures. • The energy lifeline is likely to be impacted by extreme heat. Power is used to keep the community cool and power essential appliances/equipment and essential facilities, such as the Lessalt and West Hills Water Treatment Plants. Extreme heat can consequently increase the strain on the local energy grids both in terms of demand and transmission. Increased demands can overwhelm energy grids and can even strain the gas utilities. The water district has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to Sunnyslope County Water District's vulnerability to extreme heat.
	Extreme Cold	Extreme cold is a medium-priority hazard to water district. Notable vulnerabilities to and potential impacts from extreme cold include the following: • Community health is a major impact of concern during extreme cold events. Extreme cold temperatures can lead to numerous health concerns including frostbite, hypothermia, and other life-threatening health outcomes. Older adults, infants and children, individuals with chronic health conditions, low-income individuals, and outdoor workers, are particularly vulnerable to the impacts of extreme cold either due to their body's limited ability to keep itself warm or their inability to go to a warm environment. • There are a variety of cascading impacts on the community resulting from extreme cold. Extreme cold events that impact transportation may limit the community's ability to access emergency services. Extreme cold weather events may also cause partial roadway closures and limit public transportation along the lines run by the San Benito County Express. These events may also cause increased injuries and deaths due to transportation accidents. • The energy lifeline is likely to be impacted by extreme cold. Power is used to keep the community warm, so extreme cold can increase the strain on the energy grid. Moreover, direct damage to the energy infrastructure in the community can limit energy transmission. As a cascading impact, limited to no power to the Lessalt and West Hills Water Treatment plants may put increased stress on the availability of potable water. The water district has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the Sunnyslope County Water District's vulnerability to extreme cold.

Hazard	Impacts and Vulnerability
Flood	Flooding is a medium-priority hazard to water district. Flooding can loss of life and injury to individuals in the water district, damage to infrastructure, and cascading impacts across the community. To better understand the potential impacts of a flooding event, a Hazus analysis was conducted (see **Appendix B. Risk Assessment**). Key results of the Hazus analysis are summarized in the Countywide vulnerability assessment. Other notable vulnerabilities to and potential impacts from flooding include the following: • The transportation lifeline is heavily impacted by flooding. Flooding can cause road damage and closures that require repair and impact ingress and egress routes. During past flood events, some access roads have been cutoff due to floodwaters over SA-25. Vulnerable communities with access and functional needs, such as the residents who live with a disability and those living below the poverty line are significantly impacted as they have unequal access to resources need to prepare and recover from the damages of floods. • There are a variety of cascading impacts on the community resulting from flooding. Flooding can adversely impact the water system for Sunnyslope County Water District. Rain can increase the pollutant concentration in surface water and wastewater. • Rain events of small magnitudes may create significant problems for the wastewater and water systems in the water district. The volume of combined runoff and wastewater may become too large for the Lessalt and West Hills Water Treatment Plants to manage, and flow is diverted to outfall points that discharge raw sewage, toxic industrial waste and floatable such as garbage and syringes. Water quality and availability issues may impact the customers who receive water from the Sunnyslope County Water District. There has been no significant change to the water district's vulnerability to flooding resulting from increased structural development and population. However, without future strategic development, increased investment in infrastructure and housing will create new vulnerabilities for the community.
Communicable Disease	Communicable diseases are a medium-priority hazard to the water district. Notable vulnerabilities to and potential impacts from communicable disease include the following: • Community health is the major impact of concern for communicable disease, but as illustrated by the ongoing COVID-19 pandemic there are a series of cascading impacts impacting the community. Communicable diseases, by nature, cause mild to severe illness. More severe illnesses may potentially result in long-term or permanent impacts and may even result in death. • Continuity of operations may be disrupted by a communicable disease event, and water district employees may find themselves working in environments that may be dangerous to their health. Water district employees who work in-person are most likely to be impacted. • The global and local supply chain may be disrupted by a communicable disease or other hazard event. The disaster may impact the availability of food, cleaning supplies, and medical resources, such as personal protective equipment, medications, disease testing supplies, vaccinations, and other equipment to support treatment. • Communicable disease events may cause public distrust and fear of government agencies and health care professionals. Communicable disease events may last for months or even years, placing strain on professionals

Hazard		Impacts and Vulnerability
		and organizations responding to the event. Communicable diseases may also have an extensive impact on the emotional and mental wellbeing of individuals who lose members of the community, are displaced from their homes by a hazard event, or are affected in other ways. The water district has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the Sunnyslope County Water District's vulnerability to communicable disease.
Severe Weather	Hail	last Severe weather, specifically hail, is a high-priority hazard to the water district. Notable vulnerabilities to and potential impacts from hail include the following: • A primary impact of hail is property damage. Roofs and windows of water district facilities, including management buildings, the Lessalt Water Treatment Plant, and West Hills Water Treatment Plant, can be severely impacted. • Additionally, agriculture and livestock can be damaged or injured by the impacts of hailstorms. Crops and equipment belonging to local agricultural companies, may experience varying extents of damage based on the severity of hail events. Negative impacts on the agricultural sector will also have direct effects on residents who are their employees and their families. The water district has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the Sunnyslope County Water District's vulnerability to hail.
	High Winds	Severe weather, specifically high winds, are a high-priority hazard to the water district. Notable vulnerabilities to and potential impacts from high winds include the following: • Extreme winds pose a significant threat to the community, public and private property, and vital utilities. This can be directly from the wind or due to flying debris, such as rocks, lumber, fuel drums, sheet metal and loose gear of any type that can be picked up by the wind. Workers in the construction industry, are at higher risk of being injured by flying debris on job sites. • Extreme winds pose a significant threat to the community, public and private property, and vital utilities. This can be directly from the wind or due to flying debris, such as rocks, lumber, fuel drums, sheet metal and loose gear of any type that can be picked up by the wind. • Water district employees who work outside during a severe weather event are more vulnerable to impacts of high winds. This may be more likely for employees working outdoors at the Lessalt Treatment Plant and West Hills Water Treatment Plant. • Vulnerability increases in areas that have more structures of light construction, particularly manufactured homes, which suffer more damage from high winds. Moreover, older water district buildings, especially those that were built prior to when the district adopted modern building codes, are susceptible to damage from straight-line winds. These buildings are less likely to have enough design to mitigate wind damage. Even structurally sound buildings can suffer costly damage with potential for secondary impacts, such as broken windows. • High winds can knock down trees and power lines, resulting in power outages across the district. Further, power supply may temporarily be shut off during high-wind events as a precautionary measure to prevent cascading

Hazard		Impacts and Vulnerability
		effects such as wildfires sparked by loose live wires. These activities may all impact the water district's ability to provide services. The water district has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the Sunnyslope County Water District's vulnerability to high wind.
	Tornado	Severe weather, specifically tornadoes, are a high-priority hazard to the water district. Notable vulnerabilities to and potential impacts from tornadoes include the following: • Tornadoes typically cause acute, severe damage. The severe cyclonic winds impact structures and property, trees, utilities, and transportation infrastructure. As the severity of the tornado increases, the result would be increased structural damage and an increased likelihood of debris becoming dangerous projectiles. Water district facilities that were built prior to current building codes and manufactured homes would be highly vulnerable to tornado events. • Based on the severity of the tornadoes, mass evacuations may be called for. Evacuations also can cause the sudden need for sheltering, which can burden the San Benito County OES and other agencies coordinating sheltering operations; San Benito County HHSA, Community Foundation for San Benito, and other organizations providing social services; and the greater community, depending on the size and scope of the disaster. This may impact the availability of critical employees to operate water district facilities. • Transportation infrastructure can be heavily impacted by tornado hazards due to extensive debris and downed street signals. The water district does not have extensive transportation infrastructure to support a mass evacuation due to a hazard event, with only one road, SR 25, serving as the major ingress and egress route out of the district. This may impact the availability of critical employees to operate water district facilities. • Power outages can be caused by downed utility poles and utility structural damage, impacting communications, wastewater services, hospitals, and other emergency response operations. Water services in the County, which are jointly provided by Sunnyslope County Water District, may experience extensive stress and have limited available potable water, impacting all residents who receive water supply from the district. The water district has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to the Sunnyslope County Water District's vulnerability to tornado.
Wildfire		Wildfires are a high-priority hazard to the water district. Notable vulnerabilities to and potential impacts from wildfires include the following: • Wildfires can damage infrastructure across the water district. Infrastructure in the WUI interface and intermix regions, including service areas along the northwest section of SR-25, Lessalt Water Treatment Plant, and West Hills Water Treatment Plant, are particularly vulnerable to the impacts of wildfire. • Wildfires are likely to cause significant evacuations across and out of the County. Mass evacuations of residents may limit the availability of water district staff to operate infrastructure, therefore impacting service provision. • Wildfires can cause water quality and availability issues. The water district provides services to residents in the City of Hollister and manages the Lessalt Water Treatment Plant and West Hills Water Treatment Plant. This

Hazard	Impacts and Vulnerability
	infrastructure may experience extensive stress and have limited available potable water. • Wildfires can impact communities for significant periods of time, as made evident by recent fires across the State. Complete destruction of critical lifelines can result in years of recover and residents not returning to the community. Extended fire seasons can strain the ability of the water district to provide services to the community, even if a fire is not directly impacting the water district. The water district has not experienced a significant increase in development or population since the last HMP update, and therefore there has been no change to Sunnyslope County Water District's vulnerability to wildfires.
Earthquake	Earthquakes are a medium-priority hazard to the water district. Earthquakes can impact Sunnyslope County Water District on the local and regional level. Depending on the severity of each incident these impacts could be limited and isolated or contribute to significant destruction. To better understand the potential impacts of an earthquake event, a Hazus analysis was conducted (see **Appendix B. Risk Assessment**). Key results of the Hazus analysis for a M6.9 Calveras scenario are summarized in the Countywide vulnerability assessment. Other notable vulnerabilities to and potential impacts from earthquakes include the following: • Earthquakes can heavily impact the built environment, causing damage or destruction to buildings. Given the results of the water district's lifeline analysis, single family residences are likely to incur the most earthquake damage. However, all buildings in the water district could be damaged in an earthquake. Significant damage to housing in the community would likely require temporary and long-term recovery housing solutions, disrupting community services and operations for years. • Earthquakes can disrupt utility infrastructure (e.g., power, water, communication). Earthquakes can result in downed power lines, which may cause power outages or fires. Without adequate backup power sources, there may be extensive disruption of water district services. Earthquakes also may directly damage water and wastewater infrastructure, by breaking water pipes or damaging water infrastructure from the Lessalt Water Treatment Plant and West Hills Water Treatment Plant and distribution systems. Depending on the size and scope of the disaster, it may also be difficult to get bulk potable water or deal with waste in the absence of these systems. • Communications infrastructure, can be either damaged, destroyed, or overwhelmed in the event of an earthquake. Response times and effort by agencies and organizations who may be involved in active response operations may be significantly impacted. Continuity of water district operations may be disrupted and employees' access to facilities be greatly limited. • Damage to transportation infrastructure may involve direct structural damage, collapse of overpasses, landslides, liquefaction and lateral spreading of road surfaces and blockage by collapsed building debris. All of the roads in the Sunnyslope County Water District are at risk from earthquake, including SR-25. A major earthquake would be expected to cause considerable damage to transportation systems. Damage to major transportation routes may hamper response and recovery operations as response agencies may have difficulty accessing areas of the water district. Additionally, damage to transportation routes around the water district may

Hazard	Impacts and Vulnerability
	hamper the ability to receive additional outside resources needed for response and recovery operations. • Most significantly, earthquakes can loss of life and injury to individuals in the water district. Hazards often strain communities and create great uncertainty among individuals, when the end of an incident or the length of recovery is unknown. Disasters may also have an extensive impact on the emotional and mental wellbeing of individuals who lose members of the community, are displaced from their homes by a hazard event, or are affected in other ways. There has been no significant change to the Sunnyslope County Water District's vulnerability to earthquakes resulting from increased structural development and population. However, without future strategic development, increased investment in infrastructure and housing will create new vulnerabilities for the community.
Landslide	Landslides are a low-priority hazard to the water district. Notable vulnerabilities to and potential impacts from landslides include the following: • Landslides can loss of life and injury to individuals in the water district and damage to structures and infrastructure. Communities with functional and access issues, including residents who are 65 years or older or those who do not have car access, may have a more difficult time evacuating in the event of a landslide. The impacts of landslides tend to be acute but can be felt across the community depending on the size, scope, and location of the incident. • Landslides may damage or destroy utilities (i.e., wastewater infrastructure) and roads/bridges. Landslides can cause water quality and availability issues. The water district provides services to residents in the City of Hollister and manages the Lessalt Water Treatment Plant and West Hills Water Treatment Plant. This infrastructure may experience extensive stress and have limited available potable water. Landslides can also destroy or pollute natural ecosystems – impacting communities for years to come. • Landslides can easily isolate portions of the water district, having major health and economic implications for community members and the water district overall. In the event of a severe landslide with high numbers of injured civilians, the local healthcare infrastructure and hospital systems may be overwhelmed. As the sole hospital, the Hazel Hawking Memorial Hospital and other local medical support service providers may have limited staff and equipment and as a result find their resources being negatively impacted. There has been no change to Sunnyslope County Water District's vulnerability to landslides resulting from increased structural development and population.
Dam Failure	Dam failure is a medium-priority hazard to San Juan Bautista. Dam inundation maps are located **Appendix B. Risk Assessment**. Notable vulnerabilities to and potential impacts from dam failures include the following: • Dam failure can cause downstream flooding in the inundation area leading to loss of life or injury to individuals in the water district, damage to infrastructure, and cascading impacts across the community. Failure of the Hawkins Dam would result in flooding along Arroyo De Las Vibras in San Benito County north and northeast of Hollister flooding farmland, houses, roads, and open land. Failure of the Hernandez Dam would result in flooding along the San Benito River along California State Route 25, primarily impacting open space south of Pinnacles, blocking California State Route 25 just north of Pinnacles, and then farmland, houses, roads, and other infrastructure south and east of the City of Hollister. Failures of both of these dams, while not operated by the water district, have the potential to impact

Hazard	Impacts and Vulnerability
	the service area and therefore impact continuity of operations and water district-owned infrastructure. • Dam failures may also reduce the amount of water available. The water district provides services to residents in the City of Hollister and manages the Lessalt Water Treatment Plant and West Hills Water Treatment Plant. This infrastructure may experience extensive stress and have limited available potable water. • Dam failure may result in loss of habitat, ecosystems, or recreational areas in the reservoir upstream or downstream from the dam. Depending on the scope of the failure, reconstruction may also be a significant financial expense. Depending on the function of the dam, the power or water and wastewater system may be impacted in the long-term. There has been no change to Sunnyslope County Water District's vulnerability to dam failure resulting from increased structural development and population.
HAZMAT Incident	HAZMAT Incidents are a low-priority hazard to water district. Notable vulnerabilities to and potential impacts from HAZMAT Incidents include the following: • HAZMAT incidents can impact human health, infrastructure, and the environment. HAZMAT incidents impact the whole community, but certain professions and geographies are more likely to be impacted. Those residing along SR-25, which are central to intra-City transportation services, are more susceptible to feel the negative impacts of major HAZAMT incidents on both their health and the environment. • Buildings and facilities where hazardous materials are stored or locations near major transportation routes are most likely to be impacted by HAZMAT incidents. Local facilities such as the Lessalt Water Treatment Plan and the West Hills Water Treatment, are susceptible to HAZMAT incidents as they are known to handle hazardous chemicals. Major transportation routes that run through the water district where there are increased chances of HAZMAT Incidents to occur include SR-25. HAZMAT spills in or near water distribution systems such as those operated by the San Felipe Distribution System may cause long-tern shutdowns of water resources and put additional stress the water system thus limiting the availability of potable water. The impacts of HAZMAT incidents will depend on the materials involved in the incident. This can include thermal injury, radiological injury, asphyxiation, chemical injury, biological exposure, and physical injury. There has been no change to the water district's vulnerability to HAZMAT incidents resulting from increased structural development and population.
Terrorism	Terrorism is a low-priority hazard to the water district. Notable vulnerabilities to and potential impacts from terrorism include the following: • Terrorism can have extensive and far-reaching impacts. These impacts can be uniquely felt based on both real or perceived threats of terrorism. These impacts may include injury and loss of life and damage to property and infrastructure, damage to the community and individual mental health, and economic losses. Critical infrastructure that may be impacted include roadways/bridges, electricity and gas, and water and wastewater systems. Attacks on the water district's existing communications structure exacerbate the impacts of a terrorist attack. Chemical, biological, radioactive/nuclear, guns, and/or bombs and explosives are all types of potential attacks that can occur and significantly impact the infrastructure and population of the

Hazard	Impacts and Vulnerability
	Sunnyslope Water District. An attack on any one of these systems has the potential for larger cascading impacts. • Terrorism incidents can range in size and scope, impacting the extent of these impacts. Terrorist attacks are likely to occur in locations with high population densities and areas that experience movement of larger groups of individuals, such as the Hollister Municipal Airport and along local public transportation routes including SR-25. Attacks may also occur in areas of historical or cultural significance, during events that surge population in the region (e.g., Fourth of July Independence Rally), and at water district operational buildings. There has been no change to the water district's vulnerability to terrorism resulting from increased structural development and population.

Capability Assessment

The specific capabilities maintained by the Sunnyslope County Water District are detailed in the **Capability Assessment** and **Appendix C. Capability Assessment**, including capabilities they intend to develop and expand upon to better manage and implement a mitigation program. The specific capabilities to be expanded upon include:

- Legal and Regulatory Capabilities: Real Estate Disclosure Ordinance
- Administrative and Technical Capabilities: Grant writing training
- Fiscal Capabilities: Ability to withhold spending in hazard-prone areas
- Education and Outreach Capabilities: Enhance ongoing public education program

Mitigation Strategy

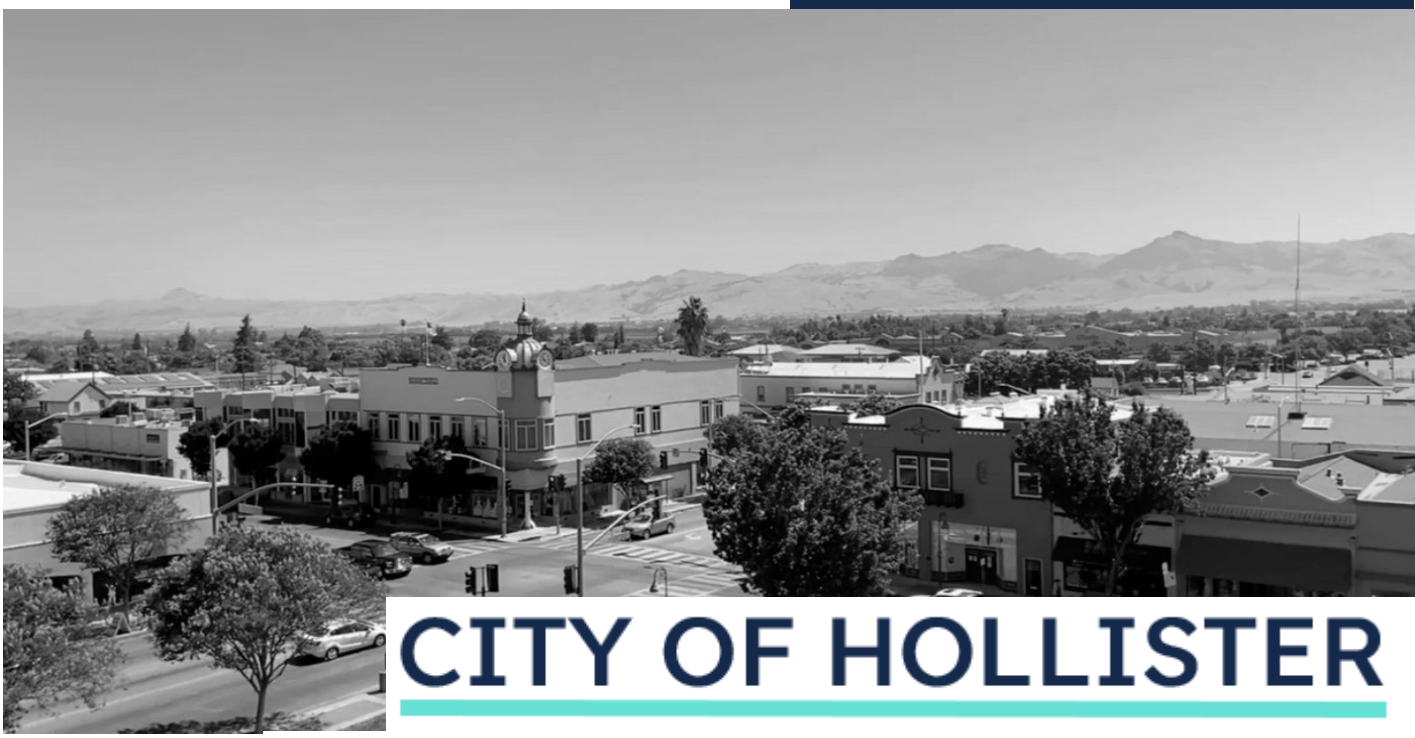
The **Mitigation Action Plan** comprehensively details the mitigation actions applicable to the participating jurisdictions in the San Benito County HMP. The specific actions to be undertaken by the Sunnyslope County Water District, and the hazards mitigated by those actions, are included in the table below.

No.	Description	Hazards Mitigated										
		DROUGHT	FLOOD	EXTREME TEMPERATURE	COMMUNICABLE DISEASE	SEVERE WEATHER	WILDFIRE	EARTHQUAKE	LANDSLIDE	DAM FAILURE	HAZMAT	TERRORISM
1	Develop and implement a sustainable groundwater plan.	■	■									
2	Foster participation in the County's hazard mitigation program	■	■	■	■	■	■	■	■	■	■	■

	throughout the planning cycle.											
9	Review community-wide water control measures.											
14	Review San Benito County COVID-19 after action report to identify effective and appropriate communicable disease mitigation actions.											
15a	Evaluate and implement projects at critical facilities to mitigate against earthquakes.											
15b	Evaluate and implement projects at critical facilities to mitigate against severe weather events.											
15c	Evaluate and implement projects at critical facilities to mitigate against wildfires.											
17	Educate residents and property owners about extreme temperature risks.											
18	Map and assess vulnerability to San Justo Dam and Leroy Anderson Dam.											
19	Protect buildings and infrastructure from severe weather damage.											

Appendix I. Hollister Jurisdictional Annex

This appendix includes the plan developed by the City of Hollister in conjunction with their Hollister 2040 General Plan update. Hollister chose to complete a comprehensive jurisdictional annex in addition to participating in the collaborative planning process to ensure alignment between the City's general plan and widely reflects the vision and priorities of the City.



CITY OF HOLLISTER

LOCAL HAZARD MITIGATION PLAN

ATLAS PLANNING SOLUTIONS

Public Review Draft

2/28/2022

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Chapter 1 – Introduction

Plan Purpose and Authority



Hazard events can lead to injuries or death, affect overall health and safety of a community, damage or destroy public and private property, harm ecosystems, and disrupt key services. Although the hazard event often gets the most attention, it is only one part of a larger emergency management cycle.

Emergency planners and responders can take steps during the response, recovery, mitigation, and preparedness phases of the cycle to minimize the harm caused by a disaster. This Local Hazard Mitigation Plan (LHMP) focuses on optimizing the mitigation phase of the cycle. Mitigation involves making a community more resilient to disasters so that when hazard events do ultimately occur, the community suffers less damage and can recover more effectively. It differs from preparedness, which involves advanced planning for how best to respond when a disaster occurs or is imminent. For example, a policy to make homes structurally stronger so they suffer less damage during an earthquake is a mitigation action, while fully equipping shelters to accommodate people who lose their homes in an earthquake is a preparedness action. Some activities may qualify as both.

The City of Hollister (City), like other communities, could potentially suffer severe harm from hazard events, and although large disasters may cause widespread devastation, even smaller disasters can have substantial effects. The City cannot make itself completely immune to hazard events, but this LHMP can help make the community a safer place to live, work, and visit. This LHMP provides a comprehensive assessment of the threats that the City faces from natural and human-caused hazard events and a coordinated strategy to reduce these threats. It identifies resources and information that can help community members, City staff, and local officials understand local threats and make informed decisions. The LHMP can also support increased coordination and collaboration between the City, other public agencies, local employers, service providers, community members, and other key stakeholders.

KEY TERMS

HAZARD EVENT: AN EMERGENCY DUE TO A NATURAL OR HUMAN-CAUSED EVENT THAT HAS THE POTENTIAL TO CAUSE HARM.

Federal Authority

The City is not required to prepare an LHMP, but state and federal regulations encourage it. The federal Robert T. Stafford Disaster Relief and Emergency Act, amended by the Disaster Management Act of 2000, create a federal framework for local hazard mitigation planning. It states that jurisdictions that wish to be eligible for federal hazard mitigation grant funding must prepare a hazard mitigation

plan that meets a certain set of guidelines and submit this plan to the Federal Emergency Management Agency (FEMA) for review and approval. These guidelines are outlined in the Code of Federal Regulations, Title 44, Part 201, and discussed in greater detail in FEMA's Local Mitigation Plan Review Tool.

State Authority

California Government Code Sections 8685.9 and 65302.6

California Government Code Section 8685.9 (also known as Assembly Bill 2140) limits the State of California's share of disaster relief funds paid out to local governments to 75 percent of the funds not paid for by federal disaster relief efforts unless the jurisdiction has adopted a valid hazard mitigation plan consistent with the Disaster Management Act of 2000 and has incorporated the hazard mitigation plan into the jurisdiction's general plan. The State may cover more than 75 percent of the remaining disaster relief costs in these cases.

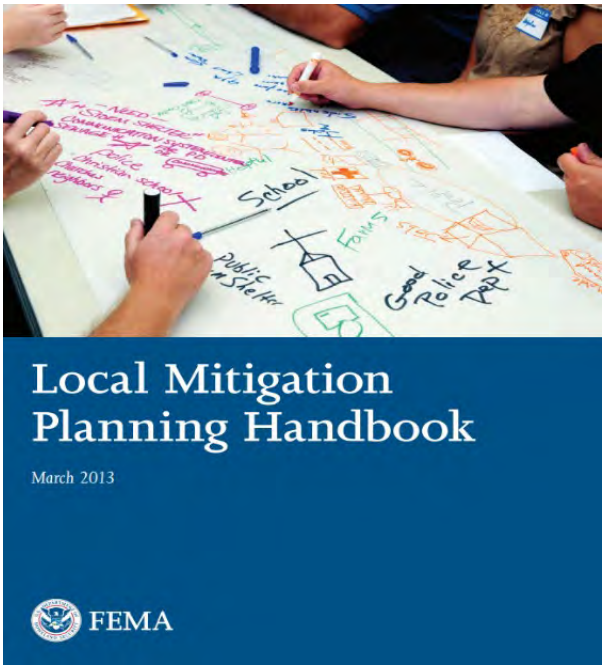
All cities and counties in California must prepare a general plan, which must include a safety element that addresses various hazard conditions and other public safety issues. The safety element may be a stand-alone chapter or incorporated into another section, as the community wishes. California Government Code Section 65302.6 indicates that a community may adopt an LHMP into its safety element if the LHMP meets applicable state requirements. This allows communities to use the LHMP to satisfy state requirements for safety elements. As the General Plan is an overarching long-term plan for community growth and development, incorporating the LHMP into it creates a stronger mechanism for implementing the LHMP.

California Government Code Section 65302 (g)(4)

California Government Code Section 65302 (g)(4), also known as Senate Bill (SB) 379, requires that the safety element of a community's general plan address the hazards created or exacerbated by climate change. The safety element must identify how climate change is expected to affect hazard conditions in the community and include measures to adapt and be more resilient to these anticipated changes.

Because the LHMP can be incorporated into the safety element, including these items in the LHMP can satisfy the state requirement. SB 379 requires that climate change be addressed in the safety element when the LHMP is updated after January 1, 2017, for communities that already have an LHMP, or by January 1, 2022, for communities without an LHMP.

This LHMP is consistent with current standards and regulations, as outlined by the California



FEMA's Local Mitigation Planning Handbook, last updated in 2013, is one of the key guidance documents for local communities in preparing hazard mitigation plans.

Office of Emergency Services (Cal OES) and FEMA. It uses the best available science, and its mitigation actions/strategies reflect best practices and community values. It meets the requirements of current state and federal guidelines and makes the City eligible for all appropriate benefits under state and federal law and practices. Note that while FEMA is responsible for reviewing and certifying this LHMP, and Cal OES is responsible for conducting a preliminary review, it does not grant FEMA or Cal OES any increased role in the governance of the City or authorize either agency to take any specific action in the community.

Plan Organization and Use

The Hollister LHMP is both a reference document and an action plan. It has information and resources to educate readers and decision-makers about hazard events and related issues, and a comprehensive strategy that the City and community members can follow up to improve resilience in the City. It is divided into the following chapters:

- *Chapter 1: Introduction. This chapter describes the background of the Plan, its goals and objectives, and the process used in its development.*
- *Chapter 2: Community Profile. This chapter discusses the history of Hollister, its physical setting and land uses, its demographics, and other important community characteristics.*
- *Chapter 3: Hazard Assessment. This chapter identifies and describes the hazards that pose a threat to Hollister and discusses past and future events as well as the effects of climate change.*
- *Chapter 4: Vulnerability Assessment. This chapter describes the threat of each hazard on Hollister's key facilities and community members, including socially vulnerable individuals.*
- *Chapter 5: Mitigation Strategy. This chapter lists the mitigation actions to reduce Hollister's vulnerability to hazard events and provides an overview of the community's existing capabilities to improve hazard resilience.*
- *Chapter 6: Plan Maintenance. This chapter summarizes the process for implementing, monitoring, and updating the LHMP and opportunities for continued public involvement.*

Previous Hollister LHMP

In January of 2013 the update to the San Benito County Multi-Jurisdictional Hazard Mitigation Plan began. The final draft was approved by CAL OES and FEMA and adopted by the County in August of 2015. At this time, the plan was considered a Multi-Jurisdictional Plan (MJHMP) that included the incorporated communities of Hollister, San Juan Bautista, and the participating agencies of San Benito County Water and Sunnyslope County Water Districts. In January of 2020, the City began preparing a comprehensive update of the General Plan. As part of this process, the City began preparing their own Local Hazard Mitigation Plan specific to the City of Hollister. Subsequently, the County of San Benito began preparing their MJHMP, which includes the City of Hollister. This plan has been incorporated into the San Benito County MJHMP as an annex.

While this plan was originally developed as a Single Jurisdiction Plan by the City, integration into the County's MJHMP ensures it incorporates relevant Countywide information and integrates with the County's overall goals, priorities, and mitigation actions and strategies that address current issues and conditions within the City.

Plan Goals

This Plan was developed to broadly increase resilience in Hollister. The following key goals were developed for the City's LHMP:

Protect against threats from natural hazards to life, injury, and property damage for Hollister residents and visitors.

- *Increase public awareness of potential hazard events.*
- *Preserve critical services and functions by protecting key facilities and infrastructure.*
- *Protect natural systems from current and future hazard conditions.*
- *Coordinate mitigation activities among City departments, neighboring jurisdictions, and with federal agencies, and*
- *Prepare for long-term changes in hazard regimes.*

These goals reflect a change in the community's priorities given the amount of development that has occurred in the past 20 years and anticipated new development in areas of the City experiencing growth and change.

Planning Process

State and federal guidance for LHMPs do not require that jurisdictions follow a standardized planning process. FEMA encourages communities to create their own planning process that reflects local values, goals, and characteristics. FEMA does suggest a general planning process the follows these general milestones:

For the City of Hollister, the planning process used to create this plan is described below.



Hazard Mitigation Planning Committee

The City established a Hazard Mitigation Planning Committee (hereafter referred to as the Committee). The Committee is made up of representatives from key City departments and stakeholder members that include representatives from local and regional agencies and companies

that are key to hazard mitigation activities. **Table 1-1** identifies the members that were invited and/or attended Committee meetings. A key stakeholder that attended these meetings was the County of San Benito, which provided insight into the overall MJHMP process and feedback on the update of mitigation strategies and actions. Emergency managers from surrounding cities were also invited but did not attend these meetings.

Table 1-1: Hollister Hazard Mitigation Planning Committee

Name	Title	Department
Abraham Prado	Interim Development Services Manager	Development Services-Planning
Ambur Cameron	Associate Planner	Development Services-Planning
Eva Kelly	Associate Planner	Development Services-Planning
Brett Miller	City Manager	Administrative Services
Cheryl Mullen	Interim Airport Director	Airport
Minerva Arredondo	Building Official	Development Services-Building
Mark Falgout	Consulting Engineer	Engineering Department
Henry Gonzalez	Interim Management Services Director	Management Services
Derrick Speights	Streets/Park Supervisor	Management Services-Public Works
Summer Garcia	Utilities Supervisor	Management Services-Utilities
Leonard Martinez	Stormwater Management Supervisor	Management Services-Stormwater Mgmt
Michael Grzan	Environmental Programs Manager	Management Services-Environmental Programs
Bob Martin Del Campo	Fire Chief	Fire
Charlie Bedolla	Battalion Chief/Fire Marshall City of Hollister	Fire
Carlos Reynoso	Police Chief	Police
Rosie Betanio	Lieutenant	Police
Desiree Martinez	Code Enforcement Officer	Code Enforcement
Tina Garza	Recreation Services Manager	Recreation
Paul De Silva	Director of Information System & Technology	Information System & Technology
David Early	General Plan Principal in Charge	Placeworks
Carey Stone	General Plan Manager	Placeworks
Aaron Pfannenstiel	LHMP Project Manager	Atlas Planning Solutions
Crystal Stueve	LHMP Planner	Atlas Planning Solutions
Robert Jackson	LHMP Planner	Atlas Planning Solutions

The Committee held three meetings throughout the plan development process to lay out the methods and approach for the Plan, draft and review content, make revisions, and engage members of the public.

Committee Meeting #1 (March 11, 2021): The Committee members confirmed the project goals and the responsibilities of the Committee. They revised the community engagement and outreach strategy, confirmed and prioritized the hazards to be included in the Plan, and identified critical facilities for the threat assessment.

Committee Meeting #2 (May 19, 2021): Members held a detailed discussion about the results of the hazards assessment, mapping, and risk assessment results that showed the areas facing an elevated risk within the City. The committee also discussed potential hazard mitigation actions to address vulnerabilities.

Committee Meeting #3 (July 30, 2021): The Committee reviewed the draft mitigation measures, made revisions, and assigned priorities.

Invitations to Committee meetings, as well as agendas/materials, were provided via email. **Appendix A** contains copies of invitations, meeting agendas and sign-in sheets, and other relevant materials distributed for these meetings.

Public Engagement

Under FEMA guidelines, local hazard mitigation planning processes should create opportunities for members of the public to be involved in plan development—at a minimum, during the initial drafting stage and plan approval. The Committee chose to integrate the LHMP into the General Plan update where possible to ensure that the LHMP reflects community values, concerns, and priorities. To ensure all residents were aware of the LHMP update and General Plan project, the city created a website, https://hollister2040.org/. This website serves as the source for information and the status for both the Hollister General Plan Update and the Hollister Hazard Mitigation Plan Update project. The site has links to project background information, a calendar of city events (Ex: City Council meetings) as they relate to the project, public engagement opportunities to participate in the planning process, a link to the local hazard mitigation plan update, and the documents themselves as they are made available. **Appendix B** contains a copy of these engagement resources used during the update.

PUBLIC MEETINGS

Virtual public meetings were a central component of the City's engagement efforts. Covid-19 and the surrounding pandemic protocols restricted the ability to hold in-person meetings and required the use of virtual meetings, which were made available via Zoom to watch live and participate in. These meetings were archived for later viewing on YouTube. These meetings provided an opportunity for members of the public to learn about the Hollister General Plan and LHMP updates. These meetings were in coordination with the General Plan Advisory Committee (GPAC) and the City of Hollister. At these meetings, members of the public were given opportunities to learn about the LHMP update process and results and provide feedback directly to City staff, GPAC members, and other stakeholders. The City held two public meetings, and notices of each meeting were widely distributed in advance in accordance with City notification requirements, the engagement strategy, legal requirements, and best practices.

Public Engagement Opportunity #1 (April 27, 2021) was conducted via Zoom, with 18 people in attendance.

Public Engagement Opportunity #2 (TBD) **(date will be added after public engagement is completed)** was conducted via Zoom and allowed the public and stakeholders an opportunity to review the Public Review Draft LHMP and provide comments, suggestions, and feedback on the plan.

Appendix B includes a copy of the flyers used to promote these meetings.

ONLINE ENGAGEMENT

The City recognized that not all community members are able to attend public meetings and conducted public engagement through social media and online platforms. To assist with engagement, the City set up a page within the General Plan update website as a simple, one-stop location for community members to learn about the LHMP. The website included information about what an LHMP is and why the City prepared one. It had links to materials and Plan documents as they became available and allowed members of the public to receive notifications about upcoming events.

The City also promoted the planning process through the following online methods:

- *City Website: http://hollister.ca.gov/*
- *Projects Website: https://hollister2040.org/*
- *Social Media*

  Facebook: facebook.com/cityofhollister

  Hollister General Plan Update

  Instagram: @hollistergeneralplan

  @cityofhollister

  Twitter: twitter.com/cityofhollister

A central part of the engagement strategy was an online survey. This survey asked community members about their experience and familiarity with emergency conditions, their level of preparedness for future emergencies, and preferred actions for the City to take to increase resiliency. The City distributed the survey in English and Spanish. The survey had responses from 42 individuals within the community. A summary of these responses is summarized here:

- *45.2% of respondents live in the City of Hollister, with an additional 38.1% that live and work in the City.*
- *Over 64.3% of respondents have not been impacted by a disaster in their current residence.*
- *The top three hazards of concern for respondents were Drought, Seismic Hazards, and Wildfire*
- *Approximately 83% of respondents showed some concern regarding climate change affecting future hazards.*
- *Over 66% of respondents said that they have done improvements to their home to make it less vulnerable to hazards such as earthquakes and fires.*

- *38% of respondents said that they ARE familiar with the special needs of their neighbors in the event of a disaster situation (special needs may include limited mobility, severe medical conditions, memory impairments).*

Appendix B contains copies of all materials used for public outreach, including the full results of the community survey.

Public Review Draft

On February 28, 2022 the City released a draft copy of the LHMP for public review and comment. The document was posted electronically on the City's website and staff is available to make the draft copy available that the Planning Counter and City Hall. The City distributed notifications about the public review draft through social media accounts and the project website https://hollister2040.org/

Plan Revision and Adoption

(This section will be updated upon completion of this phase) The City received public comments on the plan; however, none of the comments required edits or modifications to the plan content. The City submitted the plan to Cal OES and FEMA following public comment. The City then made additional revisions to incorporate comments from state and federal agencies, as appropriate, and submitted the final draft to City decision-makers. The Hollister City Council adopted the final LHMP on [DAY MONTH, YYYY]. Appendix C contains a copy of the adoption resolution.

Plan Resources

The City used several different plans, studies, technical reports, datasets, and other resources to prepare the hazard assessment, mapping, threat assessment, and other components of this Plan. **Table 1-2** provides some of the primary resources the Committee used to prepare this Plan.

Table 1-2: Key Resources for Plan Development

Section	Key Resources Reviewed	Data Incorporated from Resource
Multiple	• *Cal-Adapt* • *California Department of Conservation* • *California Geological Survey* • *California Office of Emergency Services* • *California State Hazard Mitigation Plan* • *City of Hollister General Plan* • *FEMA Local Hazard Mitigation Plan Guidance* • *San Benito County Multi-Jurisdictional Local Hazard Mitigation Plan*	• *Science and background information on different hazard conditions* • *Records of past disaster events in and around Hollister* • *Current and anticipated climate conditions in and around Hollister* • *Projections of future seismic conditions and events*

	• *National Oceanic and Atmospheric Administration* • *National Weather Service* • *US Geological Survey* • *US Census Bureau 2013-2017 American Community Survey*	
Community Profile	• *US Census Bureau 2013-2017 American Community Survey* • *City of Hollister General Plan Background Reports* • *California Energy Commission* • *City of Hollister Current Conditions Reports*	• *Demographic information for Hollister and San Benito County* • *History of the region* • *Economic trends in Hollister* • *Commute patterns in Hollister* • *Local land-use patterns* • *Background information on utilities serving Hollister*
Hazard Assessment (Aircraft Incidents)	• *Federal Aviation Administration*	• *Data on aircraft incidents in and around Hollister*
Hazard Assessment (Disease and Pest Hazards)	• *California Department of Public Health* • *Centers for Disease Control* • *World Health Organization*	• *Science and historical records of disease outbreaks*
Hazard Assessment (Drought)	• *Cal Adapt* • *US Drought Monitor*	• *Historic drought information* • *Current drought conditions*
Hazard Assessment (Flood Hazards)	• *FEMA Map Service Center* • *San Benito County Water District* • *Sunnyslope Water District* • *City of Hollister Water, under City Utilities Department*	• *Records of past flood events in and around Hollister* • *Locations of flood-prone areas in Hollister*
Hazard Assessment	• *Global Terrorism Database*	• *Historical records of terrorism*

(Human-Caused Hazards)		
Hazard Assessment (Hazardous Materials Release)	• *Agency for Toxic Substances and Disease Registry*	• *Location and dates of past hazardous materials release* • *Effects of hazardous materials release*
Hazard Assessment (Seismic Hazards)	• *California Department of Water Resources* • *US Drought Monitor* • *Western Regional Climate Center*	• *Science and background information on extreme weather events* • *Historical record of extreme weather events in and around Hollister*
Hazard Assessment (Severe Weather Hazards)	• *California Department of Water Resources* • *US Drought Monitor* • *Western Regional Climate Center*	• *Records of past fire events* • *Location of fire hazard zones in and around Hollister*
Hazard Assessment (Wildfire Hazards)	• *California Department of Forestry and Fire Prevention* • *Fire and Resource Assessment Program*	• *Records of past fire events* • *Location of fire hazard zones in and around Hollister*
Note: Sections that are not individually called out in this table relied primarily on sources identified in multiple sections.		

Chapter 2 – Community Profile

The Community Profile section of the LHMP is a summary of Hollister, including information about the community's physical setting, history, economy and demographics, current and future land uses, and key infrastructure. The Community Profile helps to establish the baseline conditions in Hollister, which inform the development of the hazard mitigation actions in Chapter 5.

Setting and Location

The City of Hollister is located in Central California, in San Benito County. Hollister is the county seat and is located in the Hollister Valley. Hollister Valley is surrounded by coastal mountains, including the Gavilan Range to the southwest, the Quien Sabe Range (part of the greater Diablo Range) to the east, the Lomerias Muertas (or Flint Hills), and the more distant Santa Cruz Mountains to the northwest, and the San Benito River to the west. Hollister is southeast of San Jose, between the towns of Gilroy and San Juan Bautista near Highway 156, close to the San Luis Reservoir.

History

The area known today as Hollister was originally inhabited by the Mutsun band of the Ohlone Native Americans. In 1797, the construction of Mission San Juan Bautista cemented the presence of the Spanish missionaries and led to the Ohlone people being forced into the California mission system. The city of Hollister was named after Colonel William Welles Hollister. Col. Hollister was famous for leading the first large-scale transcontinental sheep drive (10,000 head of Merino sheep) from Ohio to California. Upon reaching the area, he acquired Spanish land grants and formed Rancho San Justo (almost 35,000 acres) in San Benito County, which included the land of present-day Hollister.



Bird's eye view of Hollister, California, circa 1890 by H.S. Crocker & Co.
Photo Courtesy of vintagecitymaps.com

The town of Hollister was founded on November 19th, 1868. Initially, they wanted to call the city San Justo after the original land grant. However, the name was denied as it was considered to be another name on the growing list of locations in California that boasted the "saint" moniker, and that name was ultimately rejected. The San Justo Homestead Association of farmers instead decided to name it after Colonel W.W. Hollister for his part in forming the city. The City was incorporated on March 26th, 1872. At the time, the city was in Monterey County until the California Legislature formed San Benito County in 1874 from portions of Monterey, Merced, and Fresno counties. The city of Hollister has grown and flourished to the present day.

Demographics

The data used in this draws primarily from Esri Business Analyst, a private vendor of demographic, economic, and housing estimates, and from the U.S. Census Bureau. Based on this dataset, Hollister's 2019 population was estimated to be 39,241, with a median age of 32, 3.3 years younger than all

jurisdictions within the AMBAG (Association of Monterey Bay Area Governments) region. Comparatively, the number of senior residents aged 65 and older is less than the rest of the AMBAG region, while Hollister residents have a lower median household income. In addition, a lower proportion of Hollister residents rent when compared to the AMBAG region. **Table 2-1** shows the basic demographics for Hollister and the AMBAG region. The City's population is approximately 39,241 residents, which is an increase of over 12.3% from the 2010 census, suggesting the City has experienced more growth in the last decade when compared to the AMBAG region (5.1%) and State (6.9%).

Table 2-1: Basic Demographics, Hollister and The AMBAG Region

Demographics	Hollister	AMBAG Region
Total Population	**39,241**	**770,425**
Percent of children who are less than 18 years old	28.2%	23.2%
Percent of residents who are senior citizens (65+)	9.7%	14.3%
Median Age	32	35.3
Total households	11,048	246,835
Median household income	$70,969	$76,626
Percent of rental households	36.9%	43.6%
Note: Percentage values are rounded to the nearest tenth decimal.		

In terms of its racial and ethnic composition, Hollister is a Hispanic/LatinX-majority city, with 69.2% of all Hollister residents identifying as Hispanic/LatinX. The second-largest population is White, with 25.0% of all residents identifying as such. This population makeup is similar to the greater AMBAG region due to a higher proportion of Hispanic/LatinX and White populations. **Table 2-2** shows the racial and ethnic composition for all groups in Hollister and the AMBAG region.

Educational levels for Hollister residents are lower in comparison to the AMBAG region. For example, a smaller proportion of the population has attained bachelor's and professional degrees (16.9%) versus the AMBAG region residents (31.2%). Other categories also differ, such as a slightly higher percentage of people not having education past 9th grade and a slightly higher percentage of people not having graduated high school. **Table 2-3** shows all levels of educational attainment of residents 25 years of age or older in both Hollister and the AMBAG region.

Hollister has a wide range of non-English languages spoken at home among its residents, with varying proficiency levels. Generally, Spanish is the second most spoken language in Hollister, with more than 10% who are not fluent in English, which is approximately 3% lower than the AMBAG region population. Indo-European languages are the third most-spoken languages in Hollister, with less than 1% of these speakers unable to speak English fluently, which is similar to the rest of the AMBAG region. **Table 2-4** shows the most prevalent languages spoken at home for the City and the AMBAG region.

Table 2-2: Racial and Ethnic Composition, Hollister and The AMBAG Region

Race or Ethnicity	Hollister		AMBAG Region	
	Population	Percentage	Population	Percentage
Hispanic/LatinX	27,156	69.2%	391,374	50.8%
White	12,094	25.0%	300,099	39.0%
Black	364	0.9%	13,986	1.8%
American Indian and Alaskan Native	127	0.3%	2,489	0.3%
Asian	1,023	2.6%	38,569	5.0%
Native Hawaiian and Other Pacific Islander	73	0.2%	2,415	0.3%
Another Race	41	0.1%	1,339	0.2%
Two or more races	655	1.7%	20,154	2,6%
Total	**39,240**	**100%**	**770,425**	**100%**

*** The US Census Bureau does not currently count persons who identify as LatinX as a separate racial or ethnic category. Persons who identify as Hispanic or LatinX are already included in the other racial or ethnic categories**

Note: Percentage values are rounded to the nearest tenth decimal.

Table 2-3: Educational Attainment of Residents 25+ Years of Age in Hollister and The AMBAG Region

Educational Attainment	Hollister		AMBAG Region	
	Number	Percentage	Number	Percentage
Less than 9th grade	3,689	15.3%	71,183	14.0%
9th grade to 12th grade (no diploma)	1,786	7.4%	35,189	6.9%
High school graduate or equivalent	6,392	26.5%	98,071	19.3%
Some college (no degree)	5,901	24.5%	101,387	20.0%
Associate degree	2,239	9.3%	43,104	8.5%
Bachelor's degree	2,915	12.1%	95,288	18.8%
Graduate or professional degree	1,166	4.8%	62,952	12.4%
Total	**24,088**	**100%**	**507,174**	**100%**

Note: Percentage values are rounded to the nearest tenth decimal.

Table 2-4: English Proficiency and Languages Spoken at Home Among Residents 5 Years or Older in Hollister and The AMBAG Region

Languages	Hollister		AMBAG Region	
	Number of Speakers	Percentage not fluent in English	Number of Speakers	Percentage not fluent in English
English only	18,911	0.0%	389,421	0.0%
Spanish	14,824	10.5%	282,143	13.3%
Indo-European*	564	0.2%	16,566	0.2%
Asian and Pacific Islander*	553	0.4%	22,980	0.5%
All other languages	90	0.2%	4528	0.2%
Total	**34,942**	**16.7%**	**715,638**	**14.2%**

Source: data.census.gov
Note: Percentage values are rounded to the nearest tenth decimal.

Economy and Commute Patterns

Hollister and San Benito County have a diverse economy of employers from various sectors, including manufacturing, agriculture, mining, hunting and fishing, retail, and construction. The top two employers in the City are R & R Labor and Hazel Hawkins Memorial Hospital. **Table 2-5** shows the top five employers in Hollister as of 2018 with estimated ranges of employees and industry types.



Hazel Hawkins Memorial Hospital. Photo courtesy of Benito Link

Table 2-5: Top Employers in Hollister

Employer	Employee Range	Industry Type
R & R Labor	500-999	Labor Contractors
Hazel Hawkins Memorial Hospital	250-499	Hospital
MC Electronics Inc.	250-499	Electronics Manufacturing
San Benito High School	250-499	Education/School
Corbin Sparrow	100-249	Electronic Vehicle Manufacturing

Sources: California Employment Development Department, 2020; BAE, 2020.

As of 2017, there are approximately 8,361 people with jobs in Hollister, of which over 50% live within San Benito County, and approximately 38% live within the City. A large majority of residents living in Hollister (77%) have jobs located outside of the City, with over 63% working outside of San Benito County.[1]

[1] Bay Area Economics. (2020). *Market Demand Analysis*. City of Hollister

While the majority of Hollister's residents commute outside the city for work, most of those residents (36.2%) travel less than 10 miles to reach their place of employment. Approximately 20.7% of commuters traveled 50 miles or more, with most of those trips heading into Santa Clara (23.8%) or Monterey County (13.4%). The City boasts convenient freeway, rail, and air access to neighboring counties and California. **Table 2-6** shows the outflow of workers from Hollister to other worksites in the region (Based on data from 2017).

Table 2-6: Work Commute Distances for Hollister's Residents (2018)

Work Destinations for Hollister's Residents	Number	Percentage
Less than 10 miles	5,509	35.1%
10 to 24 miles	4,317	27.5%
25 to 50 miles	2,780	17.7%
Greater than 50 miles	3,067	19.6%
Total	**15,673**	**100.0%**

Totals may not match other data due to rounding and the use of different sources of information
Source: https://lehd.ces.census.gov/

Development Trends

Hollister is in the northern portion of San Benito County. Between 2010-2019, Hollister experienced just over a 12% increase in its population and households, going from 34,928 residents in 2010 to approximately 39,241 residents in 2019. With approximately 472.4 acres of vacant land, 256.7 underutilized acres in the Hollister city limits, and 368.8 vacant acres within its sphere of influence, Hollister still has plenty of development potential.[2]

Based on this information, the City has a capacity to support approximately 1,464 residential units, 1.2 million square feet of commercial space, and 5.8 million square feet of industrial space within vacant lands. There is also capacity for an additional 1,500 residential units, 2 million square feet of industrial space, and 945,000 square feet of commercial space within underutilized areas. This development potential could allow for an additional 2,963 residential units, 2.2 million square feet of commercial space, and 7.8 million square feet of industrial space within the City. In addition, areas within the Sphere of Influence could allow for additional development of 941 residential units, 533,000 commercial square feet, and 2.5 million industrial square feet.

Currently, the City has several residential and commercial projects in various phases of the approval and construction process. **Table 2-7** identifies these projects and the stage they are currently in as of Q3 2021. **Figure 2-1** displays the Hollister General Plan Land Use map.

[2] Ibid

Table 2-7: City of Hollister Development Activity

Land Uses	Under Construction	Building Permit	Engineering Review	Other Status*
Residential	1,389 units	880 units	10	186
Commercial and Industrial	6 Buildings, 1 Hotel	3 Buildings	11 Buildings, subdivision of 3 parcels into 60 lots ranging from 1.68 acres to 11.08 acres	10 Buildings for commercial use, 3 stormwater detention basins, and 5 greenhouses

Source: City of Hollister 2021

Major Community Elements

Agricultural Uses[3]

The City of Hollister was originally established as an agricultural center within the region. Much of the land surrounding the City continues to be used for agricultural use. The San Benito Valley, where Hollister is located, is considered a prime agricultural area due to the favorable soil and climate conditions. There are three primary farmland types within the planning area: field crops and pasture, vegetable and row crops, and orchards. While continued growth and urbanization are changing parts of the community, agriculture remains an important asset to the region.

Open Space Preservation[4]

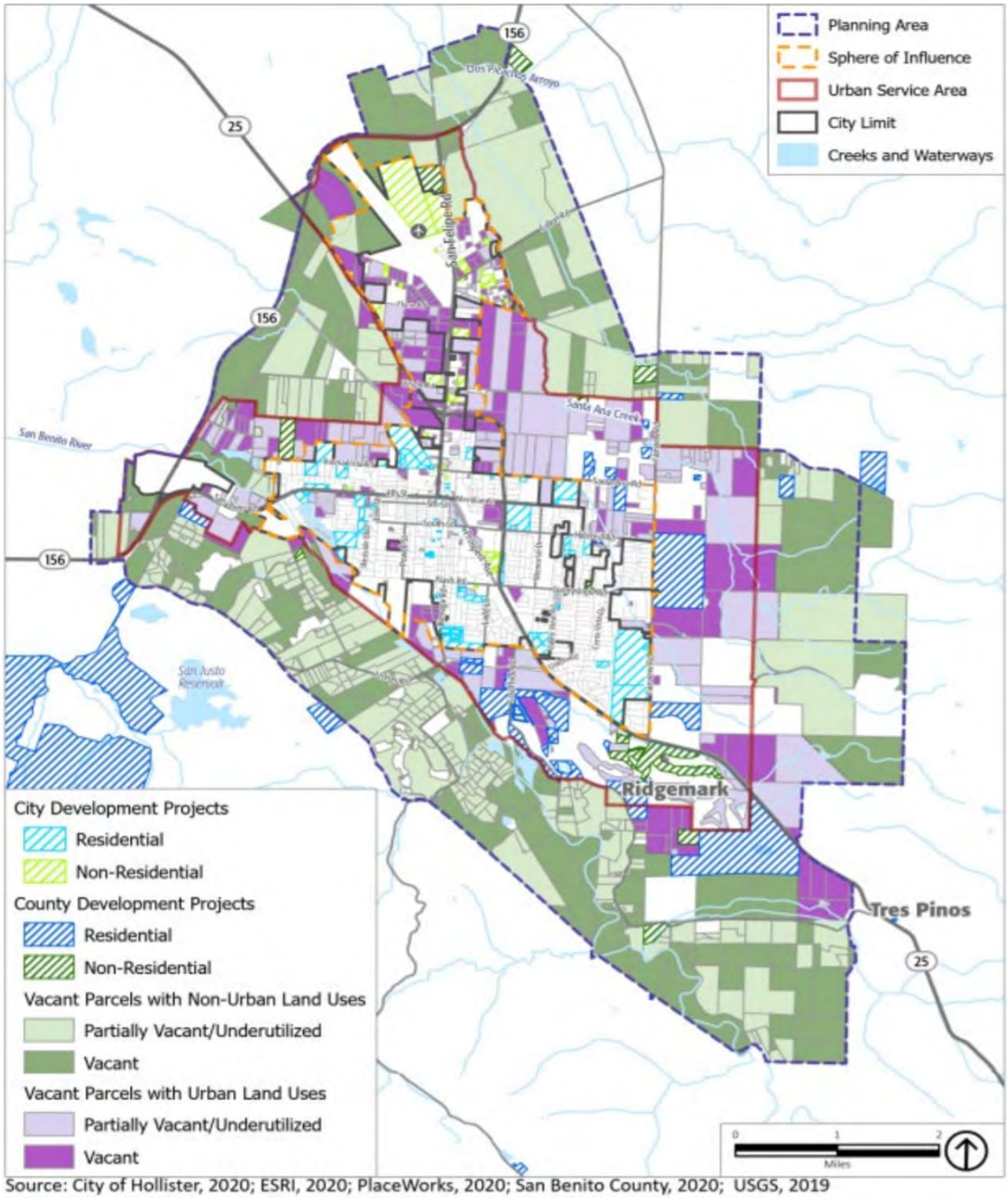
The San Benito Agricultural Land Trust (Land Trust) was formed to aid in the preservation of regionally important lands for open space and agricultural use. The Land Trust incentivizes landowners to voluntarily allow the creation of conservational land easements on their property. Lands designated under these easements are prohibited from being used for land use activities unrelated to agriculture or the preservation of open space. Currently, the Land Trust holds easements for approximately 6,749 acres used primarily for open space preservation and grazing.

Hollister Municipal Airport

Hollister Municipal Airport (KCVH) is located in the northern portion of the City. Owned and operated by the City of Hollister, the airport covers approximately 343 acres, 2 runways, and is home to approximately 109 aircraft. The airport has an average of 157 aircraft operations per day (52% local general aviation, 46% transient general aviation, and 2% military).[5] The airport itself acts as host to many airport-related businesses and activities. It is also home to the Cal Fire Air Attack Base, playing a pivotal role in wildfire suppression in six counties, by providing rapid response teams to help fight fires.

[3] https://hollister2040.org/wp-content/uploads/2020/09/3_AgricultureResources_PRDraft_09-29-20.pdf
[4] Ibid.
[5] AirNav airport information statistics, http://www.airnav.com/airport/CVH

Figure 2-1 Hollister General Plan Land Use Map



Source: City of Hollister, 2020; ESRI, 2020; PlaceWorks, 2020; San Benito County, 2020; USGS, 2019

Infrastructure Assessment

Infrastructure plays a vital role in mitigating the effects of hazard events. When infrastructure fails, it can exacerbate the extent of certain hazards or create complications for rescue workers trying to reach victims. For example, utility poles damaged during strong winds or seismic events can obstruct roadways and prevent emergency vehicles from reaching affected areas. The following are Hollister's electrical, fossil fuel, hydrologic, and transportation networks of infrastructure.

Electricity

Hollister receives electricity from Central Coast Community Energy (CCCE) and Pacific Gas & Electric (PG&E). In 2018, CCCE was created as a Community Choice Energy provider for San Benito County, including the City of Hollister. CCCE provides two types of electricity options: 3Cchoice (combination of hydroelectric and renewable energy sources) and 3Cprime (fully renewable energy source). Anyone residing in the CCCE service area, including Hollister, is automatically enrolled in the 3Cchoice program. If customers opt-out of using this provider, PG&E becomes their electrical provider. PG&E maintains the electrical grid, makes necessary repairs, and conducts customer billing within the CCCE service area. The Hollister substation is the primary connection between Hollister and the electrical grid supplying energy from other parts of the region. The substation receives its power from two 115 kV (kilovolt) power lines, which provide redundancy to the power grid.[6] Disruptions to the power grid could lead to local power outages, while large regional failures would likely disrupt power transmission to Hollister for an extended time until service is restored.[7]

Public Safety Power Shutoff

The State's investor-owned utilities have general authority to shut off the electric power to protect public safety under California law. Utilities exercise this authority during severe wildfire threat conditions as a preventative measure of last resort through Public Safety Power Shut-offs (PSPS).

Currently, there are no PSPS circuits that would affect the City. However, this could potentially change if it becomes a relevant mitigation strategy identified by PG&E for the City and San Benito County.

Fossil Fuel

Natural gas is provided to Hollister and surrounding jurisdictions by PG&E. PG&E has a massive existing infrastructure system to provide both electric and gas service to central and northern California (roughly 70,000 square miles of service area and over 42,000 miles of gas distribution pipelines, not including the thousands of miles of transportation lines/pipelines). Gas delivered by PG&E is harvested from gas fields in California, Canada, the US Rocky Mountains, and the US Southwest. The gas is sent from these fields, and storage facilities, via large high-pressure transmission lines. The gas then enters smaller distribution pipelines to individual businesses and residents within the service area.

One natural gas pipeline runs east to west in the central portion of San Benito County. Supplying Hollister are two lines, one of which runs south from this mainline, extending south into the downtown

[6] City of Hollister, Existing Conditions Report, Chapter 7: Energy, Section 7.2.2, September 2020
[7] https://3cenergy.org/

area, while the other runs perpendicularly south to Buena Vista Road until it meets SR 156 and then heads west.

Damage to these lines could potentially interrupt the flow and delivery of natural gas to the City. Additionally, natural gas ignites very easily, and any pipeline leak/rupture could damage properties in the vicinity and cause fires from the escaping gas. The presence of this infrastructure creates unique challenges for the City from an emergency management perspective. The inclusion of hazards associated with damage to this infrastructure is an important element of an effective response to future incidents involving natural gas use and transmission.[8]

Water and Wastewater

Water distribution in Hollister is provided by the City of Hollister and Sunnyslope County Water District (SSWD). The San Benito County Water District (SBCWD) supplies the water to both entities. These districts jointly operate two water treatment plants (WTP) to serve the City and its Sphere of Influence (SOI). The treatment plants are owned by SBCWD, while the SSWD, in partnership with the City, are under contract and operate both the Lessalt WTP and the West Hills WTP. The City owns seven water wells (three are currently inactive), and SSWD operates four wells in the North San Benito Basin.

The Hollister Urban Area (HUA) relies on both imported water from the Central Valley Project (CVP) and local groundwater for the municipal water supply. The SBCWD has the authority and the responsibility to manage the surface water and groundwater supplies in San Benito County. SBCWD also manages water imported from the CVP, which, when combined with the two WTPs, has lowered the municipal and industrial supply dependence on local groundwater. Groundwater remains the primary water source (especially in droughts) for the Hollister urban area.

Wastewater for the city of Hollister is processed in one of two facilities within the city. The first is an industrial wastewater treatment plant (IWTP), and the other is a domestic wastewater recycling facility (DWRF). The IWTP primarily treats the wastewater from the San Benito Foods tomato cannery and collects portions of the City's stormwater runoff and excess effluent from the DWRF. The DWRF is responsible for treating portions of the City and County domestic, industrial, and commercial wastewater. This facility produces Title 22 reclaimed water for agricultural use, irrigation for parks, groundwater recharge, and landscaping at the airport. There is also a smaller WWTP located near the Cielo Vista Estates on the southeastern edge of the city limits that treats the water of the 70 residences located there, with the potential to expand its utilization once an interagency policy has been created.[9]

Transportation

Much of the transportation infrastructure in Hollister consists of a roadway network that includes highways, arterials, collectors, and local streets. For non-motorized travel, the City has a well-established pedestrian network and local bicycle network. While no freeways are located within the city limits, US 101 is located approximately 9 miles west of the City. This facility serves as a primary connector to employment centers in Silicon Valley and the greater San Francisco Bay Area. Two

[8] City of Hollister, Existing Conditions Report, Chapter 7: Energy, Section 7.2.2.2-.7.2.3, September 2020

[9] City of Hollister, Existing Conditions Report, Chapter 17: Energy, Section 17.2.1-17.2.2, September 2020

highways serve the City (SR 25 and SR 156), which allow for high speed and high-volume access to the City and surrounding areas of the County. SR 25 bisects the City from North to South, while SR 156 approaches the City from the west, where it splits into two routes (SR 156 and SR 156B). **Table 2-8** identifies the major highways within the City.

Table 2-8: City of Hollister Transportation Infrastructure

Highways in Hollister	Direction	Exits Serving the City of Hollister
SR 25	Northwest/Southeast	Enterprise Rd, Union Rd, Sunset Dr, Tres Pinos Rd, Sunnyslope Rd, Hillcrest Rd, Meridian St, Santa Ana Rd, San Felipe Rd, Wright Rd, Flynn Rd
SR 156	Southwest/Northeast	San Juan Rd, Wright Rd, Union Rd, 4th St, SR 156B
SR 156B	West/East then North/South	Graf Rd, Miller Rd, Westside Blvd, San Benito St, McCray St, San Felipe Rd, SR 25, Wright Rd, Flynn Rd, Fallon Rd, Hollister Municipal Airport, SR 156

Source: City of Hollister, Existing Conditions Report, Ch 17: Transportation and Circulation Element, Figure 16-1

Public transportation options within the City are provided by San Benito County Express (County Express). This service provides affordable, convenient transportation services throughout the community of Hollister, San Juan Bautista, and Gilroy. County Express offers a complimentary Dial-A-Ride service for residents. County Express also offers intercounty service to the Caltrain and Greyhound bus station located in Gilroy. That same service also connects to Gavilan College, which can connect to the Santa Clara Valley Transportation Authority bus system. The County Express has three service routes and schedules within the City.



San Benito County Express shuttle. Image courtesy of San Benito County Express

Chapter 3 – Risk Assessment

This chapter discusses the types of hazards that might reasonably occur in Hollister. It describes these hazards and how they are measured, where in Hollister they may occur, a history of these hazards in and around Hollister, and the future risk they pose. The discussion of future risks includes changes to the frequency, intensity, and/or location of these hazards due to climate change. This chapter also discusses how the Hazard Mitigation Planning Committee (HMPC) selected and prioritized this plan's hazards.

Hazard Identification

FEMA guidance identifies several hazards that communities should evaluate for inclusion in a hazard mitigation plan. Communities may also consider additional hazards for their plans. The HMPC reviewed an extensive list of hazards and excluded those that do not threaten Hollister. **Table 3-1** lists the hazards considered and explains the reasoning for inclusion/exclusion. For context, this table also shows if a hazard is recommended for consideration by FEMA, if it is included in the 2018 California State Hazard Mitigation Plan (SHMP), and if it is included in the San Benito County 2015 (LHMP).

Table 3-1: Hazard Evaluation for Hollister LHMP

Hazard	Recommended for Consideration	Included in LHMP?	Reason for Inclusion or Exclusion
Agricultural Pests	SHMP SBC LHMP	Yes	Agricultural uses within the City contribute to the economy. Due to their presence, the City identified pests and invasive species as a hazard of concern.
Air Pollution	SHMP SBC LHMP	No	Air pollution is a state and regional issue that is addressed through plans and regulations administered by the Monterey Bay Air Resources District and/or California Air Resources Board.
Aircraft Incident	SHMP SBC LHMP	Yes	The Hollister Municipal Airport (KCVH) is located within the City. Given this proximity and past incidents associated with aircraft, the HMPC determined that this hazard should be included in the plan.
Aquatic Invasive Species	SHMP	No	There are no major riparian environments in Hollister where aquatic invasive species could endanger the community. However, the HMPC did indicate that Quagga Mussels are a concern for some reservoirs within the region.
Avalanche	FEMA guidance SHMP	No	Hollister is not located within potential avalanche hazard zones.
Civil Disturbance or Riot	SHMP SBC LHMP	Yes	The HMPC determined that civil disturbances of the degree that would endanger property or life to residents can occur, especially in locations of the City where large populations visit/congregate. Past incidents include a riot that occurred during the Hollister Motorcycle rally.
Climate Change	SHMP SBC LHMP	Yes	Climate change is discussed as a function of each relevant hazard and is mentioned throughout the Plan.

Coastal Flooding and Storm	FEMA guidance SHMP	No	Hollister is not located along the coast of California. Coastal flooding and storms are not anticipated to impact the community.
Cyber Threats	SHMP	Yes	With the increase in cyber threats occurring throughout California and the nation, the HMPC considers them serious in nature, requiring evaluation.
Dam Failure	FEMA guidance SHMP SBC LHMP	No	Several dams are located around the City. The closest being the San Justo Dam and Reservoir. Due to the proximity to this dam and reservoir, the HMPC identified dam failure as a potential hazard of concern. However, during plan development, it was determined that inundation from these facilities would not impact the City and was therefore minimally addressed within the flood hazard profile of this LHMP.
Drought	SHMP SBC LHMP	Yes	Droughts are a recurring and potentially severe hazard in Hollister.
Energy Shortage	SHMP SBC LHMP	No	Hollister does not produce its own energy and is not at any greater risk of energy shortage than surrounding communities.
Epidemic, Pandemic, Vector-Borne Disease	SHMP SBC LHMP	Yes	Given the current state of the COVID-19 pandemic, the City, along with the County and the rest of the country, are currently addressing this incident and the health of residents, city staff, and other resources.
Erosion	FEMA guidance SHMP SBC LHMP	Yes	While erosion occurs in certain areas of the City, this hazard is generally associated with other hazards like wildfire, landslide, flooding, and earthquakes.
Expansive Soil	FEMA guidance	No	Expansive soils are located within the City; however, adherence to the California Building Code ensures impacts from these soils are minimized or eliminated during the construction process.
Extreme Cold	FEMA guidance SHMP SBC LHMP	No	Temperatures in Hollister do not usually fall to a level that would be considered a danger to public safety.
Extreme Heat	FEMA guidance SHMP SBC LHMP	Yes	Extreme heat has occurred in Hollister and is expected to be a recurring issue.
Fault Rupture	FEMA guidance SHMP SBC LHMP	Yes	The Calaveras fault runs through the City and is located within an Alquist-Priolo Special Study zone. As a result, the HMPC identifies fault rupture as a potential hazard of concern.
Flooding	FEMA guidance SHMP SBC LHMP	Yes	Several streams located in the City are identified within FEMA flood hazard zones. While significant flooding events have not recently affected properties within the City, the presence of these flood zones is a concern for the future.
Fracking	SHMP	No	Fracking does not occur in Hollister.
Hail	FEMA guidance	No	Hail that is severe enough to threaten people and property is too rare in Hollister to be included.
Hazardous Materials release	SHMP SBC LHMP	Yes	The presence of facilities storing, manufacturing, disposing, and transporting hazardous materials was identified as a concern by the HMPC. Routes 25 and 156 run through the City, allowing for the transport of

			materials that could endanger the community if a release into the environment were to occur.
Hurricane	FEMA guidance SHMP	No	Hurricanes do not occur in Hollister.
Infrastructure Failure	SHMP SBC LHMP	No	Infrastructure failure can pose a threat to people and property in Hollister. However, it is not a hazard of concern identified by the HMPC.
Landslide	FEMA guidance SHMP SBC LHMP	Yes	Areas within the City of Hollister have existing landslides or the potential for landslides to occur. As a result, the HMPC them as a hazard of concern.
Levee Failure	SHMP	No	Levees are not located within the City. Based on this, the HMPC did not identify levee failure as a hazard of concern.
Lightning	FEMA guidance	No	Although lightning occasionally occurs in Hollister, it does not pose a significant threat to people or property.
Liquefaction	FEMA guidance SHMP	Yes	According to mapping prepared by the California Geological Survey, portions of the City are located within liquefaction-prone areas.
Methane-containing Soils	SHMP	No	The City does not have methane containing soils that pose a threat to the public health and safety of residents and businesses.
Natural Gas Pipeline Hazards	SHMP	No	Although natural gas pipelines run through the City, this hazard was not determined to be a high priority compared to the other hazards in the plan. A discussion of these facilities is provided in Chapter 2 - Community Profile.
Oil Spills	SHMP	No	There is no history of oil drilling and extraction within the City. Based on this, the HMPC did not identify the need to include this hazard in the plan.
Power Failure	SHMP SBC LHMP	No	With the limited number of past power failure events, the HMPC determined that power failure is not an issue of concern for Hollister.
Radiological Accidents	SHMP	No	There are no known major sources of radiation in Hollister or the immediate surrounding area that could pose a serious threat to the community.
Sea-level Rise	FEMA guidance SHMP	No	Hollister is not considered a coastal community
Seiche	FEMA guidance SHMP	No	There are no major bodies of water in Hollister that could be subjected to seiche.
Seismic Shaking	FEMA guidance SHMP SBC HMP	Yes	Hollister is in a seismically active area where shaking can be severe enough to damage property or cause loss of life. For this reason, the HMPC determined it should be addressed in this plan.
Severe Wind	FEMA guidance	Yes	Severe wind is an issue in Hollister, and the most frequent occurrences are from the Diablo Winds. The HMPC identified this as a hazard of concern.
Severe Weather and Storms	FEMA guidance SHMP SBC HMP	No	Severe Weather and Storms were not identified as a hazard of concern for Hollister. The only weather hazards identified are extreme heat and severe wind.
Storm Surge	FEMA guidance	No	Hollister is not a coastal community.
Subsidence	FEMA guidance	No	Subsidence is not an issue within Hollister and was not recommended for inclusion by the HMPC.

Mass-Casualty Incident (Terrorism)	SHMP	Yes	The HMPC was concerned about mass-casualty incidents posing a threat to public safety, citing a recent attack in a neighboring community. This discussion is included in the Human-Caused Hazards section.
Thunderstorm	SHMP	No	The HMPC does not feel that thunderstorms are a hazard of concern for Hollister.
Tornadoes	FEMA guidance SHMP	No	Hollister has experienced some very minor tornados in the past; only two minor injuries were reported. The HMPC does not feel that tornados are a hazard of concern for Hollister.
Transportation Accidents	SHMP	No	Major freeways or rail lines within Hollister could be the location of transportation accidents; however, the HMPC did not consider this a hazard of concern for the City.
Tree Mortality	SHMP	No	Tree Mortality is not a hazard concern identified by the HMPC.
Tsunami	FEMA guidance SHMP	No	Hollister is not a coastal community.
Urban Fire	SHMP SBC HMP	No	Urban Fire is not a hazard concern identified by the HMPC.
Volcano	SHMP	No	There are no volcanoes near Hollister to reasonably pose a threat.
Wildfire	FEMA guidance SHMP SBC HMP	Yes	The HMPC identified wildfire as a threat to the developed and undeveloped areas of the City and should be included in the document.

After hazard evaluation and the organizational changes made by the Committee, this Plan discusses 10 broad hazard types with their respective sub-categories:

Hazard Type	Sub-Categories
Aircraft Incident	
Diseases and Pests	Agricultural Pests Epidemic/Vector-Borne Disease
Drought	
Flooding	Dam Inundation
Geologic Hazards	Landslide Erosion
Hazardous Materials Release	
Human-Caused Hazards	Mass-Casualty Incident (Terrorism) Civil Disturbance Cyber Threats
Seismic Hazards	Fault Rupture Seismic Shaking Liquefaction
Severe Weather	Extreme Heat Severe Wind
Wildfire	

Hazard Scoring and Prioritization

The Committee followed FEMA guidance for hazard mitigation plans and prioritized each of the 10 hazards. The initial step assigned a score of 1 to 4 for each of the 10 hazards. The four criteria are:

Probability: The likelihood that the hazard will occur in Hollister in the future.
Location: The size of the area that the hazard would affect.
Maximum probable extent: The severity of the direct damage of the hazard to Hollister.
Secondary impacts: The severity of indirect damage of the hazard to Hollister.

The Committee assigned a weighting value to each criterion, giving a higher weight to the criteria deemed more important, and multiplied the score for each criterion by weighing the factor in determining the overall score for each criterion. The weighting values were recommended by FEMA:

- *Probability: 2.0*
- *Maximum probable extent: 0.7*
- *Location: 0.8*
- *Secondary impacts: 0.5*

Table 3-2 shows the Criterion Scoring used to assign a score for each criterion.

Table 3-2: Criterion Scoring

Probability		**Maximum Probably Extent (Primary Impact)**	
THE ESTIMATED LIKELIHOOD OF OCCURRENCE BASED ON HISTORICAL DATA.		THE ANTICIPATED DAMAGE TO A TYPICAL STRUCTURE IN THE COMMUNITY.	
Probability	Score	**Impact**	Score
Unlikely—less than a 1 percent chance each year.	1	Weak—little to no damage	1
Occasional—a 1 to 10 percent chance each year.	2	Moderate—some damage, loss of service for days	2
Likely—a 10 to 90 percent chance each year.	3	Severe—devastating damage, loss of service for months	3
Highly likely—more than a 90 percent chance each year.	4	Extreme—catastrophic damage, uninhabitable conditions	4
Location		**Secondary Impact**	
The projected area of the community affected by the hazard.		The estimated secondary impacts to the community at large.	
Affected Area	Score	Impact	Score
Negligible—affects less than 10 percent of the planning area.	1	Negligible—no loss of function, downtime, and/or evacuations	1
Limited—affects 10 to 25 percent of the planning area.	2	Limited—minimal loss of functions, downtime, and/or evacuations	2
Significant—affects 25 to 75 percent of the planning area.	3	Moderate—some loss of functions, downtime, and/or evacuations	3
Extensive—affects more than 75 percent of the planning area.	4	High—major loss of functions, downtime, and/or evacuations	4

After calculating the total impact score for each hazard (sum of the location, maximum probable extent, and the secondary impact). FEMA guidance recommends multiplying the total impact score by the overall probability to determine the final score for each hazard. A final score between 0 and 12 is considered a low-threat hazard, 12.1 to 42 is a medium-threat hazard, and a score above 42 is considered a high-threat hazard. This final score determines the prioritization of the hazards. **Table 3-3** shows the individual criterion scores, the final score, and the threat level for each hazard based on the above prioritization process.

Table 3-3: Hazard Scores and Threat Level

Hazard Type*	Probability	Impact			Total Score	Hazard Planning Consideration
		Location	Primary Impact	Secondary Impacts		
Seismic[1]	4	4	4	4	64.00	High
Drought	3	4	3	3	40.80	Medium
Severe Weather[2]	2	3	2	3	21.20	Medium
Human Caused[3]	2	2	2	3	18.00	Medium
Hazardous Materials	2	2	2	2	16.00	Medium
Disease and Pests[4]	2	3	1	1	14.40	Medium
Wildfire	2	1	2	2.5	13.80	Medium
Flooding	2	1	2	2	12.80	Medium
Aircraft Incident	2	1	1	2	10.00	Low
Geological[5]	1	1	2	2	6.40	Low

*** Climate Change considerations discussed as appropriate within this hazard.**

1 - Seismic Hazards includes: Fault Rupture, Seismic Shaking, Liquefaction, Earthquake Induced Landslides
2 - Severe Weather includes: Extreme Heat, Severe Wind, Rain
3 - Human-Caused Hazards includes: Mass-Casualty Incidents (Terrorism), Civil Disturbance, Cyber Threats
4 - Diseases Pests includes: Agricultural Pests, Epidemic/Vector-Borne Diseases
5 - Geologic Hazards includes: Erosion, Landslides

Hazard Profiles

Seismic Hazards

Hollister's seismic hazards include fault rupture, seismic shaking, liquefaction, and earthquake-induced landslide.

Description

Fault Rupture

The shifting and movement of the Earth's tectonic plates are responsible for seismic events. These tectonic plates can pull away from, move toward, or pass by each other. As they do, the plates sometimes lock together. This creates tension, and eventually, the built-up tension is released like a springboard. The tension dissipates into the Earth's crust.

The location at which two tectonic plates join is called a fault line. Fault lines are sometimes visible on the Earth's crust as sudden rifts or anomalies in the continuity of the landscape. The major north-south fault line in California is the San Andreas Fault—where the North American and Pacific Plates meet. Constant friction between the two plates over the millennia has caused the areas where the two plates intersect to become fragmented, creating new, smaller faults.

The area in the immediate vicinity of a fault line is at risk of damage due to the potential for a fault rupture—the deformation or displacement of land on either side of the fault, which may move a few inches to several feet in opposite directions. Any buildings or infrastructure situated around, on top of, or across a fault line could potentially be severely damaged or destroyed. The direction of the fault rupture depends upon the fault type: dip-slip faults produce vertical shearing, strike-slip faults produce horizontal shearing, and oblique-slip faults produce both vertical and horizontal shearing. A fourth kind of fault, called a "blind" fault, produces virtually no visible displacement of land.

Some faults have emerged recently in geologic history. Quaternary faults have developed any time between the Holocene Era and the present (within the last 1.8 million years). These faults are especially concerning since they are the most likely to be active and cause future earthquakes.

The Alquist-Priolo Earthquake Fault Zoning Act enables the California State Geologist to designate zones surrounding active faults as Alquist-Priolo Special Study Zones, which is a special regulatory zone that requires additional study, to determine the location of the fault and the limits of the area prohibited from surface construction on top of the known location of an active fault.

Seismic Shaking

Seismic shaking is the shaking felt on the surface caused by an earthquake. In most cases, earthquakes are not powerful enough to feel the shaking. However, particularly powerful earthquakes can generate significant shaking, causing widespread destruction resulting in property damage.

Liquefaction

Liquefaction occurs when seismic energy shakes an area with low-density, fine grain soil, like sand or silt, that is also saturated with water. When the shaking motion reaches these areas, it can cause these loosely packed soils to suddenly compact, making the waterlogged sediment behave more like a liquid than solid ground. During liquefaction events, the liquified soil can lose most of its stability, which can cause damage to buildings and infrastructure built upon it. In severe cases, some buildings may

completely collapse. Pipelines or other utility lines running through a liquefaction zone can be breached during an event, potentially leading to flooding or the release of hazardous materials.

Earthquake-Induced Landslide

Ground failure resulting from an earthquake can occur in the form of an Earthquake-Induced Landslide. These failures typically happen in areas with steep slopes or unstable soil conditions. Landslides can impact structures, sever utility lines, block roadways, and impact people and properties in the failure path. This hazard is discussed in detail within the geologic hazards profile.

Location and Extent

Fault Rupture

The Calaveras Fault is considered an active fault (located within an Alquist-Priolo Special Study Zone) within the City. In addition to this fault, other regional faults within the vicinity of the City include the San Andreas, Quien Sabe, and Tres Pinos faults, which could result in seismic hazards should an earthquake occur along one of them. **Figure 3-1** identifies the faults located within and around Hollister.

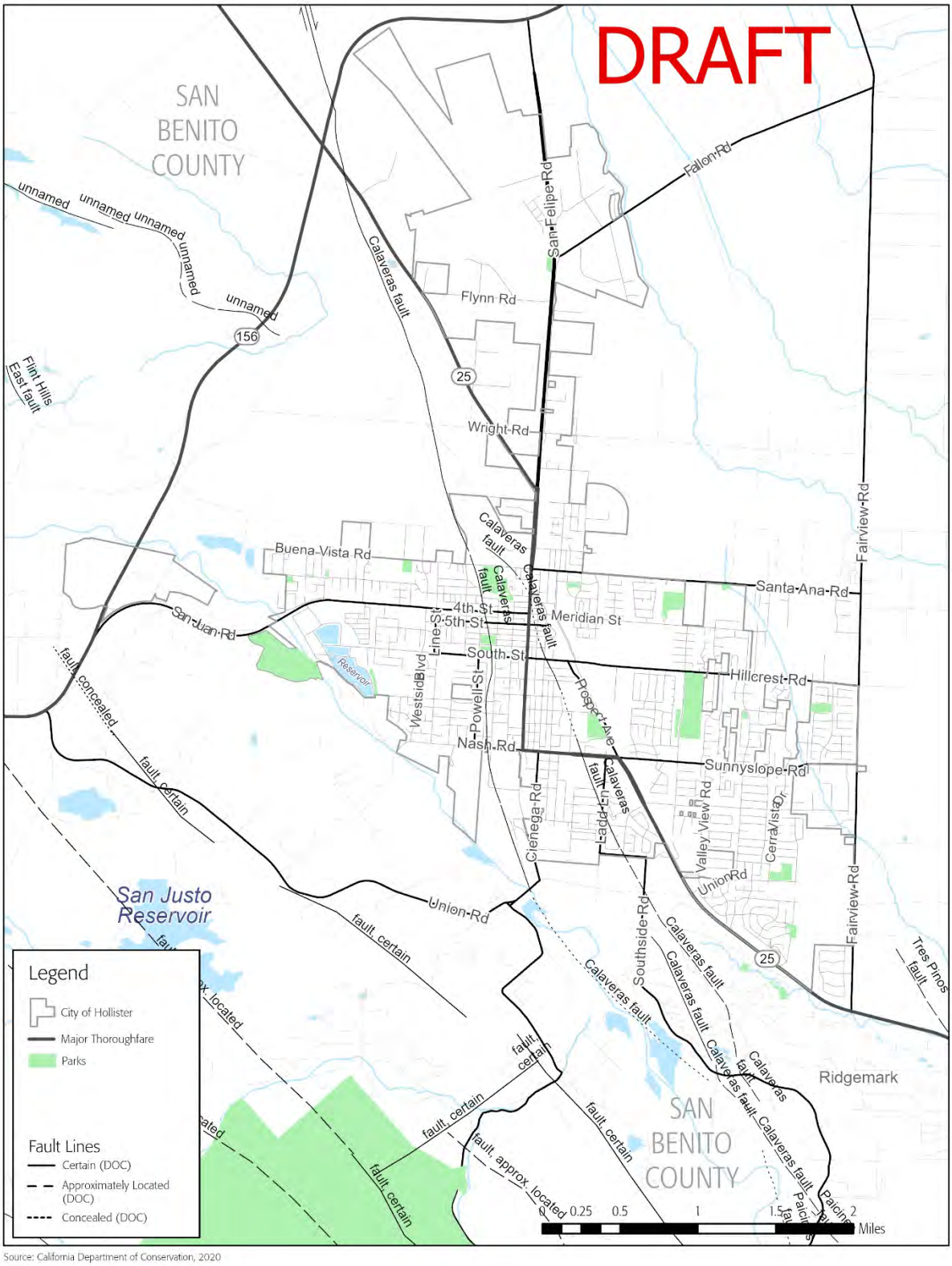
The Calaveras Fault system splits Hollister's downtown area in a north-south orientation. Earthquakes are estimated to generate shaking of up to 7.0M along this fault system, which could produce surface rupture. The San Andreas Fault system runs northwest/southeast, approximately 6 miles west of the City, and can generate significant shaking (up to 8.3M). The Quien Sabe is located approximately 3 miles from downtown Hollister and has recorded quakes up to 5.5M in the past. The Tres Pinos fault is a minor branch of the Calaveras Fault system, which is not considered an active fault at this time. Due to the presence of the Calaveras Fault within Hollister's downtown area, fault rupture associated with this fault is the greatest concern. While these other fault systems are located in close proximity, fault rupture events associated with them pose a greater threat to other locations within the County; however, as new development is proposed in close proximity to these faults, special consideration should be given to future residential, agricultural, industrial, and commercial development decisions.[10]

Seismic Shaking

The intensity of seismic shaking occurs in relation to the amount of energy discharged by the seismic event, which is dictated by the length and depth of the fault. The longer and nearer the surface the fault rupture occurs, the greater the seismic shaking. In most cases, areas nearest to the fault rupture experience the greatest seismic shaking, while more distant areas experience less shaking. Seismic shaking can damage or destroy structures leading to partial or even total collapse. The shaking of the ground can also damage or destroy underground utilities or pipelines, potentially leading to releases of hazardous materials and flooding if water lines are breached. **Figure 3-2** identifies the potential intensity of seismic shaking expected from a seismic event in and around Hollister.

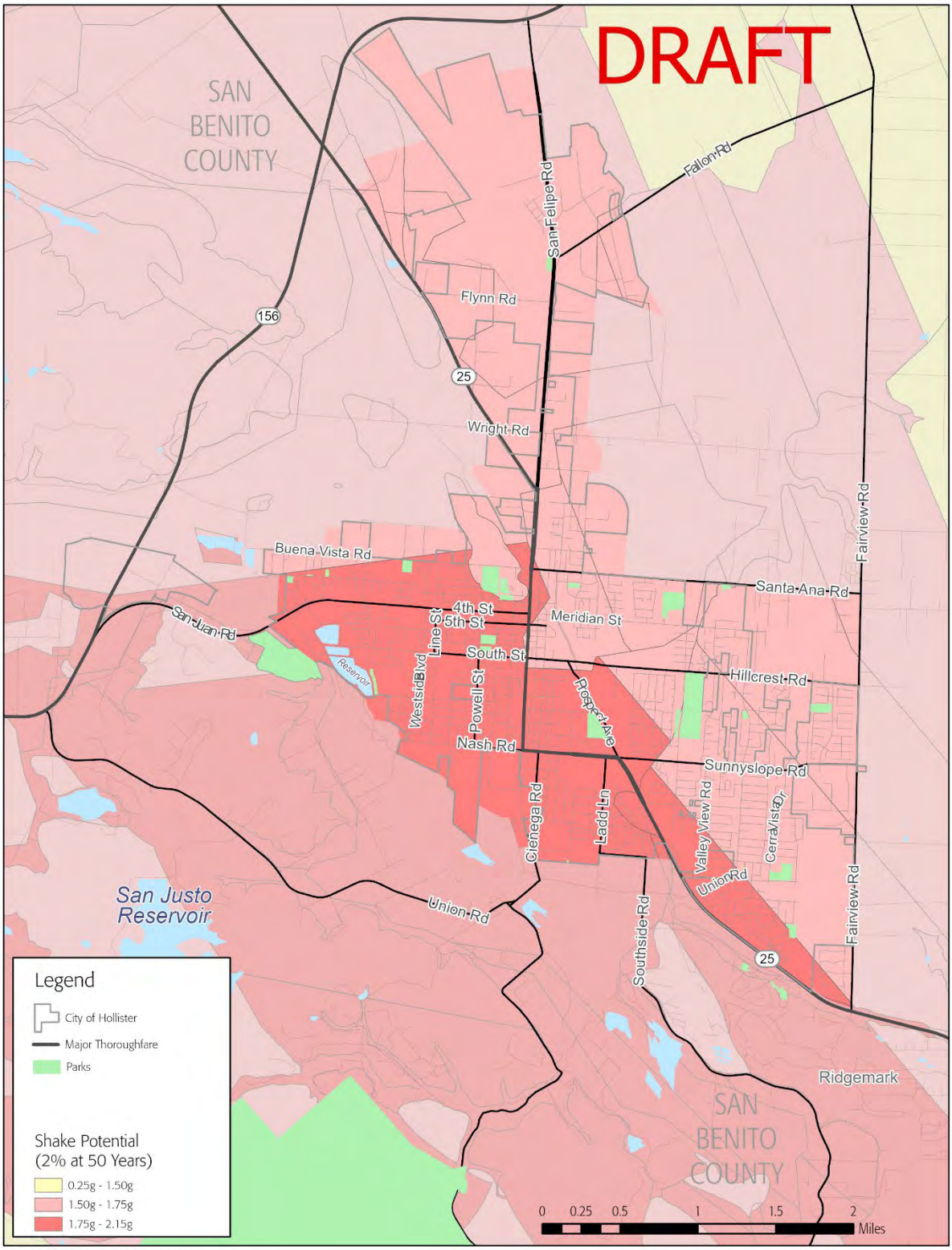
[10] City of Hollister, Existing Conditions Report, Chapter 8: Geology and Soils, Section 8.2.3-8.2.3.1 September 2020

Figure 3-1: Fault Locations within the City of Hollister



Source: California Department of Conservation, 2020

Figure 3-2 Seismic Shaking Potential in Hollister



Source: California Department of Conservation, 2021

Most of California, including Hollister, is a highly seismic area because of the major faults that run through the region. These areas are subject to seismic shaking, which is measured by shaking intensity. To denote shaking intensity, the USGS devised the Modified Mercalli Intensity (MMI) scale, which is based on the amount of observed damage.

Seismic shaking may also be measured using the more widely known moment magnitude scale (MMS, denoted as M_w or sometimes M), which measures the amount of energy the earthquake releases. The MMS begins at 1.0 and increases the more energy is released. This scale is based on a logarithmic scale, meaning that the difference in energy between two measurements is substantially greater than the difference between the measurements themselves. For example, a 6.5 M earthquake releases approximately 1.4 times as much energy as a 6.4 M earthquake and 1,000 times as much energy as a 4.5 M earthquake. The MMS replaces the Richter scale, which is a similar scale but less reliable when measuring large earthquakes. Since the degree of shaking and consequential damage generally decreases as the seismic energy travels farther away from the event's point of origin, different sections of a city or region can report different measurements in different locations. **Table 3-4** illustrates the MMS and MMI scale, which measures the degree of shaking intensity based on damage to structures.

Table 3-4: Modified Mercalli Intensity Scale

Moment Magnitude	Intensity	Description	Description
1.0M - 2.9M	I	Instrumental	Felt only by a very few people, under especially favorable conditions.
3.0M - 3.9M	II	Feeble	Felt only by a few people at rest, especially on the upper floors of buildings.
	III	Slight	Noticeable by people indoors, especially on upper floors, but not always recognized as an earthquake.
4.0M - 4.9M	IV	Moderate	Felt by many indoors, and by some outdoors. Sleeping people may be awakened. Dishes, windows, and doors are disturbed
	V	Slightly Strong	Felt by nearly everyone, and many sleeping people are awakened. Some dishes and windows broken, and unstable objects overturned.
5.0M - 5.9M	VI	Strong	Felt by everyone. Some heavy furniture is moved, and there is slight damage.
	VII	Very Strong	Negligible damage in well-built buildings, slight to moderate damage in ordinary buildings, and considerable damage in poorly built buildings.
6.0M - 6.9M	VIII	Destructive	Slight damage in well-built buildings, considerable damage and partial collapse in ordinary buildings, and great damage in poorly built buildings.
	IX	Ruinous	Considerable damage in specially designed structures. Great damage and partial collapse in substantial buildings, and buildings are shifted off foundations.
7.0M and higher	X	Disastrous	Most foundations and buildings with masonry or frames are destroyed, along with some well-built wood structures. Rail lines are bent
	XI	Very Disastrous	Most or all masonry structures are destroyed, along with bridges. Rail lines are greatly bent.
	XII	Catastrophic	Damage is total. The lines of sight are distorted, and objects are thrown into the air.

Source: United States Geological Survey. 2019. The Modified Mercalli Intensity Scale. https://earthquake.usgs.gov/learn/topics/mercalli.php

LIQUEFACTION

Soils must be saturated with water for liquefaction to occur. Areas with high water tables generally have saturated soil since the distance between the shallowest aquifer and the surface is minimal. Areas with alluvial soils—soft sands, silts, and clays—are also susceptible to liquefaction as these soils are fine grain and generally do not bond together well. Liquefaction events do not have a scale of measurement; however, other factors can be used to assess the extent of damage associated with a liquefaction event, such as:

- *Soil type*
- *Strength of seismic shaking in the area of liquefaction*
- *Size of the affected area*
- *Degree of destruction because of the liquefaction*



Liquefaction caused by the 1964 Niigita, Japan earthquake caused these apartment blocks to experience severe leaning. Image from the

Parts of Hollister are susceptible to liquefaction (**Figure 3-3).** This is due to the presence of shallow groundwater in areas of loose alluvial soils. The areas located on either side of the San Benito River flood plain are of particular concern with the highest susceptibility. In addition, areas in the northern portion of the City (Hollister Airport) are also considered susceptible to liquefaction. While portions of the City are susceptible to liquefaction, there is insufficient evidence to definitively link structural damage with liquefaction events triggered by an earthquake.[11]

PAST EVENTS

FAULT RUPTURE

The largest recent fault rupture near Hollister was the 1989 Loma Prieta earthquake "World Series Earthquake." It was the first major fault rupture event along the San Andreas Fault system since 1906. No fault rupture events have been identified within Hollister; however, the potential still exists for them to occur.

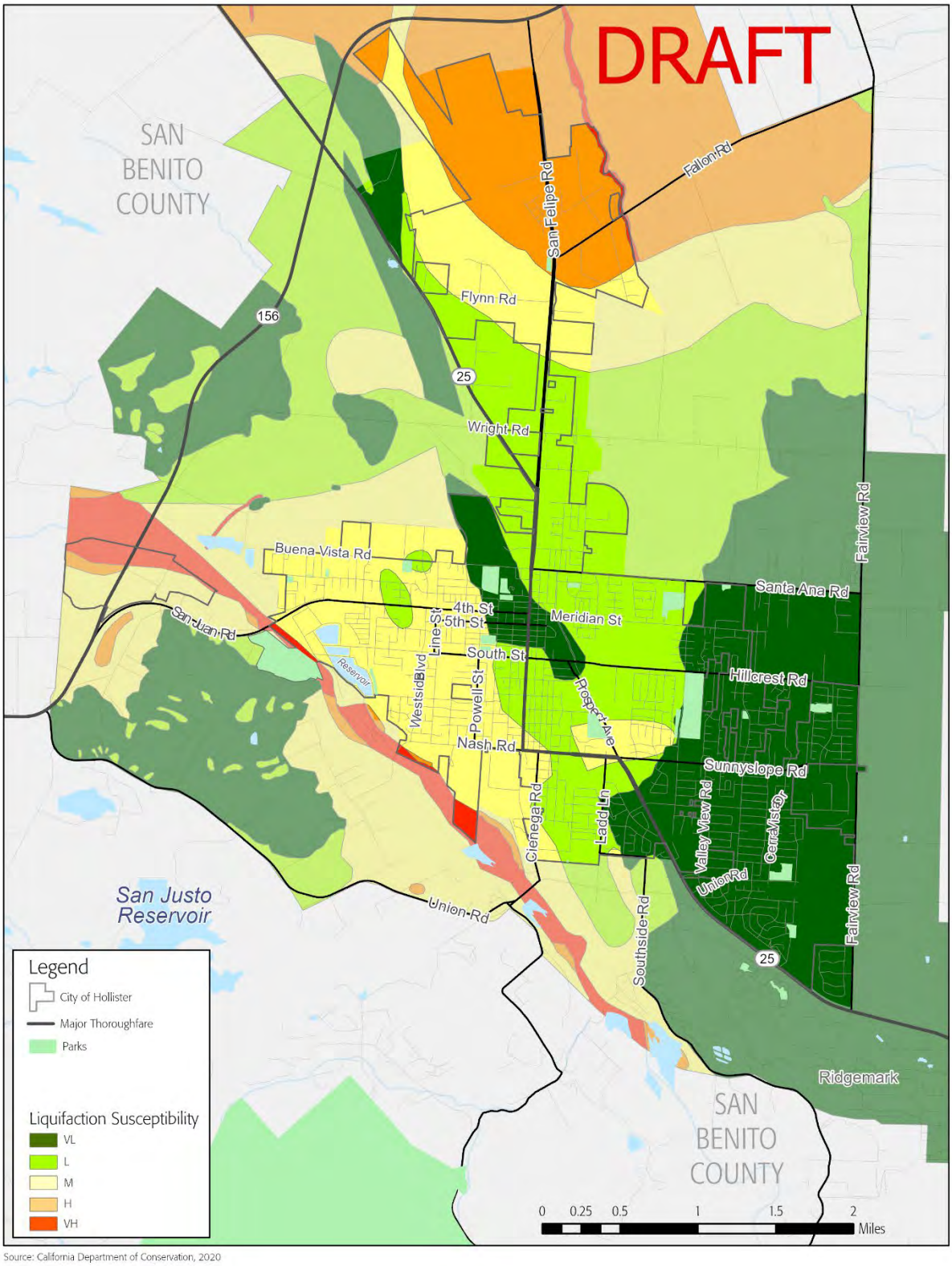
SEISMIC SHAKING

Hollister has no doubt felt the shaking of regional earthquakes. The nearest earthquake event to Hollister that caused significant damage to the California Central Coast region was the 1989 Loma Prieta earthquake. The actual epicenter for the quake was in The Forest of Nisene Marks State Park. The event caused more than $5.6 billion in property damage and resulted in the deaths of 63 people. During this quake in downtown Hollister, the Calaveras Fault shook the 400 block of San Benito Street so hard that it brought down buildings and knocked homes from their foundations.[12] This event began the retrofitting of businesses and government buildings in the area that has occurred in the past 30 years.

[11] City of Hollister, Existing Conditions Report, Chapter 8: Geology and Soils, Section 8.2.3.2 September 2020

[12] Chadwell, John. Bentiot Link "Is Hollister ready for the next big one?" https://benitolink.com/is-hollister-ready-for-the-next-big-one/

Figure 3-3: Liquefaction Zones of Concern for Hollister



Source: California Department of Conservation, 2020

While farmers in the area most likely felt powerful seismic shaking, it is unlikely that they experienced significant property damage as other more urbanized areas in the region reported. Other strong, regional earthquakes have occurred in the Central Coast of California region, but their epicenters have been a distance from Hollister that seismic shaking generated by the earthquake did not cause significant property damage or harm to the City. **Table 3-5** shows significant earthquakes—magnitude 6.0 M_w or greater—within 200 miles of Hollister since the beginning of the 20th century.

Table 3-5: Significant Earthquakes (6.0+Mw) Within 200 Miles of Hollister

Event Name	Distance (Miles)*	Magnitude
San Francisco (1906)	84	7.9 Mw
Lompoc (1927)	160	7.3 Mw
Santa Barbara (1929)	190	6.8 Mw
Loma Prieta (1989)	30	6.9 Mw
San Simeon (2003)	85	6.6 Mw

*Distance between the epicenter and Hollister City Hall.

LIQUEFACTION

There is limited information on the occurrence of past liquefaction events in Hollister. Since these events occur in conjunction with strong earthquakes, the nearest and most recent liquefaction event occurred in the City of Santa Cruz during the 1989 Loma Prieta earthquake; much of the downtown area in Santa Cruz was affected by liquefaction.[13] Santa Cruz is roughly 35 miles from Hollister. The geologic makeup of the alluvial soils and the presence of a perched water table create the potential for liquefaction should a large enough earthquake occur in the fault systems in and around the City.

RISK OF FUTURE EVENTS

FAULT RUPTURE

Given the presence of faults within the City, it is likely that fault rupture could occur in the future. However, as further study of the Calaveras Fault system occurs, it will be easier to understand the potential effects of future rupture episodes.

SEISMIC SHAKING

Hollister is in a seismically active area surrounded by many active faults. The Calaveras Fault System runs through downtown, and the San Andreas Fault is roughly 5.2 miles west of the downtown area. Any seismic shaking poses a danger to people, buildings, and/or infrastructure. It is almost inevitable that an earthquake will occur along one of the regional faults. The Third Uniform California Earthquake Rupture Forecast (UCERF3) was released in 2015 and is the most recent assessment of the probability of a major earthquake on various faults between 2015 to 2044. **Table 3-6** shows the results for nearby and regional fault lines for the City.

