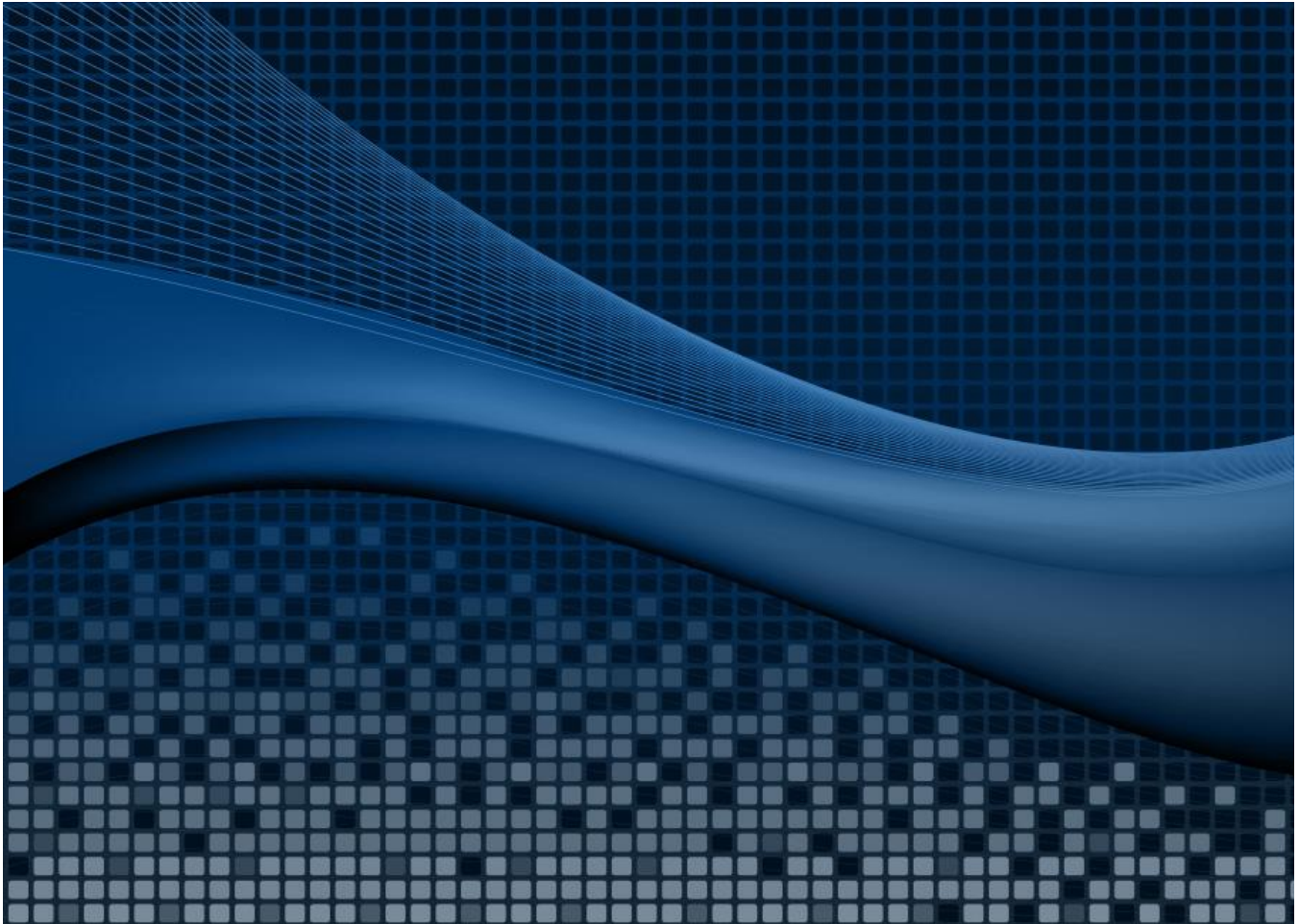




ATTACHMENT 3

Santa Clara Operational Area Hazard Mitigation Plan

Volume 2—Planning Partner Annexes



Santa Clara Operational Area Hazard Mitigation Plan

Volume 2—Planning Partner Annexes

September 19, 2017

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Appendix B. Procedures for Linking to Hazard Mitigation Plan
Appendix C. Annex Instructions
Appendix D. Status of Prior Actions

INTRODUCTION

BACKGROUND

Region IX of the Federal Emergency Management Agency (FEMA) and the California Office of Emergency Services (CalOES) both encourage multi-jurisdictional planning for hazard mitigation. Such planning efforts require all participating jurisdictions to fully participate in the process and formally adopt the resulting planning document. Chapter 44 of the Code of Federal Regulations (44 CFR) states:

“Multi-jurisdictional plans (e.g. watershed plans) may be accepted, as appropriate, as long as each jurisdiction has participated in the process and has officially adopted the plan.” (Section 201.6.a(4))

For the Santa Clara Operational Area Hazard Mitigation Plan, a Planning Partnership was formed to leverage resources and to meet requirements of the federal Disaster Mitigation Act (DMA) for as many eligible local governments as possible. The DMA defines a local government as follows:

“Any county, municipality, city, town, township, public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity.”

Two types of Planning Partners participated in this process, with distinct needs and capabilities:

- Incorporated municipalities (cities, towns and the County)
- Special purpose districts.

Each participating planning partner has prepared a jurisdiction-specific annex to this plan. These annexes, as well as information on the process by which they were created, are contained in this volume.

THE PLANNING PARTNERSHIP

Initial Solicitation and Letters of Intent

The planning team solicited the participation of all eligible municipalities and special purpose districts at the outset of this project. A kickoff meeting was held on July 19, 2016 to identify potential stakeholders and planning partners for this process. The purpose of the meeting was to introduce the planning process to jurisdictions in the County that could have a stake in the outcome of the planning effort. All eligible local governments within the planning area were invited to attend. The goals of the meeting were as follows:

- Provide an overview of the Disaster Mitigation Act.
- Describe the reasons for a plan.
- Outline the hazard mitigation work plan.

- Outline planning partner expectations.
- Seek commitment to the planning partnership.
- Seek volunteers for the working group.

All interested local governments were provided with a list of planning partner expectations developed by the planning team and were informed of the obligations required for participation. Local governments wishing to join the planning effort were asked to provide the planning team with a “letter of intent to participate” that agreed to the planning partner expectations (see Appendix A) and designated a point of contact for their jurisdiction. In all, formal commitment was received from 17 planning partners by the planning team. Maps for each participating municipality are provided in the individual annex for that municipality in this volume.

Planning Partner Expectations

The planning team developed the following list of planning partner expectations, which were confirmed at the kickoff meeting held on July 19, 2016:

1. Each partner will submit a “Letter of Intent to participate.”
2. Each partner will designate a lead point of contact for the effort.
3. Each partner will support and participate in the selection and function of the Steering Committee selected to oversee the development of this plan.
4. Each partner will provide support in the form of mailing list, possible meeting space, and public information materials, such as newsletters, newspapers or direct mailed brochures, required to implement the public involvement strategy developed by the Steering Committee.
5. Each partner will participate in the process through opportunities such as:
 - a. Steering Committee meetings
 - b. Public meetings or open houses
 - c. Workshops and planning-partner-specific training sessions
 - d. Public review and comment periods prior to adoption
6. Each partner will attend the **mandatory** workshop. This workshop will cover the proper completion of the jurisdictional annex template, which is the basis for each partner’s jurisdictional chapter in the plan.
7. After participation in the mandatory template workshop, each partner will be required to complete their template and provide it to the planning team in the time frame established by the Steering Committee.
8. Each partner will perform a “consistency review” of all its technical studies, plans, ordinances specific to hazards to identify any that are inconsistent equivalent countywide documents reviewed in the preparation of the countywide plan.
9. Each partner will review the risk assessment and identify hazards and vulnerabilities specific to its jurisdiction.
10. Each partner will review the mitigation recommendations in the countywide plan to determine if they meet the needs of its jurisdiction.
11. Each partner will create its own action plan that identifies each project, who will oversee its implementation, how it will be financed and when it is estimated to occur.
12. Each partner will sponsor at least one public meeting to present the draft plan to its constituents at least two weeks prior to adoption.
13. Each partner will formally adopt the plan.

By adopting this plan, each planning partner also agrees to the plan implementation and maintenance protocol established in Volume 1. Failure to meet these criteria may result in a partner being dropped from the partnership by the Steering Committee, and thus losing eligibility under the scope of this plan.

Linkage Procedures

Eligible local jurisdictions that did not participate in development of this multi-jurisdictional plan may comply with DMA requirements by linking to this plan following the procedures outlined in Appendix B.

ANNEX-PREPARATION PROCESS

Templates

Templates were created to help the Planning Partners prepare their jurisdiction-specific annexes. Since special purpose districts operate differently from incorporated municipalities, separate templates were created for the two types of jurisdictions. The templates were created so that all criteria of Section 201.6 of 44 CFR would be met, based on the partners' capabilities and mode of operation. Templates available for the planning partners' use were specific as to whether the partner is a municipality or a special purpose district and whether the annex is an update to a previous hazard mitigation plan or a first-time hazard plan. Each partner was asked to participate in a technical assistance workshop during which key elements of the template were completed by a designated point of contact for each partner and a member of the planning team. The templates were set up to lead each partner through a series of steps that would generate the DMA-required elements that are specific for each partner. The template instructions provided to the Planning Partners can be found in Appendix C to this volume.

Workshop

Workshops were held for Planning Partners to address the following topics:

- DMA
- Local plan background
- Analysis of public survey results
- The templates
- Risk ranking
- Developing your action plan
- Cost/benefit review.

The sessions provided technical assistance and an overview of the template completion process. Attendance at this workshop was mandatory under the planning partner expectations established by the Planning Team. There was 100-percent attendance of the partnership at these sessions.

In the risk-ranking exercise, each planning partner was asked to rank each risk specifically for its jurisdiction, based on the impact on its population or facilities. Municipalities were asked to base this ranking on probability of occurrence and the potential impact on people, property and the economy. Special purpose districts were asked to base this ranking on probability of occurrence and the potential impact on their constituency, their vital facilities and the facilities' functionality after an event. The methodology followed that used for the countywide risk ranking presented in Volume 1. A principal objective of this exercise was to familiarize the partnership with how to use the risk assessment as a tool to support other planning and hazard mitigation processes. Tools utilized during these sessions included the following:

- The risk assessment results developed for this plan
- Hazard maps for all hazards of concern
- Hazard mitigation catalogs
- Federal funding and technical assistance catalogs
- Copies of partners' prior annexes, if applicable.

Prioritization

44 CFR requires actions identified in the action plan to be prioritized (Section 201.c.3.iii). The planning team and steering committee developed a methodology for prioritizing the action plans that meets the needs of the partnership and the requirements of 44 CFR. Each action was assigned two priorities—a priority for implementation and a priority for pursuing grant funding—according to the following criteria:

- **Implementation Priority:**
 - **High Priority**—An action that meets multiple objectives, that has benefits that exceed cost, that is eligible for grant funding and funding has been secured or it is an ongoing project, and that can be completed in the short term (1 to 5 years).
 - **Medium Priority**—An action that meets multiple objectives, that has benefits that exceed costs, that is eligible for grant funding but funding has not yet been secured, and that can be completed in the short term (1 to 5 years) once funding is secured. Medium priority actions become high priority actions once funding is secured.
 - **Low Priority**—An action that will mitigate the risk of a hazard, that has benefits that do not exceed the costs or are difficult to quantify, that is not eligible for any identified grant funding and funding has not been secured, and for which the timeline for completion is long term (more than 5 years). Low priority actions may be eligible for grant funding from programs that have not yet been identified.
- **Grant Pursuit Priority:**
 - **High Priority**—An action that meets grant eligibility requirements, that has high benefits, that has a high or medium implementation priority, and for which one of the following funding conditions is true:
 - Local funding is unavailable
 - Local funding is available but could be used for other, non-grant-eligible projects if grant funding is received for this action.
 - **Medium Priority**—An action that meets grant eligibility requirements, that has medium or low benefits, that has a medium or low implementation priority, and for which local funding is unavailable.
 - **Low Priority**—An action that does not meet grant eligibility requirements or has low benefits.

Priority designations for a given action can change based on changes to any parameter, such as funding availability. The prioritization will be updated as needed annually through the plan maintenance strategy.

Benefit/Cost Review

44 CFR requires the prioritization of the action plan to emphasize a benefit/cost analysis of the proposed actions. Because some actions may not be implemented for up to 10 years, benefit/cost analysis was qualitative and not of the detail required by FEMA for project grant eligibility under the Hazard Mitigation Grant Program (HMGP) and Pre-Disaster Mitigation (PDM) grant program. A review of the apparent benefits versus the apparent cost of each project was performed. Parameters were established for assigning subjective ratings (high, medium, and low) to costs and benefits as follows:

Cost ratings were defined as follows:

- **High**—Existing funding will not cover the cost of the project; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).
- **Medium**—The project could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
- **Low**—The project could be funded under the existing budget. The project is part of or can be part of an ongoing existing program.

Benefit ratings were defined as follows:

- **High**—Project will provide an immediate reduction of risk exposure for life and property.
- **Medium**—Project will have a long-term impact on the reduction of risk exposure for life and property, or project will provide an immediate reduction in the risk exposure for property.
- **Low**—Long-term benefits of the project are difficult to quantify in the short term.

Using this approach, projects with positive benefit versus cost ratios (such as high over high, high over medium, medium over low, etc.) are considered cost-beneficial and are prioritized accordingly.

For many of the actions identified in this plan, financial assistance may be available through Hazard Mitigation Assistance grants, all of which require detailed benefit/cost analyses. These analyses will be performed on projects at the time of application using the FEMA benefit-cost model. For projects not seeking financial assistance from grant programs that require detailed analysis, “benefits” can be defined according to parameters that meet the goals and objectives of this plan.

Analysis of Mitigation Actions

Each planning partner reviewed its recommended actions to classify each action based on the hazard it addresses and the type of mitigation it involves. This planning process used the Community Rating System (CRS) categories of mitigation activities (2017 *CRS Coordinators Manual* (OMB No. 1660-0022), Figure 510-4). The CRS credits programs and activities that are considered to be above and beyond the minimum requirements established by FEMA. These CRS categories add significantly more detail to the four mitigation categories defined in FEMA’s 2013 *Local Mitigation Handbook*. The CRS expanded categories provide a more comprehensive range of alternatives to consider, thus increasing integration opportunities. Additionally, the use of CRS program guidance will enhance the CRS credit potential for this plan, benefiting planning partners who participate in the CRS program. Mitigation types used for this categorization are as follows:

- **Prevention**—Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
- **Property Protection**—Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
- **Public Education and Awareness**—Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
- **Natural Resource Protection**—Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- **Emergency Services**—Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.

- **Structural Projects**—Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.
- **Climate Resilient**—Actions that minimize the impacts of climate change via an aquifer storage and recovery system to increase water supply for drought mitigation and a flood diversion and storage project to reduce flood risk.

COMPATIBILITY WITH PREVIOUSLY APPROVED PLANS

The jurisdictions listed in Table 1 previously participated in the Association of Bay Area Governments (ABAG) regional hazard mitigation planning effort. The table lists the dates that each of these jurisdictions adopted its annex under the ABAG plan. The City of Los Altos and the City of San José may have participated in the plan, but no actions were identified and no proof of formal adoption was located.

Table 1. ABAG Participants - 2010

Jurisdiction	Jurisdiction Adoption Date (2010 ABAG)
Santa Clara County	February 7, 2012
City of Campbell	March 19, 2012
City of Cupertino	Unavailable (listed as approval pending adoption on plan website)
City of Gilroy	January 9, 2012
Town of Los Altos Hills	2014 (annex to plan was developed in 2013)
Town of Los Gatos	February 21, 2012
City of Monte Sereno	September 20, 2011
City of Morgan Hill	March 21, 2012
City of Mountain View	February 28, 2012
City of Palo Alto	Unavailable (listed as approval pending adoption on plan website)
City of Santa Clara	Unavailable
City of Saratoga	February 15, 2012
City of Sunnyvale	Unavailable

The ABAG plan identified over 300 regional strategies in the following categories:

- Infrastructure
- Health
- Housing
- Economy
- Government
- Education
- Land Use.

Planning partners selected some of these strategies for implementation and included them in their annexes to the plan. The progress on these strategies has been reviewed and is included in Appendix D of Volume 2 of this plan. Each strategy was determined to be completed, was removed or was carried over to this plan update.

FINAL COVERAGE UNDER THE PLAN

All of the committed planning partners fully met the participation requirements specified by the Planning Team and agreed to by the Planning Partnership. Table 2 lists the jurisdictions that submitted letters of intent and their ultimate status in this plan.

Table 2. Planning Partner Status

	Letter of Intent Date	Attended Workshop?	Completed Template?	Covered by This Plan?
County of Santa Clara	August 1, 2016	Yes	Yes	Yes
City of Campbell	July 22, 2016	Yes	Yes	Yes
City of Cupertino	July 25, 2016	Yes	Yes	Yes
City of Gilroy	August 9, 2016	Yes	Yes	Yes
City of Los Altos	July 25, 2016	Yes	Yes	Yes
Town of Los Altos Hills	July 28, 2016	Yes	Yes	Yes
Town of Los Gatos	July 21, 2016	Yes	Yes	Yes
City of Milpitas	July 25, 2016	Yes	Yes	Yes
City of Monte Sereno	August 27, 2015	Yes	Yes	Yes
City of Morgan Hill	August 1, 2016	Yes	Yes	Yes
City of Mountain View	August 14, 2016	Yes	Yes	Yes
City of Palo Alto	July 28, 2015	Yes	Yes	Yes
City of San José	August 3, 2016	Yes	Yes	Yes
City of Santa Clara	August 2, 2016	Yes	Yes	Yes
City of Saratoga	July 21, 2016	Yes	Yes	Yes
City of Sunnyvale	August 11, 2016	Yes	Yes	Yes
Santa Clara County Fire Department	August 1, 2016	Yes	Yes	Yes

CALIFORNIA ENVIRONMENTAL QUALITY ACT

The County and the unincorporated areas have sought exemption from the California Environmental Quality Act (CEQA) for the Hazard Mitigation Plan based on four sections of the CEQA guidelines:

- **Section 15183(d)**—"The project is consistent with...a general plan of a local agency, and an environmental impact report was certified by the lead agency for the...general plan."
- **Section 15262**—"A project involving only feasibility or planning studies for possible future actions which the agency, board or commission has not approved, adopted, or funded does not require the preparation of an environmental impact report or negative declaration but does require consideration of environmental factors. This section does not apply to the adoption of a plan that will have a legally binding effect on later activities."
- **Section 15306**—" (Categorical Exemption) Class 6 consists of basic data collection, research, experimental management, and resource evaluation activities which do not result in a serious or major disturbance to an environmental resource. These may be strictly for information gathering purposes, or as part of a study leading to an action which a public agency has not yet approved, adopted or funded."
- **Section 15601(b)(3)**—"...CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA."

Planning partners may seek exemption at their discretion.

ACRONYMS AND ABBREVIATIONS

- **AB 1420**—Assembly Bill 1420 Urban Water Management Planning Act
- **AB 2140**—Assembly Bill 2140 General Plans: Safety Element

- **ABAG**—Association of Bay Area Governments
- **AlertSCC**—Santa Clara County Emergency Alert System
- **ARES/RACES**—Amateur Radio Emergency Service/radio Amateur Civil Emergency Services
- **BCEGS**—Building Code Effectiveness Grading Schedule
- **CalFire**—State of California Department of Forestry and Fire Protection
- **CalOES**—State of California Office of Emergency Services
- **CalWARN**—California Water/Wastewater Agency Response Network
- **CDBG**—Community Development Block Grants
- **CEMP**—Comprehensive Emergency Management Plan
- **CEQA**—California Environmental Quality Act
- **CERT**—Citizens Emergency Response Training
- **CFR**—Code of Federal Regulations
- **CIP**—Capital Improvement Plan
- **CIPR**—Capital Improvement Project Reserve
- **CRS**—Community Rating System
- **CUPA**—Certified Unified Program Agencies
- **CWOP**—Closed without Payment
- **CWPP**—Community Wildfire Protection Plan
- **DMA**—Disaster Mitigation Act
- **DR**—Major Disaster Declaration
- **DPW**—Department of Public Works
- **EMPG**—Emergency Management Performance Grant
- **EOC**—Emergency Operations Center
- **EOP**—Emergency Operations Plan
- **ESD**—Environmental Services Department
- **ETS**—Engineering and Technology Services
- **FEMA**—Federal Emergency Management Agency
- **FIT**—Facility Inspection Tool
- **FMA**—Flood Mitigation Assistance
- **GHG**—Greenhouse gas
- **GIS**—Geographic Information System
- **HCP**—Habitat conservation plan
- **HMA**—Hazard Mitigation Assistance
- **HMGP**—Hazard Mitigation Grant Program
- **HSGP**—Homeland Security Grant Program
- **ISD**—Information Services Department (Santa Clara County)
- **LHMP**—Local hazard mitigation plan
- **NCCP**—Natural community conservation plan
- **NFIP**—National Flood Insurance Program
- **NPDES**—National Pollution Discharge Elimination System
- **OES**—Office of Emergency Services
- **PDM**—Pre-Disaster Mitigation Grant Program
- **POC**—Point of Contact
- **PSAP**—Public-safety answering point
- **RWQCB**—Regional Water Quality Control Board
- **SCADA**—Supervisory control and data acquisition
- **SCC**—Santa Clara County
- **SCCFD**—Santa Clara County Fire Department

- **SCVWD**—Santa Clara Valley Water District
- **SFPUC**—San Francisco Public Utilities Commission
- **UASI**—Urban Area Security Initiative
- **URM**—Unreinforced Masonry
- **USC**—United States Code
- **USGS**—U.S. Geological Survey
- **UWMP**—Urban Water Management Plan
- **WUI**—Wildland Urban Interface

1. COUNTY OF SANTA CLARA

1.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

David Flamm, Deputy Director OES
55 West Younger Avenue
San José, CA 95110
Telephone: - (408)808-7802
e-mail Address: david.flamm@oes.sccgov.org

Alternate Point of Contact

Darrell Ray, Emergency Manager
55 West Younger Avenue
San José, CA 95110
Telephone: - (408)808-7814
e-mail Address: darrell.ray@oes.sccgov.org

1.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—February 18, 1850
- **Current Population**—The California Department of Finance estimated population for the unincorporated area of the county is 87,352 as of January 1, 2016. The unincorporated population comprises 4.5 percent of the County population.
- **Population Growth**—The California Department of Finance estimated an increase in the unincorporated population from 2015 (87,029) to 2016 (87,352) of 0.4 percent. Table 1-1 shows the California Department of Finance decennial population statistics for Santa Clara County from 1980 through 2010, with the percent change of the previous decades from 1990 to 2010.

Table 1-1. Population Statistics for Santa Clara County from 1980 through 2010

Year	Total County		Incorporated Cities		Unincorporated County	
	Population	% Change from Previous Decade	Population	% Change from Previous Decade	Population	% Change from Previous Decade
1980	1,295,071	—	1,168,117	—	126,954	—
1990	1,497,577	15%	1,391,404	19%	106,173	-16%
2000	1,682,585	12%	1,582,772	14%	99,813	-6%
2010	1,781,642	6%	1,691,716	7%	89,926	-10%

Source: California Department of Finance

- **Location and Description**—A significant portion of the county's land area is unincorporated ranch and farmland. Large areas of unincorporated rural areas lie to the east, west and south of the county. Mt. Hamilton is within the Diablo Range which lines the eastern border of the County: the Santa Cruz Mountains lie along the west. Within the Santa Cruz Mountains are steep slopes, active earthquake faults, and redwood forests. Both mountain ranges have areas of geologic instability. The County of Santa Clara operates 28 parks covering more than 50,000 acres including scenic lakes, streams, and miles of hiking and biking trails, primarily in these open lands.

The Santa Clara County Public Health Department has defined the cities and small areas/neighborhoods in the unincorporated areas of the county to better enable reporting data for smaller populations within cities and pre-existing neighborhoods (See Figure 1-1). The **Unincorporated Areas Small Area/Neighborhood Profiles** include:

- **Bayshore**—This area lies to the northeast, bordered by Sunnyvale and Mountain View. Moffit Federal Airfield inhabits most of this area, with a residential area west of the airfield. The population in this small area is 719. 100 percent of households in Bayshore are occupied by renters. The median household income is \$77,778.
- **Unincorporated East**—This area lies along the eastern border of the county. The population in this area is 1,144. Households occupied by renters is 27 percent. The median household income is \$41,162.
- **Unincorporated South**—This area lies along the southern border of the county, bordered by the city of Gilroy to the west, and Morgan Hill to the northwest. The population in this area is 12,946. Households occupied by renters is 26 percent. The median household income is \$89,423.
- **Unincorporated West**—This area lies along the western border of the county. The population in this area is 11,032. Households occupied by renters is 20 percent. The median household income is \$98,362.

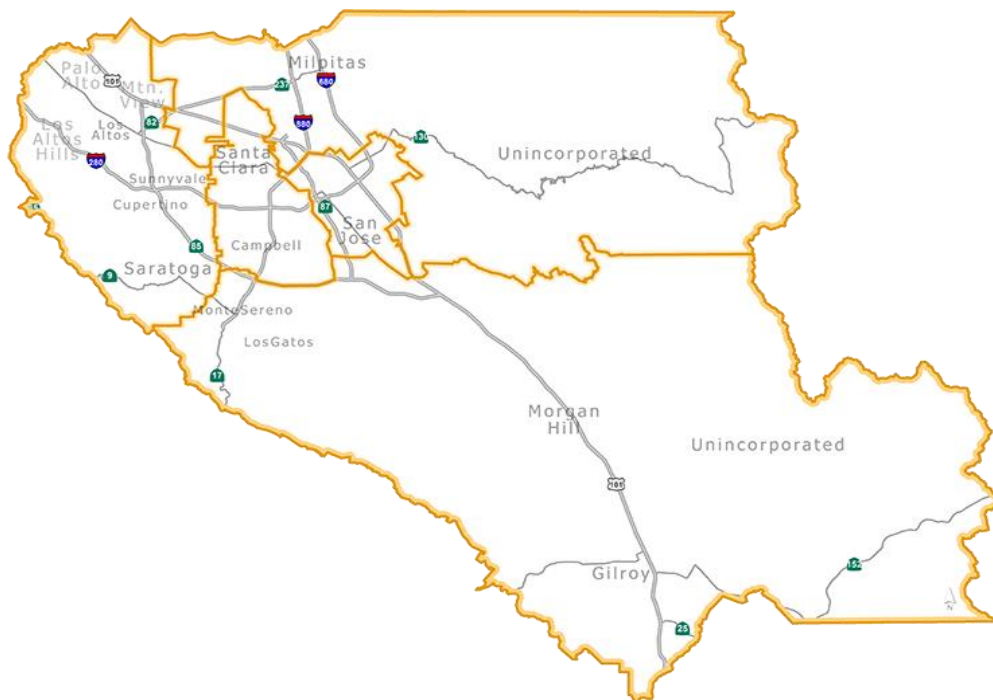


Figure 1-1. Unincorporated Areas Small Area/Neighborhoods

- **Brief History**—The County of Santa Clara is one of 27 original county jurisdictions when California became a state. The seat of California’s first capital city, San José, is in the county of Santa Clara. The county is named after Mission Santa Clara, which was established in 1777. The first inhabitants of the greater Santa Clara Valley were members of the Ohlone or Costanoan cultural group. A number of Ohlone tribes occupied the southern portions of the San Francisco Bay area.

During the Spanish and Mexican Periods (1776-1848) the Santa Clara Valley was established as Spain’s new world colony. The El Camino Real (King’s Highway) was the major transportation route that linked

the Franciscan missions and outposts that were being developed during this period. The pueblo at San José was the first civil settlement established by the Spanish Crown. With Mexico's new independence, and the formal change of governmental control from Spain to Mexico in 1822. The Mexican government brought about the legalization of trade with foreign ships in the ports of San Francisco and Monterey, and a law for the settlement of private land grants to local residents for a "rancho" to stimulate colonization of the territory. Dwellings were built on the ranchos and soon villages were developed. By 1845, American immigrants were increasing the population and establishing businesses within the valley. The American presence in San José was rapidly changing the character of the pueblo from a Mexican village to a bustling American town.

In May 1846, the United States declared war on Mexico; and shortly thereafter, the American flag was raised in Monterey and San José. California statehood was achieved in 1850. The discovery of gold in 1848 brought settlers and the making of towns to the valley. Part of the county's territory was given to Alameda County in 1853. In 1882, Santa Clara County tried to levy taxes upon property of the Southern Pacific Railroad within county boundaries. The result was the U.S. Supreme Court case of *Santa Clara County v. Southern Pacific Railroad*, 118 U.S. 394 (1886), in which the Court extended Due Process rights to artificial legal entities. The mid-1800s saw houses, hotels, schoolhouses, and businesses established. Early businesses were a variety of manufacturing, seed, and fruit industries. Many businesses generated in the late 1800s remained viable through the early to mid-1900s: tannery and leather products, vegetable and fruit seed farms, wood products such as lumber, mill work, sashes, doors, and moldings, and canned fruits, for example. In 1939, San José had a population of 57,651, and had the largest packing center for dried fruit and canning in the world. The first major technology company to be based in the area was Hewlett-Packard, founded in a garage in Palo Alto in 1939. IBM selected San José as its West Coast headquarters in 1943. Varian Associates, Fairchild Semiconductor, and other early innovators were located in the county by the late 1940s and 1950s. The U.S. Navy had a large presence in the area and began giving large contracts to Silicon Valley electronics companies. The term "Silicon Valley" was coined in 1971. The trend accelerated in the 1980s and 1990s, and agriculture has since then been nearly eliminated from the northern part of the county.