[13] City of Santa Cruz LHMP 2012, Chapter 4: Earthquakes and Liquefaction, Page 34. https://www.cityofsantacruz.com/home/showdocument?id=36747

Table 3-6: Earthquake Probabilities for Key Faults near Hollister (2015-2044)

Fault	Distance (Miles)*	Probability			
		6.7+ M_w	7.0+ M_w	7.5+ M_w	8.0+ M_w
Calaveras	0	16.6%	10.9%	3.1%	0.5%
Sargent	1.8	0.7%	0.3%	0.2%	<0.01%
Quien Sabe	4.7	0.3%	0.1%	<0.01%	N/A
San Andreas (Creeping Section)	5.2	15.8%	15.5%	5.9%	3.0%
Zayante	7.4	0.1%	0.08%	0.06%	0.02%
San Andreas (Santa Cruz Mtns.)	9.2	16.3%	16.1%	6.0%	3.0%

*** Distance between Hollister City Hall and the nearest point of the fault. All distances are approximate.**
† Southern California segments only.
Note: UCERF3 results consist of two individual models (3.1 and 3.2), each of which provides rupture probabilities for each segment of the fault. This table shows the maximum probability for a section of the fault in either model.

In addition to UCERF3 forecasts, which identify the probability of a major earthquake on local and regional faults, the U.S. Geological Survey forecasts the severity of seismic shaking in different locations for various plausible earthquake scenarios. **Table 3-7** shows the anticipated shaking in Hollister from four scenarios. Of these scenarios shown, the Calaveras Fault could cause the strongest seismic shaking in Hollister due to the magnitude and close proximity of the event. The San Andreas fault would have a similar magnitude; however, it would have less shake intensity than the Calaveras event due to the distance. As noted in **Table 3-6**, the likelihood of a powerful earthquake occurring along these faults within the next 25 years is likely.

Table 3-7: Selected Shaking Scenarios for Hollister

Fault	Magnitude	Distance to Epicenter (Miles)*	MMI in Hollister
Calaveras	7.3 Mw	6	IX (Ruinous)
Quien Sabe	5.6 Mw	9	VII (Very Strong)
Sargent	6.7 Mw	18	VIII (Destructive)
San Andreas	7.2 Mw	19	VIII (Destructive)

*Distance between Hollister Civic Center and the epicenter (the point on the surface above where the fault rupture began).

LIQUEFACTION

Due to the proximity of active faults, soil types, and shallow groundwater, the City will be perpetually at risk of a liquefaction event. Since liquefaction events are triggered by seismic shaking, the probability of a liquefaction event occurring depends on the likelihood of an earthquake. An earthquake occurring along the numerous local/regional faults running through Hollister and San

Benito County may lead to a liquefaction event. The likelihood of experiencing an earthquake powerful enough to trigger a liquefaction event within the next 25 years is illustrated in **Table 3-6**. Particularly active faults, like the San Andreas or Calaveras, are more likely to cause these events due to the shaking potential that could be generated during an event. As a result, it is only possible to say that liquefaction could occur in the City and the areas of greatest susceptibility; however, we cannot predict exactly where or how large an event would be as this is based on the shaking intensity and subsurface conditions.

Climate Change Considerations

Fault Rupture

Generally, there is no known direct connection between earthquake fault rupture and climate change. Some evidence suggests that greater oceanic pressure on tectonic plates because of melting land ice could influence the behavior of seismic events, but there is little to indicate that this would play a major factor in any seismic event, including fault rupturing

Seismic Shaking

There is no direct link between climate change and seismic activity that could impact Hollister, so climate change is not expected to cause any changes to the frequency or intensity of seismic shaking. Some research indicates that climate change could result in "isostatic rebounds," or a sudden upward movement of the crust as a result of reduced downward weight caused by glaciers. As glaciers are known to melt when overall global temperatures increase, climate change could indirectly increase seismicity in California or other parts of the world.

Liquefaction

Climate change is anticipated to change the usual precipitation patterns throughout California. Periods of both rain and drought are anticipated to become more intense and frequent. This means that more precipitation could fall during rainy periods, and droughts are expected to be more intense (drier) and/or last even longer. As a result, the water table beneath Hollister could rise during intense periods of precipitation. Alternatively, longer-lasting drought may lead to more groundwater withdrawal and could lower groundwater elevations. Therefore, depending on the circumstances, climate change could either increase or decrease the future risk of liquefaction in Hollister.

Flooding

Description

Floods are a common hazard in many parts of California, including Hollister. Ultimately, a flood occurs when too much water is on the ground to be held within local water bodies, causing water to accumulate in naturally dry areas. They are often caused by heavy rainfall, though floods can also occur after a long period of moderate rainfall or if unusually warm weather causes mountain snow to melt faster than expected. Floods that develop quickly, known as flash floods, are especially dangerous because there may be little warning that one is occurring, but floods can also build over a more extended period.

Floods are dangerous for several reasons. The floodwaters themselves can be deep enough for people to drown and moving fast enough to sweep people away. The moving water can damage buildings with its force (in extreme cases, it may move entire structures) or carry large debris that damages objects it collides with. When water gets into buildings, it can cause extensive damage to personal property, ruining building materials, furniture, electronics, and numerous other items. Both standing and moving water can be barriers to movement, isolating people and hindering evacuation, rescue, or relief efforts.

LOCATION AND EXTENT

Flood events are measured by their likelihood of occurrence in any given year. A 100-year flood is a flood that has a 1 in 100 (1.0 percent) chance of occurring in any given year, while a 500-year flood is a flood that has a 1 in 500 (0.2 percent) chance of occurring in any given year. The 100-year flood has been designated as the benchmark for major flood events. Thus 100-year floods are referred to as "base floods."

Floodplains are areas that are prone to flooding and often experience frequent flooding. While it is possible for areas outside of these designated floodplains to experience flooding, the most likely locations to experience future flooding are low-lying areas near bodies of water. FEMA is the governmental body responsible for designating which areas of the United States can be classified as floodplains.

The three most common designations are:

- Special Flood Hazard Area: The area within a 100-year floodplain.
- Moderate Flood Hazard Area: The area outside of the 100-year floodplain but within the 500-year floodplain.
- Minimum Flood Hazard Area: The area outside of the 500-year floodplain.

FEMA has multiple floodplain categories for each unique environment within these three designations. **Table 3-8** shows these detailed floodplain categories. FEMA classifies the Hollister 100-year floodplain zones as A, AE, and AO, while the 500-year floodplains are designated as X. All these floodplains can be seen on the FEMA Flood Hazard Zone Map depicted in **Figure 3-4**.

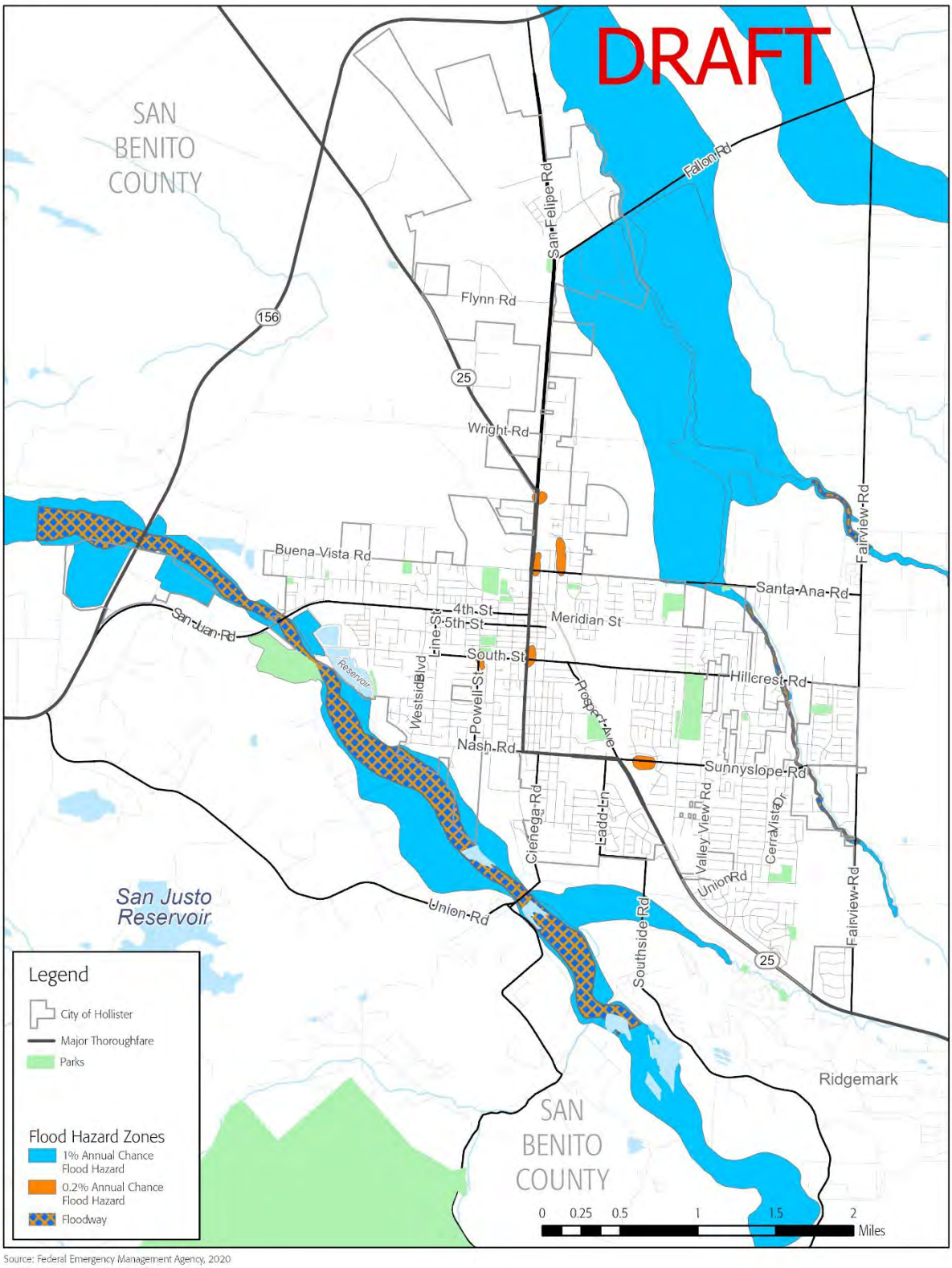
Flood-prone areas within Hollister include Santa Ana Creek, which flows along the City's northeastern border, extending roughly a mile south along the creek. The western bank of the Santa Ana Creek in the west-central area of Hollister starting at Fallon Ave, continuing south, and dropping below Santa Ana Rd at the Tributary fork, then switching east to Fairview Road. The southwest area of Hollister lies along the banks of the San Benito River and is subject to flooding along the entirety of the river length should the river jump the banks.

Development within flood hazard areas is expected to comply with flood protection standards that reduce vulnerability to flood impacts and ensure safe use and occupation of structures.

Table 3-8: FEMA Flood Plain Categories

Category	Description
A	Within a 100-year flood plain, but the water height of the 100-year flood is not known
A1-30	Within a 100-year flood plain and the water height of the 100-year flood is known
AO	Within a 100-year flood plain, and the water height of the 100-year flood is between one and three feet but not specifically known
A99	Within a 100-year flood plain, protected by flood protection infrastructure such as dams or levees
AH	Within a 100-year flood plain, and the water height of the 100-year flood is between one and three feet and is specifically known
AR	Within a 100-year flood plain, protected by flood protection infrastructure that is not currently effective, but is being rebuilt to provide protection
V	Within a 100-year flood plain for coastal floods, but the water height of the flood is not known
V1-30 or VE	Within a 100-year flood plain for coastal floods and the water height of the flood is known
VO	Within a 100-year flood plain for shallow coastal floods with a height between one and three feet.
B	Within a 500-year flood plain or within a 100-year flood plain with a water height less than one foot (found on older maps)
C	Outside of the 500-year flood plain (found on older maps)
X	Outside of the 500-year flood plain (found on newer maps)
X500	Within a 500-year flood plain or within a 100-year flood plain with a water height less than one foot (found on newer maps)
D	Within an area with a potential and undetermined flood hazard
M	Within an area at risk of mudslides from a 100-year flood event
N	Within an area at risk of mudslides from a 500-year flood event
P	Within an area at risk of mudslides from a potential and undetermined flood event
E	Within an area at risk of erosion from a 100-year flood event

Source: CFR, Title 44, Part 64, Section 64.3.



Source: Federal Emergency Management Agency, 2020

DAM INUNDATION

Dam inundation is a contributing factor to flooding hazards throughout California. While there are several dams and reservoirs within a fifty (50) mile radius of Hollister, none of these structures currently pose a flooding threat to the City. Current data shows that all the inundation zones associated with these dams and reservoirs will not flow into nor impact the City. The closest of these structures is the San Justo Reservoir located southwest of the City, which would endanger the city of San Juan Bautista should it fail and release its contents.[14]

PAST EVENTS

Like many cities in California, Hollister is susceptible to flooding, especially during El Nino weather events which bring heavy/intense weather systems to California. **Table 3-9** identifies some of the more recent flooding events in Hollister. Hollister is vulnerable to flooding and has participated in the National Flood Insurance Program (NFIP) since 9/27/1991. The NFIP is administrated by FEMA and allows homeowners, business owners, and renters in participating communities to purchase federally backed flood insurance. Communities participating in the NFIP agree to adopt and enforce floodplain management ordinances to reduce future flood damage. According to FEMA, Hollister has 20 policies in force with the program, totaling over $6.3 million of in-force coverage. Hollister has seven repetitive loss properties (any insurable building for which the NFIP paid two or more claims of more than $1,000 within any rolling 10-year period since 1978) listed by the NFIP. These have resulted in 11 repetitive loss claims totaling over $223,000 in benefits paid to the insured owners.

Table 3-9: Recent Flooding Events in Hollister

Date	Event Description	Impact
2017	Pacheco Creek floods after the Hollister area received 2.37 inches of rain over a week, compared to 3.5 inches total in 2008 and the historical record of 4.2 inches in 1995. The Pacheco Creek flooded because of the local rainfall combined with the 8 inches of rain that came down in Henry Coe Park that borders Santa Clara and Stanislaus counties.	Forty-nine people were evacuated from their homes and rescued either by boat, firefighters, or other means. A further 59 people evacuated the town on their own, as well as an unknown number of animals (livestock and horses). Governor Jerry Brown declared a state of emergency for San Benito County (amongst others) because of the flooding severity.
2014	Large storm hits San Benito County (affecting Hollister, San Juan Bautista, and Aromas), dropping 3.8 inches of water, causing flooding, mudslides, and knocking over trees due to a combination of water and wind.	Three landslides due to flooding caused Southside School to close along Southside Road. Multiple calls for fallen trees were reported.

[14] Del Webb at San Juan Oaks Specific Plan Subsequent EIR, 4.9-5, Dam Inundation, Link

2010	Storms caused flooding within the City. The age and design of the storm drain infrastructure exacerbated flooding along San Benito St. near Nash Rd.	Flooding and major puddling occurred along the main thoroughfare of San Benito St. City staff indicated that the grading issues and deteriorated infrastructure caused inlets to fill with debris causing water to back up. Flooding occurred in an area where water mains recently broke. Based on the impacts of this episode, the need for additional infrastructure was identified by staff.
2004	A storm front brings between 1 to 4 inches of rain into San Benito County, depending upon location. Strong winds of up to 70mph were reported in some areas during this storm.	Impacts included flooding along East and Second Streets, broken tree limbs, and debris.

Source: https://sanbenito.com/

Risk of Future Events

There is no indication that the intense rainfall which leads to flooding will abate in the future, either in Hollister or the greater central coastal region of California. While Hollister may experience prolonged periods of dry or wet years, flood events will likely continue to impact the City. The highest likelihood of flooding within the City is anticipated to occur in the areas within the 100-year and 500-year flood hazard zones. As the seat of the county capitol, Hollister has worked with San Benito County on flood management and mitigation projects. The City also takes steps on an annual basis to maintain and prepare for flood events, ensuring the existing infrastructure can effectively convey floodwaters.

Climate Change Considerations

Climate change is expected to affect California's precipitation patterns, which are likely to influence future flood events. A 2017 study found that the number of very intense precipitation days in California is projected to more than double (increasing 117%) by the end of the century, making it likely that flood events will become more frequent.[15] More flood events could increase the frequency of maintenance and repair activities and require operational changes to City function. Much of the City's infrastructure may require modification and retrofit to better accommodate changes anticipated from climate change. As a result, significant investment in future infrastructure may be necessary, particularly along the Santa Ana Creek and San Benito River.

[15] Polade, S.D., Gershunov, A., Cayan, D.R., Dettinger, M.D., & Pierce, D.W. 2017. Precipitation in a warming world: Assessing projected hydro-climate changes in California and other Mediterranean climate regions. Scientific Reports. https://www.nature.com/articles/s41598-017-11285-y

Drought

Description

A drought is a long period with substantially less precipitation than usual. The primary direct impact of a drought is the reduction of available water supplies. This is particularly concerning in agricultural areas and natural environments, but it can also affect urban areas. Droughts can harm landscapes because plants do not get the water they need to survive. In severe cases, droughts may lead to a human health risk if available water supplies are insufficient to meet basic needs.

Indirectly, drought causes soils to dry out, making them harder and less able to absorb water. When precipitation returns, the soil absorbs less water, increasing runoff, which can lead to flooding. Dry soils are more susceptible to erosion, especially if plants have died or no longer provide stability due to loss of roots and soil composition changes. Drought causes many plants in natural areas to dry out, making them more susceptible to the risk of pests/diseases and increased risk of wildfires.

Location and Extent

Droughts are somewhat frequent in California and typically occur when precipitation is limited for an extended period. Rain arrives in California via atmospheric rivers (channels of moist air located high in the atmosphere) and the El Niño Southern Oscillation (ENSO) cycle (a regional meteorological phenomenon in the southern Pacific Ocean). This cycle typically gives rise to two distinct phases known as El Niño, the warm and wet phase, or La Niña, the dry and cold phase. When California experiences a drought, it is typically the result of fewer atmospheric rivers or an active La Niña phase, resulting in lower-than-average precipitation levels. Drought may also occur when conditions in areas where water sources are located experience drought conditions, even though the local region does not. Table 3-10 identifies the drought classifications used by the US Drought Monitor program. This classification system synthesizes multiple different scales into a descriptive index.

Communities that rely on water supplies from other parts of the State may experience drought differently than communities that source their water supplies locally. The Hollister Urban Area (HUA) relies on both imported water from the Central Valley Project (CVP) and local groundwater for the municipal water supply. Groundwater remains a major source of all water within the HUA especially during drought. Between 2011 and 2015, local groundwater accounted for almost 73% of the total supply of water used within the HUA.[16]

Droughts are regional events, which means that all parts of Hollister and San Benito County as a whole face the same potential risk of drought. Urban areas will experience different effects than open space areas. Increased demand on local groundwater sources could impact future years if drought conditions persist. It is also possible for communities to experience a “long-distance drought” since many urban areas in California receive water supplies from great distances. If these distant areas experience drought, it may cause water shortages or prevent water deliveries in the urban areas that rely on them, even if these areas are experiencing normal precipitation levels.

[16] General Plan Update City of Hollister, Chapter 17.2 Existing Conditions Water/Utilities, sections 17.2.1 - 17.2.1.5

Table 3-10: U.S. Drought Monitor Classification Scheme

Category	Description	Possible Impacts
D0*	Abnormally dry	Slower growth of crops and pastures.
D1	Moderate drought	Some damage to crops and pastures. Water bodies and wells are low. Some water shortages may occur or may be imminent. Voluntary water use restrictions can be requested.
D2	Severe drought	Likely crop and pasture losses. Water shortages are common, and water restrictions can be imposed.
D3	Extreme drought	Major crop and pasture losses. Widespread water shortages and restrictions.
D4	Exceptional drought	Exceptional and widespread crop and pasture losses. Emergency water shortages develop.

*D0 areas are those under "drought watch" but not technically in a drought. They are potentially heading into drought conditions or recovering from drought but not yet back to normal.

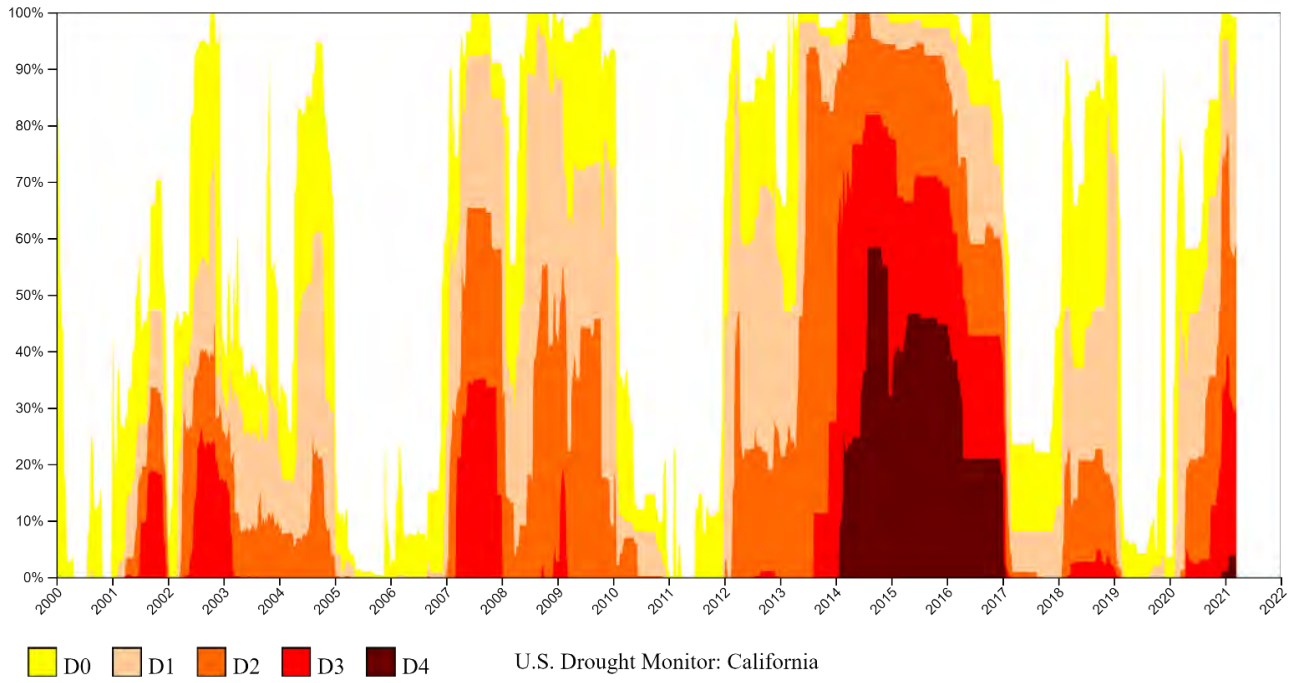
Source: US Drought Monitor. 2019. *Drought Classification*. https://droughtmonitor.unl.edu/AboutUSDM/AbouttheData/DroughtClassification.aspx

Past Events

Like the rest of California, Hollister has experienced many drought events throughout its history. Each of these drought events has its own distinct severity, duration, and frequency in which they occur.

One of the earliest major droughts in state history was called the "Great Drought," it occurred in 1863 and 1864. This drought was responsible for the decimation of 46 percent of the cattle in California, which ultimately led to the decline in cattle ranching in the state. The "Dustbowl Droughts" lasted from 1928 to 1935 and caused catastrophic impacts on the state's agriculture. The inability to water crops effectively because of the drought led to the initiation of the state's first modern irrigation infrastructure (California Aqueduct). Another major drought struck in 1976 and 1977, which caused nearly $1 billion in agricultural losses across the state. Implementation of water conservation practices were a direct outcome of this drought, many of which are still in effect today across California. The drought lasting from 1987 to 1993 (causing an estimated $250 million per year in agricultural losses) led to the creation of even further water conservation legislation. Unlike other natural disasters such as wildfires, earthquakes, or flooding, which generally occur quite rapidly, droughts stretch out and occur gradually over a longer period of time. Because of this, it is much harder to calculate the beginning and end of droughts in the same manner as we would other natural hazards. **Figure 3-5** illustrates the severity of drought conditions experienced within the state over the past 20 years.

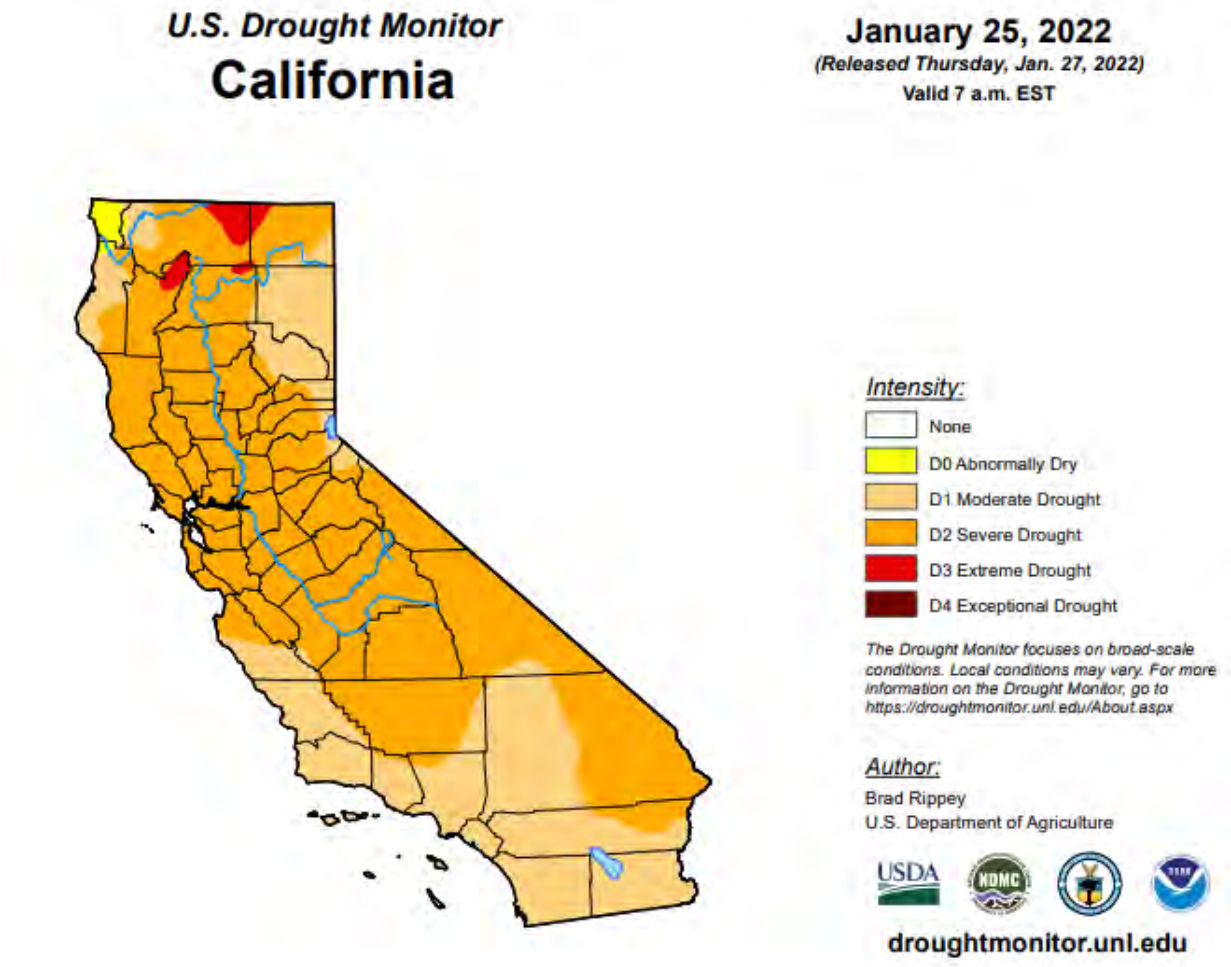
Figure 3-5: Drought History: California (2000-2021)



The most recent major drought experienced by California occurred from December of 2011 to March of 2017 and was one the most intense droughts in state history. The period between late 2011 through 2014 was the driest in California history. By July 2014, nearly the entire state was experiencing D2 (Severe Drought) conditions or worse. The City of Hollister, all of San Benito County, and roughly 75 percent of California were reported as experiencing D4-Exceptional Drought conditions (the most intense level). The year 2015 brought the proclamation of statewide emergency water-saving mandates, requiring all jurisdictions to reduce water use by no less than 25 percent. Relief from the extreme conditions came in early 2017 with the arrival of several successive heavy rain systems. However, it was short-lived as the following winter, late 2017 to early 2018, precipitation levels were not in the same quantity as the previous winter, leading to moderate drought conditions across the state. The winter between late 2018 and early 2019 brought heavy rains, ending drought conditions.

The 2020-2021 water year began with approximately two thirds of the state experiencing drought conditions, with most of those conditions in the D1 and D2 categories. As of January 25, 2022, the entire state is experiencing drought conditions, with 66% of the state experiencing at least severe drought (D2-D4) conditions. Extreme and exceptional drought conditions are occurring in the northern part of the state. **Figure 3-6** identifies the drought conditions throughout the state, noting that Hollister and San Benito County are currently experiencing severe drought conditions.

Figure 3-6: U.S. Drought Monitor, California



Risk of Future Events

Drought will be a continual hazard for Hollister and the entire state of California for the foreseeable future. Droughts are expected to increase in both intensity and frequency due to climate change. Droughts due to infrastructure failure are also impossible to predict, as the cause of the infrastructure failure is unique in its cause and effect.

Climate Change Considerations

Climate change is anticipated to effect drought conditions in multiple ways. While an increase to the intensity of precipitation events could occur, as we see during the El Niño weather events, the inverse could also be true, as witnessed with the La Niña weather event, which leads to longer dry periods with no precipitation in California.

Drought conditions due to climate change are expected to increase in frequency and intensity within Hollister, San Benito County, and the entirety of California by the mid-century. The Fourth Climate

Change Assessment: Central Coast Region Report indicates the following as potential climate change effects on drought conditions in San Benito County[17]:

Increased Temperature: Based on results from a multitude of regional climate models, the overall temperature is expected to increase by a range of 2°C to 5°C (3.6 to 9°F) over the next 50 – 100 years. Increased temperatures could lead to a change in water supply and quality levels. Abnormally dry soils are also possible because of increased temperatures, which can exacerbate other hazards like flooding and wildfire.

Precipitation Volume, Type, and Intensity: Lead to both possible increases and decreases in annual precipitation rates, resulting in fluctuating water levels. According to the studies and the "uncertainty associated with projection of annual precipitation, it would be too speculative to determine the reasonably foreseeable direct effects of climate change on the physical conditions, specifically precipitation volumes, in San Benito County." However, it is safe to assume that future events may be more intense but occur less frequently than in the past.

Snowpack Storage and Water Supply: Climate change is anticipated to reduce the overall size of the snowpack in California and change the timing and duration of the snowmelt. This can affect the amount of water available with an overall reduction to supply and how often it can be delivered. Dependency on local groundwater during drought conditions could increase, reducing groundwater resources and groundwater quality concerns.

California's unpredictable and periodic droughts are frequently a main contributor to water shortages, especially in the Central Coast region. The future projections of extreme and or prolonged droughts will only exacerbate the water supply shortages and the challenges San Benito County will face, brought about by climate change.

Severe Weather

Description

The severe weather concerns for Hollister include extreme heat and severe winds, which are addressed in this profile.

Extreme Heat

Extreme heat is a period when temperatures are abnormally high relative to the normal temperature range that is generally experienced in the City. There are three types of extreme heat events that are counted when addressing this topic:

- *Extreme Heat Days*: a day during which the maximum temperature surpasses 98 percent of all historic high temperatures for the area, using the time between April and October from 1961 to 1990 as the baseline.
- *Warm Nights*: a day between April to October when the minimum temperature exceeds 98 percent of all historic minimum daytime temperatures observed between 1961 to 1990.

[17] California Fourth Climate Change Assessment: Central Coast Region
https://www.energy.ca.gov/sites/default/files/2019-11/Reg_Report-SUM-CCCA4-2018-006_CentralCoast_ADA.pdf

- *Extreme Heat Waves*: a successive series of extreme heat days and warm nights where extreme temperatures do not abate; while no universally accepted minimum length of time for a heatwave event exists, Cal-Adapt considers four successive extreme heat days and warm nights to be the minimum threshold for an extreme heatwave.

SEVERE WIND

Wind is simply the movement of air caused by differences in atmospheric pressure and temperature. High-pressure air will naturally move to areas of low pressure. Usually, the distance between these high- and low-pressure zones is far; however, on occasion, these low- and high-pressure zones may be near one another. When this happens, air will flow dramatically, creating high-speed winds. The most common wind events in central California are the "Diablo" winds, named after the Diablo Mountain range. These winds are equivalent to the "Santa Ana" winds associated with southern California. **Figure 3-7** depicts the typical conditions that occur in the fall and winter to create these events.

When winds are fast enough, they can damage homes, public facilities, utilities, and other infrastructure. They can also uproot or topple mature trees or pick up debris and send it careening through the air. This debris can injure or even kill bystanders who may find themselves stranded outside. High-speed winds can also deposit this debris in the middle of rights-of-way, such as roads, freeways, and railways, blocking exit routes for would-be evacuees or impeding access to first responders trying to reach wounded people.

Figure 3-7: Diablo Winds

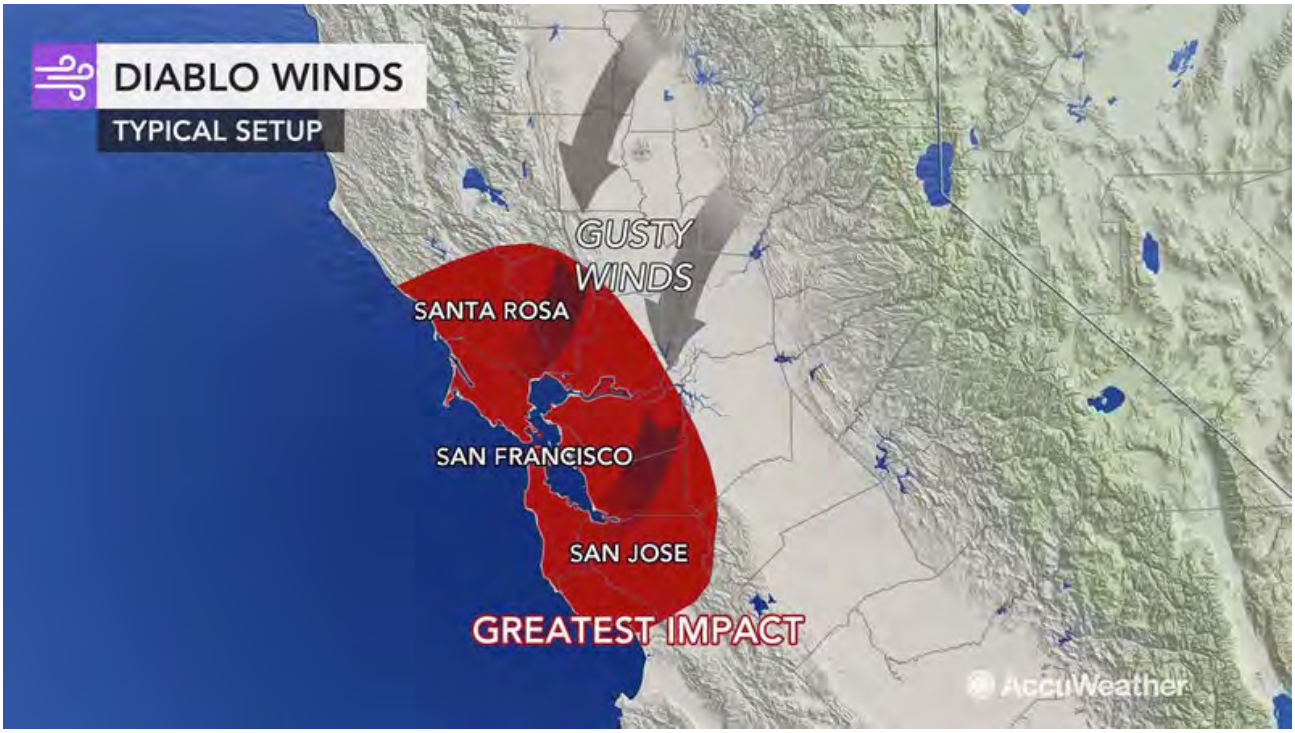


Photo Source: https://abc7news.com/el-diablo-winds-what-are-nothern-california-wildfires-sonoma-county/5644600/

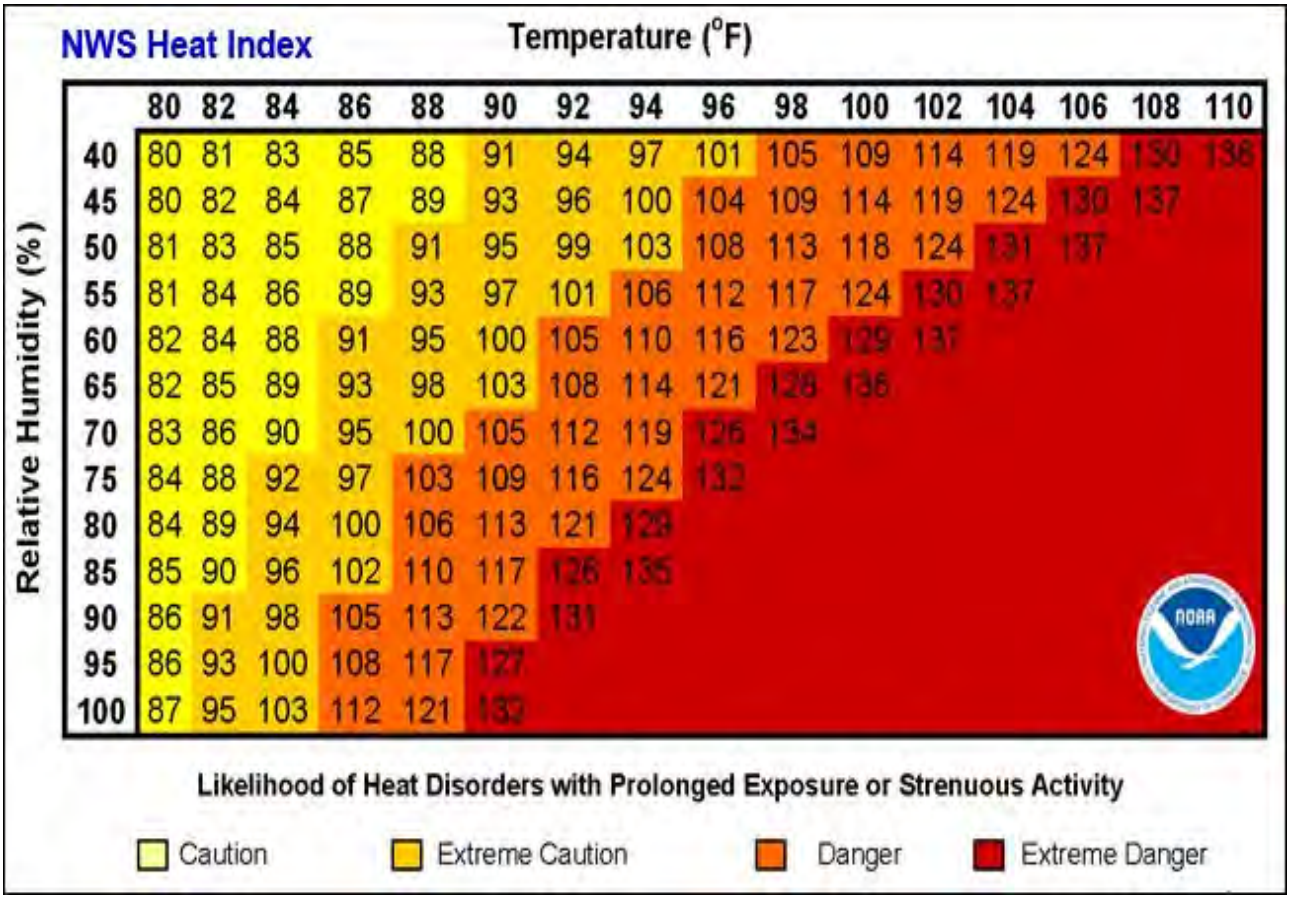
LOCATION AND EXTENT

EXTREME HEAT

Extreme heat events will feel different from region to region since different areas have different historic high temperatures. For example, an extreme heat day in the Central Coast region will feel much different than an extreme heat day in the southern California desert. The reason for this is humidity. Humidity plays a factor in the perceived heat that people feel. Humid conditions will make a day feel hotter than non-humid conditions, even though the temperature may be the same. The difference between the perceived and actual temperatures is known as the "heat index." To illustrate the effect of the heat index, a 90-degree day with 50 percent humidity feels like 95°F, whereas a 90-degree day with 90 percent humidity feels like 122°F. **Figure 3-8** illustrates the National Oceanic and Atmospheric Administration (NOAA)'s National Weather Service Heat Index.

In the City of Hollister, an extreme heat day involves a temperature that exceeds 96.6° F, and a warm night involves a temperature that exceeds 58°F.[18]

Figure 3-8: NOAA National Weather Service Heat Index



[18] https://cal-adapt.org/tools/extreme-heat/

Table 3-11 and **Table 3-12** show us projections of extreme heat days and warm nights based on two model projections from Cal-Adapt. *RCP 4.5* projects greenhouse gas (GHG) emissions peak around 2040 and begin to decline as society attempts to lower GHG emissions. *RCP 8.5* projects GHG emissions continue to rise strongly through 2050 and plateau around 2100, assuming a slower pace for GHG emission reductions.

Table 3-11: Hollister Avg. Annual Extreme Heat Days: Temperature Threshold 96.6°F

Year	RCP 4.5	RCP 8.5
1961 – 1990*	4 Days (Observed Historical)	4 Days (Observed Historical)
2035 - 2064	11 Days	15 Days
2070 - 2099	15 Days	24 Days

* Increases to 5 using the 1950-2005 timeframe
Source: https://cal-adapt.org/tools/extreme-heat/

Table 3-12: Hollister Avg Annual Warm Nights: Temperature Threshold 58°F

Year	RCP 4.5	RCP 8.5
1961 – 1990*	4 Days (Observed Historical)	4 Days (Observed Historical)
2035 - 2064	38 Days	52 Days
2070 - 2099	60 Days	107 Days

* Increases to 6 using the 1950-2005 timeframe
Source: https://cal-adapt.org/tools/extreme-heat/

Based on these projections, both scenarios will result in a significant change in the number of extreme heat days and warm nights when compared to the observed historical average. The City could see an increase to 15 extreme heat days and 60 warm nights by the end of the century under the RCP 4.5 scenario and 24 days and 107 days, respectively under the RCP 8.5 scenario.

Severe Wind

The Diablo Winds typically come from the Great Basin region of Nevada and Utah, according to NASA's Earth Observatory. The winds are generated by high-pressure air blowing toward lower-pressure areas and lower elevations near the coast. On the way, the air masses pass over California's mountain ranges and are funneled down through valleys, which causes the air to compress, dry out, and heat up in temperature. As the winds descend, they sometimes begin to carry particulate matter, which can aggravate the respiratory health of those who have allergies. The winds are "hot" due to contact with hot surfaces (deserts to the east) and the drop in elevation; the winds are "dry" as the air in the

desert (where they originate) has a very low dew point which is warmed even further as the air drops in elevation reducing the relative humidity further.[19]

These Diablo Wind events can occur during the Fall, Winter, or Spring. Generally, they are most prominent during the dry season of Summer and early Fall. These intensely fast, dry, hot winds can intensify fire conditions and carry embers to the next patch of land. Diablo winds can damage the electrical distribution infrastructure, creating wildfire ignitions due to arcing or downed power lines. Diablo winds can also result in rapid fire spread from ordinarily contained or small fires such as vehicle fires or fires caused by discarded smoking materials. Diablo Winds exacerbated the devastating Camp Fire in 2018 (which killed 85 people, destroyed over 18,000 structures, burned over 153,000 acres, caused by a down electrical transmission line owned by PG&E), and the Kincaid Fire more recently in 2019 and the Glass Fire in 2020[20].

Generally, winds are measured using the Beaufort scale, developed in 1805, which categorizes wind events on a force scale from 0 to 12 using their speed and impacts. Any wind classified as force nine or above is generally considered a severe wind event. **Table 3-13** identifies the Beaufort scale, which classifies wind events in detail.

Table 3-13: Beaufort Scale

Force	Speed (mph)	Description
1	0 to 1	Calm: Smoke rises vertically, and the sea is flat
2	1 to 3	Light air: The direction of wind is shown by smoke drift, but not wind vanes
3	4 to 7	Light breeze: Wind is felt on the face, leaves rustle, and wind vanes are moved. Small wavelets appear on the ocean but do not break
4	8 to 12	Gentle breeze: Leaves and small twigs are in motion, and light flags are extended. Large wavelets appear on the ocean, and crests begin to break
5	13 to 18	Moderate breeze: Dust and loose paper become airborne, and small branches are moved. Small waves appear on the ocean
6	19 to 24	Fresh breeze: small trees begin to sway, and moderate waves form
7	25 to 31	Strong breeze: large branches are in motion, and using an umbrella becomes difficult. Large waves begin to form
8	32 to 38	Near gale: Whole trees are in motion, and walking against the wind can be hard. Foam from breaking waves is blown in streaks
9	39 to 46	Gale: Walking is difficult, and twigs break off trees
10	47 to 54	Severe gale: Slight structural damage. Crests of waves begin to topple
11	55 to 63	Storm: Trees are uprooted, and considerable damage to structures. Very high waves form in long, overhanging crests
12	63 to 72	Violent storm: Widespread damage. Exceptionally high waves form, and the ocean is completely covered in foam

Source: https://www.weather.gov/mfl/beaufort.

[19] http://tornado.sfsu.edu/geosciences/classes/m356/DiabloWinds/DiabloDef.htm

[20] https://www.nytimes.com/2020/10/01/us/diablo-winds-wildfire.html#:~:text=Diablo%20winds%20helped%20exacerbate%20some,Glass%20Fire%20in%20early%20October.&text=Sojda%20said%20the%20fire%20swept,because%20of%20strong%20wind%20gusts.

Past Events

Table 3-14 is a list of recent extreme heat and severe wind events in and around the City of Hollister.

Table 3-14: Recent Extreme Heat/Severe Weather Events in and around Hollister

Date	Event	Impact
9/2020	Diablo Winds exacerbated and increased the destruction of the Glass Fire.	Burned over 67,000 acres, destroyed 1,555 structures in Napa and Sonoma Counties.
8/2020	Temperatures reached as high as 107°F in Hollister. The highest temperature recorded in San Benito County was Aug 16th at 111°F at the Pinnacles National Park.	Impacts include increased demand for power, increased demand in water usage, potential damage to crops, and increased health risk to vulnerable populations.
8/2020	Dry Lightning Warning issued by the National Weather Service as remnants of tropical storms that moved across California. This event included strong winds, low levels of precipitation, and over 12,000 lightning strikes hitting northern California in a 72-hour period.	The combination of dry winds, low moisture, and significant lightning strikes sparked nearly 600 fires across northern California, including fires in the counties bordering San Benito County.
10/2019	Diablo Winds exacerbated and increased the destruction of the Kincade Fire, caused by electrical transmission lines owned by PG&E.	4 non-fatal injuries, burned over 77,000 acres, and destroyed 374 structures in Sonoma County.
9/2017	Excessive heat warnings prompted the opening of cooling centers in Hollister. Temperatures were expected to reach up to 115°F.	Impacts include increased demand for power, increased demand in water usage, potential damage to crops, and increased health risk to vulnerable populations.
2/2017	A windstorm caused thousands of San Benito County residents to lose power. Hollister reported 65 downed trees and 4 gas leaks.	Impacts include loss of power, increased health risks to vulnerable populations, potential explosions from gas leaks, damage to the urban forest, and damage to building and infrastructure as a result.
Source: https://benitolink.com/page/2/?s=hollister+fire&post_type=post		

Risk of Future Events

Extreme Heat

According to Cal-Adapt, historically (1961-2005), Hollister has experienced an average of five extreme heat days annually, which increased to six days between 2006-2019. Based on Cal-Adapt projections, the City could experience between 15 and 24 extreme heat days annually by the end of the century.[21]

Severe Wind

Given Hollister's location within Central California's Coastal region and the history of severe wind events, it is very likely that wind events will continue to impact the City and region. The most probable

[21] https://cal-adapt.org/tools/extreme-heat/

source of these events in the future will likely originate from the Diablo winds or other extreme storm events. All expectations are that their probability of occurring in the future is highly likely.

CLIMATE CHANGE CONSIDERATIONS

EXTREME HEAT

The primary effect of climate change is warmer average temperatures. The hottest years on record have occurred since 2000. San Benito County set a record for the hottest day on record on August 16th, 2020. The temperature recorded was 111°F. During this event, temperatures reached 107°F in downtown Hollister (the usual average temperatures are 82°F in August).[22] As climate change accelerates in the 21st century, it is anticipated that extreme heat events will become more frequent and intense in San Benito County and Hollister. With the projection that extreme heat days could increase between 15 and 24 days annually by 2100, the City can expect a shift in residential and business needs for cooling and addressing heat-related issues.

SEVERE WIND

It is anticipated that the atmospheric rivers that deliver drought-busting storms to Northern California may intensify because of climate change and impact the area twice as often as they currently do. As the atmosphere temperature rises, it holds more water vapor, so the number of atmospheric rivers is anticipated to increase. This means that the average number of storms in Northern California will increase.[23] This increase in storm intensity may also bring more intense winds to the Northern California region, including Hollister and San Benito County.

However, regarding Diablo winds, studies indicate that these events may be affected in varying ways. According to one study that examined two global climate models, there is a projected decreased activity in future Diablo wind events. However, other studies have found that the number of Diablo wind events may remain just as frequent as they are now and that the events will increase in temperature, becoming hotter as regional climate temperature increases.[24] Given the anticipated increases in temperatures throughout the region, future events are anticipated to become more severe in some cases, even if the number of events decreases.

Wildfire

DESCRIPTION

Wildfires are fires that burn in largely undeveloped and natural areas, and they are a regular feature of ecosystems throughout California. These fires help clear brush and debris from natural areas and are necessary for the health of many ecosystems and various species' life cycles. However, since the early twentieth century, the common practice was to suppress naturally occurring fires in wildland areas, allowing dry plant matter and other fuels (litter) to build up. This has proven to be a large contributing factor to the size and scale of wildfires. This unnatural abundance of fuel leads to hotter

[22] Reyes, Juan. San Benito.com. 2020 https://sanbenito.com/heatwave-torches-san-benito-county/

[23] Atmospheric Rivers to Soak California as Climate Warms. https://www.livescience.com/49225-atmospheric-rivers-double-climate-change.html

[24] Hughes et al. 2011. Guzman Morales et al. 2016. Central Coast Region Summary Report. California's Fourth Climate Change Assessment. https://www.energy.ca.gov/sites/default/files/2019-11/Reg_Report-SUM-CCCA4-2018-006_CentralCoast_ADA.pdf

and larger blazes when the built-up litter catches flame. Nature needs fire and occurs naturally, and depriving ecosystems of this naturally occurring "spring cleaning" could potentially make matters much worse. The practice of "prescribed burns" (fires that are planned, intentionally set, and controlled as much as possible by forestry management teams) has been executed for thousands of years by native societies (e.g., Aboriginals in Australia and Native American tribes). The desired goal is to mimic the benefit of natural wildfires while simultaneously reducing the risks that larger uncontrolled fires can wreak on an ecosystem, people, and property. Removal of this built-up litter in a controlled burn allows the ecosystem to recharge and return nutrients to the earth, as it would do naturally without the interference of humans.[25]

At the same time, human activity has caused changes in the buffer zone between urbanized and undeveloped areas, known as the wildland-urban interface (WUI). The more natural setting of a WUI can make these zones highly desirable places to live. In many parts of California, the WUIs have become developed, albeit at lower densities than fully urbanized areas. However, this development activity has brought more people into wildfire-prone areas. The availability of fuel and increasing encroachment into the WUI, together with a changing climate, have made wildfires among the most common and dangerous natural hazards in California.

Lightning, accidents, infrastructure failure (ex: electricity transmission lines), and arson can spark wildfires. The size and severity of any fire depend on fuel, weather conditions, and topography availability. However, wildfires in the WUI do not need to be large to cause damage. In Oakland, the 1991 Tunnel Fire was relatively small, only 1,600 acres, but it was one of California's deadliest and most destructive wildfires.[26] The flames from wildfires create severe risks to property and lives. Smoke and other particulate matter (ash/soot) from wildfires pose a health risk, even to those not near the blaze. Burned areas can be more susceptible to flooding and landslides because wildfires destroy the vegetation that helps slow down water runoff and hold slopes together.[27] The ground may repel water rather than absorb it as fire changes a soil's composition. Due to the change in the landscape structure after a fire, repelled water can cause mudslides and debris flows that can carry debris into water reservoirs.

Location and Extent

Wildfires are not measured on a specific scale and are usually classified by size (e.g., acres burned) or impact (buildings destroyed or damaged, injuries or deaths, cost of damage, etc.). Wildfire hazards are classified by the California Department of Forestry and Fire Protection (Cal Fire) on a three-tier scale of fire hazard severity zones (FHSZs): very high, high, and moderate. These zone classifications do not correspond to a specific risk or intensity of fire but are qualitative terms that consider many factors. Fire-prone areas are also classified by the agency responsible for fire protection. Federal Responsibility Area (FRA) falls to federal agencies such as the US Forest Service, the Bureau of Land Management, and the National Park Service. State Responsibility Areas (SRA), which includes unincorporated land within counties that has statewide watershed value, falls to Cal Fire. Local

[25] "The Ecological Benefits of Fire". Resource Library. https://www.nationalgeographic.org/article/ecological-benefits-fire/
[26] Cal FIRE. 2020. https://www.fire.ca.gov/media/5512/top20_deadliest.pdf
[27] EPA. 2019. "Wildfires: How Do They Affect Our Water Supplies?" https://www.epa.gov/sciencematters/wildfires-how-do-they-affect-our-water-supplies

Responsibility Areas (LRA) include portions of incorporated cities with identified wildfire hazard zones, which local governments are responsible for managing.

Hollister is located within the Hollister Valley, a largely flat area/region, located adjacent to the Gabilan and Diablo Mountain Ranges to the southwest and west, respectively. The City itself is located several miles from these mountain ranges separated by large swathes of flat, open, agricultural land. The city limits and sphere of influence (SOI) are within the LRA, which is predominantly covered by Moderate and High Fire Hazard Severity Zones. The closest Very High Fire Hazard Severity Zone is located southwest of the City. **Figure 3-9** depicts the locations of the fire hazard severity zones surrounding Hollister, and **Figure 3-10** identifies wildfire hazard potential within Hollister and the surrounding area based on fuels, terrain, weather, and other relevant factors.

Past Events

There have been 28 wildfires recorded in San Benito County since the 1950s. These fires ranged in size from 35,380 acres with the Mack fire in 1950 near the San Benito and Fresno county lines to the 236-acre Browns Valley fire in 2001.[28] One wildfire, the 1981 Herbert Fire, burnt 1,866 acres mostly to the west of Hollister, with a small portion of the City's SOI affected by the incident.[29] The most recent wildfire was the 1,500-acre Coyote Fire in July of 2020, approximately 20 miles southeast of Hollister.[30] While no wildfires have truly threatened the City, the possibility does exist for wildfire to directly or indirectly impact the City. Indirect effects associated with air pollution (smoke, embers, ash, particulate matter) can travel far distances depending on the location and size of the fire. While these events could be temporary, vulnerable populations like the agricultural labor force, the elderly, people with asthma, people with underlying medical or autoimmune deficiencies, and children could be affected by these conditions.

Risk of Future Events

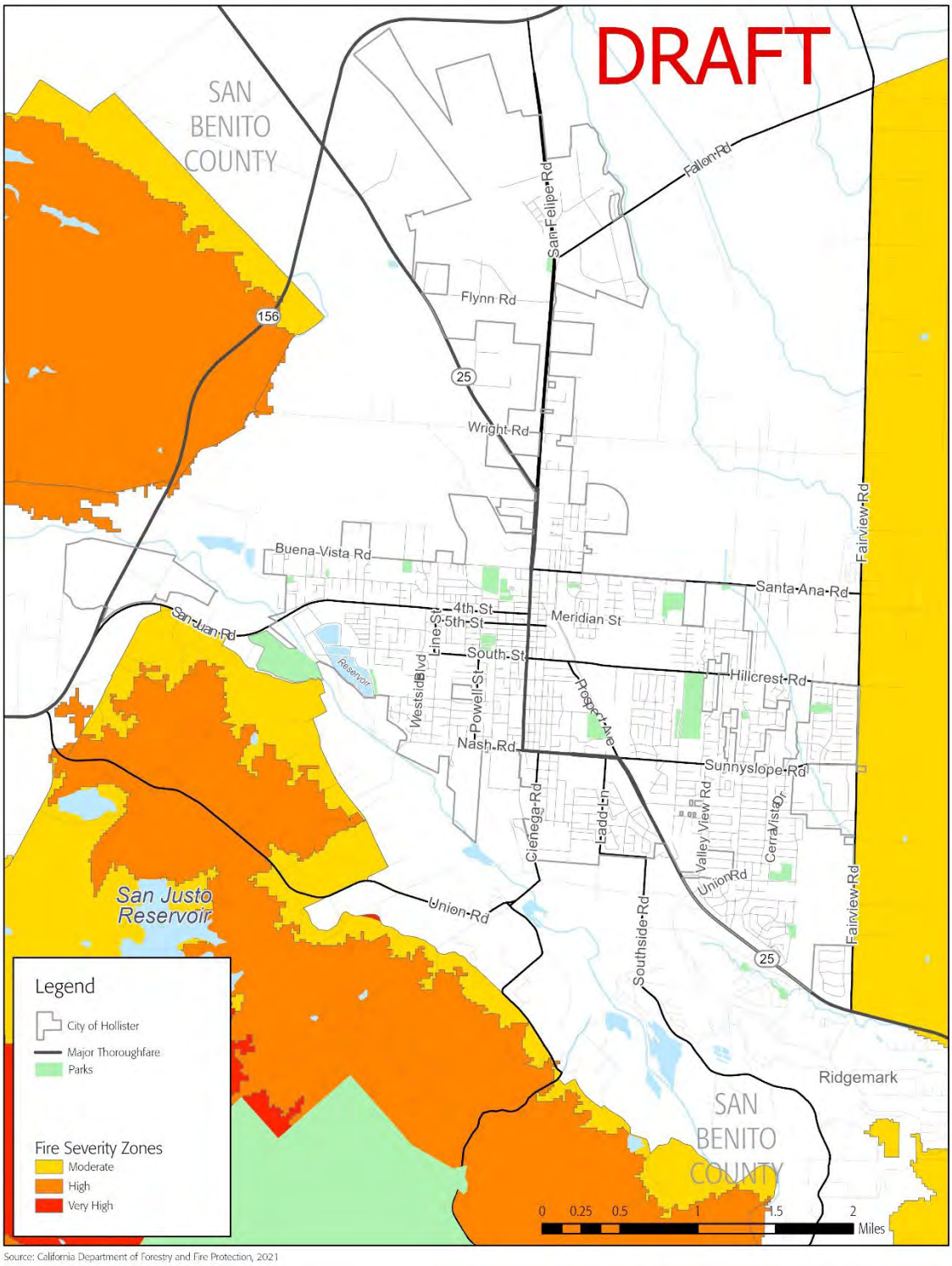
The risk of wildfires will remain present simply due to the geographical location of Hollister within Hollister Valley and the surrounding mountain ranges. There will always be the possibility of a wildfire burning in areas around the City, which could affect residents, businesses, and properties. The presence of fire hazard severity zones (moderate and high) in close proximity to the City indicates wildfire risk is present. Development near these higher-risk areas should account for these conditions.

[28] San Benito County, August 2015, County of San Benito Operation Area California, USA Multi-Jurisdictional Hazard MitigationPlan: http://www.cosb.us/wp-content/uploads/Local-Hazard-Mitigation-Plan-

[29] Cap Radio, 2018, A History of California Wildfires pre-1950 to 2018, https://projects.capradio.org/california-fire-history/#11.58/36.8562/-121.4191

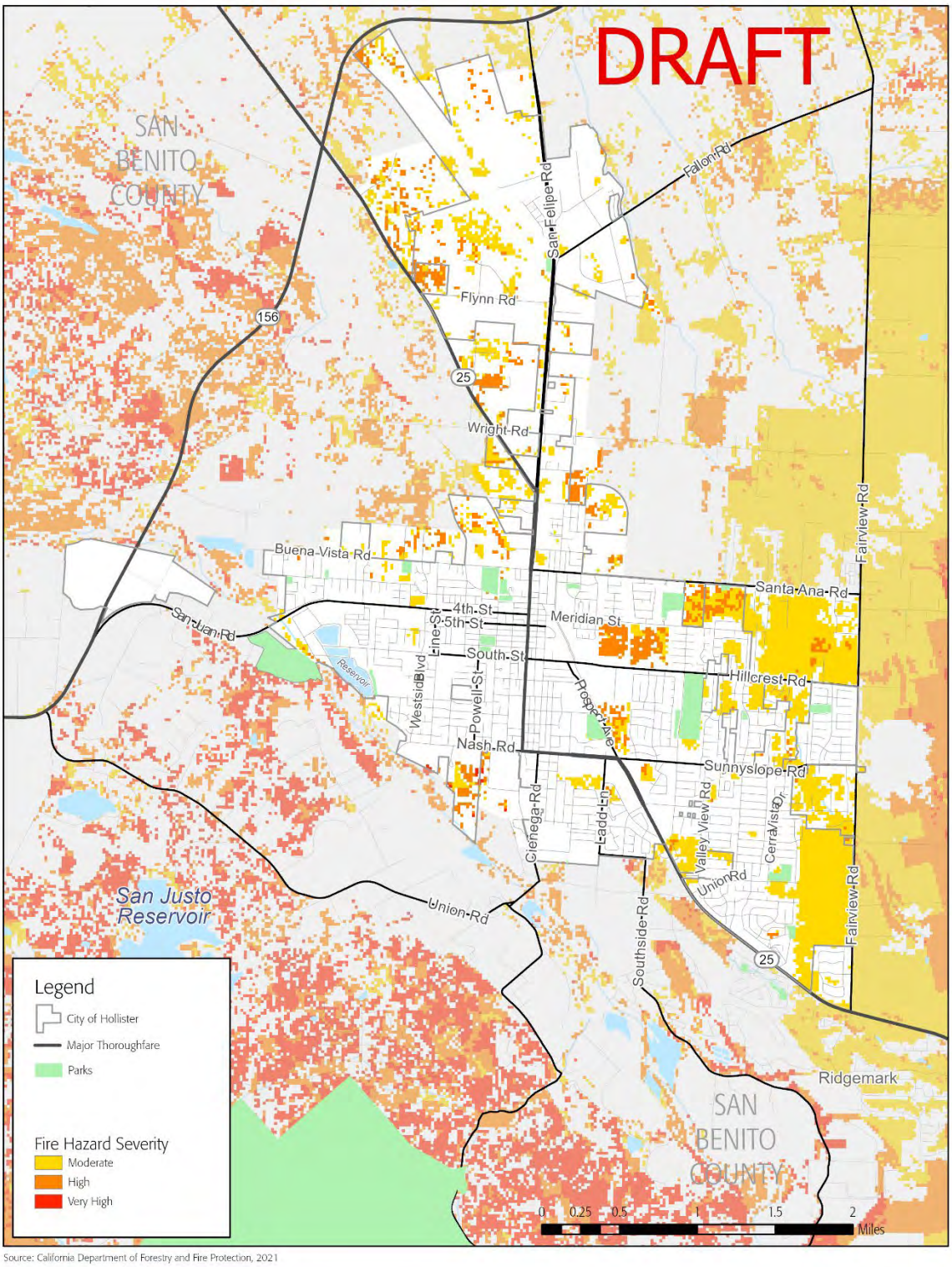
[30] Cal FIRE, 2020, Coyote Fire General Information, https://www.fire.ca.gov/incidents/2020/7/15/coyote-fire/

Figure 3-9: Fire Hazard Severity Zones



Source: California Department of Forestry and Fire Protection, 2021

Figure 3-10: Fire Hazard Severity



Source: California Department of Forestry and Fire Protection, 2021

CLIMATE CHANGE CONSIDERATIONS

Climate change is expected to cause an increase in temperatures and more frequent and intense drought conditions. This increase will likely increase the amount of dry plant matter available for fuel, increasing wildfire risk statewide. For the Hollister region, 118.5 hectares on average were burned by wildfire historically. This area is projected to increase by mid-century under the RCP 4.5 scenario. Under the 8.5 RCP scenario, the area burned is projected to decrease by the end of the century.[31] Increases and decreases projected are most likely related to changes in the amount of precipitation (increases lead to more vegetation growth, whereas decreases lead to changes in the types and density of vegetation growth) as well as the temperatures experienced in the region. Increased temperatures may change flora and fauna growing in the region, which could impact the wildfire conditions. The wildfire-prone areas of the Diablo and Gabilan Mountain Ranges could see a reduction or change in vegetation that reduces wildfire severity/incidence if these vegetation changes occur.

Human-Caused Hazards

DESCRIPTION

TERRORISM/MASS CASUALTY INCIDENT

Terrorism is the use or threat of force to achieve a particular social or political outcome. The goals of terrorism may sometimes be the overturning of a government, the reversal of a public policy, the release of political prisoners, and other such motives. Acts of terror may overlap with acts of war or hate crimes. Generally, terrorism involves an attempt to kill or seriously harm people or disrupt civil society by destroying property or infrastructure, attacking government operations at all levels, interrupting essential public services, creating chaos, or a combination of some or all these goals. Firearms and explosives are the most common weapons used among terrorists. In extreme situations, terrorists may gain access to weapons of mass destruction, including bioweapons, chemical agents, radioactive materials, or high-yield explosives. It should be noted that these events are very rare. While incidents of terror caused by foreign individuals or groups receive significant media and public attention, most acts of terror in the United States have been caused by domestic terrorists.

A mass casualty incident describes an incident within the United States in which emergency medical service resources, such as personnel and equipment, are overwhelmed by the number and severity of casualties. The more commonly recognized events of this type include building collapses, train and bus collisions, plane crashes, earthquakes, and other large-scale emergencies. The most common types are generally caused by terrorism, mass-transportation accidents, or natural disasters. Events such as the Oklahoma City bombing in 1995 and the September 11 attacks in 2001 are well-publicized examples of mass casualty incidents.

CIVIL DISTURBANCE/RIOT

A civil disturbance is an event when the normal operations of the city are either threatened or temporarily interrupted by events such as violent protests, riots, shootings, and armed standoffs. Civil disturbances can occur at a single time or be a string of related events. Property damage to

[31] https://cal-adapt.org/tools/wildfire/

businesses, government facilities, or homes can occur during these events. In extreme situations, death and injury may result from civil disturbances.

A riot is defined as a noisy, violent public disturbance caused by a group or a crowd (three or more people) usually protesting another group's actions or government policy in the streets. This can lead to the destruction of private and public property, looting, arrests, and in extreme cases, even assault, injury, or death.

Cyber Threat

Cyber threats are when an individual or a group threatens or attempts to disrupt the operations and functioning of the computer systems belonging to private citizens, religious groups, educational institutions, government agencies, or businesses. These threats take the form of online harassment, hacking, or in-person tampering with electronic equipment. Successful cyber threats can lead to service disruptions, infrastructure damage, theft, and may cause injury or death in severe instances.

Location and Extent

Terrorism/Mass Casualty Incident

Mass Casualty Incidents can occur anywhere, although public spaces and locations where many people congregate (parks, schools, places of worship, government facilities, shopping centers, and areas of public gathering) are most common. Key locations in Hollister may be large shopping centers, governmental facilities (i.e., City Hall), schools, hospitals (i.e., Hazel Hawkins Memorial Hospital), parks (i.e., Dunne Park, Park Hill Park, etc.), and large employers.

Acts of terrorism may be located at the locations listed above; however, the perpetrators may also choose high-value targets such as electric substations, water treatment plants, levees or reservoirs, Hollister Municipal Airport, highways, and other facilities that could impact governmental services.

Mass Casualty Incidents and acts of terrorism are typically measured by the fatalities, injuries, and destruction they cause, but there is no universally used scale for measuring these events.

Civil Disturbance/Riot

Civil disturbances/riots can arise at any time and place for a variety of reasons. There are, however, some places where such events are more likely to emerge, including local, state, and federal government centers, jails, police stations, major businesses, university campuses, and places of public assembly. Many of the locations listed in the Terrorism/Mass Casualty Incident description above would be locations for these types of incidents as well.

No definitive scale for measuring civil disturbance events exists, but several metrics may be used individually to determine a civil disturbance event's impact. These measures include:

- Number of facilities affected
- Number of fatalities
- Monetary loss
- Interruptions to communications infrastructure

- Number of people protesting
- Impacts to certain socioeconomic groups[32] [33]

Cyber Threat

Since computers are so ubiquitous, a cyber threat could appear in virtually any part of the City. In extreme circumstances, a threat could impact the entire city. Cyber threats vary in their length and severity in impact. A minor threat could simply cause computer systems to slow down for a few minutes and not behave as responsively. On the other hand, a major cyber threat could cause a complete shutdown of critical systems, including those used by banks, healthcare institutions, universities, major businesses, and city governments.

Cyber threats are not measured on any scale, but they can be assessed by determining:

- The type of incident (website defacement, denial of service, unauthorized surveillance)
- The use of malicious software
- The level of security countermeasures that failed in preventing the cyber threat
- The duration of the cyber threat (a few hours, a few days, several weeks, etc.)[34]

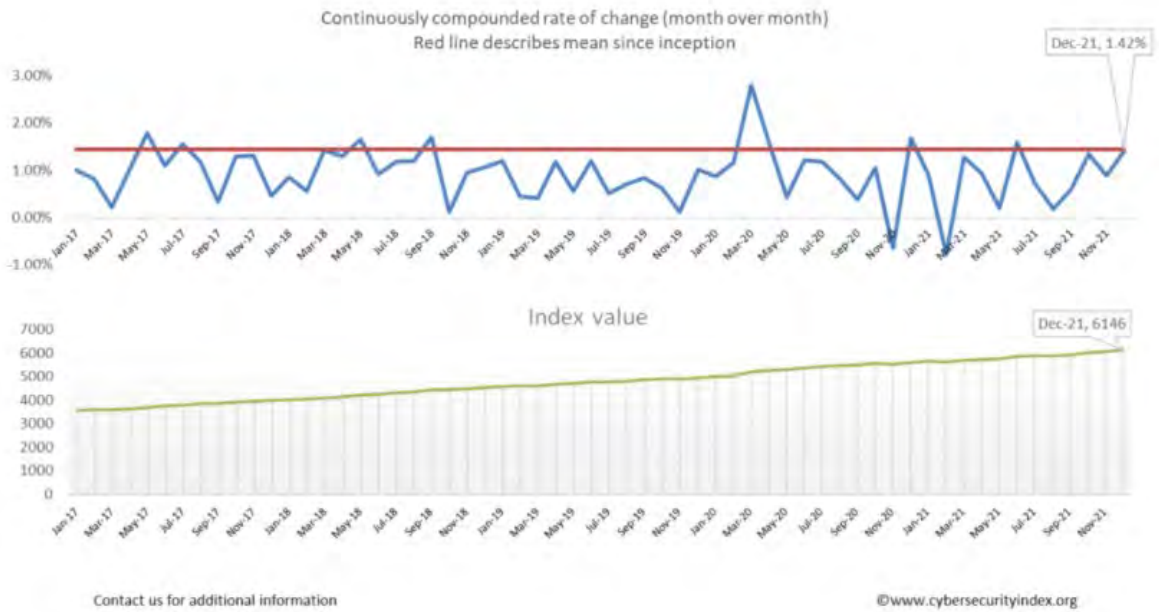
Globally, cyber threats are increasing and becoming more sophisticated. The most common types of attacks include:

- Phishing
- Ransomware
- Intellectual Property Theft
- Spyware/Malware
- Unpatched Software

Figure 3-11 identifies the measure of perceived cyber security risk, which has experienced an upward trend since 2015.

[32] Renn, O., et al. 2011. "Social Unrest." Organization for Economic Co-operation on Development. 14 January.
[33] Cal OES (California Office of Emergency Services). 2018. 2018 State of California Multi-Hazard Mitigation Plan. http://www.caloes.ca.gov/HazardMitigationSite/Documents/016-
[34] Mateski, M., C. Trevino, C. Veitch, J. Michalski, J. Harris, S. Maruoka, and J. Frye. 2012. "Cyber Threat Metrics." Sandia National Laboratories. https://fas.org/irp/eprint/metrics.pdf.

Figure 3-11: Index of Cyber Security



Past Events

Terrorism/Mass Casualty Incident

Although no terrorism/mass casualty incident events have occurred within Hollister, the following incidents that may be relevant to the community have occurred within its vicinity:

- *A 1970 bombing of the Stanford Research Institute facility, which caused approximately $500,000 in property damage. No injuries or deaths occurred during this incident.*[35]
- *In April 1992, unknown perpetrators opened fire into an Internal Revenue Service office in Hayward, CA. The attack resulted in no casualties and $1,000 in damage. This incident took place on the same date as the tax filing deadline.*[36]
- *In October 2018, a letter bomb was discovered at a mail sorting facility on 44th Street in Sacramento, CA. The letter bomb was addressed to then Democratic Senator Kamala Harris. This was 1 of 16 coordinated mail bomb attacks that targeted critics of President Donald Trump.*[37]

In July 2019, 19-year-old Santino Legan opened fire on a crowd at the Gilroy Garlic Festival in Gilroy, CA, killing three and wounding a dozen others. Legan was shot and killed by police officers within a

[35] Global Terrorism Database. 2021. "1970-10-18". https://www.start.umd.edu/gtd/search/IncidentSummary.aspx?gtdid=197010180001
[36] Global Terrorism Database. 2021. "1992-04-15." https://www.start.umd.edu/gtd/search/IncidentSummary.aspx?gtdid=199204150009
[37] Global Terrorism Database. 2021. "2018-10-26." https://www.start.umd.edu/gtd/search/IncidentSummary.aspx?gtdid=201810260003

minute of the start of the attack. Although his motivations are unknown, Legan had possible links to the white supremacist movement.[38]

Civil Disturbance/Riot

The following is a list of recent civil disturbances/riots:

- *In July 2018, an assailant threw an explosive device targeting Oakland police officers during a march commemorating the life of Nia Wilson, an 18-year-old woman who was stabbed to death on a commuter train platform. The explosive device consisted of an M-1000 firecracker, shrapnel, and copper sheeting. The blast injured at least four police officers. A 23-year-old man was arrested in connection with the detonation, allegedly joining the march to carry out a premeditated attack on Oakland police.*[39]
- *On May 29, 2020, demonstrators in Oakland, CA, gathered to protest the killing of George Floyd by Minneapolis, Minnesota police on May 25th, 2020. After initially being a peaceful demonstration, the protest turned destructive as activists began lighting fires and looting the downtown area. During this time, multiple police officers had sustained injuries from projectiles that were thrown at them.*[40]

Cyber Threat

The City of Hollister has not experienced cyber incidents directly. However, several jurisdictions in California and across the country have. Several recent incidents include:

- *On August 29, 2018, the County of San Benito suffered a malware attack that shut County systems down for a week and affected critical and public safety services.*[41]
- *April 22, 2021, Santa Clara Valley Transportation Authority experienced a data breach/ransomware incident involving the potential dump of stolen data if demands were not met. This incident did not impact transportation infrastructure operations.* [42]
- *On May 31, 2018, the City of Morgan Hill experienced a data breach exposing 480 former and current employees' financial information.*[43]
- *December 2020 – A foreign nation-state led a cyberattack on multiple U.S. federal government agencies, including the Dept. of Homeland Security, the Commerce Dept., and the U.S. Treasury. This attack appeared to be conducted in an effort to gather information about the U.S. government. The most significant and immediate impact of the attack was business interruption and data exfiltration.*

[38] Global Terrorism Database. 2021. "2019-07-28." https://www.start.umd.edu/gtd/search/IncidentSummary.aspx?gtdid=201907280007

[39] Global Terrorism Database. 2021. "2018-07-23." https://www.start.umd.edu/gtd/search/IncidentSummary.aspx?gtdid=201807230040

[40] CBS San Francisco. "Oakland George Floyd Protest Turns Angry as Marchers Block Freeway, Start Looting." CBS San Francisco, May 29, 2020. https://sanfrancisco.cbslocal.com/2020/05/29/oakland-george-floyd-protesters-block-traffic-on-i-880-in-both-directions/

[41] https://www.seculore.com/resources/cyber-attack-archive/california

[42] https://patch.com/california/losgatos/vta-hit-cyberattack-unclear-if-personal-info-breached-report

[43] https://morganhilltimes.com/city-employees-info-accessed-in-data-breach/

Risk of Future Events

Terrorism/Mass Casualty Incident

Given that mass casualty incidents and acts of terrorism stem from a variety of factors: economics, societal pressures, mental health, global geopolitics, warfare, religion, etc.—it is impossible to predict when an incident occurs. While Hollister does not feature facilities of critical national or state importance, it is likely that future incidents would originate domestically and is less likely to attract the attention of international terrorist groups. Incidents of these types are more likely to be conducted by smaller organizations or individuals aligned with greater-known organizations, although the effects may be no less significant.

Civil Disturbance/Riot

While civil disturbance events may be rare, there is still a possibility that they could occur in the future in Hollister. Given that several recent civil disturbance events have occurred in the vicinity of the city, it is safe to say that gathering locations such as parks and event centers may be areas where such events could emerge in the future.

Cyber Threat

Due to the integrated nature of technology into the everyday lives of Hollister's residents, businesses, and government operations, it is possible that a cyber threat could emerge in the future. While no cyber threats are publicly known to have disrupted the City's normal operations in the past, the likelihood of a cyber threat affecting the residents, businesses, and/or governmental operations in the future is increasing.

Climate Change Considerations

Terrorism/Mass Casualty Incident

The link between mass casualty incidents/terrorism and climate change is not well understood. However, it has been suggested that the impacts of a changing climate may exacerbate existing social, political, religious, and ethnic tensions. For example, longer, more intense droughts may restrict food supply or place limits on economic growth for cities, regions, or even whole countries. Nevertheless, the likelihood of climate change impacting mass casualty incidents/acts of terrorism in Hollister is negligible since these changes are more likely to impact developments on the national or international level.

Civil Disturbance/Riot

Climate change is not likely to impact future civil disturbances in Hollister.

Cyber Threat

Climate change is not likely to impact cyber threats in the future within Hollister.

Geologic Hazards (Erosion, Landslides)

DESCRIPTION

EROSION

Erosion is the general process whereby rocks and soils are broken down, removed by weathering, or fragmented, and then deposited in other places by water or air. The rate of erosion depends on many variables, including the soil or rock texture and composition, soil permeability, slope, extent of vegetative cover, and precipitation amounts and patterns. Erosion increases with increasing slope and precipitation and with decreasing vegetative cover, which includes areas where protective vegetation has been removed by fire, construction, or cultivation.

LANDSLIDES

Landslides occur when the earth on slopes becomes destabilized, typically after heavy rains, when the precipitation saturates the soil and makes it less stable, or when significant erosion from rainfall destabilizes the ground. Slopes that have recently burned face a greater risk from rain-induced landslides, as the fires burn up many of the trees, brush, and other vegetation that help stabilize the earth. Earthquakes may also be a source of landslides as the shaking can destabilize already loosened soils.

LOCATION AND EXTENT

EROSION

The Hollister valley is generally flat, and erosion is not common. According to the General Plan, the areas of greatest concern are the areas in and around agricultural lands; however, the soils associated with these areas are generally considered to be prime farmland (land with the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops), which has only a slight or moderate erosion potential. The areas with the greatest erosion potential are the Park Hill area and the outer banks of the San Benito River, where sand and gravel have been mined.

LANDSLIDES

The relatively flat topography of Hollister and the general planning area generally equates to low susceptibility to landslides. However, landslides can occur in connection with a severe earthquake. The area where this susceptibility is greatest is the west side of Park Hill; however, landslides would most likely be small and isolated based on soil composition in this area. Smaller landslides and mudslides have a higher probability of occurring in areas where stormwater runoff contributes to the deterioration of slope stability, which leads to the sudden movement of earth and debris. These areas would most likely be tributary canyons to the major drainages within Hollister.

PAST EVENTS

Table 3-15 is a list of events that have occurred within Hollister.

Table 3-15: Geologic Events in Hollister

Date	Event	Impact/Cause
2018	There was a series of 5 landslides along Southside Rd near Blossom Lane in 2018 alone. The road was covered when a slope below the Sunnyslope Water Treatment Plant retention pond #5 broke loose and collapsed, obscuring the road and making it impassable.[44]	Cleaning up after the slides and repairing the roads has cost over $1 million. An investigation concluded that the slope was weakened by groundwater leaking from the pond and running along a fault trace near the retention pond at the top of the slope. The road closed for multiple days as it was cleaned up, repaired, and investigated. According to adjacent property owners, this same pond had not been in use since a 1984 landslide and had only seen usage resume in 2016, and the result is more landslides. The state water board says the pond has always been in use; residents disagree. Landslides keep occurring because of the pond and its contents.[45]
2014	Large storm hits San Benito County (affecting Hollister, San Juan Bautista, and Aromas), dropping 3.8 inches of water, causing flooding, mudslides, and knocking over trees due to a combination of water and wind.	Three landslides due to flooding caused Southside School to close along Southside Road. Multiple calls for fallen trees were reported.
2010	San Justo Reservoir has caused multiple landslides since its construction in 1987. Areas prone to landslide were identified at this time, and liners were installed to minimize water seepage. However, upon filling the reservoir, the anticipated seepage was much worse than originally thought, resulting in landslides due to excessive soil saturation.[46]	Located about 3 miles southwest of Hollister, the dam and reservoir provide water storage for the federal Central Valley Project from the Pachecho conduit and the Hollister conduit fed by the San Luis Reservoir. This is a vital storage facility for water and the surrounding communities. Water storage had to be reduced to reduce the amount of water seeping into the surrounding hillsides avoiding further landslides.

Source: Benito Link

[44] Magana, Noe. Benito Link. 2019. https://benitolink.com/report-indicates-sunnyslope-water-pond-as-cause-of-southside-road-landslides/
[45] Magana, Noe. Benito Link. 2018. https://benitolink.com/supervisors-hold-special-session-on-landslides/
[46] Breen, Adam. San Benito.com. 2010. https://sanbenito.com/landslides-a-nuisance-at-san-justo-reservoir/

Risk of Future Events

Erosion

Erosion potential will always exist in some areas of Hollister. The most erosion-prone areas are the outer banks of the San Benito River due to the soil composition and the recurring presence of floodwaters. Park Hill is also an area of potential concern due to the location's topography. Farmland and other land used for agricultural purposes are also locations where erosion can occur due to the disturbance of soils and vegetation, which typically hold soils in place.

Landslides

Although substantive landslides have not occurred in Hollister, parts of the community do face an elevated risk from these events, as depicted in Figure 3-12. Key areas of concern include the foothills surrounding the community and drainages running through the City. If a future landslide occurs, it would likely impact one of these areas. Moisture-induced landslides could occur annually (accompanying strong winter storms), while seismically induced landslides would accompany a strong earthquake event close to Hollister.

Climate Change Considerations

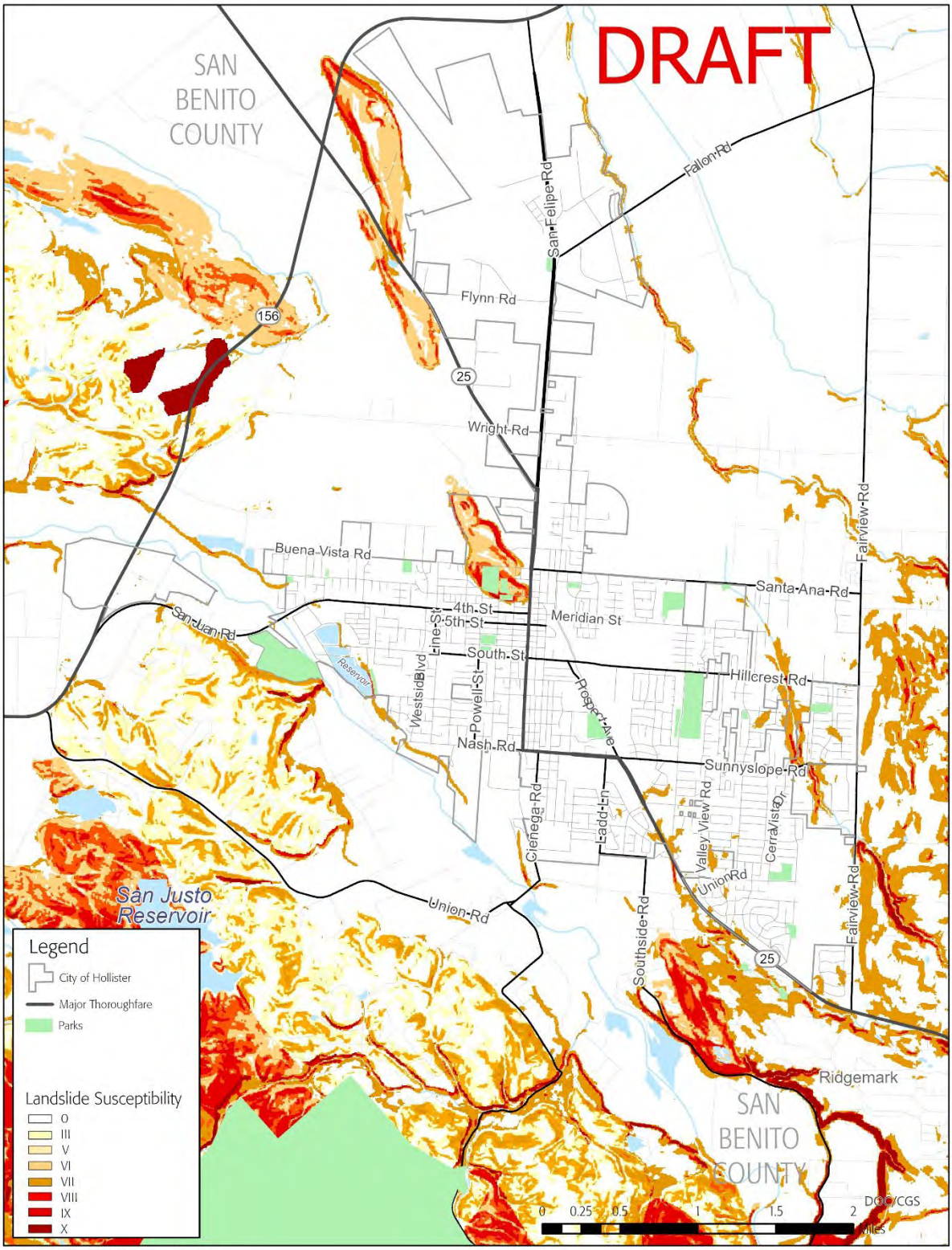
Erosion

Climate change is predicted to affect the intensity and frequency of precipitation events, increasing the potential for erosion. The greater the storm intensity, the higher water levels potentially will rise, which can increase water velocity as it flows, further increasing the erosion potential of many stream courses, especially during and following intense rain events. Higher levels of sediment being washed out and redeposited downstream can also affect water quality. Drinking water sources can become compromised or reduced in availability and potability. This sedimentation can also threaten local wildlife (fish and invertebrates) and aquatic vegetation.

Landslides

There is no evidence that climate change affects seismic activity to any appreciable degree, so climate change is not expected to affect seismically induced landslides. Climate change may increase the frequency and/or intensity of moisture-induced landslides, given a possible increase in the intensity of major storm systems. Such an increase would likely cause higher precipitation levels, leading to slopes absorbing more moisture and becoming more unstable. As a result, landslides may become larger or could occur more often. Climate change may also increase the amount of land burned by wildfires, increasing the likelihood of landslides in Hollister and San Benito County.

Figure 3-12: Deep Seated Landslide Susceptibility



Source: Federal Emergency Management Agency, 2020

Diseases/Pests

DESCRIPTION

DISEASE

According to the World Health Organization (WHO), vector-borne diseases are human illnesses caused by parasites, viruses transmitted by vectors. Vectors are living organisms that can transmit infectious pathogens between humans or animals to humans. Vector-borne diseases account for more than 17% of all infectious diseases, causing more than 700,000 deaths annually. They can be caused by either parasites, bacteria, or viruses.[47]

A pandemic is an epidemic of an infectious disease that has spread across a large region, for instance, multiple continents or worldwide, affecting a substantial number of people. The world has experienced numerous pandemics, the most fatal being the Black Death (the Bubonic Plague, 1346-1353), the 1918 Spanish Flu, HIV/AIDS (1980's-current), and presently the entire world is contending with COVID-19 (SARS-CoV-2, 2019-current). The two deciding factors that influence the spread of disease are the speed at which the pathogen can be transmitted from person to person in addition to human behaviors either individually or as a society.

The following are some diseases and the pests/vectors that could affect the population of Hollister:

COVID-19: A highly contagious respiratory disease caused by the SARS-CoV-2 virus. SARS-CoV-2 spreads from person to person through droplets released when an infected person coughs, sneezes, or talks. The most common signs and symptoms of COVID-19 are fever, cough, and trouble breathing. Fatigue, muscle pain, chills, headache, sore throat, runny nose, nausea or vomiting, diarrhea, and a loss of taste or smell may also occur. The signs and symptoms may be mild or severe and usually appear 2 to 14 days after exposure to the SARS-CoV-2 virus. Some people may not have any symptoms but are still able to spread the virus. Most people with COVID-19 recover without needing special treatment, but some face serious symptoms. Serious illness may include life-threatening pneumonia and organ failure. [48] As of January 2022, approximately 11,808 cases have been reported in San Benito County and 91 deaths.[49]

Influenza (the flu): Is a virus that leads to illness in humans. Symptoms of the flu include fever, cough, headache, sore throat, muscle and joint pain, or runny nose. Given that the flu virus is constantly mutating, it is exceptionally difficult to create a vaccine that protects against all strains of the virus. These variations of the flu can occasionally give rise to particularly deadly strains, such as the H1N1 strain that emerged in 2009. Currently, the flu is one of the common diseases around the world, leading to the deaths of as many as 650,000 people per year.[50]

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[47] Vector-borne Diseases. https://www.who.int/news-room/fact-sheets/detail/vector-borne-diseases

[48] Covid-19. https://www.cancer.gov/publications/dictionaries/cancer-terms/def/covid-19

[49] San Benito County Public Health Services. https://hhsa.cosb.us/wp-content/uploads/2022/01/COVID-19-Update-012722b.pdf

[50] Hartl, G. December 2017. Up to 650,000 people die of respiratory diseases linked to seasonal flu each year. *World Health Organization*. https://www.who.int/news-room/detail/14-12-2017-up-to-650-000-people-die-of-respiratory-diseases-linked-toseasonal-flu-each-year

West Nile Virus: Is a disease originally from Africa that was first reported in the U.S. in 1999. West Nile Virus is a vector-borne disease, with transmission occurring from mosquito bites. Most people who are infected do not display symptoms or feel sick. Those who display symptoms most often experience high fever, headache, neck stiffness, tiredness, or tremors. More severe symptoms include coma and paralysis. Vulnerable populations, primarily the elderly, may die because of their infections. There is currently no vaccine for the virus.[51]

Zika Virus: In 2016, there were 30 reported cases of Zika Virus infections and 12 cases in 2017, an infection rate of 0.9% and 0.4%, respectively.[52] All these cases resulted from residents traveling to foreign countries where the virus was active and then diagnosed with the infection upon their return. There has never been any Zika infection that occurred within California itself.[53]

PESTS

Pest concerns for Hollister include invasive insect and plant species that could impact agricultural resources. The San Benito County Agricultural Commission has programs in place to detect and eradicate the following species:

- ***Detect:*** *Asian Citrus Psyllid, European Pine Shoot Moth, Japanese Beetle, Melon Fruit Fly, Mexican Fruit Fly, European Corn Borer, Glassy-winged Sharpshooter, Khapra Beetle, Mediterranean Fruit Fly, European Grapevine Moth, Gypsy Moth, Oriental Fruit Fly, and Light Brown Apple Moth.*
- ***Eradicate*** *using a combination of chemical, mechanical, and biological control methods: yellow & purple starthistle, scotch thistle, and artichoke thistle.*[54]

LOCATION AND EXTENT

Any location within Hollister is susceptible to spreading disease; locations where large groups of people gather are far more likely to facilitate the spread of diseases. Key locations may include medical facilities (Hazel-Hawkins Memorial Hospital), educational institutions, shopping centers, and larger employment centers. Locations that are highly trafficked by many different people are potential places to spread disease. While Hollister has a population of 42,720 (2020), the Hollister Municipal Airport has over 53,000 aircraft annually landing and taking off with passengers and goods (potential vectors of disease). The City is home to the annual Hollister Independence Motorcycle Rally (which was not held in 2020 due to statewide closures and regulations during the current COVID-19 pandemic), bringing an estimated 10,000 riders to the area. The potential for the introduction and spread of disease increases with these types of events.

[51] Center for Disease Control and Prevention. December 2018. *West Nile Virus*. https://www.cdc.gov/westnile/index.html
[52] Health Care Agency. 2018. Reportable Diseases & Conditions by Year, 2013-2017. http://www.ochealthinfo.com/civicax/filebank/blobdload.aspx?BlobID=76272
[53] California Department of Public Health. 2019. *What Californians Need to Know: Don't Bring Zika Home*. https://www.cdph.ca.gov/Programs/CID/DCDC/pages/zika.aspx
[54] San Benito County Agricultural Commissioner. 2019 Crop Report. https://www.cosb.us/home/showpublisheddocument/6203/637413906956070000

Areas where pests (potential vectors, invasive species) gather or are located could impact humans, plants, or animals nearby. Standing water is a breeding ground for mosquitos, as this is the environment where they lay their eggs. Standing pools of water could increase the risk of infection from vector-borne diseases like West Nile Virus and Zika Virus if bitten by an infected mosquito. In response to these threats, the County instituted the San Benito County Mosquito Abatement Program in 2007. The program provides mosquito abatement and disease control services within its boundaries (**Figure 3-13**), which includes the city of Hollister.

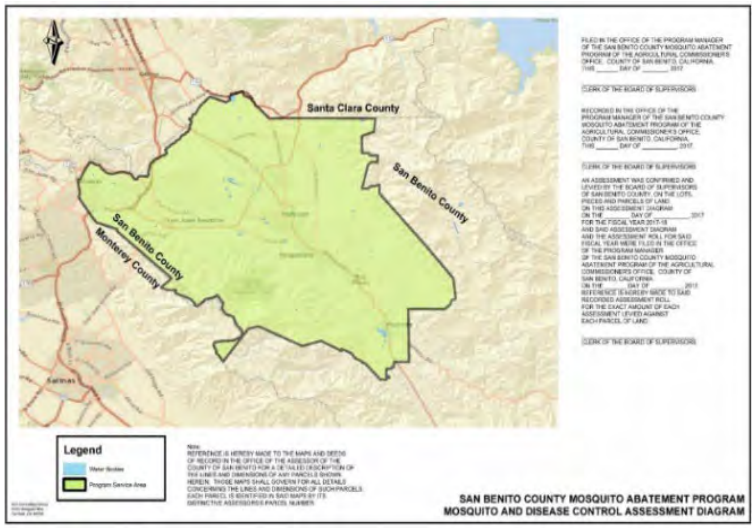


Figure 3-13: San Benito County Mosquito Abatement Program Coverage (Courtesy of San Benito County)

Weeds such as purple starthistle, yellow starthistle, and branch broomrape have been found in San Benito County and the Hollister area. These weeds have been monitored since 2001, and eradication efforts have occurred to ensure these species do not impact agricultural production within the County.

Past Events

While specific local information on vector-borne diseases for Hollister is not available, San Benito County has been impacted by outbreaks of diseases. The following are some notable statistics and instances of diseases that have occurred within San Benito County.

COVID-19: To date, San Benito County has been fortunate in its relatively low number of positive COVID-19 cases. The San Benito County Public Health Services Department provides official reporting on a biweekly basis; as of January 27, 2022, 11,808 cases and 91 deaths have been reported since the start of the pandemic.

West Nile Virus: In 2013, all of California experienced a sudden outbreak of West Nile Virus infections, with most cases occurring within Orange County. San Benito County has reported no human cases since 2013. A very small number of horses and sentinel chickens have tested positive since then, 1-2 a year.[55]

Zika Virus: As of September 2021, San Benito County has not been identified having mosquitos (Yellow Fever or Asian Tiger) that transmit Zika virus. Since 2011 all reported cases in California are the result of residents traveling to foreign countries where the virus was active and then was diagnosed with the

[55] YTD Reports WestNile.ca.gov. https://westnile.ca.gov/resources_reports.php?report_category_id=6

infection upon their return. There has never been any Zika infection that occurred within California itself.[56]

Asian Citrus Psyllid: In April 2015, one female Asian Citrus Psyllid was found in Hollister, which is a concern as it carries a disease (huanglongbing) that can infect trees, causing a decline in health until it dies. Once infected, there is no cure for this disease, which could cause significant damage to citrus and closely related tree species.[57]

Risk of Future Events

Hollister is almost certain to continue experiencing influenza infections and other vector-borne diseases in the future. Since influenza has no completely effective vaccine, it is impossible to eradicate this disease. Vaccinations are currently being administered for COVID-19; however, there is limited understanding of this virus because it is so new. The Centers for Disease Control and Prevention (CDC) states that getting the vaccine in combination with following state mandates, wearing a mask, and maintaining social distancing are the best way to slow and hopefully end the spread of the COVID-19 virus. If residents of, workers of, or visitors to Hollister were to stop receiving vaccinations against preventable diseases, it could cause a resurgence of such diseases within the City or region.

Vector-borne diseases of concern, like the West Nile or Zika viruses, are not native to California and are currently being monitored with the hope of catching an outbreak before it causes significant harm in the future. As all cases of Zika Virus infection have occurred among those who have traveled to countries where the risk of infection is high, it can be expected that there will always be some degree of risk from this infection for any residents in Hollister or San Benito County. West Nile Virus infection rates tend to remain very low for San Benito County and are only limited to horses and sentinel chickens at this time. Understanding the periods when infection rates suddenly rise, usually because of larger populations of mosquitoes, allows the County to actively manage this risk through control measures and abatement. However, the risk of future outbreaks occurring still exists for the City.

Pests (insects and plants) will continue to remain a risk to Hollister and the surrounding region in the future. Most invasive plant species currently being monitored within the County and Hollister area have management plans and programs to control and eradicate these species. However, if these species begin to expand or new foreign species are introduced, the County and City will need to expand their efforts to protect agricultural resources and native species that could be negatively impacted.

Climate Change Considerations

Climate change generally will lead to changes in temperature and precipitation, affecting Hollister. These changes may cause insects, pests, and other vectors that carry disease to remain active for longer periods of the year or allow for expansion or migration into areas where the species did not exist before. This possibility increases the threat of exposure to any infectious diseases that these pests carry. Additionally, vectors currently not active in Hollister and San Benito County may migrate

[56] California Department of Public Health. 2019. *What Californians Need to Know: Don't Bring Zika Home*. https://www.cdph.ca.gov/Programs/CID/DCDC/pages/zika.aspx

[57] Benitolink. https://benitolink.com/citrus-pest-found-in-hollister/

into the area due to warmer temperatures or changes in precipitation. Mosquitoes carrying diseases like West Nile Virus and Zika Virus would have an extended range.[58]

Hazardous Material Release

Description

Hazardous materials release refers to a hazard event whereby harmful concentrations of hazardous or toxic substances are released into the environment, which occurs when storage containers of hazardous materials leak or fail. It can happen due to industrial accidents, vehicle crashes, as a direct result of other disasters (e.g., a flood or earthquake), or as a deliberate act.

The threat that hazardous materials pose to human health depends on the type of material, frequency, and duration of exposure, and whether chemicals are inhaled, penetrate the skin, or are ingested, among other factors. Exposure to hazardous materials can result in short- or long-term effects, including major damage to organs and systems in the body or death. Hazardous waste is any material with properties that make it dangerous or potentially harmful to human health or the environment. Hazardous materials can also cause health risks if they contaminate soil, groundwater, and air, potentially posing a threat long after the initial release.

Location and Extent

Hazardous materials and chemicals are used daily in households and businesses throughout Hollister. In addition to the locations of large industrial uses, sources of hazardous materials can originate from seemingly harmless places such as service stations, dry cleaners, medical centers, and almost any industrial business. Hazardous waste can take the form of liquids, solids, contained gases, or sludge and can be the by-products of manufacturing processes or simply discarded commercial products, like cleaning fluids and pesticides used in all sorts of agricultural applications. **Table 3-16** identifies the number of facilities in Hollister registered with the federal government (Environmental Protection Agency [EPA]) or state (Department of Toxic Substances Control [DTSC]). **Figure 3-14** identifies the locations of the hazardous material facilities within the City identified in the DTSC database. These locations have been overlayed on the Cal EnviroScreen dataset identifying California communities by census tracts disproportionately burdened by and vulnerable to multiple pollution sources. A majority of the City is within the 50-75% category, indicating that populations within these areas may experience higher pollution burdens than other parts of the state.

Table 3- 16: Hazardous Material Facilities in Hollister

Facility Descriptions	Number of Facilities
EPA Facility Register Service Database	653
DTSC Envirostor Sites	38
Active Voluntary Clean Ups	0
Cases of Leaking Underground Storage Tanks (All cases are closed)	48

Source: https://www.epa.gov/frs/frs-query, https://www.envirostor.dtsc.ca.gov/public/

[58] McKenna, M. April 2017. "Why the Menace of Mosquitoes Will Only Get Worse." The New York Times. https://www.nytimes.com/2017/04/20/magazine/why-the-menace-of-mosquitoes-will-only-get-worse.html

Past Events

Based on reporting provide through the Cal OES Hazardous Materials Spill/Release Reporting program, the City has experienced an average of 6.47 spills annually between 2006 and 2020. Most of these incidents involved the release of sewage and petroleum products. **Table 3-17** identifies the yearly releases reported to Cal OES during this period.