- **Climate**—The climate in Santa Clara County is described as Mediterranean, characterized by warm, dry summers and mild winters. The climate of the region remains temperate year round due to the area's geography and its proximity to the Pacific Ocean. The temperature seldom drops below freezing. The fall and winter months have daily high temperatures that range from 55 to 77 degrees Fahrenheit. The summer months have dry warm weather with a range of high temperatures between 65 and 82 degrees Fahrenheit. The average rainfall in the county is 15 inches in San José and approximately 40 inches in the Santa Cruz Mountains.
- **Governing Body Format**—The governing body of the county is a five member board of supervisors, elected by voters in each district to serve four year terms on the County Council. The Council hires a professional Chief Executive Officer (CEO), Chief Operating Officer (COO), and six Deputy CEO's. The County of Santa Clara provides services to its residents either directly or by working with other agencies. The County directly provides administrative services, building permits/inspections, planning/design review, engineering/public works, city clerk/election services and finance. The county is one among three counties in California (with Napa and Madera) to establish a separate department, the Santa Clara County Department of Corrections, to deal with corrections pursuant to California Government Code §23013. In the United States House of Representatives, Santa Clara County is split between four congressional districts.

The County Charter is a legislative document adopted by the people of the County of Santa Clara. The Charter provides for the creation of the County and defines its powers and privileges and facilitates the

governing of the County. The County Council assumes responsibility for the adoption of this plan; the Office of Emergency Service will oversee its implementation.

1.3 DEVELOPMENT TRENDS

Within Santa Clara County, and the bay area region, there is a housing shortage. From 2007 through 2014, 999 housing units were projected to be produced in the County. This falls within 10 percent below the projected need (1,090) of housing for the period. The County of Santa Clara revised the General Plan Housing Element in June 2015. The most significant changes to the strategies and policies are increased focus on Extremely Low Income families, Permanent Supportive Housing, Secondary Units, and Farmworker housing. The Housing Element states “Funding programs will prioritize housing for households with extremely low incomes (as opposed to households with low or moderate incomes), secondary units will be the focus of efforts to reduce regulatory constraints, more collaborative efforts will be pursued, and the housing needs of farmworkers and the homeless will get increased attention.”

From 1970-2010, the unincorporated population decreased by 37 percent due to the urban unincorporated islands or “pockets” being annexed into their surrounding cities, while the total County population increased by nearly 67 percent. The policy of cities annexing the unincorporated areas around them reinforces the role of cities to plan for and accommodate new urban development. As a result, cities are accorded the opportunities and responsibilities for new housing or infill redevelopment.

The unincorporated County population is expected to be stable during the 2015-2022 planning period, as large-scale annexations connected with the State’s Streamlined Annexation Incentive Program are expected to decrease throughout the time period. As a result, there is a relatively small amount of housing construction in the unincorporated County. The slowing construction of housing units on unincorporated County lands reflects the Countywide policies for compact growth occurring within city boundaries near urban infrastructure, as well as ongoing annexations. Table 1-2 summarizes development trends in the performance period since development of the previous hazard mitigation plan and expected future development trends.

1.4 CAPABILITY ASSESSMENT

1.4.1 Resources for the 2017 Planning Initiative

The following technical reports, plans, and regulatory mechanisms were reviewed to inform the 2017 Multi-Jurisdiction Hazard Mitigation Plan for both Volume I and Volume II (Unincorporated County Annex). All of the below items were additionally reviewed as part of the full capability assessment for the Unincorporated County Area.

- **Santa Clara County General Plan**—The General Plan, including the Housing Element, Land Use, and Safety Elements, were reviewed for information regarding the jurisdiction profile, and the goals and policies consistent with hazard mitigation for carry over as goals and objectives.
- **Santa Clara County Municipal Code**—The Municipal Code was reviewed for the jurisdiction profile, the full capability assessment, and for identifying opportunities for action plan integration.
- **Floodplain Management Ordinance**—The Floodplain Management Ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Capital Improvement Plan**—The Capital Improvement Plan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.
- **Technical Reports and Information**—Outside resources and references used to complete the Santa Clara County - Unincorporated Annex are identified in Section 2.12 of this Annex.

Table 1-2. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan? • If yes, give the estimated area annexed and estimated number of parcels or structures.	No					
Is your jurisdiction expected to annex any areas during the performance period of this plan? • If yes, please describe land areas and dominant uses. • If yes, who currently has permitting authority over these areas?	No					
Are any areas targeted for development or major redevelopment in the next five years? • If yes, please briefly describe, including whether any of the areas are in known hazard risk areas	Yes This is currently in planning stages.					
How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?		2011	2012	2013	2014	2015
	Single Family	37	39	59	46	49
	Multi-Family	0	0	2	1	1
	Other (commercial, mixed use, etc.)	4	4	8	3	12
Please provide the number of permits for each hazard area or provide a qualitative description of where development has occurred.	Special Flood Hazard Areas- 24 Landslide- 99 High Liquefaction Areas- 45 Tsunami Inundation Area - 0 Wildfire Risk Areas - 126					
Please describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	County growth policies focus on higher density, infill development occurring in cities.					

1.4.2 Full Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 1-3. An assessment of fiscal capabilities is presented in Table 1-4. An assessment of administrative and technical capabilities is presented in Table 1-5. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 1-6. An assessment of education and outreach capabilities is presented in Table 1-7. Classifications under various community mitigation programs are presented in Table 1-8. Development and permitting capabilities are presented in Table 1-9, and the community's adaptive capacity for the impacts of climate change is presented in Table 1-10.

Table 1-3. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code	Yes	No	Yes	No
Comment: The Santa Clara County building code is the 2013 California Building Code, including the Building Standards Administrative Code, Building Code, Volumes 1 & 2, Residential Code, Electrical Code, Mechanical Code, Plumbing Code, Energy Code, Historical Building Code, Fire Code, Existing Building Code, Green Building Standards Code, and Referenced Standards Code; incorporated by reference (Ord. No. NS-1100.117, § 3, 12-10-13).				
Zoning Code	Yes	No	Yes	No
Comment: Zoning Ordinance of the County of Santa Clara, establishing regulations limiting the use of land and structures; Articles 1 through 5, (Ord. No. NS-1200.317, § 18, 6-8-04).				
Subdivisions	Yes	No	Yes	No
Comment: Santa Clara County Subdivision Ordinance, regulating the subdivision of land in the unincorporated areas in accordance with the Subdivision Map Act (Government Code § 66410 et seq.), (Ord. No. NS-1203.35, § 4, 3-13-78).				
Stormwater Management	Yes	No	Yes	Yes
Comment: The Nonpoint Source Pollution Ordinance was established to protect the health and safety of individuals in the County of Santa Clara and reduce surface water quality degradation caused by stormwater runoff, (Ord. No. NS-517.84, 6-25-13).				
Post-Disaster Recovery	Yes	Yes	No	Yes
Comment: Draft recovery framework was completed in Fall 2016. Final draft framework projected to be published within the next 12 months. Draft framework does currently address mitigation integration opportunities.				
Real Estate Disclosure	No	No	Yes	Yes
Comment: CA. State Civil Code 1102 requires full disclosure on natural hazard exposure of the sale/re-sale of any and all real property. **Further investigation needed on this matter.				
Growth Management	Yes	No	Yes	No
Comment: California State Growth Management – General Planning Law - Cal. Gov. Code §65300 et seq.				
Site Plan Review	Yes	No	Yes	Yes
Comment: Title C: Construction, Development, and Land Use, Chapter II Single Building Sites provides requirements for site development plans and site plan reviews , (Ord. No. NS-1203.35, § 5, 3-13-78).				
Environmental Protection	Yes	No	Yes	Yes
Comment: Title C: Construction, Development, and Land Use, Chapter III grading and Drainage provides requirements for protecting environmentally sensitive areas on or near the site, such as creeks, streams, wetlands, lakes, springs, trees, and riparian habitat that could be affected by the grading (Ord. No. NS-1203.120, § 1, 4-9-13). The California Environmental Quality Act (CEQA) also outlines requirements for environmental protection. Riparian Setback Ordinance for San Martin Area: Yes. The Riparian Setback requirements for new development in the San Martin area reduce the likelihood of the release of stormwater pollutants to local waterway. [See new (March 2016) setback ordinance. https://www.municode.com/library/ca/santa_clara_county/codes/code_of_ordinances?nodeId=TITBRE_DIVB11.5NOSOPO_CHVIISTRIV_EPRSAMAAR]				
Flood Damage Prevention	No	Yes	Yes	No
Comment: Floodplain Management Ordinance reflects updates to floodplain management policies affecting real property located in designated flood hazard areas of the unincorporated territory of Santa Clara County, (Ord. No. NS-1100.106, § 1, 4-21-09).				
Emergency Management	Yes	No	Yes	Yes
Comment: The Emergency Services Ordinance provides for the protection of persons and property within the County of Santa Clara in the event of an emergency; the establishment, coordination, and direction of the Santa Clara County Emergency Organization, Disaster Council, Office of Emergency Services; and the coordination of the County with all other public agencies, corporations, organizations and affected private persons, (Ord. No. NS-300.600, § 2, 5-13-97).				
Climate Change	Yes	No	Yes	Yes
Comment: SB 97 directs California Environmental Quality Act (CEQA) Guidelines to address greenhouse gas emissions. Other state policies include AB 32, SB 375, SB 379 and regulations of the Climate Action Plan.				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Other: Fire Code	Yes	No	No	Yes
Comment: The fire code of the County is the 2013 California Fire Code, based on the International Fire Code (2012 Edition), modified by the California Building Standards Commission, (Ord. No. NS-1100.117, § 1, 12-10-13.)				
Other: Santa Clara County Geologic Ordinance	Yes	No	Yes	No
Comment: The Geologic Ordinance is for the purpose of establishing minimum requirements for the geologic evaluation of land based on proposed land uses, and ensuring ensure the County fulfills its duties under state law regarding geologic hazards, including the Alquist-Priolo Earthquake Fault Zoning Act and the Seismic Hazards Mapping Act (Ord. No. NS-1203.111, § 1, 3-19-02)				
Planning Documents				
General Plan	Yes	No	Yes	Yes
Is the plan compliant with Assembly Bill 2140? No.				
Comment: The Santa Clara County General Plan, 1995-2010, was adopted December 20, 1994. Recent revisions include the Housing Element Update, 2014, the Health Element Update, 2015, and Local Serving Areas, 2015. The 2000 Stanford University Community Plan, adopted December 2000, is also a part of the General Plan and is published separately as a stand-alone document.				
Capital Improvement Plan	Yes	No	No	Yes
How often is the plan updated? 5 Year Intervals				
Comment: In May of 2016 the proposed Five-Year Capital Improvement Plan (CIP) for Fiscal Years FY 2017 – FY 2021 was presented to the Board of Supervisors for approval. The CIP covers Policy Manual: Policies 4.11 and 4.14, Facilities and Fleet Department Projects, Parks and Recreation Department Projects, Roads and Airports Department Projects, and Health and Hospital Projects.				
Floodplain or Watershed Plan	No	Yes	Yes	No
Comment: None Located; Santa Clara Valley Water District				
Stormwater Plan	Yes	No	Yes	Yes
Comment: The Santa Clara County Stormwater Management Program complies with the National Pollutant Discharge Elimination System (NPDES) to manage stormwater (rainwater) runoff to protect local waterways during construction and after construction. The County implements the NPDES requirements through its development review process to ensure local waterways meet pollution prevention and flow management requirements.				
Urban Water Management Plan	No	Yes	Yes	No
Comment: The Santa Clara Valley Water District 2015 Urban Water Management Plan provides information on water use and supply in Santa Clara County, including groundwater, local surface water, imported water, and water recycling, historical water use, water conservation programs, demand projections, water shortage contingency and supply interruption planning, reliability and threats to reliability.				
Habitat Conservation Plan	No	Yes	No	Yes
Comment: The Santa Clara Valley Habitat Plan is a 50-year regional plan to protect endangered species and natural resources while allowing for future development in Santa Clara County, and is both a habitat conservation plan and natural community conservation plan, or HCP/NCCP. The final Habitat Plan was approved and adopted in 2013.				
Economic Development Plan	No	No	No	No
Comment: The 1995-2010 General Plan, Book A, Part Two, has a chapter on Economic Well Being that discusses economic development within the county. Strategy #5 is to increase economic development planning and promotion.				
Shoreline Management Plan	No	No	No	No
Comment: The Santa Clara Valley Water District and State Coastal Conservancy have worked in partnership with the Army Corps on the South San Francisco Bay Shoreline Study for over 10 years. This major flood risk management and ecosystem restoration project will protect Santa Clara County communities ringing the southern part of the San Francisco Bay from tidal flooding and rising sea levels.				
Community Wildfire Protection Plan	Yes	No	Yes	Yes
Comment: The Santa Clara County Fire Department has developed a Community Wildfire Protection Plan to reduce wildland fire risks to communities and the environment. The CWPP is currently in the public review process. The CWPP is a vital element in the H.R. 4233 (Healthy Forest Restoration Amendments Act of 2009), Public Law 108–148, 2003). The Act was revised in 2009 to address changes to funding and provide a renewed focus on wildfire mitigation.				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Forest Management Plan	Yes	No	No	Yes
Comment: The Santa Clara County Department of Parks and Recreation Tree Safety Program serves to protect natural forest and woodland communities, maintain the natural setting, manage problem trees in designated developed areas characterized by high public use, and protect park facilities and cultural and historical resources.				
Climate Action Plan	Yes	No	Yes	Yes
Comment: The Climate Action Plan for Operations and Facilities was developed and approved in 2009. SB 97 directs California Environmental Quality Act (CEQA) Guidelines to address greenhouse gas emissions. Other state policies include AB 32 and SB 375 and regulations of the Climate Action Plan.				
Comprehensive Emergency Management Plan	Yes	No	Yes	Yes
Comment: The Santa Clara County Operational Area Emergency Operations Plan was approved in 2008. In 2013 the Office of Emergency Services began the revision of the EOP consistent and compliant with applicable State and Federal planning guides and documents, applicable for all Operational Area emergency management functions.				
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	Yes	No	Yes
Comment: The County of Santa Clara developed a standalone THIRA and participates in the Bay Area UASI THIRA, 2015. A THIRA evaluates the capability targets against scenarios across all hazards that stress stakeholder capabilities, and estimates the resources needed to achieve those capability targets.				
Post-Disaster Recovery Plan	Yes	No	No	Yes
Comment: Draft recovery framework was completed in Fall 2016. Final draft framework projected to be published within the next 12 months. Draft framework does currently address mitigation integration opportunities.				
Continuity of Operations Plan	Yes	No	No	Yes
Comment: There is a COOP planning initiative to be conducted throughout the calendar year of 2017. Planning process will include hazard identification and mitigation planning.				
Public Health Plan	Yes	No	No	Yes
Comment: The Santa Clara County Department of Public Health has the following public health plans: 2015-2020 Community Health Assessment and Health Improvement Plan; 2014 Emergency Medical Services Plan; 2013 EMS Strategic Plan; 2013 Santa Clara County EMS System Strategic Implementation Plan; Santa Clara County EMS Trauma System Plan; and Santa Clara County EMS Stroke Plan.				
Other:	No	No	No	Yes
Comment: None Located				

Table 1-4. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes; Recreational Services fees
Incur Debt through General Obligation Bonds	Yes – dependent on voter approval
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes; Special District fees, Open Space Authority (Measure Q funds).

Table 1-5. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Land Development Engineering Section of the Planning and Development Department
Engineers or professionals trained in building or infrastructure construction practices	Yes	Building Inspection, Planning and Development Department
Planners or engineers with an understanding of natural hazards	Yes	County Surveyor, Land Development Engineering Section
Staff with training in benefit/cost analysis	Yes	Controller-Treasurer Department
Surveyors	Yes	Office of County Surveyor
Personnel skilled or trained in GIS applications	Yes	Graphic Information Services
Scientist familiar with natural hazards in local area	Yes	Planning and Development Department, Contracted Services
Emergency manager	Yes	Office of Emergency Services
Grant writers	Yes/No	Planning and Development Department, Office of Emergency Services

Table 1-6. National Flood Insurance Program Compliance

Criteria	Response
What local department is responsible for floodplain management?	Department of Planning and Development
Who is your floodplain administrator? (department/position)	Planning and Development/Director
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date of adoption of your flood damage prevention ordinance?	April 21, 2009
Does your floodplain management program meet or exceed minimum requirements?	Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	November 2014
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, please state what they are.	Yes Issues are currently being addressed
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If no, please state why.	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No
Does your jurisdiction participate in the Community Rating System (CRS)? • Is your jurisdiction interested in joining the CRS program?	No No
How many flood insurance policies are in force in your jurisdiction? • What is the insurance in force? • What is the premium in force?	670 ^a \$164,764,000 ^a \$889,748 ^a
How many total loss claims have been filed in your jurisdiction? • How many claims were closed without payment/are still open? • What were the total payments for losses?	121 ^a 37 CWOP ^a \$1,506,976.57 ^a

a. According to FEMA statistics as of October 31, 2016.

Table 1-7. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes; County Executive's Office of Public Affairs coordinates Public Information Officers, Media Contacts and Spokespersons from individual departments.
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes Office of Emergency Services page provides hazard mitigation information.
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes The County, Sheriff's, OES, Public Health, and Fire Departments have Facebook, Twitter, or YouTube accounts or multiple sites.
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes; Animal Advisory Commission, Flood Protection and Watershed Advisory Committees, Los Altos Hills County Fire Protection District, Santa Clara County Health Authority, Santa Clara County Emergency Operational Area Council.
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes Community Emergency Response Team, Volunteer programs
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Alert SCC, Santa Clara County Emergency Alert System,

Table 1-8. Community Classifications

	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	Yes	3	2013
Public Protection (Santa Clara County Fire Department)	Yes	2/2Y	12/2015
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A

Table 1-9. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? • If no, who does? If yes, which department?	Yes Planning and Development
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory?	Yes

Table 1-10. Adaptive Capacity for Climate Change

Adaptive Capacity Assessment Question	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts	Medium
<i>Comment: None provided.</i>	
Jurisdiction-level monitoring of climate change impacts	Low
<i>Comment: None provided.</i>	
Technical resources to assess proposed strategies for feasibility and externalities	Low
<i>Comment: None provided.</i>	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Low
<i>Comment: None provided.</i>	
Capital planning and land use decisions informed by potential climate impacts	Low
<i>Comment: None provided.</i>	
Participation in regional groups addressing climate risks	Medium
<i>Comment: None provided.</i>	
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Medium
<i>Comment: None provided.</i>	
Identified strategies for greenhouse gas mitigation efforts	Medium
<i>Comment: None provided.</i>	
Identified strategies for adaptation to impacts	Medium
<i>Comment: None provided.</i>	
Champions for climate action in local government departments	Low
<i>Comment: None provided.</i>	
Political support for implementing climate change adaptation strategies	Medium
<i>Comment: None provided.</i>	
Financial resources devoted to climate change adaptation	Low
<i>Comment: None provided.</i>	
Local authority over sectors likely to be negative impacted	Low
<i>Comment: None provided.</i>	
Public Capacity	
Local residents knowledge of and understanding of climate risk	Low
<i>Comment: None provided.</i>	
Local residents support of adaptation efforts	Low
<i>Comment: None provided.</i>	
Local residents' capacity to adapt to climate impacts	Low
<i>Comment: None provided.</i>	
Local economy current capacity to adapt to climate impacts	Low
<i>Comment: None provided.</i>	
Local ecosystems capacity to adapt to climate impacts	Low
<i>Comment: None provided.</i>	

1.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the hazard mitigation plan into local planning mechanisms.

1.5.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan:

- **Emergency Management Performance Grant (EMPG)**—Annual Grant program that is meant to comprehensively reduce shared risk across the operational area. Any purchases take into account mitigation impact.
- **Recovery Framework**—As a component of the recovery framework potential mitigation actions are identified and recommended in order to build a community’s emergency management capacity and resiliency.
- **Silicon Valley Regional Interoperability Authority**—Meant to mitigate consequences of hazards due to interoperability and communication issues.
- **Emergency Operations Plan (EOP)**—Integrated mitigation actions by planning for organizational short-falls and unforeseen circumstances.

1.5.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration:

- **California Building Code**—Maintain triennial adoption of updated California Building Code to maintain regulatory standards that will subsequently minimize future hazard impacts.
- **Habitat Conservation Plan**—There is integration potential for our Plan with the Hazard Mitigation Plan due to the fact that we will be managing 47,000 acres of ranchland and open space that has the potential to be impacted by fire, flooding and theologically earthquakes.
- **Environmental Protection**—Riparian Setback Ordinance for San Martin Area (see same section above)
- **Site Plan Review**—The site plan review process provides an opportunity for mitigation to be incorporated into development practices. Several current projects were identified and were included in the action plan (see Table 1-13).

1.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 1-11 lists all past occurrences of natural hazards within the jurisdiction.

Table 1-11. Natural Hazard Events

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment ^a
Earthquake	—	4/18/1906	\$524,000,000
Flooding	15	2/5/1954	Unknown
Flooding	47	12/23/1955	Unknown
Fire	65	12/29/1956	Unknown
Flooding	82	4/4/1958	Unknown
Severe Weather - High Winds	—	1960	\$95,185
Severe Weather - High Winds	—	1961	\$73.36

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment ^a
Flooding	138	10/24/1962	Unknown
Flooding	122	3/6/1962	Unknown
Severe Weather - Winter Weather/High Winds	—	1962	\$67,657
Severe Weather - Thunderstorm	—	1962	\$845
Flooding	145	2/25/1963	Unknown
Dam/Levee Break	161	12/21/1963	Unknown
Severe Weather - Lightening	—	1965	\$7,837
Severe Weather - Thunderstorm	—	1965	\$648.67
Severe Weather - Thunderstorm	—	1965	\$7,135.19
Severe Weather - High Winds	—	1965	\$110,652.18
Severe Weather - Thunderstorm	—	1965	\$74,765.54
Severe Weather - Thunderstorm	—	1965	\$6,486.52
Severe Weather - High Winds	—	1966	\$83,128.89
Severe Weather - Thunderstorm	—	1967	\$61,117
Severe Weather - High Winds	—	1967	\$81,566.86
Severe Weather - Thunderstorm	—	1968	\$10,015.94
Landslide	—	1968	\$16,283,858.04
Severe Storm/Thunder Storm	—	1969	\$5,567,438.75
Severe Weather - Thunderstorms/High Winds	—	1969	\$10,763,714.88
Severe Weather - Thunderstorms/High Winds	—	1970	\$63,632.35
Severe Weather - Winter Weather	—	1970	\$71,031.25
Severe Weather - High Winds	—	1972	\$2,835.13
Flooding	—	1973	\$86,206.90
Drought	3023	1/20/1977	Unknown
Severe Weather - Thunderstorms/High Winds	—	1980	\$2,996.28
Winter Weather	—	1981	\$2,716.10
Flooding	651	12/19/1981	\$17,543,819.07
Flooding	—	1982	\$409,356.61
Severe Weather - Thunderstorms/High Winds	—	1982	\$12,280.67
Flooding	—	1982	\$1,228,067.36
Severe Weather - High Winds	—	1982	\$25,584.73
Flooding	—	1983	\$20,746,004.58
Severe Weather - Thunderstorms/High Winds	—	1983	\$915,264.90
Severe Storm/Thunder Storm/Wind	—	1983	\$24,788.43
Flooding - Coastal Storm	677	1/21/1983	\$1,189,844.38
Earthquake	—	1984	\$9,124,812.35
Fire	739	6/26/1985	Unknown
Flooding	758	2/12/1986	\$10,812,819.38
Severe Weather - High Winds	—	1987	\$7,865.46
Severe Weather - High Winds	—	1988	\$5,008.81
Severe Weather - High Winds	—	1988	\$17,271.77
Flooding	—	1988	\$100,176.25
Severe Weather - Winter Weather	—	1989	\$238,928.43

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment ^a
Earthquake	845	10/17/1989	\$1,409,677,726
Severe Weather - Freeze	894	12/19/1990	Unknown
Severe Weather - High Winds	—	1991	\$669.32
Severe Weather - Winter Weather	—	1992	\$175.98
Flooding	—	1992	\$3,586,367.38
Flooding/Wind	—	1992	\$1,797.17
Severe Weather - Winter Weather	—	1992	\$3,808.34
Flooding	—	1993	\$91,125.34
Severe Weather - Winter Weather/High Winds	—	1993	\$230,691.85
Severe Weather - Winter Weather/High Winds	—	1993	\$108,172.06
Severe Weather - Winter Weather	—	1994	\$2,498.91
Severe Weather - Winter Weather	—	1994	\$2,050.39
Severe Weather - Storm	1044	1/3/1995	\$1,010,899.28
Severe Weather - Storm	1046	2/13/1995	\$17,482,926.56
Severe Weather - Landslide	1155	12/28/1996	\$21,792,068.12
Severe Weather - Tornado	—	1997	\$29,534.83
Severe Weather - landslide	1203	2/2/1998	\$25,537,087.33
Severe Weather - High Winds	—	2001	\$936,826.09
Fire - Croy	2465	9/23/2002	\$6,559,446.93
Hurricane - Katrina (Evacuation)	3248	8/29/2005	\$1,870,933.90
Landslide	—	2006	\$5,094,611.45
Severe Weather - High Winds	—	2006	\$199,865.53
Severe Weather - Winter Weather	—	2007	\$5,578,430.62
Severe Weather - Tornado	—	2007	\$1,143.12
Fire - California Wildfires	3287	6/20/2008	\$491,525,986
Fire - Summit	2766	5/22/2008	\$10,722,593.80
Severe Weather - High Winds	—	2008	\$55,042.66
Severe Weather - High Winds	—	2008	\$18,164.08
Severe Weather - Winter Weather	—	2008	\$8,806.82
Severe Weather - High Winds	—	2009	\$23,016.33
Severe Weather - High Winds	—	2009	\$48,294.84
Severe Weather - High Winds	—	2009	\$20,235.96
Severe Weather - Fog	—	2009	\$9,206.53
Severe Weather - Heat	—	2009	\$3,682.61
Severe Weather - High Winds	—	2009	\$5,523.92
Flooding/Wind/Landslide	—	2009	\$1,852,906.55
Severe Weather - High Winds	—	2009	\$18,413.07
Severe Weather - Winter Weather	—	2009	\$46,953.32
Flooding/Landslide	—	2010	\$5,434.77
Severe Weather - High Winds	—	2010	\$313,858.17
Severe Weather - High Winds	—	2010	\$9,057.95
Severe Weather - High Winds	—	2010	\$10,869.54
Severe Weather - High Winds	—	2010	\$181,159.13

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment ^a
Landslide	—	2010	\$1,449.27
Severe Weather - High Winds	—	2010	\$21,286.19
Severe Weather - High Winds	—	2011	\$2,634.24
Flooding/Wind/Landslide	—	2011	\$66,294.96
Landslide	—	2012	\$19,356.21
Severe Weather - High Winds	—	2012	\$4,129.32
Landslide	—	2012	\$10,323.31
Severe Weather - High Winds	—	2012	\$4,430.42
Hail	—	2012	\$51.62
Severe Weather - High Winds	—	2012	\$731.23
Flooding	—	2012	\$2,787,293.67
Severe Weather - High Winds	—	2012	\$5,333.71
Severe Weather - High Winds	—	2013	\$2,882.72
Severe Weather - High Winds	—	2013	\$11,106.92
Severe Weather - High Winds	—	2013	\$18,313.74
Flooding	—	2014	\$500.59
Severe Weather - High Winds	—	2014	\$667.46
Severe Weather - High Winds	—	2015	\$7,608.33
Severe Weather - High Winds	—	2015	\$3,250
Fire - Loma	—	2016	Unknown
Flooding	—	2017	\$6,608,518 ^b

a. Unless otherwise indicated damage assessment values are in 2015 dollars

b. 2017 dollars

1.7 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 1
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include:

- Localized street flooding throughout County.

1.8 HAZARD RISK RANKING

Table 1-12 presents the ranking of the hazards of concern.

1.9 STATUS OF PREVIOUS PLAN ACTIONS

The status of previous actions from the 2011 ABAG LHMP for Santa Clara County can be found in Appendix D of this volume.

Table 1-12. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
1	Wildfire	54	High
2	Severe Weather	33	Medium
3	Flood	18	Medium
3	Landslide	18	Medium
4	Dam and Levee Failure	13	Low
5	Drought	9	Low

1.10 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 1-13 lists the actions that make up the County of Santa Clara hazard mitigation action plan. Table 1-14 identifies the priority for each action. Table 1-15 summarizes the mitigation actions by hazard of concern and the six mitigation types.

1.11 ADDITIONAL RESOURCES

The hazard mitigation plan annex development tool-kit was used in the development of this annex to the Santa Clara Operational Area Hazard Mitigation Plan.

Table 1-13. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SCC-1 —County-Wide CWPP - Maintain and update as appropriate, the County unincorporated CWPP, while expanding the planning scope to integrate the all of the Operational Area's jurisdictions.						
Existing	Wildfire	1, 2, 5, 6	Santa Clara County Fire Department -or- FireSafe Council	Medium	SCCFD General Budget; County OES General Budget; HMGP; PDM; EMPG	Ongoing
SCC-2 —CalFire, South County Fire, and the Santa Clara County Fire Department should prepare for coordinated wildfire response operations through the development of a Wildfire Annex to the County's Emergency Operations Plan						
Existing	Wildfire	1, 3, 5, 6	County OES	Low	SCCFD General Budget; County OES General Budget; HMGP; EMPG	Short-term
SCC-3 —Cal Fire, South County Fire, and the Santa Clara County Fire should continue working together to study the latest research on best practices (i.e. Be Ember Aware) via conferences, seminars and invitations to attend other area FireSafe Council meetings.						
New and Existing	Wildfire	1, 2, 5	Santa Clara County Fire Department	Low	SCCFD General Budget, FireSafe Council General Budget, and South County Fire General Budget; EMPG	Ongoing
SCC-4 —Continue to promote programs that mitigate vegetation fire, such as disease tree removal, defensible space, and FireWise community programs.						
New and Existing	Wildfire	2, 4, 6, 8	Santa Clara County Fire Department	Low	SCCFD General Budget; County OES General Budget; South County Fire General Budget; HMGP; and PDM; EMPG	Ongoing

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SCC-5 —Create Santa Clara County Information Sharing Council (or equivalent) as an institutional receptacle for matters pertaining to infrastructure data-sharing efforts.						
<ul style="list-style-type: none"> • Invite all departments/agencies owning EM related data (including private utilities) • Consider hosting private sector • Host quarterly council meetings 						
New and Existing	All hazards	1, 2, 5	ISD (GIS)	\$150,000 (for all #19 Actions collectively) Medium	SCCFD General Budget, County OES Budget, ISD/GIS Budget, HMGP; EMPG	Short-Term
SCC-6 —Maintain and update a GIS layer of localized flooding “hot spots” throughout the County.						
New and Existing	Flood, Severe Weather	1, 2	SCVWD	\$50,000 Medium	SCVWD General Budget; County ISD/GIS Budget, HMGP; PDM; FMA; EMPG	Short-Term
SCC-7 —Maintain and update GIS to evaluate catastrophic dam failure scenarios.						
New and Existing	Dam and Levee Failure	1, 2	SCVWD	\$100,000 Low	SCVWD General Budget; County ISD/GIS Budget, HMGP; PDM; FMA; EMPG	Short-Term
SCC-8 —Develop, update, and maintain GIS inventories of essential facilities, at-risk buildings and infrastructure and prioritize mitigation projects. Ideas for Implementation:						
<ul style="list-style-type: none"> • Identify critical facilities at risk from natural hazards events. • Develop strategies to mitigate risk to these facilities, or to utilize alternative facilities should natural hazard events cause damage to the facilities in question. • Identify bridges at risk from flood or earthquake hazards. 						
Existing	All hazards	1, 2, 8	ISD (GIS)	\$50,000 Medium	County ISD Budget, County OES Budget, HMGP; PDM; FMA; EMPG	Long-term/Ongoing
SCC-9 —Maintain the WebEOC to up-to-date technology. For example, review the WebEOC vendor's Road Map; assess the vendor technology's fitness to the County's IT infrastructure; consider upgrading to a new system.						
Existing	All hazards	2, 9	ISD (GIS)	\$100,000 Low	County ISD Budget, County OES Budget, Emergency Management Performance Grant Program, HMGP; PDM; FMA; EMPG	Short-Term
SCC-10 —Participate in Statewide effort to collaborate on the spatial data standardization, data sharing platform, common operating procedures.						
Existing	All hazards	1, 5, 9	ISD (GIS)/OES	\$10,000 Low	County ISD Budget, County OES Budget, Emergency Management Performance Grant Program, HMGP; PDM; FMA; EMPG	Ongoing
SCC-11 —Develop and provide the Indoor Mapping, Evacuation Routing to Emergency Response Personnel						
New	Dam and Levee Failure, Earthquake, Flood, Severe Weather, Wildfire, Hazardous Materials	2, 9	ISD (GIS)	Medium	County ISD Budget, Emergency Management Performance Grant Program, HMGP; PDM; FMA; EMPG	Long-Term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SCC-12 —Develop a standard set of maps (digital and hard copy) that should be utilized during exercise and events.						
New and Existing	All hazards	2, 9	ISD (GIS)	\$50,000 Low	County ISD Budget, Emergency Management Performance Grant Program, HMGP; PDM; FMA; EMPG	Short-Term
SCC-13 —Identify county facilities vulnerable to earthquakes and develop appropriate actions. Identify the most seismically vulnerable bridges on county roads.						
Existing	Earthquake	2, 8	ISD (GIS)	\$100,000 Low	County ISD Budget, Fleet and Facilities Budget Emergency Management Performance Grant Program, HMGP; PDM; FMA; EMPG	Long-Term
SCC-14 —Identification and deployment of next generation reverse 911 system (i.e. AlertSCC replacements)						
New	All hazards	6, 9	County Communications	\$300,000 High	County ISD Budget, County OES Budget; County Communications Budget; the State Homeland Security Grant Program	Long-Term
SCC-15 —Deploy Plume Modeling software and enable OES staff to manage data input to assess hazardous materials atmospheric risk						
New and Existing	Hazardous materials, Earthquake	1, 2	ISD (GIS)	\$200,000 Medium	County ISD Budget, County OES Budget; County Public Health Budget; SCCFD; EMPG; the State Homeland Security Grant Program	Long-Term
SCC-16 —Bloomfield Road Settlement Repair (located in Gilroy between Sheldon & Davidson Aves): Project would realign current drainage ditch to dewater the subsurface/ ground water; inject materials to stabilize the subgrade; and, install new AC pavement.						
Existing	Earthquake, Landslide,	6, 8	Roads and Airports	\$3,000,000 High	County Roads and Airports Budget; County OES Budget; HMGP; PDM; FMA	Long-Term
SCC-17 —Shannon Road Slide Repair (between Diduca Way & Santa Rose Dr. in Los Gatos): Soil nail project would cover approximately 1,000 LF.						
Existing	Landslide	6, 8	Roads and Airports	\$2,000,000 High	County Roads and Airports Budget; County OES Budget; HMGP; PDM; FMA	Long-Term
SCC-18 —Miguelito Road Repairs for two road sections (located in east side of San José): Section 1, located near the intersection of Camino Vista Way and Miguelito Road, would replace the current soldier pile wall with a new retaining wall and repave the roadway. Section 2, located near the intersection of Rica Vista Way and Miguelito Road, would repair the slope failure.						
Existing	Landslide	6, 8	Roads and Airports	\$650,000 High	County Roads and Airports Budget; County OES Budget; HMGP; PDM; FMA	Long-Term
SCC-19 —Clayton Road Slide Repair (located near 14194 Clayton Road, San José): Install retaining wall and repair roadway.						
Existing	Landslide	6, 8	Roads and Airports	\$500,000 High	County Roads and Airports Budget; County OES Budget; HMGP; PDM; FMA	Long-Term
SCC-20 —East Dunne Avenue Slide Repair & Road Reconstruction (located in Morgan Hill): Project site is about 0.3 mile from Woodchopper Picnic Area located in Anderson Lake County Park.						
Existing	Landslide	6, 8	Roads and Airports	\$3,500,000 High	County Roads and Airports Budget; County OES Budget; HMGP; PDM; FMA	Long-Term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SCC-21 —Alma Bridge Road Slide Repair (located in Los Gatos): Project site is 0.75 mile south of the Los Gatos Rowing Club@ Lexington Reservoir.						
Existing	Landslide	6, 8	Roads and Airports	\$1,500,000 High	County Roads and Airports Budget; County OES Budget; HMGP; PDM; FMA	Long-Term
SCC-22 —Arastradero Road Slide & Mitigation Project: Located 0.08 mile south of the intersection of Alpine & Arastradero Roads.						
Existing	Landslide	6, 8	Roads and Airports	\$1,000,000 High	County Roads and Airports Budget; County OES Budget; HMGP; PDM; FMA	Long-Term
SCC-23 —Review and implement selected recommendations detailed in the Loma Fire Watershed Emergency Response Team Final Report, October 25, 2016 (CA-SCU-006912). Potential actions may include, but are not limited to: the deployment of an early warning system, infrastructure improvements, establishment of a FireWise community program, waterway clearance, general watershed restoration, etc.						
New and Existing	Wildfire, Flood, Landslide	3, 4, 6, 9	County OES	Medium	County Roads and Airports Budget; County OES Budget; HMGP; PDM; FMA	Long-Term
SCC-24 —Review critical facilities and capital projects for mitigation project potential - including, but not limited to: street flood water drainage, power production maintenance/upgrades, etc.						
Existing	All hazards	3, 6, 8	Fleet and Facilities	Medium	County Roads and Airports Budget; County OES Budget; County Fleet and Facilities Budget; County Roads and Airports Budget; County Planning & Development Budget; HMGP; PDM; FMA, EMPG; the State Homeland Security Grant Program	Short-Term
SCC-25 —Provide technical information and guidance to public on individual risk identification using information sharing/GIS platforms.						
New and Existing	All hazards	1, 4, 6	County ISD	Low	County ISD Budget, County OES Budget; SCCFD; EMPG; the State Homeland Security Grant Program	Short-Term
SCC-26 —Develop strategy to take advantage of post disaster opportunities - through the development of Disaster Recovery Planning, Disaster Cost Recovery Planning, etc.						
New and Existing	All hazards	1, 2, 3, 4, 5, 6, 7, 8	County OES	Medium	County OES Budget; SCCFD; County Finance Agency Budget; EMPG; the State Homeland Security Grant Program; HMGP	Long-Term
SCC-27 —Develop and adopt a COOP for County Departments, as appropriate						
Existing	All hazards	6, 9	County OES	Low	County OES Budget; SCCFD; County ISD; EMPG; the State Homeland Security Grant Program; HMGP	Short-Term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SCC-28 —Maintain existing data as well as gather new data needed to define risks and vulnerability. New data should be integrated into County policies relating to, but not limited to: stormwater management, post-disaster recovery, real estate disclosures, environmental protection, climate change, fire suppression, seismic activity.						
New and Existing	All hazards	1, 2, 3	County OES	Low	County OES Budget; SCCFD; County ISD; EMPG; the State Homeland Security Grant Program; HMGP	Ongoing
SCC-29 —Maintain existing data as well as gather new data needed to define risks and vulnerability. New data should be integrated into County plans relating to, but not limited to: the County's General Plan, Capital Improvement Plan, Stormwater Plan, Habitat Conservation Plan, Community Wildfire Protection Plan, Forest Management Plan, Climate Action Plan, Emergency Operations Plan, Threat & Hazard Identification & Risk Assessment, Post-Disaster Recovery Plan; Continuity of Operations Plan; Public Health Plan						
New and Existing	All hazards	1, 2, 3	County OES	Low	County OES Budget; SCCFD; County ISD; EMPG; the State Homeland Security Grant Program; HMGP	Ongoing
SCC-30 —Develop a Debris Collection and Management Plan						
Existing	Dam and Levee Failure, Earthquake, Flood, Landslide, Severe Storm, Wildfire	2, 6	County Roads and Airports	Medium	County OES Budget; SCCFD; County ISD; County Roads & Airports Budget; County Public Health Budget; EMPG; the State Homeland Security Grant Program; EMPG	Short-Term
SCC-31 —Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP). This will be accomplished through the implementation of floodplain management programs that will, at a minimum, meet the requirements of the NFIP:						
<ul style="list-style-type: none"> Enforcement of the flood damage prevention ordinance Participate in floodplain identification and mapping updates Provide public assistance/information on floodplain requirements and impacts. 						
New and Existing	Flood	1, 3, 4, 7, 8	SCVWD	Low	SCVWD General Budget; HMGP; PDM; FMA	Ongoing
SCC-32 — Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community.						
New	All hazards	2, 3	County OES	Medium	County OES Budget, SCCFD Budget, County Planning & Development Budget	Ongoing
SCC-33 —Develop and implement a program to capture perishable data after significant events (e.g. high water marks, preliminary damage estimates, damage photos) to support future mitigation efforts including the implementation and maintenance of the hazard mitigation plan.						
New and Existing	All hazards	1, 2, 7	County OES	Medium	County OES Budget, SCCFD Budget, County ISD/GIS Budget, County Finance Agency Budget	Long-Term
SCC-34 —Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All hazards	1, 5	County OES	Low	County OES Budget, SCCFD Budget, HMGP; PDM; EMPG	Ongoing
SCC-35 —Coordinate with the private sector on prioritization of critical facilities before and during restoration of utility services.						
Existing	All hazards	5, 6	County OES	Low	County OES Budget	Ongoing

Acronyms used in Sources of Funding: EMPG = the Federal Emergency Management Performance Grant; FMA = the Federal Flood Mitigation Assistance Grant Program; HMGP = The Federal Hazard Mitigation Grant Program; PDM = Federal Pre-Disaster Mitigation Grant Program; SCCFD General Budget = Santa Clara County Fire Department General Budget

Table 1-14. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
SCC-1	4	Medium	Medium	Yes	Yes	Yes	High	Medium
SCC-2	4	Medium	Low	Yes	Yes	Yes	High	Medium
SCC-3	3	Low	Low	Yes	Yes	Yes	High	Medium
SCC-4	4	Medium	Low	Yes	Yes	Yes	High	Medium
SCC-5	3	Medium	Medium	Yes	Yes	Yes	High	Medium
SCC-6	2	Medium	Medium	Yes	Yes	Yes	High	Medium
SCC-7	2	Medium	Low	Yes	Yes	Yes	High	Medium
SCC-8	3	Medium	Medium	Yes	Yes	Yes	Low	Medium
SCC-9	2	Medium	Low	Yes	Yes	Yes	High	Medium
SCC-10	3	Low	Low	Yes	Yes	Yes	Medium	Medium
SCC-11	2	High	Medium	Yes	Yes	Yes	Medium	Medium
SCC-12	2	Low	Low	Yes	Yes	Yes	Medium	Medium
SCC-13	2	Medium	Low	Yes	Yes	Yes	Low	Medium
SCC-14	2	High	High	Yes	Yes	No	Medium	High
SCC-15	2	Medium	Medium	Yes	Yes	Yes	Low	Medium
SCC-16	2	High	High	Yes	Yes	No	Medium	High
SCC-17	2	High	High	Yes	Yes	No	Medium	High
SCC-18	2	High	High	Yes	Yes	No	Medium	High
SCC-19	2	High	High	Yes	Yes	No	Medium	High
SCC-20	2	High	High	Yes	Yes	No	Medium	High
SCC-21	2	High	High	Yes	Yes	No	Medium	High
SCC-22	2	High	High	Yes	Yes	No	Medium	High
SCC-23	4	Medium	Medium	Yes	Yes	Yes	Low	Medium
SCC-24	3	Medium	Medium	Yes	Yes	Yes	High	Medium
SCC-25	3	Low	Low	Yes	Yes	Yes	Medium	Low
SCC-26	8	Medium	Medium	Yes	Yes	Yes	Low	Medium
SCC-27	2	Medium	Low	Yes	Yes	Yes	High	Medium
SCC-28	3	Low	Low	Yes	Yes	Yes	Medium	Medium
SCC-29	3	Low	Low	Yes	Yes	Yes	Medium	Medium
SCC-30	2	Medium	Medium	Yes	Yes	Yes	High	Medium
SCC-31	5	Medium	Low	Yes	Yes	Yes	High	Medium
SCC-32	2	Medium	Medium	Yes	No	Yes	High	Low
SCC-33	3	Medium	Medium	Yes	No	Yes	Low	Low
SCC-34	2	Low	Low	Yes	Yes	Yes	Medium	Low
SCC-35	2	High	Low	No	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

Table 1-15. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a						
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects	7. Climate Resilient
Earthquake	SCC-5, SCC-8, SCC-10, SCC-26, SCC-28, SCC-29, SCC-30, SCC-32, SCC-33, SCC-34	SCC-8, SCC-13, SCC-16, SCC-24	SCC-25		SCC-9, SCC-11, SCC-12, SCC-14, SCC-15, SCC-27, SCC-30, SCC-35		
Wildfire	SCC-1, SCC-3, SCC-5, SCC-8, SCC-10, SCC-23, SCC-26, SCC-28, SCC-29, SCC-30, SCC-32, SCC-33, SCC-34	SCC-1, SCC-4, SCC-8, SCC-24	SCC-1, SCC-4, SCC-25	SCC-4	SCC-2, SCC-9, SCC-11, SCC-12, SCC-14, SCC-27, SCC-30, SCC-35		
Severe Weather	SCC-5, SCC-6, SCC-8, SCC-10, SCC-26, SCC-28, SCC-29, SCC-30, SCC-32, SCC-33, SCC-34	SCC-8, SCC-24	SCC-25		SCC-9, SCC-11, SCC-12, SCC-14, SCC-27, SCC-30, SCC-35		
Flood	SCC-5, SCC-6, SCC-8, SCC-10, SCC-23, SCC-26, SCC-28, SCC-29, SCC-30, SCC-31, SCC-32, SCC-33, SCC-34	SCC-10, SCC-8, SCC-24, SCC-31	SCC-25, SCC-31		SCC-9, SCC-11, SCC-12, SCC-14, SCC-27, SCC-30, SCC-35		
Landslide	SCC-5, SCC-8, SCC-10, SCC-23, SCC-26, SCC-28, SCC-29, SCC-30, SCC-32, SCC-33, SCC-34	SCC-8, SCC-16, SCC-18, SCC-19, SCC-20, SCC-21, SCC-22, SCC-24	SCC-25		SCC-9, SCC-12, SCC-14, SCC-27, SCC-30, SCC-35	SCC-18, SCC-19,	
Dam and Levee Failure	SCC-5, SCC-7, SCC-8, SCC-10, SCC-26, SCC-28, SCC-29, SCC-30, SCC-32, SCC-33, SCC-34	SCC-8,, SCC-24	SCC-25		SCC-9, SCC-11, SCC-12, SCC-14, SCC-27, SCC-30, SCC-35		
Drought	SCC-5, SCC-8, SCC-10, SCC-26, SCC-28, SCC-29, SCC-32, SCC-33, SCC-34	SCC-8, SCC-24	SCC-25		SCC-9, SCC-12, SCC-14, SCC-27, SCC-35		

a. See the introduction to this volume for explanation of mitigation types.

2. CITY OF CAMPBELL

2.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

Joe Cefalu, Captain
70 N. First St.
Campbell, CA 95008
Telephone: 408-866-2702
e-mail Address: jcefulu@cityofcampbell.com

Alternate Point of Contact

Cindy McCormick, Senior Planner
70 N. First St
Campbell, CA 95008
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2.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—1952
- **Current Population**—42,584 (as of January 1, 2016 – California Department of Finance)
- **Population Growth**—According to the state Department of Finance, it is estimated that Campbell experienced a 1.4 percent increase in population between 2014 (41,986) & 2015 (42,584). Although projections are not available for individual cities, the Department of Finance projects that Santa Clara County will experience a 4.25 percent increase in population between 2015 and 2020 and a 9.15 percent increase between 2020 and 2030.
- **Location and Description**—Nestled in the midst of Silicon Valley, Campbell has retained the charm of a small, friendly town while embracing the future. Residents enjoy beautiful natural surroundings, well maintained parks and trails, and easy access to transit and major freeways. The City occupies approximately six square miles of relatively flat land near the south end of the San Francisco Bay. Nearby communities include San José to the west, east and north, and Los Gatos and Saratoga to the south.
- **Brief History**—The City was founded in 1887 and incorporated in 1952 as a general law city. Benjamin Campbell, Campbell's founder, came west in 1846 with his family. In 1851, he bought 160 acres which would later become Campbell's historical downtown core. Although there were efforts to incorporate Campbell in 1906, it was not considered by the voters until 1946, at which time it failed by a narrow margin of 10 votes. Facing the threat of being gobbled up by its voracious neighbors and the impending loss of county services, incorporation advocates won the day on March 11, 1951, by a narrow margin of 50 votes. From the mid-1850s, Campbell was primarily an agricultural production center, with fruits as its major crops. By 1950, however, croplands were beginning to be transformed into residential neighborhoods. Campbell's population doubled during the 1960s, slowed down in the 1970s, increased by 33 percent in the 1980s, and has been limited since 1990. Today, Campbell is a largely built-out suburban community. Campbell has grown from a small farming community with a population of approximately 5,000 to a progressive community with a population of over 42,000.
- **Climate**—Campbell has a Mediterranean climate, generally characterized by mild, wet winters and warm, dry summers. On average, the warmest month of the year is July (average high temperature of 85° F) and the coolest month is January (average low temperature of 39° F). The annual average precipitation

is approximately 23 inches, with the wettest month of the year being February with an average rainfall of approximately 5.1 inches.

- **Governing Body Format**—Campbell operates under a Council/Manager form of government. Campbell is a General Law City with a five-member Council including a rotating Mayor’s position. The City Council is elected to four-year terms. The City Manager is the chief administrative officer of the city, acts as a liaison between the City Council and employees, and appoints department heads and all other staff. City departments include the City Manager/City Clerk’s Office, Community Development, Finance, Recreation & Parks, Public Safety (Police), and Public Works. The city has several commissions and boards including the Bicycle and Pedestrian Advisory Committee; Building Board of Appeals; Civic Improvement Commission; Historic Preservation Board; Parks and Recreation Commission; Planning Commission; Rental Increase Fact Finding Committee; Successor Agency; and Youth Commission. The City Council assumes responsibility for the adoption of this plan: the City Manager will oversee its implementation.

2.3 DEVELOPMENT TRENDS

Of the approximately 16,000 housing units in the City, 58 percent are single-family homes, 40 percent are multi-family units, and 2 percent are mobile homes or other types of residential options. The city has grown and changed since it adopted its current General Plan in 2001. The City of Campbell has adopted a variety of special area plans to protect the small town residential character and encourage commercial revitalization efforts in areas that are showing signs of age and obsolescence. In 2016, the city initiated a multi-year process of updating their General Plan. This General Plan update, referred to as the Envision Campbell Plan, looks ahead to the year 2040, making adjustments based on current issues and emergent trends, and positioning the City of Campbell for the next 20-25 years. Table 2-1 summarizes development trends in the performance period since development of the previous hazard mitigation plan and expected future development trends.

2.4 CAPABILITY ASSESSMENT

2.4.1 Resources for the 2017 Planning Initiative

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for inclusion into the 2017 Multi-Jurisdiction Hazard Mitigation Plan for both Volume 1 and Volume 2 (City of Campbell Annex). All of the below items were additionally reviewed as part of the full capability assessment for the City of Campbell.

- **City of Campbell General Plan**—The General Plan, including the Land Use and Safety Elements, were reviewed for information regarding goals and policies consistent with hazard mitigation for carry over as goals and objectives.
- **City of Campbell Municipal Code**—The Municipal Code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Flood Damage Prevention Ordinance**—The Flood Damage Prevention Ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Capital Improvements Plan**—The Capital Improvements Plan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.
- **Technical Reports and Information**—Outside resources and references used to complete the City of Campbell Annex are identified in Section 2.12 of this Annex.

Table 2-1. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan? <ul style="list-style-type: none"> If yes, give the estimated area annexed and estimated number of parcels or structures. 	No. The last land annexed occurred just before adoption of the 2012 hazard mitigation plan. N/A					
Is your jurisdiction expected to annex any areas during the performance period of this plan? <ul style="list-style-type: none"> If yes, please describe land areas and dominant uses. If yes, who currently has permitting authority over these areas? 	No N/A N/A					
Are any areas targeted for development or major redevelopment in the next five years? <ul style="list-style-type: none"> If yes, please briefly describe, including whether any of the areas are in known hazard risk areas 	Yes It is anticipated that the following properties will be redeveloped within the next five years: <ul style="list-style-type: none"> Mixed Use development on E Campbell Ave Commercial development on S. Bascom Ave They are located in an area with potential for liquefaction and possible inundation from a dam failure					
How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?		2011	2012	2013	2014	2015
	Total Number of Permits	1,122	1,276	1,375	1,276	1,605
Please provide the number of permits for each hazard area or provide a qualitative description of where development has occurred.	The entire City of Campbell is approximately 4 miles north of a major dam (Lexington Reservoir) as well as in close proximity to the San Andreas Fault. Development has occurred throughout the city during the performance period for this plan. For hazards with a clearly defined extent and location, the City cannot estimate development impacts. For hazards with impacts city-wide, it is safe to assume that this new development could be subject to impacts from those hazards. However, it is important to note that all new development was subject to the regulatory capabilities identified in this annex.					
Please describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	The current General Plan estimated "buildout" would accommodate a population level of approximately 41,825. The 2010 census found the population to be 39,349. The California Department of Finance estimated Campbell's population to be 41,986 as of January 1, 2015 and 42,584 as of January 1, 2016. The issue of "buildout" will be reviewed again as part of the General Plan update currently underway.					

2.4.2 Full Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 2-2. An assessment of fiscal capabilities is presented in Table 2-3. An assessment of administrative and technical capabilities is presented in Table 2-4. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 2-5. An assessment of education and outreach capabilities is presented in Table 2-6. Classifications under various community mitigation programs are presented in Table 2-7. Development and permitting capabilities are presented in Table 2-8, and the community's adaptive capacity for the impacts of climate change is presented in Table 2-9.

Table 2-2. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment: California Building Code, California Code of Regulations, Title 24, Campbell Municipal Code Title 18</i>	Yes	Yes (State)	Yes	No
Zoning Code <i>Comment: Campbell Municipal Code Title 21, Article 1 through 6</i>	Yes	No	No	Yes
Subdivisions <i>Comment: Campbell Municipal Code Title 20</i>	Yes	No	Yes	Yes
Stormwater Management <i>Comment: Santa Clara Valley Water District</i>	Yes	Yes	Yes	Yes
Post-Disaster Recovery <i>Comment: None Located; Recovery plan development would be a coordinated effort</i>	Yes	No	No	Yes
Real Estate Disclosure <i>Comment: California Civil Code §1102 et seq.</i>	No	No	Yes	No
Growth Management <i>Comment: California Government Code §65300 et seq.</i>	Yes	No	Yes	No
Site Plan Review <i>Comment: Campbell Municipal Code Chapter 21.42</i>	Yes	No	No	Yes
Environmental Protection <i>Comment: California Environmental Quality Act, Public Resources Code, Section 21000 et seq.</i>	Yes	Yes (State)	Yes	No
Flood Damage Prevention <i>Comment: FEMA, Campbell Municipal Code Chapter 21.22</i>	Yes	Yes (State)	Yes	Yes
Emergency Management <i>Comment: Campbell Municipal Code Title 2.28</i>	Yes	Yes (State)	Yes	No
Climate Change <i>Comment: The City has recently acquired the services of DeNovo Planning Group to prepare a Climate Action Plan (CAP) for the City in coordination with an update of the City's General Plan. California Senate Bill 379</i>	Yes - In progress	No	Yes	Yes - In progress
Other: Fire Code <i>Comment: Campbell Municipal Code Title 17</i>	Yes	Yes (State)	Yes	No
Planning Documents				
General Plan <i>Is the plan compliant with Assembly Bill 2140? The General Plan includes a Health and Safety Element</i> <i>Comment: The City of Campbell's General Plan is currently being updated.</i>	Yes	No	Yes	Yes - In progress
Capital Improvement Plan <i>Comment: The 5-year CIP is updated annually.</i>	Yes	No	No	Yes
Floodplain or Watershed Plan <i>Comment: Santa Clara Valley Water District</i>	Yes	Yes	Yes	Yes
Stormwater Plan <i>Comment: Campbell Municipal Code Title 14, Chapter 14.02</i>	Yes	Yes	Yes	Yes
Urban Water Management Plan <i>Comment: Santa Clara Valley Water District</i>	No	Yes	Yes	No
Habitat Conservation Plan <i>Comment: U.S. Fish and Wildlife Service</i>	No	Yes	No	No
Economic Development Plan <i>Comment: General Plan identifies economic development strategies</i>	Yes	No	No	No

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Shoreline Management Plan <i>Comment: Not applicable</i>	No	No	No	No
Community Wildfire Protection Plan <i>Comment: Santa Clara County Fire Department</i>	No	Yes	No	No
Forest Management Plan <i>Comment: None Located</i>	No	No	No	No
Climate Action Plan <i>Comment: City of Campbell Climate Action Plan in progress</i>	In progress	No	No	In progress
Comprehensive Emergency Management Plan <i>Comment: The plan was revised and adopted by Council in 2014</i>	Yes	No	Yes	No
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment: Santa Clara County Office of Emergency Services</i>	No	Yes	No	No
Post-Disaster Recovery Plan <i>Comment: The plan was revised and adopted by Council in 2014</i>	Yes	No	No	No
Continuity of Operations Plan <i>Comment: The plan was revised and adopted by Council in 2014</i>	Yes	No	No	No
Public Health Plan <i>Comment: The plan was revised and adopted by Council in 2014</i>	Yes	No	No	No
Other: <i>Comment: None Located</i>	N/A	N/A	N/A	N/A

Table 2-3. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes: park impact fees, vehicle impact fees
Other	No

Table 2-4. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Multiple staff in Community Development Department and Public Works Department
Engineers or professionals trained in building or infrastructure construction practices	Yes	Multiple staff in Building Department and Public Works Department
Planners or engineers with an understanding of natural hazards	Yes	Multiple staff in Building Department and Public Works Department
Staff with training in benefit/cost analysis	No	
Surveyors	Yes	Contract staff
Personnel skilled or trained in GIS applications	Yes	Community Development Department and Public Works Department
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Police Department/Captain
Grant writers	Yes	Comm. Dev./Public Works/City Manager

Table 2-5. National Flood Insurance Program Compliance

Criteria	Response
What local department is responsible for floodplain management?	Community Development Department
Who is your floodplain administrator? (department/position)	Community Development Director
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	2014
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	3/15/2012
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If no, please state why.	No Some of the maps are outdated. Property owners must apply for a letter of map amendment/revision in these cases.
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	Yes FEMA E273 class
Does your jurisdiction participate in the Community Rating System (CRS)? • If yes, is your jurisdiction interested in improving CRS Classification? • Is your jurisdiction interested in joining the CRS program?	No No
How many flood insurance policies are in force in your jurisdiction? • What is the insurance in force? • What is the premium in force?	85 ^a \$23,936,300 ^a \$48,148 ^a
How many total loss claims have been filed in your jurisdiction? • How many claims were closed without payment/are still open? • What were the total payments for losses?	0 per FEMA website ^a n/a per FEMA website ^a n/a per FEMA website ^a

a. According to FEMA statistics as of October 31, 2016

Table 1-6. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	No
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes We use Twitter/Nextdoor to inform residents about preparedness and local hazards
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes CERT
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Alert SCC and CodeRED

Table 2-7. Community Classifications

	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	Yes	2	2010
Public Protection	Yes	ISO 2	unknown
Storm Ready	Yes	N/A	unknown
Firewise	No	N/A	N/A

Table 2-8. Development and Permit Capabilities

Criterion	Response
Does your jurisdiction issue development permits? • If no, who does? If yes, which department?	Yes Planning and Building
Does your jurisdiction have the ability to track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	No, however staff has informally identified some underdeveloped areas that could be redeveloped.