Table 3-17: Hollister Hazardous Materials Spill/Release Reporting

Year	Reported Releases
2006	4
2007	2
2008	9
2009	5
2010	4
2011	6
2012	10
2013	7
2014	10
2015	7
2016	6
2017	16
2018	6
2019	2
2020	3
Annual Avg.	6.47

Source: https://www.caloes.ca.gov/cal-oes-divisions/fire-rescue/hazardous-materials/spill-release-reporting

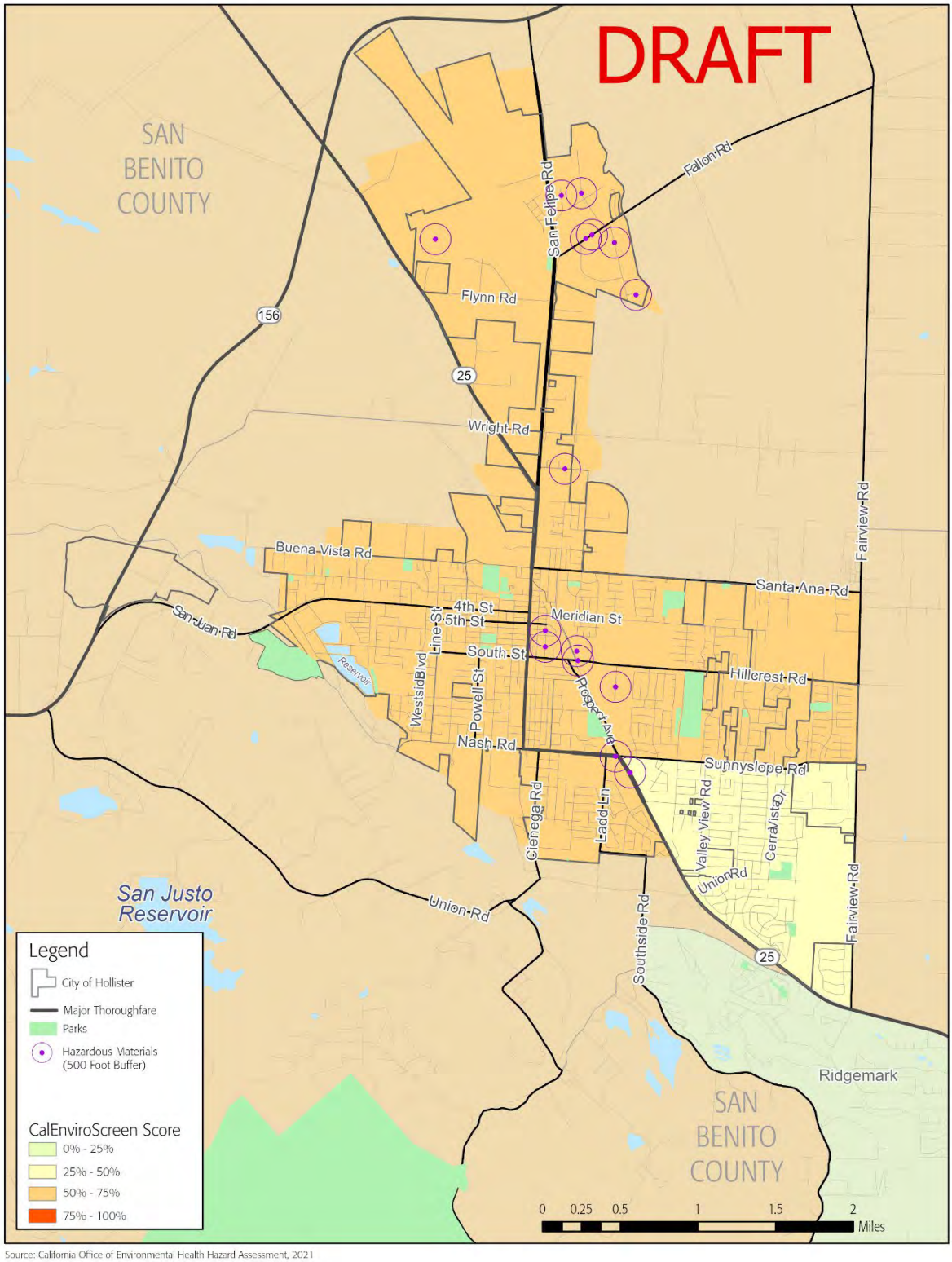
Risk of Future Events

Most of the release events within Hollister have occurred due to human error, malfunctioning equipment, or deliberate acts. Given this, it is anticipated that future events within the City will include minor incidents like the past occurrences identified. Based on this historical average, Hollister can expect at least one reported spill every other month. Additionally, Routes 156, 156B, and 25 run through Hollister, making the city vulnerable to spills involving tractor-trailers carrying various hazardous materials.

Climate Change Considerations

Climate-related natural hazard events, such as an intense flood, could cause hazardous materials releases. These releases could occur due to traffic accidents associated with inclement weather, flooded roadway conditions, or leakage from storage containers due to intense weather events. Climate-related hazards could also exacerbate the effects and impacts of such events. For example, heavier rains could lead to more runoff from contaminated sites. These issues should be monitored during the 5-year implementation period of this plan.

Figure 3-14: Hazardous Materials Facilities in Hollister



Source: California Office of Environmental Health Hazard Assessment, 2021

Aircraft Incident

Description

An aircraft incident refers to an airborne vehicle—such as an airplane, helicopter, or airship that experiences failure to the degree that people within the vehicle or on the ground are endangered. This could result from human error, inclement weather, deferred maintenance, design flaw, equipment failure, or a collision in a worst-case scenario. There are two types of classifications when dealing with aircraft: incident and accident. To better understand the differences between an aircraft accident and an aircraft incident, based on Title 49 of the Code of Federal Regulations Part 830 (§830.2):

- ***Accident**: Occurs between when the first person boards the aircraft – with the intention of flight - and the last person disembarks; results in death or serious injury; causes substantial damage to the aircraft.*
- ***Incident:** Associated with the operation of an aircraft that affects or could affect the safety of operations; any occurrence other than an accident.*

Location and Extent

Hollister is home to its own airport, Hollister Municipal Airport (KCVH), which is located approximately 3 miles north of the city center. KCVH is a city-owned public-use airport covering approximately 343 acres, hosting two asphalt paved runways that support an average of 157 aircraft operations daily. These operations range from military operations, local flights, and itinerant operations (a flight from one airport to another of at least 20 miles).[59]

Past Events

Given the proximity to airport facilities, the City and surrounding areas have been impacted by past aircraft hazard events. **Table 3-18** identifies the prior accident statistics for KCVH from 1982 through June 1, 2020. Some of the most recent aircraft accidents in Hollister include:

- May 4, 2021: A vintage plane was forced to make an emergency landing when its landing gear malfunctioned.
- June 20, 2019: The pilot of an aircraft sustained minor injuries as the aircraft was forced to land in a dirt field near Hollister Municipal Airport. The investigation concluded that the aircraft had not been properly refueled.
- November 25, 2010: The pilot of an aircraft was killed when their plane crashed near Hollister shortly after takeoff. The investigation concluded that the aircraft was not loaded within its weight and balance capacity.

[59] https://skyvector.com/airport/CVH/Hollister-Municipal-Airport

Table 3-18: Hollister Municipal Airport Aircraft Accident Statistics

	(1983-2005)		(2008-2020)	
Accident	32	100.00%	11	100.00%
Fatal Accidents	4	12.50%	2	18.18%
Fatality Range	1 to 4	N/A	1 to 3	N/A
Total Fatal Injuries	7	N/A	2	9.09%
Total Serious Injuries	N/A	N/A	3	13.64%
Total Minor Injuries	N/A	N/A	4	18.18%
Total Uninjured	N/A	N/A	13	59.10%
Source : https://www.ntsb.gov/_layouts/ntsb.aviation/index.aspx				

Risk of Future Events

Given the high volume of air traffic in the area, the possibility of an aircraft incident/accident occurring in Hollister will continue to exist. It is anticipated that future impacts will be similar based on historical events. A key component to aircraft incident safety is administering the Airport Environs Land Use Plan for Hollister Municipal Airport. This plan identifies the height restrictions and safety zones that require land-use restrictions to minimize potential impacts. Future land-use decisions that adhere to these restrictions and plan accordingly will help reduce future impacts associated with aircraft incidents. While these efforts can help reduce impacts on the ground, little can be done to reduce the impacts associated with aircrafts flying overhead under normal flight conditions. The risk associated with these types of incidents is like other parts of San Benito County and Central California.

Climate Change Considerations

There is no direct link between aircraft incidents and climate change; it is not anticipated that future hazards would be affected by changing climatic conditions at this time.

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Chapter 4 – Threat and Vulnerability

The threat assessment process looks at the harm that each hazard event discussed in Chapter 3 may cause in three different areas: the physical threat to key facilities, the threat to vulnerable populations, and the threat to any other community assets.

Threat Assessment Process

The threat assessment process looks at the harm that Hollister may experience from a hazard event but does not consider its likelihood, so it gives equal consideration to hazards that are more likely (e.g., earthquakes, flood) as well as hazards that are less likely (e.g., aircraft incident, dam failure).

Critical Facilities and Facilities of Concern

Critical facilities (CF) consist of properties and structures that play important roles in government operations and the services they provide to the community. Examples of CFs include local government offices and yards, community centers, public safety buildings like police and fire stations, schools, and any other properties a city has deemed essential for its operations. CFs may also serve dual roles if a city designates them as public assembly points during an emergency. CFs are often owned by the City, but many are also owned and operated privately, such as some utilities and telecommunication infrastructure. Facilities of Concern (FOC) are locations that the City may be concerned about; however, they do not have direct control over the maintenance and operations of the facility. In these instances, FOC are identified if the City desires to better understand their potential vulnerability to hazards of concern.

The Hazard Mitigation Planning Committee identified 61 CFs or FOC in Hollister that fall into 5 different categories based on their function or characteristics. **Table 4-1** shows the number of CFs and FOC in each category, the total estimated value of the facilities in each category, and examples of the facilities in each. **Appendix D** has a complete list of the CFs and FOC. **Figure 4-1** shows the mapped locations of CFs and FOC; however, some facilities were not mapped due to security concerns.

The potential loss value is the total insured value of the CFs that fall within the hazard zone. It is intended to provide the ballpark estimate of replacement cost if the property is completely or severely damaged. The actual repair costs could be smaller or larger than the provided estimate. The data was provided by the City's Property Schedule, and therefore, information for facilities not owned by the City are not shown (e.g., bridges, private buildings). In some instances, replacement cost information was not made available. Where this occurs, "N/A" has been used within the table.

Based on the available data provided by the City, the risk assessment calculates a total of $126,996,269 worth of City-owned assets analyzed. The total potential loss value of all City-owned and non-City-owned assets is much higher but is not known due to data limitations. The greatest potential for loss among the City-owned assets comes from the Water/Sewer Facilities category, which includes all of the sewer and storm drain infrastructure throughout the City. The next category with the greatest potential for loss is the Other Facilities, which includes the Hospital, School Gyms, and the Animal

Shelter. To better understand the magnitude of impacts, this plan identifies representative percentages of potential impact based on the total valuation of City assets. For planning purposes, we identified different tiers of impact that could happen. It is reasonable to assume that impacts would not exceed 50% of the total asset value city-wide. The following are parameters to help understand how much a proposed investment/improvement compares to the existing assets within the City:

1% Impact - $1,269,962

5% Impact – $6,349,813

10% Impact – $12,699,626

20% Impact - $25,399,253

50% Impact - $63,498,134

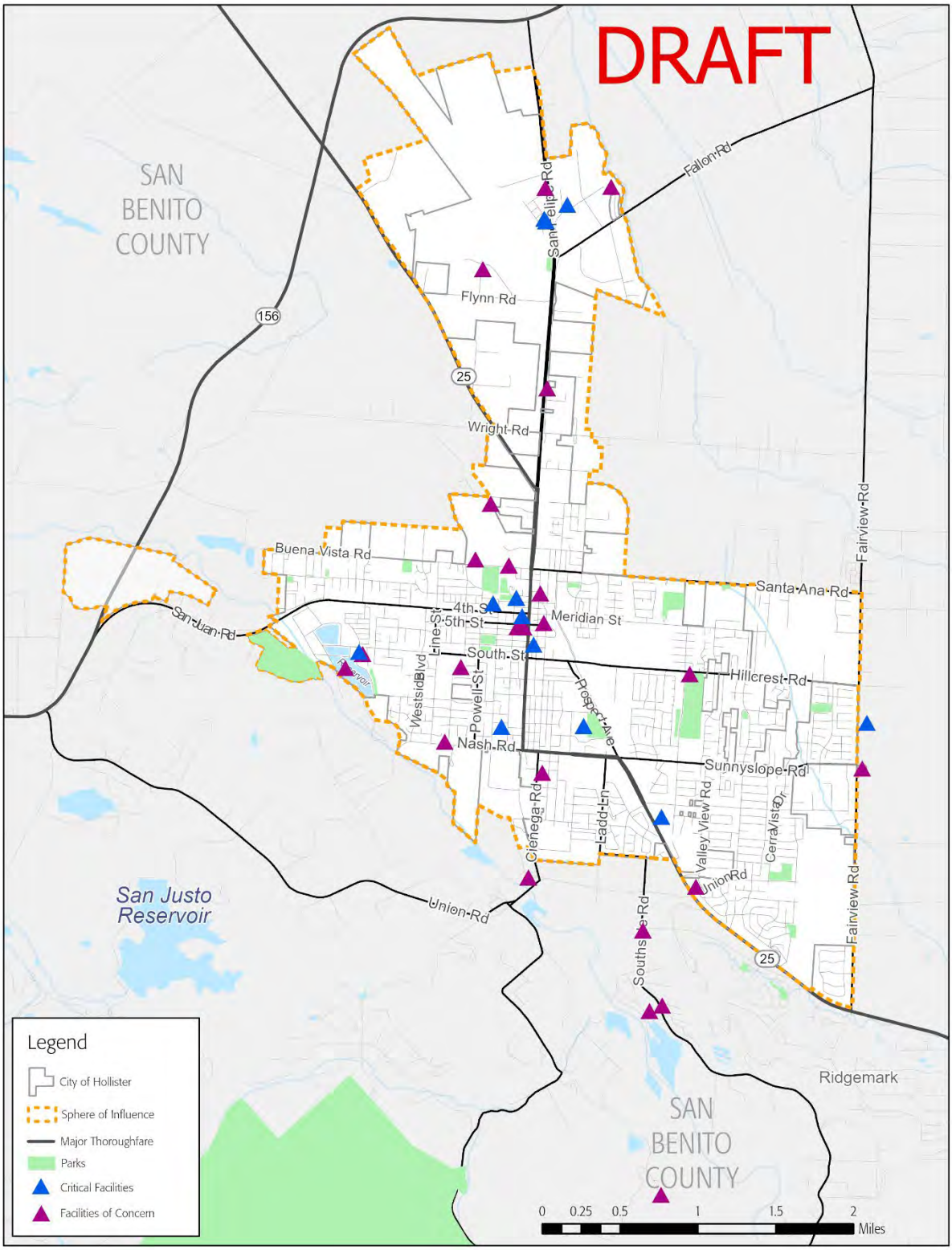
The likelihood that all facilities are completely damaged simultaneously is extremely remote. Most impacts are anticipated to be isolated to certain locations based on the hazard event. This estimate does not include the value of underground infrastructure and surface drainage facilities owned and operated by the City.

Table 4-1: Critical Facilities and Facilities of Concern

Category	Number of Facilities		Examples	Potential Loss
	CRITICAL	CONCERN		
City Facilities	9	0	City Hall, Police Station, Operations Support	$23,954,581
Community Centers	0	3	Community Centers	$13,955,417
Parks	0	20	Parks, Recreation Amenities, Sports Complexes and support facilities	$6,388,607
Water/Sewer Facilities	20	1	Water Treatment Plants, Booster Stations, Pump Stations, etc.	$50,435,591
Other Facilities	0	8	School Gyms, Hospital, Animal Shelter	$32,262,073
Total	**29**	**32**	---	**$126,996,269**

* Potential loss data are estimates only, as replacement values for some facilities were not available. Actual losses may be greater than the estimate presented in this table.

Figure 4-1: Critical Facilities and Facilities of Concern



Vulnerable Populations

Factors such as age, physical and/or mental condition, socioeconomic status, access to key services, and many other factors affect the ability of people to prepare for and protect themselves and their property from a hazard event. Even though some hazard events may impact all parts of Hollister with equal severity, different people may experience the impacts differently. Higher-income households, for instance, are likely more able to afford the cost of retrofitting their homes to resist flooding or, alternatively, move to a location that is less prone to flooding than a lower-income household. As a result, the higher-income household is less likely to experience significant damage during a flood event than the lower-income household, even if the same amount of rain falls on both.

A social threat analysis examines the ways hazard events are likely to impact different demographic populations in Hollister and where these different demographic populations live. This includes an assessment of whether the people in an area of an elevated hazard risk are more likely than the average person to be considered a threatened population. The social threat analysis uses the following criteria to assess the threat to vulnerable populations:

Disability status: Persons with disabilities may often have reduced mobility and experience difficulties living independently. As a result, they may have little or no ability to prepare for and mitigate hazard conditions without assistance from others.

Income levels: Lower-income households are less likely to have the financial resources to implement mitigation activities on their residences. They may also struggle with having the necessary time to find and access educational resources discussing hazard mitigation strategies. Furthermore, lower-income households are less likely to be able to afford to move to safer areas or areas that are less at risk of being impacted by a hazard. The national poverty limit standard for the U.S. for a four-person family is approximately an income of $26,200 or less. For San Benito County, the FY 2021 Low-Income Limits for a four-person family, according to Housing and Urban Development (HUD), is $81,600.

Seniors (individuals at least 65 years of age): Seniors are more likely to have reduced mobility, physical and/or mental disabilities, and lower-income levels, all of which may decrease their ability to prepare for and mitigate a hazard event.

Table 4-2 shows the amounts of people in Hollister who meet at least one of the criteria for threatened, vulnerable populations. For more detailed demographic information, please refer to **Chapter 2**.

The social threat analysis also shows the threat other populations may encounter, such as persons experiencing homelessness or persons without access to lifelines (vehicles or communication networks). Since data for these groups are not readily available, there is no definitive way to determine the amount of these persons in areas of elevated risk, so this assessment will discuss how these other threatened groups may also be affected in a general manner.

Table 4-2: Hollister Threatened-Population Metrics	
Threatened Population Metric	**Community-Wide Data**
Population	42,362
Households	12,079
Median household income	$77,035*
Renter Households	37.8%*
Percentage of households with at least one person living with a disability	22.3%
Percentage of households living under the poverty limit	9.1%
Percentage of households with one member aged 65+	25.0%
Source: US Census Bureau, American Community Survey, 2013-2017 5-Year Estimates. 2017. "Table DP02: Selected Social Characteristics in the United States." https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_DP02&prodType=table	

Data Limitations and Notes on Vulnerability Tables

Due to data limitations, the data comparing the hazard zone population with the Citywide population comes from two separate sources. The Citywide data comes from the US Census Bureau's American Community Survey, and the hazard zone population data comes from ESRI's Business Analyst reports. As a result, there may be minor discrepancies in comparing the two data sets. The data that should be considered correct for this plan is the ACS data reported in Chapter 2.

Other Assets

In addition to the City's designated inventory of CFs/FOC and vulnerable populations, hazard events could threaten other important assets to Hollister. These assets may include services, artistic or cultural landmarks, or local economic activities. The threat assessment describes the potential harm to these other assets based on available information.

Threat Profiles

Seismic Hazards

PHYSICAL THREAT

FAULT RUPTURE

The City has numerous faults that have been mapped and identified within the City and the surrounding foothills of the local mountain ranges. **Figure 4-2** identifies these mapped faults with the City's CFs and FOC overlain. The Calaveras is located within the City's downtown and is located within an Alquist-Priolo Fault Study zone. **Table 4-3** identifies the CFs and FOC located within 500 feet of these mapped fault segments. Based on this table, potential losses associated with fault rupture could amount to over $30 million and affect 6 CFs and 6 FOC.

Table 4-3: Critical Facilities and Facilities of Concern (Fault Rupture)

Category	Number of Facilities		Potential Loss**
	Critical	Concern	
City Facilities (City Hall, Fire, Police)	3	0	$6,848,528
Community Centers	0	2	$11,522,525
Parks	0	0	$ 0
Water/Sewer Facilities	3	0	$211,376
Other Facilities	0	4	$12,140,627
Total	**6**	**6**	**$30,723,056**

* Replacement Values Unavailable
** Based on the City of Hollister insured replacement values
Source: Atlas Planning Solutions, 2021

SEISMIC SHAKING

Many physical assets in the City are estimated to experience the same seismic shaking intensity, ranging from 1.5 to 2.12g (shaking intensity in relation to earth's gravity). Therefore, all facilities could potentially be damaged during a significant seismic event, which would likely be extremely costly for the City. If all facilities were to be damaged at the same time during a seismic shaking event, it can be assumed that the City would incur a percentage of the maximum potential loss of its physical assets. Given the shaking intensity, the damage could range from 20% to 50% of the replacement value for City assets. Based on this, potential losses could range from $25 to $63 million. Underground physical assets, like pipelines or utilities, could also be damaged, which are not factored into this estimate. In such a scenario, natural gas and water delivery service to Hollister homes and businesses may not be available until repairs are completed. **Figure 4-3** identifies CFs and FOC in Hollister that are threatened by seismic shaking.

LIQUEFACTION

Parts of Hollister are within liquefaction susceptibility zones. This is due to the location of liquefiable soils atop shallow groundwater. The combination of these soil and groundwater conditions creates the potential for a seismic event to cause liquefaction. The areas located on either side of the San Benito River and northern portions of the City beneath the airport are of particular concern. Given a significant seismic event, these locations may experience liquefaction leading to impacts to buildings, infrastructure, and roadways. **Figure 4-4** identifies the mapped liquefaction susceptibility areas along with the location of CF's and FOC. **Table 4-4** identifies the CFs and FOC located within the very high and high liquefaction susceptibility areas. Based on this analysis, potential losses associated with liquefaction could amount to over $31 million and affect 2 CFs and 5 FOC.

Figure 4-2: Fault Rupture Physical Threat

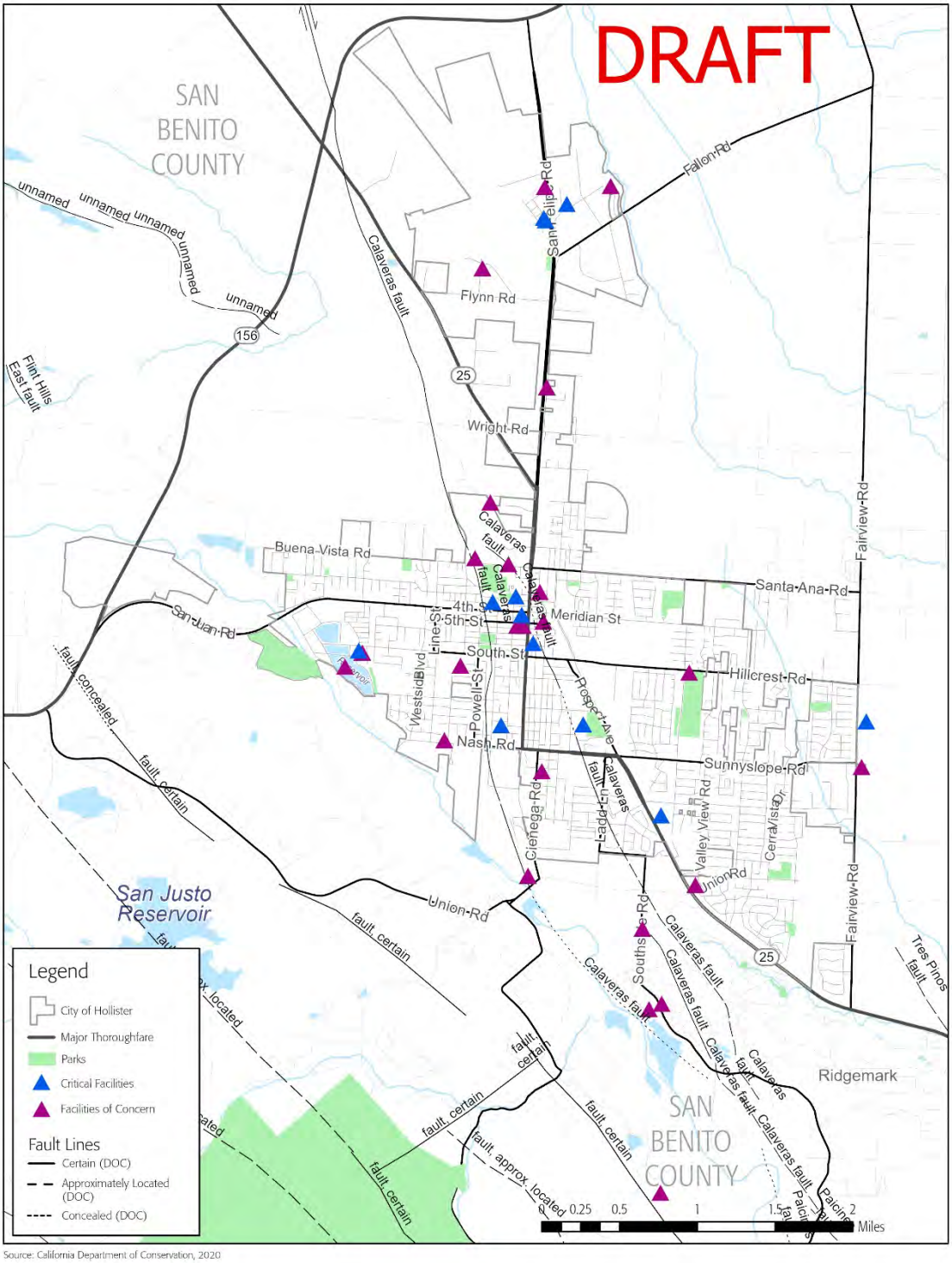
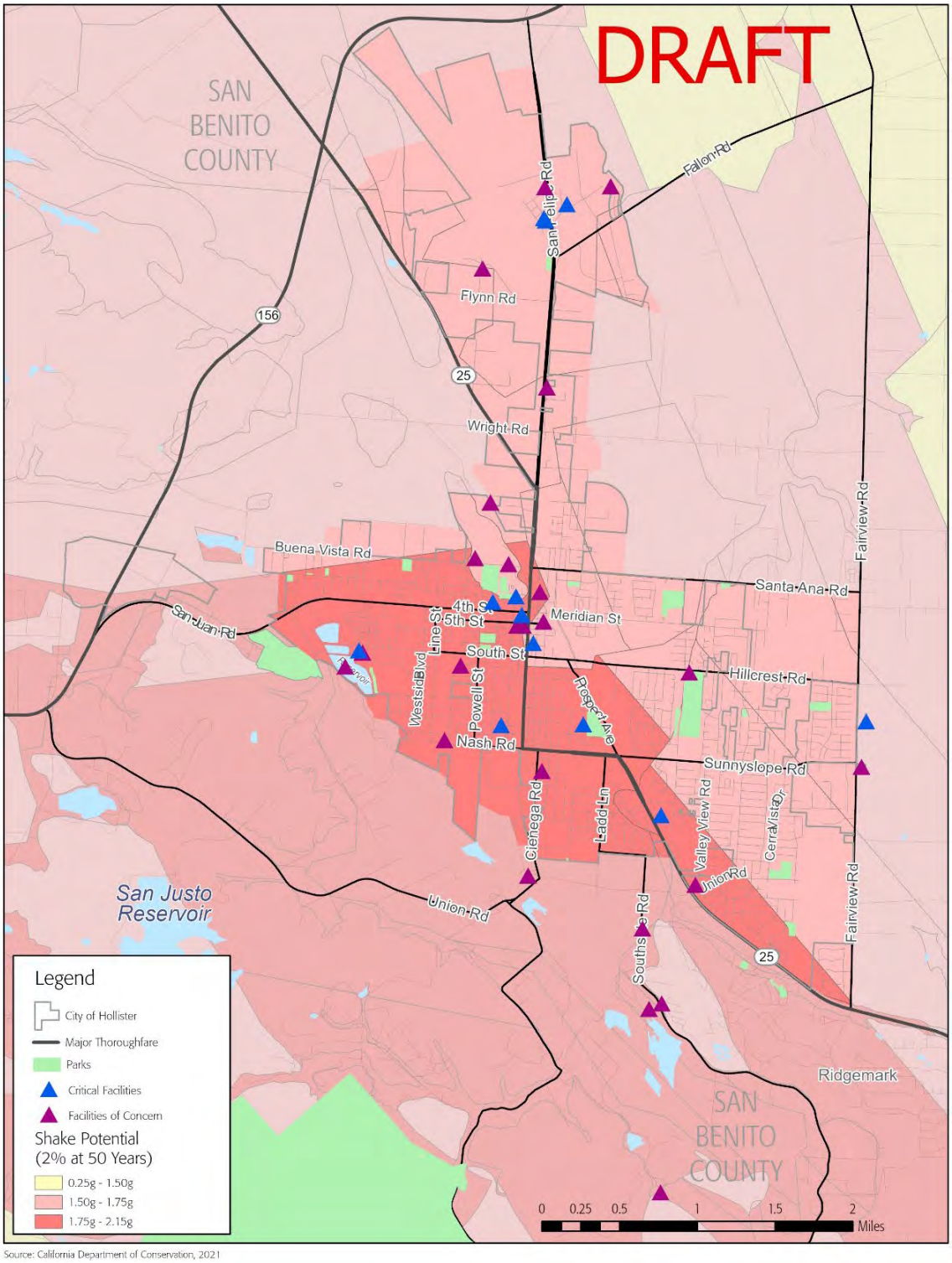


Figure 4-3: Seismic Shaking Physical Threat



Source: California Department of Conservation, 2021

Table 4-4: Critical Facilities and Facilities of Concern (Liquefaction)

Category	Number of Facilities		Potential Loss**
	Critical	Concern	
City Facilities (City Hall, Fire, Police)	1	0	$9,571,857
Community Centers	0	1	$2,432,892
Parks	0	2	$88,073
Water/Sewer Facilities	1	1	$263,183
Other Facilities	0	1	$18,788,598
Total	**2**	**5**	**$31,144,603**

* Replacement Values Unavailable
** Based on the City of Hollister insured replacement values
Source: Atlas Planning Solutions, 2021

Social Threat

The risk of a seismic event is a danger to all groups in Hollister though some are more threatened than others.

Fault Rupture

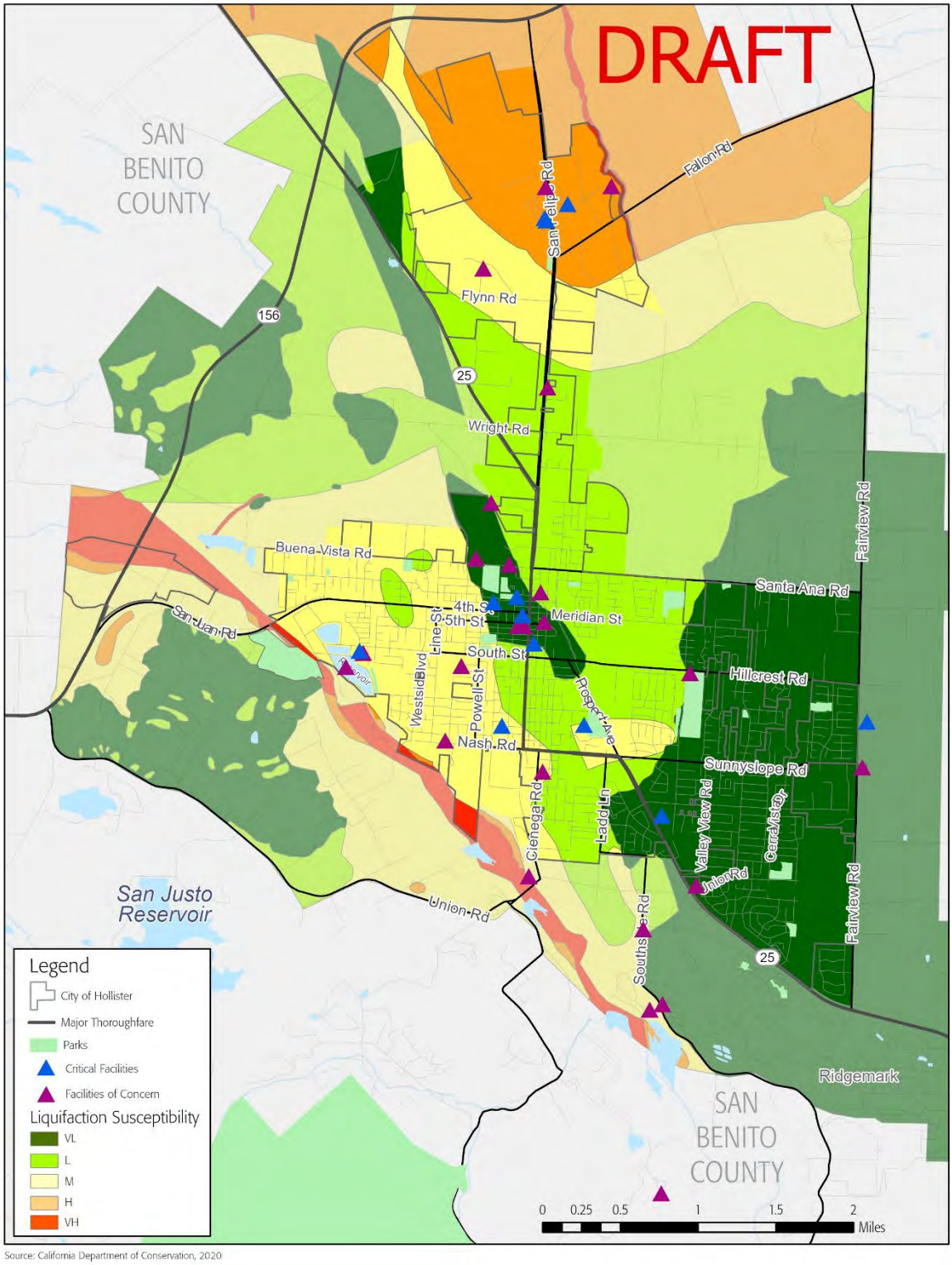
Data sets provided by the California Geological Survey and City of Hollister were mapped and analyzed using a 500-foot buffer around each fault segment to analyze the social threat associated with fault rupture. **Table 4-5** identifies the threatened populations within these fault rupture areas, which includes over 4,593 residents that have a median household income of over $67,583, which is lower than the City average. In these areas, there is a higher percentage of persons living with a disability and a lower percentage of households with one member aged 65+.

Table 4-5: Fault Rupture Hazard Threatened Populations

Threatened Population Metric	Fault Rupture Zones (CA Geologic Survey)	City of Hollister
Population	4,593	42,362
Households	1,572	12,079
Median household income	$67,583	$77,035
Percentage of households with at least one person living with a disability	24.6%	22.3%
Percentage of households living under the poverty limit	9.8%	9.1%
Percentage of households with one member aged 65+	30.3%	25.0%

Source: Atlas Planning Solutions, 2021

Figure 4-4: Liquefaction Physical Threat



Source: California Department of Conservation, 2020

SEISMIC SHAKING

Seniors, pregnant people, and persons with disabilities are more threatened by seismic shaking since they may have limited mobility and may be unable to reach shelter in time. Even if these groups reach shelter in time, they may find themselves trapped if furniture or building components have fallen around them. Renters and low-income persons are also more threatened by seismic shaking since these groups may live in homes that are not properly retrofitted to survive the stresses of a seismic event. These groups may not be able to absorb the costs associated with repairing their homes or looking for new housing should their existing housing be too damaged for occupancy.

LIQUEFACTION

Table 4-6 compares the populations within the very high liquefaction susceptibility zone with citywide populations. Approximately 77 residents within 24 households are located within this zone. These residents have a median household income of approximately $6,000 lower than the Citywide average and a higher proportion of persons living with a disability and households with a member aged 65+. Based on these metrics, populations within these areas may have difficulty if structure damage to their homes occurs during a seismic event.

Table 4-6: Liquefaction Hazard Threatened Populations

Threatened Population Metric	Liquefaction Zones	City of Hollister
Population	77	42,362
Households	24	12,079
Median household income	$71,586	$77,035
Percentage of households with at least one person living with a disability	33.3%	22.3%
Percentage of households living under the poverty limit	8.3%	9.1%
Percentage of households with one member aged 65+	37.5%	25.0%

Source: Atlas Planning Solutions, 2021

OTHER THREATS

FAULT RUPTURE

Seismic events that cause surface fault rupture tend to damage roads and structures in the areas of impact. The length of rupture is typically a component of the seismic event's magnitude. The stronger the event, the greater distance that rupture can occur. The Calaveras Fault runs through Hollister, which is considered an active fault with a high likelihood of rupturing in the future. In addition, most of the fault movement occurring in the region is associated with strike-slip faulting along the Calaveras, Sargent, Quien Sabe, San Andreas, and Zavante fault zones. If surface rupture occurs, any buildings, structures, and/or infrastructure in the area affected will most likely experience damage, which, based on its location could impact many homes and businesses within Hollister.

SEISMIC SHAKING

As early earthquake warnings systems become operational soon, it can be expected that utilities will take advantage of these advance warnings to shut off gas, water, and power transmission to control any potential leaks following a seismic event. Authorities may have enough time to halt the use of

bridges or move workers to a safe distance away from hazardous materials. Workers will cease their activity and take shelter until they can be safely evacuated. Therefore, all services will be non-operational during the seismic event and remain inactive until authorities are confident that it is safe to reactivate utilities and return employees to their workplaces. The length of this time would vary depending on the magnitude of the event. A significant earthquake would likely put utilities out of commission and halt economic activity for a few hours or several days. Hollister and the region could experience economic losses during the outage period. Structures like telephone poles or power lines felled by the shaking could block roadways and prevent emergency response personnel from reaching victims or evacuees needing assistance.

LIQUEFACTION

Services and mobility may be disrupted during and following a liquefaction event. Much of the impacts would be similar to those described above but isolated to the areas of greatest susceptibility. Infrastructure located along stream courses (bridges and storm drains) will most likely be impacted if liquefaction occurs.

Flooding

PHYSICAL THREAT

Portions of the City are located within the 100-year flood zone (1.0% Annual Chance of Flooding) and the 500-year flood zone (0.2% Annual Chance of Flooding). Any physical assets located within these mapped boundaries can expect to be inundated if enough precipitation were to fall, exceeding the storm drain infrastructure design capacity in these areas. Electronic or mechanical equipment on the ground could become waterlogged and nonfunctional. **Table 4-7** identifies the City's physical assets within the 100-year and 500-year flood zones. In total, five facilities (CFs and FOC) are located within these zones totaling approximately $9.4 million. Several facilities did not have replacement costs identified; therefore, this estimate could increase based on actual impacts. **Figure 4-5** displays the CF's and FOC located within these flood hazard zones.

Table 4-7: Critical Facilities and Facilities of Concern

Flood Risk	Flooding (100 year)	Flooding (500 year)
City Facilities (City Hall, Fire, Police)	0	0
Community Centers	0	1*
Parks	2*	1
Water/Sewer Facilities	1*	0
Other Facilities	0	0
Total Facilities	**3**	**2**
Total Replacement Costs	**-**	**$9,403,819**

* Replacement costs are unknown
Source: Atlas Planning Solutions, 2021

SOCIAL THREAT

The threat of a flood will primarily affect those residents living within the 100-year and 500-year flood zones, many of which are located along drainages within the City. Flooding of this type would likely

inundate curb cuts and sidewalks to some extent. Residents who walk or bike as their main form of transportation may encounter greater difficulties with mobility if they do not have access to alternative transportation means. Seniors, persons with disabilities, and low-income persons are those most likely to be affected. **Table 4-8** shows the proportions of Hollister's vulnerable populations who are likely to face a greater threat from a flood event. Based on the analysis, 3 households are located in the 100-year flood zone, and 49 households are located within the 500-year flood zone.

Populations located in the 500-year flood zone appear to have a lower median household income and a higher proportion of households with one or more persons with a disability. These metrics may indicate that residents living in these areas may be challenged in recovering from a flood incident or evacuating if flooding impacts their residence.

Additionally, flooding events are typically associated with rainstorms, which can impact persons experiencing homelessness. If these populations are caught outside during flood conditions without shelter, they could be disproportionately impacted. Though floodwaters in Hollister are not expected to exceed a depth of one foot, a floodwater depth of six inches may render any makeshift structures uninhabitable during a flood event. Possessions such as sleeping bags or electronic devices may be damaged or swept away by these floodwaters if these residents cannot relocate in a timely manner.

Table 4-8: Flood Hazard Threatened Populations

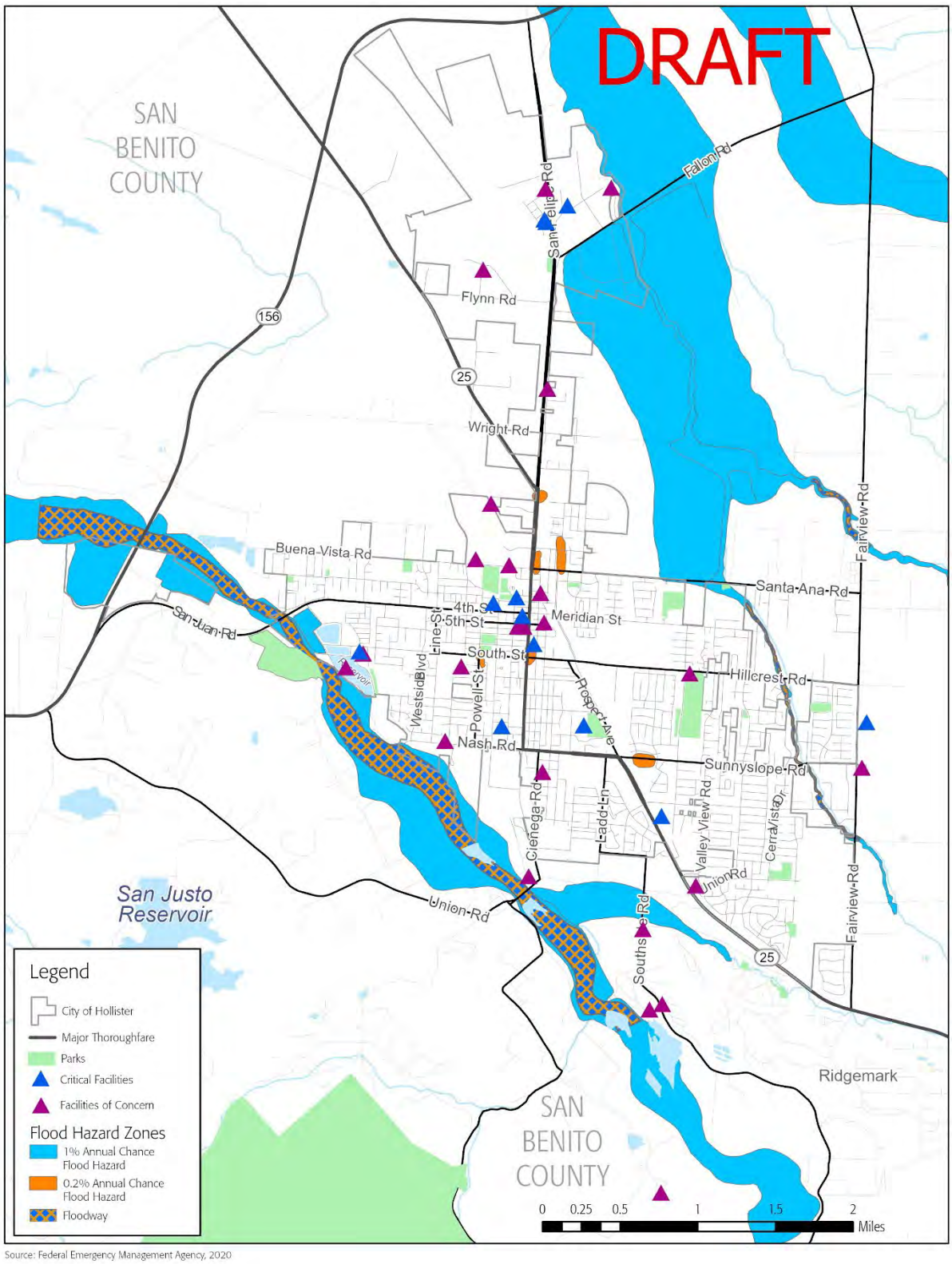
Flood Hazard Zone	100-Year Flood	500-Year Flood	City of Hollister
Total Population	16	185	42,362
Total Households	3	49	12,079
Median Household Income 2019	$125,000	$75,910	$77,035
Percent of Households with One or More Persons with a Disability	33.3%	28.6%	22.3%
Percent of Households under Poverty Line	0.0%	8.2%	9.1%
Percentage of households with one-member aged 65+	33.3%	14.3%	25.0%

Source: Atlas Planning 2021

OTHER THREATS

Flooding may temporarily stop any type of transportation in the city. Debris carried by floodwaters can block roadways, hinder vehicles' access, and potentially affect emergency response services. Rushing water only one foot deep is enough to carry small vehicles downstream. A severe flood situation where the maximum anticipated flood depth of one foot is realized may prevent people who own smaller vehicles from driving to work, leading to reduced economic activity. Severe flooding that causes serious damage to homes and businesses may also reduce economic activity until repair work is completed.

Figure 4-5: Critical Facilities and Facilities of Concern in 100-Yr and 500-Yr Floodplains



Source: Federal Emergency Management Agency, 2020

Drought

Physical Threat

Since the primary threat from drought is reduced water supply and availability, there are no foreseeable threats to any of the City's physical assets. It is possible that any water delivery infrastructure that is not used or used less than usual may fall into some degree of disrepair if maintenance is deferred. Lower water pressures may cause some aged water pipes to release rust particles into the water supply.

Social Threat

Droughts are unlikely to cause serious social threats to households in Hollister, though residents and business owners in the City may experience financial costs associated with water conservation efforts. Those who have less access to financial resources, such as low-income households or seniors, may be harder hit if higher water fees are imposed during a severe drought event

Other Threats

A typical drought is not anticipated to lead to any outages in service in Hollister. However, an exceptional drought may lead to restricted water use for both residents and businesses. Agriculture is a major component of the economy and livelihood of many in Hollister. An extended drought could impact crop production, limit the amount of usable land for grazing livestock, and even potentially kill livestock. The financial impact on the agricultural industry could be drastic during an exceptional or extensive drought. Trees that are not adequately adapted to lower irrigation levels could perish or become diseased due to stress, which would alter the City's aesthetic appearance. Any open spaces with extensive lawns may start to die, turning brown, which could discourage residents from using these parks and open spaces.

Severe Weather

Physical Threat

Extreme Heat

Extremely high temperatures can cause roads to deform and buckle as the pavement expands in the heat, especially in areas that have not been maintained well. Power lines and other electrical infrastructure can become less effective in higher temperatures and may experience damage during extreme heat events. Buildings and dark pavements will absorb more heat than the areas covered by vegetation or light-colored materials, which are better at reflecting the sun's energy. As buildings and pavements absorb more heat, occupants may rely on air-conditioning units that may require longer operation. This places strain on the electrical grid and could lead to power outages if too many residents use more electricity than the grid can provide.

Severe Wind

Intense winds, like the Diablo Winds, likely present one of the greatest threats to physical structures, particularly from trees or branches that fall on buildings and cause substantial damage. Older structures that have deferred maintenance or have not been retrofitted for high wind conditions may suffer greater damage than newer/updated structures. Utility lines and wooden utility poles face an elevated threat from wind, as do buildings without reinforced roofs. Severe winds have the potential

to damage electrical transmission lines and other utility infrastructure, which can lead to wildfire, power outages, and a disruption of utilities.

Social Threat

Extreme Heat

While extreme heat is a threat to all persons in Hollister, some demographic groups are more susceptible than others. For instance, seniors, children, and laborers (agricultural workers) who are required to spend extended periods of time outdoors may fall victim to heatstroke or other heat-related conditions. Seniors may be at risk of heat-related death if they are left exposed to extreme heat conditions without intervention. Persons experiencing homelessness may also be affected by extreme heat episodes since they lack access to shelter from the extreme temperatures. These people are very vulnerable to heatstroke during a heatwave, especially if they cannot reach a cooling center. Lower-income households may also face a greater threat from extreme heat events since they may have limited incomes preventing them from running air conditioning units due to increased energy costs. Renters that do not own their housing units may not have the ability to add air conditioning or other heat abatement design retrofits without first consulting their landlord or property owner, who may not approve any changes proposed by the renter. Sudden spikes in heat can catch people by surprise. Stores can rapidly sell out of fans, air-conditioning units, or drinking water during a heatwave. Lower-income households or those with limited mobility may be at a disadvantage in mitigating these conditions without significant preparations.

Severe Wind

Vulnerable populations may be challenged during severe wind events for several reasons. Housing and structures damaged during an event may become uninhabitable or expensive to repair, which could strain renters/ homeowners if they cannot afford the repairs. If relocation is required, this location change could put additional strain on the resident. If businesses are damaged, clean-up and repairs may require closing the business, affecting the City's economic activity. For residents that rely on public transportation, walking, or biking, exposure to severe winds could impede travel or delay arrival.

Other Threats

Extreme Heat

Extreme Heat for any length of time can affect other hazards and risks within the City as well. For example, it can create a spike in electricity demand leading to power loss/failure. During an intense regional heat event, where hundreds of thousands of people may be drawing on the regional power grid, it is possible that a blackout, or a complete power outage, could occur, affecting the City, as well as surrounding jurisdictions.

Severe Wind

Severe wind events that affect Hollister can make other risks such as wildfire exponentially worse. Winds can also affect the take-off and landing of small aircraft at Hollister Municipal Airport, leading to an increased risk of possible aircraft incidents.

Wildfire

PHYSICAL THREAT

There are no fire hazard severity zones (Very High, High, and Moderate) located within the City. **Figure 4-6** identifies Moderate Fire Hazard Severity Zones directly adjacent to the eastern portion of the City and Moderate and High Fire Hazard Severity Zones to the west and southwest of the City. Only one critical facility is located within these areas outside of the City.

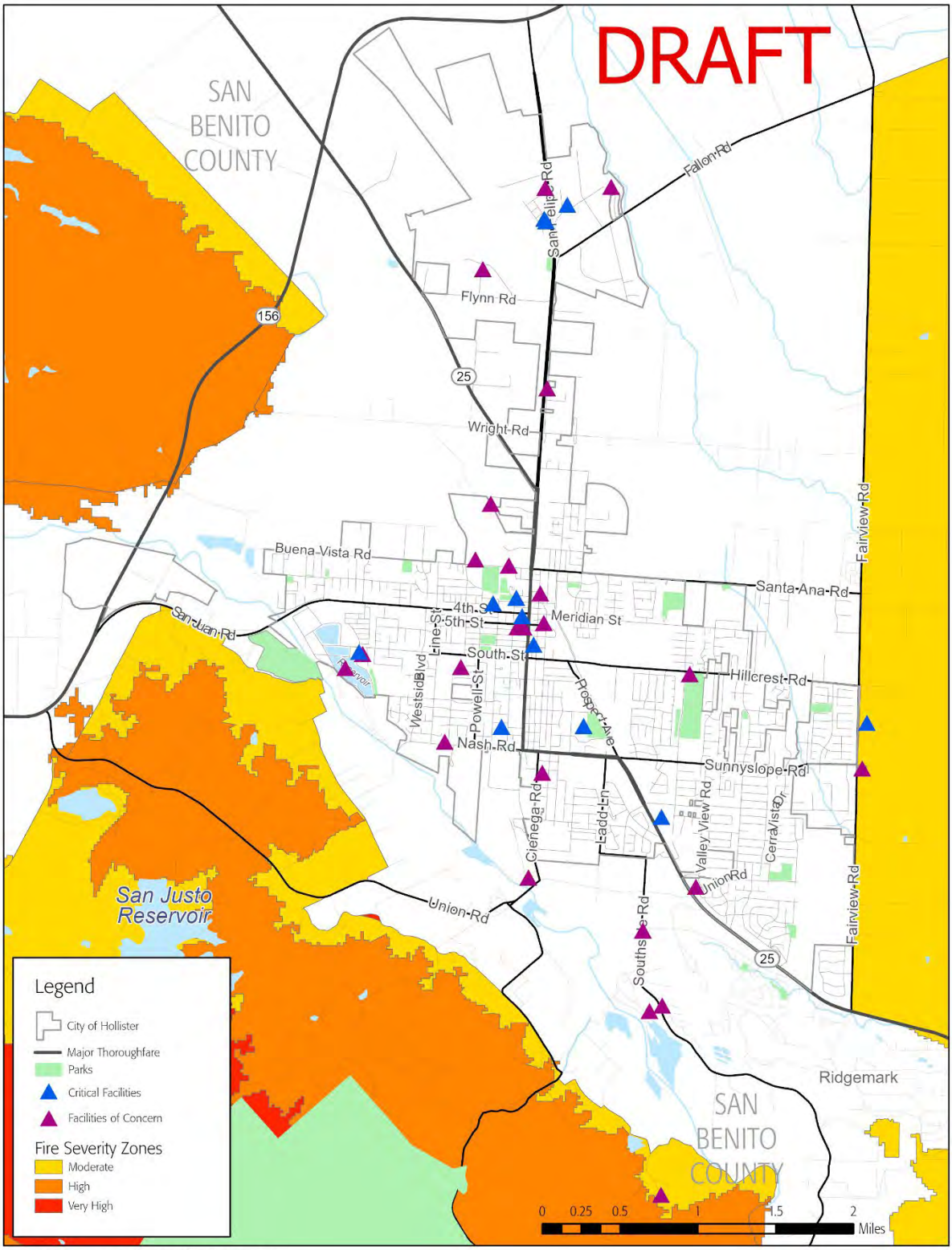
SOCIAL THREAT

Outside of the property owners directly impacted by a wildfire event, wildfires can also impact seniors and persons with disabilities. These groups may have limited mobility, be immuno-compromised, and/or not receive notifications regarding current conditions and evacuation requirements. For example, a senior who lives alone may not be aware that a wildfire is burning close to their residence, and evacuation orders have been issued.

Persons with disabilities may require special mobility devices or caregiver assistance to go outside, which may not arrive as quickly as needed. Other groups with increased threat levels include people with lower incomes, renters, and the homeless.

Since Hollister does not have Fire Hazard Severity Zones located within the city limits, Fire Hazard Severity Threat data was used to estimate wildfire-affected populations. **Figure 4-7** identifies these areas in relation to the CF and FOC locations, and **Table 4-9** identifies the populations located within the moderate and high fire-threat areas. Currently there are 608 households and a total of 2,077 residents within these areas. Based on this analysis, those households within the moderate fire threat area have a higher median income, while those in the high fire-threat area have a lower median income than the median for the entire City. This could impact recovery and mitigation for these households if they have inadequate financial resources available to support these activities. Households in both areas have a lower percentage of households with at least one person living with a disability and households living under the poverty limit. However, there is a higher percentage of households with one member aged 65+ in the moderate fire threat area and a lower percentage in the high fire-threat area than the Citywide average.

Figure 4-6 Fire Hazard Severity Zones with Critical Facilities



Source: California Department of Forestry and Fire Protection, 2021

Table 4- 9 Fire Hazard Zone Threatened Populations

Threatened Population Metric	Moderate Fire Hazard	High Fire Hazard	Hollister
Population	1,902	175	42,362
Households	562	46	12,079
Median household income	$85,027	$71,541	$77,035
Percentage of households with at least one person living with a disability	16.9%	17.4%	22.3%
Percentage of households living under the poverty limit	3.4%	8.7%	9.1%
Percentage of households with one-member aged 65+	26.3%	21.7%	25.0%

OTHER THREATS

Other threats associated with wildfires may involve the loss of electricity or other utilities, evacuation of areas potentially under threat, or the health effects of wildfires located near Hollister or throughout the region. Loss of utility services can impact vulnerable populations to a greater degree if they rely on the service for medical reasons (oxygen, dialysis, etc.) or to ensure adequate heating/cooling occurs. Some households may not have the means or capability of providing backup power generation if power loss occurs.

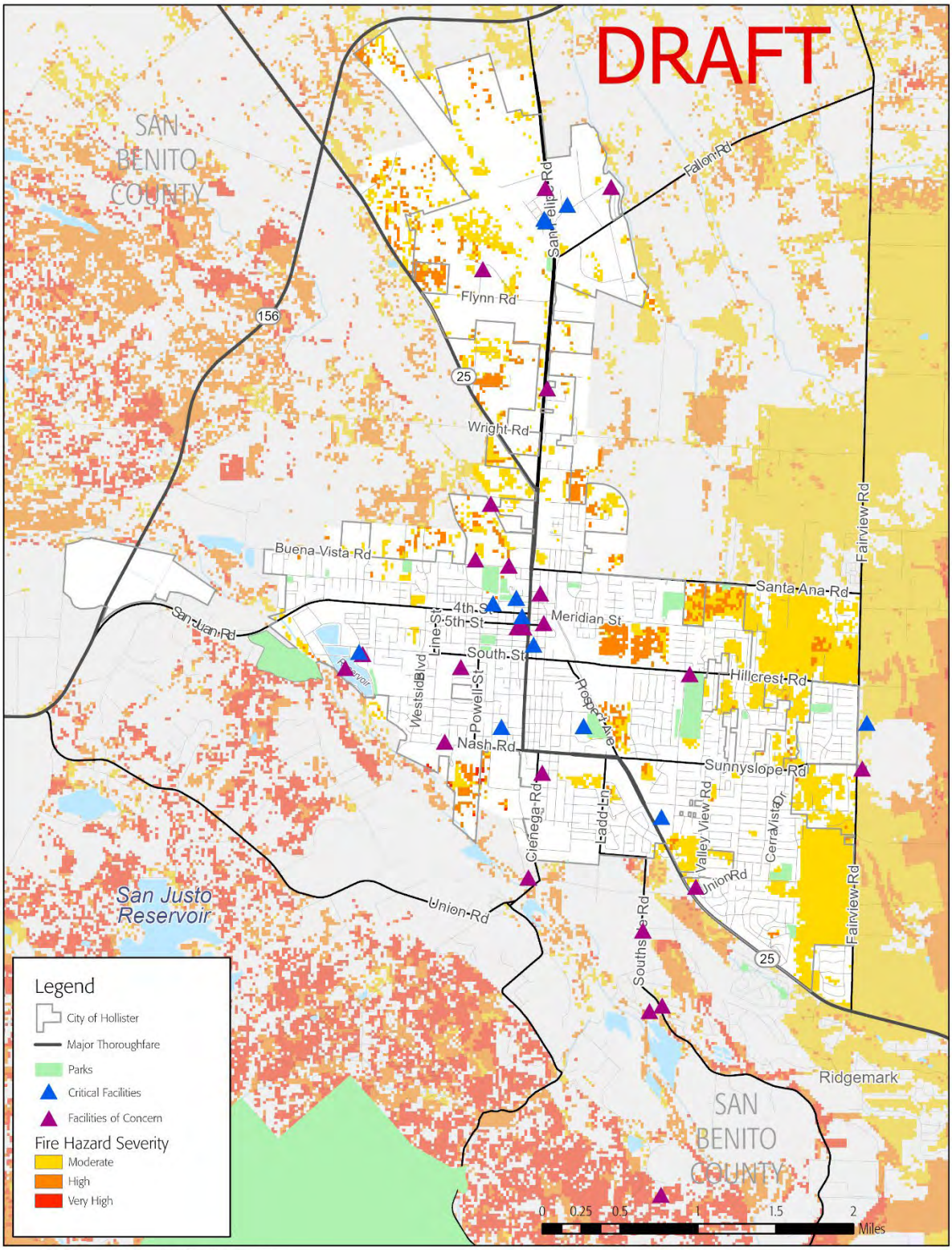
The health effects associated with wildfires can also be very detrimental to a community. As wildfires in California become larger and more intense, there is a greater potential for smoke production. Chronic exposure to particulates generated during a wildfire can cause health outcomes that range from eye and respiratory tract irritation to more serious disorders, including reduced lung function, bronchitis, exacerbation of asthma and heart failure, and premature death. Children, pregnant women, and the elderly are especially vulnerable to smoke exposure. Emissions from wildfires are known to cause increased visits to hospitals and clinics by those exposed to smoke.[60]

A study of the 2003 wildfires in southern California concluded that wildfire-related PM (2.5) led to increased respiratory hospital admissions, especially asthma, suggesting that better preventive measures are required to reduce morbidity among vulnerable populations.[61] With the expectation that wildfire incidents will increase in size and severity in the future, it will be important to understand how the City can assist residents with poor air quality during wildfires occurring throughout the region.

[60] https://www.epa.gov/air-research/wildland-fire-research-health-effects-research#:~:text=The%20effects%20of%20smoke%20from,especially%20vulnerable%20to%20smoke%20exposure.

[61] The relationship of respiratory and cardiovascular hospital admissions to the southern California wildfires of 2003. https://pubmed.ncbi.nlm.nih.gov/19017694/

Figure 4-7 Fire Hazard Severity Threatened Population



Source: California Department of Forestry and Fire Protection, 2021

Human-Caused Hazard

Physical Threat

Mass Casualty Incident / Terrorism

There is no way to predict which of Hollister's facilities or assets may be impacted by a mass casualty incident/act of terrorism since the motive behind the incident is often complex or not easily understood. Generally, these types of incidents occur at places of political, economic, or cultural importance. If the perpetrator's motives are to shut down City or regional governmental activity for some time, they may instead target infrastructure, like water systems, utility delivery systems, or transportation networks. In this situation, bridges may become prime locations for these types of activities. The financial losses that may result would depend on the degree of destruction associated with the activity. If the incident involves the destruction of physical assets, the City or property owners' cost would likely be immense.

Civil Disturbance

The potential for the destruction of critical facilities during civil unrest is impossible to predict; much like terrorism, civil unrest can happen anywhere and at any time within the City. The distinguisher between both acts is the intent behind them, while terrorist acts are meant to be just that, acts that create fear and doubt. Civil unrest can begin as a peaceful protest that has the potential to devolve into riots and looting. Authorities can have the time to assemble an appropriate response; however, it takes time to assemble large groups of people. Destruction of property, looting of local goods, and even disrupting critical city functions such as public utilities are all possibilities with civil unrest activities. Financial losses would depend on the degree of destruction associated with the activity. If the incident involves the destruction of physical assets, the City or property owners' cost would likely be immense.

Cyber Threat

Cyber threats would have a limited impact on physical assets. The extent of this impact would focus on City-owned computer/ network infrastructure.

Social Threat

Mass Casualty Incident / Terrorism

Since mass casualty incidents/acts of terrorism could occur anywhere in Hollister, all groups are potentially threatened by these incidents; however, the extent of the threat would depend upon the event's type and magnitude. For example, an active shooter situation may be isolated to a single location, whereas a larger-scale incident may affect multiple locations. Some locations are more likely to be targeted than others, including but not limited to medical facilities, government buildings, or financial institutions. Populations that frequently visit these locations may face a greater threat than the average person. For instance, seniors, pregnant people, and persons with disabilities are more likely to visit medical facilities than other subpopulations in the City. Should an incident occur at one of these facilities or within the community (overwhelming hospital resources), these groups are expected to face an increased impact from the incident.

An incident that occurs at a government building or financial institution may be more likely to threaten seniors or lower-income individuals that rely on in-person transactions in place of online options.[62,63] As such, their use of these in-person services may place them in harm's way. An incident at City Hall or a bank can be expected to be more of a threat to these groups. Seniors and persons with limited income may be challenged if there is a need to shelter in place or evacuate during an incident requiring additional services, assistance, and/or medical treatment.

Civil Disturbance

Since civil disturbance could occur anywhere in Hollister, all groups are potentially threatened by these incidents; however, the extent of the threat would depend upon the event's type and magnitude. Depending upon the location of the event, populations that frequently visit or live in these areas may face greater risk than the average person. Seniors, persons with disabilities, and persons with limited income may be challenged if there is a need to shelter in place or evacuate during an incident requiring additional services, assistance, and/or medical treatment.

Cyber Threat

Cyber threats may have an impact on residents and businesses throughout the City. While most cyber threats focus on large entities like major corporations and/or governmental agencies, all residents could become victims of cyber threats.

Other Threats

Mass Casualty Incident / Terrorism

A mass casualty incident/act of terrorism may require expanded response activities by Hollister, surrounding jurisdictions, the county, the state, or even the federal government. Some of these activities may require the closure of transportation networks, monitoring of communication networks, and coordinated response activities until the threats have been neutralized. During this time, portions of the community may be isolated and/or inaccessible. Communications (phone, internet, etc.) may be restricted or temporarily unavailable, causing distress for community members. The Hollister Municipal Airport could also be a potential target of opportunity for terrorist attacks. Hijacking and or theft of planes for terrorist activities, theft of goods and cargo to fund illicit activities, disruption of the CalFire forward firebase functionality to render aid and assistance, even taking over the facility or taking of hostages to hold as potential ransom.

Civil Disturbance

Disruption of transportation networks, city services, and utilities, and the functionality of emergency response units to perform their duty during the event, are all potential factors to consider during an act of civil unrest. Hospitals could become overburdened with patients and injuries because of the event or even become the mob's focus.

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[62] Smith, A. April 2014. Older Adults and Technology Use. https://www.pewinternet.org/2014/04/03/older-adults-and-technology-use/

[63] Anderson, M., Kumar, M. May 2019. Digital divide persists even as lower-income Americans make gains in tech adoption. https://www.pewresearch.org/fact-tank/2019/05/07/digital-divide-persists-even-as-lower-income-americans-make-gains-in-tech-adoption/

CYBER THREAT

The greatest impact that a cyber threat could present to the city itself would be a complete shutdown of city services and programs. Utilities like electricity, gas, water, and sewer could be shut off for extended periods if the control systems were compromised by a cyber threat. The loss of control over streetlights, traffic lights, and railroad crossings could also impact transportation and mobility. To the average citizen, personal information, identity, and financial records could be stolen. As our society becomes more technologically ingrained/dependent, the ever-evolving category of cyber threats will continue to change and grow.

Geological Hazards

PHYSICAL THREAT

EROSION/ LANDSLIDE

The physical impacts of erosion would be limited to the area's most subject to erosion: Park Hill and the outer banks of the San Benito River, where sand and gravel have been mined. While there are no CFs or FOC in these areas, homes and businesses are a concern.

Landslides pose a threat to a variety of CF and FOC. **Figure 4-8** identifies the facilities located within the Deep-Seated Landslide hazard zones within the City and vicinity. A majority of these landslide hazard zones are in the foothills surrounding the City; however, areas like Park Hill that are characterized by steep slopes can become less stable during heavy or prolonged rain events. In total, the City has 7 CFs and 6 FOC located in deep-seated landslide hazard areas totaling approximately $9.4 million (**Table 4-10)**. However, not all potential loss values are represented as some information was unavailable.

SOCIAL THREAT

EROSION/ LANDSLIDE

Table 4-11 identifies the populations located within the Deep-Seated Landslide Susceptibility Zones, including approximately 7,281 people in 2,128 households. This is approximately 17% of the city's population. This population has a slightly higher median household income, a lower proportion of households living under the poverty limit, and a lower percentage of households with one member aged 65+ than the City overall. These indicators suggest that populations within these areas may be more resilient to hazard-related impacts.

Generally, erosion would affect any vulnerable groups living near Park Hill and the San Benito River area. Lower-income residents and renters living in these areas may be more vulnerable to the effects of erosion, as they may be unable to retrofit their homes or rebuild their homes in the event of a landslide caused by erosion.

OTHER THREATS

EROSION

Erosion generally occurs slowly over time and can be the underlying cause of long-term disruptions to various infrastructure, roadways, levees, streams and riverbanks, or slopes. These physical threats and damage can be the beginning of longer-reaching effects. Traffic circulation can be temporarily or

even permanently disrupted until roadway infrastructure can be repaired. The slow erosion of streams or riverbanks can cause the permanent alteration of waterways, leading to flooding in areas where it previously did not exist, damaging homes and structures, which can create economic burdens.

Table 4-10: Critical Facilities and Facilities of Concern (Deep Seated Landslide)

Category	Number of Facilities		Potential Loss**
	Critical	Concern	
City Facilities (City Hall, Fire, Police)	1	0	$2,406,658
Community Centers	0	0	$2,045,369
Parks	0	4	$5,021,207
Water/Sewer Facilities	6	0	$ *
Other Facilities	0	2	$ *
Total	**7**	**6**	**$9,473,234**

* Replacement Values Unavailable
** Based on the City of Hollister insured replacement values

Table 4-11: Deep-Seated Landslide Hazard Threatened Populations

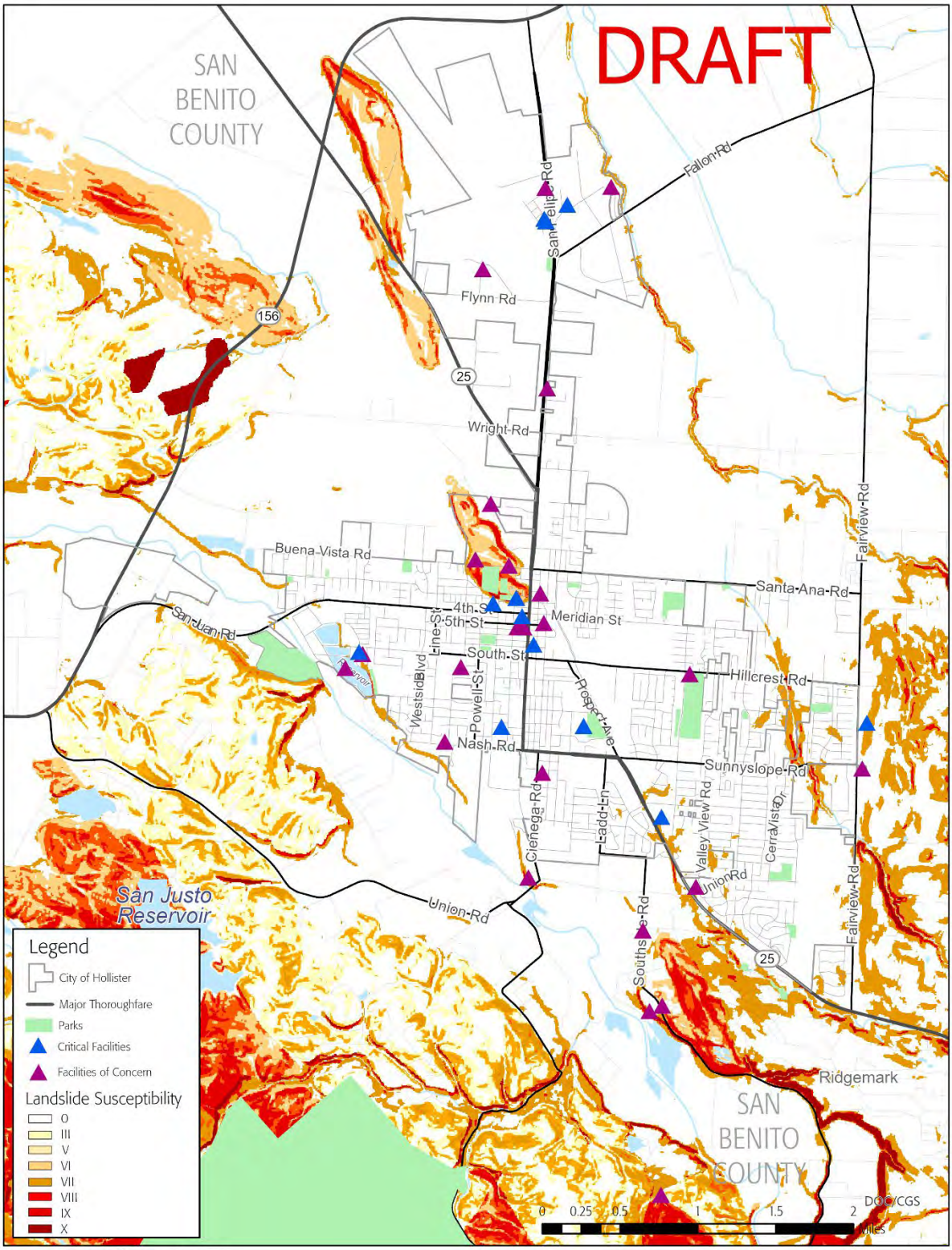
Threatened Population Metric	Landslide Zones	City of Hollister
Population	7,281	42,362
Households	2,128	12,079
Median household income	$80,825	$77,035
Percentage of households with at least one person living with a disability	19.3%	22.3%
Percentage of households living under the poverty limit	6.3%	9.1%
Percentage of households with one member aged 65+	24.7%	25.0%

LANDSLIDE

Landslides are erosion events that can happen quickly or over a long period of time. When they occur, they can block roadways causing long-term disruptions to the roadway network, infrastructure systems, and city capabilities. Underground utility lines in slide-prone areas or above-ground lines built on or above them can be damaged in a landslide, causing service outages. Landslides could affect sensitive ecological areas around the community, causing localized harm to the region's ecosystem, although widespread disruptions are unlikely.

Homes and businesses are typically damaged or destroyed by landslides. In addition to potentially causing significant injuries or fatalities, this can cause economic harm and create a need for long-term emergency sheltering and temporary housing until these buildings can be reconstructed. Utility lines, such as power lines or water pipes, may be broken by a landslide, interrupting important services.

Figure 4-8: Deep-Seated Landslide Hazard Zone Susceptibility



Source: Federal Emergency Management Agency, 2020

Disease/Pests

Physical Threat

Since diseases and pests affect humans, plants, and animals, these events would not directly impact physical assets within the City.

Social Threat

Diseases and pests can impact vulnerable populations. Depending on the size and scale of the event, key individuals or entire communities may be impacted. The City and the world are currently experiencing the global Covid-19 pandemic, which has affected everyone in one way or another. This event has changed procedures on how the City operates, placed restrictions on businesses and gatherings, and involved voluntary and mandatory requirements (stay-at-home orders, vaccinations, etc.) to prevent transmission and reduce the effects of the virus. To some degree, diseases and viruses like Influenza and Covid-19 can affect everyone in Hollister, whether the impact is a mild inconvenience or death. There is no universally applicable social threat from diseases and pests since each disease affects the body differently. Generally, seniors, infants, pregnant people, and people with weakened immune defenses experience the greatest risk. Lower-income persons may also be more threatened than others by diseases since they may not be able to afford medical treatment. Persons with disabilities or those who live alone may have increased risks from an illness since they may be unable to access treatment or have fewer safety nets to ensure they receive the care they need.

Other Threats

A major outbreak of disease could overwhelm the capacity of Hollister's medical facilities and the surrounding area, potentially leading to greater inaccessibility of medical services and a shortage of medical personnel. California and much of the world have experienced this during the Covid-19 pandemic. A major outbreak could also be expected to incapacitate large amounts of the City's and region's workforce, inhibiting the regional economy of San Benito County and Central California. Hollister, as well as most of the world, have experienced economic hardship, a major reduction in their economy, a massive drop in production output, slowed shipping and receiving, barred exports and imports to stem the spread, and a huge reduction in the available labor force and employment rates due to the stay-at-home orders for non-essential workers. Service-oriented businesses such as recreation, dine-in restaurants, retail, and others were forced to close temporarily as the pandemic progressed and commerce suffered as a result.

As a community with direct ties to the agricultural sector, the City may also experience similar issues associated with pests and invasive species. Typically, these incidents may be focused on specific locations or crops; however, the ripple effect of these incidents may be felt throughout the economy.

Hazardous Materials Release

Physical Threat

Hazardous materials can cause damage to physical assets in Hollister if they are released into the environment. Corrosive hazardous materials can damage the exteriors of any CFs or FOC. Flammable hazardous materials can potentially start fires and impact nearby buildings. Generally, sites closer to the origin of release are at greater risk than those further away. **Figure 4-9** shows the CFs and FOC in Hollister located within 500 feet of hazardous materials sites identified by DTSC.

Table 4-12 identifies 1 CF and 2 FOC located within 500 feet of a hazardous materials site, totaling approximately $13.6 million in potential loss valuation.

Table 4-13 identifies the number of facilities located within the areas of increased pollution based on the Cal EnviroScreen dataset. 26 CFs and 29 FOC are located within census tracts in the 50th percentile or greater, equating to more than $126 million in asset value. Based on this analysis, approximately $126.9 million in potential loss valuation.

Table 4-12: Critical Facilities and Facilities of Concern (Haz Mat Buffer 500 feet)

Category	Number of Facilities		Potential Loss**
	Critical	Concern	
City Facilities (City Hall, Fire, Police)	1	0	$4,201,001
Community Centers	0	1	$9,403,819
Parks	0	0	$ 0
Water/Sewer Facilities	0	1	$ 0*
Other Facilities	0	0	$ 0
Total	**1**	**2**	**$13,604,820**

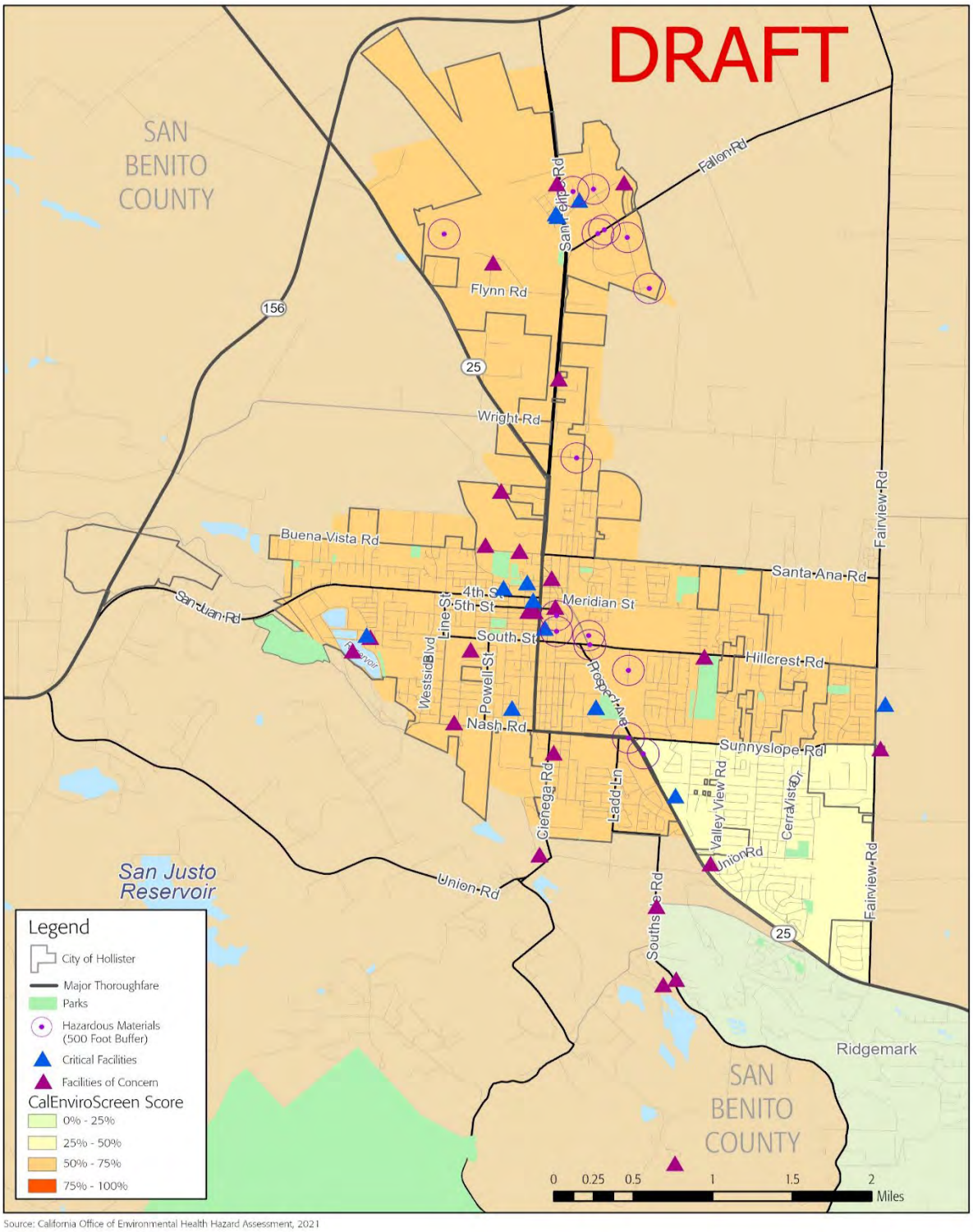
* Replacement Values Unavailable
** Based on the City of Hollister insured replacement values

Table 4-13: Critical Facilities and Facilities of Concern (Cal Enviro Screen – 50% or above)

Category	Number of Facilities		Potential Loss**
	Critical	Concern	
City Facilities (City Hall, Fire, Police)	8	0	$23,954,581
Community Centers	0	3	$13,955,417
Parks	0	18	$6,305,715
Water/Sewer Facilities	18	1	$50,435,591
Other Facilities	0	7	$32,262,073
Total	**26**	**29**	**$126,913,377**

* Replacement Values Unavailable
** Based on the City of Hollister insured replacement values

Figure 4-9: Critical Facilities and Facilities of Concern (Haz Mat Buffer 500 feet)



Source: California Office of Environmental Health Hazard Assessment, 2021

SOCIAL THREAT

The threat of a hazardous materials release event affects those closest to the source of release, including industrial sites, gas stations, gas transmission lines, or sewer mains. **Table 4-14** shows the City's vulnerable populations living within 500 feet of hazardous materials storage or waste sites. Approximately 132 residents within 57 households live in close proximity to these sites. Based on this analysis, these households have a higher median household income (~$30,000 more) than the rest of the City and a lower proportion of residents living under the poverty limit. However, these households do include a higher proportion of one member aged 65 than the Citywide average.

Table 4-14: Hazardous Materials Release Hazard Threatened Populations

Threatened Population Metric	Hazardous Material Site	City of Hollister
Population	132	42,362
Households	57	12,079
Median household income	$107,312	$77,035
Percentage of households with at least one person living with a disability	22.8%	22.3%
Percentage of households living under the poverty limit	7.0%	9.1%
Percentage of households with one member aged 65+	33.3%	25.0%

While the population living in close proximity to these sites is relatively small, many Hollister residents live near major transportation infrastructure, such as highways or major arterial streets, that can experience hazardous materials release during transport. Trucks or vehicles shipping quantities of hazardous materials may release their contents into their environment if the vehicle is involved in a collision. Specifically, residents in Hollister living next to SR-156 are at greater risk of these types of incidents than residents living along the outskirts of the community. Residents and businesses located near the Hollister Municipal Airport also potentially face an increased risk of hazardous materials release, from daily operations and maintenance activities within the facility.

The release of natural gas has been demonstrated to cause both short- and long-term health impacts. Methane, the main component of natural gas, may react with other chemicals in the air to form hydrogen sulfide, benzene, formaldehyde, toluene, and xylene, exposure to which can increase the likelihood of cancer or other problems affecting the immune, nervous, and respiratory systems. Exposure to these substances at an early or developmental stage of life is particularly threatening for groups like youth or pregnant people since the effects may be lifelong. For pregnant women, birth complications or miscarriages may result from exposure to benzene and toluene.

Groups such as the elderly, low-income persons, or renters face a greater risk of exposure since they may not have the financial resources necessary to retrofit their homes against infiltration by hazardous materials or to move away to a home that is further from the potential sources of hazardous materials release events.

Aircraft Incident

Physical Threat

All structures located within the planning area surrounding the Hollister Municipal Airport are at an elevated risk to aircraft incidents, predominantly associated with landing, take-off, and approach activities. As you move further away from the airport facility, the risk associated with aircraft incidents reduces and is limited to flyover activities above the City. Incidents overhead can send debris and materials from the aircraft crashing down on any structures or physical assets lying below. Even if the aircraft does not crash within the city, it is possible that falling debris could land on and damage structures. An aircraft incident may be an act of terrorism, in which case the target of the terrorists would likely be a target of importance (religious, governmental, cultural) or a place where many people are gathered.

Social Threat

An aircraft incident may threaten all persons in Hollister. Typically, populations located closer to Hollister Municipal Airport would have a higher probability of being impacted versus populations located in areas farther away.

Residents and employees in an aircraft incident's impacted area may experience property damage or loss and/or emotional distress resulting from injuries/death of family or friends in the crash or having witnessed the event or its aftermath. If future events occur in Hollister, it is assumed that lower-income persons may not recover as quickly (i.e., afford to repair damages, replace items destroyed, receive medical assistance, or counseling services.)

Other Threats

Depending on the severity of the aircraft incident, some services in Hollister could be temporarily disrupted. For example, falling debris from an aircraft incident could damage or destroy infrastructure (water, power, etc.) in the City, cutting off service to residents and businesses. Debris could also fall onto a roadway and obstruct the normal traffic flow through the City. A more severe aircraft incident in which an entire aircraft crashes into a section of the City could likely ignite a blaze impacting the area where the plane went down. Any transmission wires or pipelines in the crash site would likely be affected to some degree, resulting in partial or complete outages of utility services to other parts of the city. A severe aircraft incident at a major employment center in the City would almost certainly result in the closure of the employers located in the crash area until authorities deem it safe to return to work, which would result in a loss of economic activity.

Chapter 5 – Hazard Mitigation Strategy

Strategy Development Process

Hollister's hazard mitigation strategy is a comprehensive set of actions that are intended to reduce the impacts of hazard events. These hazard mitigation actions will help protect the safety and well-being of residents and visitors, CFs and FOC, other buildings and structures, key services, the local economy, and other important community assets. Some actions will also help with emergency preparedness, allowing for a more effective community response to hazard events. Preparedness actions are not a required component of an LHMP, but they support and complement mitigation activities. The HMPC chose to include them as part of the overall hazard mitigation strategy.

Use of Hazard and Threat Assessment

The HMPC relied partly on the hazard profiles and threat assessments in this Plan to develop the actions in the mitigation strategy. A comprehensive set of mitigation actions that respond to the relevant hazard situations and provide protection to residents, businesses, and community assets in Hollister were prepared. The HMPC ensured that the mitigation actions would help reduce damage from the most frequent types of hazard events, the most significant that may reasonably occur, and those with the greatest potential to harm the community. The Committee also drafted mitigation actions that will help protect the most vulnerable members of the community and the most vulnerable local assets.

Capabilities Assessment

As part of the effort to draft mitigation actions, the City completed a capabilities assessment, which included a review of existing policies, personnel, and technical resources that can support hazard mitigation activities in Hollister. The hazard mitigation actions build off the existing success of these resources and leverage their capabilities to support improved resiliency in the community. The capabilities assessment looked at the following types of resources:

- *Personnel resources: City employees and volunteers, and employees and volunteers at other agencies*
- *Plan resource: Advisory or enforceable plans adopted by the City or other agencies.*
- *Policy resource: Policies adopted and implemented by the City or other agencies*
- *Technical resource: Data and tools available to the City*
- *Financial resource: funding mechanisms available to the City that support mitigation activities*

Table 5-1 shows the capabilities assessment for Hollister.

Table 5-1: Hollister Capabilities Assessment

Resource Name	Type of Resource	Ability to Support Mitigation	Website
City of Hollister			
City Manager	Personnel Resource	Responsible for the overall administration of the City operations and functions. The City Manager recommends policy alternatives to the City Council and implements the policies adopted by the governing body. Oversees the provision of City services and recommends alternative approaches to address changing community needs. Responsible for overseeing the approval of the City's Annual Budget implementation once approved. Their ability to support mitigation includes direction setting for the City Council and City departments and the prioritization and implementation of new policies, regulations, and requirements to increase resiliency within the organization.	City of Hollister
City Council	Personnel Resource	Is comprised of the elected Mayor, four elected council members, and the City Treasurer. They establish and adopt new local laws, set policies, approve programs, officially adopt the annual budget, as well as appropriate funds. This body supports mitigation by exercising their elected communities' votes, passing measures, appropriating funds for projects and programs to reduce vulnerabilities, and creating new laws and legislation to prevent future hazards and disasters.	City of Hollister
City Clerk	Personnel Resource	The City Clerk is responsible for all elections, local legislation, and public records. As elections official, the City Clerk administers federal, state, and local procedures through which local representatives are elected. As legislative administrator, the City Clerk prepares the legislative agenda, ensures legal notices are posted and published for all ordinances and is entrusted with recording the decisions made during Council meetings. As the records manager, the City Clerk oversees the preservation and	City of Hollister

Resource Name	Type of Resource	Ability to Support Mitigation	Website
		protection of public records during all City Council meetings. The City Clerk supports mitigation by keeping adequate records of historic events and incidents, documenting City efforts during and after disaster events, and maintaining records that reflect key changes in policy and code requirements that can reduce future hazards.	
Administration Department: Finance Division	Personnel Resource	The finance division is responsible for the financial management and reporting on the results of operation of the City's various funds, projects, assessment districts, budgets, and departments. They process utility and sewer billing, payroll for the City employees, and tax information. This division can aid in mitigation efforts by tracking costs associated with hazard events and disasters, identifying potential grant funding opportunities, and establishing financial risk calculations that aid in department budgeting of operations, maintenance, and capital improvements.	City of Hollister
Administration Department: Human Resources Division	Personnel Resource	The Human Resources Division is responsible for coordinating services and programs that provide City departments with assistance in developing and maintaining a qualified, effective, and diverse workforce. This division can support mitigation activities like identifying staffing needs and shortfalls, developing plans and agreements with other jurisdictions/agencies to ensure future needs are met, and tracking and overseeing necessary training to ensure staff can support emergency response and recovery needs.	City of Hollister
Development Services: Planning Division	Personnel Resource	The Planning Division is responsible for carrying out Long-Range, Current Planning, and Zoning activities within the City of Hollister Planning Area. Long-Range planning includes preparing planning policy documents, such as the City's General Plan, which provides decision-	City of Hollister

Resource Name	Type of Resource	Ability to Support Mitigation	Website
		makers with a community-wide vision for future land use decision making. Current planning activities include interpreting and enforcing planning, zoning, and subdivision regulations, reviewing and processing use development proposals, creating and maintaining a land-use inventory, technical and demographic research and analysis, interdepartmental and intergovernmental coordination, and permit processing. Mitigation support can include identifying large systemic issues within the community and incorporating mitigation strategies or policies into existing and new projects. This division can also adopt new regulations and requirements that prevent development in high-risk areas or ensure new developments adhere to higher standards intended to reduce hazard risk.	
Development Services: Building Division	Personnel Resource	Responsible for regulation of construction and use of buildings and structures through the application of adopted codes and ordinances intended to safeguard life or limb, health, property, and public welfare. They also issue permits and perform inspections for allowed work and investigate complaints of illegal construction or use of structures, at times, in conjunction with the Code Enforcement division. Mitigation support for this department occurs through inspection of new and existing buildings and assurance that code requirements are met. For existing structures, ensuring the necessary retrofits are incorporated to comply with established policies, and providing emergency response and damage assessment during and after disaster events.	City of Hollister
Development Services: Code Enforcement	Personnel Resource	The priority of the Code Enforcement Program is to address conditions that pose a threat to the health, safety, and wellbeing of an occupant, property owner, or individual. Services provided include	City of Hollister

Resource Name	Type of Resource	Ability to Support Mitigation	Website
		investigation of code violations, monitoring corrective actions, and legal action if necessary. This division's purpose is to ensure that conditions that negatively impact a neighborhood are eliminated. Mitigation support for this department comes in the form of inspections ensuring code compliance is met and maintained, identifying code changes necessary to better protect the community and monitoring nuisance issues/trends that may need to be proactively addressed.	
Development Services: Engineering Department	Personnel Resource	The Engineering Department provides engineering and inspection to the City's capital improvement projects and developer-initiated public improvement projects and reviews, approves, and inspects street permit work, and provides engineering assistance to all other City departments. The Engineering Department also reviews, approves, and processes subdivision final maps, parcel maps, subdivision, and single lot improvement plans. Mitigation support includes the planning, designing, and implementing mitigation projects for the City.	City of Hollister
Management Services Department: **Operations and Maintenance**	Personnel Resource	The Management Services Department is responsible for planning, design, construction, operation, and maintenance of all City infrastructure. The Department consists of two sections – Operations and Maintenance, and Utilities. Operations and Maintenance are responsible for maintaining streets, storm drainage facilities, buildings and grounds, parks, and the City fleet. Mitigation support includes the maintenance and retrofitting of key infrastructure within the City. The Utilities Division is responsible for water and sewer collection system planning, operations, and maintenance. They are also responsible for leaf pickup,	City of Hollister

Resource Name	Type of Resource	Ability to Support Mitigation	Website
City of Hollister Utilities Division		storm drain maintenance, producing and distributing potable water service to approximately half of the City. Mitigation support includes the maintenance and retrofitting of storm drain and sewer infrastructure, water conservation efforts, and coordination with other entities like Sunnyslope County Water District to manage and monitor water supplies and water quality within the groundwater basin.	
Hollister Fire Department (HFD)	Personnel Resource	Hollister Fire is an all-risk fire department providing fire prevention (including building plan review, site inspections, public education), investigation, response, and rescue services. Mitigation support for the department includes risk reduction and elimination through fire prevention, inspection, wildland fire threat reduction, and public education/ community outreach. Enhancing emergency response by reducing hazard vulnerabilities and increasing community disaster resiliency through the many mitigation, preparedness, and response programs currently in place.	City of Hollister
	"Community Outreach and Engagement"	The Hollister Fire Department is committed to the education of the community and hosts fire service courses through the South Bay Regional Public Safety Consortium. The department has been hosting fire academies year-round with Evergreen College for over a decade. They also offer educational events such as Station tours, Education on Natures Wrath, Safe Kids Campaign, Fire prevention week, Fireworks safety Sheet, Safe House, and assisting the San Benito Fire Safe Council.	
Police Department (HPD)	Personnel Resource	The Hollister Police Department is charged with maintaining public safety in the community. The department is responsible for conducting emergency preparedness activities, investigating criminal activity, and	City of Hollister

Resource Name	Type of Resource	Ability to Support Mitigation	Website
		directing traffic. Mitigation support includes the safe movement of traffic (e.g., during evacuations) and residents' public safety during emergency events. As emergency preparedness is part of the department's responsibilities, the police department can also widely implement other types of mitigation actions through coordination with other departments and agencies.	
"*MYPD*" App **Office of Emergency Services (OES)** ***CodeRed***	Technical Resource "Community Outreach and Engagement"	The MYPD app developed by HPD aims to improve communication with the citizens of Hollister. With this app, you can follow the latest information from HPD, send anonymous tips, ask questions, get directions/ contact information for HPD staff. The app now includes push notifications to keep the population updated with timely information and includes links to FEMA and the US National Terror Advisory System (NTAS), so the public can be aware and ready for any situation. It also allows for the reporting of problems throughout the City. Mitigation support from this resource can include disseminating information to the public and receiving information and feedback for those engaged with the app. CodeRed is the new Emergency Notification system for Santa Cruz and San Benito Counties. This system allows County personnel to send important messages to residents and businesses. The system can send thousands of messages in a very short time based on the geographic location of the incident. Mitigation support from this technology is the ability to directly communicate and disseminate information in an emergency between the Office of Emergency Services (OES) and the public, reducing damage and loss of life during an emergency.	MYPD App CodeRed

Resource Name	Type of Resource	Ability to Support Mitigation	Website
Recreation Department **Parks and Facilities**	Personnel Resource Technical Resource	The Recreation Department provides and manages programs and activities for the citizens of Hollister. The Recreation Department also manages the City's parks and facilities. The various parks throughout the City can be used as shelter and aide sites during an emergency if certain areas of the City need to be evacuated. Future park enhancements should focus on addressing safety concerns to ensure use as shelter and aide sites will not negatively affect people during a disaster.	City of Hollister
Adopted FY Budget	Financial Resource	The City adopts its budget every two years, which identifies the funding available for each fiscal year that can be used to support governmental operations. This budget is a key location where future mitigation projects can be identified from a funding perspective.	Hollister FY Budget
Capital Improvement Program	Plan Resource	The Hollister Capital Improvement Program (CIP) is a long-range fiscal forecast that identifies major public improvements to the City's infrastructure over a five-year horizon. The Plan is important for planning and managing the City's growth and development and maintaining existing infrastructure. During Plan development, capital projects affecting public health and safety and/or legal mandates receive the highest priority, emphasizing projects maintaining service levels or preventing deterioration of facilities. Integration of this Plan into the CIP can assist in mitigation efforts by identifying new funding sources for future improvements. As new grant opportunities become available, the CIP may already have projects consistent with the LHMP that can easily be used for grant submittals. Leveraging these two plans can help secure needed funds to reduce vulnerabilities and increase resilience throughout the City.	Capital Improvement Program

Resource Name	Type of Resource	Ability to Support Mitigation	Website
General Plan	Plan Resource	The Hollister General Plan is currently undergoing an update. The General Plan is the long-term, comprehensive blueprint for development and changes in the community. The policies in the general plan address land use, public safety, environmental protection, transportation, and others. The general plan serves as a framework for mitigation actions, establishing the overarching policies for mitigation activities. Mitigation actions may be directly incorporated into the general plan as policies and/or implementation actions to provide a stronger enforcement mechanism.	Hollister General Plan
	Community Outreach and Engagement	The City's General Plan Update currently underway relies on public input, feedback, and concerns as a crucial component. The website launched for the project encourages residents to take part in the update process. The plans' purpose is to reflect the community's values and priorities. Future mitigation actions for the community may be directly attributed to input and feedback from participants.	hollister2040.org
Hollister Municipal Code: Building Code	Plan Resource	The Hollister Municipal Code encompasses all the various ordinances that the City of Hollister has adopted into law. This regulates most activities within the city, including the Building Code. The Building Code and associated standards (Residential Code, Mechanical Code, Electrical Code, etc.) govern how new buildings are constructed, or existing buildings are retrofitted/reconstructed. They are published by the state and adopted by local communities, sometimes with amendments to make the codes more locally applicable. Mitigation actions to construct buildings to a safer standard, allowing them to better resist damage during a hazard event, may be included in future building code updates.	Hollister Municipal Code

Resource Name	Type of Resource	Ability to Support Mitigation	Website
Hollister Municipal Code: Zoning Ordinance	Plan Resource	The Zoning ordinance carries out the policies of the Hollister General Plan by classifying and regulating the uses of land and structures within the City. This zoning ordinance is adopted to protect and promote the public health, safety, comfort, convenience, prosperity, and general welfare of residents and businesses. Mitigation actions that relate to the siting, construction, and operation of new developments in Hollister may be implemented through the zoning ordinance to ensure these locations address risks identified in the plan.	Title 17 Hollister Zoning Ordinance
San Benito County			
San Benito County C.E.R.T. Team	Personnel Resource	The Community Emergency Response Team (CERT) program educates volunteers about disaster preparedness for the hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. CERT offers a consistent, nationwide approach to volunteer training and organization that professional responders can rely on during disaster situations, allowing them to focus on more complex tasks.	C.E.R.T.
Sunnyslope County Water District (SSWD)	Personnel Resource	Sunnyslope County Water District is a water district that provides potable water for a portion of the City. Through coordination with the City, this District can assist with drought and water supply mitigation efforts and ensure sustainable water sources for future generations.	Sunnyslopewater.org
County of San Benito Multi-Jurisdictional Local Hazard Mitigation Plan.	Plan Resource	The San Benito County Multi-Jurisdictional Local Hazard Mitigation Plan (MJLHMP) identifies and describes the hazard events in Hollister and San Juan Bautista, the unincorporated parts of San Benito County, The San Benito County Water District, and the Sunnyslope County Water District. This plan provides a suite of mitigation actions to help decrease the	County of San Benito Multi-Jurisdictional Local Hazard Mitigation Plan

Resource Name	Type of Resource	Ability to Support Mitigation	Website
		potential damage from these hazards. Mitigation actions for the City of Hollister that require coordination with the county may be integrated into the County's Hazard Mitigation Plan. Similar mitigation actions in both the County's and Hollister's hazard mitigation plans can lead to a more regionally unified hazard mitigation strategy, improving effectiveness.	
San Benito County Integrated Waste Management (SBCIWM)	Technical Resource	San Benito County Integrated Waste Management Regional agency administers the recycling and waste reduction programs that meet CalRecycle waste mandates, protect public health, and increase sustainability for its members, including the Cities of Hollister and San Juan Bautista and the unincorporated San Benito County. They coordinate comprehensive and cost-effective programs for green business, household hazardous waste, small quantity hazardous waste generators, safe disposal for medication and sharps, and motor oil recycling. Mitigation strategies focused on enhancing infrastructure within the City may be implemented with support and assistance from SBCIWM.	Integrated Waste Management
San Benito County Office of Emergency Services	Technical Resource	The Office of Emergency Services (OES) provides emergency management services for the County Operational Area, including its two principal cities and all special districts and political subdivisions. OES coordinates emergency operations activities among all the various local jurisdictions and develops written guidelines for emergency preparedness, response, recovery, and mitigation to natural or human-made disasters. OES is charged with providing the necessary planning, coordination, response support, and communications with all agencies affected by large scale emergencies or disasters. OES works in a cooperative effort with other governmental jurisdictions	San Benito County OES

Resource Name	Type of Resource	Ability to Support Mitigation	Website
		within the county; disciplines such as law enforcement, fire, and emergency medical services, state and federal agencies, utilities, private industry, and volunteer groups to provide a coordinated response to disasters. Working with San Benito County OES, Hollister can obtain guidance on hazard mitigation planning practices, coordinate in time of disasters to aid in evacuations, and receive aid in obtaining funding to implement mitigation strategies.	
Regional, State, and Federal Agencies			
California State Hazard Mitigation Plan	Plan Resource	The California State Hazard Mitigation Plan assesses the types of hazards that may be present in California. It includes descriptions of these hazards, summaries of past hazard events, descriptions of how these hazards may occur in the future, and how these hazards may harm the people and assets of California. Like a local hazard mitigation plan, the State Hazard Mitigation Plan is updated every five years. The Committee can use the State Hazard Mitigation Plan as a source of information to refine the hazard profiles and vulnerability assessments in future Hollister LHMPs.	2018 California State HMP
Cal-Adapt	Technical Resource	Cal-Adapt is an online tool that provides detailed projections for future climate-related conditions in California, including factors such as temperature, precipitation, and sea-level rise. These projections can help inform future hazard events and explain how hazard conditions are expected to change. The Committee can use Cal-Adapt to monitor anticipated changes in future climate conditions and adjust mitigation actions accordingly.	Cal-Adapt
California Department of Transportation	Technical Resource	The California Department of Transportation (Caltrans) is the state agency with jurisdiction over designated state routes, highways, and interstates. Mitigation measures related to ensuring the resiliency of state-designated routes	Caltrans

Resource Name	Type of Resource	Ability to Support Mitigation	Website
		will be implemented through coordination with Caltrans.	
California Governor's Office of Emergency Services	Technical Resource	The California Governor's Office of Emergency Services (Cal OES) is the state agency responsible for reducing hazards in the state through mitigation activities, conducting emergency planning, supporting emergency response and recovery activities, and acting as a liaison between local and federal agencies on emergency-related issues. Cal OES provides guidance on hazard mitigation planning activities, shares best practices, and distributes funding opportunities. The Committee can work with Cal OES to obtain funding to implement LHMP mitigation strategies and to receive guidance on future updates.	Cal OES
Federal Emergency Management Agency	Technical Resource	The Federal Emergency Management Agency (FEMA) is the federal agency responsible for hazard mitigation, emergency preparedness, and emergency response and recovery activities. It provides guidance to state and local governments on hazard mitigation activities, including best practices and how to comply with federal requirements. FEMA also provides funding for hazard mitigation actions through grant programs.	FEMA
Private Organizations			
Central Coast Community Energy	Technical Resource	CCCE is the default electricity provider for all communities in San Benito County, including Hollister, as well as for communities in Santa Cruz and Monterey Counties. In 2018, the Central Coast Community Energy (CCCE), previously known as Monterey Bay Community Power, was created as a joint power's authority, established as part of the Community Choice Energy model implemented by the State of California. Customers may elect to opt out of receiving their electricity supply from CCCE, which defaults those customers to PG&E's	CCCE

Resource Name	Type of Resource	Ability to Support Mitigation	Website
		electricity supply. All electric energy provided by CCCE is conveyed to customers through PG&E's existing infrastructure. PG&E continues to maintain the grid, repair lines, and conduct customer billing within the CCCE service area.	
Pacific Gas & Electric Company (PG&E)	Technical Resource	Pacific Gas & Electric Company provides natural gas and electrical service to over 16 million people throughout their 70,000 square mile area in northern and central California. In conjunction with Central Coast Community Energy (CCCE), they provide the energy needs of San Benito County, including the City of Hollister. PG&E provides electrical service for those who have opted out of the CCCE service. They are the natural gas provider for the City and San Benito County. They own and maintain above-ground infrastructure networks of electrical and gas transmission and distribution facilities throughout the planning area. Mitigation actions relating to the resiliency of Hollister's electrical grid, natural gas infrastructure, and service will be implemented through coordination with PG&E.	PG&E

Hazard Mitigation Strategies and Actions

Hazard Mitigation Goals

The goals identified in Chapter 1 help develop policies to protect community members, ecosystems, and other important assets from hazard events. These goals were developed to ensure consistency with the City's General Plan Safety Element, which plays an important role in risk reduction within Hollister. These goals informed the development of mitigation actions and act as checkpoints to help City staff determine implementation progress.