Table 2-9. Adaptive Capacity for Climate Change

Adaptive Capacity Assessment	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts	Low
<i>Comment: Our jurisdiction rating should improve within the next two years because the City has recently acquired the services of DeNovo Planning Group to prepare a Climate Action Plan (CAP) for the City in coordination with an update of the City's General Plan.</i>	
Jurisdiction-level monitoring of climate change impacts	Low
<i>Comment: Our jurisdiction rating should improve within the next two years because the implementation and monitoring program developed for the CAP will include a summary matrix that identifies the priority for implementation of each measure, the timeframe for implementation of each measure, and identify the agency, department, or party responsible for measure implementation. A monitoring and reporting protocol will be developed as a tool for the City to use after adoption of the CAP, to ensure that priority measures are properly implemented within the timeframes identified.</i>	
Technical resources to assess proposed strategies for feasibility and externalities	Low
<i>Comment: Our jurisdiction rating should improve within the next two years because DeNovo Planning Group proposes to utilize a greenhouse gas (GHG) software program to estimate the effectiveness of each measure or policy in reducing GHG levels and in meeting a Target Reduction Goal.</i>	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Low
<i>Comment: Our jurisdiction rating should improve within the next two years because the Climate Action Plan being prepared by DeNovo Planning Group will include an Existing Emissions Inventory that provides a detailed quantification of greenhouse gases being generated in Campbell during the base year.</i>	
Capital planning and land use decisions informed by potential climate impacts	Low
<i>Comment: Our jurisdiction rating should improve within the next two years because the CAP will also provide a summary table of measures that would be required by future development projects. This tool will provide a clear and straight-forward reference to the development community, and will assist staff in their review of development projects for consistency with the CAP. This tool will also assist with the CEQA review of subsequent projects, and will detail how projects may be eligible for streamlined CEQA review if appropriate CAP measures are correctly integrated into project plans.</i>	
Participation in regional groups addressing climate risks	Low
<i>Comment: Unknown at this time</i>	
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Low
<i>Comment: Our jurisdiction rating should improve within the next two years because the City Council will determine the appropriate target for the level of greenhouse gas emissions the CAP seeks to reduce in future years.</i>	
Identified strategies for greenhouse gas mitigation efforts	Low
<i>Comment: Our jurisdiction rating should improve within the next two years because the Climate Action Plan being prepared by DeNovo Planning Group will include a range of strategies, measures, and programs that the City and the community may implement to reduce the generation of greenhouse gas emissions (GHGs) within the city. The Climate Action Plan being prepared by DeNovo Planning Group will include a wide range of measures to reduce greenhouse gas emissions from a variety of sources, including energy use, building design and materials, transportation, and solid waste disposal.</i>	
Identified strategies for adaptation to impacts	Low
<i>Comment: Our jurisdiction rating should improve within the next two years because the CAP will include all of the information contained in the Baseline Emissions Inventory, including a discussion of existing climate change science, the effects and impacts of climate change (with particular emphasis on how Campbell may be impacted), and a summary of actions currently being taken by State, Federal and local agencies on climate change.</i>	
Champions for climate action in local government departments	Low
<i>Comment: Our jurisdiction rating should improve within the next two years because several Departments will be involved in the General Plan update and the Climate Action Plan that will be coordinated with that effort.</i>	
Political support for implementing climate change adaptation strategies	High
<i>Comment: The City Council has authorized the preparation of the Climate Action Plan, illustrating their support for considering climate change adaptation strategies.</i>	
Financial resources devoted to climate change adaptation	Low
<i>Comment: It is unknown at this time. However, our jurisdiction rating should improve within the next two years because the CAP will identify possible funding sources for the implementation of proposed measures.</i>	

Adaptive Capacity Assessment	Jurisdiction Rating
Local authority over sectors likely to be negative impacted	Low
<i>Comment: It is unknown at this time. However, our jurisdiction rating should improve within the next two years in this regard.</i>	
Public Capacity	
Local residents knowledge of and understanding of climate risk	Unknown
<i>Comment: Our jurisdiction rating should improve within the next two years because once completed, the Climate Action Plan being prepared by DeNovo Planning Group will help inform residents of climate risk.</i>	
Local residents support of adaptation efforts	Unknown
<i>Comment: It is unknown at this time how supportive residents will be of the adaption efforts proposed by DeNovo Planning Group and accepted by the City Council.</i>	
Local residents' capacity to adapt to climate impacts	Unknown
<i>Comment: It is unknown at this time what the local residents' capacity to adapt to climate impacts will be.</i>	
Local economy current capacity to adapt to climate impacts	Unknown
<i>Comment: It is unknown at this time what the local economy current capacity to adapt to climate impacts will be.</i>	
Local ecosystems capacity to adapt to climate impacts	Unknown
<i>Comment: It is unknown at this time what the local ecosystems capacity to adapt to climate impacts will be.</i>	

2.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

This section describes the process for integrating the hazard mitigation plan into local planning mechanisms.

2.5.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan:

- **Emergency Operations Plan (EOP)**—The EOP's purpose is to help identify hazards in Campbell and enhance the development of our LHMP. These, and other goals, are written in the plan under the "Purpose" and "Scope" section of the plan.

2.5.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration:

- **General Plan**—This plan is currently being developed and will be used to assist in the growth and land development of our community. The plan will introducing green elements and environmental resource elements so we can help lower things such as greenhouse gas emissions, reducing waste, improving energy and water efficiency and complying with state and nationwide standards. The updated safety element will also comply with California State requirements regarding flood, wildfire and climate change. The risk assessment developed as part of the hazard mitigation plan update will be used to inform the development of the General Plan
- **Climate Action Plan**—This plan is under development and will be included in the General Plan.
- **Updated Floodplain Plan**—This updated plan will help us to better identify flood risks, their impact on the community and a prioritized action plan for reducing these flood risks.
- **Capital Improvement Plan**—There are several projects identified in this plan which could, at a later date, be integrated with this plan to help to mitigate some risks.
- **Other Legal and Regulatory Capabilities**—Those capabilities identified as providing an integration opportunity in Table 2-1 will be reviewed and updated to include information on hazard risk reduction as feasible and appropriate.

2.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 2-10 lists all past occurrences of natural hazards within the jurisdiction.

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Storm	1203	2/1998	Unknown
Severe Storm	1155	1/1997	Unknown
Severe Storm	758	2/1996	Unknown
Severe Storm	1046	3/1995	Unknown
Severe Storm	1044	1/1995	Unknown
Severe Freeze	894	12/19/90	\$31,800
Loma Prieta	845	10/17/1989	Unknown
Severe Storm	651	12/1981	Unknown
Drought	3023	1/1977	Unknown

2.7 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include:

- Critical City infrastructure was built before modern seismic codes and are in need of retrofitting.
- The generators responsible for supporting our City's critical infrastructure (EOC, City Hall, etc.) are over 25 years old and could be replaced.
- There are multi-family unit structures within the City with soft-story construction.

2.8 HAZARD RISK RANKING

Table 2-11 presents the ranking of the hazards of concern.

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe Weather	33	High
3	Dam and Levee Failure	18	Medium
3	Flood	18	Medium
4	Drought	9	Low
4	Landslide	9	Low
5	Wildfire	0	Low/None

2.9 STATUS OF PREVIOUS PLAN ACTIONS

The status of previous actions from the 2011 ABAG LHMP for the City of Campbell can be found in Appendix D of this volume.

2.10 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 2-12 lists the actions that make up the City of Campbell hazard mitigation action plan. Table 2-13 identifies the priority for each action. Table 2-14 summarizes the mitigation actions by hazard of concern and the six mitigation types.

2.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

A dam inundation study to include Lexington and Stevens Creek Reservoirs is needed.

2.12 ADDITIONAL RESOURCES

The hazard mitigation plan annex development tool-kit was used in the development of this annex to the Santa Clara Operational Area Hazard Mitigation Plan. This tool-kit included NOAA storm events data.

Table 2-12. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
CB-1 —Update the General Plan, which will assist in directing the growth and land development of our community, so we can better address environmental concerns and hazards during future growth.						
New and Existing	All Hazards	1, 2, 3, 4, 8	Planning/DeNovo Planning Group*	Low	General Plan Maintenance Fees	Short-term
CB-2 —Develop a Climate Action Plan to help our community incorporate green elements and environmental resource elements so we can help lower greenhouse gas emissions, reducing waste, improving energy and water efficiency and complying with state and nationwide standards.						
New	All Hazards	1, 2, 6	Planning/DeNovo Planning Group*	Low	General Plan Maintenance Fees	Short-term
CB-3 —Update our Municipal Code (Zoning, Subdivision, Flood Prevention, Site Plan Review) to adjust specific standards for achieving our General Plan goals and policies, which will help to mitigate risk in our community.						
New and Existing	All Hazards	1, 2, 3, 4, 6, 8	Planning	Medium	Capital Improvement Project Reserve (CIPR)	Long-term
CB-4 —Develop a Green Infrastructure Master Plan to increase roadway safety and address storm run-off and drainage issues to prevent flooding and lessen the environmental impacts.						
New	Flood, Severe weather	1, 2, 3, 5, 6, 7, 8	Public Works	Low	Staff Time/Storm Water Fees	Short-term
CB-5 —Replace the CAD/RMS system in the Police Department to improve emergency communications and improve the functionality of this critical resource.						
Existing	All Hazards	2, 4, 5, 9	Police Department	Medium	CIPR, Possible Grant	Short-term
CB-6 —Develop a post disaster recovery plan and debris management plan.						
Existing	Earthquake, Flood, Severe Weather, Dam and Levee Failure, Landslide	2, 3, 4	Emergency Management	Medium	EMPG	Long-term
CB-7 —Complete Unreinforced Masonry (URM) Abatement Program to ensure all private properties identified in the community have completed retrofitting of their buildings.						
Existing	Earthquake	1, 2, 3, 4, 8	Building Department	Medium	Staff time, General Fund, Possible HMGP and PDM	Short-term
CB-8 —Where appropriate, support retro-fitting, purchase or relocation of critical structures located in high hazard area and prioritize those structures that have experienced repetitive losses.						
Existing	All Hazards	1, 2, 6, 7, 8, 9	Public Works	High	HMGP, PDM, FMA	Short-term
CB-9 —Complete the Campisi Bridge Feasibility Study to enhance and improve the structural stability of a key roadway and bridge that will be used for ingress and egress over a key waterway.						
New	Earthquake	1, 2, 6, 7, 8	Public Works	High	Possible Grant/CIPR	Long-term
CB-10 —Develop the San Tomas Creek Trail Plan to provide greater recreational opportunities for Campbell and enhance natural environment hazard buffers						
New	Flood	2, 5, 6, 8	Public Works	High (\$2 million)	CIPR/Possible Local Grant	Long-term
CB-11 —Silicon Valley Radio Interoperability Authority Emergency Radio Replacement – improve emergency communications and the ability to communicate with multiple agencies across the Operational Area.						
Existing	All Hazards	1, 2, 4, 5, 9	Police Department	Medium	CIPR, Possible Grant	Short-term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
CB-12 —Support efforts to retrofit privately owned buildings with soft-story construction.						
Existing	Earthquake	2, 3, 8	Public Works	Low	General Funds, Possible sub applicant for HMGP, PDM	Long-term
CB-13 — Actively participate in the plan maintenance protocols outlined in Volume 1 of the hazard mitigation plan.						
New and Existing	All Hazards	1, 5	Police Department/Community Development	Low	Staff Time, General Funds	Short-term
CB-14 — Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP). This will be accomplished through the implementation of floodplain management programs that will, at a minimum, meet the requirements of the NFIP:						
<ul style="list-style-type: none"> • Enforcement of the flood damage prevention ordinance • Participate in floodplain identification and mapping updates • Provide public assistance/information on floodplain requirements and impacts. 						
New and Existing	Flood	1, 2, 3, 4, 7, 8	Community Development	Low	Staff Time, General Funds	Ongoing

* Indicates consultant who will be leading the planning effort

Table 2-13. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
CB-1	5	High	Low	Yes	No	Yes	High	Low
CB-2	3	High	Low	Yes	No	Yes	High	Low
CB-3	6	Medium	Medium	Yes	No	No	Medium	Low
CB-4	7	Medium	Low	Yes	No	Yes	Low	Low
CB-5	4	High	Medium	Yes	Yes	Yes	Medium	Medium
CB-6	5	Medium	Medium	Yes	Yes	No	Medium	Medium
CB-7	5	Medium	Medium	Yes	No	Yes	High	Low
CB-8	6	High	High	Yes	Yes	No	Medium	High
CB-9	5	Medium	High	No	Possible	No	Low	High
CB-10	5	Medium	High	No	Possible	No	Low	Medium
CB-11	5	High	Medium	Yes	Yes	Yes	High	Medium
CB-12	3	High	Low	Yes	Possibly	Yes	Medium	Medium
CB-13	2	Low	Low	Yes	No	Yes	High	Low
CB-14	6	Medium	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

Table 2-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a						
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects	7. Climate Resilient
Earthquake	CB-1, CB-2, CB-3, CB-4, CB-7, CB-13	CB-3, CB-7, CB-8, CB-9, CB-12	CB-1, CB-2, CB-5	CB-2, CB-4, CB-9, CB-10	CB-5, CB-6, CB-8, CB-11	CB-7, CB-8, CB-9	
Severe Weather	CB-2, CB-3, CB-4, CB-13	CB-7, CB-8, CB-9	CB-1 CB-2, CB-5	CB-2, CB-4, CB-9, CB-10	CB-5, CB-6, CB-8, CB-11	CB-8, CB-9	CB-4
Dam and Levee Failure	CB-1, CB-3, CB-4, CB-13, CB-14	CB-7, CB-8, CB-9, CB-14	CB-1, CB-2, CB-5, CB-14	CB-2, CB-3, CB-4, CB-9, CB-10	CB-5, CB-6, CB-8, CB-11	CB-7, CB-8, CB-9	
Flood	CB-1, CB-3, CB-4, CB-13, CB-14	CB-7, CB-8, CB-9, CB-14	CB-1, CB-2, CB-5, CB-14	CB-2, CB-3, CB-4, CB-9, CB-10	CB-5, CB-6, CB-8, CB-11	CB-7, CB-8, CB-9	
Drought	CB-2, CB-3, CB-13			CB-9, CB-10	CB-5, CB-11		CB-4
Landslide	CB-1, CB-3, CB-4, CB-13	CB-4, CB-7, CB-8, CB-9	CB-1, CB-2, CB-6	CB-2, CB-3, CB-4, CB-9, CB-10	CB-5, CB-6, CB-11	CB-7, CB-8, CB-9	

a. See the introduction to this volume for explanation of mitigation types.

3. CITY OF CUPERTINO

3.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

Timm Borden, Director of Public Works
10300 Torre Avenue
Cupertino, CA 95014
Telephone: 408-777-3354
e-mail Address: timmb@cupertino.org

Alternate Point of Contact

Chad Mosley, Senior Civil Engineer
10300 Torre Avenue
Cupertino, CA 95014
Telephone: 408-777-3354
e-mail Address: chadm@cupertino.org

3.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—1955
- **Current Population**—58,185 as of January 1, 2016
- **Population Growth**—Based on the data tracked by the state Department of Finance, Cupertino has experienced a relatively flat rate of growth. The overall population increased only 0.3 percent in 2015.
- **Location and Description**—Cupertino, California is located in the heart of Silicon Valley against the foothills of the Santa Cruz Mountains. With a population of almost 60,000 residents within 13-square miles, Cupertino is 42 miles south of San Francisco and on the western edge of Santa Clara County. The city enjoys convenient access from Highways 280 and 85 and is situated along Stevens Creek Boulevard. The City shares borders with San José to the east and south, Sunnyvale to the north, Santa Clara to the northeast, and Los Altos to the northwest.
- **Brief History**—In 1776, Spanish explorer Captain Juan Bautista de Anza led a group up the coast of California. During the expedition, the group encamped in what is now Cupertino. Anza's cartographer christened the creek next to the encampment the Arroyo San Joseph Cupertino (known today as Stevens Creek) in honor of his patron, San Guiseppa (San Joseph) of Copertino, Italy. The village of Cupertino sprang up at the crossroads of Saratoga-Sunnyvale Road (now DeAnza Boulevard) and Stevens Creek Boulevard. The initial primary economic activity was fruit agriculture, including prune, plum, apricot, and cherry orchards, as well as wineries. Cupertino officially became the 13th city in Santa Clara County on October 10, 1955.
- **Climate**—Cupertino has mild weather, wet winters and mild, dry summers. Averages in January range from 38.7 °F (3.7 °C) to 58.2 °F (14.6 °C). Averages in July range from 54.1 °F (12.3 °C) to 82.0 °F (27.8 °C). The average rainfall is 14.9 inches.
- **Governing Body Format**—The City of Cupertino is governed by a five-member council. The City consists of five departments which are overseen by the City Manager: Administrative Services, Community Development, Information Services, Public Works, and Recreation and Community Services. The City has thirteen commissions and committees, which report to the City Council. The City Council appoints the City Manager. The City Council is responsible for adopting this plan. The City Manager is responsible for overseeing its implementation.

3.3 DEVELOPMENT TRENDS

Cupertino is considered one of the most prestigious cities in which to live and work within Silicon Valley and the San Francisco Bay Area. Because Cupertino is a mature, 90 percent built-out city, we focus on business retention and revitalization. Cupertino is world renowned as the home of high-tech giants, such as Apple, Inc. and Seagate Technologies, and as a community with stellar public schools. DeAnza College, one of the largest single-campus community colleges in the country, is another major employer and a magnet for attracting local and international students. The City's proactive economic development efforts have resulted in an innovative environment for start-ups and growing companies to thrive. The City strives to retain and attract local companies through active outreach and a responsive and customer-oriented entitlement process. Cupertino is excited to have a number of new mixed-use development projects in final construction phases and almost fully leased, which will provide more retail and dining options, as well as provide additional housing opportunities to meet the needs of the growing community. Apple Inc.'s planned new corporate campus is under construction and will include 2.8 million square feet of office and R&D space north of Highway 280 between Wolfe Road and Tantau Avenue. Table 3-1 summarizes development trends in the performance period since development of the previous hazard mitigation plan and expected future development trends.

Table 3-1. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan?	No					
• If yes, give the estimated area annexed and estimated number of parcels or structures.	N/A					
Is your jurisdiction expected to annex any areas during the performance period of this plan?	Yes					
• If yes, please describe land areas and dominant uses.	Predominantly single family residential developed valley floor property to the east of the city, a portion of which may be located in liquefaction-inundation zones along the Saratoga Creek and could also be subject to Wetland Fee Zones under the Santa Clara County Habitat Conservation Plan.					
• If yes, who currently has permitting authority over these areas?	Santa Clara County					
Are any areas targeted for development or major redevelopment in the next five years?	Yes					
• If yes, please briefly describe, including whether any of the areas are in known hazard risk areas	Certain properties in the city have entitlements for development in the long term. None are in known hazard risk areas; all are on the valley floor.					
How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?		2011	2012	2013	2014	2015
	Single Family	59	50	56	42	51
	Multi-Family	0	3	3	0	2
	Other (commercial, mixed use, etc.)	4	3	7	6	7
Please provide the number of permits for each hazard area or provide a qualitative description of where development has occurred.	The City has not historically had the ability to track development by hazard area. Development has occurred throughout the city during the performance period for this plan. For hazards with a clearly defined extent and location, the City cannot estimate development impacts. For hazards with impacts city-wide, it is safe to assume that this new development could be subject to impacts from those hazards. However, it is important to note that all new development was subject to the regulatory capabilities identified in this annex.					
Please describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	The City is largely built out with some portions along the commercial corridors that are underdeveloped and could be redeveloped as infill development sites.					

3.4 CAPABILITY ASSESSMENT

3.4.1 Resources for the 2017 Planning Initiative

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for inclusion into the 2017 Multi-Jurisdiction Hazard Mitigation Plan for both Volume 1 and Volume 2 (Cupertino Annex). All of the below items were additionally reviewed as part of the full capability assessment for Cupertino.

- **Cupertino General Plan**—The General Plan, including the Land Use and Safety Elements, were reviewed for information regarding goals and policies consistent with hazard mitigation for carry over as goals and objectives.
- **Cupertino Municipal Code**—The Municipal Code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Flood Damage Prevention Ordinance**—The Flood Damage Prevention Ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Capital Improvements Plan**—The Capital Improvements Plan was reviewed to identify cross-planning initiatives.
- **Technical Reports and Information**—Outside resources and references used to complete the Cupertino Annex are identified in Section 3.11 of this Annex.

3.4.2 Full Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 3-2. An assessment of fiscal capabilities is presented in Table 3-3. An assessment of administrative and technical capabilities is presented in Table 3-4. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 3-5. An assessment of education and outreach capabilities is presented in Table 3-6. Classifications under various community mitigation programs are presented in Table 3-7. Development and permitting capabilities are presented in Table 3-8, and the community's adaptive capacity for the impacts of climate change is presented in Table 3-9.

Table 3-2. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
2016 California Code of Regulations	Yes	Yes	Yes	No
<i>Comment: City of Cupertino and Santa Clara County Fire Dept. Jurisdiction; Cupertino Municipal Code Title 16: Buildings and Construction</i>				
Zoning Code	Yes	No	No	No
<i>Comment: Cupertino Municipal Code, Title 19: Zoning</i>				
Subdivisions	Yes	Yes	Yes	No
<i>Comment: Cupertino Municipal Code, Title 18: Subdivisions; California Subdivision Map Act</i>				
Stormwater Management	Yes	Yes	Yes	No
<i>Comment: Cupertino Municipal Code Title 9.18: Stormwater Pollution Prevention and Watershed Protection; State Water Resources Control Board</i>				
Post-Disaster Recovery	No	No	No	No
<i>Comment: None located.</i>				
Real Estate Disclosure	No	No	Yes	No
<i>Comment: California Civil Code §1102 et seq.</i>				
Growth Management	Yes	Yes	Yes	No
<i>Comment: Local Agency Formation Commission; California Government Code §65300 et seq.</i>				
Site Plan Review	Yes	No	No	No
<i>Comment: Cupertino Municipal Code Title 19: Zoning</i>				
Environmental Protection	Yes	Yes	Yes	No
<i>Comment: Cupertino General Plan, Cupertino Municipal Code Title 9: Health and Sanitation; California Environmental Quality Act (Guideline: California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387)</i>				
Flood Damage Prevention	Yes	Yes	Yes	Yes
<i>Comment: Cupertino Municipal Code Title 16.52: Prevention of Flood Damage; State Dept. of Water Resources, FEMA, Santa Clara Valley Water District</i>				
Emergency Management	Yes	Yes	Yes	No
<i>Comment: Santa Clara County Fire; Cupertino Municipal Code Title 2.40: Disaster Council</i>				
Climate Change	Yes	No	Yes	Yes
<i>Comment: General Plan Environmental Resources and Sustainability Element & Cupertino Climate Action Plan; California SB-379</i>				
Other:	No	No	No	No
<i>Comment: None Located</i>				
Planning Documents				
General Plan	Yes	No	No	No
<i>Is the plan compliant with Assembly Bill 2140? Yes</i>				
<i>Comment: General Plan: Community Vision 2015-2040; Last adopted October 2015</i>				
Capital Improvement Plan	Yes	No	No	No
<i>How often is the plan updated? Annually</i>				
<i>Comment: Part of adopted budget</i>				
Floodplain or Watershed Plan	No	Yes	No	Yes
<i>Comment: No plan identified; Santa Clara Valley Water District – Flood Control</i>				
Stormwater Plan	Yes	No	No	No
<i>Comment: Storm Drain Master Plan</i>				
Urban Water Management Plan	No	Yes	Yes	No
<i>Comment: Municipal Regional Permit, State Water Resources Control Board</i>				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Habitat Conservation Plan <i>Comment: Cupertino is outside of the SCC Habitat Conservation Plan Permit Area</i>	No	No	No	No
Economic Development Plan <i>Comment: Economic Development Strategic Plan</i>	Yes	No	No	No
Shoreline Management Plan <i>Comment: None located</i>	No	No	No	No
Wildland Urban Interface Area Plan <i>Comment: Santa Clara County Community Wildfire Protection Plan, June 2016</i>	Yes	Yes	Yes	No
Forest Management Plan <i>Comment: None located</i>	No	No	No	No
Climate Action Plan <i>Comment: Cupertino Climate Action Plan</i>	Yes	No	Yes	Yes
Comprehensive Emergency Management Plan <i>Comment: Santa Clara County Operational Area Emergency Management Plan</i>	Yes	No	No	No
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment: Urban Area Security Initiative THIRA – 2016; UASI is required to develop a THIRA as a condition of grant funding. As a jurisdiction within the Santa Clara Operational Area, Cupertino is covered by UASI.</i>	No	Yes	Yes (Partial)	No
Post-Disaster Recovery Plan <i>Comment: None located</i>	No	No	No	No
Continuity of Operations Plan <i>Comment: None located</i>	No	No	No	No
Public Health Plan <i>Comment: None located</i>	No	No	No	No
Other: <i>Comment: None located</i>	No	No	No	No

Table 3-3. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No (City does not manage these utilities)
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	No

Table 3-4. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Community Development/Director, Assistant Director, Principal Planner, Senior Planner, Associate Planner, Assistant Planners Public Works/Director, Senior Civil Engineer, Associate Civil Engineer, Senior Engineering Technician
Engineers or professionals trained in building or infrastructure construction practices	Yes	Chief Building Official, Deputy Building Official, Permit Center Manager, Building Inspector Public Works/Director, Senior Civil Engineer, Associate Civil Engineer, Construction Inspector
Planners or engineers with an understanding of natural hazards	Yes	Public Works/Director, Senior Civil Engineer
Staff with training in benefit/cost analysis	Yes	Contract
Surveyors	Yes	Contract
Personnel skilled or trained in GIS applications	Yes	GIS Coordinator, GIS Technician
Scientist familiar with natural hazards in local area	Yes	Contract
Emergency manager	Yes	County Fire
Grant writers	Yes	Contract

Table 3-5. National Flood Insurance Program Compliance

Criteria	Response
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	Public Works/Senior Civil Engineer
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date of adoption of your flood damage prevention ordinance?	May 5, 1980; Last updated 2016
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Exceed Increased Freeboard (1'), Cumulative Substantial Damage
When was the most recent Community Assistance Visit or Community Assistance Contact?	2015
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No
Does your jurisdiction participate in the Community Rating System (CRS)? • If yes, is your jurisdiction interested in improving CRS Classification?	Yes (currently Class 7) No
How many flood insurance policies are in force in your jurisdiction? • What is the insurance in force? • What is the premium in force?	145 ^a \$44,365,900 ^a \$103,099 ^a
How many total loss claims have been filed in your jurisdiction? • How many claims were closed without payment/are still open? • What were the total payments for losses?	20 ^a 10/0 ^a \$812,170.73 ^a

a. According to FEMA statistics as of October 31, 2016

Table 3-6. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes Interactive GIS maps and Open Data Portal
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes Ready 95014
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes, CERT and Public Safety Commission
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes Cupertino Alert System (CAS) allows the City to rapidly notify residents and businesses by phone, email, SMS and fax in the event of an emergency. Information made available on the City Channel, Ch. 26 on Comcast Cable or Ch. 99 on AT&T, Radio Cupertino 1670 AM, Facebook, Twitter, Nextdoor, and the Cupertino website.
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes CAS

Table 3-7. Community Classifications

	Participating?	Classification	Date Classified
Community Rating System	Yes	7	5/1/2015
Building Code Effectiveness Grading Schedule	Yes	2	10/18/2014
Public Protection	Yes	Unknown	Since Incorporation
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A

Table 3-8. Development and Permit Capabilities

Criterion	Response
Does your jurisdiction issue development permits? • If no, who does? If yes, which department?	Yes City of Cupertino Community Development Department
Does your jurisdiction have the ability to track permits by hazard area?	No - Not historically but we now have the ability moving forward with new permit system.
Does your jurisdiction have a buildable lands inventory?	No

Table 3-9. Adaptive Capacity for Climate Change

Adaptive Capacity Assessment	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts	Medium
<i>Comment: None provided.</i>	
Jurisdiction-level monitoring of climate change impacts	Medium
<i>Comment: None provided.</i>	
Technical resources to assess proposed strategies for feasibility and externalities	Medium
<i>Comment: None provided.</i>	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	High
<i>Comment: Completed initial GHG inventory with adoption of Climate Action Plan in 2015. Will conduct an update to be released in 2017.</i>	
Capital planning and land use decisions informed by potential climate impacts	Medium
<i>Comment: None provided.</i>	
Participation in regional groups addressing climate risks	High
<i>Comment: Joint Venture Silicon Valley Public Climate Task Force; Santa Clara County's Silicon Valley 2.0; Joint Policy Committee Bay Area Climate & Resiliency Project</i>	
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Low
<i>Comment: General Plan Environmental Resources & Sustainability Element Goal ES-1.1 provides the vision to incorporate principles of sustainability into Cupertino's planning, infrastructure and development processes.</i>	
Identified strategies for greenhouse gas mitigation efforts	High
<i>Comment: City's Climate Action Plan outlines over 200 strategies to reduce GHG communitywide and for municipal operations</i>	
Identified strategies for adaptation to impacts	Low
<i>Comment: Two important documents are a start for addressing adaptation impacts</i> 1. General Plan Environmental Resources & Sustainability Element Strategy ES-1.1.3: Climate Adaptation & Resiliency 2. Cupertino's Climate Action Plan Chapter 6 Climate Adaptation & Resiliency.	
Champions for climate action in local government departments	High
<i>Comment: Champions for climate action starts in the City Manager's office and can be found within all levels of the organization and within each department. Departments report on their progress towards Climate Action Plan strategies yearly. Additionally, every staff report that goes to City Council has a section where staff need to explain the sustainability impact of the item.</i>	
Political support for implementing climate change adaptation strategies	High
<i>Comment: A sustainability commission created by the City in 2015 to oversee implementation of the Climate Action Plan meets quarterly</i>	
Financial resources devoted to climate change adaptation	Low
<i>Comment: None provided.</i>	
Local authority over sectors likely to be negative impacted	Medium
<i>Comment: None provided.</i>	
Public Capacity	
Local residents knowledge of and understanding of climate risk	Unknown
<i>Comment: Unknown. This information can be updated after implementation of GP Strategy ES-1.1.3 Climate Vulnerability Assessment,</i>	
Local residents support of adaptation efforts	Unknown
<i>Comment: Unknown. This information can be updated after implementation of GP Strategy ES-1.1.3 Climate Vulnerability Assessment,</i>	
Local residents' capacity to adapt to climate impacts	Unknown
<i>Comment: None provided.</i>	
Local economy current capacity to adapt to climate impacts	Unknown
<i>Comment: None provided.</i>	
Local ecosystems capacity to adapt to climate impacts	Unknown
<i>Comment: Unknown. This information can be updated after implementation of GP Strategy ES-1.1.3 Climate Vulnerability Assessment,</i>	

3.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the hazard mitigation plan into local planning mechanisms.

3.5.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan:

- **Cupertino General Plan**—Currently incorporates information on hazard risks and strategies for hazard risk reduction through its development plans and strategies. At the time of the next update, information obtained in the update of the hazard mitigation plan will be integrated into the General Plan as appropriate.
- **Flood Damage Prevention Ordinance**—The flood damage prevention ordinance identifies areas at risk from the flood hazard and includes specific standards and regulations designed to reduce risk to structures within those areas.

3.5.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration:

- **Legal and Regulatory Capabilities**—Those capabilities identified as providing an integration opportunity in Table 3-1 will be reviewed and updated to include information on hazard risk reduction as feasible and appropriate.

3.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 3-10 lists all past occurrences of natural hazards within the jurisdiction.

Table 3-10. Natural Hazard Events

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Heavy Rain	—	January 3-13, 2017	Unknown
Flood	—	January 20, 2010	Unknown
Heavy Rain	—	December 15, 2002	Unknown
Severe Storm	1203	February 9, 1998	\$25,537,087.33
Severe Storm	1115	January 4, 1997	\$21,792,068.12
Severe Storm	1046	March 12, 1995	\$9,331,377.98
Severe Storm	1044	January 10, 1995	\$17,482,926.56
Freeze	894	February 11, 1991	Unknown
Earthquake	845	October 17, 1989	\$1,409,677,726.18
Flood	758	February 21, 1986	\$10,812,819.38
Storm	677	February 9, 1983	\$20,746,004.58
Flood	651	January 7, 1982	\$17,543,819.07

3.7 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include:

- Urban street flood—particular areas are prone to street flooding during flash rain events.

3.8 HAZARD RISK RANKING

Table 3-11 presents the ranking of the hazards of concern.

Table 3-11. Hazard Risk Ranking			
Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	48	High
2	Severe Weather	33	Medium
3	Flood	25	Medium
4	Landslide	15	Medium
4	Wildfire	15	Medium
5	Drought	9	Low
6	Dam and Levee Failure	0	Low ^a

a. A dam plan exists for Stevens Creek Reservoir

3.9 STATUS OF PREVIOUS PLAN ACTIONS

The status of previous actions from the 2011 ABAG LHMP for Cupertino can be found in Appendix D of this volume.

3.10 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 3-12 lists the actions that make up the City of Cupertino hazard mitigation action plan. Table 3-13 identifies the priority for each action. Table 3-14 summarizes the mitigation actions by hazard of concern and the six mitigation types.

3.11 ADDITIONAL RESOURCES

The hazard mitigation plan annex development tool-kit was used in the development of this annex to the Santa Clara Operational Area Hazard Mitigation Plan.

Table 3-12. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
CPT-1 —Require all new construction, including public facilities, to be built in accordance with the most recent Building and Fire Code standards.						
New and Existing	All hazards	3	Building Division Fire Department	Low	General Fund	Ongoing
CPT-2 —Continue to enforce and/or comply with State-mandated requirements, such as the California Environmental Quality Act and environmental regulations to ensure that urban development is conducted in a way to minimize air pollution. Specifically, develop a Sustainable Land Use and Green Building Policy to expand on the work that was done to achieve these goals in the 2005 General Plan Sustainability Section.						
New and Existing	All hazards	1, 2, 3, 4	Planning Division Public Works	Low	General Fund	Ongoing
CPT-3 —Increase the use of clean, alternative energy, by subscribing to and supporting Community Choice Energy.						
New	Severe Weather	1, 2, 6	Building Division	Medium	General Fund	Ongoing
CPT-4 —Increase recycling rates in local government operations and in the community.						
New and Existing	Wildfire	4, 6	Public Works Sustainability	Medium	General Fund Resource Recovery Fund	Ongoing
CPT-5 —Promote or increase the resiliency of critical and essential facilities/infrastructure following a major natural disaster through various means.						
New and Existing	All hazards	3, 8, 9	Building Division Public Works	Medium	General Fund	Ongoing
CPT-6 —Help educate the public, schools, other jurisdictions, professional associations, business and industry about reducing global warming pollution.						
New and Existing	Severe Weather	2, 4, 6	Sustainability	Medium	General Fund	Ongoing
CPT-7 —Maintain and update a GIS layer of localized flooding “hot spots” throughout the City.						
New	Flood and Severe Weather	1, 2, 4, 8, 9	Public Works Information Services	Medium	General Fund	Ongoing
CPT-8 —Develop a storm drain master plan in order to develop and prioritize capital projects.						
New	Flood and Severe Weather	1, 2, 4, 8, 9	Public Works	Medium	General Fund Storm Fee	Short-term
CPT-9 —Continue to maintain good standing and compliance under the National Flood Insurance Program. This will be accomplished through the implementation of floodplain management programs that will, at a minimum, meet the requirements of the NFIP:						
<ul style="list-style-type: none"> • Enforcement of the flood damage prevention ordinance • Participate in floodplain identification and mapping updates • Provide public assistance/information on floodplain requirements and impacts. 						
New and Existing	Flood	1, 2, 3, 4, 7, 8	Public Works	Low	Staff Time, General Funds	Ongoing
CPT-10 —Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.						
Existing	All Hazards	4, 5, 6, 7, 8	Planning Division Public Works	High	HMGP, PDM, FMA, CDBG-DR	Short-term
CPT-11 —Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community.						
New and Existing	All Hazards	2, 4	Planning Division	Low	Staff Time, General Funds	Ongoing
CPT-12 —Actively participate in the plan maintenance protocols outlined in Volume 1 of the hazard mitigation plan.						
New and Existing	All Hazards	1, 5	Public Works	Low	Staff Time, General Funds	Short-term

Table 3-13. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
CPT-1	1	High	Low	Yes	No	Yes	Medium	Low
CPT-2	4	High	Low	Yes	No	Yes	High	Low
CPT-3	3	Medium	Medium	Yes	Yes	Yes	Medium	Medium
CPT-4	2	Medium	Medium	Yes	No	Yes	Medium	Low
CPT-5	3	High	High	Yes	Yes	No	Medium	High
CPT-6	3	Medium	Medium	Yes	Yes	Yes	Medium	Medium
CPT-7	5	Medium	Medium	Yes	Yes	Yes	Medium	Medium
CPT-8	5	High	High	Yes	Yes	Yes	High	High
CPT-9	5	Medium	Medium	Yes	No	Yes	Medium	Low
CPT-10	5	High	High	Yes	Yes	No	Medium	High
CPT-11	2	Medium	Low	Yes	No	Yes	High	Low
CPT-12	2	Low	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

Table 3-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a						
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects	7. Climate Resilient
Earthquake	CPT-11, CPT-12	CPT-1, CPT-2, CPT-5, CPT-10	CPT-1, CPT-2, CPT-5		CPT-1, CPT-2, CPT-5	CPT-1, CPT-2, CPT-5	
Severe Weather	CPT-3, CPT-6, CPT-11, CPT-12	CPT-2, CPT-5, CPT-10	CPT-2, CPT-5				
Flood	CPT-7, CPT-8, CPT-9, CPT-11, CPT-12	CPT-7, CPT-8, CPT-9, CPT-10	CPT-7, CPT-8, CPT-9		CPT-7, CPT-8, CPT-9		
Landslide	CPT-11, CPT-12	CPT-2, CPT-5, CPT-10	CPT-2, CPT-5				
Wildfire	CPT-11, CPT-12	CPT-2, CPT-10	CPT-2	CPT-2			
Drought	CPT-3, CPT-6, CPT-11, CPT-12	CPT-10	CPT-3, CPT-6				
Dam and Levee Failure	CPT-11, CPT-12	CPT-7, CPT-8, CPT-9, CPT-10	CPT-9		CPT-7, CPT-8, CPT-9		

a. See the introduction to this volume for explanation of mitigation types.

4. CITY OF GILROY

4.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

Roy J. Shackel, Fire Captain/OES Coordinator
7070 Chestnut St.
Gilroy, CA 95020
Telephone: 408-846-0386
e-mail Address: rshackel@ci.gilroy.ca.us

Alternate Point of Contact

Kristi Abrams, Community Development Director
7351 Rosanna St.
Gilroy, CA 95020
Telephone: 408-846-0467
e-mail Address: Kristi.Abrams@ci.gilroy.ca.us

4.2 JURISDICTION PROFILE

- **Date of Incorporation**—1868
- **Current Population**—55,170 as of January 1, 2016
- **Population Growth**—Based on the data tracked by the state Department of Finance, Gilroy has experienced a moderate rate of growth. The overall population has increased by approximately 13 percent since 2010 and growth averaged 1.3 percent per year from 2000 to 2014.
- **Location and Description**—The City of Gilroy is on the inland U.S. Route 101 corridor, approximately 40 miles north of Monterey and 30 miles south of San José. The city is surrounded by unincorporated Santa Clara County. This unincorporated area is served by the Santa Clara County Sheriff's Department, City of Gilroy fire department, and a rural fire district operated by CalFire. To the east and approximately 2.5 miles from the city limits are the foothills of the Diablo mountain range. To the west and also outside of the city limits are the Santa Cruz mountains. Seven miles to the north is Morgan Hill, the closest incorporated city to Gilroy in Santa Clara County.

Gilroy is well known as the “Garlic Capital of the World” and for the Gilroy Garlic Festival, which occurs annually, featuring a wide variety of garlic-flavored foods, including garlic ice cream. Olam Spices and Vegetables (formerly Gilroy Foods) processes vast quantities of garlic and other fresh vegetables. Gilroy is home to the Gilroy Premium Outlets, a large shopping center consisting of outlet stores. The major highways through Gilroy are U.S. Route 101 and State Route 152. The Santa Clara Valley Transportation Authority provides local buses and express buses to San José and Sunnyvale. Caltrain provides weekday rush-hour commuter rail service to the Santa Clara Valley and the San Francisco Peninsula. Amtrak California's Capitol Corridor line runs a San José-Santa Barbara Thruway Motorcoach connection with a stop in Gilroy. Monterey-Salinas Transit's Line 55, which stops in Gilroy, is a rush-hour San José-Monterey express bus that also serves as an Amtrak Thruway Motorcoach connection. San Benito County Express provides intercounty bus service to Hollister and San Juan Bautista.

- **Brief History**—Gilroy's first inhabitants were the Amah Mutsun native American tribes. The area was first settled in the late 1700s by the Spanish missionaries and military, followed by wider Spanish settlement, including Spanish land grants, in the early 1800s. In the post - Mexican-American War and

gold rush years, the area's first agricultural enterprises began. The village of Gilroy was incorporated in 1868. Agriculture continued to expand throughout the 1900s with tree crops such as prunes, cherries and apricots dominating until the early 1960s when the area transitioned to row crops such as tomatoes, sugar beets, and, of course, garlic. In the latter half of the 20th century, Gilroy began the shift to an urban community, while maintaining its small-town feel and agricultural roots. The Gilroy Garlic Festival, held annually in July, draws thousands of visitors from around the world to enjoy everything garlic!

- **Climate**— Gilroy's climate strikes a pleasant balance between hot and cold, wet and dry, making it perfect for agriculture and recreation. Nestled between the Diablo and Santa Cruz mountains in the Santa Clara Valley, Gilroy residents enjoy mild temperatures, while missing most of the coastal fog. A state climatology report says up to 70 percent of Gilroy's days are sunny, with average rainfall of about 19.11 inches. The proximity of the Pacific Ocean keeps temperatures uniform. The average annual temperature is 62.8 degrees, although it is not unusual for summer readings to top 100. The average July high temperature is near 90 degrees. Winter temperatures drop to an average of 57 degrees in January.
- **Governing Body Format**—The City of Gilroy is a charter city, governed by a seven-member city council and mayor elected at-large. The City employs 269 people in eight departments: Police Services, Fire Services, Administration, Human Resources/Risk Management/Facilities Department, Finance and IT Department, Community Development Department, Public Works Department and Recreation Department. In addition to local police services and fire services, the City also provides emergency medical services. The City has 16 commissions, boards and committees, which report to the City Council. The City Council assumes responsibility for the adoption of this plan; the City Administrator will oversee its implementation.

4.3 DEVELOPMENT TRENDS

Gilroy continues to see strong residential development with an annual average of 300 new dwelling units constructed between 2010 and the present. Two significant affordable housing projects approved will provide 340 units of multi-family housing for varying levels of affordability. Non-residential development has experienced a more moderate pace, with two notable projects, a new CVS store and a 400,000 square foot food distribution facility constructed in recent years. The Gilroy General Plan was adopted in 2002, with the 2040 General Plan update almost complete. City actions, such as those relating to land use, zoning, subdivisions, design review, and capital improvements, must be consistent with the plan. Future growth and development in the City will be managed as identified in the general plan. Table 4-1 summarizes development trends in the performance period since development of the previous hazard mitigation plan and expected future development trends.

Table 4-1. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan?	No					
• If yes, give the estimated area annexed and estimated number of parcels or structures.	N/A					
Is your jurisdiction expected to annex any areas during the performance period of this plan?	No					
• If yes, please describe land areas and dominant uses.	N/A					
• If yes, who currently has permitting authority over these areas?	N/A					
Are any areas targeted for development or major redevelopment in the next five years?	No					
• If yes, please briefly describe, including whether any of the areas are in known hazard risk areas	N/A					
How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?		2011	2012	2013	2014	2015
	Single Family	163	226	175	238	424
	Multi-Family	0	0	0	0	1
	Other (commercial, mixed use, etc.)	7	0	2	15	4
Please provide the number of permits for each hazard area or provide a qualitative description of where development has occurred.	Development has occurred throughout the city during the performance period for this plan. For hazards with a clearly defined extent and location, the City cannot estimate development impacts. For hazards with impacts city-wide, it is safe to assume that this new development could be subject to impacts from those hazards. However, it is important to note that all new development was subject to the regulatory capabilities identified in this annex. Currently, permits are not displayed geographically; however, the City will be migrating to a more robust system. No GIS capability planning to upgrade.					
Please describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	City residents voted no growth via Prop. H measure in 2016.					

4.4 CAPABILITY ASSESSMENT

4.4.1 Resources for the 2017 Planning Initiative

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for inclusion into the 2017 Multi-Jurisdiction Hazard Mitigation Plan for both Volume 1 and Volume 2 (City of Gilroy Annex). All of the below items were additionally reviewed as part of the full capability assessment for the City of Gilroy.

- **City of Gilroy General Plan**—The General Plan, including the Community Resources and Potential Hazards (Chapter 8) was reviewed for information regarding goals and policies consistent with hazard mitigation for carry over as goals and objectives. Specifically, Section 25, Natural Hazards, was reviewed. The subsections in this Chapter include Natural Hazards in which, policies include Seismic, Fire and Flooding.
- **City of Gilroy Municipal Code**—The Municipal Code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.

- **Flood Damage Prevention Ordinance**—The Flood Damage Prevention Ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Capital Improvements Plan**—The Capital Improvements Plan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.

4.4.2 Full Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 4-2. An assessment of fiscal capabilities is presented in Table 4-3. An assessment of administrative and technical capabilities is presented in Table 4-4. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 4-5. An assessment of education and outreach capabilities is presented in Table 4-6. Classifications under various community mitigation programs are presented in Table 4-7. Development and permitting capabilities are presented in Table 4-8, and the community's adaptive capacity for the impacts of climate change is presented in Table 4-9.

Table 4-2. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code	Yes	No	Yes	Yes
<i>Comment: 2016 Municipal Code Chapter 6, Codes adopted with amendments – effective Jan. 1, 2017</i>				
Zoning Code	Yes	No	Yes	No
<i>Comment: 2016 Municipal Code Chapter 30, Codes adopted with amendments – effective Jan. 1, 2017</i>				
Subdivisions	Yes	No	Yes	No
<i>Comment: 2016 Municipal Code Chapter 21, Codes adopted with amendments – effective Jan. 1, 2017</i>				
Stormwater Management	Yes	No	Yes	No
<i>Comment: 2016 Municipal Code Chapter 27C, Codes adopted with amendments – effective Jan. 1, 2017</i>				
Post-Disaster Recovery	Yes	No	No	Yes
<i>Comment: County draft recovery framework was completed in Fall 2016. Final draft framework projected to be published within the next 12 months. City of Gilroy will begin post disaster recovery planning following the county's adoption.</i>				
Real Estate Disclosure	No	Yes	Yes	No
<i>Comment: Cal. Civ. Code §1102 et seq.</i>				
Growth Management	Yes	No	Yes	Yes
<i>Comment: Adoption of local measure H limits city annexation limits to current city boundaries. Cal. Gov. Code §65300 et seq.</i>				
Site Plan Review	Yes	No	Yes	No
<i>Comment: 2016 Municipal Code Chapter 30, Codes adopted with amendments – effective Jan. 1, 2017</i>				
Environmental Protection	Yes	No	Yes	No
<i>Comment: Chapter 12.6 - Implement the Santa Clara Valley habitat conservation plan/natural community conservation plan ("HCP/NCCP") and the associated implementing agreement and take permits in order to provide a regulatory framework for promoting the protection and recovery of natural resources, including covered species, while streamlining the permitting process for both publicly funded and privately funded planned development in the City of Gilroy. The California Environmental Quality Act (CEQA) also outlines requirements for environmental protection.</i>				
Flood Damage Prevention	Yes	No	Yes	No
<i>Comment: Floodplain Management Ordinance reflects updates to floodplain management policies affecting real property located in designated flood hazard areas of the City of Gilroy (ordinance No. 98-17; updated January 2017).</i>				
Emergency Management	Yes	No	Yes	Yes
<i>Comment: The Emergency Organization and Functions provides for the protection of persons and property within the City of Gilroy in the event of an emergency; the establishment, coordination, and direction of the City of Gilroy's Emergency Organization & Office of Emergency Services (ordinance chapter 9).</i>				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Climate Change	Yes	No	Yes	Yes
Comment: SB 97 directs California Environmental Quality Act (CEQA) Guidelines to address greenhouse gas emissions. Other state policies include AB 32, SB 375, SB 379 and regulations of the Climate Action Plan.				
Other: None located	N/A	N/A	N/A	N/A
Comment: N/A				
Planning Documents				
General Plan	Yes	No	Yes	Yes
Is the plan compliant with Assembly Bill 2140? Yes				
Comment: Gilroy 2020 General Plan				
Capital Improvement Plan	Yes	No	No	Yes
How often is the plan updated? Updated with the General Plan and as needed.				
Comment: Capital Improvement Projects & Master Plans are evaluated every five years. Each capital improvement project undertaken by the City of Gilroy is the result of a master plan prepared in conjunction with data from the General Plan and other policy or forecast documents. The Engineering Division of the Public Works Department uses the master plan reports as a tool in developing the city's capital improvement budget and to identify the timing and/or type of improvement to be made. Improvements identified in master plans range from the need for a new neighborhood park site, an additional new fire station, to improvements in traffic circulation, or augmentation to the city's existing sewer, storm drain, or water system.				
Floodplain or Watershed Plan	Yes	No	No	Yes
Comment: No floodplain or watershed management plan was located.				
Stormwater Plan	Yes	No	Yes	Yes
Comment: City of Gilroy municipal storm water quality protection and discharge control was adopted to ensure the health, safety, and general welfare of City of Gilroy citizens, and protect and enhance the water quality of watercourses and water bodies in a manner pursuant to and consistent with the Federal Clean Water Act (33 U.S.C. 1251 et seq.) and the Porter-Cologne Water Quality Control Act (California Water Code Section 1300 et seq.) by reducing pollutants in storm water discharges to the maximum extent practicable and by prohibiting non-storm water discharges to the storm drain system. (Ord. No. 2011-13, § 1, 11-21-11)				
Urban Water Management Plan	Yes	No	Yes	Yes
Comment: Storm water plan will manage both of these categories.				
Habitat Conservation Plan	No	Yes	No	Yes
Comment: City of Gilroy has adopted the Santa Clara Valley Habitat Plan is a 50-year regional plan to protect endangered species and natural resources while allowing for future development in Santa Clara County, and is both a habitat conservation plan and natural community conservation plan, or HCP/NCCP. The final Habitat Plan was approved and adopted in 2013.				
Economic Development Plan	Yes	No	No	No
Comment: Article 8A of the General Municipal Code: The purpose of this article to provide industry and commerce with an alternative method of financing in acquiring, constructing or rehabilitating facilities which will increase employment opportunities for the inhabitants of or otherwise contribute to the economic development of the city.				
Shoreline Management Plan	No	No	No	No
Comment: N/A				
Community Wildfire Protection Plan	No	Yes	Yes	No
Comment: The Santa Clara County Fire Department has developed a Community Wildfire Protection Plan to reduce wildland fire risks to communities and the environment. The CWPP is currently in the public review process. The CWPP is a vital element in the H.R. 4233 (Healthy Forest Restoration Amendments Act of 2009), Public Law 108-148, 2003). The Act was revised in 2009 to address changes to funding and provide a renewed focus on wildfire mitigation.				
Forest Management Plan	No	No	No	No
Comment: None located.				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Climate Action Plan	Yes	No	Yes	Yes
Comment: The Climate Action Plan for the City of Gilroy Operations and Facilities was developed and approved in 2009. SB 97 directs California Environmental Quality Act (CEQA) Guidelines to address greenhouse gas emissions. Other state policies include AB 32 and SB 375 and regulations of the Climate Action Plan.				
Comprehensive Emergency Management Plan	Yes	No	Yes	Yes
Comment: City of Gilroy Emergency Operations Plan was approved in 2009. The plan is consistent and compliant with all state and federal documents.				
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	No	No	Yes
Comment: Consistent with adopted City of Gilroy ABAG 2010 adopted plan.				
Post-Disaster Recovery Plan	Yes	No	No	Yes
Comment: County draft recovery framework was completed in Fall 2016. Final draft framework projected to be published within the next 12 months. City of Gilroy will begin post disaster recovery planning following the county's adoption.				
Continuity of Operations Plan	Yes	No	No	Yes
Comment: No COOP/COG currently exists. Will examine integrating for mitigation in the future.				
Public Health Plan	No	Yes	Yes	No
Comment: The City of Gilroy falls under the authority of the Santa Clara County Dept. of Public Health, which has the following of Public Health Plans. 2015-2020 community health assessment and health improvement plan, 2014 EMS services plan 2013 EMS strategic plan, 2013 Santa Clara County EMS strategic implementation plan, & Santa Clara County EMS trauma system plan, and Santa Clara County EMS stroke plan.				

Table 4-3. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	None

Table 4-4. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Com. Dev.- Sr. Planner and Planning Manager, Public Works – Sr. Civil Engineer, City Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Com. Dev. – Building Official and Building Inspectors
Planners or engineers with an understanding of natural hazards	No	
Staff with training in benefit/cost analysis	No	
Surveyors	No	
Personnel skilled or trained in GIS applications	No	
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Admin. – City Administrator
Grant writers	No	

Table 4-5. National Flood Insurance Program Compliance

Criteria	Response
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	Director of Public Works
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date of adoption of your flood damage prevention ordinance?	January 2017
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Exceed One-foot additional freeboard requirement and cumulative substantial damage.
When was the most recent Community Assistance Visit or Community Assistance Contact?	March 2015
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If no, please state why.	No Maps do not include flood blockage issues in a portion of the city per study prepared by Schaaf & Wheeler and there are flood zone 'A' areas where base flood elevations have not been determined.
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	Yes Ongoing training to keep up with latest developments/updates
Does your jurisdiction participate in the Community Rating System (CRS)? • If yes, is your jurisdiction interested in improving CRS Classification?	Yes (currently class 8) Yes
How many flood insurance policies are in force in your jurisdiction? • What is the insurance in force? • What is the premium in force?	175 ^a \$65,758,000 ^a \$ 233,485 ^a
How many total loss claims have been filed in your jurisdiction? • How many claims were closed without payment/are still open? • What were the total payments for losses?	32 ^a 0/10 ^a \$302,117.33 ^a

a. According to FEMA statistics as of December 31, 2016.

Table 4-6. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	No
Do you utilize social media for hazard mitigation education and outreach?	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs already in place that could be used to communicate hazard-related information?	No
Do you have any established warning systems for hazard events?	Yes
If yes, please briefly describe.	Reverse 911

Table 4-7. Community Classifications

	Participating?	Classification	Date Classified
Community Rating System (ISO)	Yes	8	10/01/16
Building Code Effectiveness Grading Schedule	Yes	2	2/2013
Public Protection (Gilroy Fire Department)	Yes	4	Unknown
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A

Table 4-8. Development and Permit Capabilities

Criterion	Response
Does your jurisdiction issue development permits?	Yes
• If no, who does? If yes, which department?	Community Development/Planning Department
Does your jurisdiction have the ability to track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	No

Table 4-9. Adaptive Capacity for Climate Change

Adaptive Capacity Assessment Question	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts	Medium
<i>Comment: None provided.</i>	
Jurisdiction-level monitoring of climate change impacts	Low
<i>Comment: None provided.</i>	
Technical resources to assess proposed strategies for feasibility and externalities	Low
<i>Comment: None provided.</i>	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Low
<i>Comment: None provided.</i>	
Capital planning and land use decisions informed by potential climate impacts	Medium
<i>Comment: None provided.</i>	
Participation in regional groups addressing climate risks	Low
<i>Comment: None provided.</i>	

Adaptive Capacity Assessment Question	Jurisdiction Rating
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Medium
<i>Comment: None provided.</i>	
Identified strategies for greenhouse gas mitigation efforts	Low
<i>Comment: None provided.</i>	
Identified strategies for adaptation to impacts	Low
<i>Comment: None provided.</i>	
Champions for climate action in local government departments	Medium
<i>Comment: None provided.</i>	
Political support for implementing climate change adaptation strategies	Medium
<i>Comment: None provided.</i>	
Financial resources devoted to climate change adaptation	Low
<i>Comment: None provided.</i>	
Local authority over sectors likely to be negative impacted	Low
<i>Comment: None provided.</i>	
Public Capacity	
Local residents knowledge of and understanding of climate risk	Low
<i>Comment: None provided.</i>	
Local residents support of adaptation efforts	Low
<i>Comment: None provided.</i>	
Local residents' capacity to adapt to climate impacts	Medium
<i>Comment: None provided.</i>	
Local economy current capacity to adapt to climate impacts	Low
<i>Comment: None provided.</i>	
Local ecosystems capacity to adapt to climate impacts	Medium
<i>Comment: None provided.</i>	

4.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the hazard mitigation plan into local planning mechanisms.

4.5.1 Existing Integration

- **General Plan**—The City of Gilroy General Plan includes information on natural hazards. At the time of the next update, information obtained in the update of the hazard mitigation plan will be integrated into the General Plan as appropriate.
- **Municipal Code**—The City of Gilroy Municipal Code includes regulations pertaining to reducing risk from natural hazards, such as building codes with seismic standards and the flood damage prevention ordinance.

4.5.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration. These plans and programs will be developed, reviewed and/or updated to include information on hazard risk reduction as feasible and appropriate:

- Building Code
- Post-Disaster Recovery
- Growth Management
- Emergency Management
- Climate Change
- General Plan
- Capital Improvement Plan
- Floodplain or Watershed Plan
- Stormwater Plan
- Urban Water Management Plan
- Habitat Conservation Plan
- Climate Action Plan
- Comprehensive Emergency Management Plan
- Threat & Hazard Identification & Risk Assessment (THIRA)
- Post-Disaster Recovery Plan
- Continuity of Operations Plan.

4.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 4-10 lists all past occurrences of natural hazards within the jurisdiction.

Table 4-10. Natural Hazard Events			
Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Heavy Rain	DR-4301	01/17	\$6,608,518
Wildfire (Loma)	None	10/16	Unknown
Heavy Rain	N/A	12/15/02	Unknown
Severe Storm	DR-1203	02/09/98	\$25,537,087.33
Severe Storm	DR-1155	01/04/97	\$21,792,068.12
Severe Storm	DR-1046	03/12/95	\$9,331,377.98
Severe Storm	DR-1044	01/10/95	\$17,482,926.56
Freeze	DR-894	02/11/91	Unknown
Earthquake	DR-845	10/17/89	\$1,409,677,726.18

4.7 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include:

- There are a number of unreinforced masonry buildings in the downtown area.
- Approximately 1.8 percent of the City's structures are located in the 1 percent annual chance flood hazard area. However, 74.6 percent of the City's buildings are located in the 0.2 percent annual chance flood hazard area, where flood damage prevention regulations and mandatory flood insurance purchase requirements do not apply.

4.8 HAZARD RISK RANKING

Table 4-11 presents the ranking of the hazards of concern.

Table 4-11. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe Weather	33	Medium
3	Flood	24	Medium
4	Landslide	18	Medium
5	Dam and Levee Failure	13	Low
6	Wildfire	9	Low
7	Drought	9	Low

4.9 STATUS OF PREVIOUS PLAN ACTIONS

The status of previous actions from the 2011 ABAG LHMP for City of Gilroy can be found in Appendix D of this volume.

4.10 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 4-12 lists the actions that make up the City of Gilroy hazard mitigation action plan. Table 4-13 identifies the priority for each action. Table 4-14 summarizes the mitigation actions by hazard of concern and the six mitigation types.