Evaluation of Potential Hazard Mitigation Actions

Based on the hazard profiles, threat assessment, and capabilities assessment; the community survey results; discussions among Committee members; and existing best practices, the Committee prepared a set of potential mitigation actions. Next, the Committee evaluated these potential actions using the following criteria:

FEMA requires local governments to evaluate potential mitigation actions' monetary and non-monetary costs and benefits. Although local governments are not required to assign specific dollar values to each action, they should identify the general size of costs and benefits. The Committee may elect to include measures that have a high cost or low benefits, but such measures should be clearly beneficial to the community and an appropriate use of local resources.

In addition, FEMA directs local governments to consider the following questions as part of the financial analysis:

- *What is the frequency and severity of the hazard type to be addressed by the action, and how vulnerable is the community to this hazard?*
- *What impacts of the hazard will the action reduce or avoid?*
- *What benefits will the action provide to the community?*

The Committee also chose to review and revise the potential hazard mitigation actions using a third set of criteria **(Table 5-2)**, known as STAPLE/E (Social, Technical, Administrative, Political, Legal, Economic, and Environmental). The Committee did not formally assess every potential mitigation action under all STAPLE/E criteria but used the criteria to guide and inform the discussion. The Committee also discussed how the criteria might be used to evaluate grant applications the City may submit to receive funding for LHMP implementation.

Table 5-2: STAPLE/E Criteria

Issue	Criteria
Social	• *Is the action socially acceptable to Hollister community members?* • *Would the action mistreat some individuals?* • *Is there a reasonable chance of the action causing a social disruption?*
Technical	• *Is the action likely to reduce the risk of the hazard occurring, or will it reduce the hazard's effects?* • *Will the action create new hazards or make existing hazards worse?* • *Is the action the most useful approach for Hollister to take, given the City and community members' goals?*
Administrative	• *Does the City have the administrative capabilities to implement the action?* • *Are there existing City staff who can lead and coordinate the measure's implementation, or can the City reasonably hire new staff for this role?* • *Does the City have enough staff, funding, technical support, and other resources to implement the action?* • *Are there administrative barriers to implementing the action?*
Political	• *Is the action politically acceptable to City officials and other relevant jurisdictions and political entities?* • *Do community members support the action?*
Legal	• *Does the City have the legal authority to implement and enforce the action?* • *Are there potential legal barriers or consequences that could hinder or prevent the implementation of the action?* • *Is there a reasonable chance that the implementation of the action would expose the City to legal liabilities?* • *Could the action reasonably face other legal challenges?*

Economic	• *What are the monetary costs of the action, and do the costs exceed the monetary benefits?* • *What are the start-up and maintenance costs of the action, including administrative costs?* • *Has the funding for action implementation been secured, or is a potential funding source available?* • *How will funding the action affect the City's financial capabilities?* • *Could the implementation of the action reasonably burden the Hollister economy or tax base?* • *Could there reasonably be other budgetary and revenue impacts to the City?*
Environmental	• *What are the potential environmental impacts of the action?* • *Will the action require environmental regulatory approvals?* • *Will the action comply with all applicable federal, state, regional, and local environmental regulations?* • *Will the action reasonably affect any endangered, threatened, or otherwise sensitive species of concern?*

Prioritization

As part of the mitigation actions development and review, the HMPC also prioritized the actions. The prioritization efforts looked at the risks and threats from each hazard, financial costs and benefits, technical feasibility, and community values, among others. Committee members were asked to identify their priority actions through a voting exercise that determined low, medium, and high priorities.

COST ESTIMATES

To meet the cost estimation requirements of the hazard mitigation planning process, the Committee identified relative cost estimates based on their understanding of the mitigation action intent and their experience developing identical or similar programs/implementing projects. Three cost categories based on the City's typical cost criteria were used for budgeting purposes:

- *Low cost ($): $15,000 or less*
- *Medium cost ($$): $15,001 to $99,999*
- *High cost ($$$): Greater than $100,000*

Based on the criteria and evaluation processes used during Plan development, the Committee prepared a prioritized list of mitigation actions to improve Hollister's resilience to hazard events. **Table 5-3** lists the mitigation actions as well as the prioritization of each action and other details related to implementation.

Prior Mitigation Actions

As part of **Table 5-3**, several of the City's previous mitigation actions from the 2015 San Benito County MJHMP were not implemented. As a result, these actions were incorporated into the updated mitigation strategy and identified in the table with blue shading.

Table 5-3: City of Hollister Mitigation Actions

	Mitigation Action	Potential Funding Sources	Responsible Department	Relative Cost*	Time frame	Priority
Multiple hazards						
1.01	Require undergrounding of all utilities in new developments. Prioritize undergrounding existing overhead utilities in high hazard areas.	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering	$$$	Ongoing	High
1.02	Conduct routine updates of the Facility Conditions Assessment for City-owned infrastructure, buildings, lift stations, and other utilities and coordinate with agencies and utilities on regularly scheduled inspections. (Hazards addressed: All)	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Building	$$	Ongoing	Medium
1.03	Repair, as feasible, all major deficiencies discovered by inspections to prevent collapse, failure, or damage in the event of a natural disaster. (Hazards addressed: All)	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Building	$$$	Ongoing	Low
1.04	Install and harden emergency backup power at Civic and Community Centers and other critical facilities as deemed necessary. Prioritize installations for facilities that serve as key cooling/warming centers and evacuation centers. (Hazards addressed: All)	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works	$$$	2025	Medium
1.05	Conduct a feasibility assessment of installation of solar and battery backup systems at key critical facilities within the City. (Hazards addressed: All)	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering	$$	2023	Medium
1.06	Upgrade to more energy-efficient equipment to increase the longevity of backup generator fuel supplies. (Hazards addressed: All)	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works	$$	Ongoing	Low

1.07	Avoid building new City-owned key facilities in mapped hazard areas. If no feasible sites outside of mapped areas exist, ensure that such facilities are hardened against hazards beyond minimum building requirements/ mitigation standards. (Hazards addressed: All)	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Planning, Engineering	$	Ongoing	Low
1.08	Closely monitor changes in the boundaries of mapped hazard areas resulting from land use changes or climate change and adopt new mitigation actions or revise existing ones to ensure continued resilience. (Hazards addressed: All)	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Planning, Engineering	$	Ongoing	Low
1.09	Integrate policy direction and other information from this Plan into other City documents, including the General Plan, Emergency Operations Plan, and Capital Improvements Program. (Hazards addressed: All)	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Planning, Engineering	$$	Ongoing	Medium
Aircraft Incident						
2.01	Airport upgrades should incorporate strategies that allow the facility to become a regional staging location in case of local or widespread disaster.	General Fund, BRIC/ HMGP Grants, Other Grants	City Manager's Office, Airport	$$$	TBD	Low
2.02	Upon the next update of the Hollister Airport Master Plan, integrate relevant mitigation strategies and actions from the General Plan, LHMP, and EOP.	General Fund, BRIC/ HMGP Grants, Other Grants	City Manager's Office, Airport	$$$	TBD	Medium
2.03	Infrastructure improvements surrounding Hollister Airport should consider future airport upgrades and enhancements.	General Fund, BRIC/ HMGP Grants, Other Grants	Airport, Planning, Engineering	$$$	TBD	Low

Flood						
3.01	Enforce creek protection, stormwater management, and discharge control ordinances designed to keep watercourses free of obstructions and protect drainage facilities in conformance with the Regional Water Quality Control Board's Best Management Practices.	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering	$$	Ongoing	Low
3.02	Require new developments to construct utility systems that reduce or eliminate damage associated with flooding.	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering	$$	Ongoing	Low
3.03	Periodically update the City's flood management regulations and mapping as new data becomes available.	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering	$$	TBD	Low
3.04	Where feasible, use permeable paving and landscaped swales for new and replacement City-owned hardscaped areas.	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Engineering	$$$	Ongoing	Low
3.05	Identify areas with known ponding or poor drainage during rain events and increase storm drain capacity in these areas.	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Engineering	$$$	2026	Medium
3.06	Require new critical facilities to be built a minimum of 1 foot higher than the anticipated 500-year flood elevation height where feasible.	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering	$$$	Ongoing	Medium
3.07	Encourage all property owners within 100-year and 500-year floodplains to obtain flood insurance and flood-proof their structures.	General Fund, BRIC/ HMGP Grants, Other Grants	Planning, Engineering, Building	$	Ongoing	Low

3.08	Retrofit roadways with green infrastructure design elements/ features to capture stormwater during rain events. Prioritize improvements along major arterials/ roadways throughout the City.	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Engineering	$$$	TBD	Medium
3.09	Periodically update the City's Storm Drain Master Plan to incorporate new data and/or address emerging issues, especially those associated with climate change.	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering	$$$	TBD	Low
Vector Borne Diseases/Pandemic						
4.01	Assess and institute necessary upgrades to critical facilities to allow for usage during pandemic events, including adequate ventilation and physical barriers. (Hazard Addressed: Pandemic)	General Fund, BRIC/ HMGP Grants, Other Grants	Building, Public Works	$$$	TBD	Medium
Drought						
5.01	Periodically update the Municipal Code and Urban Water Management Plan with the latest drought restrictions and requirements and frequently share this information with the residents and businesses throughout the City. Reference current water restrictions.	General Fund, BRIC/ HMGP Grants, Other Grants	Planning, Building	$$	Ongoing	Medium
5.02	Install redundant and backup water supply infrastructure throughout the City to ensure water availability after a hazard event.	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering, Public Works	$$$	TBD	Medium
5.03	Coordinate closely with City of Hollister Water and Sunnyslope Water District on water use and water conservation efforts and educate residents, businesses, and agricultural operations throughout the City.	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering, Public Works	$	Ongoing	Low
5.04	Encourage drought-tolerant native landscaping, low-flow water fixtures beyond the state minimum code, and daytime watering restrictions on properties throughout the city to reduce water consumption.	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Building	$	Ongoing	Low

5.05	Use drought-tolerant plants when installing new or retrofitting City-owned landscapes. Limit turf that is not drought tolerant to recreational fields and lawns, and only in instances where no feasible drought-tolerant alternatives exist.	General Fund, BRIC/ HMGP Grants, Other Grants	Planning, Public Works	$$$	Ongoing	Low
5.06	Work with City of Hollister Water and Sunnyslope Water District to develop a focused water leak pilot program to eliminate leaky water infrastructure, focusing on areas of the City with the greatest water demand.	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Engineering	$$$	2025	Medium
5.07	Collaborate with the City of Hollister Water and Sunnyslope Water District, to pursue water efficiency best practices to reduce water demand and the need for imported water as feasible.	General Fund, BRIC/ HMGP Grants, Other Grants	Building, Planning, Public Works, Engineering	$$-$$$	Ongoing	Low
Human-Caused Hazards (Mass-Casualty Incidents, Civil Disturbance, Cyber Threats)						
6.01	Disseminate information on cyber threats or potential terrorist activity to City staff and continually follow-up with information on further developments on the situation. (Hazards addressed: Terrorism/Mass Casualty Incidents, Cyber Threats)	General Fund, BRIC/ HMGP Grants, Other Grants	Police, IT	$$	Ongoing	High
6.02	Regularly update cyber security software and educate business owners and residents on current internet-based threats. (Hazards addressed: Cyber Threats)	General Fund, BRIC/ HMGP Grants, Other Grants	IT	$$$	Ongoing	High
Seismic Hazards (Fault Rupture, Seismic Shaking, Liquefaction)						
7.01	Meet or exceed applicable codes and regulations (such as state requirements for fault, landslide, and liquefaction investigations) when constructing or significantly remodeling critical facilities.	General Fund, BRIC/ HMGP Grants, Other Grants	Planning, Building	$$$	TBD	Medium
7.02	Post notifications on City-owned/occupied buildings for occupants and visitors that identify the potential seismic risks based on building design and construction.	General Fund, BRIC/ HMGP Grants, Other Grants	Building, Public Works	$$	TBD	Low

7.03	Survey and require City buildings to conduct soft seismic retrofits (e.g., shelf bracing, securing ceiling tiles, and tie-down activities.)	General Fund, BRIC/ HMGP Grants, Other Grants	Building, Public Works	$$	Ongoing	High
7.04	To the extent feasible, construct all new and significantly retrofitted City-owned facilities to remain operational in the event of a major earthquake.	General Fund, BRIC/ HMGP Grants, Other Grants	Building, Public Works	$$$	TBD	High
7.05	Retrofit key critical facilities with seismically rated window film treatments that ensure glass windows do not shatter during a strong seismic event.	General Fund, BRIC/ HMGP Grants, Other Grants	Building, Public Works	$$$	2024	High
7.06	Critical facilities located in areas of very high liquefaction susceptibility incorporate ground improvement elements to ensure facilities remain operational after a seismic event.	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Engineering	$$$	TBD	Low
7.07	Install flexible jointing and pipelines across fault segments located within the City. Ensure these pipelines have the necessary countermeasures to ensure breakage of lines is kept to a minimum and adequate shut-off mechanisms to reduce exposure of pipeline contents to residents and businesses.	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works	$$$	2026	High
7.08	Identify seismically vulnerable structures (e.g., Unreinforced masonry, soft story construction, and non-ductile concrete) within the City and develop incentives and potential funding opportunities to support mitigation of these conditions where feasible.	General Fund, BRIC/ HMGP Grants, Other Grants	Planning, Building	$$$	Ongoing	Medium

Geologic Hazards (Erosion, Landslides)						
8.01	Address hillside development constraints in steep slopes to reduce excessive road maintenance or potential land slide effects during winter storms and work with private property owners to install and maintain drainage systems and stabilize vegetation on and above steep slopes.	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering, Public Works	$$$	2025	Medium
8.02	Require geotechnical studies in areas of significant landslide threat and identify strategies for existing development downstream of these hazard areas.	General Fund, BRIC/ HMGP Grants, Other Grants	Planning	$	Ongoing	Low
8.03	Retrofit City facilities to reduce the potential for landslide events within or adjacent to critical infrastructure.	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Engineering	$$$	TBD	Low
Severe Weather						
9.01	Promote passive cooling design (brise soleil, long roof overhangs, locating windows away from southern facades, etc.) in new developments during the design review process. (Hazards addressed: Extreme Heat)	General Fund, BRIC/ HMGP Grants, Other Grants	Building, Planning	$	Ongoing	Low
9.02	Upgrade HVAC within City facilities to more efficient systems, including split systems or decentralized systems that allow for heating and cooling the spaces needed, not entire buildings. (Hazards addressed: Extreme Heat)	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Building	$$$	2026	Medium
9.03	Evaluate the long-term capacity of designated cooling centers and shelters in the City to provide sufficient relief from extreme heat. Assess the need to expand services as future heatwaves' frequency, length, and severity potentially change. (Hazards addressed: Extreme Heat)	General Fund, BRIC/ HMGP Grants, Other Grants	Recreation, Public Works	$$	2023	High
9.04	Implement a tree-planting program to diversify tree age and increase shaded areas in the City to reduce the effects of the urban heat island effect. (Hazards addressed: Extreme Heat)	General Fund, BRIC/ HMGP Grants, Other Grants	Planning, Public Works	$$$	2025	Medium

9.05	Conduct outreach to residents and businesses prior to the severe wind (Diablo Wind events) on proper tree maintenance and identification of potentially hazardous trees. (Hazard addressed: Severe Wind)	General Fund, BRIC/ HMGP Grants, Other Grants	City Manager's Office, Public Works	$	Annually	Low
Wildfire						
10.01	Promote home hardening, defensible space, and increased use of fire-resistant materials in new developments in close proximity to fire hazard severity zones.	General Fund, BRIC/ HMGP Grants, Other Grants	Fire	$	Ongoing	High
10.02	Work with property owners to manage dead vegetation in flood control facility footprints, railroad rights-of-way, parks, and open spaces, especially during and after a drought episode.	General Fund, BRIC/ HMGP Grants, Other Grants	Code Enforcement, Public Works	$$	Ongoing	Medium

***** **Relative Cost Categories:**
$ Less than $15,000
$$ $15,001 to $99,999
$$$ Greater than $100,000 City Manager can approve under $100K w/o council approval

County MJHMP Mitigation Actions

A review of the mitigation actions from the 2015 San Benito County MJHMP was conducted during the development of the City's mitigation strategy. Several actions were determined to be more appropriate for incorporation into the County's MJHMP Update. **Table 5-4** identifies the specific actions and key City Departments involved in coordinating with the appropriate County staff.

Table 5-4: County MJHMP Mitigation Actions

Mitigation Action	Coordinating City Department
Expand the city's critical facilities inventory and incorporate into future updates to the EOP and LHMP. (Preparedness Activity)	Fire
Conduct regular emergency preparedness drills and training exercises for City staff. (Preparedness Activity)	Fire
Expand participation in the San Benito County Community Emergency Response Team (CERT) program for residents and businesses. (Preparedness Activity)	Fire
Ensure that community evacuation plans include provisions for community members who do not have access to private vehicles or are otherwise unable to drive. (Preparedness Activity)	Fire
Maintain at least one emergency power-generating station in all critical facilities that the City could use as an emergency public assembly area, such as City Hall, Community Centers, and any others that the City may so designate in the future. (Preparedness Activity)	Fire
Ensure that the City has an adequate supply of sandbags for residents and businesses, including prefilled sandbags for individuals who may be unable to fill them on their own. (Preparedness Activity)	Fire
Continue to ensure effective emergency notifications through multiple media formats, in at least English and Spanish; about pending, imminent, or ongoing emergency events. Ensure that information is accessible to persons with access and functional needs. (Preparedness Activity)	Fire
Continuously update response procedures for first responder departments to properly address new hazard events as they emerge. (Preparedness Activity)	Fire
Coordinate with Caltrans to monitor bridges within the City and develop recommendations for upgrade/retrofit when deemed necessary. (Preparedness Activity)	Fire
Assess the vulnerability of critical facilities designated by lifeline operators to damage in natural disasters or security threats, including facilities owned outside of the Bay Area that can impact service delivery within the region. Note - Lifeline agencies, departments, and districts are those that operate transportation and utility facilities and networks. (Hazards addressed: All)	Public Works, Engineering

Incentivize public and private utility operators to harden their lines passing through the City from potential breaches. Encourage adoption of supervisory control and data acquisition (SCADA) to allow instantaneous shut down of line breaches. Use mitigation grants to incentivize entities to partner with the City to complete these projects. (Hazards addressed: All)	Public Works, Engineering
Work closely with community groups to increase awareness of hazard events and resilience opportunities among socially vulnerable community members. (Hazards addressed: All)	Parks & Recreation
Coordinate with regional social service agencies and nonprofit care providers to identify temporary shelter locations for homeless persons in advance of potential hazard events. (Hazards addressed: All)	Parks & Recreation
Monitor funding sources for hazard mitigation activities. (Hazards addressed: All)	City Manager's Office, Administrative Services
Promote creek restoration programs which will maximize the effectiveness of creeks, streams, and rivers as natural flood control channels while reducing erosion potential. (Hazards addressed: Flooding)	Public Works, Engineering
Coordinate with surrounding jurisdictions, local health care providers, businesses, schools, the Hollister Public/Community Services, the California Department of Public Health, and the Centers for Disease Control to inform community members about current public health trends or issues, free and low-cost healthcare options, treatments, and where to find local healthcare facilities. (Hazards addressed: Epidemic/Vector-Borne Diseases)	City Manager's Office
Cooperate with the Agricultural Commissioner's Office to inform community members and businesses on emerging issues and concerns regarding invasive pests and diseases.(Hazards addressed: Epidemic/Vector-Borne Diseases)	City Manager's Office, Parks & Recreation
Establishing a grazing policy or permitting program to prevent overgrazing (Hazards addressed: Drought)	City Manager's Office
Coordinate with the San Benito County Sheriff to monitor threats with the potential to result in terrorism and mass casualty incidents. (Hazards addressed: Terrorism/Mass Casualty Incidents)	Police
Evaluate and retrofit all critical facilities, City administration buildings, and other buildings the City may deem to be important in the future with counterterrorism design elements and building materials. (Hazards addressed: Terrorism/Mass Casualty Incidents)	Public Works, Engineering, Building, Police, IT

Coordinate and enhance datasets for schools, hospitals, and other critical facilities with the School District, Hospitals, and other key entities within the City to better respond to mass-casualty and terrorism incidents. (Hazards addressed: Mass-Casualty Incidents)	City Manager's Office
Ensure that critical buildings owned or leased by special districts or private utility companies participate in a program similar to San Francisco's Building Occupancy Resumption Program (BORP). The BORP program permits owners of buildings to hire qualified structural engineers [1] to create facility-specific post-disaster inspection plans and allows these engineers to become automatically deputized as City/County inspectors for these buildings in the event of an earthquake or other disaster. This program allows rapid re-occupancy of the buildings. Note - A qualified structural engineer is a California licensed structural engineer with relevant experience. (Hazard Addressed: Seismic Hazards)	Building
Encourage the installation of resilient (seismically appropriate) piping for new or replacement pipelines in close coordination with local water, natural gas, and other providers. (Hazard Addressed: Seismic Hazards)	Public Works, Engineering, Building
Conduct an educational campaign and incentives to encourage the use of reinforced chimneys, anchored rooftop-mounted equipment, window film, and other preventative measures to reduce damage at private buildings. (Hazard Addressed: Seismic Hazards)	Building
Encourage community groups and industry representatives to assist in outreach to residents and businesses to obtain earthquake insurance. (Hazard Addressed: Seismic Hazards)	Planning, Building
Notify residents through public service announcements in advance of a severe weather event. Focus on media methods that target vulnerable populations, such as the elderly, sick, lower-income, or persons with limited mobility, to provide adequate time to prepare. (Hazard Addressed: Severe Weather)	City Manager's Office, Parks & Recreation
Expand use of public facilities (libraries, community centers, etc.) as warming/cooling centers for vulnerable populations during extreme weather events, and assess facility needs in order to automatically open them as extreme weather centers when conditions require. (Hazard Addressed: Extreme Weather)	Parks & Recreation
Enforce minimum road width of 20 feet with an additional 10-foot clearance on each shoulder on all driveways and road segments greater than 50 feet in length in wildfire hazard areas. (Hazard Addressed: Wildfire)	Public Works, Planning, Building
Routinely participate in the update of the San Benito County Community Wildfire Preparedness Plan for areas within the Very High, High, and Moderate Fire Hazard Severity Zones. (Hazard Addressed: Wildfire)	Fire
Work with San Benito County and the Hollister Fire Department on home preparedness assessments to assist more residents in understanding and addressing their wildfire risk. (Hazard Addressed: Wildfire)	Fire

County Climate Action Plan Integration

During initial mitigation strategy development, several actions were identified that integrated into an existing mitigation action from the 2015 San Benito County MJHMP. The following is the original action from this plan:

- *Study the combined effects of increased atmospheric carbon dioxide and increased temperature on crop water needs to predict future water needs*

During mitigation strategy development, the City identified the following additional actions that should be integrated into the County's Climate Action Planning efforts:

- *Periodically evaluate the impact of climate change on vulnerable populations as new information and data becomes available and incorporate these findings into the City's climate planning.*
- *Identify, implement, and incentivize policies and strategies that reduce greenhouse gas (GHG) emissions in the City's Climate Action Plan.*
- *Consider and evaluate climate change impacts on new developments and ensure these developments meet local, state, and federal requirements.*
- *Integrate climate change and resilience mitigation actions and strategies into the General Plan, Capital Improvements Program, and EOP where appropriate.*

National Flood Insurance Program

Hollister participates in the National Flood Insurance Program (NFIP), which was created by Congress in 1968 to provide flood insurance at subsidized rates to homeowners who live in flood-prone areas. Individual communities have the option to participate in the NFIP, although property owners who live in nonparticipating communities with flood-prone areas will not be able to buy flood insurance through the program. Additionally, nonparticipating communities with mapped flood plains cannot receive federal grants or loans for development activities in flood-prone areas and cannot receive federal disaster assistance to repair flood-damaged buildings in mapped flood plains. Hollister has participated in NFIP since 1991.

Although participation is not a dedicated hazard mitigation action, Hollister will continue to participate in NFIP and comply with the program's requirements through continued enforcement of the City's Floodplain Management Regulations (Municipal Code Chapter 15.20, Flood Damage Prevention Regulations). This district applies to all areas identified as flood-prone within the City. Details of this district identify the purpose of the regulation, the methods of reducing flood losses, basis for establishing flood hazard areas, development permit requirements, duties and responsibilities of the City's Floodplain Administrator, the development standards that apply in flood-prone areas, and required documentation and analysis for construction within these areas. As part of the City's efforts to comply with NFIP, Hollister will make updates and revisions to the Floodplain Management regulations to minimize the threat of harm from flood events. These updates and revisions may be promoted by changes in local demographics, shifts in land use, changes to flood regimes such as

frequency and intensity of flood events, and other factors that may warrant municipal action. The City will also continue to incorporate any changes to the locations and designations of mapped flood plains into future planning documents, including future updates to this Plan.

The City of Hollister contains Special Flood Hazard Areas that include 20 policies in force. Total insurance coverage for these policies amounts to $6.35 million; 7 repetitive loss properties were identified by the City's Floodplain Administrator, which have had a total of $223,287 in claims payments.

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Chapter 6 – Plan Maintenance

For this LHMP to remain effective and useful to the community of Hollister, it must remain up to date. An updated version of the LHMP will continue to guide hazard mitigation activities in Hollister and will help keep the City eligible for state and federal hazard mitigation funding. The HMPC has structured this LHMP so individual sections can easily be updated as new information becomes available and as new needs arise, helping to keep this Plan current.

This chapter discusses how to update this Plan to keep it in compliance with applicable state and federal requirements. This chapter also describes how the City can incorporate the mitigation actions described in Chapter 5 into existing programs and planning mechanisms and how public participation will remain an important part of Plan monitoring and future update activities.

Coordinating Body

The HMPC will remain responsible for maintaining and updating the Plan, including evaluating the Plan effectiveness as needed. Members of the HMPC will also coordinate the implementation of the Plan through their respective positions. Table 1-1 contains a list of current members. In future years, staff and representatives (either current Committee members or other individuals) from the following City Departments should be included in maintenance and update activities:

- *Administrative Services*
- *Airport*
- *City Clerk*
- *City Manager's Office*
- *Code Enforcement*
- *Management Services (Public Works, Utilities)*
- *Development Services (Building, Planning, Engineering)*
- *Fire*
- *Police*
- *Recreation*

The staff member currently serving as the HMPC leader (the person responsible for coordinating future updates) is in the Planning Division. He/ she will serve as the project manager during the update process or designate this role to another staff member. The HMPC leader or their designee will coordinate maintenance of this Plan, lead the formal Plan review and evaluation activities, direct the Plan update, and assign tasks to other members of the HMPC to complete these activities. Such tasks may include collecting data, developing new mitigation actions, updating mitigation actions, making presentations to City staff and community groups, and revising sections of the Plan.

Plan Implementation

The Plan's effectiveness depends on the successful implementation of the mitigation actions. This includes integrating mitigation actions into existing City plans, policies, programs, and other implementation mechanisms. The mitigation actions in this Plan are intended to reduce the damage from hazard events, help the City secure funding, and provide a framework for hazard mitigation activities. Committee members prioritized the hazard mitigation actions in **Table 5-3** in Chapter 5.

These priorities will guide the implementation of these actions through new or existing City mechanisms as resources are available. The LHMP project manager is responsible for overseeing the implementation, promotion, and maintenance of this Plan and facilitating meetings and other coordinating activities related to Plan implementation and maintenance.

The key City Plans that should incorporate content from this LHMP include:

- ***Hollister General Plan Safety Element*** *– this element should incorporate relevant mapping and analysis in the Safety Element to ensure the goals and policies of this plan are reinforced throughout future developments and projects proposed within the City.*
- ***Hollister Emergency Operations Plan*** *– The EOP focuses on the effective preparedness and response to hazard events that occur within the City. Incorporation of relevant content from this plan into the EOP ensures consistency regarding the hazards addressed in both plans.*
- ***Hollister Capital Improvements Program*** *– The CIP identifies key infrastructure investments throughout the City that may include hazard mitigation elements. Incorporation of this plan into the CIP may assist with enhancing infrastructure investment through additional funding and/or modification of improvements to include hazard mitigation elements.*

This integration of the LHMP into the Hollister General Plan also allows the City to comply with AB 2140 requirements, as identified in Chapter 1 of this plan.

Plan Maintenance Process

The City's plan maintenance process will rely on the Hollister Mitigation Implementation Handbook, located in Appendix E. The handbook is intended to function as a stand-alone document that gives a concise and accessible guide to jurisdiction staff for implementing and maintaining the Plan. A key component of the handbook is the specific mechanisms that the jurisdiction can use to integrate this plan into other City planning mechanisms.

Plan Monitoring and Evaluation

When members of the Committee are not updating the Plan, they should meet at least once a year to go over mitigation action implementation and evaluate the Plan's effectiveness. These meetings should include:

- *Discussion of the timing of mitigation action implementation*
- *Mitigation action implementation evaluation, and determination of success*
- *Mitigation action prioritization revisions, if deemed necessary*
- *Mitigation action integration into other mechanisms, as needed*

The first of these meetings will be held in the 2021-2022 fiscal calendar year. To the extent possible, Committee meetings should be scheduled at an appropriate time in the City's annual budgeting process, which will help ensure that funding and staffing needs for mitigation actions are considered.

When the Committee meets to evaluate the Plan, members should consider these questions:

- *What hazard events, if any, have occurred in Hollister in the past year? What were the impacts of these events on the community? Were the impacts mitigated, and if so, how?*
- *What mitigation actions have been successfully implemented? Have any mitigation actions been implemented but not successfully, and if so, why?*
- *What mitigation actions, if any, have been scheduled for implementation but have not yet been implemented?*
- *What is the schedule for implementing future mitigation actions? Is this schedule reasonable? Does the schedule need to be adjusted for future implementation, and are such adjustments appropriate and feasible?*
- *Have any new issues of concern arisen, including hazard events in other communities or regions that are not covered by existing mitigation actions?*
- *Are new data available that could inform updates to the Plan, including data relevant to the hazard profiles and threat assessments?*
- *Are there any new planning programs, funding sources, or other mechanisms that can support hazard mitigation activities in Hollister?*

Plan Updates

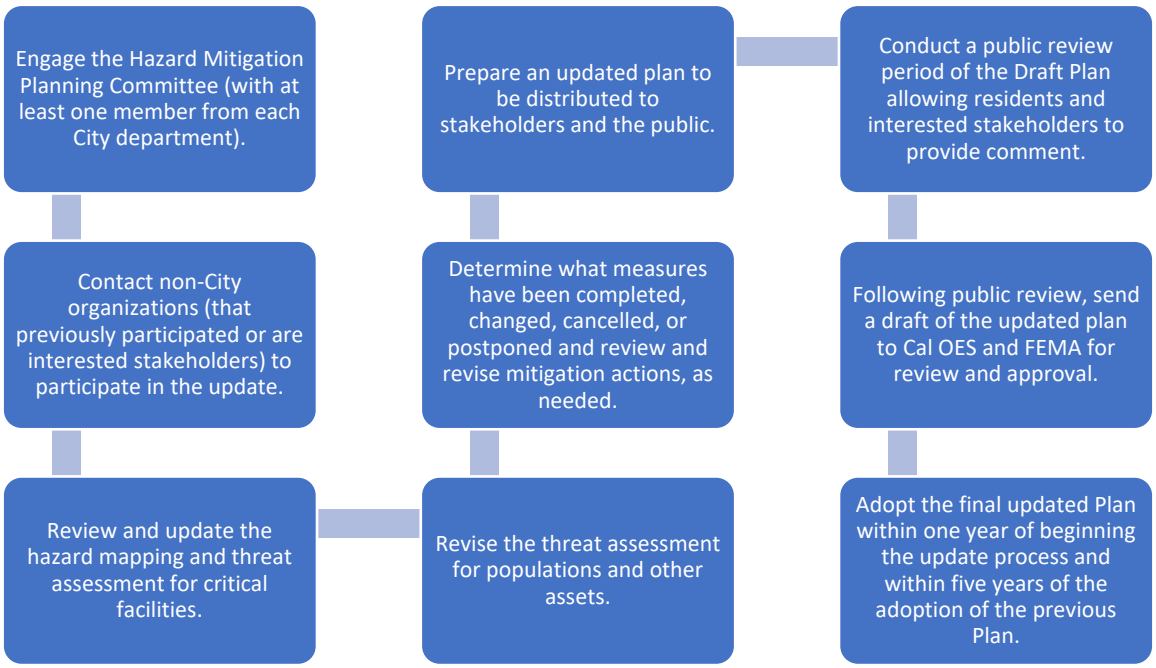
The information in this Plan, including the hazard profiles, threat assessments, and mitigation actions, is based on the best available information, practices, technology, and methods available to the City and Committee when this Plan was prepared. As factors change, including technologies, community demographics and characteristics, best practices, and hazard conditions, it is necessary to update the Plan to remain relevant. Additionally, Title 44, Section 201.6(d)(3) of the Code of Federal Regulations requires that LHMPs be reviewed, revised, and resubmitted for approval every five years to remain eligible for federal benefits.

Update Method and Schedule

The update process should begin no later than four years after this Plan is adopted, allowing a year for the update process before the Plan expires. The LHMP project manager or their designee may also choose to begin the update process sooner, depending on the circumstances. Some reasons for accelerating the update process may include:

- *A presidential disaster declaration for Hollister or an area that includes part or the entire city*
- *A hazard event that results in one or more fatalities in Hollister*

The update process will add new and updated methods, demographic data, community information, hazard data and events, considerations for threat assessments, mitigation actions, and other information, as necessary. This helps keep the Plan relevant and current. The Committee will determine the best process for updating the Plan, which should include the following steps:



UPDATE ADOPTION

The Hollister City Council is responsible for adopting this Plan and all future updates. As previously mentioned, adoption should occur every five years. The City should begin the update process at least one year prior to expiration to ensure the plan remains active. If the City has a grant application that relies on the LHMP, an update to the plan should occur no later than 18 months before expiration. Adoption should take place after FEMA notifies the City that the Plan is Approved Pending Adoption. Once the City Council adopts the Plan following its approval by FEMA, the adopted plan should be transmitted to FEMA.

Continued Public Involvement

The City will continue to keep members of the public informed about the Committee's actions to review and update the LHMP. The Committee will develop a revised community engagement strategy that reflects the City's updated needs and capabilities. The updated strategy should include a tentative schedule and plan for public meetings, recommendations for the use of the City website and social media accounts, and content for public outreach documentation. These updates are anticipated to occur after the annual HMPC meeting conducted by the City.

Point of Contact

The Hazard Mitigation Planning Committee leader for Hollister is the primary point of contact for this Plan and future updates. At the time of writing, the HMPC leaders are Ambur Cameron and Eva Kelly, available at ambur.cameron@Hollister.ca.gov and eva.kelly@hollister.ca.gov

Appendix A – HMPC Meeting Materials

Hollister

Hazard Mitigation Planning Meeting #1

3/11/2021

Agenda:

1. **Team Introductions (10 minutes)**
2. **City of (Insert Name) Project Overview (10 minutes)**
3. **Local Hazard Mitigation Plan Overview (10 minutes)**
4. **Project Goals and Expectations (10 minutes)**
5. **Hazard Mitigation Planning Team Roster (10 minutes)**
6. **Communication Protocols (5 minutes)**
7. **Break (5 minutes)**
8. **(Date of Project) City of (Insert City Name) LHMP (15 minutes)**
9. **Data Needs (Critical Facilities List, vulnerable populations, recent/past hazards, GIS) (10 minutes)**
10. **Community Engagement and Outreach Strategy (10 minutes)**
11. **Hazard Identification/Prioritization (20 minutes)**
12. **Next Steps and To-Do List (5 minutes)**

City of Hollister Project Overview

The City of Hollister has initiated an update to their Local Hazard Mitigation Plan as part of their Comprehensive General Plan Update.

2005 General Plan Safety Element Goals

Goal HS 1 - Protect community health and safety from natural and human-made hazards.

Goal HS 2 - Prepare for emergency situations.

Goal HS 3 - Achieve noise levels consistent with acceptable standards and reduce or eliminate objectionable noise sources.



Map 2
Land Use Plan

City of Hollister 2005 General Plan

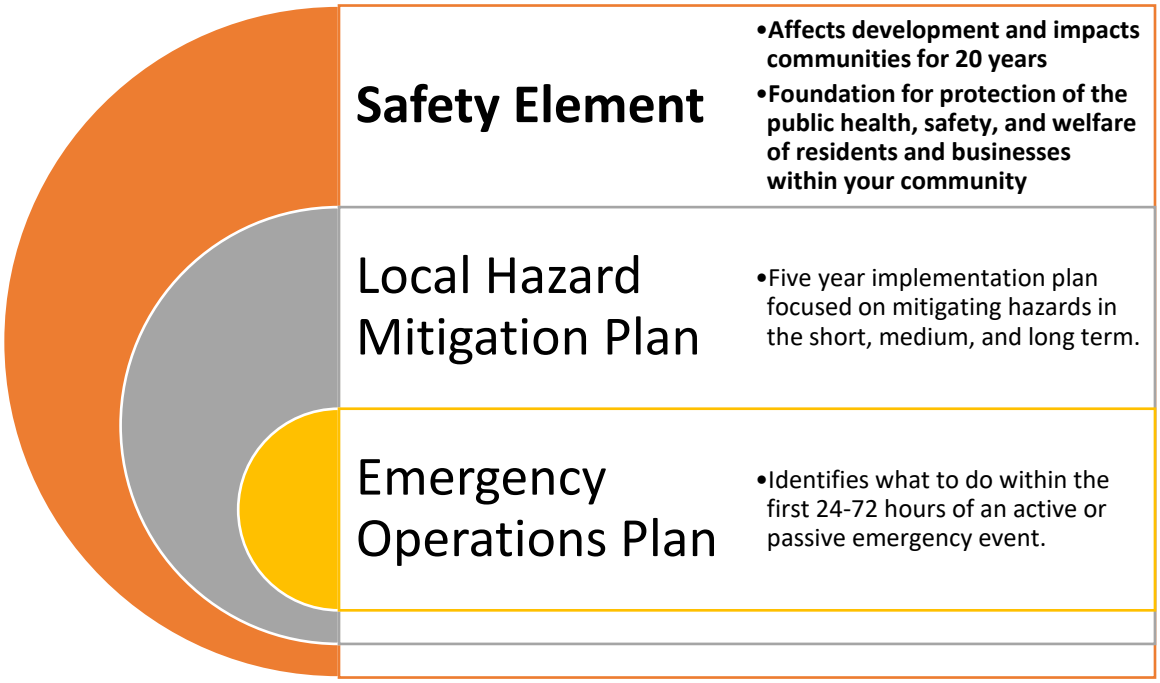
Map prepared by MIG, Inc. - December 2005
Amended by Resolution 2008-153 on October 20, 2008
Amended by Resolution 2009-10 on January 20, 2009

County of San Benito Operational Area Multi-Jurisdiction Hazard Mitigation Plan Overview

The Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) is the County of San Benito and Hollister's strategic plan to assess and reduce the threat from natural hazard conditions. The LHMP will also help identify future impacts from climate change, allowing the City to prepare for these future conditions and mitigate their effects before they become a substantial problem. Under California law, cities must assess their vulnerability to climate change when preparing or updating an LHMP.



Why Update these Documents Together?



While not a requirement, having an LHMP creates a unified and deliberate approach to improving community resilience. **A valid LHMP makes communities eligible for grant funding and additional post-disaster relief funds from FEMA and Cal OES**. LHMPs remain valid for five years following approval and adoption by City Council.

The LHMP is part of a larger cycle of emergency management:

- **The event** (the disaster)
- **Response**: Taking action to save lives, minimize injuries, and reduce future damage immediately after an emergency occurs.
- **Recovery**: Restoring normal conditions and "life as usual" after an emergency.
- **Mitigation**: Planning to reduce the threat to life, health, and property from future emergencies. The LHMP is primarily applied to this part of the cycle.
- **Preparedness:** Planning the response activities in anticipation of future emergencies.



Figure 1 - Four Phases of Emergency Management



Figure-2 Mitigation Linkages

Project Goals and Expectations

A key component of the LHMP is the identification of Plan Goals. These goals should cover the overall intent of the LHMP and be tailored to match San Benito County and Hollister's characteristics and values. Often, we look to existing plans for goals that can be incorporated into the LHMP. The General Plan goals listed earlier can become a foundation for this plan. Also, the following are goals from the (Current San Benito County Operational Area LHMP):

- **Promote economic development consistent with seismic, floodplain, and risk management guidance developed by San Benito County and its allied agencies and organizations.**
- **Provide an effective public awareness program for natural and technological hazards present in San Benito County.**
- **Encourage scientific study and data development to support mitigation strategies for those hazards that are a threat to San Benito County.**
- **Promote the recognition of the real value of hazard mitigation to public facilities, public safety, and welfare of all citizens of San Benito County.**
- **Support the mitigation efforts of local governments, private citizens, non-profit organizations, and private businesses throughout the San Benito County Operational Area**

LHMP Best Practices:

- Should consider the broader goals of Hollister and all of San Benito County
- Should be flexible and adaptable to changing conditions
- Help define future mitigation efforts and actions

Goal Setting Process:

- The goals will be discussed/ re-visited at each meeting
- Goals will be finalized prior to the release of the public draft LHMP

Hazard Mitigation Planning Team Roster

The Hazard Mitigation Planning Team (HMPT) actively guides the development of the LHMP and provides feedback during the process. The Planning Team predominantly consists of representatives from City departments. Representatives from stakeholder agencies and community partners are also invited to participate in different ways. The Planning Team has requested the following individuals:

Abraham Prado	Interim Dev Svcs Manager	Development Services-Planning
Ambur Cameron	Assistant Planner	Development Services-Planning
Eva Kelly	Assistant Planner	Development Services-Planning
Areli Perez	Assistant Planner	Development Services-Planning
Brett Miller	City Manager	Administrative Services
Cheryl Mullen	Interim Airport Director	Airport
Greg Johnsen	Building Official	Development Services-Building
Minerva Arredondo	Assistant Building Official	Development Services-Building
Mark Falgout	Consulting Engineer	Engineering Department
Henry Gonzalez	Interim Management Services Director	Management Services
Michael Grzan	Environmental Programs Manager	Management Services - Environmental Programs
Derrick Speights	Streets/Park Supervisor	Management Services-Public Works
Summer Garcia	Utilities Supervisor	Management Services-Utilities
Leonard Martinez	Stormwater Mgmt. Supervisor	Management Services-Stormwater Mgmt.
Bob Martin Del Campo	Fire Chief	Fire
Carlos Reynoso	Interim Police Chief	Police
Desiree Martinez	Code Enforcement Officer	Code Enforcement
Tina Garza	Recreation Supervisor	Recreation
David Early	General Plan Principal In Charge	Placeworks
Carey Stone	General Plan Project Manager	Placeworks
Aaron Pfannenstiel	LHMP Project Manager	Atlas Planning Solutions
Robert Jackson	LHMP Planner	Atlas Planning Solutions
Crystal Stueve	LHMP Planner	Atlas Planning Solutions

Question: Who is missing from this list?

The HMPT can invite key stakeholders/participants to this process; the following is a list of potential invitees:

AMBAG	Heather Adamson	Director of Planning
California Department of Transportation (Caltrans)	Jill Leal	Associate Transportation Planner
Colleges/Universities		
Gavilan College	Dr. Kathleen Rose	Superintendent/President
Geologist	Brian Papurello	City Geologist (Contract, Landset E
Hospitals		
Hazel Hawkins Memorial Hospital	Steven Hannah	CEO
Neighboring Jurisdictions (San Juan Bautista)	Don Reynolds	City Manager
Pacific Gas & Electric	Jeana Arnold	Government Relations and Public
San Benito Council of Governments (SBCOG)	Mary Gilbert	Executive Director
San Benito County Office of Emergency Services (OES)	Kris Mangano	Emergency Services Manager
San Benito County Public Health Department	Tracey Belton	Director - Health and Human Serv
San Benito County Resource Management Agency	Benny Young	RMA Director
	Mike Chambless	Assistant RMA Director
Building & Code Enforcement	Dauane Dauphinee	County Chief Building Official
	Toby Brenton	Code Enforcement Officer
Planning & Land Use	Taven Kinison Brown	County Principal Planner
	Darryl Boyd	County(Contract) Principal Planne
	Arielle Goodspeed	County Senior Planner
	Michael Kelly	County Associate Planner
Public Works	Roger Grimsley	County Engineer
San Benito County Water District	Jeff Cattaeno	General Manager
Sunnyslope County Water District	Drew Lander	General Manager
Schools		
Hollister School District	Diego Ochoa	Superintendent
San Benito High School District	Shawn Tennenbaum	Superintendent

Question: Who is missing from this list?

Communication Protocols

The City's primary contact for the project is Ambur Cameron, and Atlas Planning will be responsible for most communication. These direct contacts are:

County of San Benito/City of Hollister
Ambur Cameron
LHMP Project Lead
Phone: (831) 636-4360 Ext. 1223
Email: ambur.cameron@hollister.ca.gov

Atlas Planning Solutions
Aaron Pfannenstiel, AICP, LEED AP
LHMP Project Manager
Phone: (909) 374-4848
Email: aaron@atlasplanning.org

It may be more efficient to have communication between persons other than the primary contacts. Please make sure the primary contacts are CC'd on any transmittals in these instances.

County of San Benito Operational Area LHMP: Hazards of Concern for the City of Hollister

City of Hollister — Previous Occurrences of Hazard Events

Hazard Event	Year(s) of Significant Event(s)	Probability of Future Hazard Events	Spatial Extent	Potential Magnitude	Significance
Agriculture	N/A	Unlikely	Limited	Negligible	Low
Dam Failure	N/A	Unlikely	Limited	Negligible	Low
Drought	1987 - 1992	Likely	Extensive	Critical	High
Earthquake	1989, 1916	Occasional	Extensive	Catastrophic	High
Flood (Storm water)	1995, 1997, 1998	Occasional	Limited	Limited	Low
Human Health Hazards:					
Endemic/Pandemic	2009 – H1N1	Occasional	Significant	Critical	Medium
West Nile Virus	Always Present	Occasional	Limited	Negligible	Low
Landslide	N/A	Unlikely	Limited	Negligible	Low
Severe Weather:					
Extreme Cold/Freeze	1991	Occasional	Extensive	Limited	Medium – More People
Extreme Heat	2006 - July	Occasional	Extensive	Limited	Medium
Fog	Always Possible	Occasional	Extensive	Limited	Medium
Snow	N/A	Occasional	Extensive	Limited	Medium
Tornado	1985 – F2	Unlikely	Limited	Negligible	Medium
Heavy Rain/ Thunderstorm/Hail/ Lightning/Wind	1997 – Jan. 1998 – Feb.	Occasional	Extensive	Limited	Medium
Soil Hazards:					
Erosion	N/A	Unlikely	Limited	Negligible	Low
Expansive Soils	N/A	Unlikely	Limited	Negligible	Low
Volcano	N/A	Unlikely	Limited	Negligible	Low
Wildfire	N/A	Unlikely	Limited	Negligible	Low

Guidelines for Previous Hazard Event Rankings:

Probability of Future Hazard Events

- Highly Likely = Near 100% probability in next year.
- Likely = Between 10 & 100% probability in next year or at least one chance in 10 years.
- Occasional = Between 1 and 10% probability in next year or at least 1 chance in next 100 years.
- Unlikely = Less than 1% probability in next 100 years.

Spatial Event:

- Limited = Less than 10% of planning area
- Significant = 10-50% of planning area.
- Extensive = 50-100% of planning area.

Potential Magnitude:

- Catastrophic = More than 50% of affected area.
- Critical = 25-50%
- Limited = 10-25%
- Negligible = Less than 10%

- **Significance (subjective):** Low, Medium, High

Hazards based on significance as identified in the LHMP:

High: Earthquake, Drought

Medium: Endemic/Pandemic, Severe Weather (Extreme Heat, Extreme Cold, Heavy Rain, Thunderstorms, Lightning, Hail, Wind, Snow, and Fog)

Low: Flood, Dam Failure, Agriculture, Landslide, West Nile Virus, Erosion, Expansive Soils, Wildfire, and Volcano

What Additional Hazards Should Be Added?

Critical Facilities

Type of Facility	Names of Facility	Number of Facilities
Medical Facilities	• Hazel Hawkins Memorial Hospital	1
City Services	• City Hall • San Benito County Waste Services • Hollister Water and Sewer • Hollister Water and Reclamation Facility • Industrial Treatment Plant	5
Emergency Services	• Hollister Fire Department • City of Hollister Fire Station 2 • City of Hollister Fire Station 3 • CalFire Fire Station • San Benito Monterey Unit • Hollister Police Department	6

What additional facilities should be added to this list?

- Water Infrastructure?
- Bridges?
- Parks?
- Community Centers?
- Schools?

Previous Mitigation Actions

(See Excel Spreadsheets)

A mitigation action is a specific action, project, activity, or process taken to reduce or eliminate long-term risk to people and property from hazards and their impacts. Implementing mitigation actions helps achieve the plan's mission and goals. The actions to reduce vulnerability to threats and hazards form the core of the project and are vital to the planning process.

Local Plans and Regulations

Local land use or comprehensive plans embody the community's goals, values, and aspirations, as expressed through a process of community engagement. The plan should identify current development patterns and trends and areas where future development should and should not occur. The plan should include policies and ordinances that steer development away from hazard-prone areas, such as floodplains, to avoid putting people and property at risk. In some cases, local plans can work at cross-purposes. For example, a capital improvement plan may call for extending water and sewer lines to an area vulnerable to natural hazards. Emergency managers, planners, and others in a community should prepare plans to ensure consistency across all plans, consistent goals, policies, and strategies.

Structure and Infrastructure Projects:

These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct human-made structures to reduce the impact of hazards. Many of these actions are projects eligible for funding through the FEMA Hazard Mitigation Assistance program.

Natural Systems Protection:

These are actions that minimize damage and losses and preserve or restore natural systems' functions.

Education and Awareness Programs:

These are actions to inform and educate citizens, elected officials, and property owners about hazards and possible ways to mitigate them. These actions may also include participation in national programs, such as StormReady1 or Firewise2 Communities. Although this type of mitigation reduces risk less directly than structural projects or regulation, it is an essential foundation. A greater understanding and awareness of hazards and risks among local officials, stakeholders, and the public is more likely to lead to direct actions.

Preparedness and Response Actions:

Mitigation actions reduce or eliminate long-term risk and are different from actions taken to prepare for or respond to hazard events. Mitigation activities lessen or eliminate the need for preparedness or response resources in the future. When analyzing risks and identifying mitigation actions, the planning team may also identify emergency response or operational preparedness actions.

Did you progress on any of these actions since the last plan?

Data Needs

Various types of data are necessary to complete the LHMP, including information on hazard types present in Hollister and the areas of elevated hazards, recent hazard events, past hazard mitigation actions, critical facilities,

and persons and community assets who face heightened vulnerability to hazards. The following categories of data are crucial to LHMP development.

(Add list of data needs, below are examples)

- **Critical Facilities List (to be created by the team)**
- **Vulnerable Populations or Assets**
- **Past Disasters**
- **Recent Hazard Events**
- **GIS Data Sets (State and Federal sources)**

Vulnerable Populations and Assets

Past Disasters

- Landers Earthquake 06/28/1992, San Jacinto 1968 04/09/1968,
- "South Hills" wildfires:
    - 2001-one wildfire
    - 1999-two wildfires
    - 1998-seven wildfires
- December 2010 Winter Storms, Flood of 1969 01/18/1969, Flood of 1938 (Worst flood in Loma Linda history)

Past Hazard Events

Since 1980 there have been 45 Disaster Declaration/Proclamations for the state of California from the Federal, State, and County Governments:

- 27 Wildfires
- 1 Earthquake
- 7 Floods
- 11 Severe Storms/Weather Events
- 1 Terrorist Attack

LHMP Community Engagement and Outreach

Following FEMA guidance, communities should use an open public involvement process with developing hazard mitigation plans. A typical engagement for an LHMP includes these components:

Online Engagement –

- Online Survey to (Insert City Name) community members
- Social Media Posts:
    - Facebook
    - Twitter: Police Department
    - City Newsletters
- Project Website

The overall City of Hollister Engagement Strategy is still under review and should be completed shortly. Upon completion, specific activities for the LHMP process will be finalized.

What Community Engagement activities are occurring within the City today?

Hazard Identification / Prioritization

As part of the data collection process, the Planning Team will identify the hazards to be addressed in the LHMP. The table provided identifies hazards typically covered in an LHMP and some preliminary recommendations. (Example Table below)

Hazard	Natural Hazard	Other Hazards	Technological Hazard	Threat and Disturbance Hazard	SHMP	Included in this LHMP
Agricultural pests/diseases		X			X	
Air pollution		X			X	

Hazard	Natural Hazard	Other Hazards	Technological Hazard	Threat and Disturbance Hazard	SHMP	Included in this LHMP
Aircraft incident		X				
Aquatic Invasive Species		X			X	N/A
Avalanche	X				X	N/A
Civil disturbance and riot				X	X	
Climate change	X				X	All Profiles
Coastal flooding and storms	X				X	N/A
Cyber Threats				X	X	
Dam failure	X				X	
Drought	X				X	
Energy shortage		X			X	
Epidemic/ Pandemic/Vector-Borne Disease		X			X	
Erosion	X				X	
Expansive soil	X					N/A
Extreme cold	X				X	
Extreme heat	X				X	
Flooding	X				X	
Fracking			X		X	N/A
Hail	X					N/A
Hazardous materials release			X		X	
Hurricane	X					N/A
Landslide	X				X	
Levee failure	X				X	
Lightning	X					
Methane-containing soils	X					N/A
Natural Gas Pipeline Hazards			X		X	
Oil Spills			X		X	N/A
Radiological Accidents			X		X	N/A
Sea level rise	X				X	N/A
Seiche	X				X	N/A
Seismic Hazards	X				X	
Fault rupture	X				X	
Seismic Shaking	X				X	
Liquefaction	X				X	
Severe wind	X					
Severe Weather and Storms	X				X	

Hazard	Natural Hazard	Other Hazards	Technological Hazard	Threat and Disturbance Hazard	SHMP	Included in this LHMP
Storm surge	X					N/A
Subsidence	X					
Terrorism				X	X	
Thunderstorm	X					
Tornadoes	X					N/A
Transportation Accidents				X	X	
Tree Mortality		X			X	
Tsunami	X				X	N/A
Urban Fire		X			X	
Volcano	X				X	N/A
Wildfire	X				X	

Climate Change: Under state law, cities must assess their vulnerability to climate change when preparing or updating an LHMP. Our recommendation is to treat climate change as a factor that can influence the frequency, intensity, and/or locations of other hazards and determine future risk for relevant hazards.

After identifying the hazards, these hazards will be prioritized using a Federal Emergency Management Agency (FEMA) provided matrix. Each hazard is graded on four criteria, using a scale of 1 to 4. Each criterion is assigned a weighting value, and all scores are aggregated to determine a final priority for each hazard.

The four criteria for each hazard are:

Criteria	1	2	3	4
Probability: *Estimated Likelihood that the hazard will occur in the future.*	**Unlikely**	**Occasionally**	**Likely**	**Highly Likely**
Location: *The size of the affected area from a typical future occurrence.*	**Negligible**	**Limited**	**Significant**	**Extensive**
Maximum Probable Extent: *The estimated damage to facilities from a typical failure.*	**Weak –** little to no damage	**Moderate –** some damage, loss of service for days	**Severe –** devastating damage, loss of service for months	**Extreme –** catastrophic damage, uninhabitable conditions
Secondary Impacts: *The effects to the community beyond physical damage*	**Negligible –** no loss of function, downtime, and/or evacuations	**Limited –** minimal loss of function, downtime, and/or evacuations	**Moderate –** some loss of function, downtime, and/or evacuations	**High –** major loss of function, downtime, and/or evacuations

Next Steps

Hazard Mitigation Planning Process	**TBD**
Community Outreach	TBD
Administrative Draft LHMP	TBD
Public Review Draft LHMP Document	TBD
Cal OES/FEMA Review Draft Document	TBD

City of Hollister

Hazard Mitigation Planning Meeting #2

May 19, 2021

Agenda

1. Team Introductions (5 minutes)
2. Review of Project Goals (10 minutes)
3. Review of Critical Facilities (5 minutes)
4. Review of Hazard Profiles/Mapping Discussion/Threat Assessment (75 minutes)
5. Hazard Prioritization (75 minutes)
6. Introduction to Mitigation Strategies (5 minutes)
7. Next Steps (5 minutes)

July 30, 2021

City of Hollister Hazard Mitigation Planning Team: Meeting #3

Agenda:

1. Overview of Mitigation Strategies
2. Discussion of STAPLE/E Criteria
3. Discussion of Relative Cost Categories
4. Review of Discussion of Draft Mitigation Strategies (Hyperlink)
5. Next Steps

Table 5-2: STAPLE/E Criteria

Issue	Criteria
Social	• Is the action socially acceptable to Hollister community members? • Would the action mistreat some individuals? • Is there a reasonable chance of the action causing a social disruption?
Technical	• Is the action likely to reduce the risk of the hazard occurring, or will it reduce the hazard's effects? • Will the action create new hazards or make existing hazards worse? • Is the action the most useful approach for Hollister to take, given the City and community members' goals?
Administrative	• Does the City have the administrative capabilities to implement the action? • Are there existing City staff who can lead and coordinate the measure's implementation, or can the City reasonably hire new staff for this role? • Does the City have enough staff, funding, technical support, and other resources to implement the action? • Are there administrative barriers to implementing the action?
Political	• Is the action politically acceptable to City officials and other relevant jurisdictions and political entities? • Do community members support the action?
Legal	• Does the City have the legal authority to implement and enforce the action? • Are there potential legal barriers or consequences that could hinder or prevent the implementation of the action? • Is there a reasonable chance that the implementation of the action would expose the City to legal liabilities? • Could the action reasonably face other legal challenges?
Economic	• What are the monetary costs of the action, and do the costs exceed the monetary benefits? • What are the start-up and maintenance costs of the action, including administrative costs? • Has the funding for action implementation been secured, or is a potential funding source available? • How will funding the action affect the City's financial capabilities? • Could the implementation of the action reasonably burden the Hollister economy or tax base? • Could there reasonably be other budgetary and revenue impacts to the City?
Environmental	• What are the potential environmental impacts of the action? • Will the action require environmental regulatory approvals?

	• Will the action comply with all applicable federal, state, regional, and local environmental regulations? • Will the action reasonably affect any endangered, threatened, or otherwise sensitive species of concern?

Relative Cost Categories

$	**Less than $15,000**
$$	**$15,001 to $99,999**
$$$	**Greater than $100,000**

Next Steps

Administrative Draft LHMP Document	August/September 2021
» Public Review Draft LHMP Document	October 2021
» Cal OES/FEMA Review Draft Document	November 2021

Appendix B – Outreach and Engagement Materials

English

HOLLISTER GENERAL PLAN UPDATE 2040

https://hollister2040.org>

Hazard Plan

Local Hazard Mitigation Plan

The city of Hollister is preparing a Local Hazard Mitigation Plan, or LHMP, which is an implementation project that is being folded into the General Plan Update effort. This plan will help create a safer community for residents, businesses, and visitors. The LHMP allows public safety officials and city staff, elected officials, and members of the public to understand the threats from natural and human-caused hazards in our community. The plan will also recommend specific actions to proactively decrease these threats before disasters occur. Major objectives and goals of the Draft LHMP will be incorporated into the General Plan Update.

Why have an LHMP?

An LHMP will let Hollister better plan for future emergencies. Usually, after a disaster occurs, communities take steps to recover from the emergency and rebuild. An LHMP is a way for the City to better prepare in advance of these disasters, so when they do occur, less damage occurs, and recovery is easier. Our community can use LHMP strategies to reduce instances of property damage, injury, and loss of life from disasters. Besides protecting public health and safety, this approach can save money.

English

Studies estimate that every dollar spent on mitigation saves an average [illegible] on response and recovery costs. An LHMP can also help strengthen the mission of public safety officers, such as police and fire department staff, providing them with clear roles and responsibilities to build a safer community.

Besides helping to protect Hollister, our LHMP will make the City eligible for grants from the Federal Emergency Management Agency (FEMA) that can be used to further improve safety and preparedness in the community. Having an adopted LHMP can also make Hollister eligible to receive more financial assistance from the State when disasters do occur.

What is in our LHMP?

The City of Hollister LHMP will include four main sections:

- A summary of the natural and human-caused hazards that pose a risk to our community. This will include descriptions of past disaster events and the chances of these disasters occurring in the future.
- An assessment of the threat to Hollister, which will describe how our community is vulnerable to future disasters. The plan will look at the threat to important buildings and infrastructure, such as police and fire stations, hospitals, roads, and utility lines. It will also look at the threat to community members, particularly vulnerable populations.
- A hazard mitigation strategy, which will lay out specific policy recommendations for Hollister to carry out over the next five years. These recommendations will help reduce the threat that our community faces from hazard events.
- A section on maintaining the plan, which will help ensure that our LHMP is kept up-to-date. This will make it easier for us to continue to proactively protect ourselves and will also keep the City eligible for additional funding.

What hazards will our LHMP help protect against?

The City plans to include the following natural hazards in our LHMP:

- Diseases and Pest
- Drought
- Flooding

English

- Flooding
- Geologic Hazards
- Seismic Hazards
- Severe Weather
- Wildfire

Our LHMP will also look at how climate change may affect these hazards and may include other hazards that pose a threat to our community.

How is our LHMP being prepared?

The City has assembled a Hazard Mitigation Planning Committee (HMPC), which includes representatives from City Departments and is supported by key stakeholders, and technical consultants. Together, these participants form the project team responsible for guiding the overall development of our LHMP.

When will our LHMP be done?

The project team plans to release a first draft of the Hollister LHMP for public review in Summer 2021. After members of the public provide comments and feedback, the City will revise the plan and send it to the California Office of Emergency Services and FEMA for review and approval. Once approved by these agencies, the Hollister City Council will adopt the final LHMP. We hope to have the plan ready for adoption in Fall/Winter 2021, but it may be later, depending on how long state and federal review takes.

How can I get involved?

You can get involved in preparing our LHMP in different ways.

- The City will conduct public engagement opportunities to share information about our LHMP and obtain community feedback. Please check this website for updates on meeting dates/times.
- Take the online **survey** < **https://docs.google.com/forms/d/e/1FAIpQLScydJuvExPHEBB9Zc9l0QKXEgitOwtLpMRcnimyIfc28mEDyQ/viewform>** to provide information about past experience with natural hazards and how our LHMP can be the most useful.

Encourage your friends and family to take the survey too!

English

- The City will release a draft of the completed LHMP for public review. Please review and provide comments on this document, either at in-person meetings or in writing.
- Check this website for more ways to stay involved.

What can I do now to be better prepared for disasters?

- Know the hazards that may affect you at your home, work, or school. You can find out more at **http://myhazards.caloes.ca.gov/ < http://myhazards.caloes.ca.gov/>** .
- Assemble an emergency kit for your home. In a disaster, you may have to rely on supplies in your emergency kit for at least three days. Be sure to include supplies for any pets and anyone in your home with special needs. Learn more at **https://www.ready.gov/kit < https://www.ready.gov/kit>** .
- Have a disaster plan for your household, including how people should contact each other if a disaster occurs and where you should meet.
- Learn about your neighbors and how to help them. In a disaster, emergency responders may not be able to reach your neighborhood for a while. Know if your neighbors have any special needs, and be sure to check on them as soon as you can.
- Make sure your homeowner's or renter's insurance covers you from disasters such as earthquakes and floods. If these disasters occur, having good insurance coverage will help you recover easier.
- Volunteer with an emergency response or community service organization that does work on disaster education and preparation.
- Speak to your employer about creating a disaster recovery, workforce communication, and/or business continuity plan. If they already have one or more of these plans in place, make sure you and your co-workers know it.
- Join the San Benito County OES – CERT, a group of volunteers trained by the City to assist emergency responders during disasters. Training is free and offered at times throughout the year.

English

City of Hollister Planning Department

Old City Hall
339 Fifth Street
Hollister, CA 95023

Tel: +1-831-636-4360
Email: **generalplan@hollister.ca.gov**

1. Please indicate whether you live or work in the City of Hollister.

42 responses



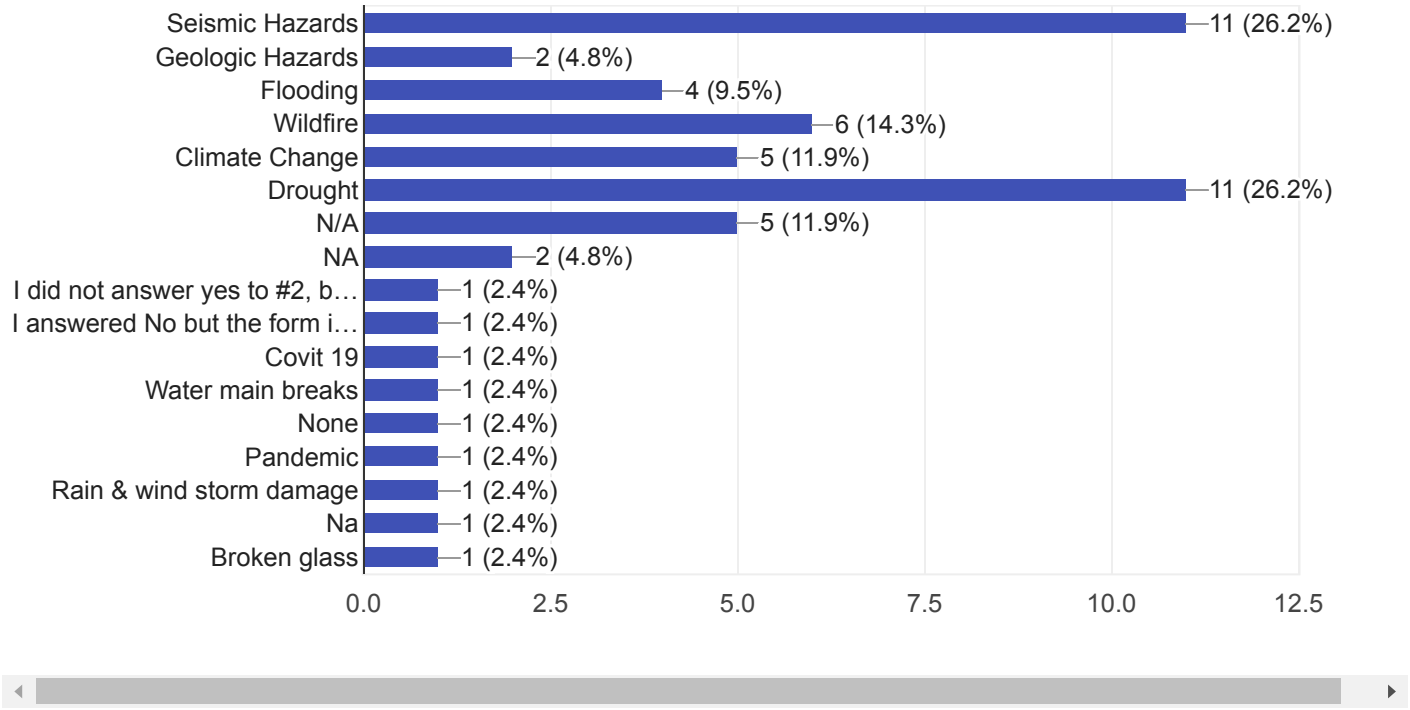
2. Have you been impacted by a disaster in your current residence?

42 responses



3. If you answered yes to the previous question, please select the type of disaster that you have been impacted by (select all that apply).

42 responses



If you selected Other above, please list any additional hazards that have previously impacted your neighborhood or home. (Otherwise put "N/A")

42 responses

N/A

N/a

NA

Na

Power Grid Failure

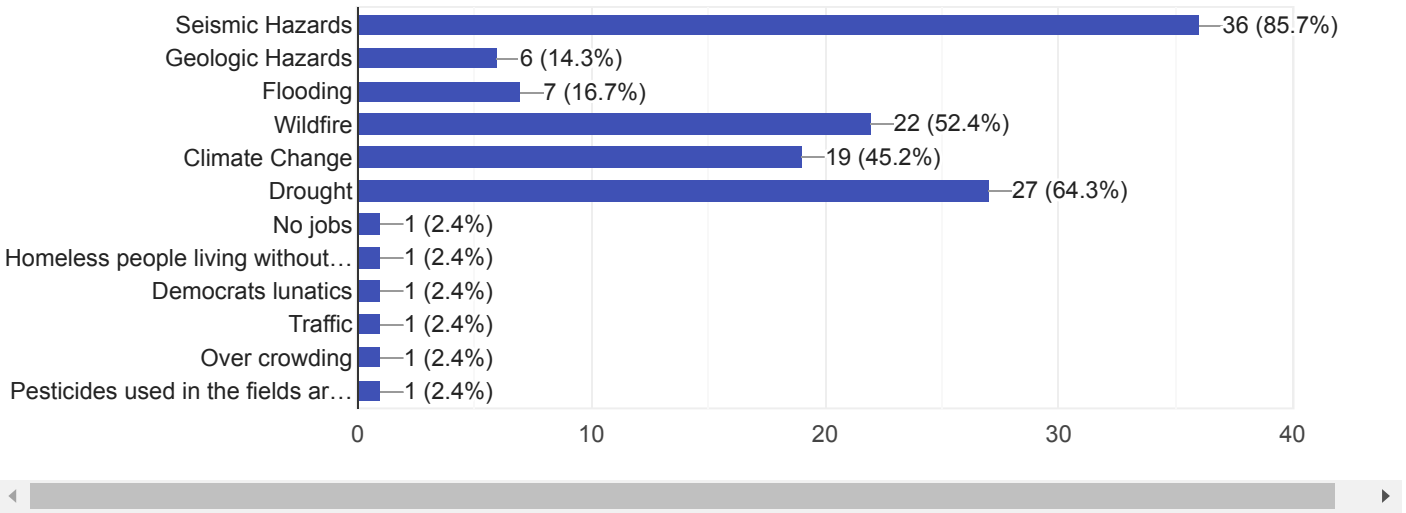
poisoning, pollution from overbuilding for money; big ag using pesticides, over watering for money, paving over our precious regenerative soil, destroying our greenbelt with more businesses, cars, accidents, road congestion all in the guise of more money. Needs to be stopped for its hazardous effects vs promoting the health and welfare of all.

Job closed

n/a

4. The following hazards could potentially impact the City. Please mark the THREE (3) hazards that are of most concern to your neighborhood or home.

42 responses



If you selected Other above, please list any additional hazards that have previously impacted your neighborhood or home. (Otherwise put "N/A")

42 responses

N/A

N/a

n/a

Na

NA

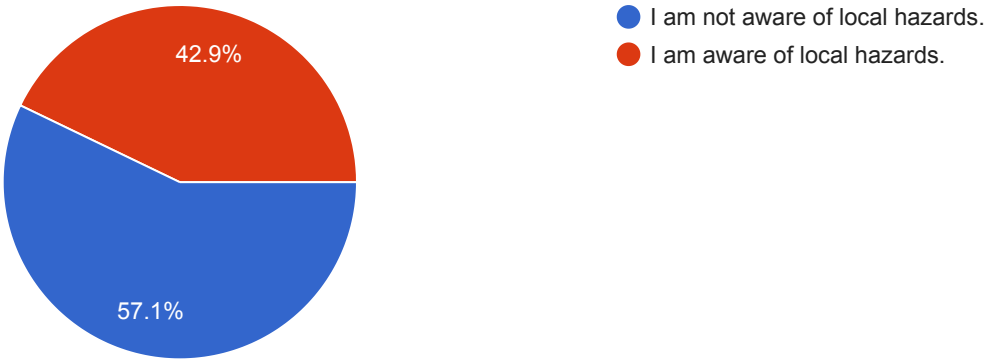
Power Grid failure

Keep the gas tank full for the generator on Fremont's Peak.

poisoning of water, pollution of air from over building, pesticide and overuse of land of big ag instead of small, regenerative, organic farming. This is wasting our precious resources, not saving them for natural times of drought. Drought is one of the three concerns but is caused by bad practices of our leaders. We shouldn't be paving over our precious Greenbelt for more

5. The planning team is using various data sources to identify hazards in your community; however, some of these data sources do not provide data at a general citywide level. Are there any small-scale issues, such as ponding at a certain intersection during rain, that you would like the planning team to consider?

42 responses



If you indicated "I am aware of local hazards" above, please provide as much detail as possible, including location and type of hazard. (Otherwise put "N/A")

42 responses

N/A

N/a

NA

Na

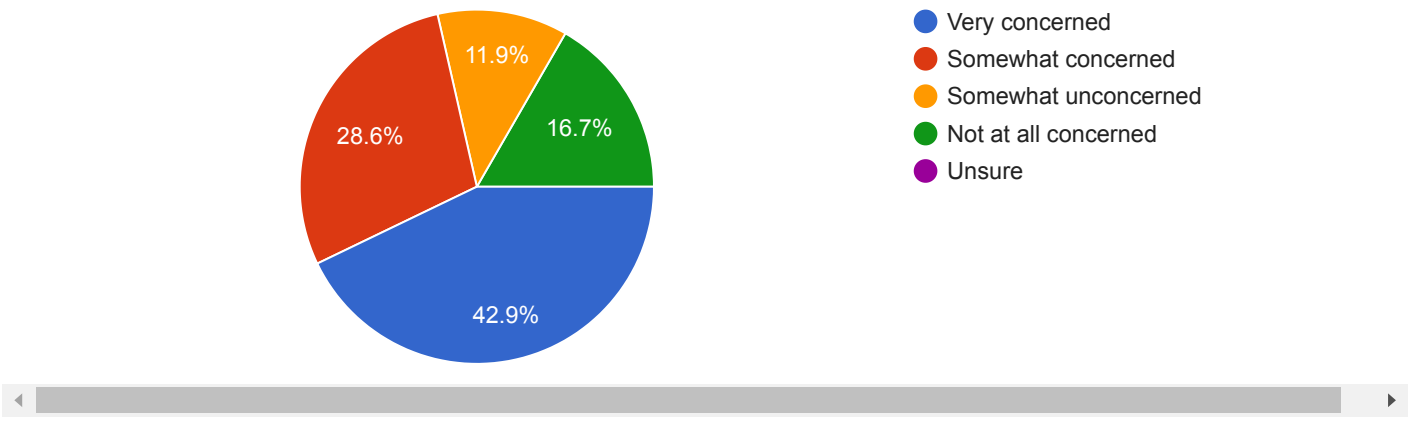
n/a

During the heavy rain of Dec 2019, the intersection of Memorial Drive and Westward was flooded from the rain. This runoff eventually joined the rain water coming down Sunset Drive and flooded the Northside Hazel Hawkins Convalscnet Hospital.

Look at all the pipes breaking and flooding main street etc. So no more overbuilding but fix the infrastructure we have. Give us the real results of our water as we know central valley has poisons in their water. Our overbuilding, big ag with pesticides, water waste from such
big industry is polluting our water, food, air as already mentioned above. All this paving over

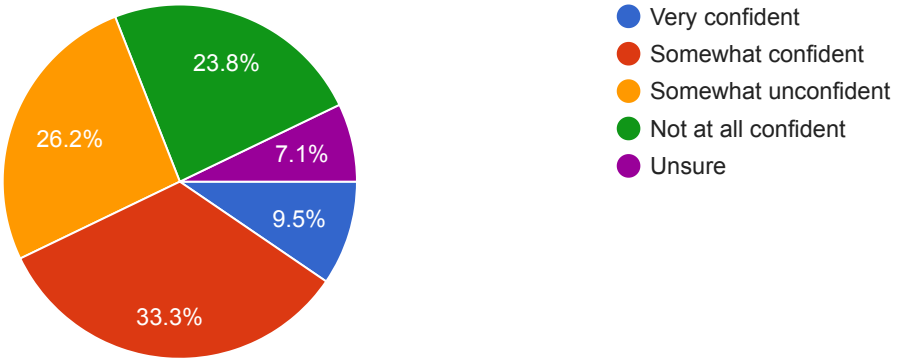
6. How concerned are you that climate change may create new hazardous situations in Hollister, or make existing natural hazards worse?

42 responses



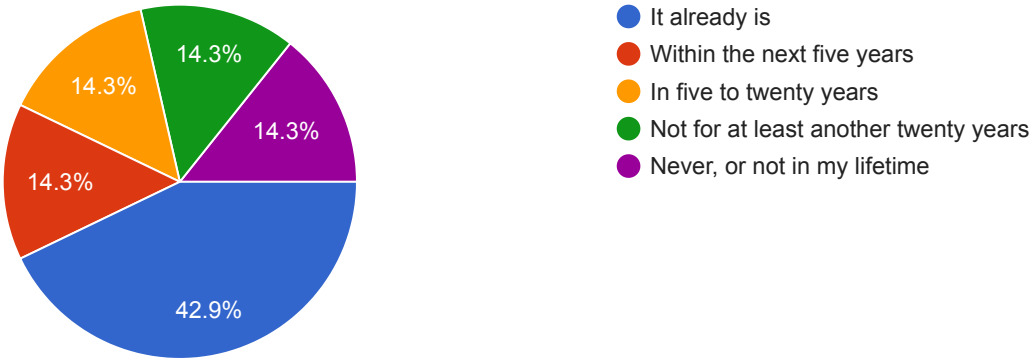
7. If you have taken any action to protect yourself against natural hazards, how confident are you that these actions will be sufficient to protect against more severe hazards that are expected because of climate change?

42 responses



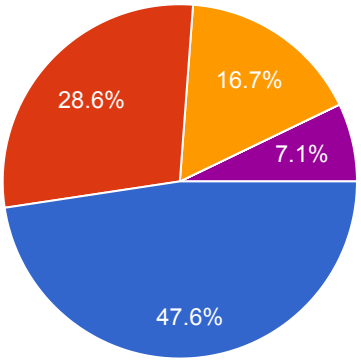
8. When do you think climate change will pose a threat to your health, property, livelihood, or overall wellbeing?

42 responses



9. If you are a homeowner, do you have adequate homeowners' insurance to cover the hazards that could impact your home?

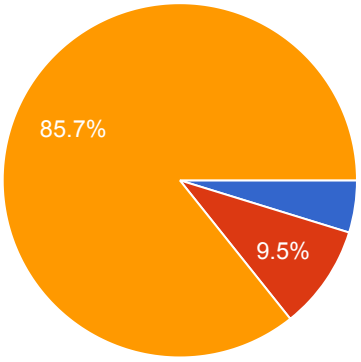
42 responses



- Yes, my insurance coverage should be adequate
- No, I don't believe my insurance coverage would be adequate for a major disaster
- Unsure
- I do not have an insurance policy
- Not applicable; I rent my current residence

10. If you rent your residence, do you have renters' insurance?

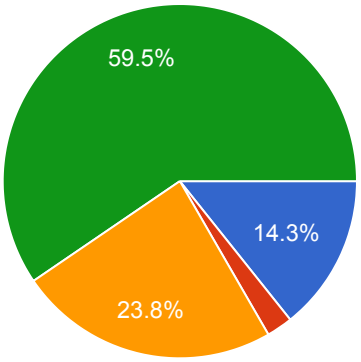
42 responses



- Yes
- No
- Not applicable; I own my residence

11. Do you have flood insurance for your home?

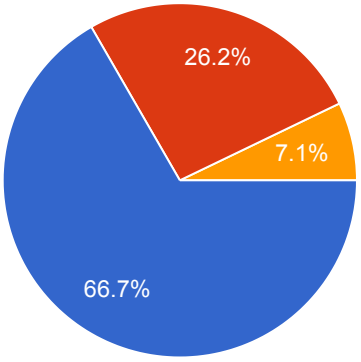
42 responses



- Yes, I own my home and have flood insurance
- Yes, I rent my home and have flood insurance
- Unsure
- No, but I am interested in reviewing flood insurance options (http://www.floodsmart.gov/floodsmart/)

12. Have you done anything to your home to make it less vulnerable to hazards such as earthquakes, floods, and fires?

42 responses



- Yes
- No
- Not applicable; I rent my residence

If you answered no above, do you plan to do anything to your residence to make it less vulnerable to hazards such as earthquakes, floods, and fires? (Otherwise put "N/A")

42 responses

N/A

N/a

Na

NA

n/a

Unsure of what measures to take. Seeking for drought tolerant landscaping

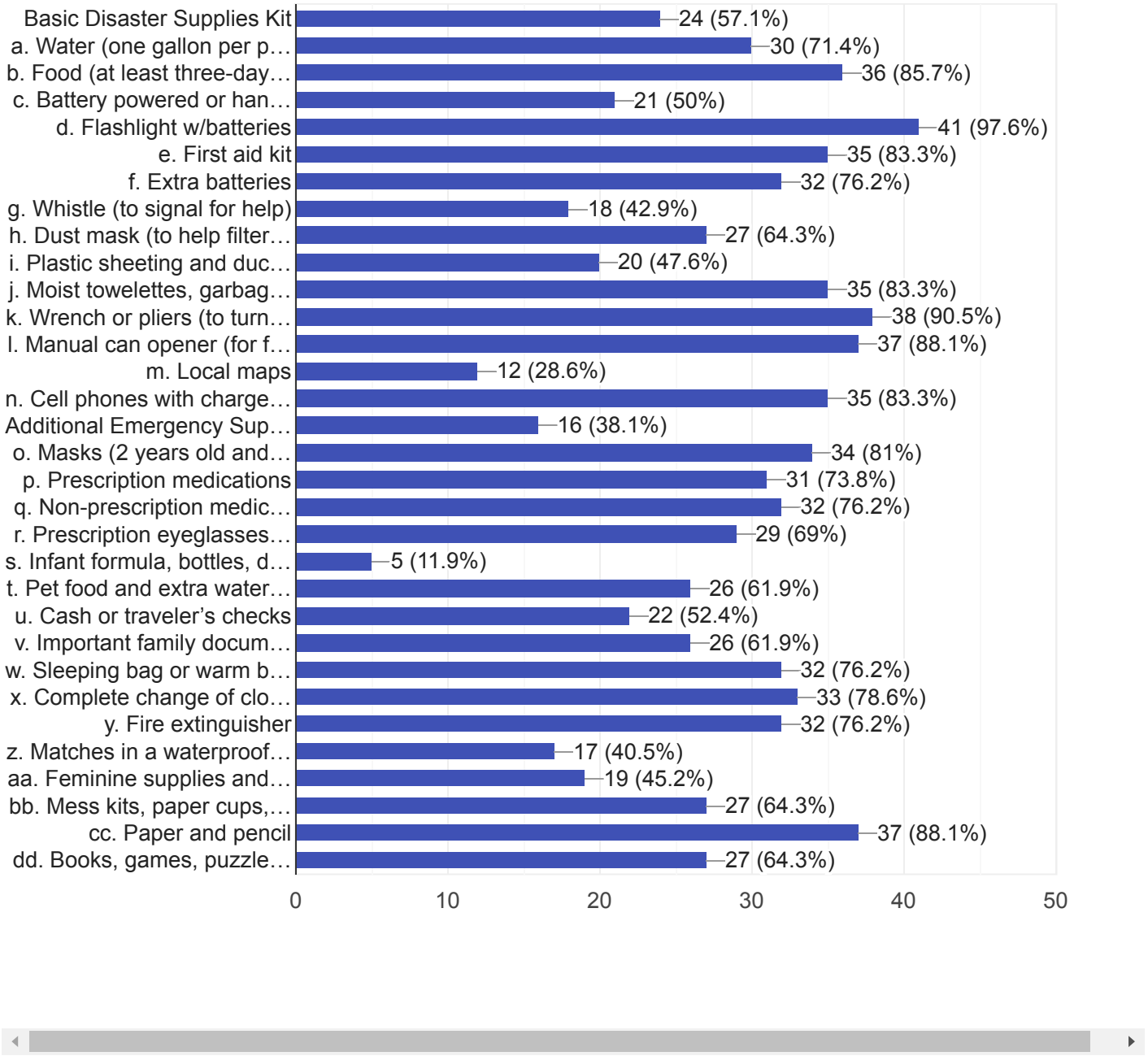
UBC strapping, appropriate drainage surrounding home, 100" clear space surrounding home

None

Yes

13. If a severe hazard event occurred today such that all services were cut off from your home (power, gas, water, sewer) and you were unable to leave or access a store for 72 hours, which of these items do you have readily available (select all that apply)?

42 responses



What else do you have in your emergency kit? (If nothing else put "N/A")

34 responses

N/A

Na

N/a

Guns

That's nice to be reminded about all these things, but what about our City's responsibility???

Weapons and ammunition

Generator

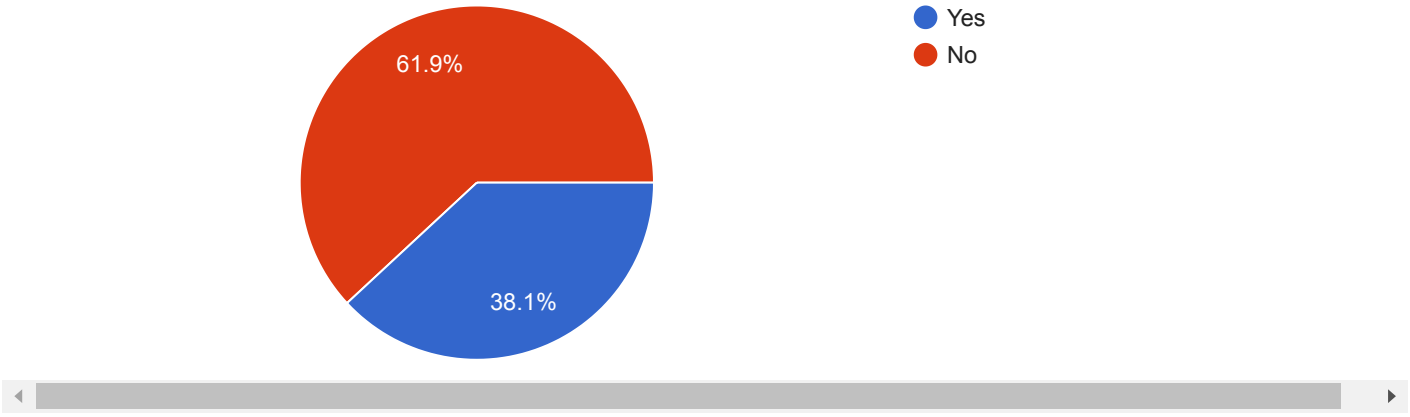
n/a

NA

For more information on emergency kits, visit: https://www.ready.gov/kit

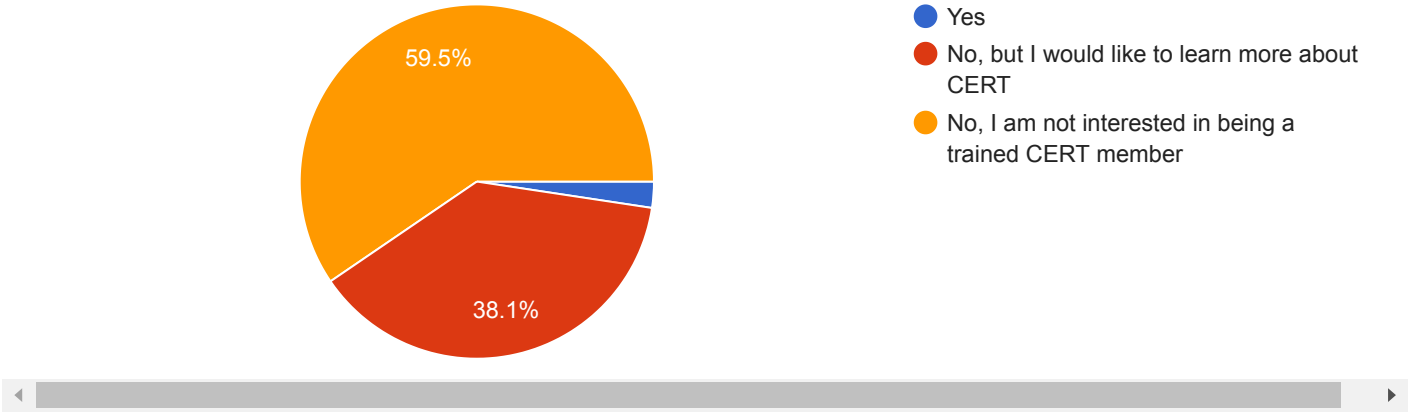
14. Are you familiar with the special needs of your neighbors in the event of a disaster situation (special needs may include limited mobility, severe medical conditions, memory impairments)?

42 responses



15. Are you a trained member of your Community Emergency Response Team (CERT)?

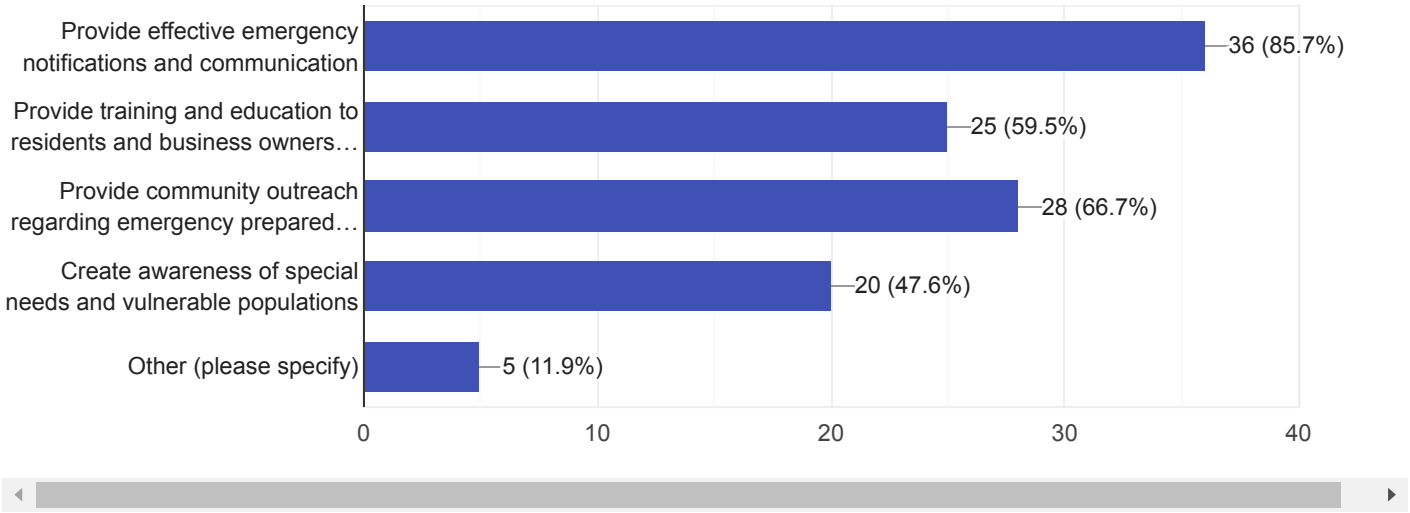
42 responses



For more information about CERT, please visit: https://www.cosb.us/departments/office-of-emergency-services-oes-and-emergency-medical-services/emergency-management/community-emergency-response-team-cert

16. How can the City help you become better prepared for a disaster? (choose all that apply)

42 responses



If you answered "Other" above, please specify below.

9 responses

N/A

Work with P.G. & E. to make sure our power grid does not go down again during a heat wave as it did last Labor Day Weekend.

NA Retired

Again, regulations for drought, keeping our greenbelts for natural water storage, native plants, flora and fauna are as important for preservation of our environment. Leadership has a responsibility to the health and welfare of all. You need to perform with best practices and educate everyone to support small, regenerative farms, wise development not urban sprawl, shop locally, have neighborhood watch, have a just, fair police protection, non violent! This is most effective instead of just a safety kit. It is important but in context with
City Government's purpose!

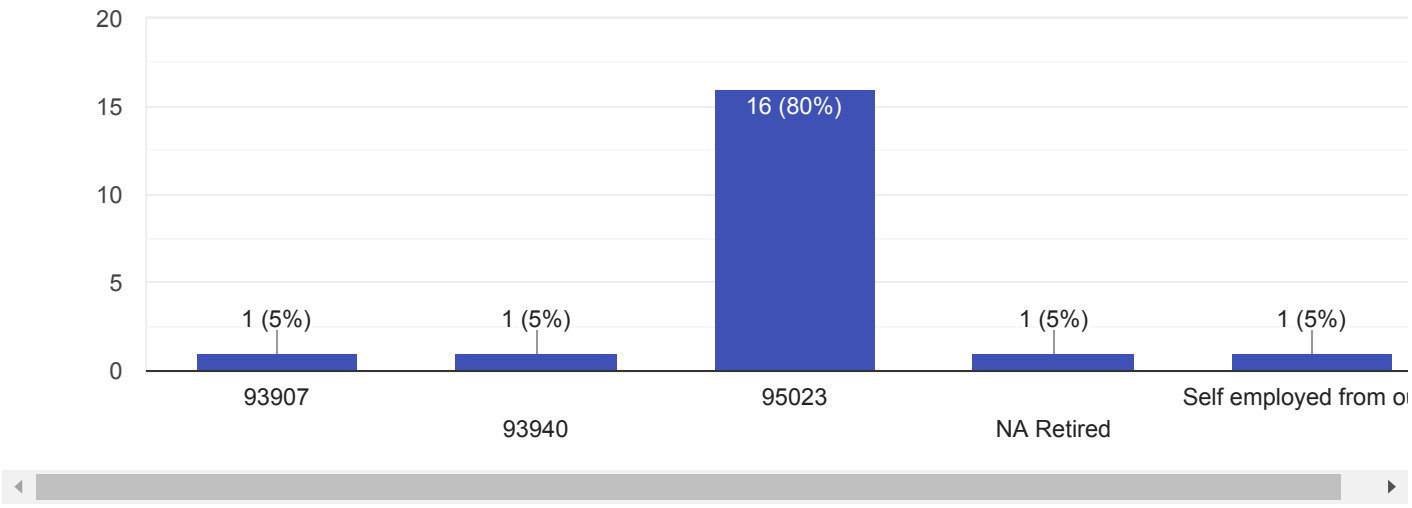
Notify residents of City/County disaster plan and locations to meet and learn more during emergencies

We will be trapped here!!! Too many people not enough access out!!! It is a very very real danger

If you do NOT work in the City of Hollister, please skip to question 20.

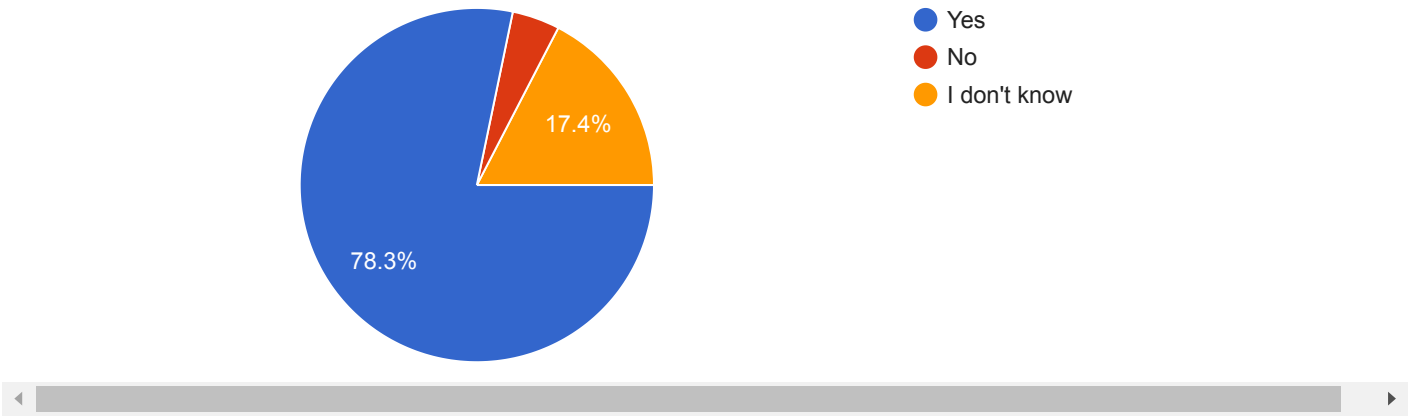
17. What is the ZIP code of your workplace?

20 responses



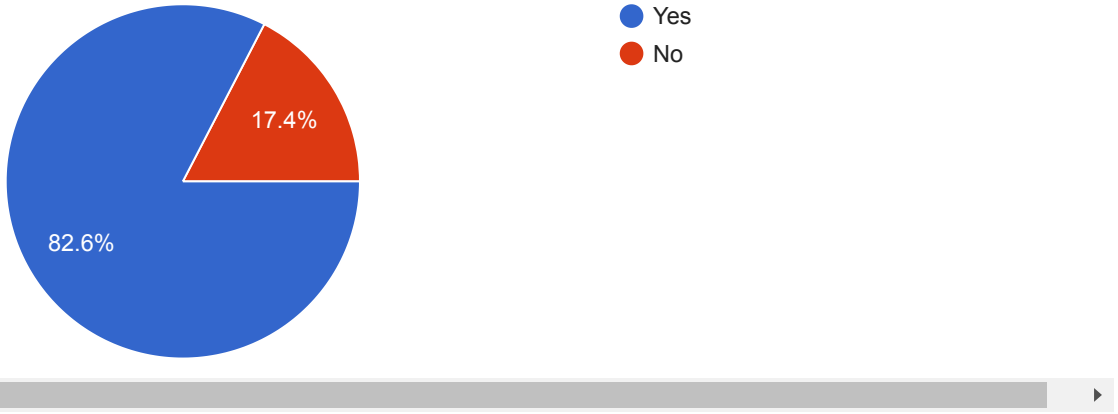
18. Does your employer have a plan for disaster recovery in place?

23 responses



19. Does your employer have a workforce communications plan to implement following a disaster so they are able to contact you?

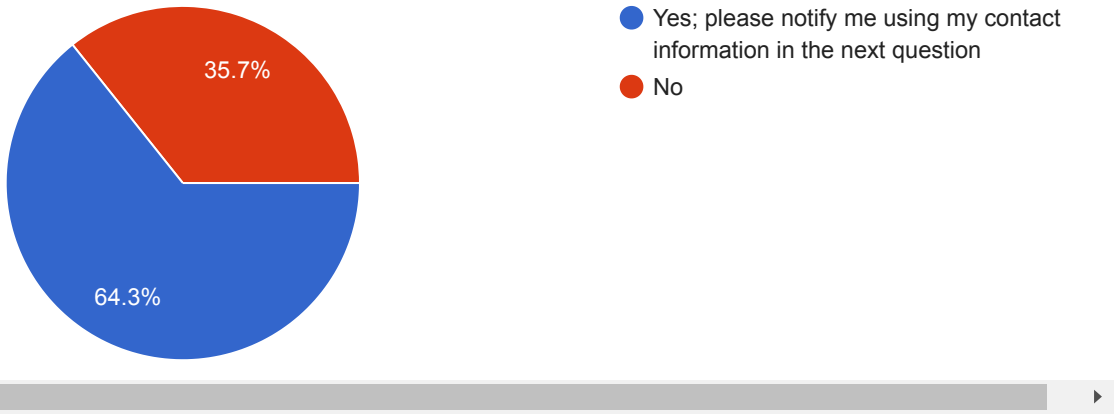
23 responses



Recommendations and Future Participation

20. Would you like to be contacted when the Draft 2021 Hollister Hazard Mitigation Plan is available for review?

42 responses



21. If you would like to be notified of future opportunities to participate in hazard mitigation and resiliency planning, please provide your name and e-mail address. If you do not have an e-mail address, please provide your mailing address.

42 responses

22. Please provide us with any additional comments/suggestions/questions that you have regarding your risk of future hazard events.

42 responses

N/A

NA

N/a

n/a

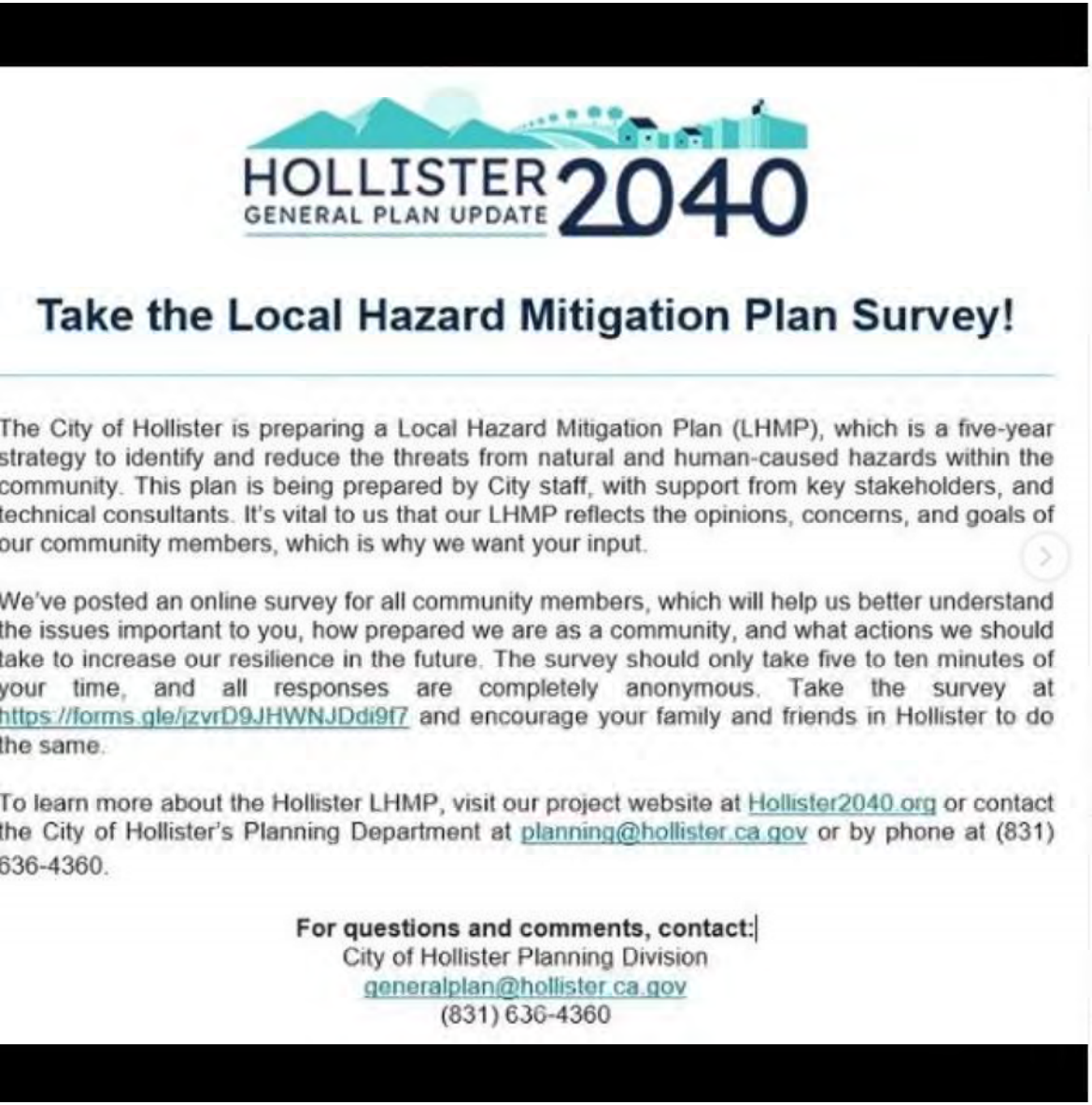
None

Na

Are we providing cooling center for the elderly or infirm if we have another power grid failure that last a longer time.

The Climate Crisis is urgent. You must consider my concerns with those of others to protect our heath and welfare of "all". We are all the caretakers of Nature, not to allow continuing destruction. It takes actions in our grassroots cities to do this and to learn

Thank you for taking the time to complete this survey. If you have any questions, or if you know of other people/organizations that should be involved, please contact: generalplan@hollister.ca.gov



hollistergeneralplan • Follow
City of Hollister City Hall

hollistergeneralplan The City of Hollister is preparing a Local Hazard Mitigation Plan (LHMP), which is a 5-year strategy plan to identify and reduce the threats from natural and human-caused hazards within the community. There is a link to the survey at hollister2040.org/hazard-plan/ to better understand what issues are important to you! #Hollister2040 #HollisterLHMP

42w

4 likes

APRIL 21, 2021

Add a comment...

Hollister General Plan Update
February 23, 2021 ·

Join the General Plan Advisory Committee! The City of Hollister is seeking applications to fill three vacant positions for the At-Large Residents seats. Learn more about the GPAC and how to apply at:
https://hollister2040.org/…/general-plan-advisory-committee/



HOLLISTER2040.ORG
General Plan Advisory Committee - Hollister2040
Public Engagement COVID-19 Accommodations Due to the current COVID-19 crisis, all public meetings, engagement and outreach for the…

Like Comment Share

Hollister General Plan Update
April 21, 2021 ·

Take the Local Hazard Mitigation Plan (LHMP) Survey! The City of Hollister is preparing an LHMP which is a 5-year strategy plan to identify and reduce threats from natural and human-caused hazards within the community. Take the survey to share your past experience with natural hazards and how our LHMP can be the most useful to you:
https://docs.google.com/…/1FAIpQLScydJuvExPHEBB9Zc…/viewform



DOCS.GOOGLE.COM
2021 Hollister Hazard Mitigation Plan Survey
Dear Community Member, The City of Hollister is preparing a Local Hazard Mitigation Plan, or LHMP. Like all other communities, Hollister could…

Like Comment Share

Appendix C – Resolution of Adoption

To be inserted upon plan adoption

Appendix D – List of Key Facilities

Site Description	Bldg Description
CITY HALL	CITY HALL
OLD CITY HALL	OLD CITY HALL
PAYMENT CENTER	FINANCE/HUMAN RESOURCES BUILDING
BRIGGS BUILDING	BRIGGS BUILDING
VETERANS MEMORIAL BUILDING	VETERANS MEMORIAL BUILDING
COMMUNITY CENTER BUILDING	COMMUNITY CENTER BUILDING
DUNNE PARK	DUNNE HALL
CITY YARD	ADMINISTRATION/SHOP BUILDING
ANIMAL SHELTER	ANIMAL SHELTER BUILDING
INDUSTRIAL WASTE WATER TREATMENT	POND 1
FIRE STATION 3	PORTABLE FIRE STATION WITH RESTROO
AIRPORT	AIRPORT OFFICE/SHOP/HANGAR BUILDIN
ELKS LODGE	ELKS LODGE (LEASED)
BUILDINGS A, B, D	VACANT BUILDING A
VISTA HILL PARK (WITH RESERVOIRS)	WATER TANK 1 (2 MILLION GALLONS); WATER TANK 2 (3.5 MILLION GALLONS)
MCCARTHY PARK	RESTROOM BUILDING
WELL 2	WELL 2
CULLUM 1 &2 WELLS	
SALLY FLATS RESERVOIR	SALLY FLATS RESERVOIR (500000 GALLONS)
WELL 5	WELL 5
WELL 4	WELL 4
MEMORIAL BOOSTER STATION	BOOSTER STATION BUILDING
BRIDGEVILLE PUMP STATION	BRIDGEVILLE PUMP STATION
2ND AND EAST LIFT STATION	2ND AND EAST LIFT STATION
GLP LIFT STATION	GLP LIFT STATION
AIRPORT LIFT STATION	AIRPORT LIFT STATION
VALLEY VIEW PARK	RESTROOM BUILDING
BRIGANTINO PARK	BRIGANTINO PARK
FIRE STATION 2	FIRE STATION 2
FIRE STATION 1	FIRE STATION 1
POLICE DEPARTMENT	POLICE STATION
WASTE WATER TREATMENT PLANT	OPERATIONS BUILDING
LESSALT WATER TREATMENT PLANT	
WEST HILLS SURFACE WATER TREATMENT PLANT	
ALLENDALE BOOSTER STATION	
ALLENDALE LIFT STATION	
SUNNYSIDE ESTATES LIFT STATION	
MIRABELLA LIFT STATION	
NORA PARK	
CALAVARAS SCHOOL PARK	
TONY AGUIRRE PARK	
MIRABELLA PARK	
SANTA ANA PARK	

JOHN Z. HERNANDEZ PARK	
CERRA VISTA SCHOOL PARK	
MARGUERITE MAZE SPORTS COMPLEX	
LAS BRISAS PARK	
FRANK KLAUR PARK	
JERRY GABE MEMORIAL PARK	
WALNUT PARK	
VETERANS MEMORIAL PARK	
APRICOT PARK	
RANCHO SAN JUSTO GYM	
SAN BENITO HIGH SCHOOL GYM	
Fire Station 4	
Hazel Hawkins Memorial Hospital	
San Benito County Waste Services	
Cal Fire Fire Station	

Appendix E – LHMP Implementation Handbook

City of Hollister



Local Hazard Mitigation Plan Implementation Handbook

February 2022

What Is This Handbook?

The Local Hazard Mitigation Plan (LHMP) for the City of Hollister features an evaluation of the City's hazards and a variety of corresponding mitigation actions. These actions are intended to preserve public safety, maintain critical municipal government operations and services when hazard events emerge, and empower community members to take on hazard mitigation at an individual level. This Implementation Handbook (Handbook) is intended for use by City staff and decision-makers after the LHMP is adopted. It will:

- Give clear instructions as to what to do following the adoption of the LHMP.
- Simplify future updates to the LHMP.
- Assist the City in preparing grant funding applications related to hazard mitigation.
- Guide annual plan review actions.

How do I Use This Handbook?

This Handbook can help City staff and decision-makers in several different situations. If and when the events listed below occur, consult the respective sections of this Handbook for advice on how best to proceed:

- A disaster proclamation has been issued by the Hollister City Council
- A disaster proclamation has been issued by the State of California
- A disaster declaration has been signed by the Federal Government
- I want to apply for mitigation grant funding
- Hollister is undergoing its budgeting process
- Hollister is holding its annual meeting of the Hazard Mitigation Planning Committee
- Hollister is updating the following policy and regulatory documents:
- The Local Hazard Mitigation Plan
- The Safety Element of the General Plan
- The Housing Element of the General Plan
- The Zoning Code

Who Maintains This Handbook?

The leader of the Hazard Mitigation Planning Committee (HMPC) is the one responsible for maintaining this Handbook. At the time of writing, the current HMPC leaders are Ambur Cameron and Eva Kelly from the Hollister Planning Department. The HMPC may delegate this responsibility to someone else should they so choose.

What to do when a disaster has been proclaimed or declared

Disasters may be proclaimed or declared by the Hollister City Council, the State of California, or the federal government. Responsibilities may differ depending on who proclaims or declares the disaster. If multiple organizations proclaim or declare a disaster, consult all applicable lists.

The Hollister City Council

If the Hollister City Council (or the Director of Emergency Services, if the City Council is not in session) proclaims a Local Emergency, take the following steps:

- ☐ Update **Attachment** 1 with information about the disaster. Include information about cumulative damage, including any damage outside of Hollister.
- ☐ Discuss opportunities for local assistance with the representatives from the California Office of Emergency Services (Cal OES).
- ☐ If the disaster damages local infrastructure or City-owned facilities, repair or rebuild the structure to be more resilient, following applicable hazard mitigation actions. A list of actions, organized by hazards, is included in **Attachment 4**.
- ☐ **Chapter 6** of the Hollister LHMP states that the City should consider updating the LHMP if a disaster causes a loss of life in the community, even if there is no state disaster proclamation or federal disaster declaration that includes part or all of the City. If there is a loss of life in Hollister, consider updating the LHMP. Consult the section on updating the LHMP in this Handbook for details.

The State of California

If the State of California proclaims a disaster for Hollister or an area that includes part or all of Hollister, take the following steps:

- ☐ Update **Attachment 1** with information about the disaster. Include information about cumulative damage, including any damage outside of Hollister.
- ☐ Collaborate with representatives from Cal OES to assess the damage from the event.
- ☐ Discuss opportunities for local assistance with representatives from Cal OES.
- ☐ If the disaster damages local infrastructure or City-owned facilities, repair or rebuild the structure to be more resilient, following applicable hazard mitigation actions. A list of actions, organized by hazards, is included in **Attachment 4.**
- ☐ If the disaster may escalate into a federal disaster declaration, begin any necessary coordination with representatives from the Federal Emergency Management Agency (FEMA).
- ☐ **Chapter 6** of the Hollister LHMP states that the City should consider updating the LHMP if a disaster leads to a state disaster proclamation or federal disaster declaration that includes part or all of Hollister, even if there is no loss of life. Consider updating the LHMP. Consult the section on updating the LHMP in this Handbook for details.

The Federal Government

If the federal government declares a disaster for Hollister or any area that includes part or all of Hollister, take the following steps:

- ☐ Update **Attachment 1** with information about the disaster. Include information about cumulative damage, including any damage outside of Hollister.
- ☐ Collaborate with representatives from Cal OES and FEMA to assess the damage from the event.

- ☐ Determine if Hollister will be eligible for public assistance funds related to the federal disaster declaration. These funds can be used to reimburse the City for response and recovery activities. If the City is eligible, work with FEMA and Cal OES representatives to enact the necessary requirements and receive funding.
- ☐ If the disaster damages local infrastructure or City-owned facilities, repair or rebuild the structure to be more resilient, following applicable hazard mitigation actions. A list of actions, organized by hazards, is included in **Attachment 4**.
- ☐ The Hazard Mitigation Grant Program (HMGP) is a FEMA program that helps fund hazard mitigation activities after a disaster event. Although not all activities may meet the program's requirements, Hollister may be eligible for funding because of the federal disaster declaration. If Hollister is eligible, work with FEMA to apply for this funding.
- ☐ **Chapter 6** of the Hollister LHMP states that the City should consider updating the LHMP if a disaster leads to a state disaster proclamation or federal disaster declaration that includes part or all of Hollister, even if there is no loss of life. Consider updating the LHMP. Consult the section on updating the LHMP in this Handbook for details.

I Want to Apply for Mitigation Grant Funding

There are three potential grant funding programs that FEMA administers for hazard mitigation activities. Two of these programs, the Pre-Disaster Mitigation (PDM) and Flood Mitigation Assistance (FMA) funding sources, are available to communities with an LHMP that complies with FEMA guidelines and has been adopted within the past five years. The third funding program is the Hazard Mitigation Grant Program (HMGP), which is available for communities that are part of a federal disaster declaration. This section discusses the PDM and FMA programs and how to apply for them. The HMGP is discussed under the "Federal Government" subsection of the above "What to Do When a Disaster Has Been Proclaimed or Declared" section.

Pre-Disaster Mitigation

The PDM grant program is a competitive, nationwide program that awards funding for planning activities and physical development programs that mitigate against future natural hazards. Development projects must be identified in a hazard mitigation plan that meets FEMA guidelines and was adopted within the past five years. When applying to this program, review the list of hazard mitigation actions in **Attachment 4** to see which projects may be eligible. Planning efforts for communities that lack a valid hazard mitigation plan may be eligible for funding if the effort would create a valid hazard mitigation plan. All PDM grant applications are processed through the State. To learn more, consult with Cal OES representatives or visit the FEMA webpage on the program. At the time of writing, this webpage is available at https://www.fema.gov/pre-disaster-mitigation-grant-program.

TAKE THE FOLLOWING STEPS TO APPLY FOR PDM FUNDING:

- ☐ Confirm that the program is currently accepting funding applications. Check with representatives from Cal OES or consult the Cal OES webpage on the PDM program. At the time of writing, this webpage is available at http://www.caloes.ca.gov/cal-oes-divisions/hazard-mitigation/pre-disaster-flood-mitigation.

- ☐ Identify the actions from the hazard mitigation strategy (see Attachment 4) that call on the City to pursue funding or list grants as a potential funding source. Confirm that the actions are consistent with the requirements of the PDM grant.
- ☐ Coordinate with Cal OES representatives to compile and submit materials for the grant application.

Flood Mitigation Assistance

The FMA grant program is a competitive, national program that awards funding for physical development projects and planning efforts that mitigate against long-term damage from flooding. The funding is only available to communities participating in the National Flood Insurance Program (NFIP), which Hollister currently does. Communities must also have a valid hazard mitigation plan that meets FEMA guidelines to be eligible. All projects must be consistent with the list of actions in the hazard mitigation strategy. When applying to this program, review the list of hazard mitigation actions in **Attachment 4** to see which projects may be eligible. As with the PDM program, applications for the FMA program must be processed through the State. To view more information, consult with Cal OES representatives or visit the FEMA webpage on the program. At the time of writing, this webpage is available at https://www.fema.gov/flood-mitigation-assistance-grant-program.

TAKE THE FOLLOWING STEPS TO APPLY FOR FMA FUNDING:

- ☐ Confirm that the program is currently accepting funding applications. Check with representatives from Cal OES or consult the Cal OES webpage on the FMA program. At the time of writing, this webpage is available at http://www.caloes.ca.gov/cal-oes-divisions/hazard-mitigation/pre-disaster-flood-mitigation.
- ☐ Identify the actions from the hazard mitigation strategy (**see Attachment 4**) that call on the City to pursue funding or list grants as a potential funding source. Confirm that the actions are consistent with the requirements of the FMA grant.
- ☐ Coordinate with Cal OES representatives to compile and submit materials for the grant application

Hollister is going through the budgeting process

Hollister's budget process is an ideal opportunity to secure funding for hazard mitigation actions and ensure that hazard mitigation efforts are incorporated into the City's fiscal priorities. Hollister currently operates on an annual budget cycle that runs from July 1 to June 30. During this process, City staff should take the following steps to incorporate hazard mitigation into Hollister's annual budget:

- ☐ Include hazard mitigation activities into Hollister's list of Capital Improvement Projects (CIP). Review the list of hazard mitigation actions in Attachment 4 and identify the projects that can be included in the CIP or support efforts within the CIP.
- ☐ Review the risk and threat assessments in the LHMP (Chapter 3 and Chapter 4) to ensure that all items in the list of CIP are being planned, designed, and constructed to minimize the threat from hazard events.
- ☐ Identify opportunities to identify state-alone hazard mitigation actions through the annual budget process. Include appropriate items from Attachment 4 in the budget as stand-alone line

items, particularly items that the Hazard Mitigation Planning Committee (Planning Committee) considered a high priority.

- ☐ Set aside staff to conduct hazard mitigation activities, including time to participate in Planning Committee meetings and time to research, prepare, and submit PDM and FMA grant opportunities (consult the "I Want to Apply for Mitigation Grant Funding" section above).
- ☐ Ensure that hazard mitigation activities are reflected in each department's priorities and earmarked time for specific goals.

Hollister is Conducting its Annual meeting of the Hazard Mitigation Planning Committee

The hazard mitigation planning process brings together representatives from multiple City departments, as well as other relevant stakeholders, and provides a forum to discuss the hazards in Hollister and how to mitigate them effectively. As mentioned in **Chapter 6** of the LHMP, the Planning Committee should meet at least once each year, beginning a year after the LHMP is adopted. During these meetings, the Planning Committee should discuss implementation progress and integration of hazard mitigation actions in other City documents. At these meetings, the Planning Committee can review the status of the hazard mitigation actions and discuss whether completed or in-progress actions are working as expected. These meetings also allow the Planning Committee to strategically plan for the upcoming year.

It may help for the Planning Committee to meet early in the year, in advance of annual budget activities. **Attachment 3** contains an example of a Planning Committee Meeting Agenda.

The annual meeting should include representatives from City departments and other organizations that originally prepared the LHMP. Representatives from other relevant organizations should also be invited. During the preparation of the LHMP, the following individuals were part of the Planning Committee:

Hollister Hazard Mitigation Planning Committee

Name	Title	Department
Abraham Prado	Interim Development Services Manager	Development Services-Planning
Ambur Cameron	Associate Planner	Development Services-Planning
Eva Kelly	Associate Planner	Development Services-Planning
Brett Miller	City Manager	Administrative Services
Cheryl Mullen	Interim Airport Director	Airport
Minerva Arredondo	Building Official	Development Services-Building
Mark Falgout	Consulting Engineer	Engineering Department

Henry Gonzalez	Interim Management Services Director	Management Services
Derrick Speights	Streets/Park Supervisor	Management Services-Public Works
Summer Garcia	Utilities Supervisor	Management Services-Utilities
Leonard Martinez	Stormwater Management Supervisor	Management Services-Stormwater Mgmt
Michael Grzan	Environmental Programs Manager	Management Services-Environmental Programs
Bob Martin Del Campo	Fire Chief	Fire
Charlie Bedolla	Battalion Chief/Fire Marshall City of Hollister	Fire
Carlos Reynoso	Police Chief	Police
Rosie Betanio	Lieutenant	Police
Eric Taylor	Captain	Sheriff's Department
Desiree Martinez	Code Enforcement Officer	Code Enforcement
Tina Garza	Recreation Services Manager	Recreation
Paul De Silva	Director of Information System & Technology	Information System & Technology
David Early	General Plan Principal in Charge	Placeworks
Carey Stone	General Plan Manager	Placeworks
Aaron Pfannenstiel	LHMP Project Manager	Atlas Planning Solutions
Crystal Stueve	LHMP Planner	Atlas Planning Solutions
Robert Jackson	LHMP Planner	Atlas Planning Solutions

In advance of Planning Committee meetings, consider using **Attachment 1** to maintain an accurate list of recent disaster events that have occurred in and around Hollister since the LHMP was adopted. At the Planning Committee meeting, review the Plan Maintenance Table **(Attachment 2**) to identify any gaps in the LHMP or any other Plan component that needs updating. This also allows Planning Committee members the opportunity to review the actions in the hazard mitigation strategy **(Attachment 4)** and ensure that they are implemented as intended.

Hollister is updating its policy and regulatory documents

Consult the following applicable section if Hollister is updating the LHMP, the Safety Element or Housing Element of the General Plan, or the Zoning Code.

Local Hazard Mitigation Plan

All LHMPs should be updated every five years. This helps keep the Plan up to date and ensures that it reflects the most recent guidance, requirements, science, and best practices. An updated LHMP also helps keep Hollister eligible for hazard mitigation grants that require a valid, recent LHMP (see "I Want to Apply for Mitigation Grant Funding"), along with an increased amount of post-disaster recovery funds.

The update process for the LHMP takes approximately one year. To ensure that a new LHMP comes into effect before the previous one expires, the update process should begin no later than four years after the Plan is adopted. Updates may occur sooner at the City's discretion. Potential reasons for updating the LHMP sooner may include a state disaster proclamation or federal disaster declaration that covers part or all of Hollister, or if a disaster leads to a loss of life in Hollister (see the "What to Do When a Disaster Has Been Proclaimed or Declared" section), as discussed in **Chapter 6** of the LHMP.

Take the following steps to update the LHMP:

Assemble the Hazard Mitigation Planning Committee

- ☐ Convene a Planning Committee meeting no later than four years after the LHMP is adopted. Invite the regular Planning Committee members and representatives from other organizations that may have a role to play in the update process.
- ☐ Review the current status of mitigation actions, including if there are any that are not being implemented as planned or are not working as expected. Determine if there have been any changes in hazard events, regulations, best practices, or other items that should be incorporated into an updated LHMP.
- ☐ Decide if there is a need for a technical consultant to assist with the LHMP update and conduct consultant selection activities if needed. If a consultant is desired, the selection process should begin a few months before the update gets underway.
- ☐ Create and implement a community engagement strategy, building off the strategy prepared for the existing LHMP. Describe in-person and online engagement strategies and materials, including ideas for meetings and workshops, draft community surveys, content for websites and press releases, and other materials that may be useful.

Update the Risk and Threat Assessments

- ☐ Review and update the risk assessment to reflect the most recent conditions in Hollister. Consider recent hazard events, new science associated with hazards and climate change, new development and land use patterns, and other recent changes in local conditions.
- ☐ Evaluate the status of all key facilities. Update this list if new facilities have been constructed or if existing facilities have been decommissioned. Re-assess the threat to key facilities.

- ☐ Review the demographics of community residents and update the threat assessment for vulnerable populations and other community members.
- ☐ Assess any changes to the threat to all other community assets, including key services, other facilities, and economic drivers.

Update the Mitigation Actions

- ☐ Update the existing hazard mitigation actions to reflect actions in progress. Remove actions that have been completed, or revise them to increase their effectiveness. Revise actions that have been abandoned or delayed to make them more feasible; remove them from the list of mitigation actions if they are no longer appropriate for Hollister.
- ☐ Develop mitigation actions to improve the status of hazard mitigation activities in Hollister by addressing any issues not covered by the existing LHMP.
- ☐ Ensure that the feedback from the community engagement activities is reflected in the new and updated mitigation actions.

Review and Adopt the Updated Plan

- ☐ Review the other chapters and appendices of the LHMP to reflect any changes made through the update process.
- ☐ Release the updated Plan to Planning Committee members, and revise the Plan to reflect any comments by Planning Committee members.
- ☐ Distribute the updated Plan to any appropriate external agencies not included in the Planning Committee, and revise the Plan as appropriate in response to any comments.
- ☐ Release the updated Plan publicly for review, and make revisions to the Plan to reflect public comments.
- ☐ Submit the Plan to Cal OES and FEMA for approval, and make any revisions as needed.
- ☐ Submit the Plan to the Hollister City Council for adoption.

The Safety Element of the General Plan

The Safety Element is a required component of Hollister's General Plan. It can be updated as a stand-alone activity or as part of a more comprehensive process to update multiple sections or all of the General Plan. The Safety Element does not need to be updated on any set schedule, but updates should be frequent enough for the element to remain current and applicable to the community.

Local communities can incorporate their LHMP into their Safety Element as allowed under Section 65302.6 of the California Government Code, as long as the LHMP meets minimum federal guidelines. This allows communities to be eligible for an increased share of post-disaster relief funding from the State if a hazard situation occurs, as per Section 8685.9 of the California Government Code.

Take the following steps to incorporate the LHMP into the Safety Element:

INCORPORATE NEW REQUIREMENTS INTO THE SAFETY ELEMENT, AND ENSURE THAT THE LHMP IS CONSISTENT WITH THE SAFETY ELEMENT

- ☐ Review the requirements for Safety Elements in Section 65302(g) of the California Government Code and LHMPs in Section 65302.6 of the California Government Code. Ensure that both documents meet all state requirements.
- ☐ Ensure that the information in both plans does not contradict each other and that any inconsistencies are corrected to use the most accurate and appropriate information. This information should include community descriptions, a risk assessment, and a threat assessment.
- ☐ Ensure that the policies in the Safety Element support the LHMP and provide a planning framework for specific hazard mitigation actions.

The Housing Element of the General Plan

The Housing Element is a required component of Hollister's General Plan. Section 65583 of the California Government Code requires a Housing Element to analyze and plan for new residential growth in a community, including residential growth for households with an annual income below the area median. Similar to an LHMP, state regulations require that the Housing Elements be updated regularly to remain current and valid.

The Housing Element is not required to contain any information or policies that relate to hazards, although it may include policies that address retrofitting homes to improve resiliency. However, state law links the regular schedule of Housing Element updates to mandatory revisions to other General Plan elements. For example, Section 65302(g)(2) of the California Government Code requires that communities that update their Housing Element on or after January 1, 2009, also update their Safety Element to include specific information and policies related to flood protection. As the LHMP is incorporated into the Safety Element, updates to the Housing Element may indirectly trigger updates to the LHMP.

To update the LHMP concurrent with updates to the Housing Element, take the following steps:

ENSURE THAT THE LHMP MEETS ANY NEW REQUIREMENTS FOR THE SAFETY ELEMENT THAT MAY BE TRIGGERED BY A HOUSING ELEMENT UPDATE

- ☐ Section 65302(g) of the California Government Code lists a number of requirements for the Safety Element of the General Plan. Some of these requirements are triggered by updates to the Housing Element. Check to see if there are any new requirements of this nature. Note that the requirement is linked to the date of adoption of the new Housing Element, not the date the update process begins.
- ☐ Because the LHMP is incorporated into the Safety Element, any amendments or revisions to the Safety Element triggered by the Housing Element update may be made directly in the LHMP. Requirements triggered by the Housing Element are unlikely to require a full rewrite of the LHMP, but the process should fully involve the Planning Committee and include appropriate community engagement.
- ☐ Adopt the updated LHMP and incorporate it into the Safety Element. If necessary, amend the Safety Element to ensure the two documents are consistent (review the "Incorporate New

Requirements Into the Safety Element, and Ensure that the LHMP is Consistent with the Safety Element" subsection above).

The Hollister Municipal Code

Hollister's Municipal Code contains a set of standards that guide land uses and development in the community. These standards include where different types of buildings and land use activities may be located, how these structures must be built, and how they must be operated or maintained. The Municipal Code may include requirements that structures (particularly new structures or those undergoing substantial renovations) incorporate hazard-resistant features, be located outside of the most hazard-prone areas, or take other steps to reduce hazard vulnerability.

All communities in California are required to adopt the minimum state Building Standard Code (BSC), which includes some hazard mitigation requirements for new or significantly renovated structures. The BSC is generally updated every three years, with supplemental code updates halfway into each update cycle. Title 15, Chapter 15.04 of Hollister's Municipal Code contains building regulations and incorporates the BSC. Other sections of the Code adopt additional standards as desired by the City that adapt the BSC to Hollister's local context.

As a participant in the National Flood Insurance Program (NFIP), Hollister is required to incorporate Floodplain Management Requirements in its Zoning Code, which is located in Title 17 – Overlay Districts, Chapter 17.14.040, Flood Hazard Overlay Zone. These regulations establish standards for the development and operation of facilities within mapped flood-prone areas. Other sections of the Hollister Municipal Code may include additional standards related to hazard mitigation activities.

With the exception of the Floodplain Management Regulations and the minimum standards in the BSC, Hollister is not required to incorporate hazard-related requirements in the Municipal Code. However, the Municipal Code is an effective tool for implementing hazard mitigation measures that relate to the siting, construction, and operation of new buildings and other structures. Substantial updates to the Municipal Code, including the Buildings and Construction and Zoning Code sections, should be done in a way that is consistent with the LHMP.

Include Hazard-Related Requirements in Applicable Sections of the Hollister Code of Ordinances

- ☐ If the BSC is being updated, evaluate the hazard-related requirements of all sections in the new BSC. Identify any areas where it may be feasible to add or revise standards to help reduce the threat from hazard events. Ensure that these standards are consistent with the LHMP. Consider whether standards should be applied to all structures, specific types of structures, or structures in a limited area (such as a flood plain).
- ☐ If the Zoning Code is being updated, ensure that all requirements do not expose community members or community assets to an excessive risk of harm. Where feasible, use the requirements to strengthen community resiliency to hazard events. Ensure that these standards are consistent with the LHMP. Consider possible standards such as overlay zones that strengthen zoning requirements in hazard-prone areas, landscaping and grading requirements that buffer development from hazards, siting and design standards that make structures more resilient, and other strategies as appropriate.

Attachment 1: Disaster Information Table

Use this table to fill out information about any disaster events that have occurred in Hollister or nearby and have had an effect on the community. Include the date and location of the disaster event, the damages associated with the event, and any information about disaster proclamations or declarations resulting from the event.

Date	Location	Damages *	Declaration Details †

* Includes number and type of injuries, number of deaths, and cost of physical damage

† If the disaster was proclaimed or declared by the local, state, and/or federal government

Attachment 2: Plan Maintenance Table

Use this table when reviewing the LHMP as part of the Planning Committee's annual activities. For each section of the LHMP, note if any changes should be made to make the Plan more effective for the community. This includes noting if anything in the LHMP is incorrect or if any important information is missing. Make revisions that are consistent with these notes as part of the next update to the LHMP.

Section	Is Anything Incorrect?	Is Anything Missing?	Should Any Other Changes Be Made?
Multiple sections or throughout			
Chapter 1: Introduction			
Chapter 2: Community Profile			
Chapter 3: Risk Assessment			
Chapter 4: Threat Assessment			
Chapter 5: Mitigation Strategy			
Chapter 6: Plan Maintenance			
Appendices			

Attachment 3: Sample Agenda and Topics for the Hazard Mitigation Planning Committee

This attachment includes a sample agenda and discussion topics for the annual meeting of the Planning Committee. Meetings do not have to follow this order or structure, but the items included in this attachment should be addressed as part of the annual meeting. During the update process for the LHMP, it is likely that the Planning Committee will meet more frequently. The meetings of the Planning Committee during the update process will involve different discussion topics.

ITEM 1: RECENT HAZARD EVENTS

1.1. What hazard events have occurred this past year in Hollister or nearby in a way that affected the community?
- Identify events that caused loss of life or significant injury to Hollister community members, significant property damage in Hollister, or widespread disruption to Hollister.
- More minor events should also be identified if there is a need for a community response to mitigate against future such events.

1.2. What are the basic facts and details behind any such hazard events?
- Consider the size and location of the affected area, any measurements of severity, any injuries and deaths, the cost of any damage, the number of people displaced or otherwise impacted, and other relevant summary information.
- Ensure that these facts and details are clearly recorded for future Plan updates, including through the use of the Disaster Information Table (**Attachment 1**).

ITEMS 2: MITIGATION ACTION ACTIVITIES

2.1. What mitigation actions have been fully implemented? Are they working as expected, or do they need to be revised?

2.2. What mitigation actions have started to be implemented since the Planning Committee last met? Is the implementation of these actions proceeding as expected, or are there any barriers or delays? If there are barriers or delays, how can they be removed?

2.3. What mitigation actions are scheduled to begin implementation in the next year? Are there any factors that could delay implementation or weaken the effectiveness of the actions? How can these factors be addressed?

2.4. What resources are needed to support planned, in-process, or ongoing mitigation actions? Does the City have access to these resources? If not, how can the City obtain access to these resources?

ITEM 3: INFORMATION SHARING

3.1. Is the City communicating with all appropriate local jurisdictions, including neighboring communities, Orange County, and special districts? This should include information on district-specific hazard situations, mitigation actions, and other relevant information.

3.2. Is the City communicating with the appropriate state and federal agencies? Is the City receiving information about new regulations, best practices, and data that relates to hazard mitigation activities?

3.3. Are there opportunities for the City to improve coordination with local, state, and federal jurisdictions and agencies?

ITEM 4: BUDGETARY PLANNING

4.1. What are the financial needs for Hollister to support the implementation of planned and in-process mitigation actions, including ongoing items? Is there sufficient funding for all measures in the LHMP that are planned for the next year, including in-process and ongoing items? How can the City obtain these funds if sufficient funding is not available?

4.2. Which ones should be prioritized if it is not feasible for the City to support all planned, in-process, or ongoing mitigation actions?

4.3. Are there hazard-related activities not included in the LHMP that should be budgeted for? Can the City obtain the necessary funding for these activities?

ITEM 5: STRATEGIC PLANNING

5.1. Which grants are available for hazard mitigation activities, and which activities are best positioned to secure funding?

5.2. How should the agencies and other organizations represented on the Planning Committee coordinate to maximize the chances of receiving funding?

5.3. Are there any scheduled or anticipated updates to other City documents related to hazard mitigation activities? How can the Planning Committee share information with staff and any technical consultants responsible for these updates and ensure that the updates will enhance community resiliency?

5.4. What capital projects are scheduled or anticipated? Are these capital projects being designed and built to be resistant to hazard events? Are there opportunities for these projects to support hazard mitigation activities?

5.5. How can Planning Committee members coordinate efforts with those responsible for capital projects to take advantage of economies of scale that will make hazard mitigation activities easier to implement?

5.6. Has it been four years since the adoption of the LHMP? If so, lay out a timeline for Plan update activities, including additional meetings of the Planning Committee. Identify if a technical consultant is needed and begin the contracting process if so.

5.7. Are there any other opportunities for Planning Committee members and the organizations they represent to coordinate efforts?

ITEMS 6: NEW BUSINESS

6.1. Are there any other items related to the Planning Committee's mission?

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Attachment 4: Hazard Mitigation Strategy

City of Hollister Mitigation Actions

	Mitigation Action	Potential Funding Sources	Responsible Department	Relative Cost*	Time frame	Priority
Multiple hazards						
1.01	Require undergrounding of all utilities in new developments. Prioritize undergrounding existing overhead utilities in high hazard areas.	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering	$$$	Ongoing	High
1.02	Conduct routine updates of the Facility Conditions Assessment for City-owned infrastructure, buildings, lift stations, and other utilities and coordinate with agencies and utilities on regularly scheduled inspections. (Hazards addressed: All)	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Building	$$	Ongoing	Medium
1.03	Repair, as feasible, all major deficiencies discovered by inspections to prevent collapse, failure, or damage in the event of a natural disaster. (Hazards addressed: All)	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Building	$$$	Ongoing	Low
1.04	Install and harden emergency backup power at Civic and Community Centers and other critical facilities as deemed necessary. Prioritize installations for facilities that serve as key cooling/warming centers and evacuation centers. (Hazards addressed: All)	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works	$$$	2025	Medium
1.05	Conduct a feasibility assessment of installation of solar and battery backup systems at key critical facilities within the City. (Hazards addressed: All)	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering	$$	2023	Medium

1.06	Upgrade to more energy-efficient equipment to increase the longevity of backup generator fuel supplies. (Hazards addressed: All)	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works	$$	Ongoing	Low
1.07	Avoid building new City-owned key facilities in mapped hazard areas. If no feasible sites outside of mapped areas exist, ensure that such facilities are hardened against hazards beyond minimum building requirements/ mitigation standards. (Hazards addressed: All)	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Planning, Engineering	$	Ongoing	Low
1.08	Closely monitor changes in the boundaries of mapped hazard areas resulting from land use changes or climate change and adopt new mitigation actions or revise existing ones to ensure continued resilience. (Hazards addressed: All)	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Planning, Engineering	$	Ongoing	Low
1.09	Integrate policy direction and other information from this Plan into other City documents, including the General Plan, Emergency Operations Plan, and Capital Improvements Program. (Hazards addressed: All)	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Planning, Engineering	$$	Ongoing	Medium
Aircraft Incident						
2.01	Airport upgrades should incorporate strategies that allow the facility to become a regional staging location in case of local or widespread disaster.	General Fund, BRIC/ HMGP Grants, Other Grants	City Manager's Office, Airport	$$$	TBD	Low
2.02	Upon the next update of the Hollister Airport Master Plan, integrate relevant mitigation strategies and actions from the General Plan, LHMP, and EOP.	General Fund, BRIC/ HMGP Grants, Other Grants	City Manager's Office, Airport	$$$	TBD	Medium

2.03	Infrastructure improvements surrounding Hollister Airport should consider future airport upgrades and enhancements.	General Fund, BRIC/ HMGP Grants, Other Grants	Airport, Planning, Engineering	$$$	TBD	Low
Flood						
3.01	Enforce creek protection, stormwater management, and discharge control ordinances designed to keep watercourses free of obstructions and protect drainage facilities in conformance with the Regional Water Quality Control Board's Best Management Practices.	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering	$$	Ongoing	Low
3.02	Require new developments to construct utility systems that reduce or eliminate damage associated with flooding.	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering	$$	Ongoing	Low
3.03	Periodically update the City's flood management regulations and mapping as new data becomes available.	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering	$$	TBD	Low
3.04	Where feasible, use permeable paving and landscaped swales for new and replacement City-owned hardscaped areas.	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Engineering	$$$	Ongoing	Low
3.05	Identify areas with known ponding or poor drainage during rain events and increase storm drain capacity in these areas.	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Engineering	$$$	2026	Medium

3.06	Require new critical facilities to be built a minimum of 1 foot higher than the anticipated 500-year flood elevation height where feasible.	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering	$$$	Ongoing	Medium
3.07	Encourage all property owners within 100-year and 500-year floodplains to obtain flood insurance and flood-proof their structures.	General Fund, BRIC/ HMGP Grants, Other Grants	Planning, Engineering, Building	$	Ongoing	Low
3.08	Retrofit roadways with green infrastructure design elements/ features to capture stormwater during rain events. Prioritize improvements along major arterials/ roadways throughout the City.	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Engineering	$$$	TBD	Medium
3.09	Periodically update the City's Storm Drain Master Plan to incorporate new data and/or address emerging issues, especially those associated with climate change.	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering	$$$	TBD	Low
Vector Borne Diseases/Pandemic						
4.01	Assess and institute necessary upgrades to critical facilities to allow for usage during pandemic events, including adequate ventilation and physical barriers. (Hazard Addressed: Pandemic)	General Fund, BRIC/ HMGP Grants, Other Grants	Building, Public Works	$$$	TBD	Medium
Drought						
5.01	Periodically update the Municipal Code and Urban Water Management Plan with the latest drought restrictions and requirements and frequently share this information with the residents and businesses throughout the City. Reference current water restrictions.	General Fund, BRIC/ HMGP Grants, Other Grants	Planning, Building	$$	Ongoing	Medium

5.02	Install redundant and backup water supply infrastructure throughout the City to ensure water availability after a hazard event.	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering, Public Works	$$$	TBD	Medium
5.03	Coordinate closely with City of Hollister Water and Sunnyslope Water District on water use and water conservation efforts and educate residents, businesses, and agricultural operations throughout the City.	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering, Public Works	$	Ongoing	Low
5.04	Encourage drought-tolerant native landscaping, low-flow water fixtures beyond the state minimum code, and daytime watering restrictions on properties throughout the city to reduce water consumption.	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Building	$	Ongoing	Low
5.05	Use drought-tolerant plants when installing new or retrofitting City-owned landscapes. Limit turf that is not drought tolerant to recreational fields and lawns, and only in instances where no feasible drought-tolerant alternatives exist.	General Fund, BRIC/ HMGP Grants, Other Grants	Planning, Public Works	$$$	Ongoing	Low
5.06	Work with City of Hollister Water and Sunnyslope Water District to develop a focused water leak pilot program to eliminate leaky water infrastructure, focusing on areas of the City with the greatest water demand.	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Engineering	$$$	2025	Medium
5.07	Collaborate with the City of Hollister Water and Sunnyslope Water District, to pursue water efficiency best practices to reduce water demand and the need for imported water as feasible.	General Fund, BRIC/ HMGP Grants, Other Grants	Building, Planning, Public Works, Engineering	$$-$$$	Ongoing	Low
Human-Caused Hazards (Mass-Casualty Incidents, Civil Disturbance, Cyber Threats)						
6.01	Disseminate information on cyber threats or potential terrorist activity to City staff and continually follow-up with information on further developments on the situation. (Hazards addressed: Terrorism/Mass Casualty Incidents, Cyber Threats)	General Fund, BRIC/ HMGP Grants, Other Grants	Police, IT	$$	Ongoing	High

6.02	Regularly update cyber security software and educate business owners and residents on current internet-based threats. (Hazards addressed: Cyber Threats)	General Fund, BRIC/ HMGP Grants, Other Grants	IT	$$$	Ongoing	High
Seismic Hazards (Fault Rupture, Seismic Shaking, Liquefaction)						
7.01	Meet or exceed applicable codes and regulations (such as state requirements for fault, landslide, and liquefaction investigations) when constructing or significantly remodeling critical facilities.	General Fund, BRIC/ HMGP Grants, Other Grants	Planning, Building	$$$	TBD	Medium
7.02	Post notifications on City-owned/occupied buildings for occupants and visitors that identify the potential seismic risks based on building design and construction.	General Fund, BRIC/ HMGP Grants, Other Grants	Building, Public Works	$$	TBD	Low
7.03	Survey and require City buildings to conduct soft seismic retrofits (e.g., shelf bracing, securing ceiling tiles, and tie-down activities.)	General Fund, BRIC/ HMGP Grants, Other Grants	Building, Public Works	$$	Ongoing	High
7.04	To the extent feasible, construct all new and significantly retrofitted City-owned facilities to remain operational in the event of a major earthquake.	General Fund, BRIC/ HMGP Grants, Other Grants	Building, Public Works	$$$	TBD	High
7.05	Retrofit key critical facilities with seismically rated window film treatments that ensure glass windows do not shatter during a strong seismic event.	General Fund, BRIC/ HMGP Grants, Other Grants	Building, Public Works	$$$	2024	High
7.06	Critical facilities located in areas of very high liquefaction susceptibility incorporate ground improvement elements to ensure facilities remain operational after a seismic event.	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Engineering	$$$	TBD	Low

7.07	Install flexible jointing and pipelines across fault segments located within the City. Ensure these pipelines have the necessary countermeasures to ensure breakage of lines is kept to a minimum and adequate shut-off mechanisms to reduce exposure of pipeline contents to residents and businesses.	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works	$$$	2026	High
7.08	Identify seismically vulnerable structures (e.g., Unreinforced masonry, soft story construction, and non-ductile concrete) within the City and develop incentives and potential funding opportunities to support mitigation of these conditions where feasible.	General Fund, BRIC/ HMGP Grants, Other Grants	Planning, Building	$$$	Ongoing	Medium
Geologic Hazards (Erosion, Landslides)						
8.01	Address hillside development constraints in steep slopes to reduce excessive road maintenance or potential land slide effects during winter storms and work with private property owners to install and maintain drainage systems and stabilize vegetation on and above steep slopes.	General Fund, BRIC/ HMGP Grants, Other Grants	Engineering, Public Works	$$$	2025	Medium
8.02	Require geotechnical studies in areas of significant landslide threat and identify strategies for existing development downstream of these hazard areas.	General Fund, BRIC/ HMGP Grants, Other Grants	Planning	$	Ongoing	Low
8.03	Retrofit City facilities to reduce the potential for landslide events within or adjacent to critical infrastructure.	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Engineering	$$$	TBD	Low
Severe Weather						

9.01	Promote passive cooling design (brise soleil, long roof overhangs, locating windows away from southern facades, etc.) in new developments during the design review process. (Hazards addressed: Extreme Heat)	General Fund, BRIC/ HMGP Grants, Other Grants	Building, Planning	$	Ongoing	Low
9.02	Upgrade HVAC within City facilities to more efficient systems, including split systems or decentralized systems that allow for heating and cooling the spaces needed, not entire buildings. (Hazards addressed: Extreme Heat)	General Fund, BRIC/ HMGP Grants, Other Grants	Public Works, Building	$$$	2026	Medium
9.03	Evaluate the long-term capacity of designated cooling centers and shelters in the City to provide sufficient relief from extreme heat. Assess the need to expand services as future heatwaves' frequency, length, and severity potentially change. (Hazards addressed: Extreme Heat)	General Fund, BRIC/ HMGP Grants, Other Grants	Recreation, Public Works	$$	2023	High
9.04	Implement a tree-planting program to diversify tree age and increase shaded areas in the City to reduce the effects of the urban heat island effect. (Hazards addressed: Extreme Heat)	General Fund, BRIC/ HMGP Grants, Other Grants	Planning, Public Works	$$$	2025	Medium
9.05	Conduct outreach to residents and businesses prior to the severe wind (Diablo Wind events) on proper tree maintenance and identification of potentially hazardous trees. (Hazard addressed: Severe Wind)	General Fund, BRIC/ HMGP Grants, Other Grants	City Manager's Office, Public Works	$	Annually	Low
Wildfire						
10.01	Promote home hardening, defensible space, and increased use of fire-resistant materials in new developments in close proximity to fire hazard severity zones.	General Fund, BRIC/ HMGP Grants, Other Grants	Fire	$	Ongoing	High

10.02	Work with property owners to manage dead vegetation in flood control facility footprints, railroad rights-of-way, parks, and open spaces, especially during and after a drought episode.	General Fund, BRIC/ HMGP Grants, Other Grants	Code Enforcement, Public Works	$$	Ongoing	Medium

*	**Relative Cost Categories:**
$	Less than $15,000
$$	$15,001 to $99,999
$$$	Greater than $100,000 City Manager can approve under $100K w/o council approval

Appendix J. Planning Process

This appendix consists of documentation of the planning process used to develop the HMP. The appendix is separated into the following sections:

- Engagement Strategy
- Kick-Off Meeting
- Planning Committee Meetings
- Risk Assessment Meeting
- Capability Assessment Webinar
- Mitigation Strategy Workshop
- Plan Review Meeting
- Public Outreach
- Newsletters
- Planning Process Participation

Engagement Strategy

1. Engagement Strategy (2/12/2021)

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Engagement Strategy

Introduction

Background

The San Benito County Multi-Jurisdictional Hazard Mitigation Plan (HMP) Update project provides the opportunity to develop an HMP that enhances and expands upon the County's capabilities to mitigate the impacts of disasters. This project will result in an HMP that meets and exceeds all Federal Emergency Management Agency (FEMA) requirements and aligns with guidance from the State of California.

Throughout the hazard mitigation planning process, San Benito County and the Project Team from Hagerty Consulting ("Hagerty") will engage with various members of the community to understand their values and collect their input relative to the HMP. This process is vital to developing a comprehensive approach to reducing the vulnerability of the people, property, and infrastructure of San Benito County to disasters.

Engagement Requirements

FEMA requires that HMP development includes substantive outreach to the community during the planning and plan maintenance processes, as defined in 44 CFR §201.6(b):

> *In order to develop a more comprehensive approach to reducing the effects of natural disasters, the planning process shall include: (1) An opportunity for the public to comment on the plan during the drafting stage and prior to plan approval; (2) An opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia, and other private and non-profit interests to be involved in the planning process; and (3) Review, and incorporation, if appropriate, of existing plans, studies, reports, and technical information.*

This requirement details that the jurisdiction must provide and document opportunities for the community to engage in the process; the number of individuals that choose to be involved in those opportunities will not impact the approval of the plan. Additionally, this requirement does not specify the exact methods through which engagement must occur, and the County may choose and adapt activities to best suit the community. This document outlines an Engagement Strategy that meets and exceeds FEMA requirements and is tailored to San Benito County.

Purpose

Engagement during the development of the HMP should **provide the opportunity for the whole community to participate in the planning process**. Participation may occur in various ways, as outlined in the sections below, and will provide opportunities for individuals to contribute to the development of the plan and give feedback on a drafted deliverable. Community values and feedback will be collected through direct means, in which individuals are invited to participate in outreach activities themselves, and through the participation of community group representatives (e.g., religious leader). Enabling the whole community to co-create the HMP ensures that the diverse values of the County's constituents are documented, analyzed, and reflected in the mitigation strategy, which in turn helps develop a plan that **comprehensively protects the community** and **builds its resilience**.

Objectives

The objectives of the San Benito County HMP Engagement Strategy are as follows:

- Increase community knowledge about relevant hazards and related mitigation activities;
- Collect comprehensive feedback and input; and
- Promote collaboration among stakeholders that may extend beyond the HMP process.

These objectives will ensure that the plan effectively engages the whole community. Each action identified in the Engagement Activities section will meet at least one of these objectives.

Engagement Activities

Audiences

The audiences that will be involved throughout the development of the San Benito County HMP are distributed between three categories, as shown in Figure 1. This tiered structure is delineated by intended participation in the planning process and desired feedback. It will both streamline the outreach process and ensure engagement is comprehensive and inclusive of the whole community.



Figure 1. Stakeholder Organization

The proposed key stakeholders are identified in Appendix A and were developed from those engaged in the 2015 San Benito County HMP process. While the outreach to each of these groups is vital to a successful planning process and HMP, the exact activities and purposes for engaging them will differ. The activities intended to engage each of these groups are outlined below. A complete list of the engagement activities are compiled in Appendix B.

Planning Committee

The Planning Committee will consist of leadership from the California Department of Forestry and Fire Protection (CAL FIRE): San Benito-Monterey Unit, San Benito County, Sunnyslope Water District, San Benito County Water District, City of Hollister, City of San Juan Bautista, and Hollister Fire Department. This group is responsible for organizing and executing the planning process, directing the development of the HMP, and reviewing drafts of planning documents. They will be consulted to make high-level decisions about the purpose and goals of the HMP.

The table below outlines the activities intended to engage the Planning Committee throughout the HMP planning process, divided into one-time engagement events and ongoing engagement activities. This group will also be invited to participate in the activities outlined for the Stakeholder Group and Public.

Table 1. Planning Committee Engagement Activities

Event	Type	Purpose	Deadline
Project Kick-Off Meeting	Meeting	Introduce the HMP planning process and begin discussions on the goals of the project	January 13, 2021
Engagement Strategy	Document Review	Opportunity to review the document and provide feedback	January 29, 2021
Drafted Risk Assessment	Document Review	Opportunity to review the document and provide feedback	March 3, 2021
Risk Assessment Meeting	Meeting	Review and contextualize findings of the Risk Assessment	March 20, 2021
Drafted Capability Assessment	Document Review	Opportunity to review the document and provide feedback	April 7, 2021
Capability Assessment Webinar	Meeting	Review existing capabilities and discuss how they may support implementation of mitigation projects	April 14, 2021
Drafted Mitigation Strategy	Document Review	Opportunity to review the document and provide feedback	May 5, 2021
Draft 1 MJHMP Completed	Document Review	Opportunity to review the document and provide feedback	August 2, 2021
Plan Review Meeting	Meeting	Ensure comprehensive understanding of the HMP contents and intended feedback	August 11, 2021
Project Closeout Meeting	Meeting	Transfer documentation and submit final invoice	Pending FEMA APA
Project Management Calls	Meeting	Discuss the progress of the HMP and direct its development	Biweekly

Stakeholder Group

The Stakeholder Group will consist of a larger audience of community representatives. Hagerty will coordinate with the Planning Committee to define the composition of the Stakeholder Group. This group will include key organizations that the County regularly interacts with, such as:

- Law enforcement groups;
- Regional and federal agencies;
- Neighboring jurisdictions (e.g., Monterey Fire Safety Council); and
- County and City departments that manage economic development, land use, housing, health and social services, infrastructure, and natural resources.

The Stakeholder Group will also consist of community groups that the County may not engage with as consistently (e.g., significant local employers, utility providers, cultural and faith-based organizations). Hagerty will work with the County to build out a Stakeholder Group that represents the whole community.

The Stakeholder Group will be invited to provide feedback on drafted plans. They will provide input on the development of the plan given their understanding of local community needs and values. As needed, Planning Committee may consult with individuals in the Stakeholder Group for subject matter expertise on specific topics.

The table below outlines the activities intended to engage the Stakeholder Group throughout the HMP planning process, divided into one-time engagement events and ongoing engagement activities. This group will also be invited to participate in the activities outlined for the Public.

Table 2. Stakeholder Group Engagement Activities

Event	Type	Purpose	Deadline
Mitigation Strategy Workshop	Interviews and Meetings	Develop a set of mitigation goals and actions to reduce long-term risk to hazards	May 12, 2021
Plan-to-Project Workshop	Interviews and Meetings	Discuss implementing mitigation actions and funding opportunities	October 20, 2021
Newsletters*	Email	Provide updates on the progress of the HMP and alert of upcoming engagement events	Monthly

*A further description of the newsletters and their expected content can be found in Appendix C.

Public

The Public will consist of the residents of San Benito County. The Public will be invited to participate in surveys to document their understanding of community hazards and capabilities to mitigate those hazards. They will also have the opportunity to directly review and provide feedback on the completed HMP prior to its submission to FEMA.

The table below outlines the activities intended to engage the Public throughout the HMP planning process.

Table 3. Public Engagement Activities

Event	Type	Purpose	Deadline
Community Hazards Survey	Survey	Collect information related to hazards present in the community	February 1 – March 1, 2021
Capability Survey	Survey	Collect information related to existing capabilities of the County to mitigate hazards	March 1 – 15, 2021
Public Review Period	Document Review	Opportunity to review the document and provide feedback	September 7 – October 7, 2021

Methodology

The methods described in this section will ensure the effectiveness of the engagement activities and that the outlined objectives are achieved. These methods may be used singularly or in conjunction with each other when planning for and executing the Engagement Strategy.

Method 1: Leverage existing methods of community outreach.

When planning engagement activities, Hagerty and the Planning Committee will ensure meetings are consistent with existing County outreach activities. This will allow for a coordinated approach to effective engagement, and may be conducted by:

- Adding notices of upcoming mitigation planning activities in community newsletters;
- Combining outreach activities with community townhalls;
- Including planning activities in community calendars; and/or
- Publicizing engagements on County websites.

The timeline of the proposed engagement activities will be consistent with the schedule of existing County activities, so as not to create competition between County priorities.

Method 2: Communicate regularly and transparently on the progress of the HMP.

During the planning process, the Planning Committee will communicate regularly and transparently with the community. They will utilize clear and simple language to convey the progress of the HMP and complex scientific concepts to ensure they are understandable by all. Transparency during the development of the Plan will promote public trust and participation in the engagement activities.

Method 3: Maintain documentation of planning activities and relevant materials in accessible formats.

All engagement and planning activities will be documented thoroughly to ensure compatibility with FEMA requirements and access to information by the community. Meeting summaries, documents for feedback, and other materials will be documented and maintained on various platforms. Documentation may be conducted by:

- Sharing meeting minutes with the Planning Committee on a shared online folder;
- Keeping the file sizes of public-facing documents small so it is easier to download for those who may not have access to high-speed internet;
- Including valuable milestones of the HMP process in monthly newsletters; and/or
- Posting updates on the planning process on the County website and other social media pages.

Anticipating and addressing challenges of accessibility is key to engaging the community in an effective and comprehensive way and will allow those with barriers to engagement the opportunity to still participate in the planning process.

Method 4: Use technology in innovative ways to connect with the audiences.

The Planning Committee will use various technology platforms to best connect with the community. The coronavirus disease 2019 (COVID-19) has created many barriers for engagement, and the Planning Committee will rely on technology to effectively engage with intended audiences in this virtual environment. This engagement may include webinars, electronic newsletters, and pre-scripted messaging for County websites and social media pages.

Hagerty has access various technology platforms to build surveys (e.g., Google Forms, Survey Monkey) and host meetings (e.g., Google Meets, Zoom) that may be useful during the planning process. The exact platforms to be used will be determined by the Planning Committee.

Method 5: Maintain a unified and consistent message.

Messaging shared by the Planning Committee with the Stakeholder Group and Public will be direct and consistent. This will help standardize and reinforce the information being shared. Common messages to be relayed throughout the project, encouraging participation in the planning process, include:

- Advocate for your community's needs and values by voicing your input.
- Your involvement is vital to the development of a comprehensive and effective plan, inclusive of a diversity of opinions.
- Represent those who have barriers to access or are unable to attend engagements. Their voice is as important as your own.
- Participation in the planning process helps align department, agency, or organizational goals and resources with the HMP.
- Your involvement fosters collaboration and bolsters the County's effort to build resilience to and better prepare for future disasters.

Appendix A. Proposed Stakeholders

The following table identifies proposed stakeholders to include in the Stakeholder Group. This list was developed based on the stakeholders involved in the 2015 San Benito County HMP Planning Process and will be finalized by the Planning Committee.

Jurisdiction	Department or Agency
State of California	CAL FIRE: San Benito-Monterey Unit
Monterey Bay Area	Association of Monterey Bay Area Governments
Monterey County	Monterey County Fire Safety Council
San Benito County	Administrative Officer
	Agriculture Commissioner
	Health and Human Services Agency
	GIS
	Office of Emergency Services
	Resource Management Agency
	San Benito Fire Safe Council
	Sherriff's Office
San Benito County Water District	Engineering Manager
Sunnyslope County Water District	General Manager
City of Hollister	Airport
	Animal Care & Services
	City Manager
	Development Services
	Management Services
	Hollister Fire
	Hollister Police
City of San Juan Bautista	City Manager
	Planning Department
	Public Works Department

Appendix B. Engagement Schedule

The table below outlines the schedule of the engagement events during the HMP planning process, identifying the intended audience for each described activity. The newsletter schedule is excluded from this table and detailed in Appendix C.

Event	Type	Audience	Purpose	Deadline
Project Kick-Off Meeting	Meeting	Planning Committee	Introduce the HMP planning process and begin discussions on the goals of the project	January 13, 2021
Engagement Strategy	Document Review	Planning Committee	Opportunity to review the document and provide feedback	January 27, 2021
Community Hazards Survey	Survey	Public	Collect information related to hazards present in the community	February 1 – March 1, 2021
Drafted Risk Assessment	Document Review	Planning Committee	Opportunity to review the document and provide feedback	March 3, 2021
Risk Assessment Meeting	Meeting	Planning Committee	Review and contextualize findings of the Risk Assessment	March 20, 2021
Capability Survey	Survey	Public	Collect information related to existing capabilities of the County to mitigate hazards	March 1 – 15, 2021
Drafted Capability Assessment	Document Review	Planning Committee	Opportunity to review the document and provide feedback	April 7, 2021
Capability Assessment Webinar	Meeting	Planning Committee	Review existing capabilities and discuss how they may support implementation of mitigation projects	April 14, 2021
Drafted Mitigation Strategy	Document Review	Planning Committee	Opportunity to review the document and provide feedback	May 5, 2021
Mitigation Strategy Workshop	Interviews and Meetings	Stakeholder Group	Develop a set of mitigation goals and actions to reduce long-term risk to hazards	May 12, 2021
Draft 1 MJHMP Completed	Document Review	Planning Committee	Opportunity to review the document and provide feedback	August 2, 2021
Plan Review Meeting	Meeting	Planning Committee	Ensure comprehensive understanding of the HMP contents and intended feedback	August 11, 2021
Public Review Period	Document Review	Public	Opportunity to review the document and provide feedback	September 7 – October 7, 2021
Plan-to-Project Workshop	Interviews and Meetings	Stakeholder Group	Discuss implementing mitigation actions and funding opportunities	October 20, 2021
Project Closeout Meeting	Meeting	Planning Committee	Transfer documentation and submit final invoice	Pending FEMA APA

Appendix C. Newsletter Schedule

The following table describes the monthly newsletters to be sent to the Stakeholder Group throughout the planning process. The exact deadline of each newsletter will be determined depending on the progress of the HMP.

Issue No.	Projected Date	Purpose
1	Week of February 8	Introduce the newsletter and HMP process, invitation to fill out Community Hazards Survey, overview of upcoming Capability Survey
2	Week of March 1	Update on HMP progress, review of Community Hazards Survey, invitation to fill out Capability Survey
3	Week of April 5	Update on HMP progress and Risk Assessment, review of Capability Survey, invitation to Mitigation Strategy Workshop
4	Week of May 3	Update on HMP progress and Capability Assessment, reminder of Mitigation Strategy Workshop, examples of mitigation strategies
5	Week of June 7	Update on HMP progress and Mitigation Strategy, review of Mitigation Strategy Workshop
6	Week of July 5	Update on HMP progress
7	Week of August 2	Update on HMP progress, reminder of upcoming Public Review Period
8	Week of September 6	Update on HMP progress, reminder of Public Review Period

Kick-Off Meeting

1. Kick-Off Meeting Presentation (1/13/2021)
2. Kick-Off Meeting Notes (1/13/2021)

January 13, 2021

San Benito County Multi-Jurisdictional Hazard Mitigation Plan

Planning Committee Kick-Off Meeting

HAGERTY

Welcome and Introductions

- Name, Title, Agency
- Introduction to the Project:
  - How have you previously been involved with emergency management?
  - Were you involved in the previous HMP update?



Welcome and Introductions

Michael Levkowitz
Project Manager, Hagerty Consulting

Michelle Bohrson
Deputy Project Manager, Hagerty Consulting

Jim DeAngelo
Project Advisor, Hagerty Consulting

Rob Lange
GIS Specialist, Hagerty Consulting

Julia Davatzes
Planner, Hagerty Consulting

Who is Hagerty Consulting?

Hagerty helps clients prepare for, respond to, and recover from disasters.



Since 2001

we have supported the nation's largest disaster recovery efforts

including 9/11, Katrina, Sandy, the 2018 wildfires, & dozens of others



700+

professionals & subject matter experts
including a core of 125+ full-time employees



We work collaboratively with stakeholders to meet desired outcomes



400+

preparedness projects executed by our professionals for clients across planning, training, exercise, assessment, & other pre-disaster programs



0

significant adverse audit findings for any of our clients

HAGERTY

Hagerty Office Locations

Evanston, IL
(Hagerty Headquarters)



Washington, DC



New York City, NY



Austin, TX



Hickory, NC



Sacramento, CA

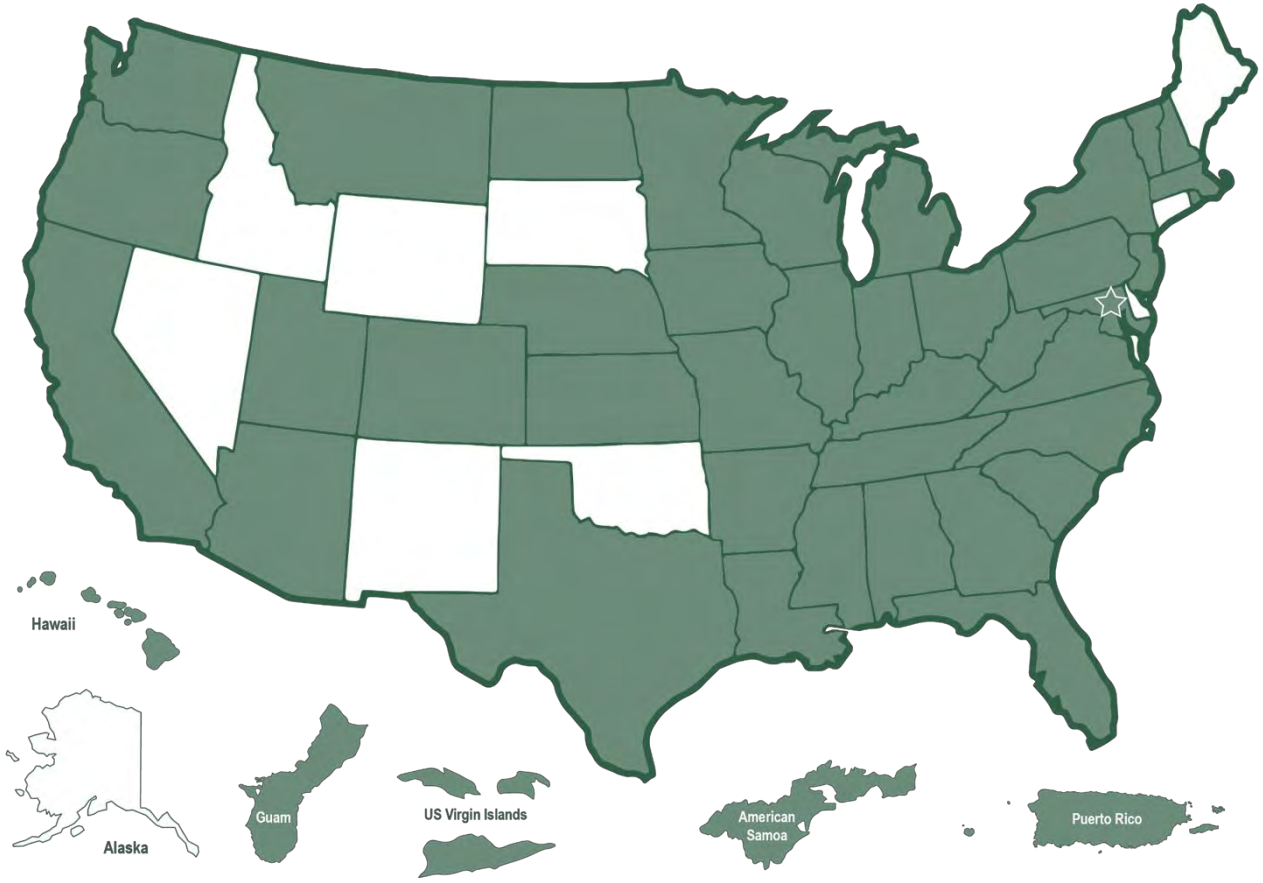


San Juan, PR



HAGERTY

Hagerty is a National Leader in Emergency Management



Our Services



PREPAREDNESS

- Active Shooter Planning, Training, and Exercises
- Citizen Preparedness Campaigns
- Cybersecurity Planning
- Public Health and Medical Planning
- Mass Care and Shelter Planning



RECOVERY

- Accounting and Internal Controls
- Disaster Housing Operations
- Mitigation Support
- Program Implementation and Monitoring
- Long-Term Community Recovery

HAGERTY

Agenda

1:15 – 1:30 P.M.	Project Overview
1:30 – 1:55 P.M.	Risk Assessment Overview
1:55 – 2:20 P.M.	Mitigation Strategy Session
2:20 – 2:30 P.M.	Next Steps

Project Overview

Hazard Mitigation Planning (HMP)



San Benito County Fires, June 2020

HMP Requirements and Benefits

- Required by the Disaster Mitigation Act of 2000 to receive types of non-emergency disaster assistance
- Hazard Mitigation Plans benefit communities by:
  - Investing in the community's future sustainability and resilience
  - Educating the public and community officials about hazard risks and vulnerabilities of people, property, and infrastructure
  - Promoting collaboration among community stakeholders

Planning Process



Project Approach

Task 1	Task 2	Task 3	Task 4	Task 5
• Project Kickoff Meeting • Project Management Plan • Outreach Strategy	• Community Hazards Survey • Risk Assessment • Capability Assessment	• Mitigation Strategy • Mitigation Strategy Workshop	• Draft 1 and 2 MJHMP • Public Review Period	• Final MJHMP Submission • Plan-to-Project Workshop • Project Closeout
November 2020 – January 2021	February – April 2021	May – June 2021	July – September 2021	October 2021 – FEMA APA

Engagement Strategy



Project Communication

- **Planning Committee Communications**: regular project management calls and virtual workshops
- **Engaging Stakeholders**: Capability Survey and monthly electronic newsletters
- **Public Involvement**: Community Hazards Survey and Public Review Period



Webinars and Workshops

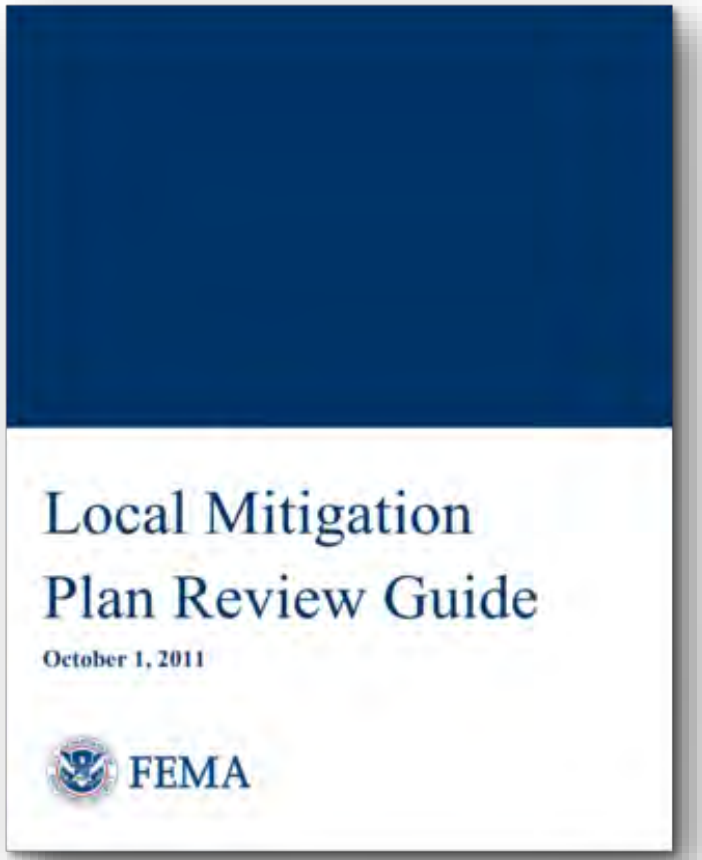


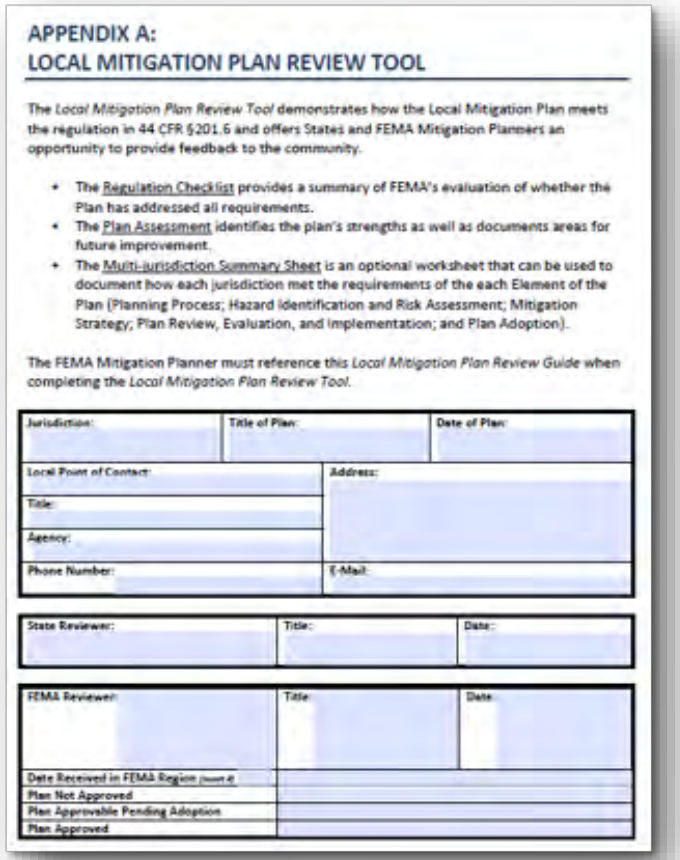
Monthly Electronic Newsletters



Online Surveys

Federal Planning Requirements





APPENDIX A:
LOCAL MITIGATION PLAN REVIEW TOOL

The *Local Mitigation Plan Review Tool* demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The Regulation Checklist provides a summary of FEMA's evaluation of whether the Plan has addressed all requirements.
- The Plan Assessment identifies the plan's strengths as well as documents areas for future improvement.
- The Multi-jurisdiction Summary Sheet is an optional worksheet that can be used to document how each jurisdiction met the requirements of the each Element of the Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this *Local Mitigation Plan Review Guide* when completing the *Local Mitigation Plan Review Tool*.

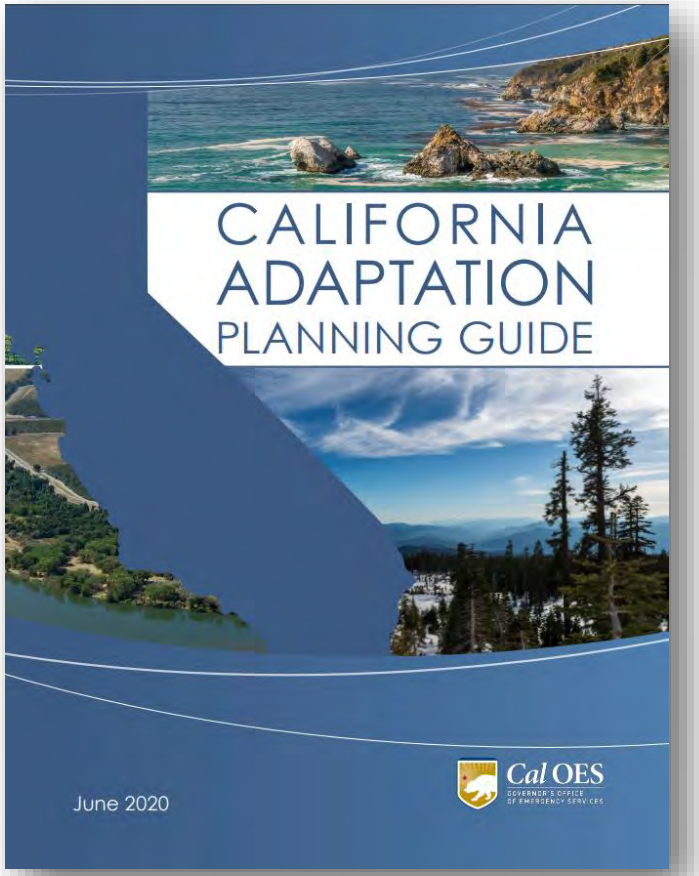
Jurisdiction:	Title of Plan:	Date of Plan:
Local Point of Contact:		Address:
Title:		
Agency:		
Phone Number:		E-Mail:

State Reviewer:	Title:	Date:

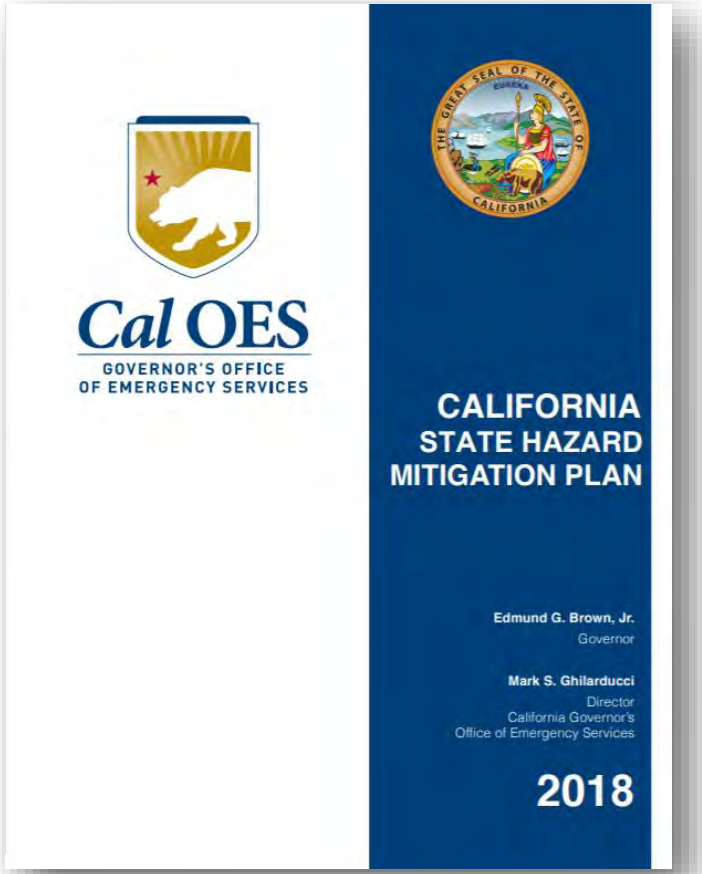
FEMA Reviewer:	Title:	Date:
Date Received in FEMA Region (insert #)		
Plan Not Approved		
Plan Approvable Pending Adoption		
Plan Approved		

Local Mitigation Plan Review Guide

State Plan Alignments



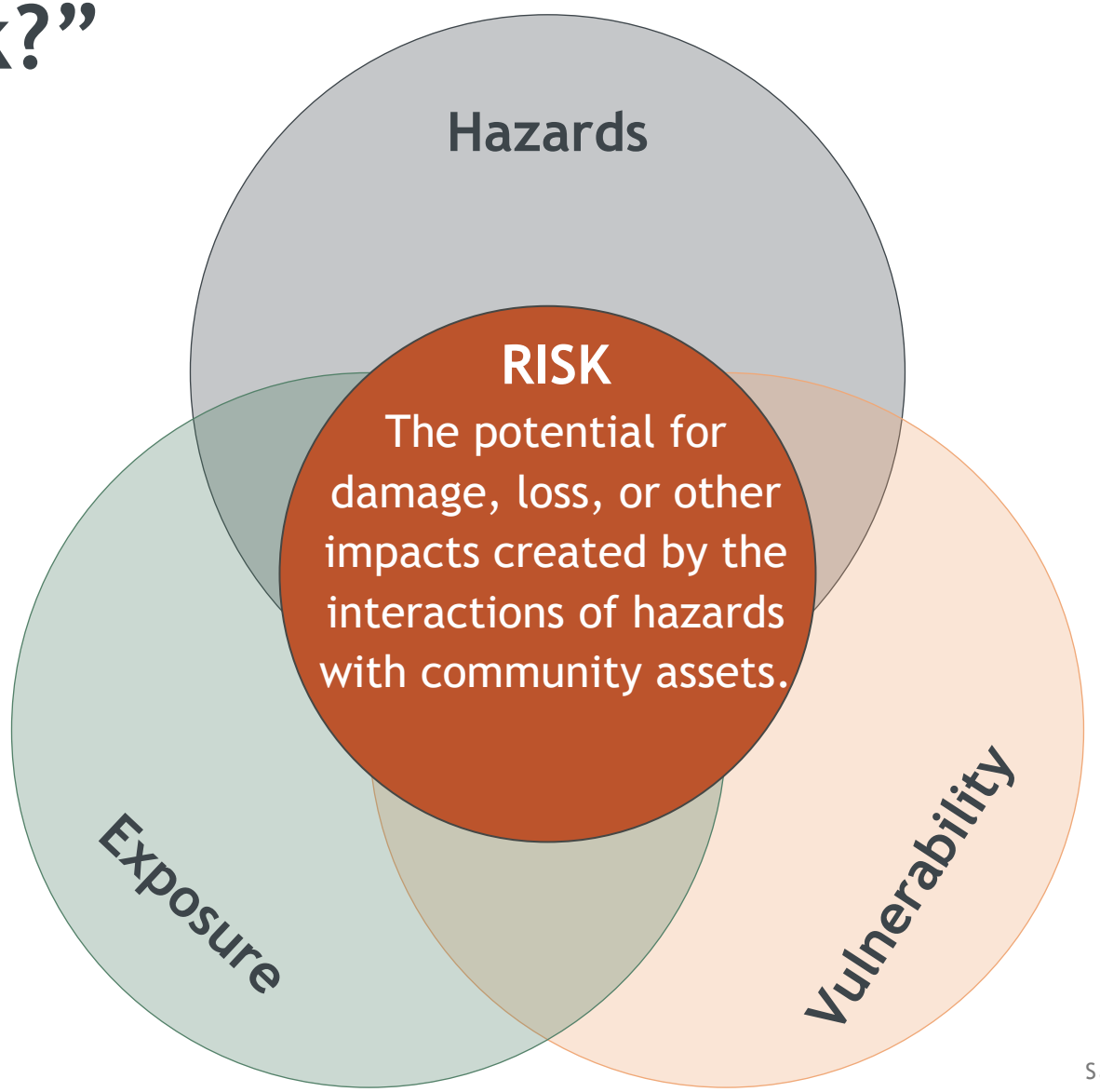
California Adaptation Planning Guide



2018 California State Hazard Mitigation Plan

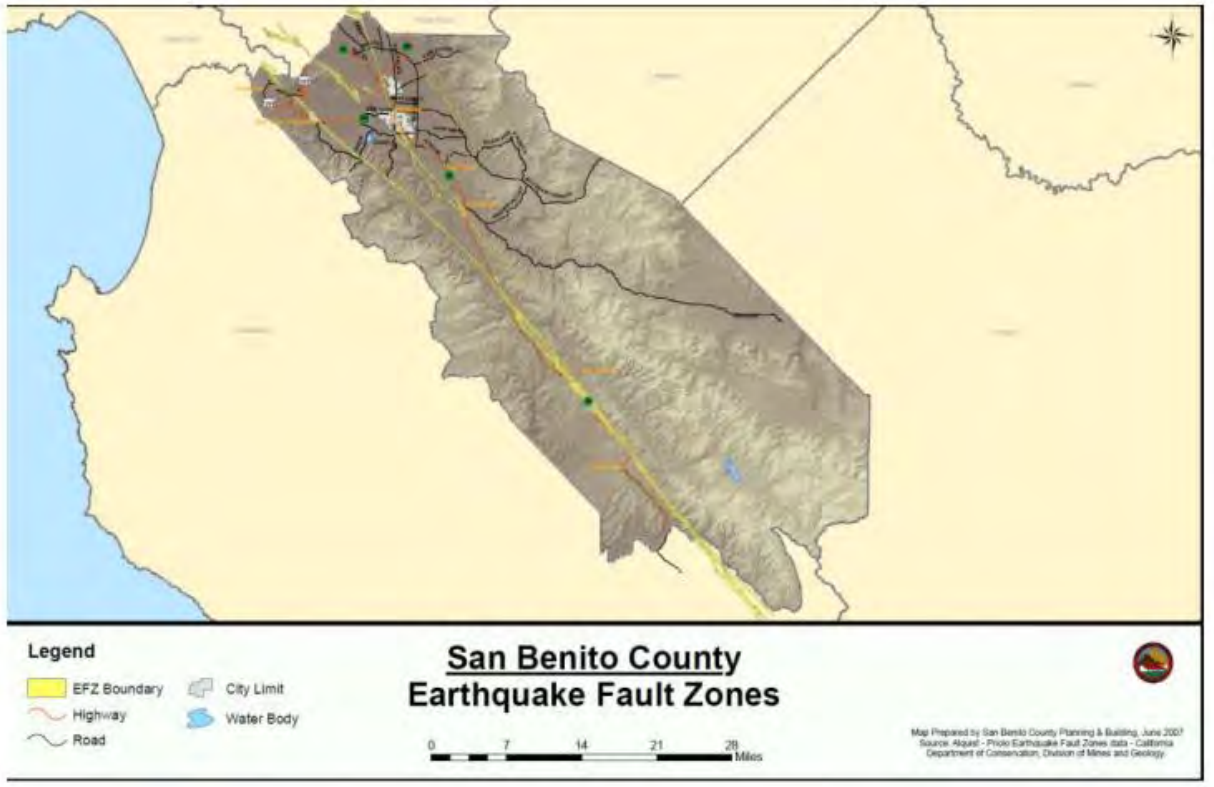
Risk Assessment Overview

What is “Risk?”


Hazards
RISK
The potential for damage, loss, or other impacts created by the interactions of hazards with community assets.
Exposure
Vulnerability

Risk Assessment

- Purpose: analyze and determine the potential impacts of hazards to people, economy, and environment
- Components of a Risk Assessment:
  - Description of hazards
  - Identification of community assets
  - Analysis of risks
  - Summary of vulnerability
- Basis for mitigation strategy and prioritization of actions



Map of Earthquake Risk Assessment from 2015 Risk Assessment

Hazard Review (2015)

Natural Hazards

- Earthquake
- Flooding
- Severe Weather
- Land Slide
- Wild Land and Urban Interface Fires

Other Hazards

- Biological
- Hazardous Materials
- Water & Wastewater Disruption
- Transportation Loss
- Economic Disruption
- Data & Telecommunications
- Dam Failure
- Substation, Electrical, Gas Utility Loss
- Weapons of Mass Destruction/ Terrorism

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Risk Assessment (2015)

Earthquake Analysis - Bay Area UASI

- Scenario: M 7.9 San Francisco 1906 San Andreas Fault Rupture
- Original Analysis – 2009
  - Outdated version of HAZUS (2.0)
    - Census Information (Population, Block Geography) – 2010 Census
    - Critical Facility Information – HIFLD 2019
    - GBS Valuation – 2018 RSMeans Data

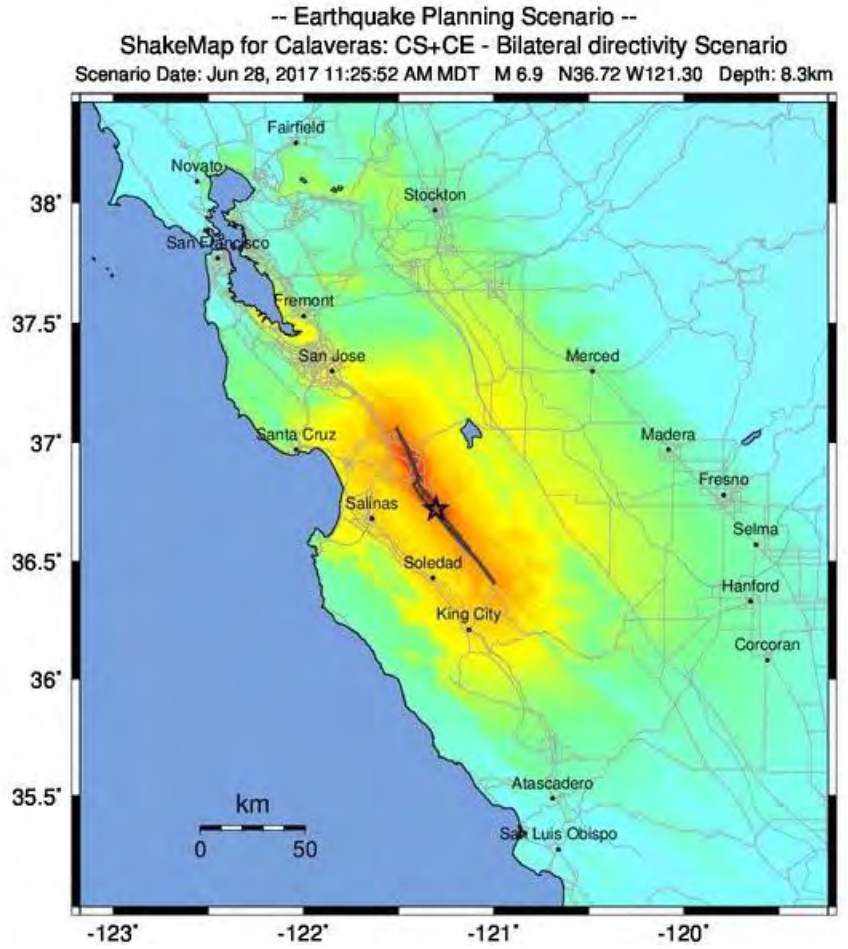
Flood Analysis

- 2009 San Benito County FIRM data
- Flood Improvements
  - Enterprise Road – LOMR 17-09-1234P
  - San Felipe Lake
  - Santa Ana Creek Tributary – Detailed H&H
- Drainage Improvements
  - San Juan Road/South Street/Hillcrest Road Trunk Line
  - Rustic Street Detention Pond

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Risk Assessment Potential Updates

1. **Flood**: Level 1 HAZUS Analysis incorporating recent terrain data.
2. **Earthquake**: Enhanced Level 1 HAZUS Analysis utilizing USGS ShakeMaps.
3. **Wildland and Urban Interface Fires**: Analysis leveraging Vegetation, Land Cover, Fire Threat, Evacuation Route, Burn Scar data



Sample ShakeMap of Magnitude 6.9 Scenario Earthquake

Hazard Review (Plan Update)

Natural Hazards

- Earthquake
- Flooding
- Severe Weather
- Land Slide
- Wild Land and Urban Interface Fires

Other Hazards

- Biological
- Hazardous Materials
- Water & Wastewater Disruption
- Transportation Loss
- Economic Disruption
- Data & Telecommunications
- Dam Failure
- Substation, Electrical, Gas Utility Loss
- Weapons of Mass Destruction/ Terrorism

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Mitigation Strategy Session

Creating Meaningful Goals

- Mitigation Goals: explain what the community wants to achieve with the mitigation plan in the long-term
- Mitigation Objectives (optional): describe how to measure progress and success toward a goal

Mitigation Goals should:

- Consider community impact and input
- Be inclusive of all jurisdictions
- Address the findings of the Risk Assessment
- Align with and support community values and state goals

Meaningful mitigation goals translate to targeted and impactful mitigation actions.

San Benito County 2015 Goals

- Promote **economic development** consistent with seismic, floodplain and risk management guidance as developed by San Benito County and its allied agencies and organizations.
- Provide for an **effective public awareness program** for natural and technological hazards present in San Benito County.
- Encourage **scientific study** and the development of data to support mitigation strategies for those hazards that are a threat to San Benito County.
- Promote the recognition of the real **value of hazard mitigation** to public facilities, public safety and welfare of all citizens of San Benito County.
- **Support the mitigation efforts** of local governments, private citizens, non-profit organizations and private businesses throughout the San Benito County Operational Area.

State of California 2018 Goals

- Significantly **reduce life loss and injuries**.
- **Minimize damage** to structures and property and minimize interruption of essential services and activities.
- Protect the **environment**.
- Promote **community resilience** through integration of hazard mitigation with public policy and standard business practices.

Mitigation Project Types

- **Local Plans and Regulations**: government authorities, policies, or codes that influence the way land and buildings are developed and built
- **Structure and Infrastructure Projects**: modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area
- **Natural Systems Protection**: minimize damage and losses and preserve or restore the functions of natural systems
- **Education and Awareness Programs**: inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them

Prioritizing Mitigation Projects for the County

Activity Scenario:

A severe flood heavily impacts San Benito County in 2021 leading to a Presidentially Declared Disaster. About a year later, **a new round of Hazard Mitigation Grant Program** funding is made available for California. The California Office of Emergency Services has prioritized **flood mitigation** in **San Benito and surrounding counties.** There is an estimated $1,000,000 available for mitigation projects in San Benito County.

Prioritizing Mitigation Projects for the County

Mitigation Action	Cost
Stormwater Management Regulations	2 Tokens
Elevate Structures	4 Tokens
Reinforce Retaining Walls	3 Tokens
Wetland Restoration	2 Tokens
Public Education Campaign	1 Token/ Campaign

How are you going to spend your 10 tokens?

Next Steps

Action Items

Planning Group

- Compile and share data for consideration in the risk assessment.
- Attend next Planning Committee Meeting to review the Risk Assessment.
- Review Project Management Plan and provide any feedback.

Hagerty Consulting

- Finalize Project Management Plan and Outreach Strategy.
- Begin drafting Risk Assessment.

Data Request



Any relevant plans, data sets, and documents, which may include:

- Emergency Response and Recovery Plans
- Comprehensive Plans
- Capital Improvement Plans
- THIRA and other UASI related materials
- Data sets of critical facilities and municipal buildings

Questions?



Contact Information

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Deputy Project Manager, Hagerty Consulting

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San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Kick-Off Meeting

JANUARY 13, 2021 | 1:00 - 2:30 P.M. PST | REMOTE

Meeting Recap

The San Benito County ("the County") Planning Committee and from Hagerty Consulting, Inc. ("Hagerty") Project Team held a Kick-Off Meeting for the San Benito County Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) Update on Wednesday, January 13, 2021. The purpose of this meeting was to introduce the components of hazard mitigation planning and provide an overview of the San Benito County MJHMP Update project. The attendees discussed the project approach and timeline, the project's Engagement Strategy for County stakeholders and the public, and proposed updates to the risk assessment from the 2015 San Benito County MJHMP. The attendees also participated in a small exercise designed to facilitate conversation on the prioritization of mitigation projects. A more detailed description of the meeting discussion and next steps are included below.

Next Steps and Action Items

San Benito County Planning Committee

- The Planning Committee will compile and share data for consideration in the risk assessment, which may include:
    - Emergency response and recovery plans;
    - Comprehensive Plans;
    - Capital Improvement Plans;
    - THIRA and other Bay Area Urban Areas Security Initiative; and/or
    - Data sets of critical facilities and municipal buildings.
- The Planning Committee will attend next Planning Committee Meeting to review the Risk Assessment.
- The Planning Committee will review Project Management Plan and provide any feedback by Friday, January 22.
- K. Mangano will work with Hagerty Consulting to schedule the next Planning Committee Meeting.
- K. Mangano will provide Hagerty Consulting with contact information for the new RMA Director.

Hagerty Consulting

- Hagerty Consulting will provide the Planning Committee with the Project Management Plan for their review.
- Hagerty Consulting will work with K. Mangano to schedule the next Planning Committee Meeting.
- Hagerty Consulting will finalize the Project Management Plan and Outreach Strategy.
- Hagerty Consulting will begin drafting the Risk Assessment.

Welcome and Introductions

M. Levkowitz of Hagerty and Kris Mangano of San Benito County Office of Emergency Services opened the Kick-Off Meeting for the San Benito County MJHMP Update. All attendees from the County and the Hagerty Project Team introduced themselves.

Project Overview

Hazard Mitigation Planning

A hazard mitigation plan (HMP) is a means to **reduce loss and damage to life, property, and infrastructure by implementing projects that lessen the impact of the disaster**. The purpose of this project is to leverage current guidance, hazard information, and understanding of a community's capacities to ensure the San Benito County MJHMP meets and exceeds state and federal requirements. While this project is a long-term planning effort, it will also connect to the activities and hazards the community is currently experiencing.

HMPs are required to receive certain types of non-emergency disaster assistance, including funding from:

- Federal Emergency Management Agency (FEMA) Public Assistance (PA);
- Hazard Mitigation Grant Program (HMGP);
- Building Resilient Infrastructures and Communities (BRIC);
- Flood Mitigation Assistance (FMA); and
- Fire Management Assistance Grant (FMAG) Program.

Additionally, HMPs directly benefit communities by:

- Investing in the community's future sustainability and resilience;
- Educating the community and its officials about hazard risks and vulnerabilities; and
- Promoting collaboration among community stakeholders.

The HMP process is inherently collaborative, as it requires stakeholder groups to share information and work together to reduce risk in the community. M. Levkowitz noted this cooperation is often an unintended benefit of the HMP planning process.

Planning Process

The HMP planning process has four major stages:

1. Organize the Planning Process and Resources.
2. Assess Risk.
3. Develop a Mitigation Strategy.
4. Adopt and Implement the Plan.

The San Benito County MJHMP Update is currently in the first stage of the planning process. Hagerty will support the County throughout the entire process, including FEMA approval and eventual local adoption of the plan.

The attendees discussed the Project Approach, as detailed in the Project Management Plan (PMP) and outlined in the table below. The attendees will have an opportunity to review the PMP and provide feedback on the anticipated timeline and project activities.

Task	Details	Dates
Task 1	• Project Kick-Off Meeting • Project Management Plan • Outreach Strategy	November 2020 - January 2021
Task 2	• Community Hazards Survey • Risk Assessment • Capability Assessment	February - April 2021
Task 3	• Mitigation Strategy • Mitigation Strategy Workshop	May - June 2021
Task 4	• Draft 1 and 2 MJHMP • Public Review Period	July - September 2021
Task 5	• Final MJHMP Submission • Plan-to-Project Workshop • Project Closeout	October 2021 - FEMA Approval and Adoption

Engagement Strategy

The three tiers of outreach that will comprise the Engagement Strategy are the Planning Committee, Stakeholder Group, and Public and Community Groups. The Engagement Strategy will provide meaningful opportunities for the whole community to shape the HMP. The systems used to communicate with the three audiences are as follows:

- **Planning Committee**: regular project management calls and virtual workshops.
- **Stakeholder Group**: Capability Survey and monthly electronic newsletters.
- **Public and Community Groups**: Community Hazards Survey and Public Review Period.

Hagerty will work with the Planning Committee to ensure the technology chosen for virtual engagement are consistent with the County's current systems. The attendees discussed the

composition of these entities and determined the following would be added to the Stakeholder Group:

- Law enforcement agencies;
- Neighboring jurisdictions, including the Fire Safety Council in the community adjacent to the City of San Juan Batista;
- Animal Regulation groups; and
- Entities the County has mutual aid agreements and standing contracts with for response and/or recovery.

The attendees also agreed that the newly-appointed Resource Management Agency (RMA) Director should be added to the Planning Committee. M. Levkowitz noted that it is important to build a comprehensive set of stakeholders to represent various needs and priorities of the County. Later in the planning process, Hagerty will provide the County with a list of suggestions of individuals who may be important to include in this category of engagement.

The attendees discussed how to best incorporate a legal component into the planning process and agreed that a legal review would be most effective for the first draft of the San Benito County MJHMP Update.

Planning Requirements

HMPs and their planning processes are required to meet federal standards, as outlined in the FEMA Local Mitigation Plan Review Guide. Hagerty will ensure that the San Benito County MJHMP Update meets this set of requirements. Additionally, the San Benito County MJHMP Update will align with the guidance of the California Adaptation Planning Guide, which encourages local governments to include considerations of future conditions in their HMPs, and the goals of the 2018 California State Hazard Mitigation Plan.

Climate Change and Funding Opportunities

The attendees discussed how climate change is perceived by citizens in the County. K. Mangano noted that climate change is not a politicized topic in the community and that the County is environmentally-conscious. For example, after a flood incident in 2018, a rare frog species was found living in the County. This discovery impacted how they repaired the river and surrounding areas so as to not disturb the frogs. The County additionally has a close relationship with their representative from the National Weather Service.

M. Streck described the grant funding available from the State of California for local governments to implement climate adaptation projects, consistent with State regulations for carbon offsets and global warming. The San Benito County MJHMP Update should maintain verbiage consistent with these grants to bolster the County's eligibility for this funding.

Risk Assessment Overview

What Is Risk?

Risk is defined as the **potential for damage, loss, or other impacts created by the interactions of hazards with community assets**. It is the intersection of hazards, the community's exposure to that hazard, and vulnerabilities the community has that makes them susceptible to damages. The risk assessment for the San Benito County MJHMP Update will comprehensively analyze risk in the community and determine the potential impacts on the community. The main components of a risk assessment are as follows:

- Description of hazard;
- Identification of community assets;
- Analysis of risks; and
- Summary of vulnerability.

The risk assessment should include a broad look at community assets that are valued by the County and should be protected (e.g., buildings, equipment, community services). The risk assessment and its findings are the foundation for an effective mitigation strategy.

Review of Risk Assessment (2015) and Proposed Updates

The hazards identified in the 2015 San Benito County MJHMP are identified in the table below. This list will be reviewed and revised during the planning process to reflect changes in development and hazard impacts.

San Benito County MJHMP (2015): Hazards	
Natural Hazards	• Earthquake • Flooding • Severe Weather • Land Slide • Wild Land and Urban Interface Fires
Other Hazards	• Biological • Hazardous Materials • Water & Wastewater Disruption • Transportation Loss • Economic Disruption • Data & Telecommunications • Dam Failure • Substation, Electrical, Gas Utility Loss • Weapons of Mass Destruction/Terrorism

R. Lange provided an in-depth review of the flood and earthquake analysis in the 2015 San Benito County MJHMP. The Hagerty Project Team detailed proposed updates to the earthquake and flood risk assessments, which will entail leveraging the latest version of

Hazus, a FEMA software tool used to estimate risk, and integrating updated data sets to provide more accurate and precise results in the updated MJHMP.