Table 4-12. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
GIL-1 —Continue/maintain a relationship with local service providers to ensure a backup system/process for telephonic communication with a local PSAP.						
Existing	All Hazards	5, 9	Police Department, Fire OES	Low	City's General Fund, EMPG, The Federal HMGP	Short-term
GIL-2 —Continue/maintain a plan for a cooperative program to retrofit or tear down unreinforced masonry buildings (downtown).						
Existing	Earthquake	1, 2, 3, 4, 6, 7, 8	Community Development Department; Building, Life, and Environmental Safety Division	Medium	City's General Fund, EMPG, The Federal HMGP	Ongoing
GIL-3 —Continue/maintain to reinforce/retrofit existing structures to meet current building code standards for essential facility seismic safety						
New and Existing	Earthquake	1, 2, 3, 4, 6, 7, 8	Community Development Department; Building, Life, and Environmental Safety Division	Medium	City's General Fund, EMPG, The Federal HMGP	Ongoing
GIL-4 —Identify feasible means and alternates to supplying all essential city facilities in hazard areas assessed by this plan with backup power generation capability. These include, but are not limited to: city hall, fire stations, senior centers, auditorium, community rooms, alert and warning facilities etc.						
New and Existing	Any hazard assessed by this plan that could result in the interruption of power	2, 6, 9	City Facilities	High	City's General Fund, EMPG, The Federal HMGP	Long-term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
GIL-5 —The City of Gilroy will take into account hazard risk assessments, mitigation actions and projects when developing any growth management plan, as a result of local Ballot Measure H, which limits the boundaries of the City to its current status.						
New	Dam Failure, Earthquake, Flood, Landslide, Wildfire	1, 2, 3, 4, 6, 7, 8, 9	Planning	Medium	City's General Fund, EMPG, The Federal HMGP	Short-term
GIL-6 —The City of Gilroy will develop a Post-Disaster Recovery Plan that at a minimum will address all hazards assessed by this plan, following the County's adoption of its Recovery Framework.						
New	All Hazards	1, 2, 4, 5, 8	Fire/OES	Medium	City's General Fund, EMPG, The Federal HMGP	Long-term
GIL-7 —The City of Gilroy will consider areas to integrate mitigation and climate change planning.						
New and Existing	All Hazards	1, 2, 3, 4, 6, 7, 8, 9	Planning and Building	Low	City's General Fund	Ongoing
GIL-8 —The City of Gilroy will consider integrating mitigation actions during the next update to the General Plan in order to reduce the impact from natural disasters.						
New and Existing	All Hazards	3, 4, 6, 7, 8	Planning, City Manager	Low	City's General Fund	Long-term
GIL-9 —The City of Gilroy will integrate, feasible, grant-eligible mitigation actions during the next update to the Capital Improvement Plan in order to reduce the impact from natural disasters and to leverage the benefits of this hazard mitigation plan.						
New and Existing	All Hazards	3, 5, 6, 7, 8	Planning, Engineering, Public Works	Low	City's General Fund; Possible HMGP	Long-term
GIL-10 —The City of Gilroy will take into account mitigation activities as per revised ordinance No. 2017-01 or when developing any floodplain or watershed plan in the future.						
New and Existing	Flood	1, 2, 3, 4, 5, 6, 7, 8, 9	Engineering	Low	City's General Fund	Long-term
GIL-11 —The city of Gilroy will include mitigation activities when revising Chapter 27C of the Municipal code - Storm Water Quality Protection and Discharge Control or when developing any storm water management plan.						
New and Existing	Flood	1, 2, 3, 4, 5, 6, 7, 8, 9	Engineering	Low	City's General Fund	Long-term
GIL-12 —The city of Gilroy will include mitigation activities when revising Chapter 12C of the Municipal code, the Habitat Conservation Plan.						
New and Existing	Climate Change	1, 2, 3, 5, 6, 8	Planning	Low	City's General Fund	Long-term
GIL-13 —Consider development of COOP/COG for essential functions within the City's government						
New	All Hazards	1, 2, 5, 8, 9	City Manager	Low	General Fund; EMPG	Short-term
GIL-14 —If it is determined to be feasible and cost-effective, the City of Gilroy will develop and implement a system to track development in hazard-prone areas using GIS software or an appropriate substitute.						
New	All Hazards	1, 2, 3, 4, 7, 8, 9	Planning	Medium	City's General Fund	Long-term
GIL-15 — Actively participate in the plan maintenance protocols outlined in Volume 1 of the hazard mitigation plan.						
New and Existing	All Hazards	1, 5	Fire	Low	Staff Time, General Funds	Short-term
GIL-16 —Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP). This will be accomplished through the implementation of floodplain management programs that will, at a minimum, meet the requirements of the NFIP:						
<ul style="list-style-type: none"> Enforcement of the flood damage prevention ordinance Participate in floodplain identification and mapping updates Provide public assistance/information on floodplain requirements and impacts. 						
New and Existing	Flood	1, 2, 3, 4, 7, 8	Public Works	Low	Staff Time, General Funds	Ongoing

a. EMPG – Emergency Management Performance Grant; HMGP – Hazard Mitigation Grant Program

Table 4-13. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
GIL-1	2	High	Low	Yes	Yes	Yes	High	High
GIL-2	8	High	Medium	Yes	Yes	Yes	High	High
GIL-3	8	High	Medium	Yes	Yes	Yes	High	High
GIL-4	3	High	High	Yes	Yes	No	Low	High
GIL-5	8	Medium	Medium	Yes	Yes	Yes	Medium	Medium
GIL-6	5	Medium	Medium	Yes	Yes	Yes	Medium	Medium
GIL-7	8	Low	Low	Yes	No	Yes	Medium	Low
GIL-8	5	Medium	Low	Yes	Possible	Yes	Medium	Medium
GIL-9	5	Medium	Low	Yes	No	Yes	Medium	Low
GIL-10	9	Medium	Low	Yes	No	Yes	Medium	Low
GIL-11	9	Medium	Low	Yes	No	Yes	Medium	Low
GIL-12	7	Medium	Low	Yes	No	Yes	Medium	Low
GIL-13	5	High	Low	Yes	Yes	Yes	Medium	High
GIL-14	7	Medium	Medium	Yes	No	Yes	Medium	Low
GIL-15	2	Low	Low	Yes	No	Yes	High	Low
GIL-16	6	Medium	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

Table 4-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a						
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects	7. Climate Resilient
Earthquake	5, 6, 7, 8, 9, 14, 15	2, 3, 4, 9			1, 3, 4, 13	9	
Severe Weather	5, 6, 7, 8, 9, 12, 14, 15	4, 9		12	1, 4, 13	9	
Flood	5, 6, 7, 8, 9, 10, 11, 14, 15, 16	4, 9, 16	16		1, 4, 13	9	
Landslide	5, 6, 7, 8, 9, 14, 15	4, 9			1, 4, 13	9	
Dam and Levee Failure	5, 6, 7, 8, 9, 14, 15	4, 9			1, 4, 13	9	
Wildfire	5, 6, 7, 8, 9, 14, 15	4, 9			1, 4, 13	9	
Drought	5, 6, 7, 8, 9, 12, 14, 15	4, 9		12	1, 4, 13	9	

a. See the introduction to this volume for explanation of mitigation types.

4.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

Current flood maps do not include flood blockage issues in a portion of the city per study prepared by Schaaf & Wheeler and there are flood zone ‘A’ areas where base flood elevations have not been determined. A more comprehensive study could provide a more clear picture of Gilroy’s flooding hazard.

Additionally, the Planning Department lacks the capability to overlay permits for development with known hazard areas. Consequently, the City should consider the acquisition and implementation of a GIS-based system to visually represent development in known hazards areas.

4.12 ADDITIONAL RESOURCES

The hazard mitigation plan annex development tool-kit was used in the development of this annex to the Santa Clara Operational Area Hazard Mitigation Plan.

5. CITY OF LOS ALTOS

5.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

Scott McCrossin, Police Captain
1 N. San Antonio Road
Los Altos, CA 94022
Telephone: 650-947-2770
e-mail Address: smccrossin@losaltosca.gov

Alternate Point of Contact

Susanna Chan, Public Works Director
1 N. San Antonio Road
Los Altos, CA 94022
Telephone: 650-947-2700
e-mail Address: schan@losaltosca.gov

5.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—December 1, 1952
- **Current Population**—31,353 (2016 state Department of Finance estimate)
- **Population Growth**—Based on data tracked by the California State Department of Finance, Los Altos has experienced a relatively steady rate of growth during that past 10 years. The overall population has increased 8.2 percent since 2010 with an average rate of 1.82 percent per year during that same period. Based on ABAG 2040 Projections, in the year 2040 Los Altos is estimated to have a population of 32,800.
- **Location and Description**—**The City of Los Altos is a small city located in the northwestern region of Santa Clara County, California. Los Altos is bordered by Palo Alto and Mountain View to the north, Sunnyvale and Cupertino to the south.** Los Altos strives to maintain a semi-rural atmosphere where most streets do not have curbs, gutters or sidewalks. The civic center is situated in the center of a still producing apricot orchard, a remnant of those that once covered the area. Lot sizes for most single-family homes in the city are fairly large at more than a quarter acre in area. Many Los Altos homes sell for \$2 million or more, putting the city (along with neighboring Los Altos Hills, with which it shares ZIP codes) at numbers 7 and 33 on Forbes' "Most Expensive ZIP Codes in America" list in 2016. Since the mid-1990s, Downtown Los Altos has experienced mild economic difficulties due to competition from nearby regional shopping centers and chain stores. The City Council has embarked on a planning process with the goal of identifying economic drivers and developing a cohesive vision based on extensive community input that will guide the Downtown's future.
- **Brief History**—The history of modern Los Altos dates back to 1906, when Paul Shoup, a Southern Pacific Railroad executive, formed the Altos Land Co. with friends. The group purchased 140 acres of land between Palo Alto and Mountain View owned by Sarah Winchester, the widow of the inventor of the Winchester rifle. The company planned a new town to serve the new Southern Pacific Railroad cutoff between Mayfield and Los Gatos and named it "Los Altos" (Spanish for "the heights") because the land was the highest on that cutoff.

In March 1907, at an outdoor land sale sponsored by the Altos Land Company, prospective buyers attended a promotional BBQ and purchased the first town lots. The site of the sale, near today's intersection of Foothill Expressway and Main Street, was the focal point of the new town. The town's name gradually spread informally to identify a much larger unincorporated area served by the Los Altos School District formed in 1910, including what is today Los Altos Hills and portions of other neighboring towns.

This larger community's population exploded after World War II, and on December 1, 1952, an expanded Los Altos became the eleventh city in Santa Clara County. As a result of decreased interest in train travel due to the wide adoption of the automobile, the Southern Pacific Railroad, an essential part of the town's founding, ceased operation here in 1964, and its right-of-way became Foothill Expressway.

- **Climate**—With an average annual rainfall of 24.71 inches, the state of California gets 14.5 less inches of rain than the national average (39.17 inches). Los Altos has had an average rainfall of 39.28 inches over the last 30 years, which is 0.11 inches fewer than the average nationwide, and 59 percent more than the average in California. Average summertime temperatures range from a low of 57 degrees Fahrenheit to a high of 79 degrees. Average wintertime temperatures range from a low of 38 degrees Fahrenheit to a high of 58 degrees (U.S. Climate Data).
- **Governing Body Format**—The City of Los Altos is governed by a five-member city council. The City consists of five departments: General Government (City Manager's Office), Community Development, Public Works, Recreation & Community Services and Police. The City currently has eleven Commissions and one Committee covering a variety of subject matters. The City Council assumes responsibility for the adoption of this plan; the City Manager will oversee its implementation.

5.3 DEVELOPMENT TRENDS

The recent pace of development activity in the City of Los Altos has been high and it is expected to remain at this level for the foreseeable future. Development is principally focused on the remodel or reconstruction of single-family dwellings on existing lots of record as the City is nearly built-out and the subdivision of land to create new lots is a rare occurrence. The exception to this is for sites with a high density zoning designation, where multiple-family dwelling units are being developed with rental and condominium units. The Los Altos General Plan covers the 2002 to 2020 time period and the most recently adopted element of the plan was the Housing Element, which was adopted in 2013 and is consistent with State Law. Those City actions relating to land use development, annexations, zoning, subdivision and design review, redevelopment, and capital improvements, must be consistent with the City's General Plan. Future growth and development in the City will be guided and managed by the goals, policies, and programs contained in the General Plan. Table 5-1 summarizes development trends in the performance period since development of the previous hazard mitigation plan and expected future development trends.

Table 5-1. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan? • If yes, give the estimated area annexed and estimated number of parcels or structures.	Pending Jardin Drive Annexation: less than one acre, which includes six parcels plus a remnant					
Is your jurisdiction expected to annex any areas during the performance period of this plan? • If yes, please describe land areas and dominant uses. • If yes, who currently has permitting authority over these areas?	Yes Less than one acre as described above; Single-family land use City of Mountain View transitioning to City of Los Altos					
Are any areas targeted for development or major redevelopment in the next five years? • If yes, please briefly describe, including whether any of the areas are in known hazard risk areas	No “targeted” areas have been identified. N/A					
How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?		2011	2012	2013	2014	2015
	Single Family	43	42	39	36	44
	Multi-Family	23	5	251	20	4
	Other (commercial, mixed use, etc.)	1	1	0	2	3
Please provide the number of permits for each hazard area or provide a qualitative description of where development has occurred.	For hazards with a clearly defined extent and location, the City cannot estimate development impacts. However, most development occurs outside of flood hazard areas. Many properties are subject to flooding; however, their structures typically rest outside of the floodplain, except for creekside properties that are subject to periodic flooding. For hazards with impacts city-wide, it is safe to assume that new development could be subject to impacts from hazards. However, it is important to note that all new development was subject to the regulatory capabilities identified in this annex.					
Please describe the level of buildout in the jurisdiction, based on your jurisdiction’s buildable lands inventory. If no such inventory exists, provide a qualitative description.	The City is principally built out					

5.4 CAPABILITY ASSESSMENT

5.4.1 Resources for the 2017 Planning Initiative

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for inclusion into the 2017 Multi-Jurisdiction Hazard Mitigation Plan for both Volume 1 and Volume 2 (Los Altos Annex). All of the below items were additionally reviewed as part of the full capability assessment for City of Los Altos.

- **City of Los Altos General Plan**—The General Plan, including the Land Use and Safety Elements, were reviewed for information regarding goals and policies consistent with hazard mitigation for carry over as goals and objectives.
- **City of Los Altos Municipal Code**—The Municipal Code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.

- **Flood Damage Prevention Ordinance**—The Flood Damage Prevention Ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Capital Improvements Plan**—The Capital Improvements Plan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects. The Santa Clara Valley Water District (SCVWD) is the County’s flood control agency and is responsible for larger scale flood control improvement projects. The City’s Capital Improvements Plan includes an annual stormwater improvement project to address localized flooding issues.
- **City of Los Altos Emergency Operations Plan (EOP)**—The EOP was reviewed for compliance with Federal, State, and local directives.
- **Technical Reports and Information**—Outside resources and references used to complete the Los Altos Annex are identified in Section 5.11 of this Annex.

5.4.2 Full Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 5-2. An assessment of fiscal capabilities is presented in Table 5-3. An assessment of administrative and technical capabilities is presented in Table 5-4. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 5-5. An assessment of education and outreach capabilities is presented in Table 5-6. Classifications under various community mitigation programs are presented in Table 5-7. Development and permitting capabilities are presented in Table 5-8, and the community’s adaptive capacity for the impacts of climate change is presented in Table 5-9.

Table 5-2. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment: Chapter 12.04 through 12.68 of the LAMC (revised Nov. 8, 2016), County Fire Department</i>	Yes	Yes	Yes	No
Zoning Code <i>Comment: Chapter 14 of the LAMC (revised Nov. 8, 2016), California Planning and Zoning Code</i>	Yes	No	Yes	No
Subdivisions <i>Comment: Chapter 13 of the LAMC (revised Jan. 25, 2011), Subdivision Map Act</i>	Yes	No	Yes	No
Stormwater Management <i>Comment: Stormwater Master Plan (adopted April 26, 2016)</i>	Yes	Yes	Yes	Yes
Post-Disaster Recovery <i>Comment: City of Los Altos Emergency Operations Plan (LAMC 2.28 – Emergency Plan)</i>	No	No	No	No
Real Estate Disclosure <i>Comment: California Civil Code §1102 et seq.</i>	No	No	Yes	No
Growth Management <i>Comment: California Government Code §65300 et seq.</i>	Yes	No	Yes	No
Site Plan Review <i>Comment: Chapter 14 of the LAMC</i>	Yes	No	No	No
Environmental Protection <i>Comment: Los Altos General Plan (adopted Nov. 2002), CEQA, SCVWD, Dept. of Fish and Game, Water Quality Control Board, Bay Area Air Quality Management District</i>	Yes	Yes	Yes	No
Flood Damage Prevention <i>Comment: Chapter 12.60 of the LAMC, National Flood Insurance Program (revised March 24, 2009), FEMA, Department of Homeland Security</i>	Yes	Yes	No	No
Emergency Management <i>Comment: City of Los Altos Emergency Operations Plan (LAMC 2.28 – Emergency Plan, adopted Oct. 22, 1987)</i>	Yes	Yes	Yes	No

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Climate Change	Yes	No	Yes	No
<i>Comment: Los Altos Climate Action Plan, State Initiative to protect climate & reduce emissions; California SB-379: Land Use: General Plan: Safety Element</i>				
Other:	No	No	No	No
<i>Comment: None Identified.</i>				
Planning Documents				
General Plan	Yes	No	Yes	No
<i>Is the plan compliant with Assembly Bill 2140? Yes</i>				
<i>Comment: Los Altos General Plan 2002-2020, November 2002</i>				
Capital Improvement Plan	Yes	No	Yes	Maybe
<i>How often is the plan updated? Biannually</i>				
<i>Comment:</i>				
Floodplain or Watershed Plan	No	Yes	Yes	Maybe
<i>Comment: Santa Clara Valley Water District</i>				
Stormwater Plan	Yes	Yes	Yes	Yes
<i>Comment: Stormwater Master Plan (adopted 2016)</i>				
Urban Water Management Plan	Yes	Yes	Yes	No
<i>Comment: NPDES Permit, Regional Water Quality Control Board Permit</i>				
Habitat Conservation Plan	No	No	No	No
<i>Comment: None Identified</i>				
Economic Development Plan	Yes	No	No	No
<i>Comment: Los Altos General Plan Economic Development Element (adopted 2002)</i>				
Shoreline Management Plan	No	No	No	No
<i>Comment: None Identified.</i>				
Community Wildfire Protection Plan	No	No	No	No
<i>Comment: None Identified.</i>				
Forest Management Plan	No	No	No	No
<i>Comment: None Identified.</i>				
Climate Action Plan	Yes	No	Yes	No
<i>Comment: Los Altos Climate Action Plan, December 2013</i>				
Comprehensive Emergency Management Plan	Yes	Yes	Yes	No
<i>Comment: City of Los Altos Emergency Operations Plan (LAMC 2.28 – Emergency Plan, adopted Oct. 22, 1987)</i>				
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	No	No	No
<i>Comment: City of Los Altos Emergency Operations Plan (LAMC 2.28 – Emergency Plan, adopted Oct. 22, 1987)</i>				
Post-Disaster Recovery Plan	Yes	Yes	No	No
<i>Comment: City of Los Altos Emergency Operations Plan (LAMC 2.28 – Emergency Plan, adopted Oct. 22, 1987), Gov't Code: 8642-8644</i>				
Continuity of Operations Plan	Yes	No	No	No
<i>Comment: Agility Recovery Continuity of Operations Planning & Recovery – Bridging the gap between disaster and the Agency (City of Los Altos) – Provides recovery of business interruptions (Office Space, Power, Communications and computer systems)</i>				
Public Health Plan	No	Yes	No	No
<i>Comment: Santa Clara County</i>				
Other:	No	No	No	No
<i>Comment: None Identified.</i>				

Table 5-3. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes - subject to voter approval
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	No

Table 5-4. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Community Development Department, City of Los Altos, Senior Staff
Engineers or professionals trained in building or infrastructure construction practices	Yes	Public Works Department and Community Development Department – Building Division
Planners or engineers with an understanding of natural hazards	Yes	Community Development Department, City of Los Altos, Senior Staff
Staff with training in benefit/cost analysis	Yes	Public Works Department, Community Development Department, City of Los Altos, Senior Staff
Surveyors	Yes	Public Works On-Call
Personnel skilled or trained in GIS applications	Yes	Public Works Department, Community Development Department, City of Los Altos, Senior Staff
Scientist familiar with natural hazards in local area	No	Not Applicable
Emergency manager	Yes	Police Department/Captain
Grant writers	Yes	City Staff or Contracting with Consultants

Table 5-5. National Flood Insurance Program Compliance

Criteria	Response
What local department is responsible for floodplain management?	Public Works/Community Development Department
Who is your floodplain administrator? (department/position)	Planning Division, Planning Services Manager—Advance Planning
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	3/24/88, revised 3/30/09
Does your floodplain management program meet or exceed minimum requirements?	Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	8/11/16
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
• If so, please state what they are.	N/A
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
• If no, please state why.	N/A
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
• If so, what type of assistance/training is needed?	N/A
Does your jurisdiction participate in the Community Rating System (CRS)?	Yes
• If yes, is your jurisdiction interested in improving CRS Classification?	Yes – currently class 8
• Is your jurisdiction interested in joining the CRS program?	N/A
How many flood insurance policies are in force in your jurisdiction?	199 ^a
• What is the insurance in force?	\$60,960,300 ^a
• What is the premium in force?	\$134,701 ^a
How many total loss claims have been filed in your jurisdiction?	0 ^a
• How many claims were closed without payment/are still open?	10/0 ^a
• What were the total payments for losses?	\$37,478.49 ^a

a. According to FEMA statistics as of October 31, 2016

Table 5-6. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes, Public Information Officer
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	Yes
• If yes, please briefly describe.	The City of Los Altos Flood Zone information webpage contains links to the FEMA and SCVWD website
Do you utilize social media for hazard mitigation education and outreach?	Yes
• If yes, please briefly describe.	Nixle, Nextdoor, Facebook, City's website
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
• If yes, please briefly describe.	Nixle, Nextdoor
Do you have any established warning systems for hazard events?	Yes
• If yes, please briefly describe.	Alert SCC, Nixle

Table 5-7. Community Classifications

	Participating?	Classification	Date Classified
Community Rating System	Yes	8	September 14, 2014
Building Code Effectiveness Grading Schedule	Yes	Pending	Pending
Public Protection	No	N/A	N/A
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A

Table 5-8. Development and Permit Capabilities

Criterion	Response
Does your jurisdiction issue development permits?	Yes
• If no, who does? If yes, which department?	Community Development
Does your jurisdiction have the ability to track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	No

Table 5-9. Adaptive Capacity for Climate Change

Adaptive Capacity Assessment	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: Relatively unaffected due to considerable elevation above sea level.</i>	High
Jurisdiction-level monitoring of climate change impacts <i>Comment: Climate Action Plan lacks measurement tools</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: There are no staff member with specific expertise in this area.</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: Has greenhouse gas inventory as of 2005</i>	High
Capital planning and land use decisions informed by potential climate impacts <i>Comment: This is not a current priority in the evaluation of development applications.</i>	Low
Participation in regional groups addressing climate risks <i>Comment: The City has an appointed Environmental Commission and Commissioners have contacts with regional groups that are focused on these issues.</i>	Medium
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: CEQA regulations, Los Altos Climate Action Plan, Environmental Commission, City Council</i>	High
Identified strategies for greenhouse gas mitigation efforts <i>Comment: City of Los Altos Climate Action Plan: Adopted December, 2013</i>	High
Identified strategies for adaptation to impacts <i>Comment: City of Los Altos Climate Action Plan</i>	High
Champions for climate action in local government departments <i>Comment: Senior Staff in each City Department</i>	Medium
Political support for implementing climate change adaptation strategies <i>Comment: GreenTown Los Altos (local non-profit)</i>	Medium
Financial resources devoted to climate change adaptation <i>Comment: No Community Issues identified</i>	Low

Adaptive Capacity Assessment	Jurisdiction Rating
Local authority over sectors likely to be negative impacted <i>Comment: None Provided</i>	High
Public Capacity	
Local residents knowledge of and understanding of climate risk <i>Comment: None Provided</i>	High
Local residents support of adaptation efforts <i>Comment: None Provided</i>	High
Local residents' capacity to adapt to climate impacts <i>Comment: None Provided</i>	Medium
Local economy current capacity to adapt to climate impacts <i>Comment: None Provided</i>	Low
Local ecosystems capacity to adapt to climate impacts <i>Comment: None Provided</i>	Medium

5.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the hazard mitigation plan into local planning mechanisms.

5.5.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan:

- **Emergency Operations Center Plan/Manual**—The hazard mitigation plan is incorporated by reference. At the time of the next update, information obtained in the update of the hazard mitigation plan will be integrated into the Plan/Manual as appropriate.
- **Los Altos General Plan, Natural Environment and Hazards Element**—Provides background data and the City's Goals, Policies and Programs to address and mitigate natural hazards. This Element of the General Plan includes Program NEH 16: that calls for the preparation and maintenance of an Emergency Preparedness Plan. At the time of the next update, information obtained in the update of the hazard mitigation plan will be integrated into the Plan/Manual as appropriate.
- **Capital Improvements Plan**—The Capital Improvements Plan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.

5.5.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration:

- **Legal and Regulatory Capabilities**—Those capabilities identified as providing an integration opportunity in Table 5-1 will be reviewed and updated to include information on hazard risk reduction as feasible and appropriate.

5.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 5-10 lists all past occurrences of natural hazards within the jurisdiction.

Table 5-10. Natural Hazard Events

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Wildfires	EM-3287	6/20/2008	Not available
Summit Fire	EM-2766	5/22/2008	Not available
Croy Fire	FS-2465	9/23/2002	Not available
Tornado	N/A	05/05/1998	\$300,000
Severe Winter Storms And Flooding	DR-1203	2/2/1998	Not available
Severe Storms, Flooding, Mud And Landslides	DR-1155	12/28/1996	Not available
Severe Winter Storms, Flooding Landslides, Mud Flow	DR-1046	2/13/1995	Not available
Severe Winter Storms, Flooding, Landslides, Mud Flows	DR-1044	1/3/1995	Not available
Severe Freeze	DR-894	12/19/1990	Not available
Loma Prieta Earthquake	DR-845	10/17/1989	Not available
Severe Storms & Flooding	DR-758	2/12/1986	Not available
Grass, Wildlands, & Forest Fires	DR-739	6/26/1985	Not available
Coastal Storms, Floods, Slides & Tornadoes	DR-677	1/21/1983	Not available
Severe Storms, Flood, Mudslides & High Tide	DR-651	12/19/1981	Not available
Drought	EM-3023	1/20/1977	Not available

5.7 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include:

- The Emergency Operations Center is in need of replacement.
- Some utilities are above ground and subject to outage resulting from natural hazard events.

5.8 HAZARD RISK RANKING

Table 5-11 presents the ranking of the hazards of concern.

Table 5-11. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	48	High
2	Severe Weather	33	Medium
3	Flood	18	Medium
4	Drought	9	Medium
5	Dam and Levee Failure	6	Low
6	Wildfire	3	Low
6	Landslide	3	Low

5.9 STATUS OF PREVIOUS PLAN INITIATIVES

The 2011 ABAG LHMP did not contain any clearly defined actions for the City of Los Altos. No actions were identified that outlined what would be done, how it would be done, by whom it would be led, and the timeframe in which the action would be accomplished. The development of this annex is considered a functional reset of the city's hazard mitigation plan; therefore, no prior action reconciliation is provided.

5.10 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 5-12 lists the actions that make up the City of Los Altos hazard mitigation action plan. Table 5-13 identifies the priority for each action. Table 5-14 summarizes the mitigation actions by hazard of concern and the six mitigation types.

5.11 ADDITIONAL RESOURCES

The hazard mitigation plan annex development tool-kit, National Climatic Data Center disaster statistics, and State Department of Finance population estimates were used in the development of this annex to the Santa Clara Operational Area Hazard Mitigation Plan.

Table 5-12. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
LA-1—Implement the adopted Stormwater Master Plan						
New or existing	Flood	3, 6	Public Works	High	Federal, State, local grant funds and General Fund	Ongoing
LA-2—Continue to maintain good standing and compliance under the National Flood Insurance Program through enforcement of flood zone ordinance, cooperation with Santa Clara Valley Water District, participation in floodplain identification and mapping updates and continued public education.						
New & existing	Flood	1, 2, 3, 4, 7, 8	Public Works/SCVWD	Low	Staff time and General Fund	Ongoing
LA-3—Improve/replace the substandard Emergency Operation Center						
Existing	All Hazards	6, 8	City Manager's Office	High	Federal, State, local grant funds or General Fund	Short-term/Long-term
LA-4—Continue to work with PG&E on the City's Utility Undergrounding Program						
Existing	Earthquake, Wildfire, Severe Weather, Flood, Landslide	5, 6, 8	Public Works	High	PG&E Rule 20A Allocation	Long-term
LA-5—Integrate the hazard mitigation plan into other plans and programs that dictate land use decisions within Los Altos						
New & existing	All Hazards	2, 4	Community Development	Low	Staff time, General Fund	Ongoing
LA-6—Develop a post-disaster recovery plan and a debris management plan						
Existing	All Hazards	1, 3, 4, 6, 8	Police Department	Medium	EMPG	Long-term
LA-7— Educate general public through the construction of a demonstration garden that showcases drought tolerant landscaping and stormwater best management practices						
New	Drought, Flood	1, 2, 4, 6	Assistant City Manager/Public Works	Medium	Private/public partnership, Grants, staff time	Short-term
LA-8—Incorporate modern security technology into critical facilities upgrade and new construction						
New & existing	Human-caused	1, 3	Police Department/Public Works	High	Federal Grants and General Fund	Long-term
LA-9—Conduct comprehensive police officer training pertaining to human-caused multi-casualty incidents. This training will incorporate a multi-disciplinary approach with police action and rescue operations.						
N/A	Human-caused	1, 2, 9	Police Department	Low	Staff Time, General Funds	Ongoing
LA-10—Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.						
Existing	All Hazards	4, 5, 6, 7, 8	Public Works and Community Development	High	HMGP, PDM, FMA, CDBG-DR	Long-term
LA-11—Actively participate in the plan maintenance protocols outlined in Volume 1 of the hazard mitigation plan.						
New and Existing	All Hazards	1, 5	Police Department	Low	Staff Time, General Funds	Short-term

Table 5-13. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
LA-1	2	High	High	Yes	No	No	Medium	Low
LA-2	6	High	Low	Yes	No	Yes	High	Low
LA-3	2	High	High	Yes	Yes	No	Medium	Medium
LA-4	3	Medium	High	No	No	Yes	Medium	Low
LA-5	2	High	Low	Yes	Yes	Yes	High	Medium
LA-6	5	High	Medium	Yes	Yes	No	Medium	High
LA-7	4	High	Medium	Yes	No	Yes	High	Low
LA-8	2	High	High	Yes	Yes	No	Medium	Medium
LA-9	3	High	Low	Yes	No	Yes	High	Low
LA-10	4	High	High	Yes	Yes	No	Medium	High
LA-11	2	Low	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

Table 5-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a						
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects	7. Climate Resilient
Earthquake	LA-5, LA-11	LA-4, LA-10			LA-3, LA-6	LA-3	
Flood	LA-1, LA-2, LA-5, LA-11	LA-1, LA-2, LA-10	LA-2, LA-7	LA-2	LA-3, LA-6		
Wildfire	LA-5, LA-11	LA-4, LA-10			LA-3, LA-6		
Drought	LA-5, LA-7, LA-11	LA-10	LA-7		LA-3, LA-6		
Landslide	LA-5, LA-11	LA-4, LA-10			LA-3, LA-6		
Severe Weather	LA-5, LA-11	LA-4, LA-10			LA-3, LA-6		
Tsunami	LA-5, LA-11	LA-4, LA-10			LA-3, LA-6		
Dam and Levee Failure	LA-5, LA-11	LA-10			LA-3, LA-6		
Human-Caused	LA-5, LA-9, LA-11				LA-8, LA-9		

a. See the introduction to this volume for explanation of mitigation types.