For the earthquake analysis, Hagerty proposes using ShakeMaps, a software created by the United States Geological Survey (USGS) to map ground motion and shaking intensity, to perform an Enhanced Level 1 Hazus analysis. This type of analysis will deliver more precise results than the previous risk assessment.

For the flood analysis, Hagerty proposes using Level 1 Hazus software, incorporating recent and more precise terrain data. The County has implemented numerous flood and drainage improvement projects since the last analysis that will be considered in this updated data set.

Wildland and urban interface fires are an increasing threat to the County, which has experienced significant fires over the last few years. The analysis of wildland and urban interface fires should be improved to reflect the many complex interactions of fires with other hazards. This analysis may include burn scars maps, land cover data, and evacuation routes.

M. Bohrson encouraged the attendees to think through what the updated risk assessment should look like and which hazards should be represented. The attendees agreed to consider adding a pandemic hazard profile to the risk assessment. M. Levkowitz noted that FEMA has published initial guidance public health mitigation actions, so there may be potential funding opportunities for these types of mitigation projects in the future.

Mitigation Strategy Session

Mitigation Strategy

M. Bohrson emphasized that the mitigation strategy is the culmination of the HMP and should be considered throughout the planning process. The mitigation strategy includes **mitigation goals**, which explain the long-term outcomes the community hopes to achieve with the HMP. Effective mitigation goals:

- Consider community impact and input;
- Are inclusive of all jurisdictions in the County and relevant hazards;
- Address the findings of the risk assessment; and
- Align with and support community values and State goals.

The attendees reviewed the goals from the 2015 San Benito County MJHMP and the State of California HMP. When developing the mitigation strategy, the Planning Committee will revise these mitigation goals to ensure they align with the State HMP Goals and the County's other plans.

Activity: Prioritizing Mitigation Projects

There is a wide variety of mitigation projects that can contribute heavily to mitigating risk. The four major project categories are:

- **Local Plans and Regulations**, which are government authorities, policies, or codes that influence the way land and buildings are developed and built:
- **Structure and Infrastructure Projects**, which modify to existing structures and infrastructure to protect them from a hazard or remove them from a hazard area;
- **Natural Systems Protections**, which minimize damage and losses and preserve or restore the functions of natural systems; and
- **Education and Awareness Programs**, which inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them.

M. Bohrson then began an exercise intended to help the attendees think about prioritization and decision-making related to mitigation projects.

***Activity Scenario**: A severe flood heavily impacts San Benito County in 2021 leading to a Presidentially Declared Disaster. About a year later, **a new round of Hazard Mitigation Grant Program** funding is made available for California. The California Office of Emergency Services has prioritized **flood mitigation** in **San Benito and surrounding counties**. There is an estimated $1,000,000 available for mitigation projects in San Benito County.*

The attendees were asked to determine about how they would distribute this funding across five mitigation projects, identified in the table below. For the purpose of this exercise, each attendee was assigned 10 tokens to allocate, with each token representing $100,000 in funding.

Mitigation Action	Cost
Stormwater Management Regulations	2 Tokens
Elevate Structures	4 Tokens
Reinforce Retaining Walls	3 Tokens
Wetland Restoration	2 Tokens
Public Education Campaign	1 Token

The attendees all provided unique answers, with a significant emphasis on stormwater management and wetland restoration. This variety demonstrates the different values stakeholders have for hazard mitigation, and the **need to find shared opportunities** that provide the greatest benefits to the County.

Additionally, this activity mirrored the **challenges of prioritization**. FEMA requires each HMP to maintain a system for prioritizing projects, but the process can be unique to the jurisdiction. The County should consider a prioritization of actions given grant requirements, allocation amounts, and the context in which funding becomes available during the development of the mitigation strategy.

Attendees

San Benito County

- Kris Mangano, Emergency Services Manager, San Benito County Office of Emergency Services, kmangano@cosb.us
- Madison Mitchell, Staff Analyst, San Benito County Office of Emergency Services, mmitchell@cosb.us
- Brett Miller, City Manager, City of Hollister, brett.miller@hollister.ca.gov
- Don Reynolds, City Manager, City of San Juan Batista, citymanager@san-juan-bautista.ca.us
- Garrett Haertel, Deputy District Engineer, San Benito County Water District, engineering@sbcwd.com
- Bob Martin del Campo, Fire Chief, Hollister Fire Department, bob.martindelcampo@hollister.ca.gov
- Drew Lander, General Manager, Sunnyslope County Water District, drew@sunnyslopewater.org
- Matt Streck, Assistant Chief, California Department of Forestry and Fire Protection (CAL FIRE) San Benito Monterey Unit, matt.streck@fire.ca.gov

Hagerty Consulting

- Michael Levkowitz, Project Manager, Hagerty Consulting, michael.levkowitz@hagertyconsulting.com
- Michelle Bohrson, Deputy Project Manager, Hagerty Consulting, michelle.bohrson@hagertyconsulting.com
- Jim DeAngelo, Project Advisor, Hagerty Consulting, jim.deangelo@hagertyconsulting.com
- Rob Lange, GIS Specialist, Hagerty Consulting, rob.lange@hagertyconsulting.com
- Julia Davatzes, Planner, Hagerty Consulting, julia.davatzes@hagertyconsulting.com

Planning Committee Meetings

1. Planning Committee Meeting Agenda (2/10/2021)
2. Planning Committee Meeting Notes (2/10/2021)
3. Planning Committee Meeting Agenda (2/24/2021)
4. Planning Committee Meeting Notes (2/24/2021)
5. Planning Committee Meeting Agenda (3/10/2021)
6. Planning Committee Meeting Notes (3/10/2021)
7. Planning Committee Meeting Agenda (3/24/2021)
8. Planning Committee Meeting Presentation (3/24/2021)
9. Planning Committee Meeting Notes (3/24/2021)
10. Planning Committee Meeting Agenda (4/7/2021)
11. Planning Committee Meeting Notes (4/7/2021)
12. Planning Committee Meeting Presentation (4/7/2021)
13. Planning Committee Meeting Agenda (4/28/2021)
14. Planning Committee Meeting Notes (4/28/2021)
15. Planning Committee Meeting Agenda (5/12/2021)
16. Planning Committee Meeting Notes (5/12/2021)
17. Planning Committee Meeting Agenda (6/15/2021)[1]
18. Planning Committee Meeting Agenda (7/8/2021)
19. Planning Committee Meeting Notes (7/8/2021)
20. Planning Committee Meeting Agenda (7/28/2021)
21. Planning Committee Meeting Notes (7/28/2021)
22. Planning Committee Meeting Agenda (8/25/2021)
23. Planning Committee Meeting Notes (8/25/2021)
24. Planning Committee Meeting Agenda (9/8/2021)
25. Planning Committee Meeting Notes (9/8/2021)
26. Planning Committee Meeting Agenda (10/6/2021)
27. Planning Committee Meeting Notes (10/6/2021)

[1] No notes were developed for this meeting.

FEBRUARY 10, 2021 | 12:00 – 1:00 P.M. PST | REMOTE

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting Agenda

Time	Details
12:00 – 12:10 p.m.	**Welcome and General Updates**
12:10 – 12:20 p.m.	**Hazard Prioritization Exercise** • Reviewing Previous HMP Hazards • Hazard vs. Impact
12:20 – 12:40 p.m.	**Public Engagement** • Engagement Strategy • Stakeholder Group • Newsletter & Community Hazards Survey
12:40 – 12:50 p.m.	**Project Updates** • Risk Assessment • Upcoming Risk Assessment Meeting
12:50 – 1:00 p.m.	**Next Steps**

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting

FEBRUARY 10, 2021 | 12:00 – 1:00 P.M. PST | REMOTE

Action Items

The next Planning Committee meeting will be on Wednesday, February 24 at 12:00 p.m. PST.

Hagerty Consulting

- Hagerty will share the Engagement Strategy, Community Hazards Survey, and Proposed Stakeholder List with the Planning Committee for review.
- Hagerty will develop and send the first newsletter to the Planning Committee.
- Hagerty will continue to develop the Risk Assessment.
- Hagerty will reach out to K. Mangano to identify the potential dates for the Risk Assessment Meeting.

San Benito County Planning Committee

- The Planning committee will review the Engagement Strategy and Community Hazards Survey and provide feedback by Monday, February 22.
- K. Mangano will share the Engagement Strategy and Community Hazards Survey with the County's PIO for review.
- The Planning Committee will review, validate, and expand upon the Proposed Stakeholder List provided by Hagerty by Monday, February 22.
- The Planning Committee will review the first issue of their newsletter and provide their feedback.
- The Planning Committee will identify their respective Floodplain Managers and share the contact information with Hagerty Consulting.

General Updates

M. Bohrson of Hagerty Consulting ("Hagerty") opened the meeting with the attendees from the San Benito County Multi-Jurisdictional Hazard Mitigation Plan (HMP) Update Planning Committee. The purpose of this meeting is to discuss key decision points related to the HMP and planning process and determine next steps for the project.

Hazard Prioritization Exercise

Proposed Hazards

M. Bohrson led the group through a Hazard Prioritization Discussion and Exercise, the purpose of which is to finalize the list of hazards to analyze in the risk assessment. Typically, hazards chosen for an HMP align with the hazards from the State's HMP and the jurisdiction's previous HMP Update. The hazards in the 2015 San Benito County HMP Update are listed in the table below.

2015 San Benito County HMP Hazards	
• Earthquake • Flooding • Severe Weather • Land Slide • Wild Land and Urban Interface Fires • Biological • Hazardous Materials	• Water & Wastewater Disruption • Transportation Loss • Economic Disruption • Data & Telecommunications • Dam Failure • Substation, Electrical, Gas Utility Loss • Weapons of Mass Destruction/Terrorism

M. Bohrson presented the proposed hazards for the 2021 San Benito County HMP Update, identified in the table below. The natural hazards selected align with those of the 2015 Plan, clarifying some terminology (e.g., pandemic) and distributing some previously grouped hazards to align with best practices (e.g., extreme temperatures and severe weather).

2021 San Benito County HMP Proposed Hazards	
Climate and Weather Hazards	• Drought • Extreme Temperatures • Flood • Pandemic • Severe Weather • Wildfire
Geological Hazards	• Earthquake • Landslide
Technological Hazards	• Dam Failure • Hazardous Materials Incident
Threat and Disturbance Hazards	• Terrorism

The proposed 2021 hazards list does omit some hazards included the 2015 Plan. M. Bohrson explained that the purpose of this is to separate hazards from the impacts of those hazards. For example, economic disruption was a hazard in the previous plan but will be analyzed as an impact in the 2021 HMP Update. The County validated the proposed list of hazards and agreed these are the most relevant hazards to analyze throughout the HMP process.

Hazards and Impacts Discussion

D. Lander and R. Hillbrecht identified earthquakes, drought, flood, pandemic, and severe weather events as the hazards of most concern to the Sunnyslope Water District in the context of this plan.

G. Haertel inquired about how significant legislature changes (e.g., new ordinance that reduces available water supply) will be considered in the HMP. Hagerty discussed that legislative changes and their impacts may be included in the Capability Assessment, to understand capacities across the County and the influence of certain regulations on capabilities, and the Mitigation Strategy. The Mitigation Strategy should consider how certain priorities and projects will be altered if the legislative and operating environment changes.

M. Mitchell discussed the importance of analyzing the impact of fires on the County's electrical systems. The County has experienced power disturbances due to wildfires outside of the planning area. M. Bohrson explained that the scope of analysis for hazards is typically contained to the planning area (i.e., County jurisdictional area), but the HMP can expand the scope of the impacts to adequately address these power disturbances.

Community Lifelines

M. Bohrson presented FEMA's Community Lifelines as a framework for understanding the impacts of hazards on the County. The framework includes the following categories:

- Safety and Security;
- Food, Water, and Shelter;
- Health and Medical;
- Energy;
- Communications;
- Transportation;
- Hazardous Material; and
- Other.

This framework will provide an opportunity to analyze legislative changes that disrupt community lifelines and may exacerbate the impacts of hazards. The County validated the Community Lifelines framework as the most relevant method to analyze the impacts of hazards in the HMP process.

Engagement

Engagement Strategy

Hagerty introduced the Engagement Strategy which outlines the approach to outreach during the HMP process. This plan will serve as documentation to help meet Federal Emergency Management Agency (FEMA) requirements and will ensure that engagement activities align with the overall goals of the HMP. The Engagement Strategy is structured into three sections:

- **Introduction**: overviews of the purpose of the document and goals for engagement
- **Engagement Activities**: describes the three audiences (i.e., Planning Team, Stakeholder Group, Public) and the activities intended to engage each
- **Methodology**: provides strategies that may be employed to develop, execute, and evaluate the outlined activities

Hagerty emphasized that the Engagement Strategy should be revised to meet the Planning Committee's goals for engagement in the planning process. The Planning Committee will review this document and provide feedback.

The County's experience engaging the community includes an Opioid Task Force Town Hall and providing public information through social media updates. The County also relies heavily on two local news stations, a local newspaper, and the CodeRed and Nixle systems to share relevant information with the community. The County has a Public Information Officer (PIO) who works in the Office of Emergency Services. K. Mangano will ask the PIO to review the survey and Engagement Strategy to ensure they align with the County's existing outreach efforts.

Community Hazards Survey

Hagerty has developed a drafted Community Hazards Survey to collect information related to the public perception of and concern for hazards. Hagerty will share this survey with the Planning Committee for their review and edits. The Planning Committee is encouraged to add questions to the survey that will be useful for them in their respective roles.

Stakeholder Group

The Stakeholder Group should include a wide variety of community representatives who could provide valuable insight for the HMP and/or benefit from participating in the planning process. Hagerty has developed an initial list of potential stakeholders and will send it to the Planning Committee on a sharing platform (e.g., Google Drive) for their review. The Planning Committee is encouraged to amend the list given their knowledge of the community.

Newsletter

Hagerty will send out a monthly newsletter to the Stakeholder Group to update them on the planning process, alert them of upcoming engagement activities, and inform them of mitigation resources and current events that may be relevant to the HMP. This newsletter should be adapted to include any other relevant information that the County wishes to share with the Stakeholder Group. Hagerty will send the Planning Committee the first issue of the newsletter for their feedback next week.

The attendees noted that it would be helpful to share this information with the County's newly elected Board of Supervisors and respective jurisdictional government leadership. Hagerty will develop a shortened version of these newsletters specifically for government leadership and for individuals outside of the stakeholder group who would still benefit from these updates.

Project Updates

Risk Assessment

Hagerty has begun developing the Risk Assessment section of the HMP. The upcoming Risk Assessment Meeting will be an opportunity to discuss the findings of the risk assessment and contextualize the identified impacts. The attendees agreed to have a virtual Risk Assessment Meeting in mid-March. The meeting will be a maximum of two hours in length. Hagerty will follow up with K. Mangano to identify potential dates for the Risk Assessment Meeting.

Additional County Contacts

Hagerty explained the importance of including Floodplain Managers (FPMs) in the planning process. The Planning Committee will identify their respective FPMs and share the contact information with Hagerty. Additionally, the Planning Committee identified the Resource Management Agency Director as an important person to include in the planning process, likely in the Stakeholder Group.

Attendees

San Benito County Planning Committee

- Brett Miller, City Manager, City of Hollister, brett.miller@hollister.ca.gov
- Drew Lander, General Manager, Sunnyslope County Water District, drew@sunnyslopewater.org
- Garrett Haertel, Deputy District Engineer, San Benito County Water District, engineering@sbcwd.com
- Kris Mangano, Emergency Services Manager, San Benito County Office of Emergency Services, kmangano@cosb.us
- Madison Mitchell, Staff Analyst, San Benito County Office of Emergency Services, mmitchell@cosb.us
- Matt Streck, Assistant Chief, California Department of Forestry and Fire Protection San Benito Monterey Unit, matt.streck@fire.ca.gov
- Rob Hillebrecht, Associate Engineer, Sunnyslope County Water District, rob@sunnyslopewater.org

Hagerty Consulting

- Michael Levkowitz, Project Manager, Hagerty Consulting, michael.levkowitz@hagertyconsulting.com
- Michelle Bohrson, Deputy Project Manager, Hagerty Consulting, michelle.bohrson@hagertyconsulting.com
- Julia Davatzes, Planner, Hagerty Consulting, julia.davatzes@hagertyconsulting.com

FEBRUARY 24, 2021 | 12:00 – 12:45 P.M. PST | REMOTE

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting Agenda

Time	Details
12:00 – 12:05 p.m.	**Welcome and General Updates**
12:05 – 12:20 p.m.	**Community Hazards Survey** • Format and Distribution • Translation
12:20 – 12:30 p.m.	**Stakeholder Group** • Proposed List and Contact Information • Newsletter
12:30 – 12:40 p.m.	**Risk Assessment** • Mapping Approach • Risk Assessment Meeting
12:40 – 12:45 p.m.	**Next Steps**

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting

FEBRUARY 24, 2021 | 12:00 – 1:00 P.M. PST | REMOTE

Action Items

The next Planning Committee meeting will be on Wednesday, March 10 at 12:00 p.m. PST.

Hagerty Consulting

- Hagerty will share the Community Hazards Survey with the Planning Committee for translation.
- Hagerty will upload the Community Hazards Survey to the Survey Monkey platform and coordinate with the Public Information Officer to distribute.
- Hagerty will coordinate with K. Mangano to collect any outstanding data needed to develop the risk assessment.
- Hagerty will coordinate with K. Mangano to arrange a meeting with A. Amaral.
- Hagerty will develop and send the March newsletter to the Stakeholder Group.
- Hagerty will continue to develop the risk assessment.

San Benito County Planning Committee

- K. Mangano and M. Mitchell will identify contacts for the Stakeholder Group.
- K. Mangano will review the Community Hazards Survey and coordinate the translation into Spanish.

General Updates

M. Levkowitz of Hagerty Consulting (“Hagerty”) opened the meeting with the attendees from the San Benito County Multi-Jurisdictional Hazard Mitigation Plan (HMP) Update Planning Committee. The purpose of this meeting is to discuss community and stakeholder outreach activities and determine next steps for the project. K. Mangano noted that they will present the Community Hazards Survey and HMP planning process to the new Board of Supervisors on March 9, who is eager to learn about the project.

Community Hazards Survey

Distribution Methods

The attendees agreed to use both online and paper copies of the survey to lessen barriers for participation. The online survey will be created on Survey Monkey, an easily sharable platform that allows for inputting questions and receiving responses in Spanish. The survey link will be distributed through existing social media pages and newsletter email lists, including contacts from a recent program with senior citizens in the County. Hagerty will coordinate with the County's Public Information Officer for distribution.

As suggested by D. Reynolds, a physical copy of the survey will be included in the water bill envelope for County residents. K. Mangano noted that they have an existing relationship with the local Staples and can manage the printing and distribution of the surveys. Hagerty will manage the manual entry of responses once collected.

Translation and Timeline

San Benito County will translate the survey into Spanish. It is estimated this service will require a week to complete. Hagerty will send the completed English survey to K. Mangano, who will coordinate the translation.

The survey will be presented to the Board of Supervisors on March 9. Once approved and finalized, the online survey will be launched. The physical copy of the survey will be included in the water bill sent on March 20.

Stakeholder Group

Stakeholder Group Members

The attendees discussed the composition of the Stakeholder Group. M. Bohrson noted that the members of the Stakeholder Group will be consulted regarding risks and mitigation actions, specifically by receiving the newsletter, attending stakeholder risk and mitigation workshops, and facilitating assessment of the County's capabilities.

One important individual to include in the Stakeholder Group is the County's liaison from California Governor's Office of Emergency Services (Cal OES), Adam Amaral (adam.amaral@caloes.ca.gov). As the County will be submitting the completed HMP to A. Amaral, it would be advantageous to engage them early in the planning process to understand any specific regional requirements or expectations for the HMP. Hagerty will coordinate with K. Mangano to arrange this meeting.

D. Reynolds discussed the importance of incorporating Pacific Gas and Electric (PG&E) in the planning process, especially since they have mapping data of the system shutoffs that will be put into effect during power shortages. A representative from PG&E will be invited to participate as a member of the Stakeholder Group

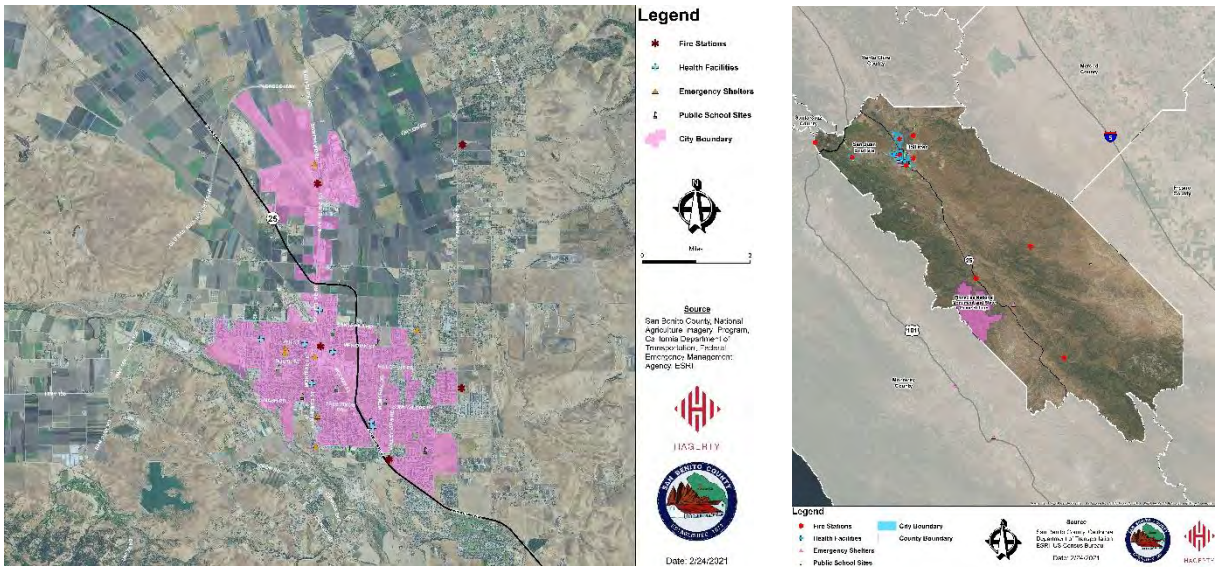
The Planning Committee discussed the Proposed Stakeholder List and worked to pare down the invitees to focus on those with direct interest or connection to mitigation efforts. The attendees agreed to solidify the members of and identify contact information for the Stakeholder Group by Friday, March 5.

Newsletter

Hagerty sent out the first newsletter to the Planning Committee. Future issues of this newsletter will be sent to the Stakeholder Group and will include relevant updates on the planning process and reminders of upcoming engagement activities (e.g., Risk Assessment Meeting). K. Mangano will be listed as the point of contact on these emails. The next newsletter will be sent out to the Stakeholder Group during the week of March 8.

Risk Assessment and Next Steps

Hagerty is continuing to develop the risk assessment and displayed some initial mapping templates for the Planning committee, as shown below.



In the next meeting, attendees will discuss what maps may be most useful to indicate risk and support decision-making. The GIS team from Hagerty has requested some additional data to complete the risk assessment. Hagerty will coordinate with K. Mangano to identify and source any requested data and will likely reach out to the cities and water districts for support. D. Reynolds noted that the sphere of influence boundaries are being currently being updated and they will update the Planning Committee as that information becomes available.

The attendees agreed that the HMP will be presented to City Council once the HMP has been finalized and approved by the State, which will likely occur at the end of 2021 or the beginning of 2022.

Attendees

San Benito County Planning Committee

- Don Reynolds, City Manager, City of San Juan Bautista, citymanager@san-juan-bautista.ca.us
- Drew Lander, General Manager, Sunnyslope County Water District, drew@sunnyslopewater.org
- Garrett Haertel, Deputy District Engineer, San Benito County Water District, engineering@sbcwd.com
- Kris Mangano, Emergency Services Manager, San Benito County Office of Emergency Services, kmangano@cosb.us
- Madison Mitchell, Staff Analyst, San Benito County Office of Emergency Services, mmitchell@cosb.us

Hagerty Consulting

- Jim DeAngelo, Project Executive, Hagerty Consulting, jim.deangelo@hagertyconsulting.com
- Michael Levkowitz, Project Manager, Hagerty Consulting, michael.levkowitz@hagertyconsulting.com
- Michelle Bohrson, Deputy Project Manager, Hagerty Consulting, michelle.bohrson@hagertyconsulting.com
- Julia Davatzes, Planner, Hagerty Consulting, julia.davatzes@hagertyconsulting.com

MARCH 10, 2021 | 12:00 – 12:45 P.M. PST | REMOTE

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting Agenda

Time	Details
12:00 – 12:05 p.m.	**Welcome and General Updates**
12:05 – 12:20 p.m.	**Public and Stakeholder Engagement** • Community Hazards Survey • March Newsletter Issue • Stakeholder Group
12:20 – 12:40 p.m.	**Risk Assessment** • Progress Report • Risk Assessment Meeting • Data Requests
12:40 – 12:45 p.m.	**Next Steps**

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting

MARCH 10, 2021 | 12:00 – 12:30 P.M. PST | REMOTE

Action Items

The next Planning Committee meeting will be on Wednesday, March 24 at 12:00 p.m. PST.

Hagerty Consulting

- Hagerty will finalize and distribute the March Newsletter.
- Hagerty will develop a condensed version of the survey for distribution in utility bills.
- Hagerty will send out a calendar meeting hold for the Risk Assessment Meeting on Wednesday, April 14.
- Hagerty will coordinate with K. Mangano to develop an Eventbrite invite for the Stakeholder Group to the Risk Assessment Meeting.
- Hagerty will follow up on any outstanding data requests.
- Hagerty will continue to develop the risk assessment.

San Benito County Planning Committee

- The Planning Committee will begin to promote the Community Hazards Survey.
- K. Mangano will follow up on any outstanding data requests.

General Updates

M. Bohrson of Hagerty Consulting ("Hagerty") opened the meeting with the attendees from the San Benito County Multi-Jurisdictional Hazard Mitigation Plan (HMP) Update Planning Committee. The purpose of this meeting is to provide updates on community and stakeholder outreach activities and the risk assessment and discuss any outstanding questions from the Planning Committee.

Public and Stakeholder Engagement

Community Hazards Survey

The Community Hazards Survey was posted on social media by the County's Public Information Officer (PIO). K. Mangano has provided Hagerty with the Spanish translated version, and Hagerty will upload this to the SurveyMonkey and coordinate with the PIO for distribution. The

online survey link will be included in the Stakeholder Group March Newsletter, but Hagerty encouraged the Planning Committee to begin promoting it within their own professional and personal networks. The online survey to be open until approximately April 15; the attendees will determine the exact survey close date at a future meeting.

The attendees discussed outstanding needs for the paper survey. Hagerty will develop a condensed survey format (i.e., one double-sided page that includes the English and Spanish surveys) and share it with the Planning Committee. K. Mangano noted that the County will have these paper surveys available at their offices, as well. The survey will be included in the March 20 water bill, and the anticipated collection timeline is approximately two months from distribution (May 2021).

March Newsletter

The next newsletter will be sent out during the week of March 15 and will include general information about hazard mitigation planning and a link to the survey. K. Mangano and Hagerty have confirmed a Stakeholder Group list for the newsletter and Risk Assessment Meeting, but the Planning Committee is encouraged to identify additional contacts for this group throughout the planning process.

Risk Assessment

Risk Assessment Meeting

Due to the Hagerty Project Team transitions and other compounding factors, the attendees agreed to move the date of the Risk Assessment Meeting to Wednesday, April 14. This delay will not negatively impact the overall timeline of the project. Hagerty will send out a calendar hold for the Risk Assessment Meeting to the Planning Committee and will develop an invitation for the Stakeholder Group using Eventbrite. This invite will be sent out after the newsletter in a separate email.

Data Requests

Hagerty has coordinated with the Planning Committee over the last two weeks to collect any additional Geographic Information System (GIS) data. The Hagerty GIS team is currently analyzing how jurisdictional areas and their critical facilities interact with various hazards. M. Chambless highlighted the importance of analyzing the aging bridge infrastructure. K. Mangano will follow up with M. Chambless and C. Bedolla to collect any related data.

Attendees

San Benito County Planning Committee

- Brett Miller, City Manager, City of Hollister, brett.miller@hollister.ca.gov
- Charlie Bedolla, Batallion Chief, Hollister Fire Department, charlie.bedolla@hollister.ca.gov
- Drew Lander, General Manager, Sunnyslope County Water District, drew@sunnyslopewater.org
- Garrett Haertel, Deputy District Engineer, San Benito County Water District, engineering@sbcwd.com
- Kris Mangano, Emergency Services Manager, San Benito County Office of Emergency Services, kmangano@cosb.us
- Matt Streck, Assistant Chief, California Department of Forestry and Fire Protection San Benito Monterey Unit, matt.streck@fire.ca.gov
- Mike Chambless, Code Enforcement Officer, Hollister Resource Management Agency, mikechamblesswork@gmail.com
- Rob Hillebrecht, Associate Engineer, Sunnyslope County Water District, rob@sunnyslopewater.org

Hagerty Consulting

- Jim DeAngelo, Project Executive, Hagerty Consulting, jim.deangelo@hagertyconsulting.com
- Michelle Bohrson, Deputy Project Manager, Hagerty Consulting, michelle.bohrson@hagertyconsulting.com
- Julia Davatzes, Planner, Hagerty Consulting, julia.davatzes@hagertyconsulting.com

MARCH 24, 2021 | 12:00 – 12:45 P.M. PST | REMOTE

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting Agenda

Time	Details
12:00 – 12:05 p.m.	**Welcome and General Updates**
12:05 – 12:35 p.m.	**Risk Assessment Overview** • Which hazards have most severely impacted San Benito County in the last 10 years? • What are the community assets most valuable to the County and its residents? • Which hazards are of most concern to you?
12:35 – 12:40 p.m.	**Stakeholder Engagement** • Risk Assessment Meeting • Capabilities Survey
12:40 – 12:45 p.m.	**Next Steps**

How would you prioritize the following hazards?



Least Concerning

Most Concerning

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting

MARCH 24, 2021 | 12:00 – 12:45 P.M. PST | REMOTE

Action Items

The next Planning Committee meeting will be on Wednesday, April 7 at 12:00 p.m. PST.

San Benito County Planning Committee

- The Planning Committee will continue to promote the Community Hazards Survey.

Hagerty Consulting

- Hagerty will send out the Risk Assessment Meeting invitation to the Stakeholder Group.
- Hagerty will continue to develop the risk assessment.

General Updates

M. Bohrson of Hagerty Consulting ("Hagerty") opened the meeting with the attendees from the San Benito County Multi-Jurisdictional Hazard Mitigation Plan (HMP) Update Planning Committee. The purpose of this meeting is to discuss the hazards profiled in the risk assessment and community assets.

Risk Assessment Overview

Significant Hazard Events

To support the development of the risk assessment and better understand the context of past hazards, the attendees discussed recent occurrences of hazards and the impact of those events. The summary of this discussion is described in the following subsections.

FLOODING

- Flooding is frequent and impactful in the County, as caused by storms and levee breaks.
- The most recent significant flood events were in 2017, when a levee broke, and in 2019, when flooding from a storm required evacuation of a senior living facility.

EARTHQUAKES

- Earthquakes are of great concern to the County, as they are difficult to predict and very impactful.
- There have not been any earthquakes of significant magnitude in the last ten years, but minor tremors may occur daily.
- The County is near the San Andreas Fault, which scientists predict will produce an earthquake in the near future.

TERRORISM

- The County is concerned about terrorist activity in the area, including a cyber attack, incident involving water system or dams, and communications interference.
- The County has engaged in strategic planning with neighboring jurisdictions and the Federal Bureau of Investigation and complete a functional exercise for an attack on the San Justo Reservoir every few years.

HAZARDOUS MATERIALS INCIDENTS

- The County has a few highways that may make them susceptible to hazardous materials (HAZMAT) incidents.
- There are no known recent occurrences of HAZMAT spills.

Community Assets

IDENTIFYING ASSETS

For the purposes of this plan, community assets are critical facilities owned or utilized by the County that may be impacted by a hazard event. Examples of assets include water infrastructure, electrical systems, government buildings, and medical facilities. In addition to the community assets previously discussed or included in collected data sets, the Planning Committee identified the following:

- Critical infrastructure to respond to emergencies (e.g., Emergency Operations Center);
- Extension Bridge and other transportation infrastructure;
- Hollister Conduit, which connects the entire water system to the San Luis Reservoir and would cause a cascading set of impacts if it were to fail; and
- Hollister Airport.

The attendees also discussed the Pacheco Reservoir, located in Santa Clara County, that would inundate areas of San Benito County and greatly increase the on-stream storage if it were to fail. The Santa Clara County Water District is currently in the process of repairing the reservoir's spillway.

Other assets to the community include:

- Hollister Hills, an off-road vehicular park;
- Annual biker rally in July that attracts people to the area;

- Large agricultural packing houses and earthbound farms that are valuable to the private economy;
- Local non-profit organizations; and
- Industrial area with hazardous materials.

COMMUNICATIONS INFRASTRUCTURE

The Planning Committee highlighted the importance of their communications infrastructure, which is greatly impacted by wildfires, wind events, and earthquakes. There is an ongoing effort by the Radio Amateur Civil Emergency Preparedness Service (RACES) to access grant funding from the Department of Homeland Security so that they may set up a wireless network for the County. RACES plays a key role in emergency response and recovery efforts.

Communications infrastructure and cascading impacts of hazards will be incorporated into the plan through a community lifelines analysis, which will take a multi-hazard approach to understand the vulnerability of those systems.

Hazard Prioritization Exercise

The Planning Committee discussed how to prioritize the risk assessment hazards. They were encouraged to consider the meeting's conversations about hazard frequency, recent occurrences, historical impacts, and vulnerability of community assets.

The Planning Committee prioritized the hazards, from most to least concerning, as follows:

1. Earthquake
2. Severe weather
3. Wildfire
4. Dam Failure
5. Flood
6. Extreme Temperatures
7. Pandemic
8. Drought
9. Landslide
10. HAZMAT Incident
11. Terrorism

Stakeholder Engagement

Hagerty has developed an invite email for the Risk Assessment Meeting and will coordinate with K. Mangano to distribute it to the Stakeholder Group. Additionally, Hagerty will develop the Capabilities Survey, which collects information on jurisdictions' capacity for mitigation and will contribute to the capabilities assessment section of the HMP. The results of the risk assessment and the capabilities assessment will be leveraged to create actionable and implementable mitigation actions. Typically, this survey is directed at the Planning Committee, but the team may identify some other key stakeholders who should also participate in this survey.

Attendees

San Benito County Planning Committee

- Brett Miller, City Manager, City of Hollister, brett.miller@hollister.ca.gov
- Charlie Bedolla, Battalion Chief, Hollister Fire Department, charlie.bedolla@hollister.ca.gov
- Drew Lander, General Manager, Sunnyslope County Water District, drew@sunnyslopewater.org
- Garrett Haertel, Deputy District Engineer, San Benito County Water District, engineering@sbcwd.com
- Kris Mangano, Emergency Services Manager, San Benito County Office of Emergency Services, kmangano@cosb.us
- Madison Mitchell, Staff Analyst, San Benito County Office of Emergency Services, mmitchell@cosb.us
- Rob Hillebrecht, Associate Engineer, Sunnyslope County Water District, rob@sunnyslopewater.org

Hagerty Consulting

- Michelle Bohrson, Project Manager, Hagerty Consulting, michelle.bohrson@hagertyconsulting.com
- Julia Davatzes, Planner, Hagerty Consulting, julia.davatzes@hagertyconsulting.com

APRIL 7, 2021 | 12:00 – 12:45 P.M. PDT | REMOTE

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting Agenda

Time	Details
12:00 – 12:05 p.m.	**Welcome and General Updates**
12:05 – 12:20 p.m.	**Risk Assessment Meeting** • Attendees • Agenda
12:20 – 12:40 p.m.	**Risk Assessment Review** • Components of the Risk Assessment Draft • Collecting Feedback • Risk Assessment Draft Distribution
12:40 – 12:45 p.m.	**Next Steps**

April 7, 2021

San Benito County Multi-Jurisdictional Hazard Mitigation Plan

Risk Assessment Review

HAGERTY

Risk Assessment Components

Hazard Profiles

- Characteristics
- Location and Extent
- Recent Occurrences
- Probability

Lifelines Vulnerability Assessment

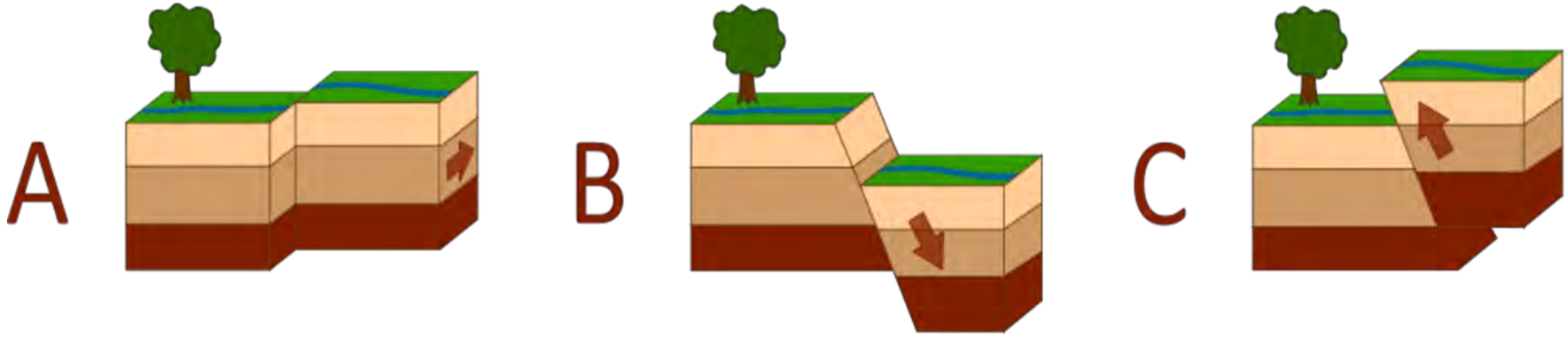
- Safety and Security
- Food, Water, Shelter
- Health and Medical
- Energy
- Communications
- Transportation
- Hazardous Materials

Hazard Profiles: Characteristics

The Characteristics section describes the **different types or categories of a hazard** and how they occur.

Example: Earthquake

Types of Faults: A – Strike-Slip, B – Normal, C – Reverse

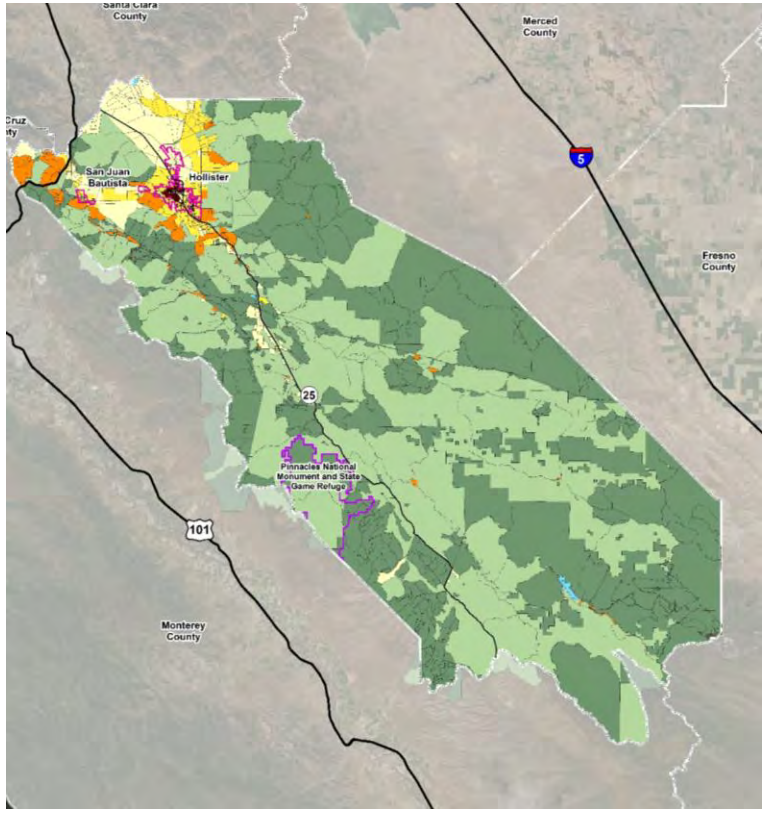


Hazard Profiles: Location and Extent (1)

The Location and Extent section describes **where the hazard may occur geographically in the County (location)** and how the magnitude of the event is measured (extent).

Example: Wildfire Location

WUI Zones in San Benito County



Hazard Profiles: Location and Extent (2)

The Location and Extent section describes where the hazard may occur geographically in the County (location) and **how the magnitude of the event is measured (extent).**

Example: Wildfire Extent

Wildfire Class Sizes

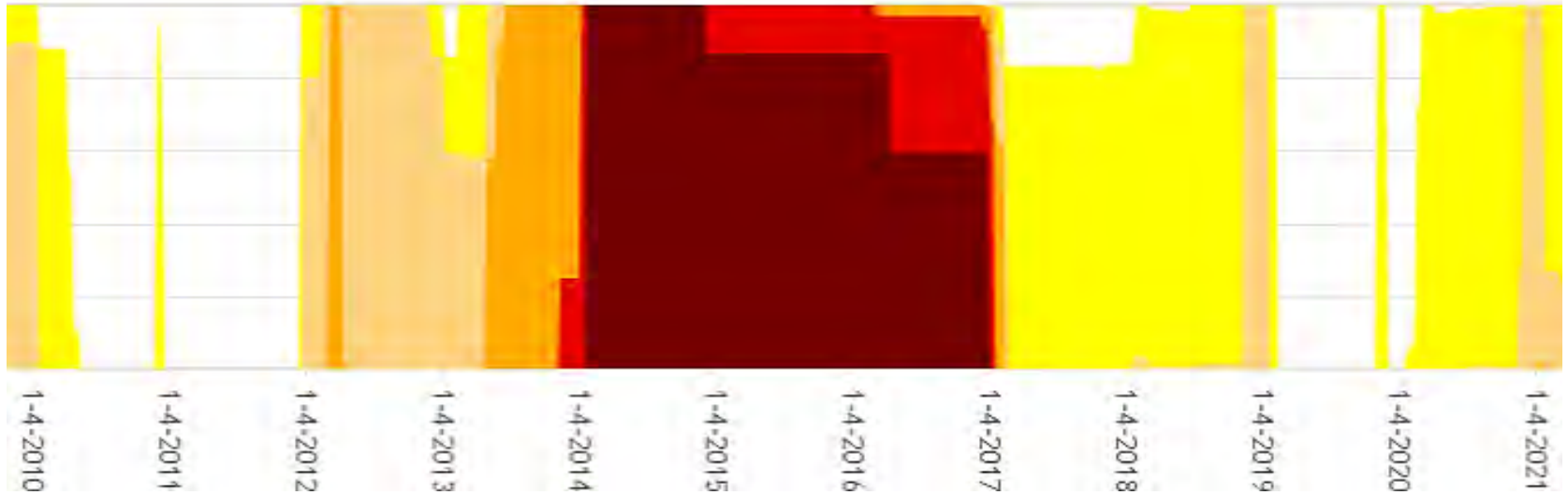
Class	Minimum Burn Area	Maximum Burn Area
A	Greater than 0 acres	0.25 acres
B	0.25 acres	10 acres
C	10 acres	100 acres
D	100 acres	300 acres
E	300 acres	1,000 acres
F	1,000 acres	5,000 acres
G	5,000 acres	N/A

Hazard Profiles: Recent Occurrences

The Recent Occurrences section compiles and describes **recent hazard events**, specifically those from January 2011 – December 2020.

Example: Drought

U.S. Drought Monitor for San Benito County, 2011 - 2020



Hazard Profiles: Probability

The Probability section describes how likely an event is to occur, calculated based on historical data or scientific study. Probability is classified as one of three categories:

- **Highly Likely**: occurs at least once a year
- **Likely**: occurs at least once every five years
- **Unlikely**: occurs less than once every five years

Example: Drought

*The probability of a drought event occurring in San Benito County is **highly likely**, or that a that a drought event is likely to occur at least once a year. This was calculated using historical data, in which at least one drought has occurred every year for the last ten years.*

Lifeline Vulnerability Assessment

The Lifelines Vulnerability Assessment details how hazard events may impact the community lifelines in San Benito County.



San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting

APRIL 7, 2021 | 12:00 – 12:45 P.M. PDT | REMOTE

Action Items

The next Planning Committee meeting will be on Wednesday, April 28 at 12:00 p.m. PDT.

San Benito County Planning Committee

- The Planning Committee will attend the Risk Assessment Meeting on Wednesday, April 14 at 12:00 p.m. PDT.
- The Planning Committee will review the risk assessment and provide feedback in the adjudication matrix by Friday, April 23.
- K. Mangano will coordinate with the County's Public Information Officer to promote the Community Hazards Survey on social media one more time.

Hagerty Consulting

- Hagerty will finalize and distribute the drafted risk assessment to the Planning Committee for review.
- Hagerty will send a reminder for the Risk Assessment Meeting invitation to the Stakeholder Group.
- Hagerty will develop talking points for K. Mangano for the Risk Assessment Meeting.
- Hagerty will close the Community Hazards Survey on Friday, April 16.

General Updates

M. Bohrson of Hagerty Consulting ("Hagerty") opened the meeting with the attendees from the San Benito County Multi-Jurisdictional Hazard Mitigation Plan (HMP) Update Planning Committee. The purpose of this meeting is to discuss the risk assessment and the upcoming Risk Assessment Meeting.

Community Hazards Survey

The Community Hazards Survey currently has 124 responses as of Wednesday, April 7. K. Mangano will coordinate with the County's Public Information Officer (PIO) to promote the

survey on the County's social media again. The Planning Committee decided not to distribute the paper surveys due to the logistical concerns of collecting responses.

Risk Assessment Meeting

The Risk Assessment Meeting is scheduled for Wednesday, April 14 at 12:00 p.m. PDT. Currently, five individuals from the wider stakeholder group have indicated they will attend the meeting. Hagerty will send out a reminder invite to see if anyone else is able to join.

The meeting will be generally structured into four sections:

- **Hazard Mitigation Planning Overview**: describe the purpose and benefits of the planning process and Federal Emergency Management Agency (FEMA) requirements.
- **Risk Assessment Review**: summarize the findings of the risk assessment, including the profiled hazards and impacts on community lifelines.
- **Introduction to Mitigation**: discuss mitigation as it relates to the risk assessment, funding, and implementation.
- **Next Steps**: outline a call to action for the attendees.

The meeting will have some engagement activities to promote collaboration and spark conversations about hazard impacts on the community. K. Mangano agreed to speak at the beginning of the meeting and welcome the attendees. M. Bohrson noted that this meeting is an opportunity to establish a local point of contact for the project and socialize what the San Benito County Office of Emergency Services does with other County employees and community members. Hagerty will develop some talking points for K. Mangano for her role, as requested.

Risk Assessment Review

Contents

The risk assessment is comprised of two main sections: Hazard Profiles and Lifelines Vulnerability Assessment. Each hazard in the **Hazard Profiles** has four subsections:

- **Characteristics**: provides information regarding the type of the specific hazard in the profile.
- **Location and Extent**: describes the geographic area that is impacted by the specific hazard, the magnitude of that event, and the scale on which the magnitude is measured by.
- **Recent Occurrences**: lists hazard events that occurred in the Chicken Ranch Tribe, specifically those from January 2011 – December 2020.
- **Probability**: estimates how often the specific hazard is likely to occur, categorized into highly likely (i.e., occurs at least once a year), likely (i.e., occurs at least once every five years), or unlikely (i.e., occurs less than once every five years).

The probability of a hazard occurrence is categorized into highly likely (i.e., occurs at least once a year), likely (i.e., occurs at least once every five years), or unlikely (i.e., occurs less than once every five years).

The **Lifelines Vulnerability Assessment** details how community assets are vulnerable to hazards and how they may be impacted by a hazard event, using FEMA's community lifelines approach. Lifelines describe the critical functions and services required to sustain a community. The community lifelines considered in the San Benito County HMP are categorized into:

- Safety and Security;
- Food, Water, Shelter;
- Health and Medical;
- Energy;
- Communications;
- Transportation; and
- Hazardous Materials.

Distribution and Feedback

The attendees agreed to distribute the drafted risk assessment to only the Planning Committee for their review. Hagerty emphasized that the Planning Committee's expertise in their community is an essential perspective to incorporate into the risk assessment. The Planning Committee is encouraged to provide detailed feedback on the draft, particularly in the Recent Occurrences and Lifelines Vulnerability Assessment sections.

An adjudication matrix will be distributed to the Planning Committee with the drafted risk assessment week for reviewers to track their comments. The adjudication matrix provides space for reviewers to identify the location of the comment, detail what needs to be changed, and provide a potential solution. Hagerty will aggregate all comments across the adjudication matrices to comprehensively review the Planning Committee's feedback and identify and address any conflicting comments.

Security Concerns

M. Chambless noted some security concerns for sharing the findings of the risk assessment publicly. M. Bohrson explained that typically, the content of the risk assessment is at a high-level and aggregates information that is publicly available on various databases and websites. To be in compliance with FEMA regulations for HMPs, the finalized plan must be posted to the jurisdiction's website. However, the County may choose to remove some of the analysis or redact certain sections and only use them for jurisdictional planning purposes. The Planning Committee will revisit this conversation after reviewing the risk assessment.

Attendees

San Benito County Planning Committee

- Brett Miller, City Manager, City of Hollister, brett.miller@hollister.ca.gov
- Charlie Bedolla, Battalion Chief, Hollister Fire Department, charlie.bedolla@hollister.ca.gov
- Drew Lander, General Manager, Sunnyslope County Water District, drew@sunnyslopewater.org
- Garrett Haertel, Deputy District Engineer, San Benito County Water District, engineering@sbcwd.com
- Kris Mangano, Emergency Services Manager, San Benito County Office of Emergency Services, kmangano@cosb.us
- Madison Mitchell, Staff Analyst, San Benito County Office of Emergency Services, mmitchell@cosb.us
- Mike Chambless, Code Enforcement Officer, Hollister Resource Management Agency, mikechamblesswork@gmail.com

Hagerty Consulting

- Michelle Bohrson, Project Manager, Hagerty Consulting, michelle.bohrson@hagertyconsulting.com
- Julia Davatzes, Planner, Hagerty Consulting, julia.davatzes@hagertyconsulting.com

APRIL 28, 2021 | 12:00 – 12:45 P.M. PDT | REMOTE

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting Agenda

Time	Details
12:00 – 12:05 p.m.	**Welcome and General Updates**
12:05 – 12:20 p.m.	**Risk Assessment Review** • Summary of Risk Assessment Meeting • Risk Assessment Feedback
12:20 – 12:35 p.m.	**Capabilities Assessment** • Components of the Capabilities Assessment • Capabilities Assessment Survey
12:35 – 12:45 p.m.	**Next Steps**

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting

APRIL 28, 2021 | 12:00 – 12:30 P.M. PDT | REMOTE

Action Items

The next Planning Committee meeting will be on Wednesday, May 12, 2021 at 12:00 p.m. PDT.

San Benito County Planning Committee

- The Planning Committee will review the risk assessment for any final additional feedback by Wednesday, May 5.
- The Planning Committee will complete the Capabilities Assessment Survey
- K. Mangano will identify a point of contact for the City of Hollister hazard mitigation planning process.
- C. Bedolla will share wildfire preparedness plans with Hagerty.

Hagerty Consulting

- Hagerty will send out a calendar hold for the Capabilities Assessment Webinar to the Planning Committee
- Hagerty will make any additional updates and finalize the risk assessment by May 7.
- Hagerty will finalize and distribute the Capabilities Assessment Survey by May 7.

General Updates

M. Bohrson of Hagerty Consulting ("Hagerty") opened the meeting with the attendees from the San Benito County Multi-Jurisdictional Hazard Mitigation Plan (HMP) Update Planning Committee. The purpose of this meeting is to discuss the Risk Assessment Meeting and upcoming Capabilities Assessment Survey.

Risk Assessment Review

Risk Assessment Meetings

Hagerty and the County discussed the Risk Assessment Meeting on April 14. During this meeting, the attendees discussed the results of the risk assessment and participated in an exercise to understand risk in the community. One challenge for the meeting was that while a

diverse group of stakeholders were invited, most attendees had very technical expertise and similar perspectives on the hazards.

Hagerty will work with the County to utilize strategies that may boost attendance and engagement during the Capabilities Assessment Workshop.

Risk Assessment Updates

The attendees identified certain hazards and impact information that should be updated in the risk assessment. M. Bohrson encouraged the attendees to review the document again, focusing on the lifelines vulnerability assessment, and provide any additional feedback.

HAZARD: EARTHQUAKES

D. Lander asked about why earthquakes are considered unlikely, despite the location of the fault line in the County and accompanying risk for an earthquake event. M. Bohrson explained that probabilities categories in the HMP were developed using historical data and research, although some hazards are more difficult to classify due to the nature of the event (e.g., earthquakes, communicable disease).

The earthquake risk may be more appropriately categorized by changing the way probabilities are categorized in the plan or adding more information to the Earthquake: Probability subsection and reassign the hazard to the likely or highly likely category. M. Bohrson noted that probability is only one component to consider in hazard prioritization, and the County can choose to assign a higher priority to earthquakes even if the estimated probability of occurrence is low.

HAZARD: HAZMAT INCIDENTS

C. Bedolla noted that hazardous materials (HAZMAT) incidents should also be categorized as likely or highly likely. The County experiences a few minor HAZMAT incidents a year due to white phosphorous discharge or natural gas leaks.

HAZARD: WILDFIRE

C. Bedolla has wildfire preparedness plans that he will share with Hagerty.

IMPACT: AIR POLLUTION

C. Bedolla noted that wildfires and droughts can cause extensive air pollution and accompanying health problems for residents. They shared an article about air pollution caused by these hazards with Hagerty to incorporate into the document.

Regional Planning Efforts

K. Mangano shared that the City of Hollister is coordinating and participating in a hazard mitigation planning process simultaneously to that of the County. The County was not previously aware of this effort. K. Mangano will identify a point of contact for the City of Hollister HMP.

Capabilities Assessment

The purpose of the capabilities assessment is to understand the capacity of jurisdictions to implement mitigation projects and maintain a mitigation program. The capabilities assessment, along with the risk assessment, is used to develop the mitigation strategy by identifying projects that both address risks and potential impacts of hazards and are actionable given local capacity.

Jurisdictional capacity will be analyzed in three categories:

- **Legal and Regulatory Capabilities**: codes, ordinances, and plans that support mitigation
- **Administrative and Technical Capabilities**: staff with particular skills or expertise, such as engineering, emergency management, or grant writing
- **Fiscal Capabilities**: eligibility for or access to grant funding and local budget capacity

Hagerty has developed a survey that will ask the Planning Committee if their jurisdiction has resources in these three categories. The survey will be distributed on May 7 and closed May 21. The survey will initially be distributed to only the Planning Committee, but individuals from the larger Stakeholder Group may be included at a later date if they have particular perspectives that may be useful.

Upcoming Project Schedule

M. Bohrson detailed the upcoming deadlines and meetings for May:

- May 7: Open Capabilities Survey
- May 7: Final Risk Assessment Deadline
- May 12: Planning Committee Meeting
- May 21: Close Capabilities Survey
- May 26: Capabilities Assessment Webinar with Stakeholder Group
- May 28: Drafted Capabilities Assessment Deadline

Hagerty will send out a hold for the Capabilities Assessment Webinar to the Planning Committee and then follow up with invitations for the broader stakeholder group.

Attendees

San Benito County Planning Committee

- Charlie Bedolla, Battalion Chief, Hollister Fire Department, charlie.bedolla@hollister.ca.gov
- Drew Lander, General Manager, Sunnyslope County Water District, drew@sunnyslopewater.org
- Garrett Haertel, Deputy District Engineer, San Benito County Water District, engineering@sbcwd.com
- Kris Mangano, Emergency Services Manager, San Benito County Office of Emergency Services, kmangano@cosb.us
- Madison Mitchell, Staff Analyst, San Benito County Office of Emergency Services, mmitchell@cosb.us
- Matt Streck, Assistant Chief, California Department of Forestry and Fire Protection San Benito Monterey Unit, matt.streck@fire.ca.gov
- Mike Chambless, Code Enforcement Officer, Hollister Resource Management Agency, mchambless@cosb.us
- Rich Brown, Code Enforcement Officer, Code Enforcement Department, codeenforcement@san-juan-bautista.ca.us
- Rob Hillebrecht, Associate Engineer, Sunnyslope County Water District, rob@sunnyslopewater.org

Hagerty Consulting

- Michelle Bohrson, Project Manager, Hagerty Consulting, michelle.bohrson@hagertyconsulting.com
- Julia Davatzes, Planner, Hagerty Consulting, julia.davatzes@hagertyconsulting.com

MAY 12, 2021 | 12:00 – 12:30 P.M. PDT | REMOTE

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting Agenda

Time	Details
12:00 – 12:05 p.m.	**Welcome and General Updates**
12:05 – 12:15 p.m.	**Capabilities Assessment Survey Reminder**
12:15 – 12:25 p.m.	**Capabilities Assessment Webinar** • Review Agenda • Invites and Logistics
12:25 – 12:30 p.m.	**Next Steps**

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting

MAY 12, 2021 | 12:00 – 12:30 P.M. PDT | REMOTE

Action Items

The next Planning Committee meeting will be on Wednesday, June 9, 2021 at 12:00 p.m. PDT.

San Benito County Planning Committee

- The Planning Committee will complete the Capabilities Assessment Survey by Friday, May 21.
- The Planning Committee will attend the Capabilities Assessment Webinar on Wednesday, May 26.
- K. Mangano will reach out to B. Miller regarding the City of Hollister hazard mitigation planning process.

Hagerty Consulting

- Hagerty will send out a calendar hold for the Capabilities Assessment Webinar to the Planning Committee.
- Hagerty will finalize and distribute the Capabilities Assessment Survey by May 7.

General Updates

M. Bohrson of Hagerty Consulting ("Hagerty") opened the meeting with the attendees from the San Benito County Multi-Jurisdictional Hazard Mitigation Plan (HMP) Update Planning Committee. The purpose of this meeting is to discuss the upcoming Capabilities Assessment Webinar.

The attendees discussed the drought emergency declared by the Governor of California on Monday, which was inclusive of San Benito County. The exact regulations of this declaration are unknown, but D. Lander noted that the County should have enough water storage to supply residents and the drought is not expected to significantly impact water availability. M. Streck noted that a drought declaration activates particular tracking mechanisms to support effective wildfire response.

Capabilities Assessment Survey

The Planning Committee was reminded to fill out the Capabilities Assessment Survey by Friday, May 21. K. Mangano requested a list of those who received the Survey, as she may want to share it with individuals from the Resource Management Agency.

Capabilities Assessment Webinar

Hagerty presented an agenda for the upcoming Capabilities Assessment Webinar, to include:

- **Welcome**
- **Project Review**: provide an overview of hazard mitigation planning, summarize the results of the risk assessment, and outline project progress and milestones.
- **Capabilities Assessment Review**: outline the components of the capabilities assessment section of the HMP.
- **Activity: Building Capacity**: engage attendees to discuss the results of the capabilities assessment and identify additional capabilities.
- **Next Steps**: discuss how the results of the risk assessment and capabilities assessment will be used to inform the mitigation strategy, and present upcoming project deadlines.

Following this meeting, Hagerty will send out an Eventbrite invite for the Capabilities Assessment Webinar to the Stakeholder Group and the Planning Committee. The attendees discussed strategies to increase attendance at this workshop in comparison to the Risk Review Meeting. Hagerty will develop some template language for direct invitations to specific people the Planning Committee would like to attend and share it with K. Mangano for distribution.

Attendees

San Benito County Planning Committee

- Charlie Bedolla, Battalion Chief, Hollister Fire Department, charlie.bedolla@hollister.ca.gov
- Drew Lander, General Manager, Sunnyslope County Water District, drew@sunnyslopewater.org
- Kris Mangano, Emergency Services Manager, San Benito County Office of Emergency Services, kmangano@cosb.us
- Madison Mitchell, Staff Analyst, San Benito County Office of Emergency Services, mmitchell@cosb.us
- Matt Streck, Assistant Chief, California Department of Forestry and Fire Protection San Benito Monterey Unit, matt.streck@fire.ca.gov
- Rich Brown, Code Enforcement Officer, Code Enforcement Department, codeenforcement@san-juan-bautista.ca.us

Hagerty Consulting

- Michelle Bohrson, Project Manager, Hagerty Consulting, michelle.bohrson@hagertyconsulting.com
- Julia Davatzes, Planner, Hagerty Consulting, julia.davatzes@hagertyconsulting.com

JUNE 15, 2021 | 12:00 – 12:30 P.M. PDT | REMOTE

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting Agenda

Time	Details
12:00 – 12:05 p.m.	Welcome and General Updates
12:05 – 12:10 p.m.	Outstanding Items from the Capabilities Assessment
12:10 – 12:20 p.m.	Mitigation Strategy Development
12:20 – 12:25 p.m.	Mitigation Strategy Workshop
12:25 – 12:30 p.m.	Next Steps

JULY 8, 2021 | 10:00 – 11:00 A.M. PDT | REMOTE

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting Agenda

Time	Details
10:00 – 10:05 a.m.	**Welcome and General Updates**
10:05 – 10:20 a.m.	**Mitigation Strategy Workshop** • Review Agenda • Invites and Logistics
10:20 – 10:55 a.m.	**Past Mitigation Actions** • Past Mitigation Action Tracking Process • Review Outstanding Actions
10:55 – 11:00 a.m.	**Next Steps**

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting

JULY 8, 2021 | 10:00 – 11:00 A.M. PDT | REMOTE

Action Items

San Benito County Planning Committee

- The San Benito Office of Emergency Services will review the Mitigation Strategy Workshop invite list and follow up with individuals whose attendance is a high priority.
- The Planning Committee will attend the in-person Mitigation Strategy Workshop on Tuesday, July 13.

Hagerty Consulting

- Hagerty will finish preparing for the Mitigation Strategy Workshop.
- Hagerty will reach out to individuals regarding the progress of previous mitigation actions.
- Hagerty will send the San Benito Office of Emergency Services the list of current Mitigation Strategy Workshop attendees and invited individuals.
- Hagerty will set up a conference line to accompany the in-person Workshop and shared the morning of the Workshop.

General Updates

M. Bohrson of Hagerty Consulting ("Hagerty") opened the meeting with the attendees from the San Benito County Multi-Jurisdictional Hazard Mitigation Plan (HMP) Update Planning Committee. The purpose of this meeting is to discuss the upcoming Mitigation Strategy Workshop.

Two new Planning Committee members were in attendance at the meeting: Chief Meddles and Chief DiTullio from the California Department of Forestry and Fire Protection (CAL FIRE), who will participate in the planning process moving forward until an additional CAL FIRE San Benito Monterey Unit staff member is identified.

Mitigation Strategy Workshop

Agenda

Hagerty presented an agenda for the upcoming Mitigation Strategy Workshop, to include:

- **Welcome & Project Review**: provide an overview of hazard mitigation planning and project progress and milestones.
- **Workshop Session 1: Create Mitigation Goals**: develop mitigation goals to drive the Mitigation Strategy.
- **Workshop Session 2: Review Previous Mitigation Actions**: track any progress on the mitigation actions listed in the County's previous HMP.
- **Workshop Session 3: Design Mitigation Actions**: identify new mitigation actions to include in the HMP.
- **Implementing Mitigation**: discuss how mitigation actions will be prioritized in the plan, how the HMP may be integrated into other planning processes and County efforts, and funding that may be available for mitigation efforts.

The Implementing Mitigation section of the workshop will be shorter in anticipation of the future Plan-to-Project Workshop that will occur after the Plan is fully drafted.

Attendees

The Planning Committee discussed the current list of attendees for the Workshop. M. Bohrson noted it is particularly important to have a breadth of stakeholders present, as there are actions that will require support from community stakeholders outside of the Planning Committee. These additional stakeholders should be present in the development of the actions to support the success of the project.

Hagerty will send the San Benito County Office of Emergency Services (OES) the list of current attendees and invited individuals so that they may follow up with those who are a high priority for the workshop (e.g., Public Works Department, Resource Management Agency).

Logistics

The attendees discussed the use of an online conference line during the Workshop. Chief Bedolla noted that a conference line would be an accessible option those who are unable to travel to the County offices. The conference line will be offered on an as-needed basis to specific individuals and shared the morning of the Workshop.

Previous Mitigation Actions

As part of the Federal Emergency Management Agency (FEMA) HMP update process, the County will need to review the progress of mitigation actions recorded in the previous HMP. In addition to meeting FEMA requirements, this process will enable the County to track accomplishments made on the listed actions and determine if these projects are still relevant to

the County and should be included in the updated HMP. FEMA does not evaluate progress on each action, but rather requires an explanation as to why a project is included or omitted.

San Benito County OES reviewed the previous mitigation actions and identified any known progress on the projects. Hagerty will follow up with members of the Planning Committee individually regarding any outstanding information.

Attendees

San Benito County Planning Committee

- Brett Miller, City Manager, City of Hollister, brett.miller@hollister.ca.gov
- Charlie Bedolla, Battalion Chief, Hollister Fire Department, charlie.bedolla@hollister.ca.gov
- Madison Mitchell, Staff Analyst, San Benito County Office of Emergency Services, mmitchell@cosb.us
- Mike Meddles, Chief, CAL FIRE West Division, mike.meddles@fire.ca.gov
- Reno DiTullio Jr, Unit Chief, CAL FIRE San Benito Monterey Unit, reno.ditulliojr@fire.ca.gov
- Rob Hillebrecht, Associate Engineer, Sunnyslope County Water District, rob@sunnyslopewater.org

Hagerty Consulting

- Michelle Bohrson, Project Manager, Hagerty Consulting, michelle.bohrson@hagertyconsulting.com
- Julia Davatzes, Planner, Hagerty Consulting, julia.davatzes@hagertyconsulting.com

JULY 28, 2021 | 12:00 – 12:30 P.M. PDT | REMOTE

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting Agenda

Time	Details
12:00 – 12:05 p.m.	**Welcome and General Updates**
12:05 – 12:10 p.m.	**Mitigation Strategy Workshop** • Workshop Summary • Feedback
12:10 – 12:20 p.m.	**Plan Development** • Plan Progress • Outstanding Information
12:20 – 12:25 p.m.	**Plan Review Period** • Feedback Collection Process • Timeline and Logistics
12:25 – 12:30 p.m.	**Next Steps**

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting

JULY 28, 2021 | 12:00 – 12:30 P.M. PDT | REMOTE

Note: These notes reflect the discussion with the Planning Committee on July 28, however they are now out of date given a project pause.

Action Items

San Benito County Planning Committee

- The Planning Committee will review the draft Capability Assessment and provide their feedback.
- The Planning Committee will review the draft Mitigation Strategy and provide their feedback.
- The San Benito County Office of Emergency Services and City of Hollister will coordinate with Hagerty to maintain consistency across the two hazard mitigation planning processes and confirm participation requirements.

Hagerty Consulting

- Hagerty will finish developing the draft Capability Assessment and draft Mitigation Strategy and share with the Planning Committee for review.
- Hagerty will develop a hazard mitigation overview document and share it with San Benito County Office of Emergency Services.
- Hagerty will coordinate with the San Benito County Office of Emergency Services and City of Hollister to maintain consistency across the two hazard mitigation planning processes and confirm participation requirements.

General Updates

M. Bohrson of Hagerty Consulting (“Hagerty”) opened the meeting with the attendees from the San Benito County Multi-Jurisdictional Hazard Mitigation Plan (HMP) Update Planning Committee. The purpose of this meeting is to discuss summarize the progress made on the Plan and provide updates for upcoming deliverable deadlines and meetings.

Mitigation Strategy Workshop

Workshop Summary

M. Bohrson provided a short summary of the Mitigation Strategy Workshop held on July 13, 2021 at the Board of Supervisors Chambers in Hollister, CA. During the Workshop, members of the Planning Committee and Stakeholder Group participated in activities to:

- Develop mitigation goals to guide the mitigation strategy of the HMP;
- Collaboratively design mitigation actions that will enhance the overall resilience of the San Benito County community; and
- Discuss preparations for future funding opportunities from the State and federal government.

K. Mangano shared the Workshop slide deck with the attendees. She and M. Mitchell received questions from community-based organizations who have not previously been involved in the planning process and requested an overview document they can share with these organizations. Hagerty will develop an overview document that outlines the planning process and details the importance of hazard mitigation and share it with the San Benito County Office of Emergency Services (OES).

Plan Development

Hagerty is finalizing remaining section of the draft HMP, including the Capability Assessment, Mitigation Strategy, and Planning Process sections, and collecting any outstanding information.

National Flood Insurance Program Data

Hagerty has been in contact with R. Bolster-Grant from the Resource Management Agency (RMA), the new County floodplain administrator, to collect the County's National Flood Insurance Program (NFIP) data. R. Bolster-Grant has shared the best available data she can access. Analyzing the County's NFIP data, in addition to meeting requirements from the Federal Emergency Management Agency (FEMA), is important for understanding the history of flooding in the County and contextualizing flood risk. Hagerty has shared additional FEMA contacts with R. Bolster-Grant so she can inquire about any additional NFIP data that may be available.

Participation of the City of Hollister

K. Mangano has been in coordination with B. Miller regarding the City of Hollister's hazard mitigation planning Process. K. Mangano noted that grant used to fund the County and participating jurisdictions' mitigation planning process is dependent on the participation of the City of Hollister. Hagerty, San Benito County OES, and the City of Hollister will continue to coordinate to ensure consistency across the planning processes and confirm participation requirements.

Upcoming Project Milestones

M. Bohrson reviewed the upcoming project milestones and due dates:

- **July 30**: Hagerty will distribute the draft Capability Assessment to the Planning Committee for review. The Planning Committee will provide feedback on the deliverable to ensure information regarding the County and its jurisdictions is captured accurately.
- **August 6**: Hagerty will distribute the Mitigation Strategy Action Plan to the Planning Committee. Hagerty has developed this Plan section by reviewing the County's previous HMP and Mitigation Strategy Workshop notes. The Planning Committee will provide feedback on the deliverable to confirm that the information included is accurate (e.g., responsible agency, project progress) and identify any additional actions they would like to include.
- **Late August**: Hagerty will distribute the full draft HMP for review. The Plan can be distributed to the Planning Committee or the Stakeholder Group, depending on the preference of the Planning Committee.
- **September – October**: There will be a Public Review Period, per FEMA requirements. The Planning Committee may redact certain portions of the Plan they do not want publicly available. Typically, communities will post the draft HMP on their jurisdiction website and attach an online survey for the public to provide feedback, although this review process can be adapted to align with any existing processes (e.g., local newspaper press release).
- **October – November**: Hagerty will analyze all the provided feedback and finalize the HMP. Then, Hagerty and the Planning Committee will work with a representative from the California Governor's Office of Emergency Services (CalOES) to submit the Plan for review.

Attendees

San Benito County Planning Committee

- Brett Miller, City Manager, City of Hollister, brett.miller@hollister.ca.gov
- Charlie Bedolla, Battalion Chief, Hollister Fire Department, charlie.bedolla@hollister.ca.gov
- Drew Lander, General Manager, Sunnyslope County Water District, drew@sunnyslopewater.org
- Kris Mangano, Emergency Services Manager, San Benito County Office of Emergency Services, kmangano@cosb.us
- Madison Mitchell, Staff Analyst, San Benito County OES, mmitchell@cosb.us
- Mike Meddles, Chief, California Department of Forestry and Fire Protection West Division, mike.meddles@fire.ca.gov
- Rich Brown, Code Enforcement Officer, Code Enforcement Department, codeenforcement@san-juan-bautista.ca.us

- Rob Hillebrecht, Associate Engineer, Sunnyslope County Water District, rob@sunnyslopewater.org

Hagerty Consulting

- Michelle Bohrson, Project Manager, Hagerty Consulting, michelle.bohrson@hagertyconsulting.com
- Julia Davatzes, Planner, Hagerty Consulting, julia.davatzes@hagertyconsulting.com

AUGUST 25, 2021 | 12:00 – 12:30 P.M. PDT | REMOTE

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting Agenda

Time	Details
12:00 – 12:05 p.m.	**Welcome and General Updates**
12:05 – 12:15 p.m.	**Project Updates** • Plan Progress • Timeline
12:15 – 12:20 p.m.	**Plan Review Meeting** • Plan Progress • Timing of Meeting
12:20 – 12:25 p.m.	**Outstanding Questions** • Capability Assessment • Mitigation Strategy
12:25 – 12:30 p.m.	**Next Steps**

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting

AUGUST 25, 2021 | 12:00 – 12:30 P.M. PDT | REMOTE

Action Items

San Benito County Planning Committee

- The Planning Committee will review the draft Capability Assessment and provide their feedback.
- The San Benito County Office of Emergency Services and City of San Juan Bautista will coordinate with Hagerty to present to the City Council on September 21.

Hagerty Consulting

- Hagerty will resend the draft Capability Assessment to the Planning Committee for an additional review.
- Hagerty will coordinate with the San Benito County Office of Emergency Services and City of San Juan Bautista to present to the City Council on September 21.

General Updates

M. Bohrson of Hagerty Consulting ("Hagerty") opened the meeting with the attendees from the San Benito County Multi-Jurisdictional Hazard Mitigation Plan (HMP) Update Planning Committee. The purpose of this meeting is to discuss the upcoming Plan Review Meeting and summarize the remaining planning process deliverables.

M. Bohrson discussed the parallel planning processes between the City of Hollister's HMP and that of the San Benito County and its participating jurisdictions. The two planning teams have met to discuss the approach and identify how the City of Hollister's scope of work fits into the County's plan. While an agreement has been reached, this coordination did impact the project timeline. The new date for delivery of the draft Plan to the Planning Committee is September 24, pending information received from the City of Hollister.

Plan Review Meeting

The purpose of the Plan Review Meeting is to review the structure of the Plan and advise the Planning Committee and Stakeholder Group on the type of feedback needed during the plan

review period. The Plan Review Meeting is a key meeting that demonstrates to the State and Federal Emergency Management Agency (FEMA) that all jurisdictions are participating in the planning process. Additional individuals who will need to eventually adopt and approve the HMP (e.g., City Council) should be invited to the meeting.

The attendees agreed to hold the meeting on Wednesday, September 22 between 12 and 3 p.m. PDT.

Upcoming Project Milestones

Capability Assessment

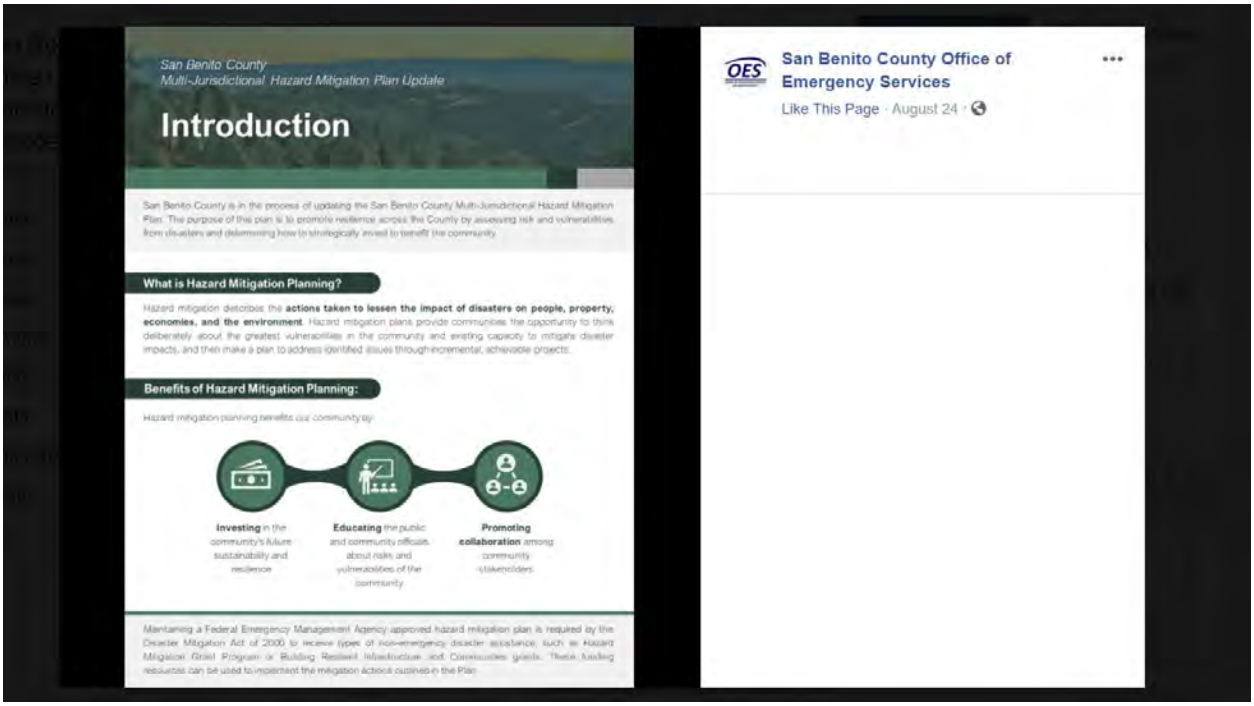
Prior to the meeting, Hagerty provided the draft Capability Assessment to the Planning Committee for their review. Sunnyslope County Water District and the Resource Management Agency do not have any additional comments. Hagerty will resend the draft Capability Assessment to the Planning Committee for an additional review.

Public Review Period

D. Reynolds from the City of San Juan Bautista asked if Hagerty could present about the HMP at the next City Council meeting. Hagerty will coordinate with the City of San Juan Bautista and San Benito County to present at the meeting on September 21 at 6 p.m. PDT.

Engaging the Public

As requested in the prior meeting, Hagerty developed a short informational document to introduce hazard mitigation planning and the San Benito County planning process. San Benito County Office of Emergency Services (OES) posted the document on the department's social media outlets to engage the community prior to the public comment period. A screenshot of the document is included below.



Attendees

San Benito County Planning Committee

- Brett Miller, City Manager, City of Hollister, brett.miller@hollister.ca.gov
- Don Reynolds, City Manager, City of San Juan Bautista, citymanager@san-juan-bautista.ca.us
- Garrett Haertel, Deputy District Engineer, San Benito County Water District, engineering@sbcwd.com
- Kris Mangano, Emergency Services Manager, San Benito County OES, kmangano@cosb.us
- Madison Mitchell, Staff Analyst, San Benito County OES, mmitchell@cosb.us
- Mike Meddles, Chief, California Department of Forestry and Fire Protection West Division, mike.meddles@fire.ca.gov
- Rob Hillebrecht, Associate Engineer, Sunnyslope County Water District, rob@sunnyslopewater.org

Hagerty Consulting

- Michelle Bohrson, Project Manager, Hagerty Consulting, michelle.bohrson@hagertyconsulting.com
- Julia Davatzes, Planner, Hagerty Consulting, julia.davatzes@hagertyconsulting.com

SEPTEMBER 8, 2021 | 12:00 – 12:30 P.M. PDT | REMOTE

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting Agenda

Time	Details
12:00 – 12:05 p.m.	**Welcome and General Updates**
12:05 – 12:10 p.m.	**Review the Mitigation Strategy** • Purpose and Sections of the Mitigation Strategy • Feedback Timeline
12:10 – 12:25 p.m.	**Upcoming Project Meetings** • Plan Review Meeting • Public Meeting • San Juan Bautista City Council Meeting
12:25 – 12:30 p.m.	**Next Steps**

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting

SEPTEMBER 8, 2021 | 12:00 – 12:30 P.M. PDT | REMOTE

Action Items

San Benito County Planning Committee

- The Planning Committee will review the draft Mitigation Strategy and provide their feedback.
- The Planning Committee will attend the Plan Review Meeting on Wednesday, September 22 from 12 – 1 p.m. PDT.

Hagerty Consulting

- Hagerty will complete the draft Mitigation Strategy and share it with the Planning Committee for their review.
- Hagerty will follow up with San Juan Bautista to confirm logistics and presentation format for the City Council meeting on September 21.
- Hagerty will continue to prepare for the Plan Review Meeting on September 22.

General Updates

M. Bohrson of Hagerty Consulting ("Hagerty") opened the meeting with the attendees from the San Benito County Multi-Jurisdictional Hazard Mitigation Plan (HMP) Update Planning Committee. The purpose of this meeting is to discuss the upcoming Plan Review Meeting and summarize the remaining planning process deliverables.

Plan Review

Capability Assessment

The Planning Committee has reviewed and provided feedback on the draft Capability Assessment. The final Capability Assessment has been updated and additional information will be incorporated into the section, pending receipt of information from the City of Hollister.

Mitigation Strategy

The draft Mitigation Strategy will be shared with the Planning Committee for their review. The Mitigation Strategy includes a written Plan section of the mitigation goals and actions, as well as a spreadsheet that includes all action plan information (e.g., lead and supporting agencies, hazards the action will mitigate). Each participating jurisdiction is encouraged to review the actions assigned to them and validate that their goals for the mitigation process are being fulfilled by these actions. In addition, the Planning Committee is encouraged to consider:

- Is the information presented comprehensive and accurate (e.g., jurisdictions that the action applies to, lead agencies)?
- Are there specific actions that have been identified by your jurisdiction that we can integrate into the Plan?
- Are there any gaps in the information presented?

Hagerty asked if there are any existing resources (e.g., emergency plans, community organizations) that should be referenced in the Plan. Sunnyslope County Water District has existing emergency response plans that they will share with Hagerty.

Prior to the meeting, the San Benito County Office of Emergency Services (OES) shared the County's past HMPs with Hagerty. Hagerty will reference these documents in the Introduction section of the Plan to demonstrate how the County has been continually engaged in mitigation efforts over the past decade.

Upcoming Project Meetings

Plan Review Meeting

The Plan Review Meeting will be held on Wednesday, September 22 from 12 – 1 p.m. PDT. The purpose of the Plan Review Meeting is to review the structure of the Plan and advise the Planning Committee and Stakeholder Group on the type of feedback needed during the plan review period. The Planning Committee and Stakeholder Group have unique perspectives to incorporate into the Plan and can validate that the Plan will be useful for the community.

The Planning Committee reviewed and approved the agenda outlined in the table below.

Time	Details
12:00 – 12:15 p.m.	**Welcome & Project Review** • Planning Process Update • Key Project Milestones
12:15 – 12:30 p.m.	**Plan Sections Overview** • Base Plan and Appendix Review • Meeting Local Hazard Mitigation Planning Requirements

Time	Details
12:30 – 12:40 p.m.	**How to Review the Plan** • How to Provide Feedback • Plan Approval and Review Process
12:40 – 12:50 p.m.	**Using the Plan** • Building Resilience • Plan Integration
12:50 – 1:00 p.m.	**Next Steps**

City Council Meeting

Hagerty has agreed to present about the HMP process to the San Juan Bautista City Council on Tuesday, September 21. The City Council Meeting is held on Zoom. Hagerty will follow up with San Juan Bautista to confirm logistics and requested presentation format for the meeting.

Public Review Webinar

After the Planning Committee and Stakeholder Group provide their feedback on the draft Plan and the Plan is updated, the Planning Committee will hold a Public Review Webinar. The purpose of this meeting is to ensure those who are less informed on the hazard mitigation planning process are engaged in the process and prepared to provide feedback on the Plan. The agenda for the meeting is similar to the Plan Review Meeting, with additional focus on the purpose of hazard mitigation and the planning process.

The attendees discussed the preferable format for the webinar, and they agreed on a 30-minute live webinar that will be recorded and uploaded to the County website after the meeting. The date for the webinar should align when the Public Review Period begins, likely in early October. The logistics regarding the Public Review Webinar will be discussed at a future Planning Committee meeting.

Public Review Period

The Public Review Period will likely begin early October and will last for 30 days per Federal Emergency Management Agency (FEMA) requirements. Typically, these Plans are posted on jurisdictions' websites alongside a survey to collect feedback. The logistics regarding the Public Review Period will be discussed at a future Planning Committee meeting.

Attendees

San Benito County Planning Committee

- Charlie Bedolla, Batallion Chief, Hollister Fire Department, charlie.bedolla@hollister.ca.gov
- Drew Lander, General Manager, Sunnyslope County Water District, drew@sunnyslopewater.org
- Kris Mangano, Emergency Services Manager, San Benito County OES, kmangano@cosb.us

Hagerty Consulting

- Michelle Bohrson, Project Manager, Hagerty Consulting, michelle.bohrson@hagertyconsulting.com
- Julia Davatzes, Planner, Hagerty Consulting, julia.davatzes@hagertyconsulting.com

OCTOBER 6, 2021 | 12:00 – 12:30 P.M. PDT | REMOTE

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting Agenda

Time	Details
12:00 – 12:05 p.m.	**Welcome and General Updates**
12:05 – 12:20 p.m.	**Update on the Draft Plan** • Outstanding Mitigation Strategy Questions • Approval and Adoption Requirements
12:20 – 12:25 p.m.	**Upcoming Project Milestones** • Stakeholder Review Period • Public Review Period • Public Review Webinar
12:25 – 12:30 p.m.	**Next Steps**

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Planning Committee Meeting

OCTOBER 6, 2021 | 12:00 – 12:30 P.M. PDT | REMOTE

Action Items

San Benito County Planning Committee

- The Planning Committee will review the draft Mitigation Strategy and provide their feedback.

Hagerty Consulting

- Hagerty will incorporate any feedback into the full draft Plan.
- Hagerty will continue to prepare for the Stakeholder Review Period, Public Review Period, and Public Review Meeting.

General Updates

M. Bohrson of Hagerty Consulting ("Hagerty") opened the meeting with the attendees from the San Benito County Multi-Jurisdictional Hazard Mitigation Plan (HMP) Update Planning Committee. The purpose of this meeting is to identify information for any gaps in the Mitigation Action Plan and summarize the remaining planning process deliverables.

Hagerty is waiting to receive a completed draft of Hollister's HMP, so that relevant information can be incorporated into the County HMP. The full draft County HMP will be delivered once the Plan from Hollister has been received.

Update on the Draft Plan

Mitigation Strategy Questions

The Planning Team has reviewed the draft Mitigation Strategy and provided feedback. G. Haertel from San Benito County Water District and R. Hillebrecht from Sunnyslope County Water District are waiting on final comments from other staff from their respective jurisdictions and will share them with Hagerty.

Mitigation Action Plan

The attendees reviewed a few specific actions from the County's previous HMP to capture any progress made towards the action, identify additional County and jurisdiction staff who may be able to answer any outstanding questions, and determine if the action should be included in the updated HMP.

Approval Process

Hagerty reviewed the process for approval and adoption of the Plan, which includes sending the Plan to the California Governor's Office of Emergency Services and then the Federal Emergency Management Agency (FEMA) Region X. Once reviewed, FEMA will designate the Plan as approval pending adoption, meaning that the HMP is only approved if each participating jurisdiction adopts the Plan.

Hagerty encouraged the attendees to think about what their **jurisdiction's approval process** consists of for their jurisdiction and if there are **certain individuals who need to review the Plan** during this process. The City Manager and City Council from Hollister will need to review the Plan, as will the City Manager from San Juan Bautista. The individuals who will need to need to review the Plan for approval from Sunnyslope County Water District are already doing so.

Upcoming Project Milestones

The attendees reviewed the upcoming project milestones:

- Stakeholder Review Period: Opportunity for the Planning Team and Stakeholder Group to review and provide feedback on the Plan.
- Public Review Period: Opportunity for the public to review and provide feedback on the Plan.
- Public Review Webinar: Virtual meeting to discuss the purpose of the hazard mitigation planning process and how the public can provide input on the Plan.

The dates of these events will be determined once Hollister has shared their draft Plan.

Attendees

San Benito County Planning Committee

- Charlie Bedolla, Batallion Chief, Hollister Fire Department, charlie.bedolla@hollister.ca.gov
- Garrett Haertel, Deputy District Engineer, San Benito County Water District, engineering@sbcwd.com
- Kris Mangano, Emergency Services Manager, San Benito County Office of Emergency Services, kmangano@cosb.us

- Madison Mitchell, Staff Analyst, San Benito County Office of Emergency Services, mmitchell@cosb.us
- Rob Hillebrecht, Associate Engineer, Sunnyslope County Water District, rob@sunnyslopewater.org

Hagerty Consulting

- Michelle Bohrson, Project Manager, Hagerty Consulting, michelle.bohrson@hagertyconsulting.com
- Julia Davatzes, Planner, Hagerty Consulting, julia.davatzes@hagertyconsulting.com

Risk Assessment Meeting

1. Risk Assessment Meeting Invitation (4/14/2021)
2. Risk Assessment Meeting Agenda (4/14/2021)
3. Risk Assessment Meeting Presentation (4/14/2021)
4. Risk Assessment Meeting Notes (4/14/2021)

View this email in your browser

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Risk Assessment Meeting

Register Now!

The Planning Committee for the San Benito County Hazard Mitigation Plan is convening on April 14, 2021 from 12:00 to 2:00 p.m. PDT for a Risk Assessment Meeting. As a representative of your community, it is essential that you attend this workshop!

Click here to Register

During this webinar, we will discuss the findings of the risk assessment, specifically areas in San Benito County with the greatest vulnerability to various hazards, and review the next steps for the planning process.

If you have any questions, please contact Kris Mangano at oes@cosb.us.

Get Involved!

The Planning Committee welcomes your input! If you would like more information on specific elements of the project, or if you

Committee leadership:

Kris Mangano
San Benito County Office of Emergency Management,
Emergency Services Manager
oes@cosb.us
(831) 636-4168

Share Tweet Share +1

San Benito County Office of Emergency Management
471 4th St
Hollister, CA 95023
www.cosb.us



In partnership with

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To learn more about what we do, visit **Disaster Discourse: The Hagerty Blog!**

Want to change how you receive these emails?
You can update your preferences or unsubscribe from this list.

APRIL 14, 2021 | 12:00 – 2:00 P.M. PDT | REMOTE

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Risk Assessment Meeting Agenda

Time	Details
12:00 – 12:10 p.m.	**Welcome**
12:10 – 12:30 p.m.	**Hazard Mitigation Planning Overview** • Purpose and Benefit of Mitigation Planning • Hazard Mitigation Planning Process • Planning Requirements
12:30 – 1:00 p.m.	**Risk Assessment Review** • What is a Risk Assessment? • Summary of Profiled Hazards • Impact of Hazards on Community Lifelines
1:00 – 1:20 p.m.	**Introduction to Mitigation** • Developing Your Mitigation Strategy • Funding for Mitigation
1:20 – 1:30 p.m.	**Next Steps**
1:30 – 2:00 p.m.	**Questions and Discussion**

April 14, 2021

San Benito County Multi-Jurisdictional Hazard Mitigation Plan

Risk Assessment Meeting

HAGERTY

Welcome

HAGERTY

Agenda

12:00 – 12:10 P.M.	Welcome
12:10 – 12:30 P.M.	Hazard Mitigation Planning Overview
12:30 – 1:00 P.M.	Risk Assessment Review
1:00 – 1:05 P.M.	Break
1:05 – 1:25 P.M.	Introduction to Mitigation
1:25 – 1:35 P.M.	Next Steps
1:35 – 2:00 P.M.	Questions and Discussion

Hazard Mitigation Planning Overview

Hazard Mitigation Planning (HMP)



San Benito County Fires, June 2020

HMP Requirements and Benefits

- Required by the Disaster Mitigation Act of 2000 to receive types of non-emergency disaster assistance
- Hazard Mitigation Plans benefit communities by:
  - Investing in the community's future sustainability and resilience
  - Educating the public and community officials about hazard risks and vulnerabilities of people, property, and infrastructure
  - Promoting collaboration among community stakeholders

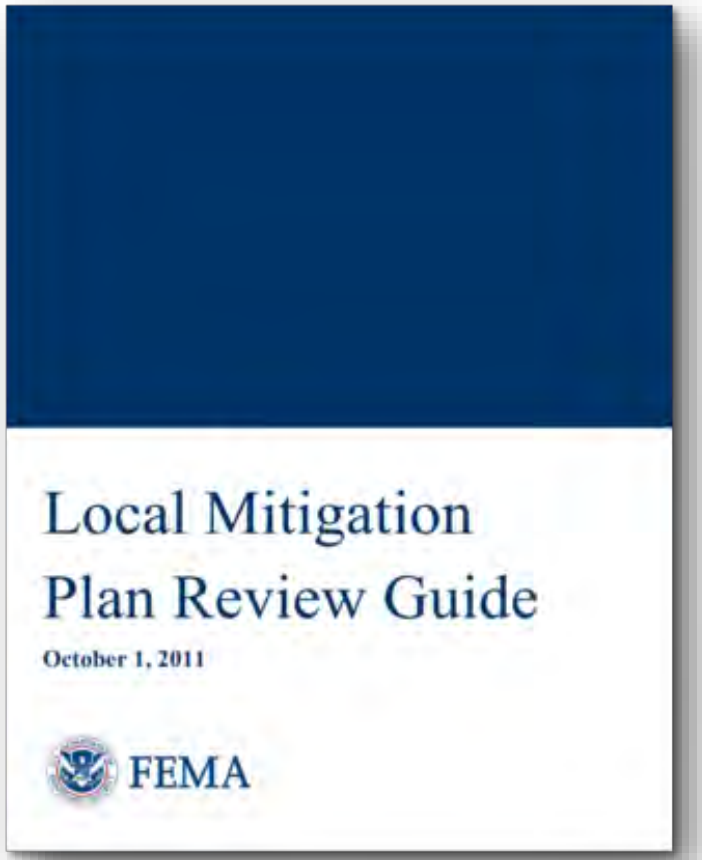
Planning Process

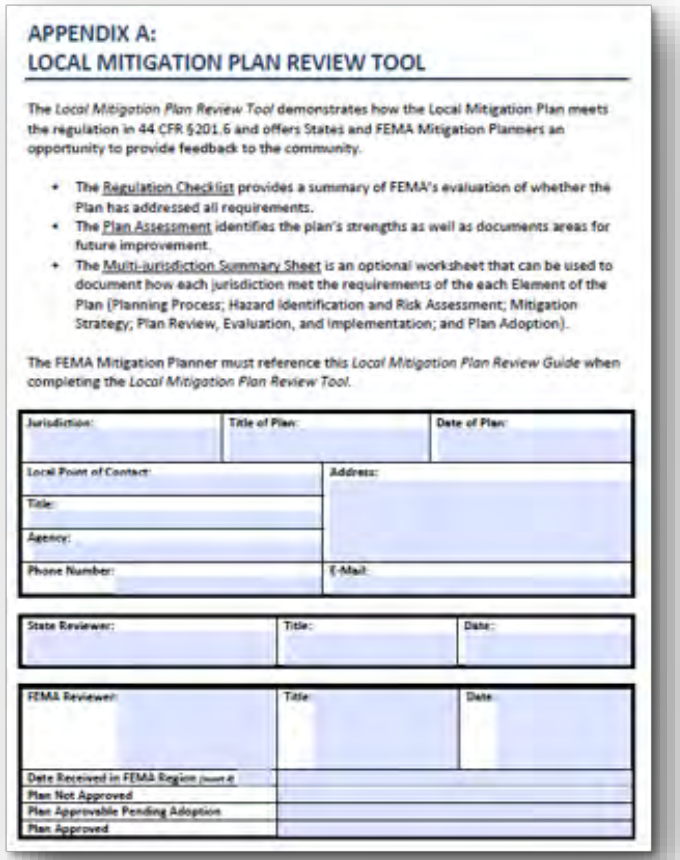


Project Approach

Task 1	Task 2	Task 3	Task 4	Task 5
• Project Kickoff Meeting • Project Management Plan • Outreach Strategy	• Community Hazards Survey • Risk Assessment • Capability Assessment	• Mitigation Strategy • Mitigation Strategy Workshop	• Draft 1 and 2 MJHMP • Public Review Period	• Final MJHMP Submission • Plan-to-Project Workshop • Project Closeout
November 2020 – January 2021	February – April 2021	May – July 2021	July – September 2021	October 2021 – FEMA APA

Federal Planning Requirements





APPENDIX A:
LOCAL MITIGATION PLAN REVIEW TOOL

The *Local Mitigation Plan Review Tool* demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The Regulation Checklist provides a summary of FEMA's evaluation of whether the Plan has addressed all requirements.
- The Plan Assessment identifies the plan's strengths as well as documents areas for future improvement.
- The Multi-jurisdiction Summary Sheet is an optional worksheet that can be used to document how each jurisdiction met the requirements of the each Element of the Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this *Local Mitigation Plan Review Guide* when completing the *Local Mitigation Plan Review Tool*.

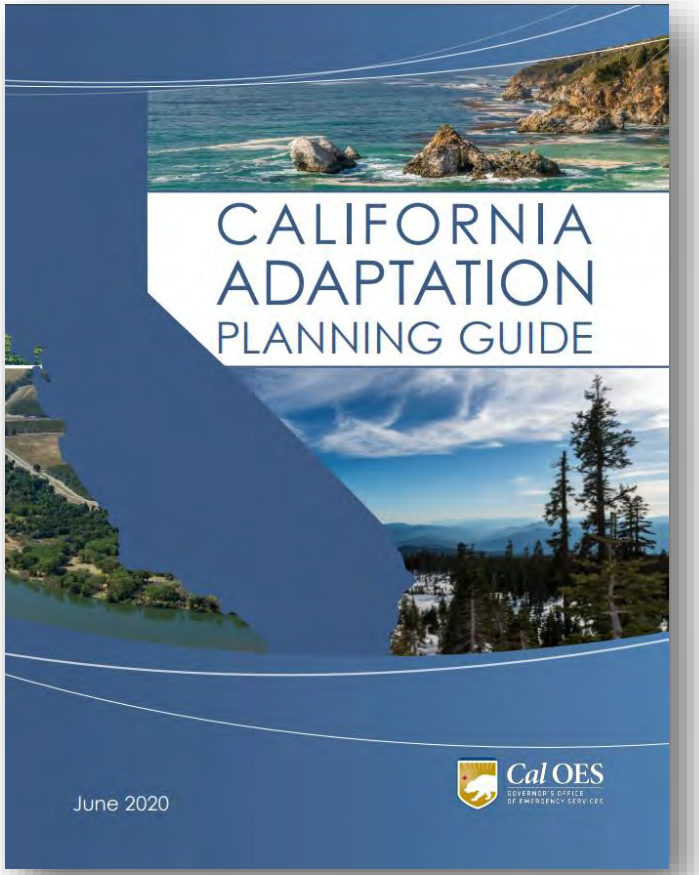
Jurisdiction:	Title of Plan:	Date of Plan:
Local Point of Contact:		Address:
Title:		
Agency:		
Phone Number:		E-Mail:

State Reviewer:	Title:	Date:

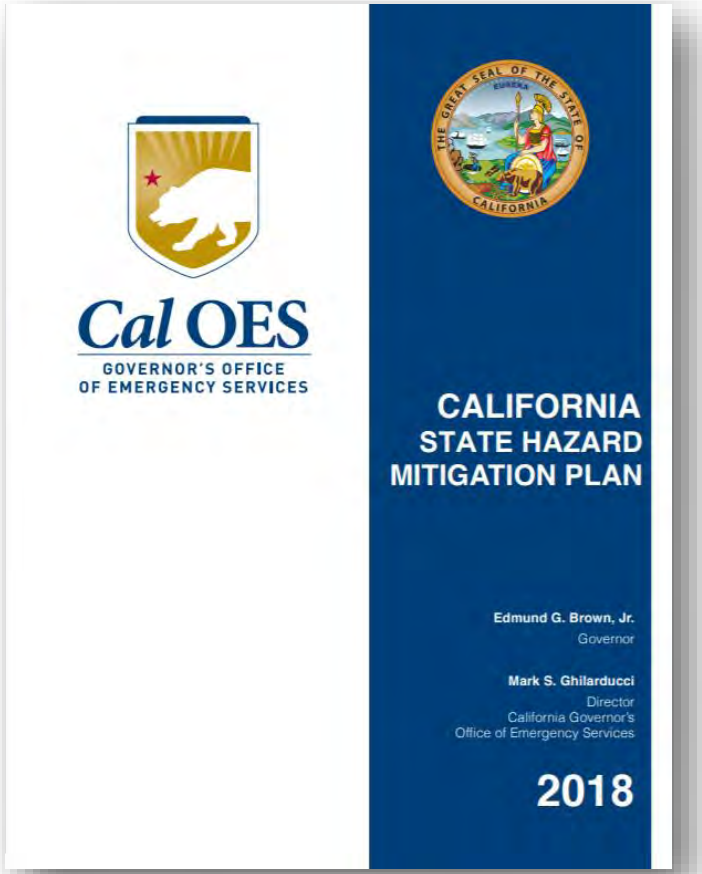
FEMA Reviewer:	Title:	Date:
Date Received in FEMA Region (insert #)		
Plan Not Approved		
Plan Approvable Pending Adoption		
Plan Approved		

Local Mitigation Plan Review Guide

State Plan Alignments



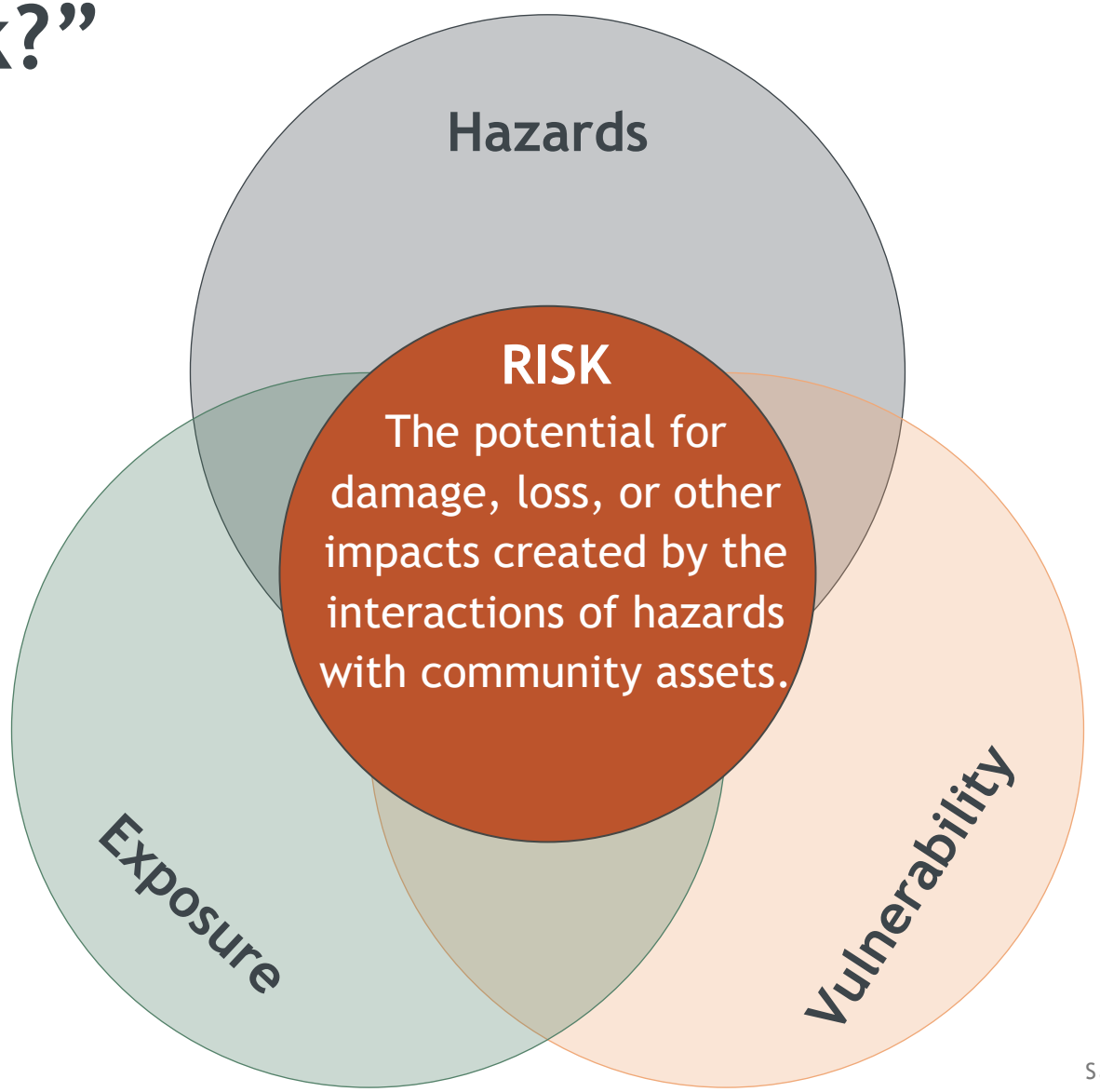
California Adaptation Planning Guide



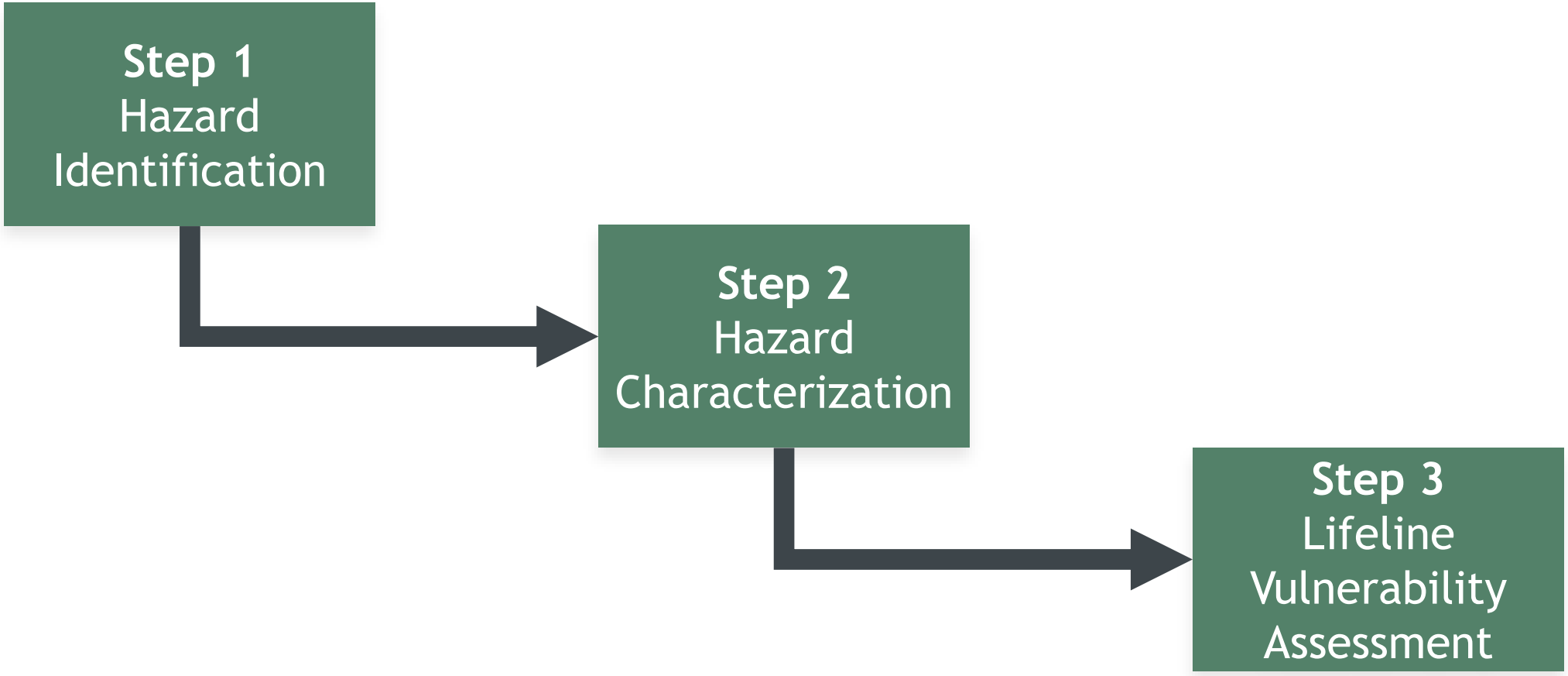
2018 California State Hazard Mitigation Plan

Risk Assessment Review

What is “Risk?”


Hazards
RISK
The potential for damage, loss, or other impacts created by the interactions of hazards with community assets.
Exposure
Vulnerability

Risk Assessment Process



HAGERTY

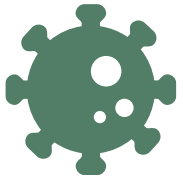
Hazard Identification

Climate and Weather Hazards


Drought


Flood


Extreme Temperatures


Communicable Disease


Severe Weather


Wildfire

Geological Hazards


Earthquake


Landslides

Technological Hazards


Dam Failure


HAZMAT Incidents

Threat and Disturbance Hazards


Terrorism

Hazard Characterization: Profile Sections

Section	Description
Characteristics	The Characteristics section describes the different types or categories of a hazard and how they occur.
Location and Extent	The Location and Extent section describes where the hazard may occur geographically in the County (location) and how the magnitude of the event is measured (extent).
Recent Occurrences	The Recent Occurrences section compiles and describes recent hazard events, specifically those from January 2011 – December 2020.
Probability	The Probability section describes how likely an event is to occur, calculated based on historical data or scientific study.

Hazard Probability

Highly Likely	Likely	Unlikely
• Drought • Severe Weather • Wildfire	• Extreme Temperatures • Flood • Landslide	• Communicable Disease • Earthquake • Dam Failure • HAZMAT Incident • Terrorism

Drought

Probability: highly likely

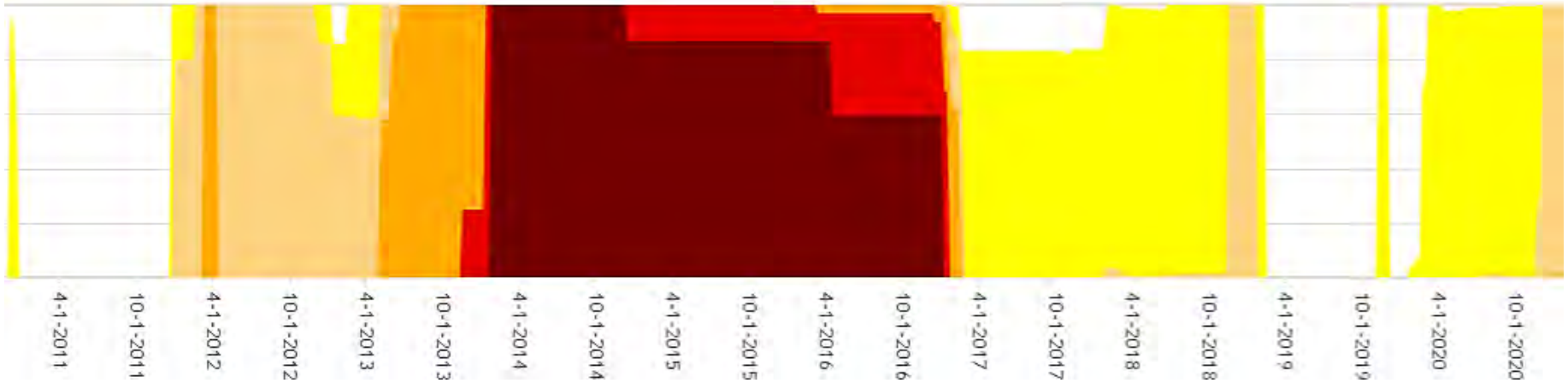
Extent: Drought Severity Index

Recent Occurrences: exceptional droughts from 2013 – 2016

Drought Severity Index

Category	Description
D0	Abnormally Dry
D1	Moderate Drought
D2	Severe Drought
D3	Extreme Drought
D4	Exceptional Drought

U.S. Drought Monitor for San Benito County, 2011 - 2020



Severe Weather

Types: heavy rain, hail, high winds, strong winds, and tornado

Probability: highly likely

Recent Occurrences: 25 unique occurrences of severe weather recorded between 2011 and 2020, the most significant were:

- Strong winds (2012) that caused $11,000 in property damage
- Tornado (2016) that caused $75,000 in crop damage

Recent Occurrences of Severe Weather in San Benito County

Event	No. of Unique Occurrences	Total Number of Occurrences
Heavy Rain	8	14
Hail	2	2
Strong Winds	12	28
High Winds	8	14
Tornado	1	2

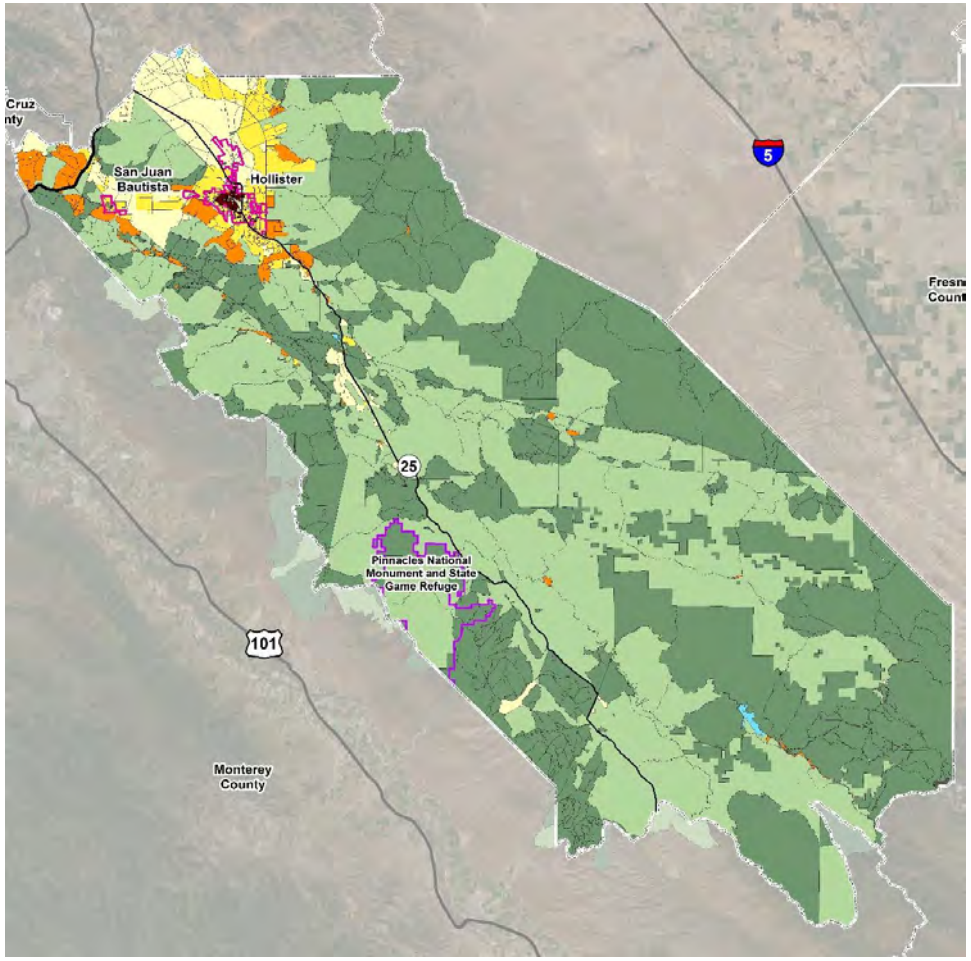
Wildfire

Probability: highly likely

Location: along wildland urban interface zones (WUIs) in the County

- WUI Interface: region where housing development is integrated into an area with a high concentration of vegetation.
- WUI Intermix: region with a high concentration of housing development adjacent to vegetation

WUI Zones in San Benito County

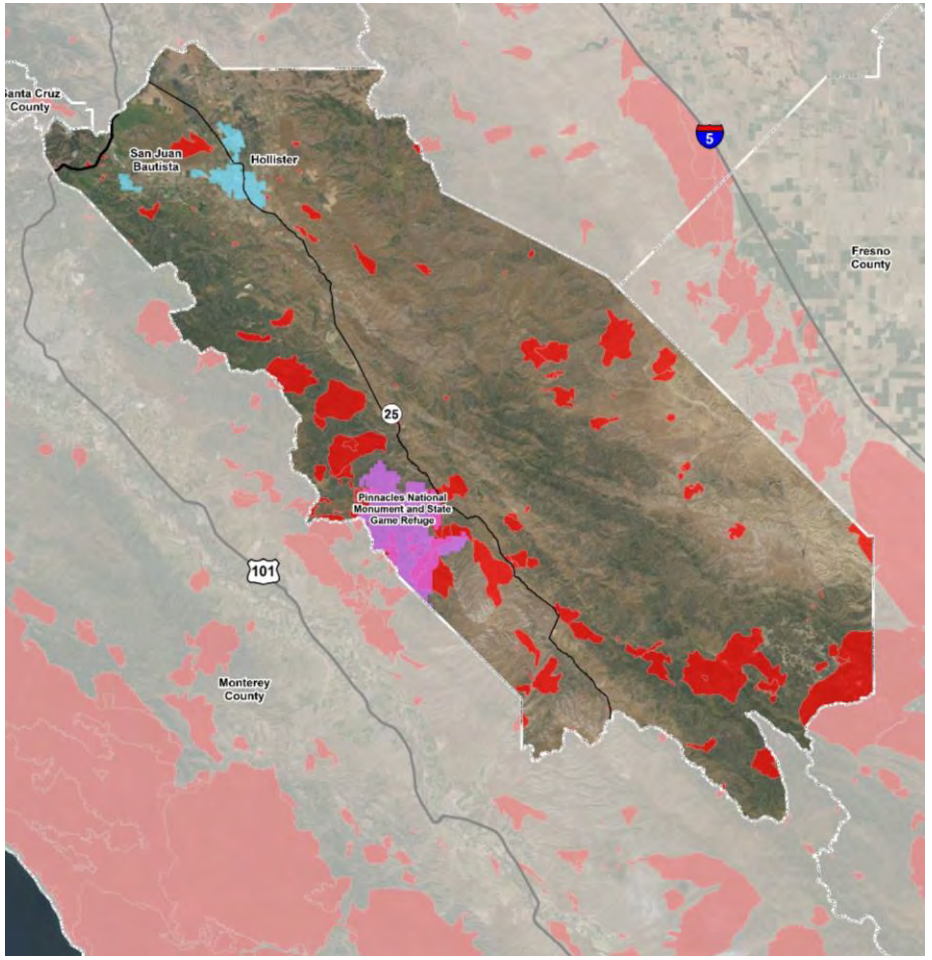


Wildfire

Recent Occurrences: 26 wildfires within the County boundaries between 2011 and 2020

- 9,312 acres burned in the region
- Longest fires lasted 213 days (Airline Fire, Eastern Fire)
- Largest single fires were the Lonoak Fire (2,546 acres), Coyote Fire (1,508 acres), and Airline Fire (1,314 acres)

Occurrences of Wildfire in the San Benito County Region



What additional information is important to include in these hazard profiles?

HAGERTY

Extreme Temperatures

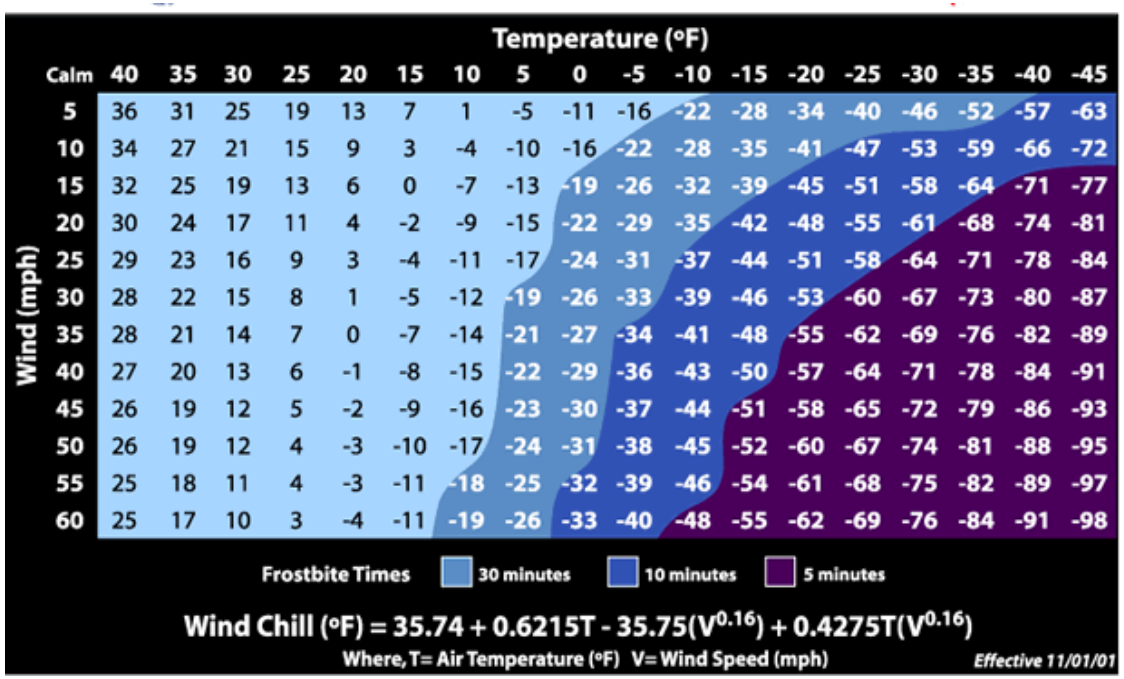
Extreme Heat: event with high temperatures and high humidity

Extreme Cold: event with low temperatures and high winds

NWS Heat Risk Index

Heat Risk Category	Level	Meaning
Green	0	No elevated risk.
Yellow	1	Low risk for those extremely sensitive to heat, especially those without effective cooling and/or adequate hydration.
Orange	2	Moderate risk for those who are sensitive to heat, especially those without cooling or hydration.
Red	3	High risk for much of the population, especially those who are heat sensitive and those without cooling or hydration.
Magenta	4	Very high risk for entire population due to long duration heat, with little to no relief overnight.

NWS Wind Chill Index



Extreme Temperatures

Probability: likely

Location:

- Extreme Heat: more likely to occur in more developed areas
- Extreme Cold: more likely to occur at higher elevations (e.g., mountains)

Recent Occurrences:

- Extreme Heat: two occurrences, one in 2012 resulting in the death of a farm worker
- Extreme Cold: six unique frost/freeze events

Recent Occurrences of Extreme Cold in San Benito County

Date	Temperature Range (°F)
12/28/2018	22 – 28
12/29/2018	28
1/1/2019	17 – 28
10/31/2019	23 – 26
2/3/2020	19 – 28
2/4/2020	22 - 28

Flood

Probability: likely

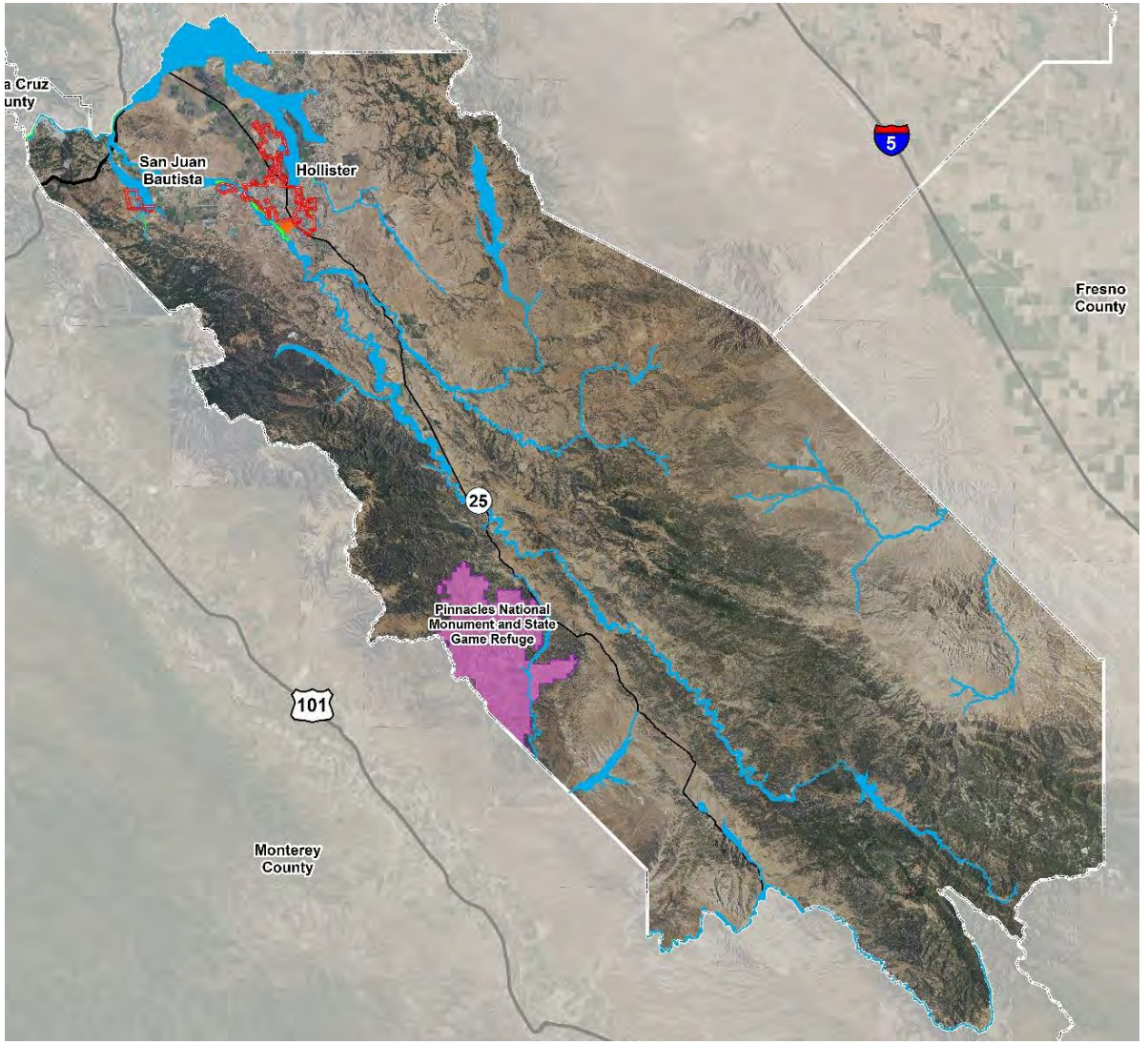
Extent: measured by FEMA flood zone designations as part of the flood insurance rate maps (FIRMs)

- 1% annual chance floodplains (previously known as 100-year floods): areas with a 1% chance of flooding each year
- 0.2% annual chance floodplains (previously known as 500-year floods): areas with a 0.2% chance of flooding each year

FEMA Flood Zone Designations

Zone	Definition	Risk
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage.	High
AE	The base floodplain where flood elevations are provided.	High
AH	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet.	High
AO	River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, with an average depth ranging from 1 to 3 feet.	High
AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system, such as a levee or dam.	High
A99	Areas with a 1% annual chance of flooding that will be protected by a federal flood control system where construction has reached specified legal requirements.	High
B and X	Area of moderate flood hazard, usually the area between the limits of the 1% chance and 0.2% chance annual floods.	Moderate

Flood



Legend

City Boundary

By Flood Zone

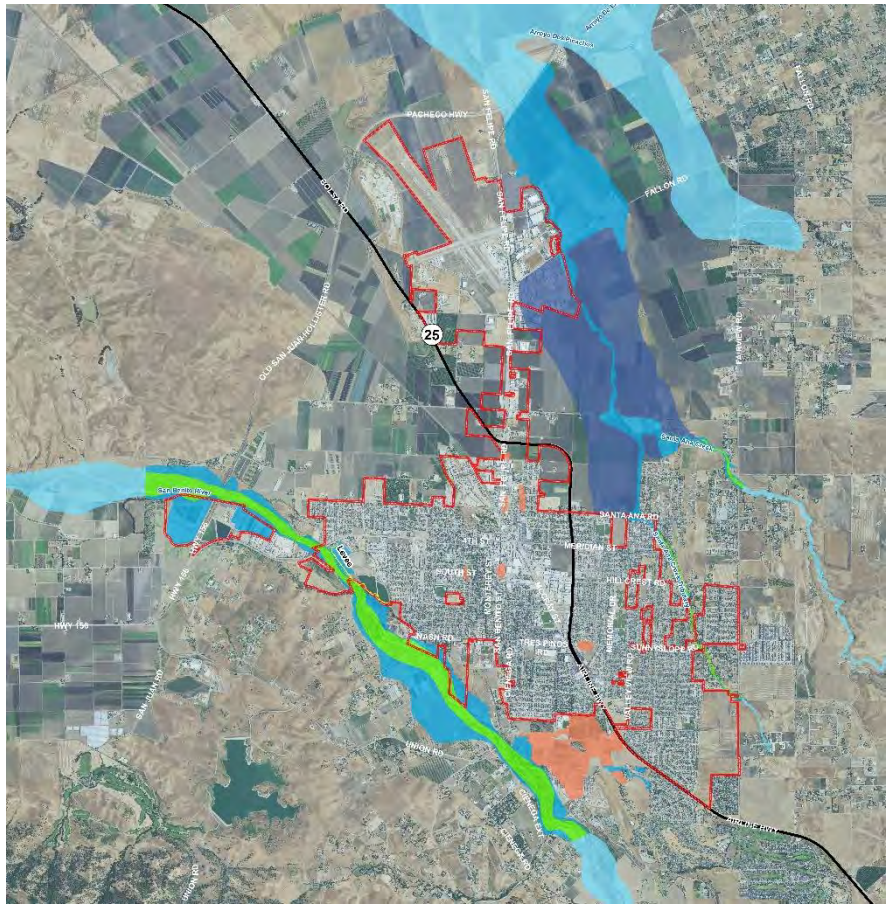
A, AE, AH, and AO

AE FLOODWAY

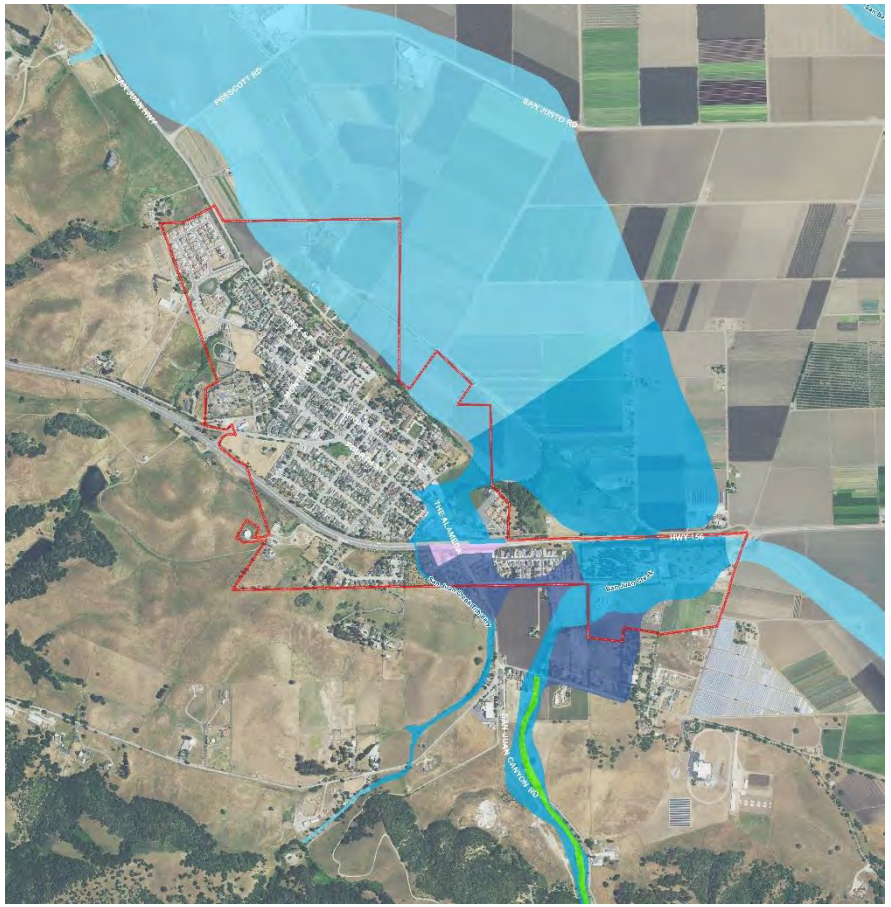
0.2 PCT ANNUAL CHANCE FLOOD HAZARD

Flood

Flood Zones in the City of Hollister



Flood Zones in the City of San Juan Bautista



FEMA Effective Floodplain

By Flood Zone and Subtype

- A
- AE
- AE, FLOODWAY
- AH
- AO
- X, 0.2 PCT ANNUAL CHANCE FLOOD HAZARD

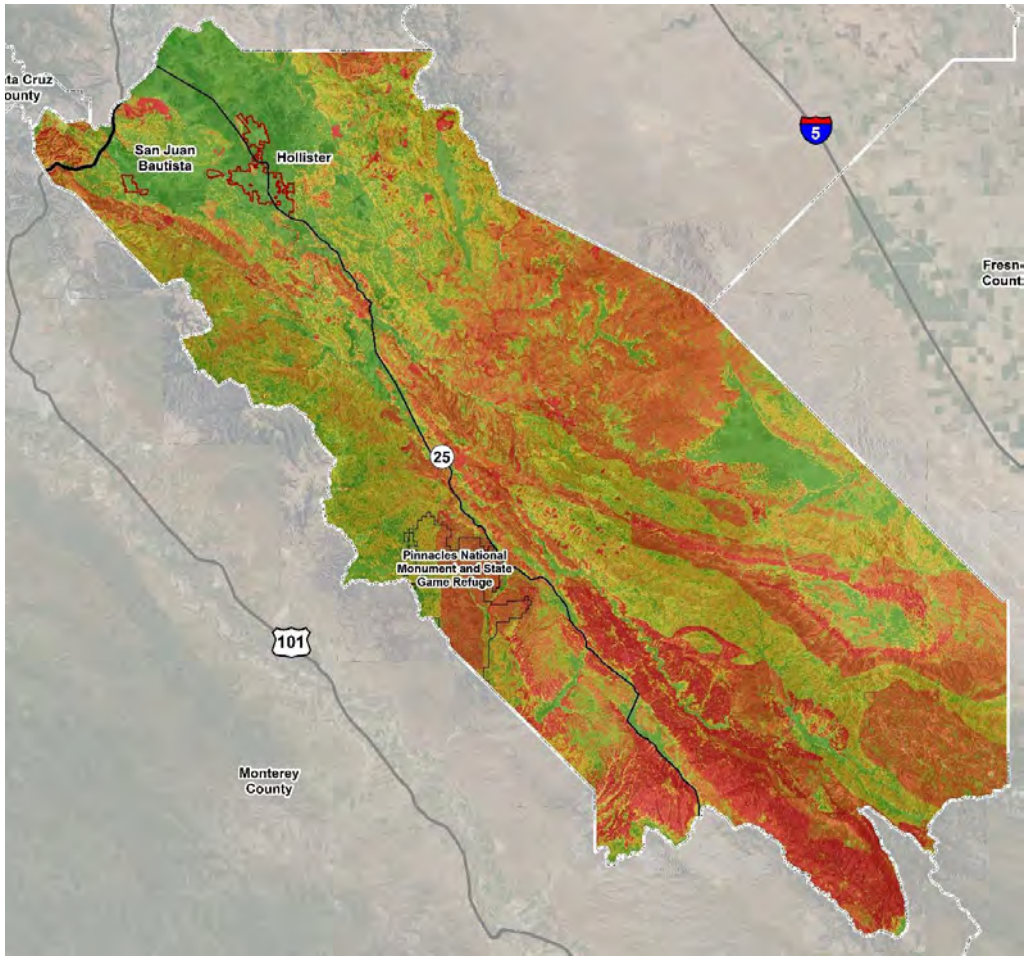
Landslide

Probability: likely

Location: dependent on landslide susceptibility classes, which identify areas with weak rocks and steep slopes

Recent Occurrences: none within the boundaries of the County, but many occurred regionally during the 2018 Southern California Mudflows

Landslide Susceptibility in San Benito County

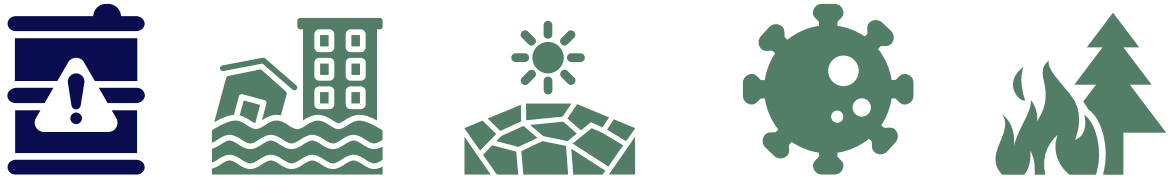


What additional information is important to include in these hazard profiles?

HAGERTY

How would you prioritize these hazards?





Least Concerning

Most Concerning

Lifeline Vulnerability Assessment

- Community Lifelines represent the **most fundamental services to communities** that enable other aspects of society to function.
- The Lifelines Vulnerability Assessment details how hazard events may impact the Community Lifelines in San Benito County.

FEMA Community Lifelines



How would the Safety and Security lifeline be impacted by a hazard event?

How would the Food, Water, Shelter lifeline be impacted by a hazard event?

How would the Health and Medical lifeline be impacted by a hazard event?



How would the Energy lifeline be impacted by a hazard event?

HAGERTY



How would the Communications lifeline be impacted by a hazard event?

HAGERTY

How would the Transportation lifeline be impacted by a hazard event?



How would the Hazardous Materials lifeline be impacted by a hazard event?

HAGERTY

How would other community assets be impacted by a hazard event?

HAGERTY

How would you prioritize these community lifelines for mitigation?



Break

Introduction to Mitigation

What is a Mitigation Strategy?

- The mitigation strategy should reduce long-term risk to natural hazards by addressing current and future threats.
- A mitigation strategy includes:
  - **Mitigation Goals**: explain what the community wants to achieve with the mitigation plan in the long-term
  - **Mitigation Objectives** (optional): describe how to measure progress and success toward a goal
  - **Mitigation Actions**: projects that will be implemented to meet the mitigation goals

The projects and actions your community will take to mitigate the risks posed to your community's people, property, infrastructure, and natural environment.

Creating Meaningful Mitigation Goals

- **Mitigation Goals should:**
  - Consider community impact and input
  - Be inclusive of all jurisdictions
  - Reflect the values and priorities of the community
  - Address the findings of the Risk Assessment

Meaningful mitigation goals translate to targeted and impactful mitigation actions.

San Benito County 2015 Goals

- Promote **economic development** consistent with seismic, floodplain and risk management guidance as developed by San Benito County and its allied agencies and organizations.
- Provide for an **effective public awareness program** for natural and technological hazards present in San Benito County.
- Encourage **scientific study** and the development of data to support mitigation strategies for those hazards that are a threat to San Benito County.
- Promote the recognition of the real **value of hazard mitigation** to public facilities, public safety and welfare of all citizens of San Benito County.
- **Support the mitigation efforts** of local governments, private citizens, non-profit organizations and private businesses throughout the San Benito County Operational Area.

State of California 2018 Goals

- Significantly **reduce life loss and injuries**.
- **Minimize damage** to structures and property and minimize interruption of essential services and activities.
- Protect the **environment**.
- Promote **community resilience** through integration of hazard mitigation with public policy and standard business practices.

Mitigation Project Types

Local Plans and Regulations	Comprehensive Plan	Land Use Ordinances	Zoning Codes
Structural Projects	Elevating Structures	Utility Undergrounding	Secure Buildings to Foundation
Natural Systems Protection	Fire-Resistant Landscaping	Erosion Control	Forest Management
Education and Awareness Programs	Digitize Risk Maps	Education Campaigns	Mental Health First Aid Classes

Prioritizing Mitigation Projects for the County

Activity Scenario:

A severe storm occurs in San Benito County in 2021. The event includes high winds, which damage local power lines and cause PG&E to institute public safety power shutoffs, and heavy rains, which result in flash flooding throughout the County. Much of the County's residents are without power or potable water for four days.

The event heavily impacts San Benito County and leads to a Presidentially Declared Disaster. About a year later, **a new round of Hazard Mitigation Grant Program** funding is made available for California. The California Governor's Office of Emergency Services has prioritized **mitigation** in **San Benito and surrounding counties.** There is an estimated $1,000,000 available for mitigation projects in San Benito County.

Prioritizing Mitigation Projects for the County

Mitigation Action	Lifeline
Design and build water storage	
Underground utility lines	
Flood-proof local hospitals and healthcare facilities	
Improve stormwater drainage system capacity	

How would you prioritize these mitigation actions?

Funding for Mitigation Activities

FEMA Hazard Mitigation Assistance:

- Hazard Mitigation Grant Program (HMGP)
- Building Resilient Infrastructure and Communities (BRIC)
- Flood Mitigation Assistance (FMA)

Other Funding:

- Section 406 – Hazard Mitigation Funding Under Public Assistance
- Community Development Block Grant – Disaster Recovery (CDBG – DR)
- State mitigation grant programs (e.g., local match support, state disaster declarations)
- Non-governmental organization funding
- Private funding

FEMA HMA Funding

Most mitigation grant funding comes from the FEMA HMA program.

Hazard Mitigation Grant Program (HMGP)

- Funding to supporting long-term hazard mitigation measures post-disaster
- Available after a federal disaster declaration and dependent on the cost of the disaster
- Includes HMGP Post Fire Assistance

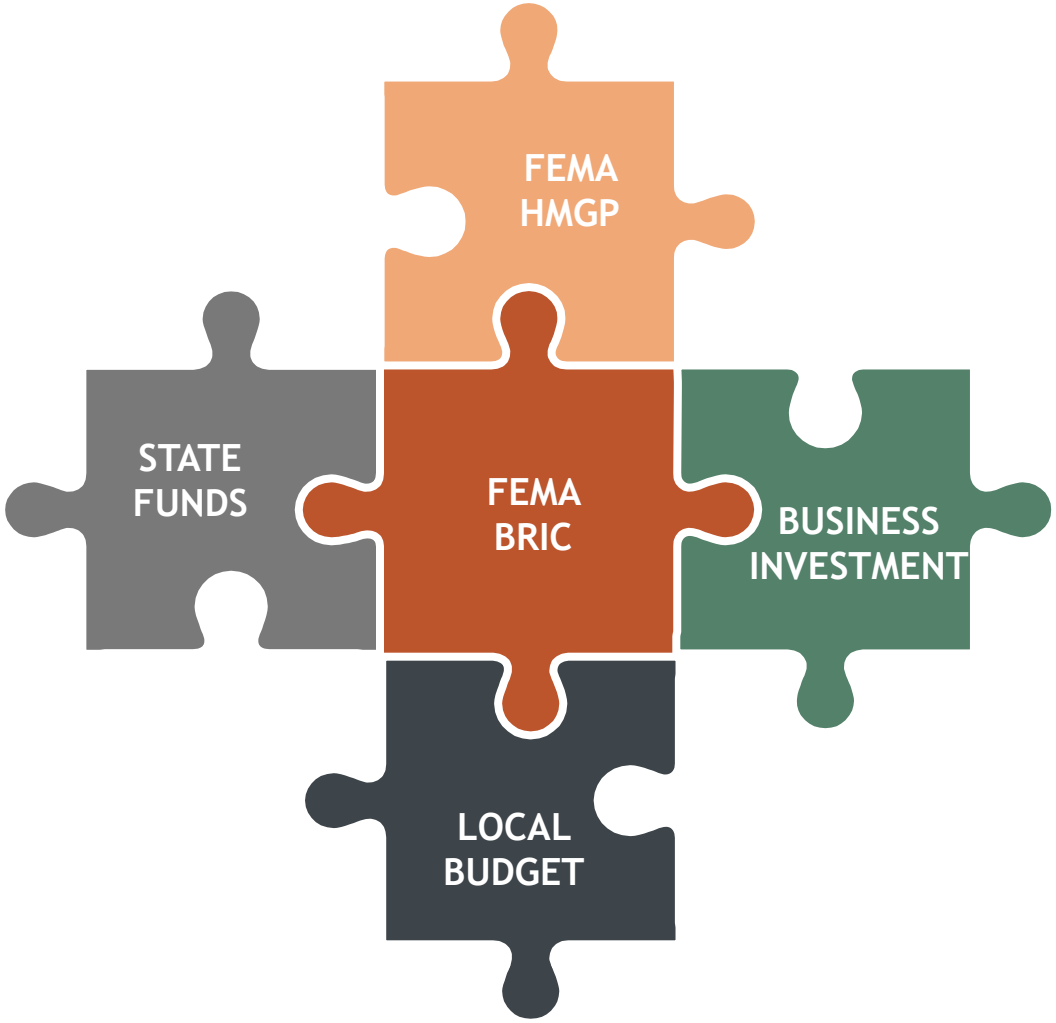
Building Resilient Infrastructure and Communities (BRIC)

- Annual funding to support long-term hazard mitigation measures
- Funded by a 6% set-aside from federal post-disaster grant funding
- Previously PDM program

Flood Mitigation Assistance (FMA)

- Annual funding to support flood mitigation
- Mitigates risk to National Flood Insurance Program (NFIP) properties

Funding to Create Resilience is Complex



What are your priorities for the mitigation strategy?

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Next Steps

Upcoming Activities and Meetings

Capability Assessment Webinar: May 2021

During this webinar, the Planning Committee and Stakeholder Group will review existing capabilities of the County to mitigate hazards and discuss how these capabilities may support the implementation of mitigation projects.

Mitigation Strategy Workshop: June 2021

During this workshop, the Planning Committee and Stakeholder Group will discuss and identify mitigation actions that may be implemented to lessen the impacts of hazards on the community.

Questions and Discussion

Questions?



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San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Risk Assessment Meeting

APRIL 14, 2021 | 12:00 – 2:00 P.M. PDT | REMOTE

Meeting Summary

Key Takeaways

The San Benito County ("the County") Planning Committee and from Hagerty Consulting, Inc. ("Hagerty") Project Team held a Risk Assessment Meeting for the San Benito County Multi-Jurisdictional Hazard Mitigation Plan (HMP) Update on Wednesday, April 14, 2021. The purpose of this meeting was to introduce project stakeholders to the hazard mitigation planning process and review, validate, and provide feedback on the results of the Risk Assessment. The attendees also participated in small exercises designed to facilitate conversation regarding the Lifelines Vulnerability Assessment and potential mitigation priorities. A more detailed description of the meeting discussion and next steps are included below.

Next Steps

CAPABILITIES ASSESSMENT WEBINAR: MAY 2021

During this webinar, the Planning Committee and Stakeholder Group will review existing capabilities of the County to mitigate hazards and discuss how these capabilities may support the implementation of mitigation projects.

MITIGATION STRATEGY WORKSHOP: JUNE 2021

During this workshop, the Planning Committee and Stakeholder Group will discuss the mitigation strategy and identify mitigation actions that may be implemented to lessen the impacts of hazards on the community.

Hazard Mitigation Planning Overview

A hazard mitigation plan (HMP) is a means to **reduce loss and damage to life, property, and infrastructure by implementing projects that lessen the impact of the disaster**. The purpose of this project is to leverage current guidance, hazard information, and understanding of a community's capacities to ensure the San Benito County HMP meets and exceeds state and federal requirements. While this project is a long-term planning effort, it will also connect to the activities and hazards the community is currently experiencing.

HMPs are required to receive certain types of non-emergency disaster assistance, including funding from:

- Federal Emergency Management Agency (FEMA) Public Assistance (PA);
- Hazard Mitigation Grant Program (HMGP); and
- Building Resilient Infrastructures and Communities (BRIC).

Additionally, HMPs directly benefit communities by:

- Investing in the community's future sustainability and resilience;
- Educating the community and its officials about hazard risks and vulnerabilities; and
- Promoting collaboration among community stakeholders.

The HMP process is inherently collaborative, as it requires stakeholder groups to share information and work together to reduce risk in the community.

Planning Process

The HMP planning process has four major stages:

1. Organize the Planning Process and Resources.
2. Assess Risk.
3. Develop a Mitigation Strategy.
4. Adopt and Implement the Plan.

This process is represented as a cycle to reflect the five-year ongoing process to update an HMP, implement the identified projects, and track progress. The project timeline is separated into five tasks and associated deliverables, as outlined in the table below.

Task	Details	Dates
Task 1	• Project Kick-Off Meeting • Project Management Plan • Outreach Strategy	November 2020 - January 2021
Task 2	• Community Hazards Survey • Risk Assessment • Capability Assessment	February - April 2021
Task 3	• Mitigation Strategy • Mitigation Strategy Workshop	May - June 2021
Task 4	• Draft 1 and 2 MJHMP • Public Review Period	July - September 2021
Task 5	• Final MJHMP Submission • Plan-to-Project Workshop • Project Closeout	October 2021 - FEMA Approval and Adoption

Planning Requirements

HMPs and their planning processes are required to meet federal standards, as outlined in the FEMA Local Mitigation Plan Review Guide. Hagerty will ensure that the San Benito County

HMP meets this set of requirements. While the FEMA requirements drive the planning process, the plan update process should result in an HMP that is an effective tool for implementing mitigation strategies in San Benito County.

Additionally, the San Benito County HMP Update will align with the guidance of the California Adaptation Planning Guide, which encourages local governments to include considerations of future conditions in their HMPs, and the goals of the 2018 California State Hazard Mitigation Plan.

Risk Review

Overview

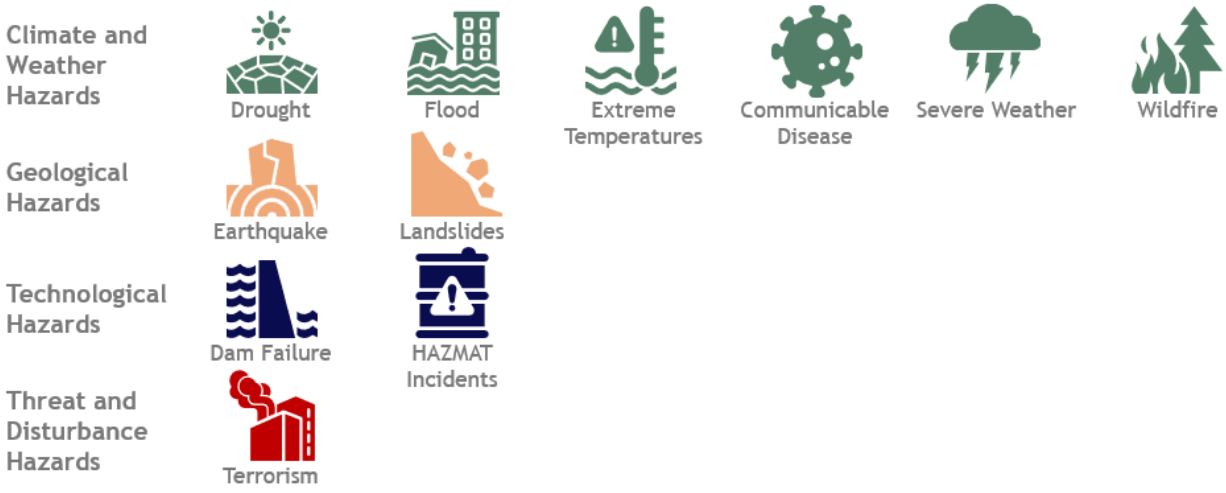
Risk is defined as the **potential for damage, loss, or other impacts created by the interactions of hazards with community assets**. It is the intersection of hazards, the community's exposure to that hazard, and vulnerabilities the community has that makes them susceptible to damages. The risk assessment for the San Benito County HMP comprehensively analyzed risk to determine potential impacts to community assets.

The process to complete the risk assessment has three steps:

1. **Hazard Identification**: select the hazards to be analyzed throughout the risk assessment.
2. **Hazard Characterization**: describe hazards, including where and how they may occur in the County.
3. **Lifeline Vulnerability Assessment**: analyze how the hazards may impact lifelines that sustain community operations.

Hazard Identification

The hazards analyzed in the risk assessment are shown in the figure below. These were selected by reviewing the 2015 San Benito County HMP, State of California HMP, other regional plans, and recent occurrences of hazard events that had significant impacts on the County (e.g., communicable disease).



Hazard Characterization

HAZARD PROFILES

Each hazard in the **Hazard Profiles** has four subsections:

- **Characteristics**: provides information regarding the type of the specific hazard in the profile.
- **Location and Extent**: describes the geographic area that is impacted by the specific hazard, the magnitude of that event, and the scale on which the magnitude is measured by.
- **Recent Occurrences**: lists hazard events that occurred in the County, specifically those from January 2011 – December 2020.
- **Probability**: estimates how often the specific hazard is likely to occur, categorized into highly likely (i.e., occurs at least once a year), likely (i.e., occurs at least once every five years), or unlikely (i.e., occurs less than once every five years).

The probability of a hazard occurrence is categorized into highly likely (i.e., occurs at least once a year), likely (i.e., occurs at least once every five years), or unlikely (i.e., occurs less than once every five years). The probabilities of each of the identified hazards occurring in San Benito County are shown in the table below.

Highly Likely	Likely	Unlikely
• Drought • Severe Weather • Wildfire	• Extreme Temperature • Flood • Landslide	• Communicable Disease • Earthquake • Dam Failure • HAZMAT Incident • Terrorism

For the purposes of this meeting, only the risk assessment results of the highly likely and likely hazards were discussed. The summary of these hazard results are included in the table below.

Hazard	Location and Extent	Recent Occurrences
Highly Likely Hazards		
Drought	• Measured by the Drought Severity Index • Not geographically-dependent	Extreme and exceptional droughts from 2013 – 2016
Severe Weather: Heavy Rain, Hail, High Winds, Strong Winds, and Tornados	• Each type of severe weather is measured by a different scale/tool • Not geographically-dependent	25 unique occurrences between 2011 and 2020, the most significant causing $11,000 in property damage (Strong Winds, 2012) and $75,000 crop damage (Tornado, 2016)
Wildfire	• Measured by Wildfire Class Sizes • Along wildland urban interfaces (WUIs), which indicate locations where development and vegetative areas intersect	26 occurrences within County boundaries between 2011 and 2020, burning 9,312 acres across the region
Likely Hazards		
Extreme Temperatures	Extreme Heat • Measured by the National Weather Service Heat Risk Index • Slightly more likely to occur in more developed areas	Two occurrences from 2011 – 2020, one in 2012 resulting in the death of a farm worker
	Extreme Cold • Measured by the National Weather Service Wind Chill Index • Slightly more likely to occur at higher elevations (e.g., mountains)	Six unique frost/freeze events from 2011 - 2020
Flood	• Measured by FEMA flood zone designations as 1% or 0.2% annual chance floodplains • Likely to occur at FEMA floodplains	Two flash flooding and two flooding events from 2011 – 2020
Landslide	• Measured by landslide susceptibility classes • Likely to occur in high-susceptibility areas	Many regional events, most occurring during the 2018 Southern California Mudflows

HAZARD PRIORITIZATION

The attendees were asked to prioritize the identified hazards, probability that they may occur and known impact of recent hazard events. The most concerning hazards selected by the attendees were:

1. Wildfire
2. Communicable Disease
3. Drought
4. Flood
5. Hazardous Materials

The attendees discussed other incidents that concern them, including gas main ruptures and transportation incidents. M. Bohrson explained that transportation accidents are not being profiled as a hazard in this context, however gas utility incidents are considered in the Hazardous Materials (HAZMAT) Incident hazard profile and hazardous materials section of the Lifeline Vulnerability Assessment.

Lifelines Vulnerability Assessment

Community lifelines represent the most fundamental services to communities that enable other aspects of society to function. The lifelines framework was developed by FEMA to support effective coordination during response and is an approach to understanding the impacts of hazards to community assets.

The **Lifelines Vulnerability Assessment** details how community lifelines are vulnerable to hazards and how they may be impacted by a hazard event. The community lifelines considered in the San Benito County HMP are categorized into:

- Safety and Security;
- Food, Water, Shelter;
- Health and Medical;
- Energy;
- Communications;
- Transportation; and
- Hazardous Materials.

This framework was utilized to develop an outcomes-based approach for the Lifelines Vulnerability Assessment that emphasizes the impacts that the County will want to mitigate, regardless of the hazard that causes them.

The discussion related to each community lifeline is summarized in the sections below. Different hazards present specific challenges to each of these lifelines, and mitigation actions will be developed to address targeted impacts on the lifelines.

SAFETY AND SECURITY LIFELINE

- COVID-19 impacted government services and how employees are able to work.
- The County it at risk for looting during earthquakes and civil disturbance events. This may require law enforcement and public services to operate out of secondary locations.

FOOD, WATER, SHELTER LIFELINE

- Hazards that have physical impacts (e.g., severe weather, earthquakes) may impact the lifeline by contaminating water systems, breaking water pipes, or damaging facilities that support water systems or provide food and shelter.
- Food shortages may result from hazards that cause mass panics (e.g., communicable disease).
- Water quality issues have been encountered after wildfires, where products of the wildfire (e.g., debris) flows into the watershed.

HEALTH AND MEDICAL LIFELINE

- Proximity and access to medicine and healthcare is a persistent challenge in the community.
- Health and medical resources are limited (e.g., ambulances, personnel) and may easily be overrun during a hazard event
- During a catastrophic hazard affecting the region (e.g., earthquake along the San Andreas Fault), the County may need to be self-sufficient due to competing resources and lack of mutual aid. Similarly, localized hazard events within the region may interrupt access to health and medical services in neighborhoods within the County that are further from the cities.

ENERGY LIFELINE

- The energy lifeline is heavily impacted by Pacific Gas and Electric Company (PG&E) public safety power shutoffs (PSPS) during wildfires and severe weather events.
- Critical facilities must have a secondary power source (e.g., solar energy, generator) to support operations during a hazard event, including facilities that may serve as Department Operations Centers and other secondary locations.
- The energy lifeline is vulnerable to large impacts from small breaks in the power system, due to the complexity of each grid system.
- Example: Recently, the grid system at a mobile home park in the County was damaged, causing all 300 residents to lose power. Each individual home initially ran its own generator. However, once better analyzing the grid system, only 30 units were truly out of power and the County was able to support them with one commercial generator until the grid was fixed.

COMMUNICATIONS LIFELINE

- Similar to the energy lifeline, communications infrastructure may be impacted during wildfire and severe weather events.
- Example: A fire under a bridge interrupted 911 services. The County utilized their alternate dispatch center and cell phones as needed to respond to calls.

TRANSPORTATION LIFELINE

- Hazards directly impact the transportation lifeline by damaging roadways or be indirectly impacted during a hazard event by creating challenges to navigate out of the County during an evacuation event.
- The airport is major asset during response operations to access supplies that should be protected.
- The County does not have extensive transportation infrastructure to support a mass evacuation due to a hazard event.
- During flood events, some access roads have been cutoff due to floodwaters over State Route 25.

HAZARDOUS MATERIALS

- There is a facility that handles hazardous materials next to the police department.
- There are several underground pipelines throughout the County that may be impacted by a hazardous materials event or other hazards that cause underground damage (e.g., earthquake).

OTHER

- Civil unrest, should it become violent, may have a significant impact on the community.

Introduction to Mitigation

Mitigation Strategy

M. Bohrson emphasized that the mitigation strategy is the culmination of the HMP and should be considered throughout the planning process. The mitigation strategy should reduce long-term risk to natural hazards by addressing current and future threats.

The mitigation strategy includes **mitigation goals**, which explain the long-term outcomes the community hopes to achieve with the HMP. Effective mitigation goals:

- Consider community impact and input;
- Are inclusive of all jurisdictions in the County and relevant hazards;
- Address the findings of the risk assessment; and
- Reflect the values and priorities of the community.

The attendees reviewed the goals from the 2015 San Benito County MJHMP and the State of California HMP. When developing the mitigation strategy, the Planning Committee will revise these mitigation goals to ensure they align with the State HMP Goals and the County's other plans. The attendees suggested adding an environment-related goal, to align with the State HMP.

Activity: Prioritizing Mitigation Actions

The mitigation goals drive the identification of **mitigation actions**. Mitigation actions may be categorized into one of the following groups:

- **Local Plans and Regulations**: government authorities, policies, or codes that influence the way land and buildings are developed and built
- **Structure and Infrastructure Projects**: modifications to existing structures and infrastructure to protect them from a hazard or remove them from a hazard area
- **Natural Systems Protection**: actions to minimize damage and losses and preserve or restore the functions of natural systems
- **Education and Awareness Programs**: efforts to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them

The attendees participated in an exercise to think about prioritization and decision-making related to mitigation projects.

Activity Scenario: *A severe storm occurs in San Benito County in 2021. The event includes high winds, which damage local power lines and cause PG&E to institute public safety power shutoffs, and heavy rains, which result in flash flooding throughout the County. Much of the County's residents are without power or potable water for four days. The event heavily impacts San Benito County and leads to a Presidentially Declared Disaster. About a year later, a new round of Hazard Mitigation Grant Program funding is made available for California. The California Governor's Office of Emergency Services has prioritized mitigation in San Benito and surrounding counties.*

The attendees were asked to determine how they would prioritize funding for four different mitigation actions to protect specific community lifelines. They agreed to prioritize the actions as follows, considering which actions would most reduce the impact of future flood events on the County:

1. Design and build water storage (Food, Water, Shelter Lifeline):
2. Underground utility lines (Energy Lifeline)
3. Flood-proof local hospitals and healthcare facilities (Health and Medical Lifeline)
4. Improve stormwater drainage and system capacity (Transportation Lifeline)

Funding for Mitigation Activities

Funding for mitigation activities are typically derived from two different sources:

- FEMA Hazard Mitigation Assistance (HMA): Hazard Mitigation Grant Program (HMPG), Building Resilient Infrastructure and Communities (BRIC), Flood Mitigation Assistance (FMA)
- Other Funding: Section 406 – Hazard Mitigation Funding under Public Assistance, Community Development Block Grant – Disaster Recovery (CDBG-DR), State mitigation grant programs, non-governmental organization funding, private funding

It is important that the identified mitigation projects have a clear and directed funding source to ensure they are actionable and implementable by the communities. Creating resilience through mitigation is complex, and multiple funding sources and collaborative projects should be integrated to comprehensively address community risks.

The attendees also discussed potential funding opportunities from PG&E and California Department of Forestry and Fire Protection (CAL FIRE) that may be applicable to the mitigation projects identified in the final HMP.

Attendees

Name	Email	Organization
Brett Miller	Brett.miller@hollister.ca.gov	Hollister City Manager
Carlos Reynoso	creynoso@police.hollister.ca.us	Hollister Police Department
Charlie Bedolla	charlie.bedolla@hollister.ca.gov	Hollister Fire Department
Eric Olson	eolson@police.hollister.ca.us	Hollister Police Department
Garrett Haertel	garrett@sbcwd.com	San Benito County Water District
Gerald Medland	mocliamgt@gmail.com	LessLosses
Kris Mangano	kmangano@cosb.us	San Benito County Office of Emergency Services
Madison Mitchell	mmitchell@cosb.us	San Benito County Office of Emergency Services
Rene Anchieta	ranchieta@cosb.us	San Benito County GIS Analyst
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Rosie Betanio	rbetanio@police.hollister.ca.us	Hollister Police Department
Tracey Belton	tbelton@cosb.us	San Benito County Health and Human Services Agency
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Julia Davatzes	julia.davatzes@hagertyconsulting.com	Hagerty Consulting

*One individual called in by phone, who was unidentifiable.

Capability Assessment Webinar

1. Capability Assessment Webinar Invitation (5/26/2021)
2. Capability Assessment Webinar Agenda (5/26/2021)
3. Capability Assessment Webinar Supporting Materials (5/26/2021)
4. Capability Assessment Webinar Presentation (5/26/2021)
5. Capability Assessment Webinar Notes (5/26/2021)

HAGERTY

Julia Davatzes <julia.davatzes@hagertyconsulting.com>

San Benito County HMP: Capabilities Assessment Webinar

1 message

San Benito County Office of Emergency Services <oes@cosb.us> Thu, May 13, 2021 at 10:09 AM
Reply-To: San Benito County Office of Emergency Services <oes@cosb.us>
To: julia.davatzes@hagertyconsulting.com

View this email in your browser

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Capabilities Assessment Webinar

Register Now!

The Planning Committee for the San Benito County Hazard Mitigation Plan is convening on May 26, 2021 from 12:00 to 1:30 p.m. PDT for a Capabilities Assessment Webinar. Attend this workshop to ensure the County's mitigation capacity is accurately represented and help make the 2021 San Benito County Hazard Mitigation Plan actionable for your community.

Click here to Register

During this webinar, we will discuss and expand upon findings of the capabilities assessment, which details the capacity of San Benito County to implement and maintain a mitigation program, and review the next steps for the planning process.

If you have any questions, please contact Kris Mangano at oes@cosb.us.

Get Involved!

The Planning Committee welcomes your input! If you would like more information on specific elements of the project, or if you believe that you may be able to supply critical information during the planning process, please reach out to our Planning Committee leadership:

Kris Mangano
San Benito County Office of Emergency Management,
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MAY 26, 2021 | 12:00 – 1:30 P.M. PDT | REMOTE

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Capability Assessment Webinar Agenda

Time	Details
12:00 – 12:10 p.m.	**Welcome**
12:10 – 12:20 p.m.	**Project Review** • Hazard Mitigation Planning • Risk Assessment Review
12:20 – 12:35 p.m.	**Capability Assessment Review** • Legal and Regulatory Capabilities • Administrative and Technical Capabilities • Fiscal Capabilities
12:35 – 1:15 p.m.	**Activity: Building Capacity** • Validate Existing Capabilities • Identifying Additional Resources
1:15 – 1:25 p.m.	**Next Steps** • Developing the Mitigation Strategy • Upcoming Deadlines and Milestones
1:25 – 1:30 p.m.	**Questions and Discussion**

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Capability Assessment Summary

The following tables identify known capabilities for San Benito County, the City of Hollister, the City of San Juan Bautista, San Benito County Water District, and Sunnyslope County Water District to implement and maintain a mitigation program. These capabilities are separated into three separate categories:

- Legal and Regulatory Capabilities: codes, ordinances, and plans that support mitigation
- Administrative and Technical Capabilities: staff with particular skills or expertise, such as engineering, emergency management, or grant writing
- Fiscal Capabilities: eligibility for or access to grant funding and local budget capacity

The identified capabilities will be discussed and clarified during the Capabilities Assessment Webinar.

Legal and Regulatory Capabilities

Regulatory Tool	*San Benito County*	*City of Hollister*	*City of San Juan Bautista*	*San Benito County Water District*	*Sunnyslope County Water District*
Codes and Ordinances					
Building Code	■	■		■	
Growth Management Ordinance	■				
Land and Zoning Ordinances	■	■			
National Flood Insurance Program (NFIP) Flood Damage Prevention Ordinance	■				
Post-Disaster Recovery Ordinance	■				
Real Estate Disclosure Ordinance	■				
Special Purposes Ordinance	■			■	■
Subdivision Ordinance	■	■			
Water Use Ordinance	■			■	■
Development and General Plans					
Capital Improvement Plan	■			■	■
Comprehensive / Master Plan	■			■	■
Economic Development Plan	■				
Floodplain Management / Basin Plan	■	■		■	
Open Space Plan					
Site Plan Review Requirements	■				■
Hazard-Specific Plans					
Active Shooter Response Plan	■			■	

Regulatory Tool	*San Benito County*	*City of Hollister*	*City of San Juan Bautista*	*San Benito County Water District*	*Sunnyslope County Water District*
Dam Failure Response or Mitigation Plan	■			■	
Drought Response or Mitigation Plan	■			■	■
Earthquake Response or Mitigation Plan	■			■	■
Hazardous Materials (HAZMAT) Response or Mitigation Plan	■	■		■	■
Landslide Response or Mitigation Plan	■				
Pandemic Response or Preparedness Plan	■				■
Stormwater Management Plan / Ordinance	■	■		■	
Wildfire Response or Mitigation Plan	■				
Response and Recovery Plans					
Emergency Evacuation Plans	■			■	■
Emergency Operations Plan	■			■	■
Emergency Sheltering Plans	■				
Post-Disaster Recovery Plan	■				■

Administrative and Technical Capabilities

Capability	*San Benito County*	*City of Hollister*	*City of San Juan Bautista*	*San Benito County Water District*	*Sunnyslope County Water District*
Emergency Manager	■	■		■	
Engineers or professionals trained in construction practices related to buildings and/or infrastructure	■	■		■	■
Grant Writers	■				
Health care professionals trained in preparedness and response to pandemics	■	■			
NFIP Floodplain Administrator	■				
Personnel skilled or trained in geographic information systems (GIS) applications	■	■		■	■
Planners or Engineers with an understanding of natural hazards	■	■		■	■
Planners or Engineers with knowledge of land development and land management practices	■	■		■	■
Scientist familiar with natural hazards	■			■	
Staff with expertise in benefit-cost analysis	■	■		■	■
Surveyors	■				■

Fiscal Capabilities

Capability	*San Benito County*	*City of Hollister*	*City of San Juan Bautista*	*San Benito County Water District*	*Sunnyslope County Water District*
Authority to levy taxes for special purposes	■			■	
Capital Improvements Project funding	■	■		■	■
Community Development Block Grant (CDBG)	■	■			
Federal grant programs	■	■		■	■
Fees for water, sewer, gas, or electric service	■	■		■	■
Impact fees for home buyers or developers for new developments	■	■			■
Incur debt through general obligation funds	■			■	■
Incur debt through private activity bonds	■			■	■
Incur debt through special tax and revenue bonds	■			■	■
State mitigation grant programs (e.g., California Governor's Office of Emergency Services, California Department of Forestry and Fire Protection)	■			■	■
Withhold spending in hazard-prone areas	■				■

May 26, 2021

San Benito County Multi-Jurisdictional Hazard Mitigation Plan

Capability Assessment Webinar

HAGERTY

Welcome

HAGERTY

Agenda

12:00 – 12:10 P.M.	Welcome
12:10 – 12:30 P.M.	Project Review
12:30 – 12:45 P.M.	Capability Assessment Review
12:45 – 1:15 P.M.	Activity: Building Capacity
1:15 – 1:25 P.M.	Next Steps
1:25 – 1:30 P.M.	Questions and Discussion

Project Review

Hazard Mitigation Planning (HMP)



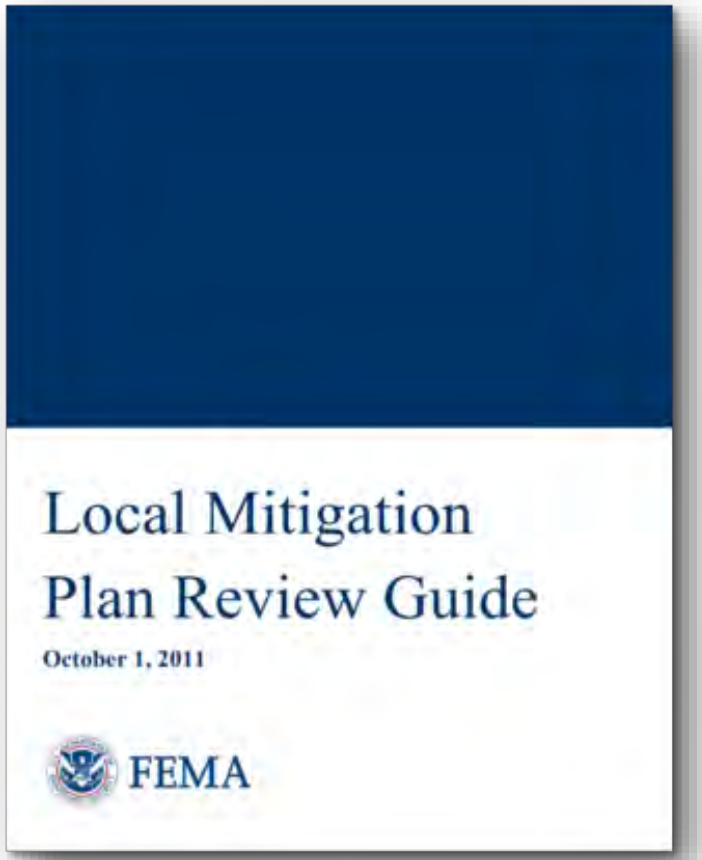
San Benito County Drought, May 2021

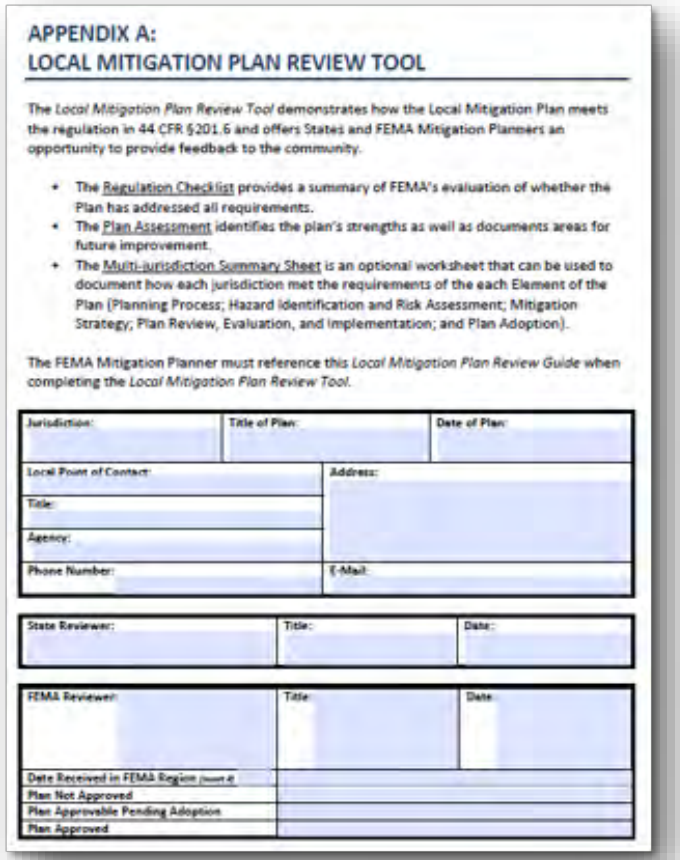
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HMP Requirements and Benefits

- Required by the Disaster Mitigation Act of 2000 to receive types of non-emergency disaster assistance
- Hazard Mitigation Plans benefit communities by:
  - Investing in the community's future sustainability and resilience
  - Educating the public and community officials about hazard risks and vulnerabilities of people, property, and infrastructure
  - Promoting collaboration among community stakeholders

Federal Planning Requirements





APPENDIX A:
LOCAL MITIGATION PLAN REVIEW TOOL

The *Local Mitigation Plan Review Tool* demonstrates how the Local Mitigation Plan meets the regulation in 44 CFR §201.6 and offers States and FEMA Mitigation Planners an opportunity to provide feedback to the community.

- The Regulation Checklist provides a summary of FEMA's evaluation of whether the Plan has addressed all requirements.
- The Plan Assessment identifies the plan's strengths as well as documents areas for future improvement.
- The Multi-jurisdiction Summary Sheet is an optional worksheet that can be used to document how each jurisdiction met the requirements of the each Element of the Plan (Planning Process; Hazard Identification and Risk Assessment; Mitigation Strategy; Plan Review, Evaluation, and Implementation; and Plan Adoption).

The FEMA Mitigation Planner must reference this *Local Mitigation Plan Review Guide* when completing the *Local Mitigation Plan Review Tool*.

Jurisdiction:	Title of Plan:	Date of Plan:
Local Point of Contact:		Address:
Title:		
Agency:		
Phone Number:		E-Mail:

State Reviewer:	Title:	Date:

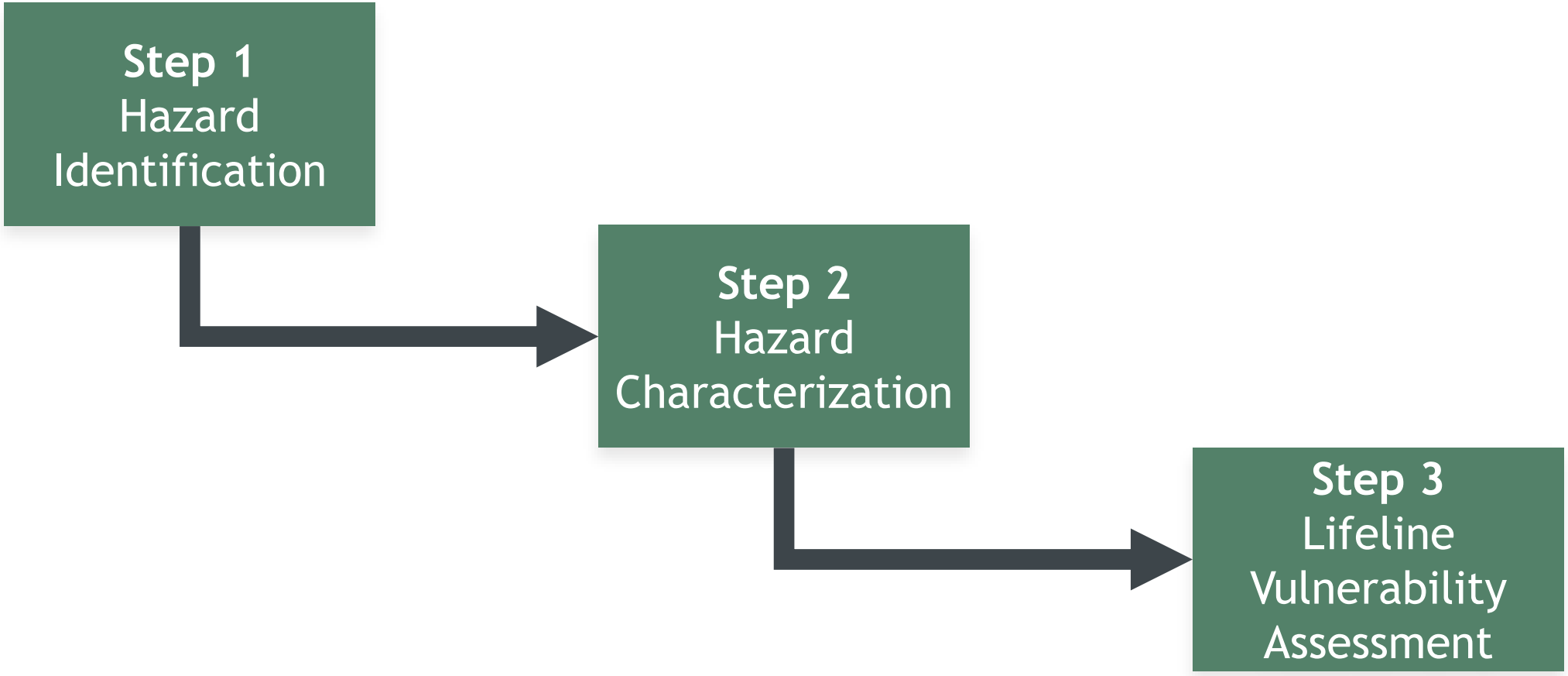
FEMA Reviewer:	Title:	Date:
Date Received in FEMA Region (insert #)		
Plan Not Approved		
Plan Approvable Pending Adoption		
Plan Approved		

Local Mitigation Plan Review Guide

Planning Process



Risk Assessment Process



HAGERTY

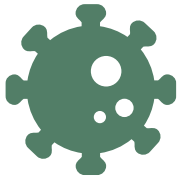
Hazard Identification

Climate and Weather Hazards


Drought


Flood


Extreme Temperatures


Communicable Disease


Severe Weather


Wildfire

Geological Hazards


Earthquake


Landslides

Technological Hazards


Dam Failure


HAZMAT Incidents

Threat and Disturbance Hazards


Terrorism

Hazard Characterization: Profile Sections

Section	Description
Characteristics	The Characteristics section describes the different types or categories of a hazard and how they occur.
Location and Extent	The Location and Extent section describes where the hazard may occur geographically in the County (location) and how the magnitude of the event is measured (extent).
Recent Occurrences	The Recent Occurrences section compiles and describes recent hazard events, specifically those from January 2011 – December 2020.
Probability	The Probability section describes how likely an event is to occur, calculated based on historical data or scientific study.

Hazard Probability

Highly Likely	Likely	Unlikely
• Drought • Severe Weather • Wildfire	• Extreme Temperatures • Flood • Landslide	• Communicable Disease • Earthquake • Dam Failure • HAZMAT Incident • Terrorism

Lifeline Vulnerability Assessment

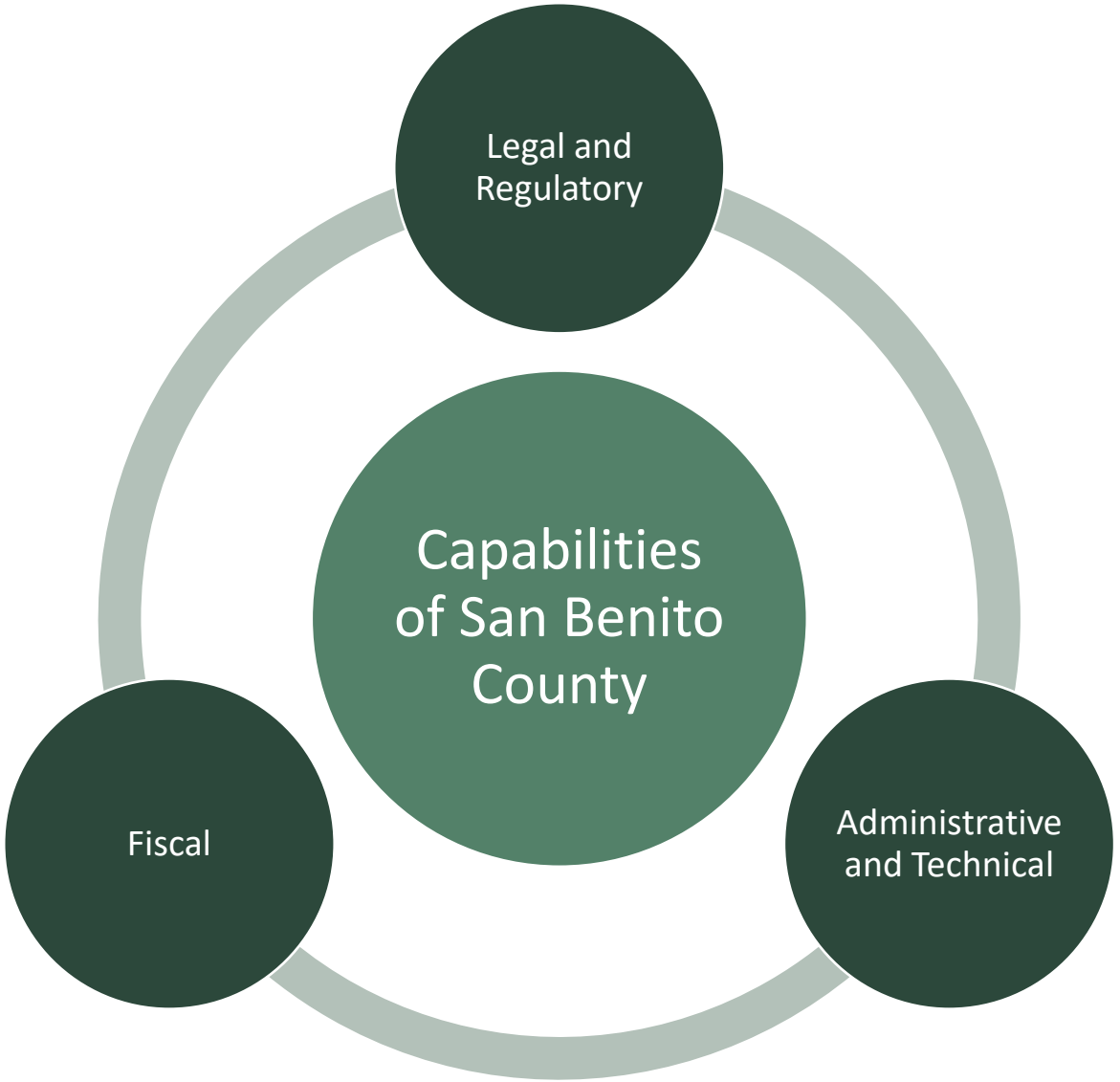
- Community Lifelines represent the **most fundamental services to communities** that enable other aspects of society to function.
- The Lifelines Vulnerability Assessment details how hazard events may impact the Community Lifelines in San Benito County.

FEMA Community Lifelines



Capability Assessment Review

Capability Assessment



Types of Capabilities



Legal and Regulatory Capabilities: codes, ordinances, and plans that support mitigation



Administrative and Technical Capabilities: staff with particular skills or expertise, such as engineering, emergency management, or grant writing



Fiscal Capabilities: eligibility for or access to grant funding and local budget capacity

Legal and Regulatory Capabilities

- Codes and Ordinances
- Development and General Plans
- Hazard-Specific Plans
- Response and Recovery Plans

Administrative and Technical Capabilities



- Emergency managers
- Engineers, planners, and professionals with construction experience, understanding of natural hazards, and knowledge of land management practices
- Staff with expertise in benefit-cost analysis
- Grant writers

Fiscal Capabilities

- State and federal funding programs
- Capital Improvements Project funding
- Incur debt through bonds, special tax, or general obligation funds
- Fees for water, sewer, gas, or electric service

Certifications





Survey Discussion

Clarifying Existing Capabilities

Are there additional capabilities of your jurisdiction that should be included or specific details to add?

Clarifying Existing Capabilities

Do these County capabilities apply to or support other jurisdictions?

Legal and Regulatory

- Building Codes and Ordinances
- Hazard-Specific Response Plans
- NFIP Flood Damage Prevention Ordinance

Administrative and Technical

- Grant Writing Resources
- Health care professionals trained for pandemics
- Surveyors

Fiscal

- Authority to levy taxes for special purposes
- Capital Improvement Funding
- Incur debt through general obligation funds

Expanding Community Capabilities

- Climate Action Plan
- Economic Development Plan
- Open Space Plan
- Post-Disaster Recovery Plan
- Resiliency Plans
- BCEGS
- Public Protection Classification Program

Does your community have any of these capabilities?

Expanding Community Capabilities

- Volunteer Organizations Active in Disaster (VOADs)
  - American Red Cross
  - Community Emergency Response Team
  - Habitat for Humanity
  - Search and Rescue
  - Civic organizations
- Local expertise in response and recovery
  - Grant writing
  - Feeding plans

Does your community have any of these capabilities?

Activity: Leveraging Capabilities

Legal and Regulatory Capabilities

How would you use your hazard response and recovery plans to implement mitigation projects?

How would your development and general plans be used to support mitigation?

How would codes or ordinances support implementing mitigation projects?

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Administrative and Technical Capabilities

What roles do Emergency Managers play in supporting mitigation?

What is the role of technical staff (e.g., engineers, GIS analysts) in supporting mitigation?

How might community partners support mitigation?

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Fiscal Capabilities

What types of mitigation projects could be implemented using Capital Improvement funding?

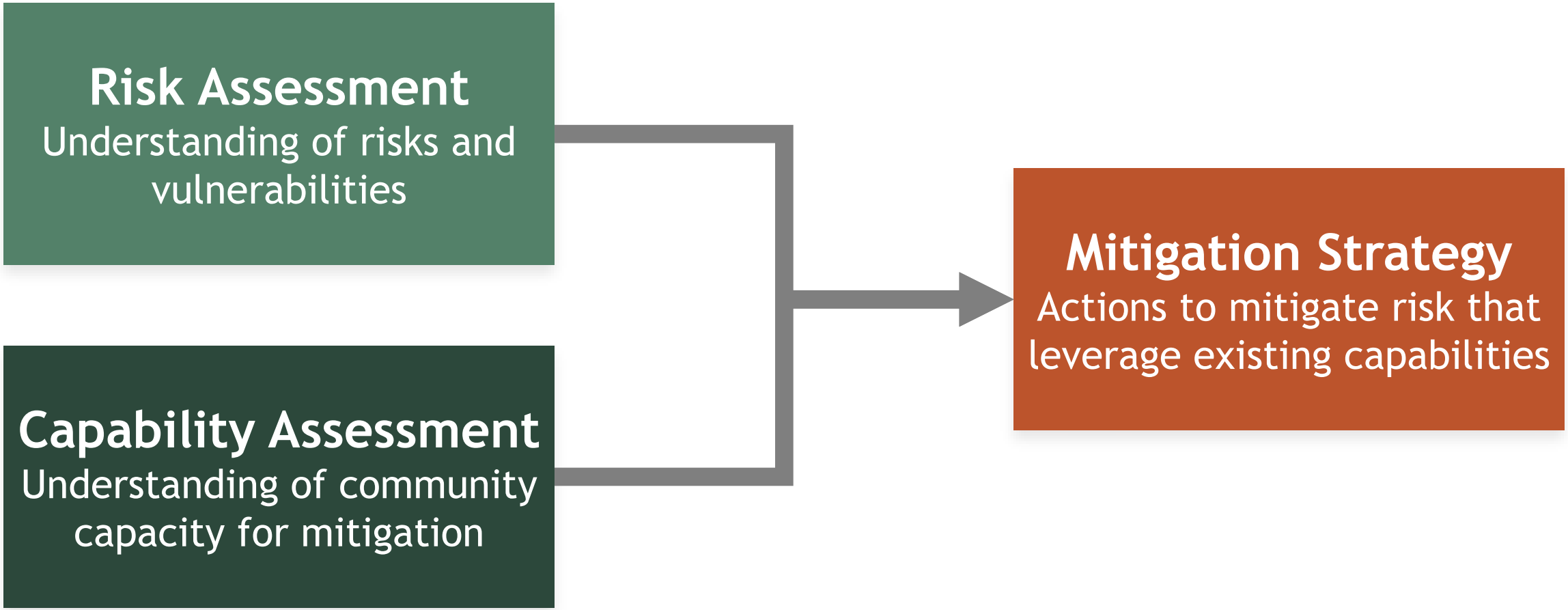
What types of mitigation projects could be implemented using NFIP funding?

What other types of State or federal grants may be used to support mitigation?

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Next Steps

Developing the Mitigation Strategy



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What is a Mitigation Strategy?

- The mitigation strategy should reduce long-term risk to natural hazards by addressing current and future threats.
- A mitigation strategy includes:
  - **Mitigation Goals**: explain what the community wants to achieve with the mitigation plan in the long-term
  - **Mitigation Objectives** (optional): describe how to measure progress and success toward a goal
  - **Mitigation Actions**: projects that will be implemented to meet the mitigation goals

The projects and actions your community will take to mitigate the risks posed to your community's people, property, infrastructure, and natural environment.

Creating Meaningful Mitigation Goals

- **Mitigation Goals should:**
  - Consider community impact and input
  - Be inclusive of all jurisdictions
  - Reflect the values and priorities of the community
  - Address the findings of the Risk Assessment

Meaningful mitigation goals translate to targeted and impactful mitigation actions.

Mitigation Project Types

Local Plans and Regulations	Comprehensive Plan	Land Use Ordinances	Zoning Codes
Structural Projects	Elevating Structures	Utility Undergrounding	Secure Buildings to Foundation
Natural Systems Protection	Fire-Resistant Landscaping	Erosion Control	Forest Management
Education and Awareness Programs	Digitize Risk Maps	Education Campaigns	Mental Health First Aid Classes

Upcoming Activities and Meetings

Mitigation Strategy Workshop: June 2021

During this workshop, the Planning Committee and Stakeholder Group will discuss and identify mitigation actions that may be implemented to lessen the impacts of hazards on the community.

Full Draft Plan Review: September 2021

The full Draft Plan and its appendices will be provided to you for review in September. Your feedback will be collected and incorporated into the document to produce HMP Draft #2 for public review.

Questions and Discussion

Questions?



Contact Information

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Project Advisor, Hagerty Consulting

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San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Capability Assessment Webinar

MAY 26, 2021 | 12:00 – 1:30 P.M. PDT | REMOTE

Meeting Summary

Key Takeaways

The San Benito County ("the County") Planning Committee and from Hagerty Consulting, Inc. ("Hagerty") Project Team held a Capability Assessment Webinar for the San Benito County Multi-Jurisdictional Hazard Mitigation Plan (HMP) Update on Wednesday, May 26, 2021. The purpose of this meeting was to discuss the capabilities of the County and participating jurisdictions to implement mitigation projects and maintain a mitigation program. The attendees also discussed ways that these capabilities may be expanded or leveraged for particular projects. A more detailed description of the meeting discussion and next steps are included below.

Next Steps

CAPABILITIES CALLS: JUNE 2021

Representatives of each participating jurisdiction will be invited to participate in short calls to confirm jurisdictional capabilities and collect any information needed to complete the Capability Assessment.

MITIGATION STRATEGY WORKSHOP: JUNE 2021

During this workshop, the Planning Committee and Stakeholder Group will discuss the mitigation strategy and identify mitigation actions that may be implemented to lessen the impacts of hazards on the community.

FULL DRAFT PLAN REVIEW: SEPTEMBER 2021

The full Draft Plan and its appendices will be provided to the Stakeholder Group for review in September. Their feedback will be collected and incorporated into the document to produce HMP Draft #2 for public review.

Project Review

Hazard Mitigation Planning

The purpose of the hazard mitigation planning process is to reduce loss and damage to life, property, and infrastructure by strategically planning for future community investment. Requirements as set by the Federal Emergency Management Agency (FEMA) in the Local HMP Review Guide drive the process. Once FEMA has approved their HMP, jurisdictions become eligible for some federal mitigation funding programs (e.g., Building Resilient Infrastructure and Communities [BRIC]).

M. Bohrson showed the planning process diagram, illustrated as a circle to represent the iterative process of hazard mitigation planning. The planning process consists of four steps:

1. Organize the planning process and resources.
2. Assess risk.
3. Develop a mitigation strategy.
4. Adopt and implement the Plan.

The first three steps are condensed to update the plan during this project effort. Step 4 will be the responsibility of the County over the next four-year period before the next required plan update.

Risk Assessment Review

M. Bohrson reviewed the purpose and results of the risk assessment. The risk assessment comprehensively analyzes the potential impacts of disasters on community assets. The process to complete the risk assessment has three steps:

1. **Hazard Identification**: select the hazards to be analyzed throughout the risk assessment.
2. **Hazard Characterization**: describe hazards, including where and how they may occur in the County.
3. **Lifeline Vulnerability Assessment**: analyze how the hazards may impact lifelines that sustain community operations.

The hazards identified for analysis are as follows:

- Communicable Disease
- Dam Failure
- Drought
- Earthquake
- Extreme Temperatures
- Flood
- Hazardous Materials Incidents
- Landslides
- Severe Weather
- Terrorism
- Wildfire

Each hazard section detailed characteristics about the hazard, the location and extent to which the hazard may occur, past hazard occurrences, and the potential frequency of a hazard event in the future.

Then, the potential impacts of hazards were analyzed using FEMA's community lifelines framework. Community lifelines represent the most fundamental services to communities that enable other aspects of society to function. The lifelines framework was developed by FEMA to support effective coordination during response and is an approach to understanding the impacts of hazards to community assets.

Capability Assessment Review

The Capability Assessment details the County's and participating jurisdiction's capacity to implement and maintain a mitigation program. The process identifies capabilities that should be leveraged for mitigation action design and recognizes areas that can be bolstered by mitigation actions themselves.

Existing County Capabilities

Information on the County's existing capabilities was originally collected through a survey administered to the Planning Committee and through a review of available County plans and documents.

LEGAL AND REGULATORY CAPABILITIES

Legal and regulatory capabilities are codes, ordinances, and plans that support mitigation, including emergency plans, flood management codes, and development ordinances. Legal and regulatory capabilities of the County include:

- Codes and Ordinances: development ordinance, flood prevention ordinance, water ordinance
- Development Plans and General Plans: County General Plan, capital improvement plans
- Hazard-Specific Plans: wildfire response plans, drought preparedness plans
- Response and Recovery Plans: emergency operations plan, comprehensive emergency management plan, disaster recovery framework

ADMINSTRATIVE AND TECHNICAL CAPABILITIES

Administrative and technical capabilities are particular skills or expertise maintained by staff, including engineering, emergency management, or grant writing. Administrative and technical capabilities of the County include:

- Emergency managers
- Engineers, planners, and professionals with construction experience, understanding of natural hazards, and knowledge of land management practices
- Staff with expertise in benefit-cost analysis
- Staff with grant writing experience

FISCAL CAPABILITIES

Fiscal capabilities are the abilities to finance mitigation projects and programs, including eligibility or access to grant funding, local revenue models, or budget capacity. Fiscal capabilities of the County include:

- State and federal funding programs
- Capital Improvements Project funding
- Incurring debt through bonds, special tax, or general obligation funds
- Fees for water, sewer, gas, or electric service

CERTIFICATIONS

Certain statewide or national certifications can support the County's mitigation program. San Benito County is a certified National Weather Service StormReady Community. This program supports communities in preparing for extreme weather events by providing emergency managers with guidelines on how to improve programming. Eligible communities must complete certain preparedness activities, including developing formal severe weather response plans and implementing a system to monitor local weather conditions.

The County, City of Hollister, and City of San Juan Bautista participate in FEMA's National Flood Insurance Program (NFIP). The NFIP incentivizes communities to enforce codes and ordinances that regulate development in floodplains. If a community participates in NFIP, residents and business owners may become eligible for flood insurance administered by FEMA.

Discussion of Existing Capabilities

The attendees discussed and clarified the County's existing mitigation capabilities. A summary of this discussion is provided in the sections below.

LEGAL AND REGULATORY CAPABILITIES

- Most County capabilities do not apply to other jurisdictions (e.g., Water Districts are not subject to building permits) but can be leveraged as touchpoints for collaboration.
- County hazard-specific response plans and response and recovery plans should be inclusive of the other jurisdictions.

ADMINISTRATIVE AND TECHNICAL CAPABILITIES

- The County is the primary manager for communicable disease response through the Health and Human Services Agency.
- The City of Hollister and City of San Juan are responsible for setting regulations regarding communicable disease response public safety practices (e.g., maximum capacity ordinance, mask-wearing requirements).

FISCAL CAPABILITIES

- Levying taxes for particular mitigation efforts may be a more effective opportunity than applying for federal or State funding. For example, taxes may directly benefit departments who can then more appropriately forecast what services they can provide to the community.
- A potential mitigation action may be "develop ballot language as required by different jurisdictions to levy a tax for local departments to expand their mitigation capabilities.
- An existing sustainable source of revenue is fire impact fees. These fees are accrued through an ordinance that charges new developers if they build in a certain area. The funding can only be used to protect an area directly impacted by the new construction.

Expanding Community Capabilities

The attendees discussed potential additional capabilities they may be interested in developing in the future, such as particular plans or certifications. The County is interested in creating a post-disaster recovery plan, resiliency plan, and all-department continuity of operations plan.

In other stages of emergency management, community entities and volunteer organizations active in disasters are active participants. While these groups are not historically as incorporated into mitigation programs, they can be vital to successful implementation of mitigation actions. Some existing organizations that are integrated into the County's existing response and preparedness efforts include:

- American Red Cross;
- Community Emergency Response Team; and
- Amateur Radio Emergency Services.

Additionally, the California Department of Forestry and Fire Protection (CAL FIRE) and the San Benito Fire Safe Council work in tandem to manage vegetation on the perimeter of the County, particularly in areas of that are wooded and at high-risk for wildfires (e.g., San Juan Canyon). All of these groups may be valuable assets for the County's mitigation program.

Activity: Building Capacity

LEGAL AND REGULATORY CAPABILITIES

The attendees discussed how existing hazard response and recovery plans may be used to support mitigation. D. Lander noted that their existing hazard response plans have identified gaps in their overall emergency preparedness. They would like to focus mitigation efforts on resolving these limitations.

ADMINISTRATIVE AND TECHNICAL CAPABILITIES

The attendees discussed specific technical expertise that may be needed to implement mitigation actions. K. Mangano noted that the Resource Management Agency will be a key partner for projects, as they are inclusive of public works, planning, and waste management

staff. County GIS will be an important partner, in particular for projects mitigating the impacts of earthquakes or floods and large-scale infrastructure projects.

FISCAL CAPABILITIES

The attendees discussed how mitigation has been funded in the past. K. Mangano noted that the County received State grants to fund many emergency management efforts related to coronavirus disease 2019 (COVID-19) and are currently waiting on approval for reimbursement from storm damage early this year. Most mitigation efforts have been funded through State and federal grants.

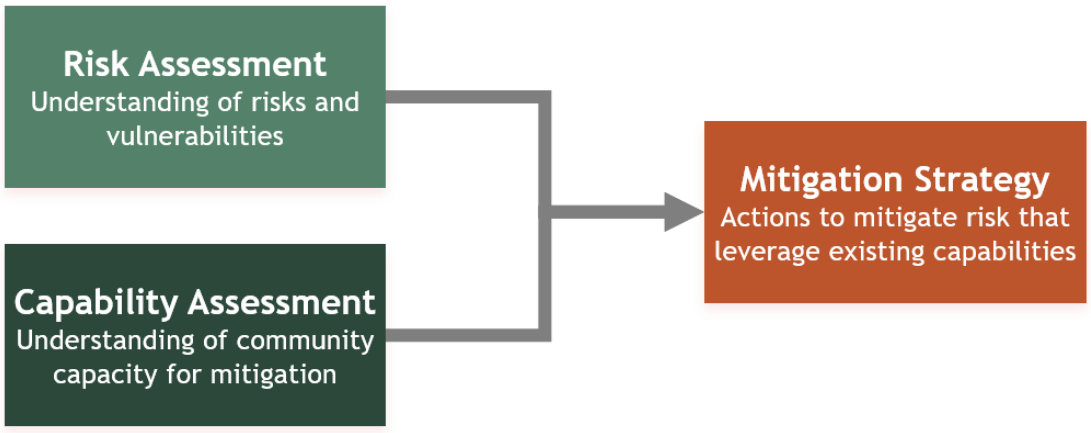
HAZARD-SPECIFIC CONSIDERATIONS

M. Streck noted that the cascading impacts of an earthquake and associated threats are the highest priority for mitigation in the County, including potential wildfires caused by downed power lines, landslides from seismic movement, and flooding from dam failure. Additionally, the County is uniquely isolated from many regional services and could be more severely impacted if aid is unable to reach them. B. Martin del Campo noted that the impact of earthquakes on transportation is of particular concern.

M. Bohrson noted that cascading impacts of disasters have been discussed consistently throughout the planning process. The County may choose to develop emergency plans and capacity-building mitigation actions that are effective for these all-hazard scenarios. For mitigation, the actions themselves may be the same, regardless of the root cause of the disaster (e.g., mitigation action for flooding from dam failures versus flooding as a cascading impact from an earthquake will be the same). Hagerty will review the drafted HMP sections to ensure they appropriately account for earthquake concerns and continue to incorporate concerns for cascading impacts in the Plan.

Mitigation Strategy

The next step in the hazard mitigation planning process is the mitigation strategy. As illustrated in the graphic below, the mitigation strategy is the culmination of the process and incorporates the findings from the risk assessment and capability assessment.



The mitigation strategy details the overarching goals of the County's mitigation program and then specific, targeted actions that may be implemented to mitigate risk to the community overall.

Mitigation projects identified should be actionable and fundable by internal local budget or an available grant. The projects will vary in scale and type to meet the evolving priorities of the County. For example, a mitigation action may be "create a scheduling for maintaining important transportation routes," which is of low cost and relatively low effort. Another mitigation action may be "retrofit a local bridge to meet seismic building codes," which is of high cost and effort but likely a high impact. Creating a variety of potential projects allows the County to be flexible to emerging needs and funding that may become available.

Attendees

Name	Email	Organization
Bob Martin Del Campo	bob.martindelcampo@hollister.ca.gov	Hollister Fire Department
Drew Lander	drew@sunnyslopewater.org	Sunnyslope County Water District
Garrett Haertel	garrett@sbcwd.com	San Benito County Water District
Kris Mangano	kmangano@cosb.us	San Benito County Office of Emergency Services
Madison Mitchell	mmitchell@cosb.us	San Benito County Office of Emergency Services
Matt Streck	matt.streck@fire.ca.gov	CAL FIRE
Rene Anchieta	ranchieta@cosb.us	San Benito County GIS Analyst
Michelle Bohrson	michelle.bohrson@hagertyconsulting.com	Hagerty Consulting
Jim DeAngelo	jim.deangelo@hagertyconsulting.com	Hagerty Consulting
Julia Davatzes	julia.davatzes@hagertyconsulting.com	Hagerty Consulting

Mitigation Strategy Workshop

1. Mitigation Strategy Workshop Invitation (7/13/2021)
2. Mitigation Strategy Workshop Agenda (7/13/2021)
3. Mitigation Strategy Workshop Supporting Materials (7/13/2021)
4. Mitigation Strategy Workshop Presentation (7/13/2021)
5. Mitigation Strategy Workshop Completed Worksheets (7/13/2021)

This event has ended.