6. TOWN OF LOS ALTOS HILLS

6.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

Suzanne Avila, Planning Director
26379 Fremont Rd.
Los Altos Hills, CA 94022
Telephone: 650-941-7222
e-mail Address: savila@losaltoshills.ca.gov

Alternate Point of Contact

Marsha Hovey, Consultant
26379 Fremont Rd.
Los Altos Hills, CA 94022
Telephone: 408-722-1210
e-mail Address: marshahovey@mac.com

6.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**— January 27, 1956
- **Current Population**—8,658 as of January 1, 2016
- **Population Growth**— 1.95 percent since 2010, 0.7 percent 2015 to 2016
- **Location and Description**— The Town of Los Altos Hills is a residential community in the northwestern region of Santa Clara County, California. It is 35 miles south of San Francisco, 5 miles south of Stanford University, and 17 miles north of downtown San José. The Town encompasses nine square miles, making it one of the smallest incorporated cities in Santa Clara County. It borders the City of Palo Alto and Palo Alto's Pearson-Arastradero Preserve to the north and west, the City of Los Altos to the east and the Mid Peninsula Regional Open Space District's Rancho San Antonio to the south. There is an additional 5.2 square miles of unincorporated land adjacent to the Town's southern boundary that is designated within the Town's "sphere of influence." In addition Foothill Community College is located within the Town boundaries new Highway 280 and Moody Road. There are several distinct features of Los Altos Hills. One is the Town's dedication to the preservation of a "residential-agricultural" conditional lifestyle, which is shown through open lands, rolling hills, and a rural atmosphere. The Town's Pathway System manifests this lifestyle, with 85 miles of trails and off-road paths that connect the community. Another significant feature of the Town is the absence of commercial and industrial zones. Permitted uses include schools, religious, and recreational facilities. The Town's zoning requires a minimum lot size of 1 acre.

The topography of Los Altos Hills provides significant constraints to development, such as steep slopes, unstable soils, seismic faults, and other natural hazards. Three major faults traverse the Town of Los Altos Hills: (1) Berrocal Fault, which runs from west to east, (2) Altamont Fault, parallel to Berrocal Fault, and (3) Monte Vista Fault, running from northwest to southeast. The Town is also near the San Andreas Fault and all are categorized as potentially active.

- **Brief History**— Ohlone Indians were the first known residents of Los Altos Hills. They were part of a group of Native Americans who once inhabited small villages throughout the Santa Clara Valley. Both Los Altos and Los Altos Hills have been substantiated as sites of early Ohlone villages. In 1955, Indian

remains and artifacts such as mortars and pestles were found on the Peck property east of Moody Road. In 1964, developers on O'Keefe Lane unearthed more human remains and artifacts. Still later, in 1970, an Ohlone village and burial ground of major significance came to light on the Costello property on O'Keefe Lane, prompting archaeological study by Foothill College and others. Additional mounds and village sites have since been excavated along Permanente and Matadero Creeks.

Two large Spanish-Mexican land grants comprise Los Altos Hills: Rancho La Purissima Concepcion, 4,436 acres granted to Native Americans José Gorgonio and his son José Ramon in 1840 and sold to Juana Briones de Miranda in 1844 for the sum of \$300; and Rancho San Antonio, 4,438 acres granted to Juan Prado Mesa. Adobe Creek was the boundary line of the two ranchos. The Briones and Mesa families were friendly and became related when two of the Mesa men married two of the Briones women.

In 1855 Juana Briones sold 3,000 acres to Martin Murphy, founder of the City of Sunnyvale, who had previously leased her land for cattle grazing. Murphy gave 2,800 acres to his daughter, Elizabeth Yuba, when she married William Taaffe, a prosperous San Francisco merchant. They built a home on what is now the Foothill Community College campus and had four children: William, Martin, and twin daughters Mary and Mathilda. Some of the Taaffe descendants still reside in Los Altos Hills. The two large ranchos were eventually parceled and sold as smaller ranches for cattle grazing and vineyards, mostly of Zinfandel grapes. Many Italian and French vintners lived on Purissima Road until a blight destroyed the vineyards near the turn of the century. Soon after, orchards of apricots, plums and prunes flourished.

With its millions of fruit trees producing a beautiful, aromatic sea of blossoms, Santa Clara Valley became the "Valley of Heart's Delight" and so it remained well into the 1960s. Trains and tour buses brought countless travelers from near and far to glimpse this unique panorama.

Los Altos Hills was incorporated as a general law city on January 27, 1956 with the name "The Town of Los Altos Hills." Before then, residential development was constrained by factors including lack of a dependable water supply. Water from wells and creek beds was safe, but not always adequate. Headwaters for Hale, Adobe, Barron, Matadero, Purissima, and Deer Creeks are in local foothills characterized by heavily wooded banks and often-impenetrable areas of poison oak and chaparral. Homes and farms were usually on large acreage. The overall personality of the region was distinctly rural.

After World War II, the pressures of a growing population and increasing urbanization were felt throughout the San Francisco Peninsula. Many members of the unincorporated Los Altos Hills community viewed local commercialism as undesirable and felt threatened by possible annexation by neighboring cities. When adjacent Los Altos incorporated in 1952 with a one-quarter-acre minimum lot size, residents of the Hills knew they had to take action to defend and preserve the amenities of their rural life, such as one-acre lots and the right to keep horses on private property.

The compelling reasons for the incorporation of Los Altos Hills were printed on green paper and distributed to residents in the fall of 1955. As stated in this document (referred to as the "Green Sheets") one of the primary reasons the founders of the Town originally decided to incorporate in 1956 was to maintain the rural character of the community. This desire continues today.

In 2016 the Town celebrated its 60th anniversary. To commemorate the occasion the Town distributed a History Anthology. A time capsule dedicated in 2016 is to be opened on the 75th anniversary in 2031.

Wealthy San Franciscans attracted to the area during this period built summer estates in Los Altos Hills. Among the many still standing are: The Shumate House on Viscaino, the Lohman and Griffin Houses on the Foothill College campus, the Morgan Manor (which for many years was operated as Ford Country Day School) on Stonebrook, and the Finn Mansion on Prospect. Both Morgan Manor and Griffin House are official Town Historical Landmarks.

- **Climate**—Los Altos Hills receives 37 inches of rain per year and 1 inch of snowfall. The average US city receives 37 inches and 25 inches, respectively. The number of days with any measurable precipitation is 69. On average, there are 263 sunny days per year in Los Altos Hills, California. The July high is around 78 degrees. The January low is 39 degrees. The Best Places comfort index, which is based on humidity during the hot months, is rated as 53 out of 100, where higher is more comfortable. The US average on the comfort index is 44.
- **Governing Body Format**—Los Altos Hills was incorporated as a general law city on January 27, 1956 with the name “The Town of Los Altos Hills.” The Town of Los Altos Hills is governed by a five-member city council. The Town consists of six departments: City Manager, City Clerk, Building, Emergency Services, Engineering & Public Works, Finance & Administrative Services, Municipal Code, Planning and Parks & Recreation. The City Manager has administrative responsibility and authority to ensure that the laws and ordinances of the Town are duly enforced. He is responsible for managing and giving direction to all department heads except the City Attorney. The City Manager is appointed by, and serves at the pleasure of, the City Council.

Major responsibilities of the City Manager are as follows:

- Represents the Town with other governmental agencies
- Recommends adoption of ordinances and resolutions to execute the City Council's policies
- Advises the City Council of the fiscal condition of the Town
- Prepares an annual budget and Capital Improvement Plan
- Exercises general supervision over all public buildings, parks, and other public properties under the control of the Town
- Appoints or removes employees of the Town.

The Town contracts police services with the Santa Clara County Sheriff's Office. Fire services are provided by the Los Altos Hills County Fire District who hires the Santa Clara County Fire Department to perform fire department services. The Town has 16 committees and commissions that report to the City Council. The City Council assumes responsibility for adoption of this plan, the City Manager will oversee its implementation.

6.3 DEVELOPMENT TRENDS

The guiding principle of the Land Use Element, as with other parts of the General Plan, is to address long-term needs while preserving the semi-rural character of the community and the overall quality of life for residents. While many changes have taken place in the intervening years, most of the pleasant country aspects of the Town remain as new housing is constructed to accommodate the needs and lifestyles of today's residents.

There are no commercial or industrial uses within the Town limits. As the Town has developed over the past 50 years, residents have continued to support the preservation of low-density residential development and the semi-rural character of the community through one-acre zoning, the right to keep horses on private property, and the protection of open space, creek corridors, wildlife habitat and heritage oak trees.

With limited land available for additional housing and only slight possibility of change on non-residential parcels, Los Altos Hills is almost fully developed. However, in addition to infill development on vacant lots, redevelopment is occurring as existing residences are torn down and replaced with new homes. The current trend is to develop residences that maximize the square footage allowed under floor area and development area regulations established by the Town's Zoning Ordinance. Table 6-1 summarizes development trends in the performance period since the previous hazard mitigation plan and expected future development trends.

Table 6-1. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan? • If yes, give the estimated area annexed and estimated number of parcels or structures.	Yes Six properties on Mora Drive and Mora Glen Drive were annexed in September 2016.					
Is your jurisdiction expected to annex any areas during the performance period of this plan? • If yes, please describe land areas and dominant uses. • If yes, who currently has permitting authority over these areas?	Yes The Town intends to pursue annexation of most of the remaining County islands that are within the Urban Service Area. County of Santa Clara					
Are any areas targeted for development or major redevelopment in the next five years? • If yes, please briefly describe, including whether any of the areas are in known hazard risk areas	No N/A					
How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?		2011	2012	2013	2014	2015
	Single Family	N/A	N/A	N/A	634	634
	Multi-Family	N/A	N/A	N/A	0	0
	Other (commercial, mixed use, etc.)	N/A	N/A	N/A	0	0
Please provide the number of permits for each hazard area or provide a qualitative description of where development has occurred.	The Town has a geologic hazards map and requires geotechnical peer review for new residences. Until recently, many properties in Los Altos Hills were in the Wildland Urban Interface (WUI) area and therefore subject to building code and landscape restrictions related to fire prevention. The City Council rescinded the WUI map on October 20, 2016. New residences and properties re-roofing a residence are still required to have class A roofing, and new residences and second units are required to have fire sprinkler systems. Development has occurred throughout the Town during the performance period for this plan. For hazards with impacts town-wide, it is safe to assume that this new development could be subject to impacts from those hazards. However, it is important to note that all new development was subject to the regulatory capabilities identified in this annex.					
Please describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	The Town is close to being built out. Most new projects involve the demolition of an existing residence and construction of a new (replacement) residence. A few subdivisions are processed each year. In 2015 two two-lot subdivisions were approved. Pending subdivision applications include one for two lots and one for nine lots.					

6.4 CAPABILITY ASSESSMENT

6.4.1 Resources for the 2017 Planning Initiative

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for inclusion into the 2017 Multi-Jurisdiction Hazard Mitigation Plan for both Volume 1 and Volume 2 Los Altos Hills Annex. All of the below items were additionally reviewed as part of the full capability assessment for Los Altos Hills

- **Los Altos Hills General Plan**—The General Plan, including the Land Use and Safety Elements, were reviewed for information regarding goals and policies consistent with hazard mitigation for carry over as goals and objectives.
- **Los Altos Hills Municipal Code**—The Municipal Code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Flood Damage Prevention Ordinance**—The Flood Damage Prevention Ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Capital Improvements Plan**—The Capital Improvements Plan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.
- **Los Altos Hills Local Hazard Mitigation Plan March 19, 2014**—The LHMP was used to develop the community profile portions of the plan and to compare strategies and information against current data.
- **Technical Reports and Information**—Outside resources and references used to complete the Los Altos Hills Annex are identified in 2.12 of this annex.

6.4.2 Full Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 6-2. An assessment of fiscal capabilities is presented in Table 6-3. An assessment of administrative and technical capabilities is presented in Table 6-4. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 6-5. An assessment of education and outreach capabilities is presented in Table 6-6. Classifications under various community mitigation programs are presented in Table 6-7. Development and permitting capabilities are presented in Table 6-8, and the community's adaptive capacity for the impacts of climate change is presented in Table 6-9.

Table 6-2. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment: Muni Code Title 8 & 2016 California Building Code</i>	Yes	No	Yes	Yes
Zoning Code <i>Comment: Muni Code Title 10 Alquist-Priolo Earthquake Fault Zoning Act Division 2, Chapter 7.5 2621 Public Resources Code</i>	Yes	No	Yes	Yes
Subdivisions <i>Comment: Muni Code Title 9 & Subdivision Map Act Government Code 66410-66413.5</i>	Yes	No	Yes	No
Stormwater Management <i>Comment: Muni Code Title 9, 10 California Regional Water Quality Control Board Order 01-119, State Waste Discharge Requirements, Clean Water Act</i>	Yes	Yes	Yes	No
Post-Disaster Recovery <i>Comment: None Identified</i>	No	No	No	Yes
Real Estate Disclosure <i>Comment: State of California Dept. of Real Estate Disclosures in Real Property Transactions Cal. Civ. Code §1102 et seq. 2005 Natural Hazards, Earthquake Guides</i>	No	Yes	Yes	No
Growth Management <i>Comment: Cal. Gov. Code §65300 et seq.</i>	No	No	Yes	No
Site Plan Review <i>Comment: Muni Code Title 10 – 1 & 10-2</i>	Yes	No	No	No
Environmental Protection <i>Comment: Various sections of Municipal Code and General Plan, California Environmental Quality Act Public Resources Code 21000–21189 and the CEQA Guidelines California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000– 15387</i>	Yes	No	Yes	No

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Flood Damage Prevention <i>Comment: Muni Code Title 7 Chapter 4, Department of Water Resources</i>	Yes	No	Yes	Yes
Emergency Management <i>Comment: Emergency Operations Plan 2009</i>	Yes	No	No	Yes
Climate Change <i>Comment: California SB-32 and SN-379</i>	No	No	Yes	Yes
Other: <i>Comment: None Identified</i>	No	No	No	No
Planning Documents				
General Plan <i>Is the plan compliant with Assembly Bill 2140? Yes</i> <i>Comment: Government Code 65300-65303.4; Town of Los Altos Hills General Plan Update 2007</i>	Yes	No	Yes	Yes
Capital Improvement Plan <i>How often is the plan updated? Annually</i> <i>Comment: 2016-2017 Operating & Capital Budget and Five-Year Capital Plan</i>	Yes	No	No	No
Floodplain or Watershed Plan <i>Comment: Santa Clara Valley Water District</i>	No	Yes	Yes	Yes
Stormwater Plan <i>Comment: Los Altos Hills Sewer Management Plan 2016; Clean Water Act, County National Pollutant Discharge Elimination System</i>	Yes	Yes	Yes	Yes
Urban Water Management Plan <i>Comment: None Identified</i>	No	No	No	No
Habitat Conservation Plan <i>Comment: Santa Clara Valley Habitat Plan</i>	No	Yes	No	No
Economic Development Plan <i>Comment: None Identified</i>	No	No	No	No
Shoreline Management Plan <i>Comment: None Identified</i>	No	No	No	No
Community Wildfire Protection Plan <i>Comment: Town has not adopted Santa Clara County Draft Wildfire Protection Plan</i>	No	Yes	No	Yes
Forest Management Plan <i>Comment: None Identified</i>	No	No	No	No
Climate Action Plan <i>Comment: Los Altos Hills Draft Climate Action Plan</i>	Yes	No	No	Yes
Comprehensive Emergency Management Plan <i>Comment: Santa Clara County Operational Area Emergency Operations Plan, 2008</i>	No	Yes	No	Yes
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment: None Identified</i>	No	No	No	No
Post-Disaster Recovery Plan <i>Comment: None Identified</i>	No	No	No	Yes
Continuity of Operations Plan <i>Comment: None Identified</i>	No	No	No	No
Public Health Plan <i>Comment: Santa Clara County</i>	No	Yes	No	No
Other: <i>Comment: None Identified</i>	No	No	No	No

Table 6-3. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes - subject to voter approval
User Fees for Water, Sewer, Gas or Electric Service	Yes - sewer
Incur Debt through General Obligation Bonds	Yes - subject to voter approval
Incur Debt through Special Tax Bonds	Yes -subject to voter approval
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	No

Table 6-4. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Planning, Building, Public Works & Engineering / LAH
Engineers or professionals trained in building or infrastructure construction practices	Yes	Building Dept. / LAH
Planners or engineers with an understanding of natural hazards	Yes	Planning, Building, Public Works & Engineering / LAH
Staff with training in benefit/cost analysis	Yes	Finance / LAH / Director
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	Planning, Public Works & Engineering / LAH
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	City Manager/Los Altos Hills/Emergency Manager
Grant writers	No	

Table 6-5. National Flood Insurance Program Compliance

Criteria	Response
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	Public Works / City Engineer
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	November 17, 2001
Does your floodplain management program meet or exceed minimum requirements?	May not meet minimum NFIP requirements
<ul style="list-style-type: none"> If exceeds, in what ways? 	
When was the most recent Community Assistance Visit or Community Assistance Contact?	Unknown
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
<ul style="list-style-type: none"> If so, please state what they are. 	
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
<ul style="list-style-type: none"> If no, please state why. 	
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
<ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	
Does your jurisdiction participate in the Community Rating System (CRS)?	No
<ul style="list-style-type: none"> If yes, is your jurisdiction interested in improving CRS Classification? Is your jurisdiction interested in joining the CRS program? 	No
How many flood insurance policies are in force in your jurisdiction?	82 ^a
Reference https://bsa.nfipstat.fema.gov/reports/1011.htm#CAT	
<ul style="list-style-type: none"> What is the insurance in force? What is the premium in force? 	\$24,837,300 ^a \$59,953 ^a
How many total loss claims have been filed in your jurisdiction?	13 ^a
Reference https://bsa.nfipstat.fema.gov/reports/1040.htm#06	
<ul style="list-style-type: none"> How many claims were closed without payment/are still open? What were the total payments for losses? 	8 CWOP/ 0 Open ^a \$31,535 ^a

a. According to FEMA statistics as of October 31, 2016

Table 6-6. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes Webpage listing links to documents, websites and videos explaining preparedness for natural and man made hazards. Also provides documents explaining structural and no-structural hazard mitigation.
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes Post information on Facebook, NextDoor, Twitter during emergencies and exercises
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes - Environmental Design & Protection Committee, Environmental Initiatives Committee
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes CERT volunteers, Town website, Town newsletter, Nextdoor.com, community events
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Reverse 9-1-1, local radio station, ham radio, Community Emergency Response Team

Table 6-7. Community Classifications

	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection (Alameda County Fire Department)	No	N/A	N/A
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A

Table 6-8. Development and Permit Capabilities

Criterion	Response
Does your jurisdiction issue development permits? • If no, who does? If yes, which department?	Yes Building Department
Does your jurisdiction have the ability to track permits by hazard area?	No. But the Town is moving forward with the implementation of a new permit tracking software and once that is in place we will have the ability to track permits by these or similar categories.
Does your jurisdiction have a buildable lands inventory?	No

Table 6-9. Adaptive Capacity for Climate Change

Adaptive Capacity Assessment	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts	Medium
<i>Comment: None provided</i>	
Jurisdiction-level monitoring of climate change impacts	Medium
<i>Comment: Climate Action Plan December 15, 2016</i>	
Technical resources to assess proposed strategies for feasibility and externalities	Low
<i>Comment: None provided</i>	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	High
<i>Comment: None provided</i>	
Capital planning and land use decisions informed by potential climate impacts	Low
<i>Comment: None provided</i>	
Participation in regional groups addressing climate risks	Low
<i>Comment: None provided</i>	
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Medium
<i>Comment: None provided</i>	
Identified strategies for greenhouse gas mitigation efforts	High
<i>Comment: Adopted Climate Action Plan December 15, 2016</i>	
Identified strategies for adaptation to impacts	Low
<i>Comment: None provided</i>	
Champions for climate action in local government departments	Medium
<i>Comment: None provided</i>	
Political support for implementing climate change adaptation strategies	Medium
<i>Comment: None provided</i>	
Financial resources devoted to climate change adaptation	Low
<i>Comment: None provided</i>	
Local authority over sectors likely to be negative impacted	Medium
<i>Comment: None provided</i>	
Public Capacity	
Local residents knowledge of and understanding of climate risk	Medium
<i>Comment: None provided</i>	
Local residents support of adaptation efforts	Medium
<i>Comment: None provided</i>	
Local residents' capacity to adapt to climate impacts	Medium
<i>Comment: None provided</i>	
Local economy current capacity to adapt to climate impacts	Medium
<i>Comment: None provided</i>	
Local ecosystems capacity to adapt to climate impacts	Medium
<i>Comment: None provided</i>	

6.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the hazard mitigation plan into local planning mechanisms.

6.5.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan:

- **Los Altos Hills General Plan**—Mitigation Plan is an Annex to the General Plan.

6.5.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration:

- **Los Altos Hills General Plan**—Plan will be reviewed to ensure alignment with the updated LHMP.
- **Los Altos Hills Municipal Code**—Sections related to zoning and building codes will be reviewed to ensure alignment with LHMP.
- **Community Wildfire Protection Plan**—Santa Clara County Fire recently adopted the Santa Clara County Community Wildfire Protection Plan. The plan included City annexes, which identify specific measures to reduce impacts from wildfires.
- **Legal and Regulatory Capabilities**—Those capabilities identified as providing an integration opportunity in Table 6-1 will be reviewed and updated to include information on hazard risk reduction as feasible and appropriate.

6.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 6-10 lists all past occurrences of natural hazards within the jurisdiction.

6.7 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include the following:

- Although only approximately 1 percent of structures in the Town are in the 1 percent annual chance floodplain, almost 92 percent of the Town's structures are believed to be located in the 0.2 percent annual chance flood hazard area.

6.8 HAZARD RISK RANKING

Table 6-11 presents the ranking of the hazards of concern.

Table 6-10. Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Preliminary Damage Assessment
Winter Storm	—	Jan 7, 2017	\$7,000
Fire (Stanford Dish)	—	June 25, 2007	The flames prompted a voluntary evacuation of homes in the area, but no structures were damaged and no injuries to residents. The blaze, burned about 125 acres
Flood	—	Jan 1, 2006	Not available
Flood	1203	Feb 2, 1998	Not available
Flood	1155	Dec 28, 1996	Not available
Winter Storm	1046	Feb 13, 1995	Not available
Winter Storm	1044	Jan 3, 1995	Not available
Severe Freeze	894	Dec 19, 1990	Not available
Earthquake (Loma Prieta)	845	Oct 17, 1989	Significant damage in Los Altos Hills, resulting in the demolition of 7 homes and necessitating substantial repairs to more than 25 residential units.
Winter Storm	758	Feb 12, 1986	Not available
Wildfire (Liddicoat)	739	July 1, 1985	\$9,000,000 (2014 LHMP) A major fire set by an arsonist destroyed nine homes in Los Altos Hills and damaged 16 others. The fire spread rapidly, burning 200 acres. The fire forced the evacuation of 195 residents, as well as horses, sheep, and dogs. The American Red Cross established a shelter at Gunn High School in Palo Alto. Injuries were limited to smoke inhalation, heat exhaustion and minor burns.
Earthquake 6.2	—	March 24, 1984	Not available
Storm/Flooding	677	Jan 21, 1983	In January 1983, both President Reagan and Governor Deukmejian declared Santa Clara County a disaster area caused by major rainfall. Major rainfall in March, 1983 caused flooding on Edith Road and West Fremont Road. A series of landslides closed Page Mill Road from Paseo del Roble to Three Forks Road. There were numerous slides on Viscaino Road from Concepcion to Purissima. The rain-swollen Adobe Creek caused erosion and landslides in the area of Foothill College.
Winter Storm	651	Dec 19, 1981	Not available
Earthquake 5.8	—	Jan. 27, 1980	Not available
Earthquake 5.9	—	Jan. 24, 1980	Not available
Earthquake 5.9	—	Aug. 6, 1979	Not available
Drought	3023	Jan 20, 1977	Not available
Earthquake 7.9	—	April 18, 1907	Not available

Table 6-11. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	48	High
2	Severe Weather	33	Medium
3	Wildfire	18	Medium
3	Flood	18	Medium
4	Landslide	15	Medium
5	Drought	9	Low
6	Dam and Levee Failure	0	Low

6.9 STATUS OF PREVIOUS PLAN ACTIONS

The status of previous actions from the 2014 LHMP for Los Altos Hills can be found in Appendix D of this volume.

6.10 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 6-12 lists the actions that make up the Town of Los Altos Hills hazard mitigation action plan. Table 6-13 identifies the priority for each action. Table 6-14 summarizes the mitigation actions by hazard of concern and the six mitigation types.

6.11 ADDITIONAL RESOURCES

The hazard mitigation plan annex development tool-kit was used in the development of this annex to the Santa Clara Operational Area Hazard Mitigation Plan.

Table 6-12. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Department	Estimated Cost	Sources of Funding	Timeline
LAH-1—Create resources to assist neighbors in networking and having an emergency action plan.						
Existing	Earthquake, Flood, Wildfire	1, 2, 4, 5, 8, 9	OES*, CERT	Low	Staff Time, General Fund	1-5 years (Short-term)
LAH-2—Continue tree trimming programs, brush clearance, and other defensible space outreach efforts as necessary to minimize the potential for road blockage. Maintenance of brush and vegetative growth for fire prevention is addressed in Section 4-2.115 and 4-2.116 of the LAH Municipal Code						
Existing	Wildfire, Flood, Severe Weather	1, 2, 4, 5, 6, 8	Public Works*, LAHCFD	Medium	Staff Time, General Fund	1-5 years (Short-term)
LAH-3—Develop and enhance public education and outreach materials for all hazards with emphasis on high risk ratings.						
Existing	All Hazards	1, 2, 4, 8, 9	OES	Low	Staff Time, General Fund	1-5 years (Short-term)
LAH-4—Prepare a comprehensive evacuation plan focusing on potential wildland fire threats and identifying potential evacuation routes.						
Existing	Earthquake, Wildfire, Flood, Landslide	1-6, 8, 9	OES*, Sheriff, Fire	Low	Staff Time, General Fund	1-5 years (Short-term)
LAH-5—Participate in County organized efforts to implement a countywide Community Wildfire Protection Plan.						
Existing	Wildfire	1-9	County OES*, LAH OES	Low	Staff Time, General Fund, HMGP	1-5 years (Short-term)
LAH-6—Evaluate options and resources available to support home owners in completing seismic retrofits.						
Existing	Earthquake	1-6, 8	Planning	Low	Staff Time, General Fund	1-5 years (Short-term)
LAH-7—Coordinate with the appropriate state and county agencies to develop a comprehensive list of bridges and overpasses within Los Altos Hills and who is responsible for their maintenance.						
Existing	Earthquake, Flood, Landslide	1, 2, 4, 5, 8	Public Works	Low	Staff Time, General Fund, HMGP	1-5 years (Short-term)
LAH-8—Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas.						
Existing	Earthquake, Wildfire, Flood	1-6, 8	Planning	High	HMGP, PDM, FMA, Staff Time, General Fund	1-5 years (Short-term)
LAH-9—Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community such as Municipal Code.						
New and Existing	All Hazards	1-4,8	Planning	Low	Staff Time, General Fund	1-5 years (Short-term)

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Department	Estimated Cost	Sources of Funding	Timeline
LAH-10 —Develop and implement a program to capture perishable data after significant events (e.g. high water marks, preliminary damage estimates, damage photos, total losses, successes, lessons learned) to support future mitigation efforts including the implementation and maintenance of the hazard mitigation plan.						
Existing	All Hazards	1-4	OES	Low	Staff Time, General Fund	1-5 years (Short-term)
LAH-11 —Support the Countywide initiatives identified in Volume 1 of the hazard mitigation plan						
Existing	All Hazards	1-9	Planning	Low	Staff Time, General Fund	On-going
LAH-12 —Actively participate in the plan maintenance protocols outlined in Volume 1 of the hazard mitigation plan						
Existing	All Hazards	1-6	OES	Low	Staff Time, General Fund	1-5 years (Short-term)
LAH-13 —Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP). This will be accomplished through the implementation of floodplain management programs that will, at a minimum, meet the requirements of the NFIP:						
<ul style="list-style-type: none"> Enforcement of the flood damage prevention ordinance. Participate in floodplain identification and mapping updates. Provide public assistance/information on floodplain requirements and impacts. 						
New and Existing	Flood	1-5	Planning	High	Staff Time, General Fund , HMGP	1-5 years (Short-term)
LAH-14 —Participate in the development of a countywide post-disaster recovery plan and a debris management plan						
Existing	Earthquake, Flood, Landslide	2, 3, 5, 6, 8	OES, Finance, Public Works	High	Staff Time, General Fund, HMGP	1-5 years (Short-term)
LAH-15 —Consider participation in programs such as Firewise, StormReady and the Community Rating System						
Existing	Wildfire, Flood, Severe Weather	1, 2, 3, 5, 6, 8	LAHCFD, Public Works, Planning	High	Staff Time, General Fund	1-5 years (Short-term)
LAH-16 —Complete Matadero Creek Erosion Control Project						
Existing	Flood	1-6	Public Works	Low	Staff Time, General Fund, HMGP, PDM, FMA, SCVWD Matching Grant	1-5 years (Short-term)
LAH-17 —Complete Barron Creek restoration joint project with private property owner.						
Existing	Flood	1-6	Public Works	Low	Staff Time, General Fund , HMGP, PDM, FMA, SCVWD Matching Grant	1-5 years (Short-term)
LAH-18 —Complete open space vegetation restoration project.						
Existing	Earthquake, Landslide	1-6	Public Works	Low	Staff Time, General Funds, HMGP, PDM	1-5 years (Short-term)
LAH-19 —Continue offering Personal Emergency Preparedness and Community Emergency Response Team (CERT) training to the community.						
Existing	Earthquake, Wildfire, Flood	1, 2, 4, 8, 9	LAHCFD*, OES	Low	Staff Time, General Fund	1-5 years (Short-term)
LAH-20 — Create and maintain a pathways inventory for alternate evacuation routes.						
Existing	Earthquake, Wildfire, Flood	2, 3, 4	Planning	Low	Staff Time, General Fund	1-5 years (Short-term)

* — Indicates lead agency

Table 6-13. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
LAH-1	6	Medium	Low	Yes	No	Yes	High	Low
LAH-2	6	Medium	Medium	Yes	No	Yes	High	Low
LAH-3	5	Medium	Low	Yes	No	Yes	High	Low
LAH-4	8	Medium	Low	Yes	No	Yes	High	Low
LAH-5	9	Medium	Low	Yes	Yes	No	Medium	Med
LAH-6	7	High	Low	Yes	No	Yes	High	Low
LAH-7	5	Medium	Low	Yes	Yes	No	Medium	Med
LAH-8	7	High	High	Yes	Yes	Yes	High	High
LAH-9	5	Medium	Low	Yes	No	Yes	High	Low
LAH-10	4	Medium	Low	Yes	No	Yes	High	Low
LAH-11	9	Low	Low	Yes	No	Yes	High	Low
LAH-12	6	Medium	Low	Yes	No	Yes	High	Low
LAH-13	5	High	High	Yes	Yes	No	Medium	High
LAH-14	5	Medium	High	No	Yes	No	Medium	High
LAH-15	6	Medium	High	No	No	No	Low	Low
LAH-16	6	High	Low	Yes	Yes	Yes	High	High
LAH-17	6	High	Low	Yes	Yes	Yes	High	High
LAH-18	6	High	Low	Yes	Yes	Yes	High	High
LAH-19	5	High	Low	Yes	No	Yes	High	Low
LAH-20	3	High	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

Table 6-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a						
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects	7. Climate Resilient
Earthquake	LAH-1, LAH-3, LAH-6, LAH-8, LAH-9, LAH-10, LAH-12,	LAH-6, LAH-7, LAH-9, LAH-10, LAH-12, LAH-19	LAH-1, LAH-3, LAH-4, LAH-10, LAH-12, LAH-19, LAH-20	LAH-14	LAH-4		
Severe Weather	LAH-2, LAH-3, LAH-9, LAH-10, LAH-12, LAH-15	LAH-10, LAH-19	LAH-3, LAH-10, LAH-12, LAH-15, LAH-19	LAH-14			
Wildfire	LAH-1, LAH-2, LAH-3, LAH-5, LAH-9, LAH-10, LAH-12, LAH-15	LAH-5, LAH-10, LAH-12, LAH-15, LAH-19	LAH-1, LAH-3, LAH-4, LAH-5, LAH-10, LAH-12, LAH-16, LAH-19, LAH-20	LAH-9, LAH-12, LAH-14, LAH-18	LAH-4		
Flood	LAH-1, LAH-2,3, LAH-8, LAH-9, LAH-10, LAH-11, LAH-12, LAH-13, LAH-15	LAH-7, LAH-9, LAH-10, LAH-12, LAH-13, LAH-15, LAH-20	LAH-1, LAH-3, LAH-4, LAH-10, LAH-12, LAH-13, LAH-15, LAH-19, LAH-20	LAH-9, LAH-12, LAH-13, LAH-14, LAH-16, LAH-17, LAH-18	LAH-4		
Landslide	LAH-3, LAH-9, LAH-10, LAH-11, LAH-12	LAH-7, LAH-10	LAH-3, LAH-4, LAH-10, LAH-12, LAH-19, LAH-20	LAH-14, LAH-16, LAH-17, LAH-18	LAH-4		
Drought	LAH-3, LAH-9, LAH-10, LAH-11, LAH-12	LAH-10, LAH-12, LAH-19	LAH-3, LAH-10, LAH-12, LAH-19	LAH-9, LAH-12			
Dam and Levee Failure	LAH-9, LAH-10, LAH-11, LAH-12	LAH-9, LAH-10,	LAH-3	LAH-9,			

a. See the introduction to this volume for explanation of mitigation types.