Need to make some updates? Edit event

JUL
13

San Benito County Hazard Mitigation Plan: Mitigation Strategy Workshop

by San Benito County Office of Emergency Services

Follow

Free

Sales Ended Details

Date and time

Tue, July 13, 2021
9:00 AM – 11:00 AM PDT
Add to calendar

Location

Board of Supervisors Chambers
481 4th Street
Hollister, CA 95023
View Map

You are invited to the Mitigation Strategy Workshop for the San Benito County Hazard Mitigation Plan Update!

About this event

The Planning Committee for the San Benito County Hazard Mitigation Plan (HMP) is inviting you to participate in an in-person Mitigation Strategy Workshop on July 13, 2021 from 9 - 11 a.m. PDT. The meeting will be held at the Board of Supervisors Chambers at 481 4th Street, Hollister, CA. Attend this workshop to design mitigation actions that will protect your community from future disasters!

During this workshop, we will discuss the status of mitigation actions developed for the 2016 HMP, develop mitigation strategies and goals to guide the mitigation program, and design new mitigation projects for the 2021 HMP.

If you have any questions, please contact Kris Mangano at oes@cosb.us.

Date and time

Tue, July 13, 2021
9:00 AM – 11:00 AM PDT
Add to calendar

Location

Board of Supervisors Chambers
481 4th Street
Hollister, CA 95023
View Map

San Benito County Office Of Emergency Services

Organizer of San Benito County Hazard Mitigation Plan: Mitigation Strategy Workshop

Follow Contact



San Benito County Hazard Mitigation Plan: Mitigation Strategy Workshop

at

Board of Supervisors Chambers

481 4th Street, Hollister, CA 95023

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JULY 13, 2021 | 9:00 – 11:00 A.M. PDT | IN-PERSON

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Mitigation Strategy Workshop Agenda

Time	Details
9:00 – 9:15 a.m.	**Welcome & Project Review** • Introductions • Planning Process Update
9:15 – 9:30 a.m.	**Workshop Session 1: Create Mitigation Goals**
9:30 – 9:45 a.m.	**Workshop Session 2: Review Previous Mitigation Actions**
9:45 – 10:15 a.m.	**Workshop Session 3: Design Mitigation Actions**
10:15 – 10:25 a.m.	**Break**
10:25 – 10:45 a.m.	**Workshop Session 4: Review Proposed Mitigation Actions**
10:45 – 10:55 a.m.	**Implementing Mitigation** • Prioritizing Mitigation Actions • Plan Integration • Mitigation Funding
10:55 – 11:00 a.m.	**Next Steps**

San Benito County Multi-Jurisdictional Hazard Mitigation Plan

Mitigation Strategy Workshop

Developing Mitigation Objectives

Goal	Objective(s)
Minimize damage and impact to community lifelines.	1.
	2.
	3.
Promote risk aware and sustainable development.	1.
	2.
	3.
Create a culture of mitigation and resilience.	1.
	2.
	3.
Reduce loss of life and injuries to the community.	1.
	2.
	3.
	1.
	2.
	3.

Mitigation Action Brainstorm Session

Wildfire Mitigation Actions

Action Category	Proposed Action(s)
High Priority Actions	1.
	2.
	3.
	4.
Medium Priority Actions	1.
	2.
	3.
	4.
Low Priority Actions	1.
	2.
	3.
	4.

Drought Mitigation Actions

Action Category	Proposed Action(s)
High Priority Actions	1.
	2.
	3.
	4.
Medium Priority Actions	1.
	2.
	3.
	4.
Low Priority Actions	1.
	2.
	3.
	4.

Earthquake Mitigation Actions

Action Category	Proposed Action(s)
High Priority Actions	1.
	2.
	3.
	4.
Medium Priority Actions	1.
	2.
	3.
	4.
Low Priority Actions	1.
	2.
	3.
	4.

Severe Weather Mitigation Actions

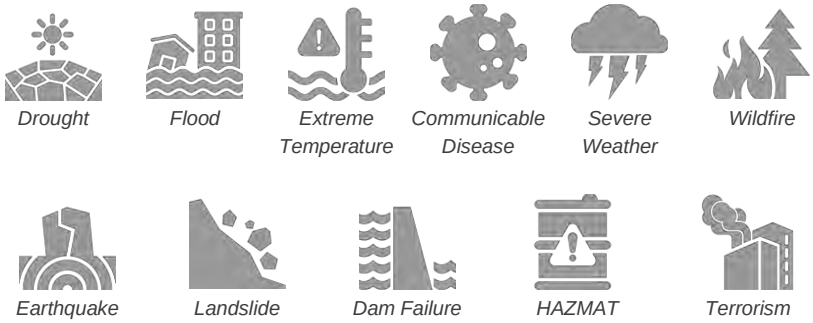
Action Category	Proposed Action(s)
High Priority Actions	1.
	2.
	3.
	4.
Medium Priority Actions	1.
	2.
	3.
	4.
Low Priority Actions	1.
	2.
	3.
	4.

Other Hazards Mitigation Actions

Community Lifeline	Proposed Action(s)
Safety and Security	
Food, Water, Shelter	
Health and Medical	
Energy	
Communications	
Transportation	
Hazardous Materials	

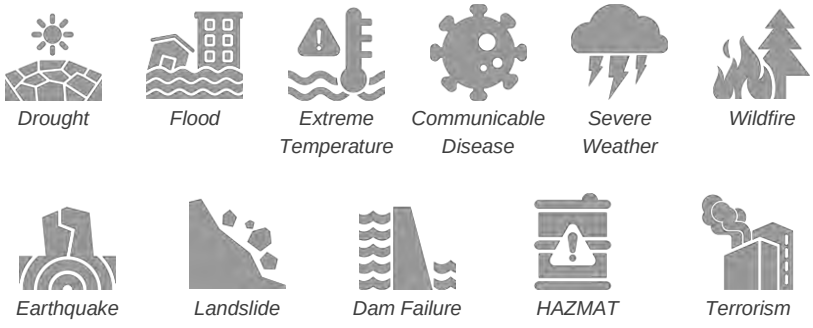
Mitigation Action Plan Development

Mitigation Action #1

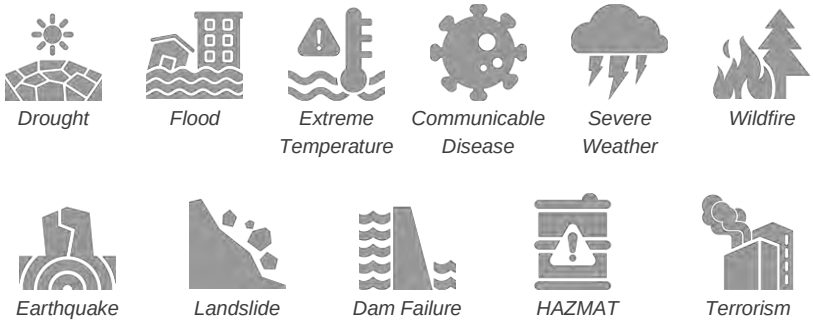
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☐ Low ☐ Medium ☐ High</td></tr>
<tr><td colspan="2">ACTION DESCRIPTION</td><td>PROJECT LEAD</td></tr>
<tr><td colspan="2"></td><td>PROJECT PARTNERS
•
•
•</td></tr>
<tr><td>COST
☐ Low
☐ Medium
☐ High</td><td>POTENTIAL FUNDING SOURCES
•
•
•</td><td></td></tr>
<tr><td colspan="2">BENEFITS</td><td>TIMELINE
☐ Immediate
☐ Short-Term
☐ Long-Term</td></tr>
<tr><td colspan="2">HAZARDS MITIGATED
 
Drought Flood Extreme Temperature Communicable Disease Severe Weather Wildfire
Earthquake Landslide Dam Failure HAZMAT Terrorism</td><td>JURISDICTIONS
☐ San Benito County
☐ City of San Juan Bautista
☐ City of Hollister
☐ Sunnyslope County Water District
☐ San Benito County Water District
☐ Regional</td></tr>
</table>

Mitigation Action #2

<table>
<tr><td colspan="2">ACTION TITLE</td><td>PRIORITY
☐ Low ☐ Medium ☐ High</td></tr>
<tr><td colspan="2">ACTION DESCRIPTION</td><td rowspan="2">PROJECT LEAD

PROJECT PARTNERS
•
•
•</td></tr>
<tr><td>COST
☐ Low
☐ Medium
☐ High</td><td>POTENTIAL FUNDING SOURCES
•
•
•</td></tr>
<tr><td colspan="2">BENEFITS</td><td>TIMELINE
☐ Immediate
☐ Short-Term
☐ Long-Term</td></tr>
<tr><td colspan="2">HAZARDS MITIGATED
 
Drought Flood Extreme Temperature Communicable Disease Severe Weather Wildfire
Earthquake Landslide Dam Failure HAZMAT Terrorism</td><td>JURISDICTIONS
☐ San Benito County
☐ City of San Juan Bautista
☐ City of Hollister
☐ Sunnyslope County Water District
☐ San Benito County Water District
☐ Regional</td></tr>
</table>

Mitigation Action #3

ACTION TITLE	PRIORITY ☐ Low ☐ Medium ☐ High
ACTION DESCRIPTION	**PROJECT LEAD**
	PROJECT PARTNERS • • •
COST ☐ Low ☐ Medium ☐ High	**POTENTIAL FUNDING SOURCES** • • •
BENEFITS	**TIMELINE** ☐ Immediate ☐ Short-Term ☐ Long-Term
HAZARDS MITIGATED  *Drought* *Flood* *Extreme Temperature* *Communicable Disease* *Severe Weather* *Wildfire* *Earthquake* *Landslide* *Dam Failure* *HAZMAT* *Terrorism*	**JURISDICTIONS** ☐ San Benito County ☐ City of San Juan Bautista ☐ City of Hollister ☐ Sunnyslope County Water District ☐ San Benito County Water District ☐ Regional

July 13, 2021

San Benito County Multi-Jurisdictional Hazard Mitigation Plan

Mitigation Strategy Workshop

HAGERTY

Welcome

HAGERTY

Introductions



Michelle Bohrson

Project Manager, Hagerty Consulting

Julia Davatzes

Lead Planner, Hagerty Consulting

Introductions

Kris Mangano
Emergency Services Manager, San Benito County Office of Emergency Services

Madison Mitchell
Staff Analyst, San Benito County Office of Emergency Services

Introductions

- Name, Title, Agency
- How have you been involved with emergency management with San Benito County?



Agenda

9:00 – 9:15 A.M.	Welcome & Project Review
9:15 – 9:30 A.M.	Workshop Session 1: Creating Mitigation Goals
9:30 – 10:15 A.M.	Workshop Session 2: Developing Mitigation Actions
10:15 – 10:25 A.M.	Break
10:20 – 10:45 A.M.	Workshop Session 3: Reviewing Proposed Mitigation Actions
10:45 – 10:55 A.M.	Implementing Mitigation
10:55 – 11:00 A.M.	Next Steps

Project Review

Hazard Mitigation Planning (HMP)



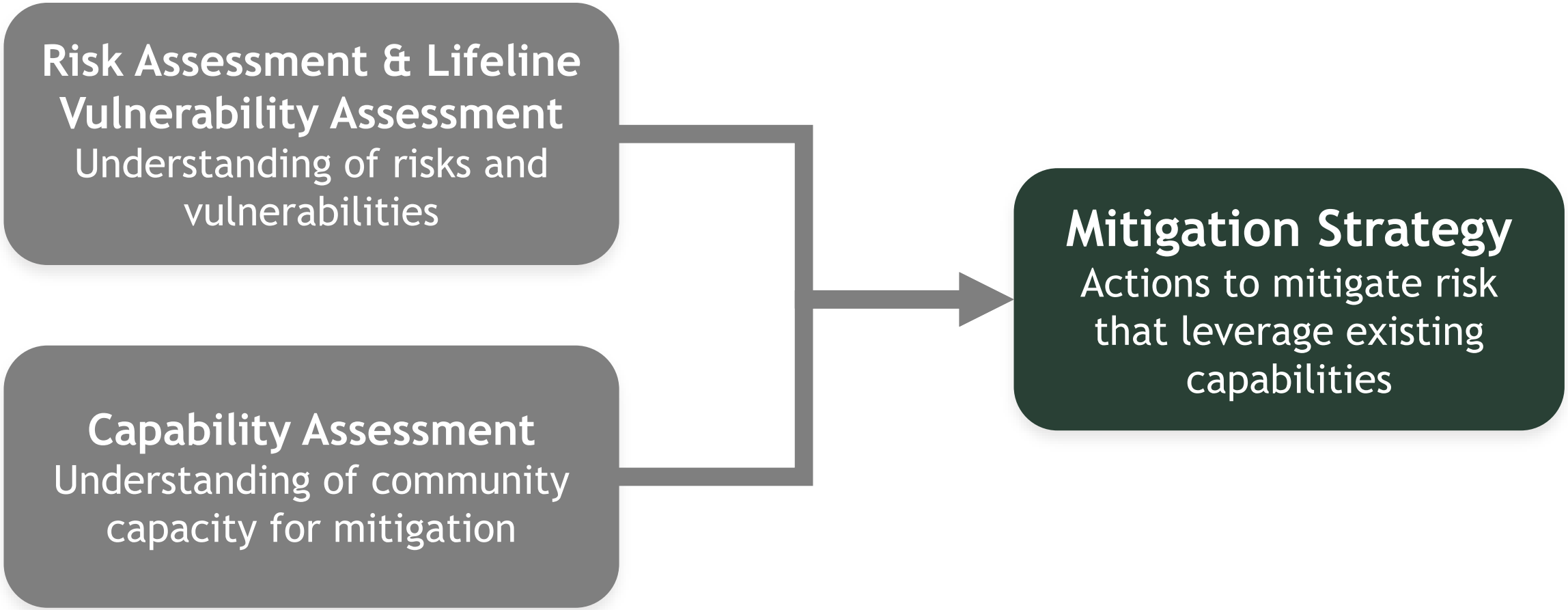
San Benito County Drought, May 2021

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Planning Process



Developing the Mitigation Strategy



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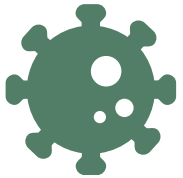
Hazard Identification

Climate and Weather Hazards


Drought


Flood


Extreme Temperatures


Communicable Disease


Severe Weather


Wildfire

Geological Hazards


Earthquake


Landslides

Technological Hazards

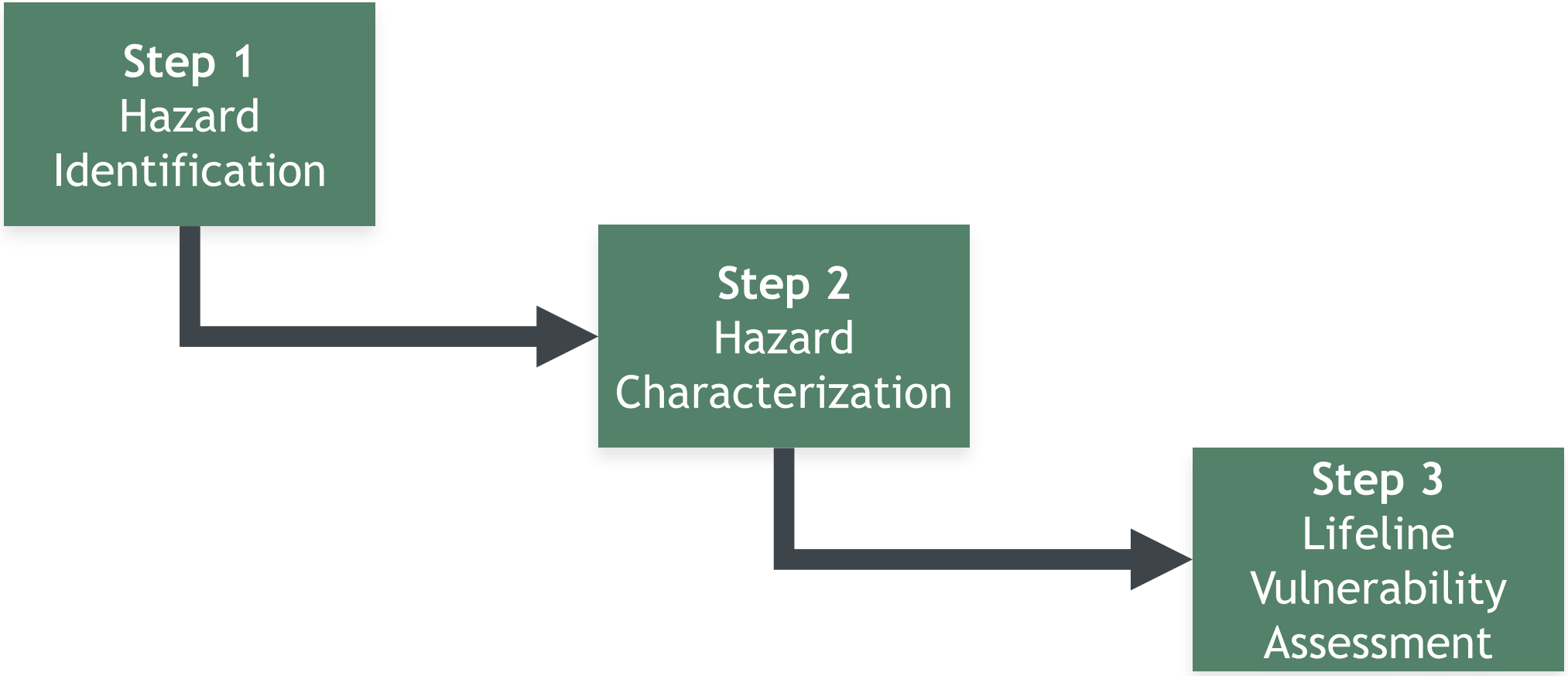

Dam Failure


HAZMAT Incidents

Threat and Disturbance Hazards


Terrorism

Risk Assessment Process



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Types of Capabilities



Legal and Regulatory Capabilities: codes, ordinances, and plans that support mitigation



Administrative and Technical Capabilities: staff with particular skills or expertise, such as engineering, emergency management, or grant writing



Fiscal Capabilities: eligibility for or access to grant funding and local budget capacity

The Mitigation Strategy

The mitigation strategy should **reduce long-term risk to natural hazards** by addressing current and future threats.

Components of the Mitigation Strategy

MITIGATION GOAL	MITIGATION OBJECTIVE	MITIGATION ACTION
Broad guiding policy statements that are not hazard-specific and establish the community vision for long-term resilience	Specific, measurable priorities that connect goals to mitigation actions and can be hazard-specific.	Projects that will be implemented to meet goals and whose progress is measured by objectives.
Minimize physical damage from natural hazards.	Reduce the number of vulnerable structures in flood hazard areas.	Amend the zoning ordinance to permit only open space uses within floodplains.

Workshop Session 1:
Creating Mitigation Goals

Mitigation Goals

- Address the findings of the Risk Assessment and Lifelines Vulnerability Assessment
- Are inclusive of all County jurisdictions
- Are not hazard-specific
- Reflect the values and priorities of the community and previous planning efforts
- Align with the goals of the State

State of California 2018 Goals

- Significantly **reduce life loss and injuries**.
- **Minimize damage** to structures and property and minimize interruption of essential services and activities.
- Protect the **environment**.
- Promote **community resilience** through integration of hazard mitigation with public policy and standard business practices.

San Benito County 2015 Goals

- Promote **economic development** consistent with seismic, floodplain and risk management guidance as developed by San Benito County and its allied agencies and organizations.
- Provide for an **effective public awareness program** for natural and technological hazards present in San Benito County.
- Encourage **scientific study** and the development of data to support mitigation strategies for those hazards that are a threat to San Benito County.
- Promote the recognition of the real **value of hazard mitigation** to public facilities, public safety and welfare of all citizens of San Benito County.
- **Support the mitigation efforts** of local governments, private citizens, non-profit organizations and private businesses throughout the San Benito County Operational Area.

Proposed 2021 Mitigation Goals

- Minimize damage and impact to **community lifelines**.
- Promote **risk aware** and **sustainable** development.
- Create a **culture of mitigation** and resilience.
- Reduce **loss of life and injuries** to the community.

Workshop Session 2:
Developing Mitigation Actions

Formulating Mitigation Actions

PREVIOUS HMP

Review mitigation actions from the previous plan to determine the status of the previous actions and how to carry forward or revise actions.

MITIGATION WORKSHOP

Brainstorm collaboratively with diverse stakeholders to identify effective and appropriate mitigation actions.

GAP ANALYSIS

Review actions from the previous HMP and mitigation workshop and provide guidance based on observed gaps.

Mitigation Project Types

Local Plans and Regulations	Hazard Response Plan	Water Use Ordinances	Zoning Codes
Structural Projects	Elevating Structures	Utility Hardening	Secure Buildings to Foundation
Natural Systems Protection	Fire-Resistant Landscaping	Erosion Control	Forest Management
Education and Awareness Programs	Digitize Risk Maps	Education Campaigns	Hazard Response Training

Mitigation Action Workshop



- Break into groups to brainstorm and discuss elements of the mitigation strategy.
- Note: what is discussed today will be reviewed by planners and adjudicated to determine what ends up in the final plan.

Mitigation Action Workshop:
Mitigation Objectives Identification

- Utilize worksheet to review proposed mitigation goals and consider associated mitigation objectives.
- Remember objectives are specific, measurable priorities that connect goals to mitigation actions.

Mitigation Goals ⟷ **Mitigation Objectives** ⟷ **Mitigation Actions**

Mitigation Action Workshop:
High Hazard Action Brainstorm

- Brainstorm different actions to mitigate risks from high priority hazards.
- These hazards are those that are most likely to occur or will have the highest impact.

Drought

Wildfire

Earthquake

Severe Weather

Mitigation Action Workshop:
Community Lifelines Brainstorm

- Brainstorm different actions to help mitigate risks to specific community lifelines.

Safety and Security

Food, Water, Shelter

Health and Medical

Energy

Communications

Transportation

Hazardous Material

Mitigation Action Workshop:
Action Sheet Development

- Identify actions that you want to explore further as a group.
- Define further information related to the identified action:

Action Priority

Action Benefit

Funding Sources

Hazards Mitigated

Stakeholders

Timeline

Jurisdictions Impacted

Mitigation Action Workshop



- Break into groups to brainstorm and discuss elements of the mitigation strategy.
- Note: what is discussed today will be reviewed by planners and adjudicated to determine what ends up in the final plan.

Break

Please return by 10:25 A.M.

Workshop Session 3: **Reviewing Proposed Mitigation Actions**

Review Proposed Mitigation Actions

- One representative from each group should share highlights from Workshop Session 2.

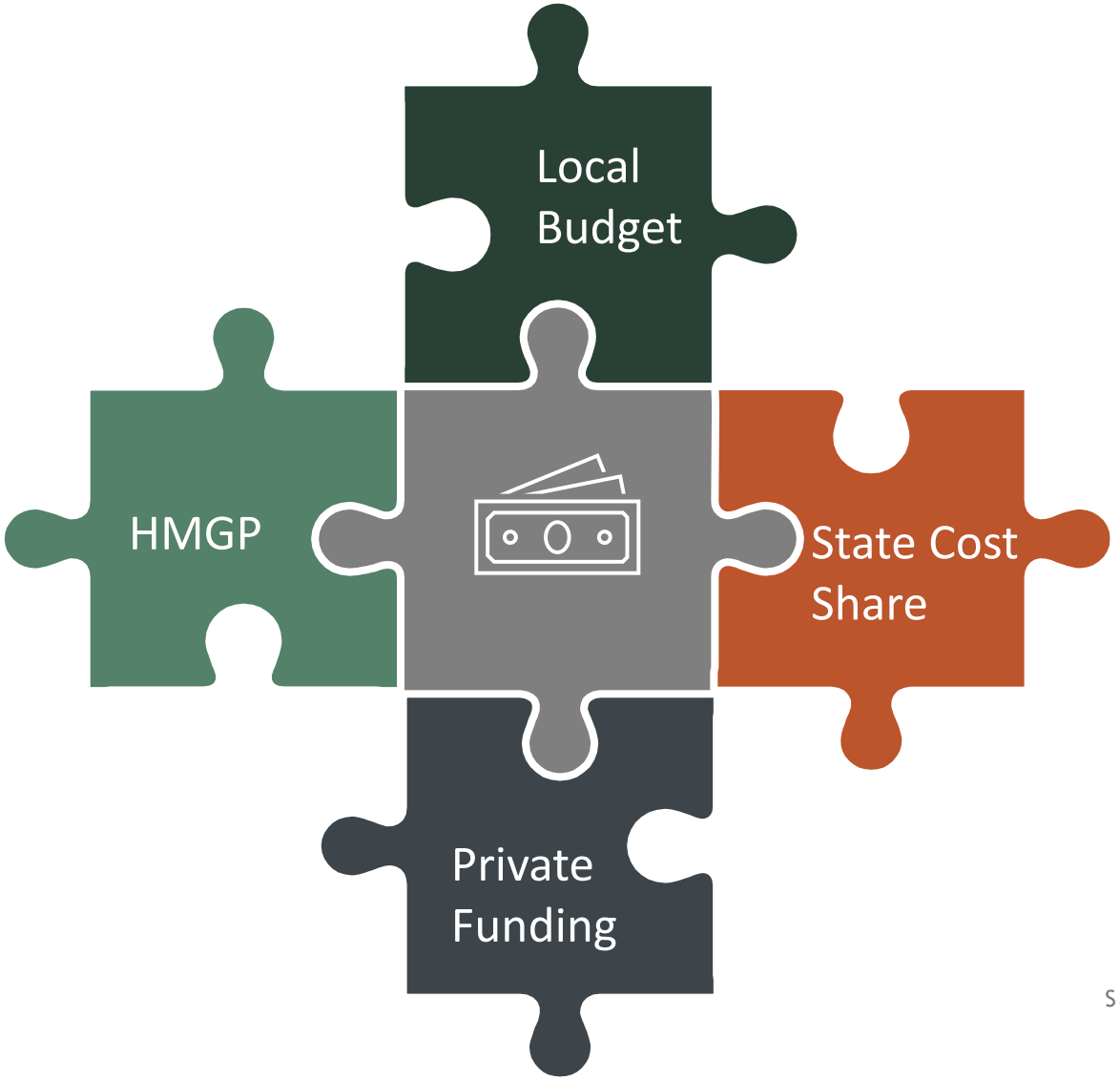


Review Proposed Mitigation Actions

- What were **common themes** across the identified proposed mitigation actions?
- Are there any **gaps** in the actions proposed that would increase the resilience of the County?
- Are there actions that you feel the County can take both **immediately** and in the **long-term**?

Implementing Mitigation

Funding to Create Resilience is Complex



Funding for Mitigation Activities

FEMA Hazard Mitigation Assistance:

- Hazard Mitigation Grant Program (HMGP)
- Building Resilient Infrastructure and Communities (BRIC)
- Flood Mitigation Assistance (FMA)

Other Funding:

- Section 406 – Hazard Mitigation Funding Under Public Assistance
- Community Development Block Grant – Disaster Recovery (CDBG – DR)
- State mitigation grant programs (e.g., local match support, state disaster declarations)
- Non-governmental organization funding
- Private funding

FEMA HMA Funding

Most mitigation grant funding comes from the FEMA HMA program.

Hazard Mitigation Grant Program (HMGP)

- Funding to supporting long-term hazard mitigation measures post-disaster
- Available after a federal disaster declaration and dependent on the cost of the disaster
- Includes HMGP Post Fire Assistance

Building Resilient Infrastructure and Communities (BRIC)

- Annual funding to support long-term hazard mitigation measures
- Funded by a 6% set-aside from federal post-disaster grant funding
- Previously PDM program

Flood Mitigation Assistance (FMA)

- Annual funding to support flood mitigation
- Mitigates risk to National Flood Insurance Program (NFIP) properties

Plan Integration

- Key element of creating a culture of mitigation involves integrating mitigation best practices across County operations.
- Benefits:
  - Streamline the use of resources to meet common community goals.
  - Build partnerships and relationships that can expand community resilience and preparedness.
  - Incorporate mitigation efforts into long-range community visions.

Next Steps

Upcoming Activities and Meetings



Document Review:

- Capability Assessment Draft (July 2021)
- Mitigation Strategy Draft (August 2021)
- Full Document Review (September 2021)



Meetings:

- Plan Review Webinars (September 2021)

Questions?



Contact Information

Kris Mangano

Emergency Services Manager, San Benito County Office of Emergency Services

kmangano@cosb.us

Michelle Bohrson

Project Manager, Hagerty Consulting

michelle.bohrson@hagertyconsulting.com

San Benito County Multi-Jurisdictional Hazard Mitigation Plan

Mitigation Strategy Workshop

Developing Mitigation Objectives

Goal	Objective(s)
Minimize damage and impact to community lifelines.	1. water lifeline - ensure sustainable water supply & quality - ground water storage
	2. address - high TDS (salts) water levels
	3.
Promote risk aware and sustainable development.	1.
	2.
	3.
Create a culture of mitigation and resilience.	1.
	2.
	3.
Reduce loss of life and injuries to the community.	1.
	2.
	3.
	1.
	2.
	3.

Mitigation Action Brainstorm Session

Wildfire Mitigation Actions

Action Category	Proposed Action(s)
High Priority Actions	1. Education – risks, dollar benefits of actions
	2. prevention – ordinance. code enforcement
	3. Evacuation routes for high fire "canyon" areas: ie. safe.
	4. Communication to community – ie fire retardant workshops.
Medium Priority Actions	1. Fire prevention workshops.
	2. Increase funding for Education
	3. resources for day care providers, parents work in case emergency happens during day in San Jose
	4.
Low Priority Actions	1.
	2.
	3.
	4.

Community Lifelines Mitigation Actions

Community Lifeline	Proposed Action(s)
Safety and Security	
Food, Water, Shelter	
Health and Medical	
Energy	
Communications	campaign for preparedness.
Transportation	
Hazardous Materials	

build a plan to grow.
dont funnel.

Mitigation Action Brainstorm Session

Wildfire Mitigation Actions

Action Category	Proposed Action(s)
High Priority Actions	1. wert ~~work~~ report dwr.
	2. communication to residents. cell phone tower, siren, reverse 911
	3. tcmp refu. area (TRA) ~~local fire~~
	4.
Medium Priority Actions	1. signage + exit plans.
	2.
	3.
	4.
Low Priority Actions	1. drills. evacuation help.
	2.
	3.
	4.

⇒ Areas for Livestock housing during emergency

⇒ Reserves of Key materials & equipment

⇒ Predetermined places for emergency housing for people

⇒ Power backup → perishable food, well pumps

⇒ Encourage off-line batteries & building flexibility & sustainability (think off the grid)

⇒ Outreach to people with highest risk

⇒ Buyer Be Ware information for new residents

⇒ Transportation especially w/ jail inmates, homeless, non-drivers

↳ No real way out of San Benito if you don't drive

↳ Even if you can drive, traffic will be so bad that no one could quickly get out

⇒ Social Media & "old" media outreach

⇒ EOC office moving

⇒ Hollister airport for large planes to land in emergency – in and out

⇒ New trail "River Park" Trail evac capacity

⇒ Use of Drones for

⇒

Tiebacks into County Strategic Plan/budgeting/CIP

- PG&E funding available for evac. centers
- microgrid opportunities for specific critical facilities
- resilience hubs

San Benito County Multi-Jurisdictional Hazard Mitigation Plan

Mitigation Strategy Workshop

Developing Mitigation Objectives

Goal	Objective(s)
Minimize damage and impact to community lifelines.	1. ID Vulnerable Infrastructure
	2. Reserves + BACKUPS etc. Utilities + Housing ~~Animals too~~
	3.
Promote risk aware and sustainable development.	1.
	2.
	3.
Create a culture of mitigation and resilience.	1.
	2.
	3.
Reduce loss of life and injuries to the community.	1.
	2.
	3.
	1.
	2.
	3.

Food + Tent

Refresh Reserves For Items that expire or deteriorate
- every 5 year - Annual sale of old items + replenish -
- Culture of sustainabilities

- Major Quake + Power out - ? grunchers, + Power ;

⇒ Stand alone Solar + Battery Storage For Residence

→ Out reach + Sharing - Risk awareness of local HAZARDS -

→ TRANSIT + Electric Vehicle alternatives. BUSSES + Transport.

- EOC - reverse 911.

= River trail Capacity to ~~[illegible]~~ handle as an alternative to closed + Blocked Roads. Bridges.

- Water Storage + Tenders to deliver if Pipes Break. - Replacing water main to handle increased Seismicity, TANKS too

- Increase water Storage beyond 2.5 day Supply.

OFFICE OF EMERGENCY SERVICES
SAN BENITO COUNTY
EMERGENCY MEDICAL SERVICES DIVISION

Hazardous Mitigation Planning Workshop
San Benito County Administrative Office
July 13, 2021
8:30am
Sign in Sheet

Name Please print clearly	Department/Agency
TAYEM M-KINISON	RMA PLANNING.
RICK PFITZER	S.B. F.S.C.
GENE POTKEY	CALFIRE
KEVIN LINDO	CALFIRE
EDWARD ESCAMILLA	COMMUNITY FOOD BANK OF SAN BENITO
Roberto Cunnally	San Benito Fire Safe Council
Nicholas Milton	Calfire B-4616
ANTHONY MOJICA	H³
Tracey Belton	SVSC HHSA
Adam Amaral	CALOES
Kristina Chavez Wyatt	SBC Business Council
Rich Brown	SJB

Plan Review Meeting

1. Plan Review Meeting Invitation (9/22/2021)
2. Plan Review Meeting Agenda (9/22/2021)
3. Plan Review Meeting Presentation (9/22/2021)
4. Plan Review Meeting Notes (9/22/2021)

Need to make some updates? Edit event

SEP
22

San Benito County Hazard Mitigation Plan: Plan Review Meeting

by San Benito County Office of Emergency Services

Follow

Free

Free Register

Date and time

Wed, September 22, 2021
3:00 PM – 4:00 PM EDT
Add to calendar

Location

Online event

You are invited to the Plan Review Meeting for the San Benito County Hazard Mitigation Plan Update!

About this event

The Planning Committee for the San Benito County Hazard Mitigation Plan (HMP) is inviting you to participate in a virtual Plan Review Meeting on Wednesday, September 22 at 12 p.m. PDT. The meeting will be held on Zoom. Attend this meeting to understand the contents of the Plan and how to provide feedback!

During this webinar, we will discuss the structure and purpose of the components of the full drafted HMP, review how the Plan meets State and federal requirements, and outline the remaining steps of the planning process. Please RSVP using the button below.

If you have any questions, please contact Kris Mangano at oes@cosb.us.

Date and time

Wed, September 22, 2021
3:00 PM – 4:00 PM EDT
Add to calendar

Location

Online event

San Benito County Office Of Emergency Services

Organizer of San Benito County Hazard Mitigation Plan: Plan Review Meeting

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SEPTEMBER 22, 2021 | 12:00 – 1:00 P.M. PDT | REMOTE

San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Plan Review Meeting Agenda

Time	Details
12:00 – 12:15 p.m.	**Welcome & Project Review** • Planning Process Update • Key Project Milestones
12:15 – 12:30 p.m.	**Plan Sections Overview** • Base Plan and Appendix Review • Meeting Local Hazard Mitigation Planning Requirements
12:30 – 12:40 p.m.	**How to Review the Plan** • How to Provide Feedback • Plan Approval and Review Process
12:40 – 12:50 p.m.	**Using the Plan** • Building Resilience • Plan Integration
12:50 – 1:00 p.m.	**Next Steps**

September 22, 2021

San Benito County Multi-Jurisdictional Hazard Mitigation Plan

Plan Review Meeting

HAGERTY

Welcome

HAGERTY

Agenda

12:00 – 12:15 P.M.	Welcome & Project Review
12:15 – 12:30 P.M.	Plan Sections Overview
12:30 – 12:40 P.M.	How to Review the Plan
12:40 – 12:50 P.M.	Using the Plan
12:50 – 1:00 P.M.	Next Steps and Q&A

Project Review

Hazard Mitigation Planning (HMP)



San Benito County Drought (May 2021)

Mitigation Planning for the Future

- Planning and implementing mitigation measures reduces loss of life and property.
- Effectively invest in your community's future sustainability and resilience.
- Become eligible for federal mitigation funding opportunities.
- Educate the public and community officials about hazard risks and vulnerabilities.
- Engage the whole community in the cycle of emergency management.

Planning Process



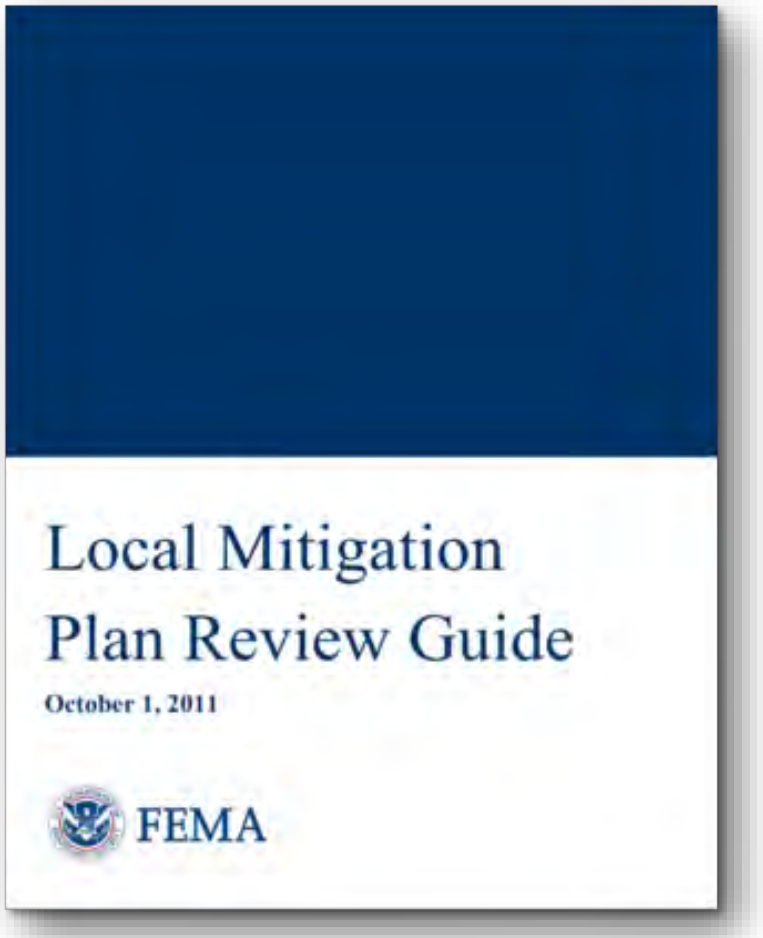
Project Approach

Task 1	Task 2	Task 3	Task 4	Task 5
• Project Kickoff Meeting • Project Management Plan • Outreach Strategy	• Community Hazards Survey • Risk Assessment • Capability Assessment	• Mitigation Strategy • Mitigation Strategy Workshop	• Draft 1 and 2 MJHMP • Plan Review Meeting • Public Review Webinar • Public Review Period	• Final MJHMP Submission • Plan-to-Project Workshop • Project Closeout
November 2020 – January 2021	February – July 2021	July – September 2021	September – November 2021	November 2021 – FEMA APA

Plan Sections Overview

Local Mitigation Plan Review Guide

- Used by FEMA reviewers to evaluate the Plan for approval.
- Catalogs all requirements for local HMPs.
- Identifies which Plan sections meet each requirement to ensure compliance.



Local Mitigation Plan Review Guide (2011)

Plan Sections

Base Plan	1. INTRODUCTION
	2. PLANNING PROCESS
	3. COUNTY PROFILE
	4. RISK ASSESSMENT
	5. VULNERABILITY ASSESSMENT
	6. CAPABILITY ASSESSMENT
	7. MITIGATION STRATEGY
Appendices	APPENDIX B: PLANNING PROCESS
	APPENDIX C: RISK ASSESSMENT
	APPENDIX D: CAPABILITY ASSESSMENT
	APPENDIX E: MITIGATION ACTION PLAN
	APPENDIX F: MITIGATION STRATEGY IMPLEMENTATION

Sections 1 & 2

1. INTRODUCTION
2. PLANNING PROCESS
3. COUNTY PROFILE
4. RISK ASSESSMENT
5. VULNERABILITY ASSESSMENT
6. CAPABILITY ASSESSMENT
7. MITIGATION STRATEGY

APPENDIX B: PLANNING PROCESS
APPENDIX C: RISK ASSESSMENT
APPENDIX D: CAPABILITY ASSESSMENT
APPENDIX E: MITIGATION ACTION PLAN
APPENDIX F: MITIGATION STRATEGY IMPLEMENTATION

Section 1: Introduction

- Orients readers to the purpose and scope of the Plan.

Section 2: Planning Process

- Describes how the plan was developed.
- Specifies who was involved and when they were engaged.

Appendix B: Planning Process

- Catalogs documentation of the planning process, including meeting notes, presentations, and survey results.

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Section 3

1. INTRODUCTION
2. PLANNING PROCESS
3. COUNTY PROFILE
4. RISK ASSESSMENT
5. VULNERABILITY ASSESSMENT
6. CAPABILITY ASSESSMENT
7. MITIGATION STRATEGY

APPENDIX B: PLANNING PROCESS
APPENDIX C: RISK ASSESSMENT
APPENDIX D: CAPABILITY ASSESSMENT
APPENDIX E: MITIGATION ACTION PLAN
APPENDIX F: MITIGATION STRATEGY IMPLEMENTATION

Section 3: County Profile

- Details information regarding the County and participating jurisdictions, including population characteristics, natural environment, and future conditions.
- Catalogs community assets and services that may be impacted by hazard events and/or leveraged in preparedness, response, recovery, or mitigation efforts.

Section 4

1. INTRODUCTION
2. PLANNING PROCESS
3. COUNTY PROFILE
4. RISK ASSESSMENT
5. VULNERABILITY ASSESSMENT
6. CAPABILITY ASSESSMENT
7. MITIGATION STRATEGY

APPENDIX B: PLANNING PROCESS
APPENDIX C: RISK ASSESSMENT
APPENDIX D: CAPABILITY ASSESSMENT
APPENDIX E: MITIGATION ACTION PLAN
APPENDIX F: MITIGATION STRATEGY IMPLEMENTATION

Section 4: Risk Assessment

- Analyzes the County's and participating jurisdictions' risk to 11 manmade or natural hazards.
- Includes standardized sections for each hazard that detail location and extent, recent occurrences, and probability of a future hazard event.



Appendix C: Risk Assessment

- Provides more detailed tables of data to supplement analysis in Sections 4 and 5.

Section 5

1. INTRODUCTION
2. PLANNING PROCESS
3. COUNTY PROFILE
4. RISK ASSESSMENT
5. VULNERABILITY ASSESSMENT
6. CAPABILITY ASSESSMENT
7. MITIGATION STRATEGY

APPENDIX B: PLANNING PROCESS
APPENDIX C: RISK ASSESSMENT
APPENDIX D: CAPABILITY ASSESSMENT
APPENDIX E: MITIGATION ACTION PLAN
APPENDIX F: MITIGATION STRATEGY IMPLEMENTATION

Section 5: Vulnerability Assessment

- Details the impact of hazards on community lifelines.



Appendix C: Risk Assessment

- Provides more detailed tables of data to supplement analysis in Sections 4 and 5.

Section 6

1. INTRODUCTION
2. PLANNING PROCESS
3. COUNTY PROFILE
4. RISK ASSESSMENT
5. VULNERABILITY ASSESSMENT
6. CAPABILITY ASSESSMENT
7. MITIGATION STRATEGY

APPENDIX B: PLANNING PROCESS
APPENDIX C: RISK ASSESSMENT
APPENDIX D: CAPABILITY ASSESSMENT
APPENDIX E: MITIGATION ACTION PLAN
APPENDIX F: MITIGATION STRATEGY IMPLEMENTATION

Section 6: Capability Assessment

- Collates information regarding the capabilities of the County and participating jurisdictions to manage a mitigation program.



Appendix D: Capability Assessment

- Provides more specific data on each participating jurisdiction's mitigation capabilities.

Developing the Mitigation Strategy

Section 3: County Profile

Section 4: Risk Assessment

Section 5: Vulnerability Assessment

Section 6: Capability Assessment

Mitigation Strategy

Establishes the community's approach to mitigation, including goals to guide activities and actions that address hazard vulnerabilities and leverage capabilities.

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Section 7

1. INTRODUCTION
2. PLANNING PROCESS
3. COUNTY PROFILE
4. RISK ASSESSMENT
5. VULNERABILITY ASSESSMENT
6. CAPABILITY ASSESSMENT
7. MITIGATION STRATEGY

APPENDIX B: PLANNING PROCESS
APPENDIX C: RISK ASSESSMENT
APPENDIX D: CAPABILITY ASSESSMENT
APPENDIX E: MITIGATION ACTION PLAN
APPENDIX F: MITIGATION STRATEGY IMPLEMENTATION

Section 7: Mitigation Strategy

- Identifies mitigation goals to drive the mitigation program.
- Describes key information of the mitigation actions.
- Outlines a plan for project implementation.

Appendix E: Mitigation Action Plan

- Provides more details related to the mitigation actions identified in Section 5.

Appendix F: Mitigation Strategy Implementation

- Provides tools that may support project reporting and implementation.

Do you have any questions about the sections of the Plan?



Meeting Multi-Jurisdictional HMP Requirements

Element	Sections Meeting Requirements
Element A: Planning Process	Sections 1, 2, 3, and 7 Appendices B and F
Element B: Hazard Identification and Risk Assessment	Sections 4 and 5 Appendix C
Element C: Mitigation Strategy	Sections 6 and 7 Appendices D, E, and F
Element D: Plan Review, Evaluation, and Implementation	Sections 1 and 2
Element E: Plan Adoption	Section 7 Appendix F

How to Review the Plan

Why Review the Plan?

It is critical for your jurisdiction to review the Plan prior to submission to Cal OES and FEMA to support plan adoption.

- You will be adopting this Plan, so please review it and confirm the information is complete and accurate.
- Your jurisdiction can utilize the Public Review Period to meet your engagement requirements to adopt the Plan.

When reviewing the plan…

Check for accuracy and clarity of information.

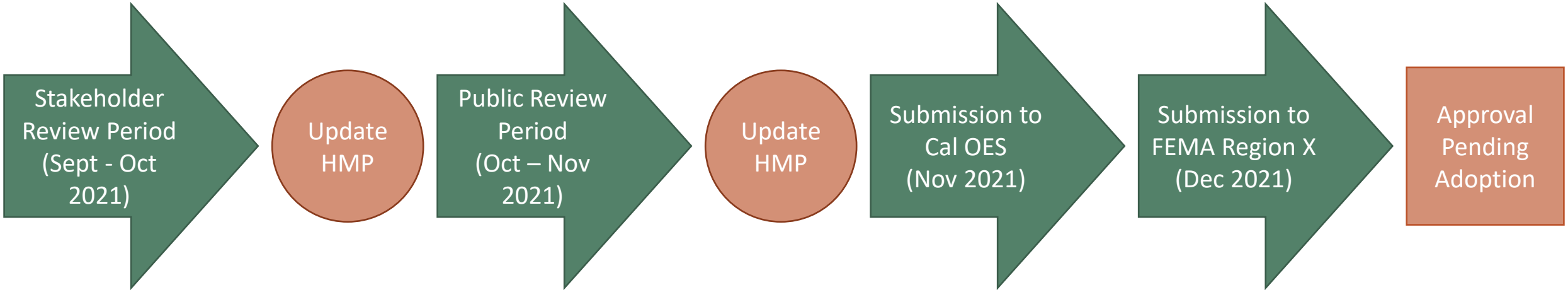
- Is your jurisdiction accurately represented?
- Do the explanations of risk and capabilities make sense to you?
- Do the mitigation goals align with your jurisdiction's existing priorities?
- Are all old and new mitigation actions accurately captured?
- Does the process for implementation align with your jurisdiction's existing processes?

Evaluate the utility of the content.

- Do the sections align with your understanding of the purpose of the Plan?
- Do the tools in Appendix F seem useful?
- Would additional tools be useful?

HAGERTY

Plan Review Process



Do you have any questions about the review process?



Who should be involved in the first stakeholder review of the Plan?



What section(s) of the Plan do you think the public will find most interesting/useful?



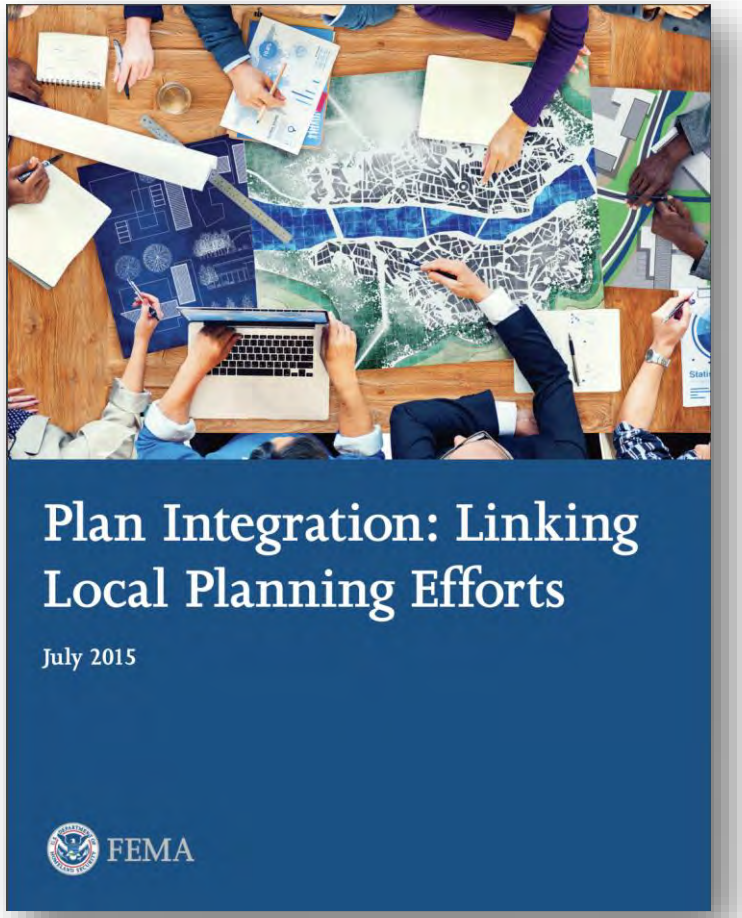
Using the Plan

How will you explain the Plan to your colleagues and community?



Plan Integration

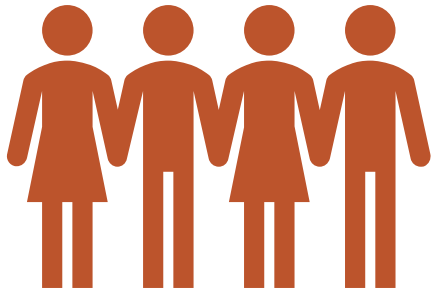
- Integrating principles of mitigation and findings from the HMP into other planning and policy efforts will:
  - Streamline the use of resources to meet common community goals.
  - Support cross-agency understanding of mitigation principles.
  - Incorporate mitigation efforts into long-range community visions.
  - Increase the community's overall resilience.



Plan Integration: Linking Local Planning Efforts (2015)

Building Resilience through Plan Integration

- Communities can build a stronger capacity for mitigation by building on the public, private, and non-profit institutions that enable day-to-day activities to run well.
- Integration can also lead to efficiencies and reduced costs as planning efforts and hazard mitigation activities are combined, productivity is optimized, and tasks and responsibilities are shared.



HAGERTY

Comprehensive Emergency Management Plan

- Reference or excerpt hazard risk assessments from the HMP.
- Build in a process to conduct post-disaster mitigation assessments to identify mitigation needs and potential strategies for future mitigation projects and to re-evaluate and update existing strategies and projects as-needed.
- Include a process and structure to transition staff supporting emergency response towards long-term recovery, including identification of mitigation opportunities.

Emergency Operations Plan

- Evaluate risk to critical facilities and secondary locations to identify need for mitigation and which have already been mitigated.
- Utilize Risk Assessment and Vulnerability Assessment to anticipate the extent and impact of future disasters and where immediate response actions may be targeted.
- Prepare for how community lifelines core to response operations (e.g., communications) may be interrupted and impact response efforts and help prioritize mitigation actions accordingly.

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How do you imagine integrating the Plan into your existing plans?



Next Steps

Plan Review Period

- We will be sent a draft Plan for your review.
- Please provide feedback through the Plan Review Survey.



Upcoming Public Engagement

- After your feedback is integrated into the Plan, we will hold:
  - Public Review Webinar
  - Public Review Period
- Please encourage your community to participate!



Questions?



Contact Information

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San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

Plan Review Meeting

SEPTEMBER 22, 2021 | 12:00 – 1:00 P.M. PDT | REMOTE

Meeting Summary

Key Takeaways

The San Benito County ("the County") Planning Committee and Hagerty Consulting, Inc. ("Hagerty") Project Team held a Plan Review for the San Benito County Multi-Jurisdictional Hazard Mitigation Plan (HMP) Update on Wednesday, September 22, 2021. The purpose of this meeting was to discuss the structure and purpose of the components of the full drafted HMP, review how the Plan meets State and federal requirements, and outline the remaining steps of the planning process.

Next Steps

FULL DRAFT PLAN REVIEW

The full draft Plan and its appendices will be provided to the Stakeholder Group for review. Their feedback will be collected and incorporated into the document to produce HMP Draft #2 for public review.

PUBLIC REVIEW WEBINAR

A Public Review Webinar will be held to orient the community to the hazard mitigation planning process and provide them guidance on how to review and give feedback on the Plan.

PUBLIC REVIEW PERIOD

The Public Review Period will be held for 30 days and coincide with the timing of the Public Review Webinar. The Plan will be posted on jurisdictions' websites with an accompany feedback survey for the public to review and provide comments.

Project Review

The purpose of the hazard mitigation planning process is to reduce loss and damage to life, property, and infrastructure by strategically planning for future community investment. Mitigation planning for the future benefits communities by investing for future sustainability and resilience, enabling communities to become eligible for federal mitigation funding opportunities, and educating the public and community officials about hazard risks and vulnerabilities. The planning process to develop the San Benito County HMP consists of four steps:

1. Organize the planning process and resources.
2. Assess risk.
3. Develop a mitigation strategy.
4. Adopt and implement the Plan.

The County is currently finishing step 3, as the Mitigation Strategy is being finalized, and beginning step 4, which includes a full-plan review by the community.

Section Review

The Plan is structured to align with the requirements outlined in the Federal Emergency Management Agency (FEMA) Local Mitigation Plan Review Guide. This guide catalogs all requirements for local HMPs and is used by FEMA reviewers to evaluate the Plan for approval. The full Plan contains seven sections and five associated appendices. The table below summarizes the purpose of each section, as well the appendix that supports it and the requirement from the Local Mitigation Plan Review Guide met by the section.

Base Plan Section	Purpose	Associated Appendix	FEMA Element
Section 1: Introduction	Orients readers to the purpose and scope of the Plan.	N/A	Elements A and D
Section 2: Planning Process	Describes how the Plan was developed and how various audiences were engaged.	Appendix B: Planning Process	Elements A and D
Section 3: County Profile	Catalogs community assets and services that may be impacted by hazard events and/or leveraged in preparedness, response, recovery, or mitigation efforts.	N/A	Element A
Section 4: Risk Assessment	Analyzes the County's and participating jurisdictions' risk to 11 hazards. • Drought • Flood • Dam Failure • Severe Weather • Extreme Temperature • Hazardous Materials Incident • Wildfire • Earthquake • Landslide • Terrorism • Communicable Disease	Appendix C: Risk Assessment	Element B

Base Plan Section	Purpose	Associated Appendix	FEMA Element
Section 5: Vulnerability Assessment	Details the impact of the 11 hazards on the community lifelines: • Safety and Security • Energy • Health and Medical • Food, Water, Shelter • Communications • Transportation • HAZMAT	Appendix C: Risk Assessment	Element B
Section 6: Capability Assessment	Collates information regarding the capabilities of the County and participating jurisdictions to manage a mitigation program.	Appendix D: Capability Assessment	Element C
Section 7: Mitigation Strategy	Establishes the community's approach to mitigation, including goals to guide activities and actions that address hazard vulnerabilities and leverage capabilities.	Appendix E: Mitigation Action Plan and Appendix F: Mitigation Strategy Implementation	Elements A, C, and E

How to Review the Plan

Plan Review Process

The Planning Committee and Stakeholder Group were encouraged to review the Plan on behalf of their jurisdictions and greater community. When reviewing the Plan, stakeholders are invited to focus on the **accuracy and clarity of information** (e.g., Is your jurisdiction accurately represented? Are all old and new mitigation actions accurately captured?) and **evaluate the utility of the content** (e.g., Are the tools included useful? If not, what would make them useful?).

Once the stakeholders provide their feedback via a provided online form, the Plan will be updated and posted on the jurisdictions' websites with a similar form for a Public Review Period. This review will help meet FEMA requirements for public participation, get direct feedback on the Plan, and gain an understanding of how well the Plan is interpreted by the community. Once the Plan Review Period has ended and any updates have been adjudicated, the Plan will be submitted to California Governor's Office of Emergency Services (Cal OES) and then FEMA Region X for approval. K. Mangano noted that the San Benito County Office of Emergency Services (OES) will offer an incentive (e.g., the first ten participants will receive a free emergency preparedness bag).

Discussion

The attendees identified the following groups as key stakeholders to review the Plan:

- Schools and hospitals;
- County Resource Management Agency and City Public Works Department;

- County Geographic Information Systems (GIS) team;
- San Benito County Business Council;
- San Benito Chamber of Commerce; and
- San Benito Economic Development Corporation.

M. Bohrson noted how a diverse stakeholder group will help the Planning Team understand if there are gaps in the actions or vulnerabilities that can bolster the Plan and create additional buy-in for the mitigation program. The attendees additionally discussed how the public will likely find sections of the Plan that discuss how mitigation may impact response most interesting and useful.

Using the Plan

Discussion

The attendees discussed how they will socialize the Plan with their colleagues and community. San Benito County OES will provide an overview of the Plan at the next Board of Supervisors meeting. Additionally, they would like to align the presentation of the Emergency Operations Plan (EOP) with the HMP so that they can discuss them at a joint town hall. C. Bedolla from the Hollister Fire Department suggested meeting with special interest groups (e.g., business owners, senior citizens, renter's groups).

Plan Integration

HMPs are only one sector of emergency management, and to be effective should be integrated with other preparedness, response, and recovery efforts. One low-cost way of implementing mitigation is to implement the principles from the Plan into other documents, which will benefit the community by:

- Streamlining the use of resources to meet common community goals;
- Supporting cross-agency understanding of mitigation principles;
- Incorporate mitigation efforts into long-range community visions; and
- Increase the community's overall resilience.

For example, information from the HMP may be incorporated directly into comprehensive emergency management plans (CEMPs) by using the risk assessment to support plan development or proposing staffing systems to implement mitigation in the long-term recovery process. Additionally, information from the HMP may be useful in EOPs by providing more details on how critical facilities may be impacted by disasters and how community lifelines core to response operations may be interrupted.

Attendees

Name	Email	Organization
Charlie Bedolla	charlie.bedolla@hollister.ca.gov	Hollister Fire Department
Drew Lander	drew@sunnyslopewater.org	Sunnyslope County Water District
Garrett Haertel	garrett@sbcwd.com	San Benito County Water District
Kris Mangano	kmangano@cosb.us	San Benito County OES
Kristina Chavez-Wyatt	Kristina@SBCBusinessCouncil.com	San Benito County Business Council
Madison Mitchell	mmitchell@cosb.us	San Benito County OES
Mike Meddles	michael.meddles@fire.ca.gov	CAL FIRE West Division
Rene Anchieta	ranchieta@cosb.us	San Benito County GIS Analyst
Michelle Bohrson	michelle.bohrson@hagertyconsulting.com	Hagerty Consulting
Julia Davatzes	julia.davatzes@hagertyconsulting.com	Hagerty Consulting

*One additional participant joined by phone but was unidentifiable.

Public Outreach

1. Community Hazards Survey Social Media Post (3/10/2021)
2. Community Hazards Survey Sample (3/10/2021)
3. Community Hazards Survey Summary (4/16/2021)
4. Introduction to Hazard Mitigation Social Media Post (8/24/2021)
5. Introduction to Hazard Mitigation Document (8/24/2021)
6. Presentation to San Juan Bautista City Council (9/21/2021)
7. Presentation to San Benito County Board of Supervisors (3/22/2022)
8. Public Review Meeting (3/23/2022)
9. Public Review Period Survey (2/28/2022 – 3/28/2022)
10. Public Review Period Advertising (2/28/2022)
11. Public Review Period Responses (2/28/2022 – 3/28/2022)

San Benito County Office of Emergency Services
March 10 ·

The San Benito County Office of Emergency Services (OES) is working with the City of Hollister, City of San Juan Bautista, San Benito County Water District, and Sunnyslope Water District as we are currently updating our local hazard mitigation plan. As part of the planning process, we are conducting this survey to understand your values related to hazards and mitigation.

This short anonymous survey will ask you to answer questions about hazards that concern you, how you have prepared for future disasters, and your emergency priorities for San Benito County. Your involvement is vital to the development of a comprehensive and effective hazard mitigation plan.

https://www.surveymonkey.com/r/9PWFXXT



SURVEYMONKEY.COM

San Benito County HMP: Community Hazards Survey

Take this survey powered by surveymonkey.com. Create your own survey...

Like Comment Share

MARCH 22, 2022

San Benito County Multi-Jurisdictional Hazard Mitigation Plan

Presentation to the Board of Supervisors

HAGERTY

Introductions

Kris Mangano

Emergency Services Manager, San Benito County Office of Emergency Services

Madison Mitchell

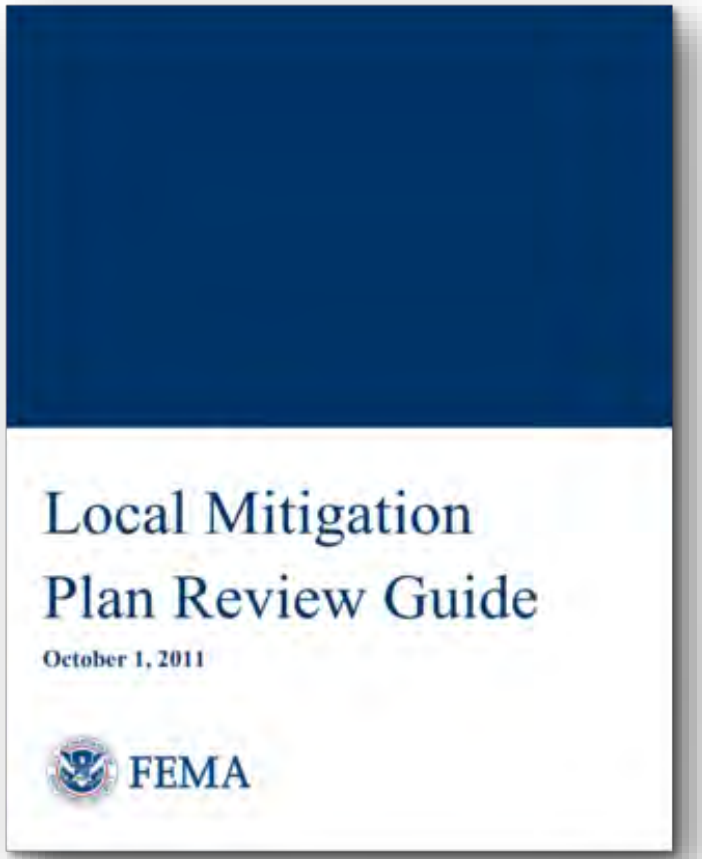
Staff Analyst, San Benito County Office of Emergency Services

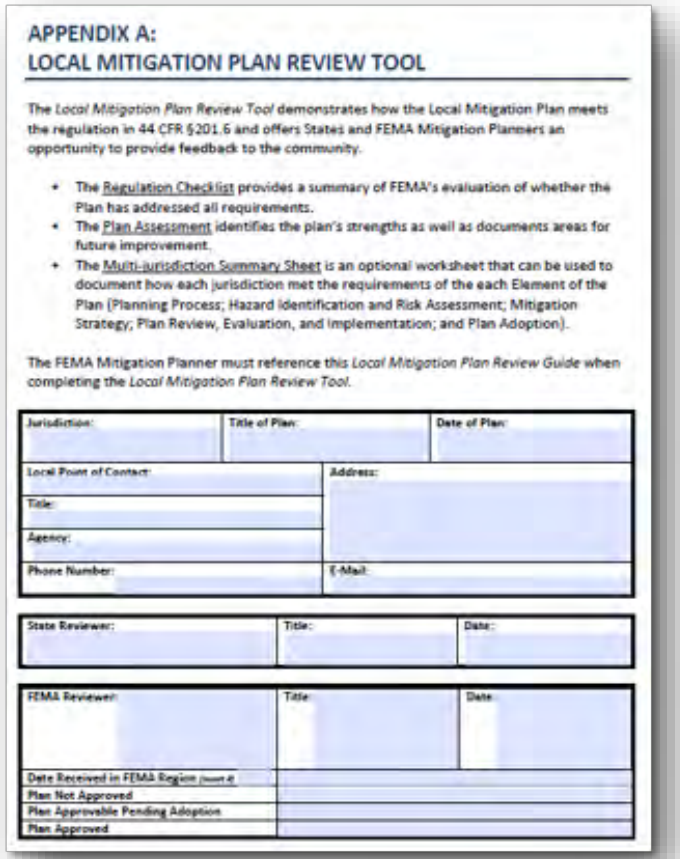
Hazard Mitigation Planning Overview

Mitigation Planning for the Future

- Planning and implementing mitigation measures reduces loss of life and property.
- Effectively invest in your community's future sustainability and resilience.
- Become eligible for federal mitigation funding opportunities.
- Educate the public and community officials about hazard risks and vulnerabilities.
- Engage the whole community in the cycle of emergency management.

Meeting Planning Requirements





Local Mitigation Plan Review Guide

Developing the Mitigation Strategy

Section 3: County Profile

Section 4: Risk Assessment

Section 5: Vulnerability Assessment

Section 6: Capability Assessment

Mitigation Strategy

Establishes the community's approach to mitigation, including goals to guide activities and actions that address hazard vulnerabilities and leverage capabilities.

HAGERTY

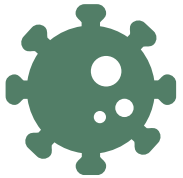
Hazards Analyzed

Climate and Weather Hazards


Drought


Flood


Extreme Temperatures


Communicable Disease


Severe Weather


Wildfire

Geological Hazards


Earthquake


Landslides

Technological Hazards


Dam Failure


HAZMAT Incidents

Threat and Disturbance Hazards


Terrorism

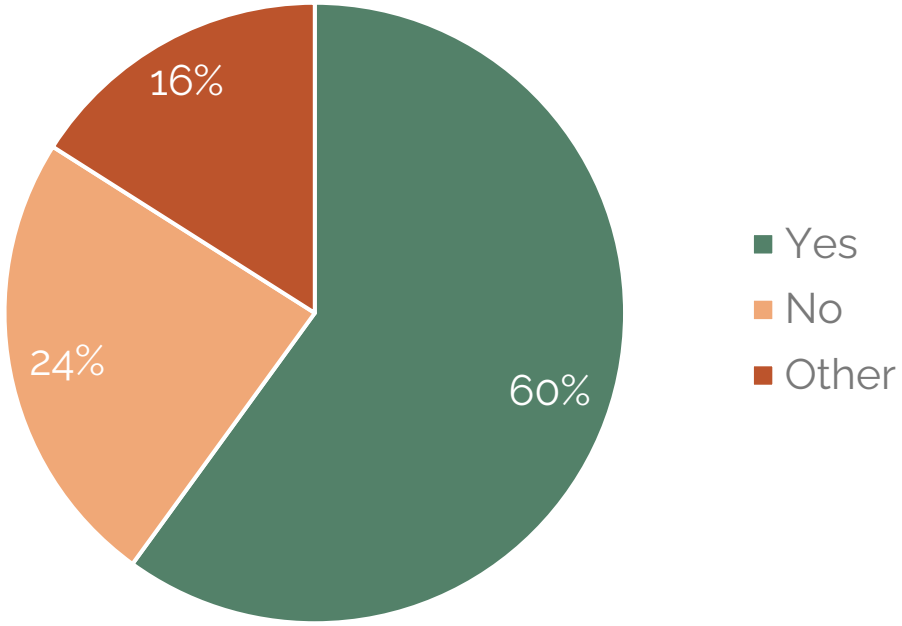
San Benito County HMP Mitigation Actions

Action 1: Implement Sustainable Groundwater Plan	Action 2: Foster Participation in Mitigation Program	Action 3: Expand participation in NFIP	Action 4: Increase Floodplain Manager Capacity
Action 5: Assess Vulnerabilities of Community Lifelines	Action 6: Evaluate Ingress and Egress Routes	Action 7: Public Education on Community Lifeline Disruption	Action 8: Regulatory Review of Building Hazard Risks
Action 9: Review County-wide Water Control Measures	Action 10: County-wide Fire Risk Reduction Program	Action 11: Incorporate HMP into General Plan Safety Element	Action 12: Mitigate Pajaro River Flood Plain Risk
Action 13: Apply for NFIP Community Rating System	Action 14: Implement COVID-19 AAR Actions	Action 15: Promote Energy Resilience	Action 16: Create Resilience Hubs

Community Hazards Survey Results

The survey received 137 responses. The most concerning hazards identified were earthquakes (101 responses), droughts (51%), and wildfires (45%).

Do you have hazard specific insurance?



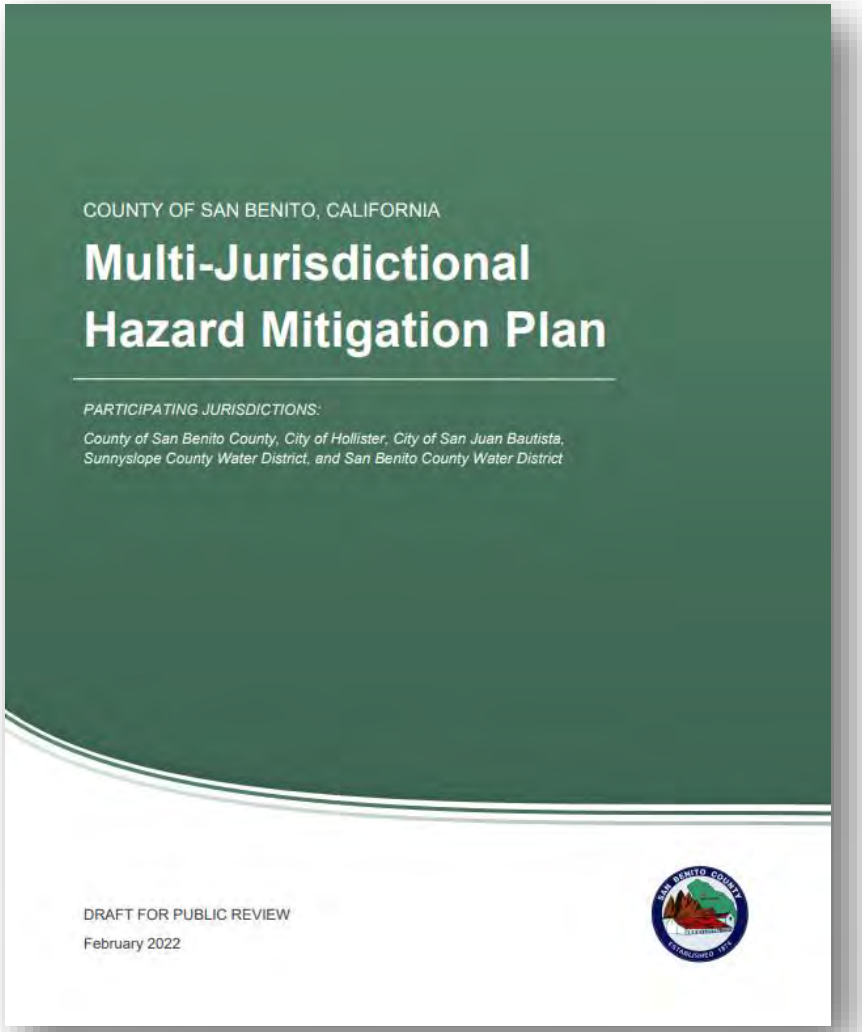
The greatest priorities for mitigation identified are:

1. Protecting critical facilities
2. Protecting and reducing damage to utilities
3. Strengthening emergency services
4. Protecting private property

Next Steps

Public Review Period

- The Plan will be available until March 28 on the San Benito County website.
- The community is encouraged to provide feedback through the Plan Review Survey.



Plan Review and Submission Process



Contact Information

Kris Mangano

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Michelle Bohrson

Project Manager, Hagerty Consulting
michelle.bohrson@hagertyconsulting.com

MARCH 23, 2022

San Benito County Multi-Jurisdictional Hazard Mitigation Plan

Public Review Meeting

HAGERTY

Welcome

HAGERTY

Introductions

Kris Mangano

Emergency Services Manager, San Benito County Office of Emergency Services

Madison Mitchell

Staff Analyst, San Benito County Office of Emergency Services

Who is OES?

- Mitigate against, prepare for, respond to, and recover from disasters.
- Develop written guidelines for emergency preparedness, response, recover, and mitigation to natural or man-made disasters.
- Lead the response during and after emergencies, in coordination with public safety officials, nonprofit organizations, and government agencies.

MISSION STATEMENT

Lead the County's efforts to protect life, property, property & the environment by developing, coordinating and managing programs that prevent, protect, respond to, recover from, and mitigate natural and man-made disasters and emergencies.

Agenda

- Welcome & Introduction
- What is Hazard Mitigation Planning?
- Hazard Mitigation Plan Sections Overview
- How to Review the Hazard Mitigation Plan
- Emergency Operations Plan Update
- Next Steps

What is Hazard Mitigation Planning?

Hazard Mitigation Planning (HMP)



San Benito County Drought (May 2021)

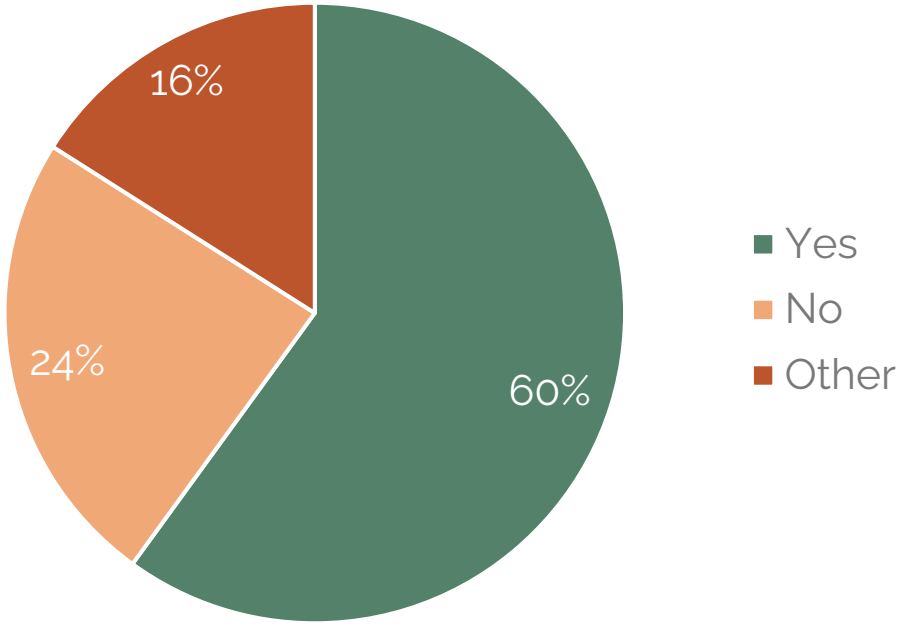
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Hazard Mitigation Plan Sections Overview

Developing the Mitigation Strategy

Section 3: County Profile

Section 4: Risk Assessment

Section 5: Vulnerability Assessment

Section 6: Capability Assessment

Mitigation Strategy

Establishes the community's approach to mitigation, including goals to guide activities and actions that address hazard vulnerabilities and leverage capabilities.

HAGERTY

Risk Assessment

Analyzes the County's and participating jurisdictions' risk to 11 manmade or natural hazards. Each hazard profile includes the following:

- **Characteristics**: different types or categories of a hazard and how they occur.
- **Location and Extent**: where the hazard may occur geographically in the County and how the magnitude of the event is measured.
- **Recent Occurrences**: recent hazard events (January 2011 – December 2020).
- **Probability:** how likely an event is to occur in the future.



Vulnerability Assessment

Details how hazard events may impact the Community Lifelines in San Benito County.

Community Lifelines represent the most fundamental services to communities that enable other aspects of society to function.



Capability Assessment

Collates information regarding the capabilities of the County and participating jurisdictions to manage a mitigation program.



Legal and Regulatory



Administrative and Technical



Fiscal

San Benito County HMP Mitigation Actions

- Action 1: Implement Sustainable Groundwater Plan
- Action 2: Foster Participation in Mitigation Program
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How to Review the Hazard Mitigation Plan

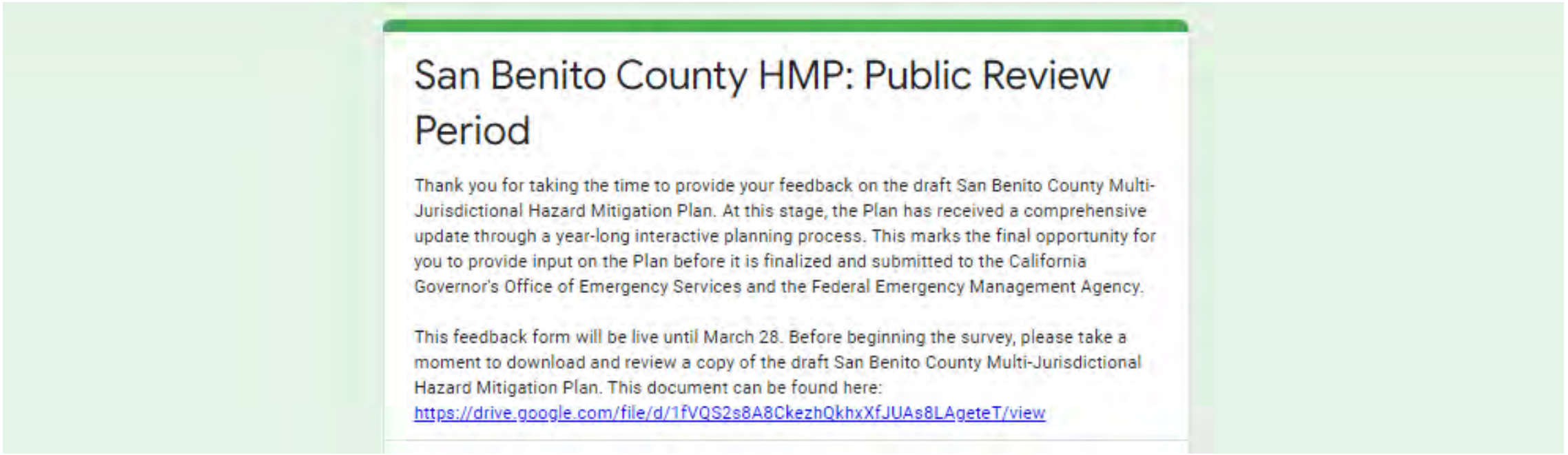
Accessing the Plan

Visit the San Benito County website to find the Draft HMP.



Providing Feedback

Use this survey to capture your feedback on the Plan. The feedback survey will be available until **March 28**.



San Benito County HMP: Public Review Period

Thank you for taking the time to provide your feedback on the draft San Benito County Multi-Jurisdictional Hazard Mitigation Plan. At this stage, the Plan has received a comprehensive update through a year-long interactive planning process. This marks the final opportunity for you to provide input on the Plan before it is finalized and submitted to the California Governor's Office of Emergency Services and the Federal Emergency Management Agency.

This feedback form will be live until March 28. Before beginning the survey, please take a moment to download and review a copy of the draft San Benito County Multi-Jurisdictional Hazard Mitigation Plan. This document can be found here:
https://drive.google.com/file/d/1fVQS2s8A8CkezhQkhxXfJUAs8LAgeteT/view

Why Review the Plan?

Reviewing the Plan will help you understand the:

- Cascading impacts of disasters that may affect your community.
- Risk of your personal property to various hazards.
- Mitigation actions the County is considering to protect you and your community.



Why Review the Plan?

This review is your opportunity to provide feedback on projects that may shape your community. When reviewing the Plan, consider:

- Is my community accurately represented?
- Do the explanations of risk and vulnerabilities make sense?
- What additional details are needed to develop and implement successful mitigation actions?





Do you have any questions about the review process?

Emergency Operations Plan Update

What is an Emergency Operations Plan (EOP)?

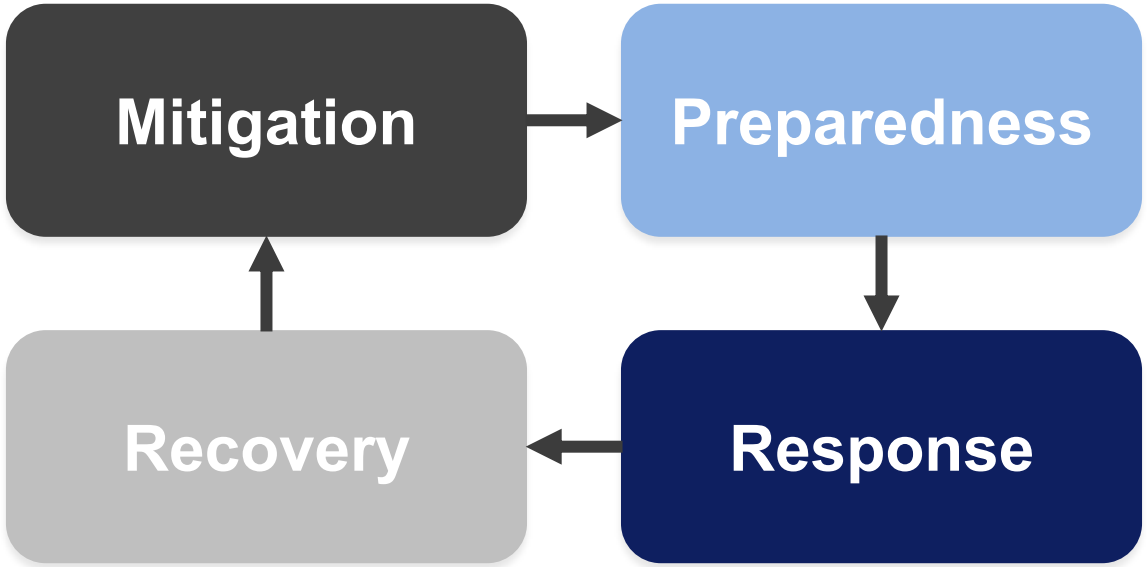
The EOP provides a countywide framework to enable local government, state and federal entities, and private sector partners to cohesively respond to, recover from, mitigate, and prepare for emergencies.

Essential Elements

- Emergency services provided by government agencies
- How resources are mobilized
- Approach to implementing emergency operations
- Process for rendering mutual aid
- Overview of public information system
- Emphasis on continuity planning to ensure uninterrupted government operations

Phases of Emergency Management

The EOP describes the responsibilities of the County and its partners throughout the four phases of emergency management:



Emergency Support Functions (ESFs)

The EOP details the roles and responsibilities of the County in operating 18 ESFs, the essential activities needed during all phases of emergency management.



ESF #1: Transportation



ESF #2: Communications



ESF #3: Construction and Engineering



ESF #4: Fire and Rescue



ESF #5: Management



ESF #6: Care and Shelter



ESF #7: Resources



ESF #8: Public Health and Medical



ESF #9: Search and Rescue



ESF #10: Hazardous Materials



ESF #11: Food and Agriculture



ESF #12: Utilities



ESF #13: Law Enforcement



ESF #14: Long-Term Recovery



ESF #15: Public Information



ESF #16: Evacuation



ESF #17: Volunteer and Donations Management



ESF #18: Cyber Security

HMP Next Steps

HMP Review and Submission Process



Contact Information

Kris Mangano

Emergency Services Manager, San Benito County

Office of Emergency Services

kmangano@cosb.us

San Benito County HMP: Public Review Period

Thank you for taking the time to provide your feedback on the draft San Benito County Multi-Jurisdictional Hazard Mitigation Plan. At this stage, the Plan has received a comprehensive update through a year-long interactive planning process. This marks the final opportunity for you to provide input on the Plan before it is finalized and submitted to the California Governor's Office of Emergency Services and the Federal Emergency Management Agency.

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julia.davatzes@hagertyconsulting.com (not shared) Switch account

* Required

Which jurisdiction do you represent? *

- [ ] City of Hollister
- [ ] City of San Juan Bautista
- [ ] San Benito County Water District
- [ ] Sunnyslope County Water District
- [ ] San Benito County
- [ ] Prefer not to answer
- [ ] Other: _____

Please indicate your level of agreement with the following statement: I believe that this hazard mitigation plan and the projects it contains will help my community reduce risks from hazards.

- ○ Strongly Agree
- ○ Agree
- ○ Neutral
- ○ Disagree
- ○ Strongly Disagree

What is the most successful element of the Plan?

- ○ The description of the outreach and engagement used to update the plan (Section 2 Planning Process).
- ○ The description and summary of the San Benito County community and its assets (Section 3 County Profile).
- ○ The analysis of the risks posed by various natural hazards to San Benito County's people and property (Section 4 Risk Assessment and Section 5 Vulnerability Assessment).
- ○ The various legal, regulatory, and financial capabilities that the County and its jurisdictions have to support mitigation (Section 6 Capability Assessment).
- ○ The County's mitigation strategy, including actions to reduce the potential impacts of hazard events (Section 7 Mitigation Strategy).
- ○ Other: _____

What is the least successful element of the Plan?

- ○ The description of the outreach and engagement used to update the plan (Section 2 Planning Process).
- ○ The description and summary of the San Benito County community and its assets (Section 3 County Profile).
- ○ The analysis of the risks posed by various natural hazards to San Benito County's people and property (Section 4 Risk Assessment and Section 5 Vulnerability Assessment).
- ○ The various legal, regulatory, and financial capabilities that the County and its jurisdictions have to support mitigation (Section 6 Capability Assessment).
- ○ The County's mitigation strategy, including actions to reduce the potential impacts of hazard events (Section 7 Mitigation Strategy).
- ○ Other: _____

Does the Plan sufficiently address the hazards that occur in San Benito County and how these hazards impact people, infrastructure, and property in your community?

- ○ Yes
- ○ No
- ○ Somewhat
- ○ Unsure

If you did not answer "yes" to the previous question, what is missing from the Plan? What would you add?

Your answer

Which hazards do you think the County should prioritize mitigation over the next five years?

- [ ] Drought
- [ ] Flood
- [ ] Extreme Temperatures
- [ ] Communicable Disease
- [ ] Severe Weather
- [ ] Wildfire
- [ ] Earthquake
- [ ] Landslide
- [ ] Dam Failure
- [ ] Hazardous Materials Incident
- [ ] Terrorism

Which proposed mitigation action(s) (from either the County or your jurisdiction) do you believe are most important?

Your answer

Please provide any specific feedback or suggestions you have for the Plan.

Your answer

Do you have any questions about the Plan or planning process? Please list here.

Your answer

Please provide your email address if you would like a response to your question, or if you are interested in learning more about the hazard mitigation planning process.

Your answer

Submit

Clear form

Never submit passwords through Google Forms.

This form was created inside of Hagerty Consulting. Report Abuse

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News, Press Releases, & Public Review

2022 San Benito County Multi-Jurisdictional Hazard Mitigation Plan - Public Review

Post Date: 02/28/2022 11:50 AM

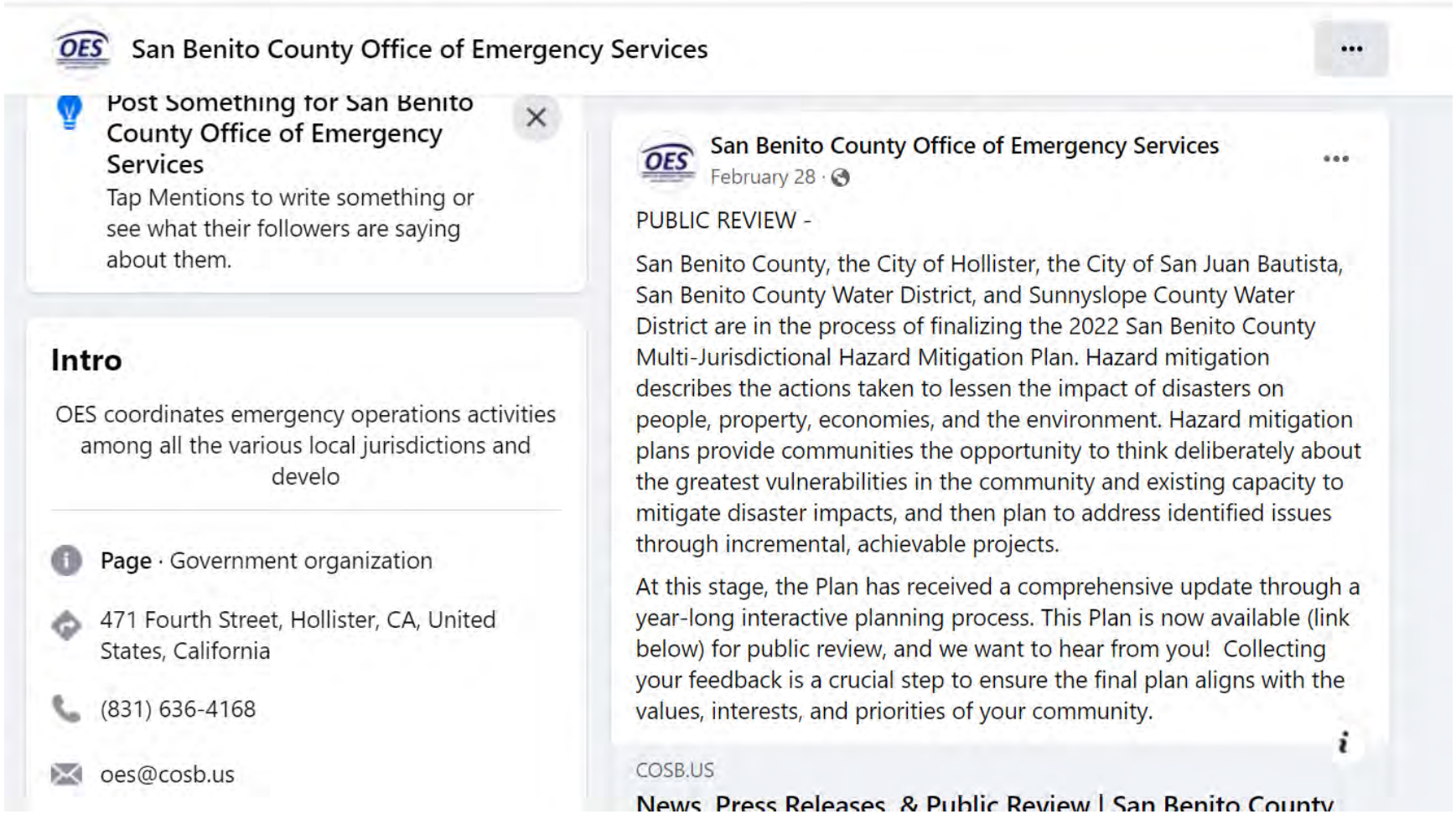
San Benito County, the City of Hollister, the City of San Juan Bautista, San Benito County Water District, and Sunnyslope County Water District are in the process of finalizing the **2022 San Benito County Multi-Jurisdictional Hazard Mitigation Plan**. Hazard mitigation describes the actions taken to lessen the impact of disasters on people, property, economics and the environment. Hazard mitigation plans provide communities the opportunity to think deliberately about the greatest vulnerabilities in the community and existing capacity to mitigate disaster impacts, and then plan to address identified issues through incremental, achievable projects.

At this stage, the plan has received a comprehensive update through a year long interactive planning process. **This plan is now available (Link below) for public review, and we want to hear from you! https://drive.google.com/file/d/1fVQS2s8A8CkezhQkhxXfJUAs8LAgeteT/view?usp=sharing**
Collecting your feedback is a crucial steps to ensure the final plan aligns with the values, interests, and priorities of your community.

This feedback form (https://forms.gle/wLx397bTHj8reNZv5) will be live until March 28th. Before beginning the survey, please take a moment to download and review a copy of the draft San Benito County Multi-Jurisdictional Hazard Mitigation Plan. This marks the final opportunity for you to provide input on the Plan before it is submitted to the California Governor's Office of Emergency Services and the Federal Emergency Management Agency.

For more information, please contact the San Benito County Office of Emergency Services: https://www.cosb.us/departments/office-of-emergency-services-oes-and-emergency-medical-services

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San Benito County Office of Emergency Services
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Intro
OES coordinates emergency operations activities among all the various local jurisdictions and develo
Page · Government organization
471 Fourth Street, Hollister, CA, United States, California
(831) 636-4168
oes@cosb.us
San Benito County Office of Emergency Services
February 28 ·
PUBLIC REVIEW -
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Public Review Period Responses

Question	Response 1	Response 2	Response 3
Which jurisdiction do you represent?	City of Hollister, San Benito County	City of Hollister	City of Hollister
Please indicate your level of agreement with the following statement: I believe that this hazard mitigation plan and the projects it contains will help my community reduce risks from hazards.	Strongly Disagree	Agree	Disagree
What is the most successful element of the Plan?	another political boondoggle; waste of tax payer dollars	The analysis of the risks posed by various natural hazards to San Benito County's people and property (Section 4 Risk Assessment and Section 5 Vulnerability Assessment).	Most of the data shows that funding infrastructure would be beneficial, since there is a lack of it and the population will keep growing.

Question	Response 1	Response 2	Response 3
What is the least successful element of the Plan?	the wasteful cost and time in creating a plan	The analysis of the risks posed by various natural hazards to San Benito County's people and property (Section 4 Risk Assessment and Section 5 Vulnerability Assessment).	The solutions are very half-assed, we need to stop funding the military, and the police departments. That money can be used instead to switch to green energy, for example, we experience high winds on a regular basis. Install a windfarm somewhere nearby and that will help make cheaper elecricity. On the topic of energy, we should switch to renewable energy at all costs. Gas prices are going up due to our country's business deals with other countries. This would benefit the citizens in every area, as it ensure a stable life with stable prices.
Does the Plan sufficiently address the hazards that occur in San Benito County and how these hazards impact people, infrastructure, and property in your community?	No	Somewhat	Somewhat

Question	Response 1	Response 2	Response 3
If you did not answer "yes" to the previous question, what is missing from the Plan? What would you add?	global warming is based on faulty modeling/save the effort - build a water dam		Defund the police, and make renewable energy. Stop relying on gas, and make use of the high winds we experience. Cut the PD budget my half, and use that money to build a train that runs on green energy.
Which hazards do you think the County should prioritize mitigation over the next five years?		Drought, Flood, Wildfire, Earthquake, Hazardous Materials Incident	Drought, Flood, Communicable Disease, Wildfire, Earthquake
Which proposed mitigation action(s) (from either the County or your jurisdiction) do you believe are most important?	Stop thinking gov't can fix natural occurences; cut programs, lower taxes. I'm effectively taxed three different ways for water. And pay taxes for schools that produce a proficiency of 31% for math, 59% for reading. Direct your energy to mitigating your educational clear and present catastrophy. More money is not the answer. Break from the state, teach basic reading and math skills.		None, because the plans are very weak and dont provide enough for the citizens that pay taxes only to get screwed.

Question	Response 1	Response 2	Response 3
Please provide any specific feedback or suggestions you have for the Plan.	focus on police, fire, roads and reducing taxes, programs.		Tax the rich, use that money to fund infrastructure, build green energy, and make a good transit system that connects to other areas, local buses are nice but trains save time, energy and are more accessible for each citizen.
Do you have any questions about the Plan or planning process? Please list here.			Can we defund the police instead? They get their weapons from the military every year so why are they getting high caliber weapons, and an increase to their budget? Can we tax those in the highest bracket and appropriately use the funds for infrastructure?

Monthly Newsletters

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San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update

February Newsletter

Welcome to the *San Benito County Multi-Jurisdictional Hazard Mitigation Plan Update Newsletter*, an e-publication that curates news about the development of the plan, innovations in mitigation, and opportunities to get involved!

LIVE: Public Review Period

Thank you for providing your feedback on the draft San Benito County Hazard Mitigation Plan (HMP). The HMP has been updated accordingly and has been posted on the County's website (link below) for public review. The Public Review Period is an opportunity for residents to provide feedback on the HMP and will be open until March 28, 2022.

Please share the link below with your community networks and encourage them to provide their feedback on the HMP and attend the Public Review Webinar.

Additionally, we will be holding a Public Review Webinar during March. This will be an opportunity for all residents of San Benito County to learn about the planning process and understand how the HMP will help protect their community. We will share more details about this event as they become available.

Click here to access the Public Draft of the Hazard Mitigation Plan

Get Involved!

The Planning Committee welcomes your input! If you would like more information on specific elements of the project, or if you believe that you may be able to supply critical information during the planning process, please reach out to our Planning Committee leadership:

Kris Mangano
San Benito County Office of Emergency Management, Emergency Services Manager
oes@cosb.us
(831) 636-4168

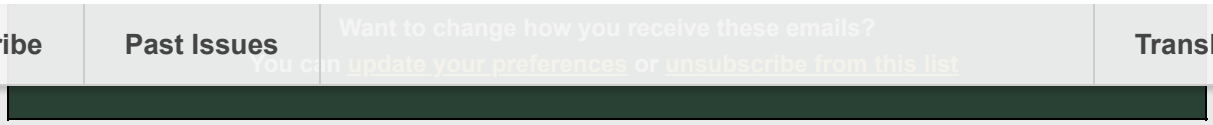
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San Benito County Office of Emergency Management
471 4th St
Hollister, CA 95023
www.cosb.us

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Planning Process Participation

1. Planning Team Meetings Participation
2. Stakeholder Group Workshops Participation

Planning Team Meetings Participation

Name	Organization	1/13/21	2/10/21	2/24/21	3/10/21	3/24/21	4/7/21	4/28/21	5/12/21	6/16/21	7/8/21	7/28/21	8/25/21	9/8/21	10/6/21
Bob Martin Del Campo	Hollister Fire Department	■													
Brett Miller	City of Hollister	■	■		■	■	■			■	■	■	■		
Charlie Bedolla	Hollister Fire Department				■	■	■	■	■		■	■		■	■
Don Reynolds	City of San Juan Bautista	■		■									■		
Drew Lander	Sunnyslope County Water District	■	■	■	■	■	■	■	■	■		■		■	
Garrett Haertel	San Benito County Water District	■	■	■	■	■	■	■		■			■		■
Kris Mangano	San Benito County OES	■	■	■	■	■	■	■	■	■		■	■	■	■
Madison Mitchell	San Benito County OES	■	■	■		■	■	■	■		■	■	■		■
Matt Streck	CAL FIRE San Benito Monterey Unit	■	■		■			■	■						
Michael Meddles	CAL FIRE West Division										■	■	■		
Mike Chambless	Hollister Resource Management Agency				■		■	■							
Reno Ditullio	CAL FIRE San Benito Monterey Unit										■				
Rich Brown	San Juan Bautista Code Enforcement							■	■			■			
Rob Hillebrecht	Sunnyslope County Water District		■		■	■		■		■	■	■	■		■

Stakeholder Group Workshops Participation

Name	Organization	Risk Assessment Meeting	Capabilities Assessment Webinar	Mitigation Strategy Workshop	Plan Review Meeting
Adam Amaral	Cal OES			■	■
Anthony Mojica	Hazel Hawkins Memorial Hospital			■	
Bob Connelly	San Benito Fire Safe Council			■	
Bob Martin Del Campo	Hollister Fire Department		■		
Brett Miller	City of Hollister	■			
Carlos Reynoso	Hollister Police Department	■			
Charlie Bedolla	Hollister Fire Department	■			■
Drew Lander	Sunnyslope County Water District		■		■
Edward Escamilla	Community Food Bank San Benito County			■	
Eric Olson	Hollister Police Department	■			
Garrett Haertel	San Benito County Water District	■	■	■	
Gene Potkey	CAL FIRE			■	
Gerald Medland	RACES	■			
Karen Gumin	San Benito County Resource Management Agency			■	■
Karen Overstreet	San Benito County Agriculture Commissioner			■	■
Kevin Lindo	CAL FIRE Land Use			■	■

Name	Organization	Risk Assessment Meeting	Capabilities Assessment Webinar	Mitigation Strategy Workshop	Plan Review Meeting
Kris Mangano	San Benito County OES	■	■	■	■
Kristina Chavez Wyatt	San Benito County Business Council			■	■
Madison Mitchell	San Benito County OES	■	■		
Matt Streck	CAL FIRE San Benito Monterey Unit		■		
Michael Linthicum	San Benito Fire Safe Council			■	
Mike Chambless	Hollister Resource Management Agency				■
Nick Milton	CAL FIRE			■	
Rene Anchieta	San Benito County GIS	■	■	■	■
Reno Ditullio	CAL FIRE San Benito Monterey Unit				■
Rich Brown	San Juan Bautista Code Enforcement	■		■	
Rick Pfitzer	San Benito Fire Safe Council			■	
Rob Hillebrecht	Sunnyslope County Water District			■	■
Rosie Betanio	Hollister Police Department	■			■
Taven M. Kinison Brown	San Benito County Resource Management Agency			■	■
Tracey Belton	San Benito County HHSA	■		■	