7. TOWN OF LOS GATOS

7.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

Laurel Prevetti, Town Manager
Town Manager's Office
110 East Main Street
Los Gatos, CA 95030
Telephone: 408-354-6832
e-mail Address: lprevetti@losgatosca.gov

Alternate Point of Contact

Lt. J. R. Langer
Los Gatos-Monte Sereno Police Dept.
110 East Main Street
Los Gatos, CA 95030
Telephone: 408-399-5719
e-mail Address: jlanger@losgatosca.gov

7.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—August 10, 1887
- **Current Population**—31,376 as of January 1, 2016.
- **Population Growth**—Based on the data obtained from the State Department of Finance, Los Gatos has experienced a relatively flat rate of growth. The overall population has increased by only 0.7 percent since 2015. Los Gatos population is expected to grow marginally per decade through 2030.
- **Location and Description**—The Town of Los Gatos, California is nestled at the base of the Sierra Azules, approximately 50 miles south of San Francisco, in the southwestern portion of Santa Clara County where the Santa Clara Valley meets the lower slopes of the Santa Cruz Mountains. Los Gatos is bounded by the City of San José to the north and east, the City of Campbell to the north, the Cities of Monte Sereno and Saratoga to the west, and the unincorporated County of Santa Clara and the County of Santa Cruz to the south. Los Gatos encompasses a wide variety of terrain, both the valley and hillsides are interspersed with creeks, streams, and riparian habitat.
- **Brief History**—The name Los Gatos comes from “El Rancho de Los Gatos,” a ranch established in 1839 by a Mexican land grant and so named because of the large number of mountain lions in the area. Wheat production in the mid 1800s gave way to orchards, and rapid growth ensued when the railroad reached Los Gatos in 1878. Residential subdivisions were built and by 1887, the population had grown to 1,500 and Los Gatans voted to incorporate. Highway 17 was constructed through the center of Town, opening in 1940. Los Gatos grew slowly over the first 80 years, but today Los Gatos covers nearly 15 square miles and has a population of over 30,000.
- **Climate**—Los Gatos enjoys a mild Mediterranean climate. Summers are dry and warm in the 80 to 100-degree range. Winters are temperate and semi-moist in the 40 to 60-degree range. Los Gatos receives most of its precipitation in December through March. The average annual precipitation is 14.9 inches. It is rare to have rain in the summer months.

- **Governing Body Format**—The Town of Los Gatos is governed by a five-member Town Council who sets policy that the Town Manager is responsible to administer (City Manager form of government). The Town Council assumes responsibility for the adoption of this Plan, and the Town Manager will oversee its implementation. The Town consists of nine departments: Town Manager’s Office, Clerk, Town Attorney, Finance, Human Resources, Library, Police, Community Development, and Parks and Public Works. The Town is served by 14 Boards, Commissions, and Committees, which are advisory to the Town Council.

7.3 DEVELOPMENT TRENDS

Anticipated residential and commercial development levels for Los Gatos are low to moderate, consisting primarily of residential remodels, the completion of the Netflix headquarters, and commercial renovations. The Town’s Housing Element, certified in 2015, identifies strategies to meet the Town’s fair share of the regional housing needs, including a focus on affordable housing and increasing the number of second units on existing properties. The Town of Los Gatos updated its General Plan in 2010. In addition to the Housing Element, the General Plan also includes elements regarding land use, community design, transportation, open space, sustainability, noise, safety, and human services. Town actions related to land use designations, annexation, zoning, and capital improvements, must always be consistent with the General Plan. Future growth and development in the Town is managed in accordance with the General Plan. Table 7-1 summarizes development trends in the performance period since development of the previous hazard mitigation plan and expected future development trends.

7.4 CAPABILITY ASSESSMENT

7.4.1 Resources for the 2017 Planning Initiative

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for inclusion into the 2017 Multi-Jurisdiction Hazard Mitigation Plan for both Volume 1 and Volume 2 (Town of Los Gatos Annex). All of the below items were additionally reviewed as part of the full capability assessment for Town of Los Gatos.

- **Town of Los Gatos General Plan**—The General Plan, including the Land Use and Safety Elements, were reviewed for information regarding goals and policies consistent with hazard mitigation for carry over as goals and objectives.
- **Town of Los Gatos Municipal Code**—The Municipal Code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Flood Damage Prevention Ordinance**—The Flood Damage Prevention Ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Capital Improvement Program**—The Town’s Five Year Capital Improvement Program was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.
- **Sustainability Plan**—The Sustainability Plan was reviewed for information regarding climate change.
- **Technical Reports and Information**—Outside resources and references used to complete the Town of Los Gatos Annex are identified in Section 7.11 of this annex.

Table 7-1. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan? • If yes, give the estimated area annexed and estimated number of parcels or structures.	Yes Land Area Annexed: 1.05 AC, 4 Parcels					
Is your jurisdiction expected to annex any areas during the performance period of this plan? • If yes, please describe land areas and dominant uses. • If yes, who currently has permitting authority over these areas?	Yes Residential land areas Town Council Approval					
Are any areas targeted for development or major redevelopment in the next five years? • If yes, please briefly describe, including whether any of the areas are in known hazard risk areas	Yes North Forty Development (Corner of Los Gatos Blvd. & Lark Ave.) Flood Zone					
How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?		2011	2012	2013	2014	2015
	Single Family	685	736	765	809	873
	Multi-Family	0	3	4	0	1
	Other (commercial, mixed use, etc.)	90	118	123	132	143
Please provide the number of permits for each hazard area or provide a qualitative description of where development has occurred.	Accela (permit system) allows for data input for hazard area type (i.e. Fire Hazard), but does not allow the Town to sort by area. The Town has Fire, Flood, and Hillside (landslide) zones that can be inputted into the system. Development has occurred throughout the Town during the performance period for this plan. For those hazards with a clearly defined extent and location, the Town cannot estimate development impacts. For those hazards with impacts town-wide, it is safe to assume that this new development could be subject to impacts from those hazards. However, it is important to note that all new development was subject to the regulatory capabilities identified in this annex.					
Please describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.						

7.4.2 Full Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 7-2. An assessment of fiscal capabilities is presented in Table 7-3. An assessment of administrative and technical capabilities is presented in Table 7-4. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 7-5. An assessment of education and outreach capabilities is presented in Table 7-6. Classifications under various community mitigation programs are presented in Table 7-7. Development and permitting capabilities are presented in Table 7-8, and the community's adaptive capacity for the impacts of climate change is presented in Table 7-9.

Table 7-2. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment: Town Code Chapter 6, 2016</i>	Yes	Yes	Yes	Yes
Zoning Code <i>Comment: Town Code Chapter 29, 2016</i>	Yes	No	Yes	No
Subdivisions <i>Comment: Town Code Chapter 24, 1994 and Chapter 29, 1998</i>	Yes	No	Yes	No
Stormwater Management <i>Comment: Municipal Regional Stormwater Permit 2017; Town Code Chapter 2, 1968 and Chapter 29, 1998</i>	Yes	Yes	Yes	Yes
Post-Disaster Recovery <i>Comment: Town Code Chapter 8, 1968</i>	Yes	Yes	Yes	No
Real Estate Disclosure <i>Comment: Cal. Civ. Code §1102 et seq.</i>	No	No	Yes	No
Growth Management <i>Comment: Town Code Chapter 29, 2016 and Town's General Plan, 2010; Cal. Gov. Code §65300 et seq.</i>	Yes	Yes	Yes	Yes
Site Plan Review <i>Comment: Town Code Chapter 29, 2016</i>	Yes	Yes	Yes	No
Environmental Protection <i>Comment: Lead Agency for project level CEQA review</i>	Yes	Yes	Yes	Yes
Flood Damage Prevention <i>Comment: Town Code Chapter 29, 2003</i>	Yes	Yes	Yes	Yes
Emergency Management <i>Comment: Town Code Chapter 8 (Civil Defense and Disaster) 1968</i>	Yes	Yes	Yes	Yes
Climate Change <i>Comment: Town General Plan Chapter 9, 2010; CA SB-379</i>	Yes	Yes	Yes	Yes
Other: Grading Ordinance <i>Comment: Town Code Chapter 12, 1968</i>	Yes	Yes	Yes	Yes
Planning Documents				
General Plan <i>Is the plan compliant with Assembly Bill 2140? Yes, General Plan contains a Safety Element, 2010</i> <i>Comment:</i>	Yes	Yes	Yes	Yes
Capital Improvement Plan <i>How often is the plan updated? Yearly</i> <i>Comment:</i>	Yes	No	No	Yes
Floodplain or Watershed Plan <i>Comment: Town Code Chapter 29, 2016; No plan located; Santa Clara Valley Water District</i>	Yes	Yes	No	No
Stormwater Plan <i>Comment: West Valley Clean Water Program</i>	No	Yes	Yes	Yes
Urban Water Management Plan <i>Comment: West Valley Clean Water Program</i>	No	Yes	Yes	Yes
Habitat Conservation Plan <i>Comment: None located</i>	No	No	No	No

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Economic Development Plan <i>Comment: Economic Vitality Program, 2002</i>	Yes	No	No	Yes
Shoreline Management Plan <i>Comment: None located</i>	No	No	Yes	No
Community Wildfire Protection Plan <i>Comment: Santa Clara County Fire</i>	No	Yes	Yes	Yes
Forest Management Plan <i>Comment: None located</i>	No	No	No	No
Climate Action Plan <i>Comment: Sustainability Plan, 2012</i>	Yes	Yes	No	Yes
Comprehensive Emergency Management Plan <i>Comment: Town of Los Gatos- City of Monte Sereno Emergency Operations Plan, 2015</i>	Yes	Yes	Yes	Yes
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment: Threat and Hazard & Risk Assessment- Emergency Operations Plan , 2015 page 14</i>	Yes	Yes	Yes	Yes
Post-Disaster Recovery Plan <i>Comment: Town of Los Gatos-City of Monte Sereno Emergency Operations Plan 2015 page 34. The Town of Los Gatos participates in Emergency Management Planning as a Santa Clara County Fire District served community. As such, the Town is currently participating in the development of an Operational Area Recovery Framework (anticipated publication and promulgation 2017/2018) that follows guidance provided by the State of California and the Federal Emergency Management Agency.</i>	Yes	No	No	Yes
Continuity of Operations Plan <i>Comment: Currently under development. Individual departments have business and continuity plans in place.</i>	Yes	No	Yes	Yes
Public Health Plan <i>Comment: The Town of Los Gatos falls under the authority of the Santa Clara County Department of Public Health, which has the following public health plans: 2015-2020 Community Health Assessment and Health Improvement Plan; 2014 Emergency Medical Services Plan; 2013 EMS Strategic Plan; 2013 Santa Clara County EMS System Strategic Implementation Plan; Santa Clara County EMS Trauma System Plan; and Santa Clara County EMS Stroke Plan.</i>	No	Yes	No	Yes

Table 7-3. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Open Space Fund	Yes

Table 7-4. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Parks & Public Works Department Town of Los Gatos Associate & Assistant Engineers Community Development Department Town of Los Gatos Associate & Assistant Planners
Engineers or professionals trained in building or infrastructure construction practices	Yes	Parks & Public Works Department Town of Los Gatos Associate & Assistant Engineers Community Development Department Town of Los Gatos Associate & Assistant Planners
Planners or engineers with an understanding of natural hazards	Yes	Parks & Public Works Department Town of Los Gatos Associate & Assistant Engineers Community Development Department Town of Los Gatos Associate & Assistant Planners
Staff with training in benefit/cost analysis	Yes	Parks & Public Works Department Town of Los Gatos Director Community Development Department Town of Los Gatos Director
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	Parks & Public Works Department Town of Los Gatos Associate & Assistant Engineers Community Development Department Town of Los Gatos Associate & Assistant Planners
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Town Manager's Office Town of Los Gatos Town Manager
Grant writers	Yes	Parks & Public Works Department Town of Los Gatos Administrative Analyst, Director

Table 7-5. National Flood Insurance Program Compliance

Criteria	Response
What local department is responsible for floodplain management?	Parks and Public Works Department
Who is your floodplain administrator? (department/position)	Parks and Public Works Director
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	2003
Does your floodplain management program meet or exceed minimum requirements?	Meet; May need to be updated with provisions pertaining to the 2004 National Flood Insurance Reform Act
When was the most recent Community Assistance Visit or Community Assistance Contact?	Unknown
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If no, please state why.	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No
Does your jurisdiction participate in the Community Rating System (CRS)? • Is your jurisdiction interested in joining the CRS program?	No No
How many flood insurance policies are in force in your jurisdiction? • What is the insurance in force? • What is the premium in force?	156 ^a \$46,988,700 ^a \$83,636 ^a
How many total loss claims have been filed in your jurisdiction? • How many claims were closed without payment/are still open? • What were the total payments for losses?	20 ^a 10/0 ^a \$51,957.41 ^a

a. According to FEMA statistics as of October 31, 2016

Table 7-6. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes, the Town Manager currently acts as the Public Information Officer
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes General Plan, Flood Plain Ordinance, Hillside Development Standards & Guidelines, Los Gatos Prepared Webpage
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes Facebook, Twitter, NextDoor
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes What's New
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes Alert SCC

Table 7-7. Community Classifications

	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection (Santa Clara County Fire)	Yes	2/2Y	2015
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A

Table 7-8. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? • If no, who does? If yes, which department?	Yes Parks and Public Works Department, Community Development Department
Does your jurisdiction have the ability to track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	Yes (in the General Plan)

Table 7-9. Adaptive Capacity for Climate Change

Adaptive Capacity Assessment	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: None provided.</i>	Medium
Jurisdiction-level monitoring of climate change impacts <i>Comment: None provided.</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: None provided.</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: None provided.</i>	Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment: None provided.</i>	Medium
Participation in regional groups addressing climate risks <i>Comment: None provided.</i>	Low
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: None provided.</i>	Low
Identified strategies for greenhouse gas mitigation efforts <i>Comment: None provided.</i>	Medium
Identified strategies for adaptation to impacts <i>Comment: None provided.</i>	Low
Champions for climate action in local government departments <i>Comment: None provided.</i>	Low
Political support for implementing climate change adaptation strategies <i>Comment: None provided.</i>	Low
Financial resources devoted to climate change adaptation <i>Comment: None provided.</i>	Low

Adaptive Capacity Assessment	Jurisdiction Rating
Local authority over sectors likely to be negative impacted <i>Comment: None provided.</i>	Low
Public Capacity	
Local residents knowledge of and understanding of climate risk <i>Comment: None provided.</i>	Low
Local residents support of adaptation efforts <i>Comment: None provided.</i>	Medium
Local residents' capacity to adapt to climate impacts <i>Comment: None provided.</i>	Low
Local economy current capacity to adapt to climate impacts <i>Comment: None provided.</i>	Low
Local ecosystems capacity to adapt to climate impacts <i>Comment: None provided.</i>	Low

7.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the hazard mitigation plan into local planning mechanisms.

7.5.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan:

- **General Plan**—The General Plan integrates the legal and regulatory section of the Hazard Mitigation Plan throughout it.
- **Hillside Development Standards & Guidelines**—Multiple sections of the Hillside Development Standards & Guidelines integrate the goals of the Hazard Mitigation Plan.
- **Emergency Operation Plan**—The Emergency Operation plan integrates many pieces of the Hazard Mitigation Plan through a Hazard Analysis, Preparedness, Response, Recovery, and Mitigation sections.
- **Building Code**—The Building Code currently integrates the Hazard Mitigation Plan through enforcing code that will mitigate damage from a disaster. The Town also has a Code Compliance Officer to enforce these codes to maintain safety in the Town.
- **Fire Code**—Santa Clara County's Fire Code integrates the Hazard Mitigation Plan through specific fire standards and practices for projects throughout the County.

7.5.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration:

- **General Plan**—Several parts of the General Plan have the opportunity for future integration. At the time of the next update, information obtained in the update of the hazard mitigation plan will be integrated into the General Plan as appropriate.
- **Sustainability Plan**—The Adaptive Capacity for Climate Change section of the Hazard Mitigation Plan integrates into the Sustainability Plan.
- **Flood Damage Prevention Ordinance**—Opportunity to integrate new NFIP ordinance language.

7.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 7-10 lists all past occurrences of natural hazards within the jurisdiction.

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Flood	651	January 7, 1982	\$17,543,819.07
Storm	677	February 9, 1983	\$20,746,004.58
Fire	739	July 18, 1985	Unknown
Flood	758	February 21, 1986	\$10,812,819.38
Earthquake	845	October 17, 1989	\$1,409,677,726.18
Freeze	894	February 11, 1991	Unknown
Severe Storm	1044	January 10, 1995	\$17,482,926.56
Severe Storm	1046	March 12, 1995	\$9,331,377.98
Severe Storm	1155	January 4, 1997	\$21,792,068.12
Severe Storm	1203	February 9, 1998	\$25,537,087.33
Heavy Rain	N/A	December 15, 2002	Unknown
Flood	N/A	January 20, 2010	Unknown
Heavy Rain	N/A	January 3-13, 2017	Unknown

7.7 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include:

- Street flooding occurs within the Town.

7.8 HAZARD RISK RANKING

Table 7-11 presents the ranking of the hazards of concern.

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	48	High
2	Wildfire	45	High
3	Severe Weather	33	Medium
5	Landslide	18	Medium
4	Flood	15	Medium
7	Dam and Levee Failure	10	Low
6	Drought	9	Low

7.9 STATUS OF PREVIOUS PLAN ACTIONS

The status of previous actions from the 2011 ABAG LHMP for Town of Los Gatos can be found in Appendix D of this volume.

7.10 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 7-12 lists the actions that make up the Town of Los Gatos hazard mitigation action plan. Table 7-13 identifies the priority for each action. Table 7-14 summarizes the mitigation actions by hazard of concern and the six mitigation types.

7.11 ADDITIONAL RESOURCES

The hazard mitigation plan annex development tool-kit was used in the development of this annex to the Santa Clara Operational Area Hazard Mitigation Plan.

Table 7-12. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
LGT-1 —Periodically update the Town’s geologic, seismic, and geotechnical maps.						
Existing	All Hazards	1, 2, 6, 7, 8	Community Development	Medium	HMGP, General Funds	On-going
LGT-2 —Periodically identify and retest, if needed, those bridges whose destruction would cause serious access problems after an earthquake.						
Existing	Earthquake	1, 2, 4, 8	Caltrans	High	Possible Grants, State	On-going
LGT-3 —Work with facility owners to periodically ensure that all buildings and structures in Town whose uses and functions are essential in response to a major earthquake are safe.						
Existing	All Hazards	1, 2, 5	Community Development, Fire, Schools	Medium	HMGP, PDM, FMA	On-going
LGT-4 —Amend the Town Code to reduce the permitted gradient for roads in areas determined to be high risk landslide or fault zones.						
New	Flood, Earthquake	2, 3, 4, 8	Community Development	Low	HMGP, General Funds	Long-term
LGT-5 —Update the Town’s earthquake preparedness information packet, keep it current on an ongoing basis and develop and implement effective means to disseminate it to Town residents and businesses.						
N/A	Earthquake	1, 2, 4, 6, 8	Town	Medium	Possible Grants	Long-term
LGT-6 —Create and adopt a Geologic Hazards Checklist to be utilized during the development review process.						
New	Flood, Earthquake	1, 2, 3, 4, 7, 8	Community Development	Medium	HMGP, General Funds	Long-term
LGT-7 —Adopt procedures whereby the public will continually be made aware of the Town’s policies regarding safety hazards and be conveniently supplied with information, including notification of residents of fire emergency plans for their area.						
N/A	All Hazards	1, 2, 4, 8, 9	Police	Medium	HMGP	Long-term
LGT-8 —Coordinate with Santa Clara Valley Water District, (SCVWD) FEMA, and/or the State Department of Water Resources to develop and distribute flood hazard preparedness educational information, including evacuation plans, for residents.						
Existing	Flood	1, 2, 4, 8, 9	Police, Parks and Public Works, FEMA, Water District, State	Medium	HMGP, PDM, FMA	Long-term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
LGT-9 —Develop and implement a program to capture perishable data after significant events (e.g. high water marks, preliminary damage estimates, damage photos) to support future mitigation efforts including the implementation and maintenance of the hazard mitigation plan.						
New and Existing	All Hazards	1, 2, 5	Parks and Public Works, Police, Fire Department	Medium	HMGP, General Funds	On-going
LGT-10 —Develop a post-disaster recovery plan and a debris management plan.						
New and Existing	All Hazards	1, 2, 5	Police, Fire Department	Medium	Possible Grants, General Funds	On-going
LGT-11 —Encourage and work with Santa Clara Valley Water District to establish policies and ordinances to support water conservation.						
New and Existing	Drought, Landslide	1, 2, 3, 5	Parks and Public Works, Water District	Low	Possible Grants, General Funds	On-going
LGT-12 —The Town will inventory and map, using GIS, the location of soft-story buildings. The maps will be available to first responders during emergencies.						
Existing	Earthquake	1, 2	Community Development	Low	General Funds	Short-term
LGT-13 — The Town will consider developing a retrofit grant program for building owners. The grant program would be made more possible if the Town is able to secure mitigation grants through having an adopted Hazard Mitigation Plan. This project would also be consistent with General Plan Safety Element Policy SAF Policy 1.5, which calls for the Town to provide incentives for seismic retrofits of structures.						
Existing	Earthquake	2, 4, 5, 7	Community Development	High	HMGP, PDM (General Funds for local match)	Short-term
LGT-14 —The Town will coordinate with surrounding jurisdictions that are in the inundation area of the Lexington Reservoir Lenihan Dam to implement a siren warning system.						
New and Existing	Dam Failure	5, 9	Parks and Public Works	High	HMGP, PDM	Short-term
LGT-15 —Marketing and public education campaigns for dam failures will also be implemented.						
New and Existing	Dam Failure	1, 4, 9	Police, Community Development	Low	General Funds	On-going
LGT-16 — Promote transportation options such as bicycle trails, commute trip reduction programs, incentives for car pooling and public transit.						
Existing	Greenhouse Gas Mitigation	4, 6	Parks and Public Works, Town Manager's Office	Low	General Funds	On-going
LGT-17 — Increase the use of clean, alternative energy by, for example, investing in “green tags”, advocating for the development of renewable energy resources, recovering landfill methane for energy production, and supporting the use of waste to energy technology.						
Existing	Greenhouse Gas Mitigation	3, 4	Town Council	Medium	General Funds	On-going
LGT-18 —Make energy efficiency a priority through building code improvements, retrofitting city facilities with energy efficient lighting and urging employees to conserve energy and save money.						
Existing	Greenhouse Gas Mitigation	2, 6	Community Development	Medium	General Funds	Long-term
LGT-19 — Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.						
Existing	All Hazards	4, 5, 6, 7, 8	Parks and Public Works / Community Development	High	HMGP, PDM, FMA	Short-term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
LGT-20 —Continue to integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community						
New and Existing	All Hazards	2, 4,	Community Development	Low	Staff Time, General Funds	On-going
LGT-21 — Actively participate in the plan maintenance protocols outlined in Volume 1 of the hazard mitigation plan.						
New and Existing	All Hazards	1, 5	Town Manager's Office	Low	Staff Time, General Funds	Short-term
LGT-22 — Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP). This will be accomplished through the implementation of floodplain management programs that will, at a minimum, meet the requirements of the NFIP:						
<ul style="list-style-type: none"> • Enforcement of the flood damage prevention ordinance • Participate in floodplain identification and mapping updates • Provide public assistance/information on floodplain requirements and impacts 						
New and Existing	Flood	1, 2, 3, 4, 7, 8	Parks and Public Works	Low	Staff Time, General Funds	On-going

Table 7-13. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
LGT-1	5	Medium	Medium	Yes	Yes	No	Medium	High
LGT-2	4	Medium	High	No	Yes	No	Low	Medium
LGT-3	3	Medium	Medium	Yes	Yes	No	Low	Medium
LGT-4	4	Medium	Low	Yes	Yes	Yes	Medium	High
LGT-5	5	High	Medium	Yes	Yes	No	Medium	Medium
LGT-6	6	High	Medium	Yes	Yes	No	Medium	Medium
LGT-7	5	High	Medium	Yes	Yes	No	Medium	Medium
LGT-8	5	High	Medium	Yes	Yes	No	Medium	Medium
LGT-9	3	High	Medium	Yes	Yes	No	Medium	High
LGT-10	3	Medium	Medium	Yes	Yes	No	Medium	High
LGT-11	4	Medium	Low	Yes	Yes	Yes	Medium	Medium
LGT-12	2	High	Low	Yes	No	Yes	High	Low
LGT-13	4	High	High	Yes	Yes	No	Medium	High
LGT-14	2	High	High	Yes	Yes	No	Medium	High
LGT-15	3	High	Low	Yes	No	Yes	High	Low
LGT-16	2	Low	Low	Yes	No	Yes	High	Low
LGT-17	2	Low	Medium	No	No	Yes	Medium	Low
LGT-18	2	Low	Medium	No	No	Yes	Medium	Low
LGT-19	5	High	High	Yes	Yes	No	Medium	High
LGT-20	2	Medium	Low	Yes	No	Yes	High	Low
LGT-21	2	Low	Low	Yes	No	Yes	High	Low
LGT-22	6	Medium	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

Table 7-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type						
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects	7. Climate Resilient
Dam and Levee Failure	LGT-1, LGT-7, LGT-9, LGT-20, LGT-21	LGT-3, LGT-19	LGT-7, LGT-14, LGT-15		LGT-10, LGT-14		
Drought	LGT-1, LGT-7, LGT-9, LGT-20, LGT-21	LGT-3, LGT-19	LGT-7		LGT-10		LGT-11
Flood	LGT-1, LGT-4, LGT-6, LGT-7, LGT-9, LGT-20, LGT-21, LGT-22	LGT-3, LGT-19, LGT-22	LGT-7, LGT-8, LGT-22	LGT-4	LGT-10		
Earthquake	LGT-1, LGT-4, LGT-6, LGT-7, LGT-9, LGT-20, LGT-21	LGT-3, LGT-13, LGT-19	LGT-5, LGT-7	LGT-4	LGT-10, LGT-12	LGT-2	
Landslide	LGT-1, LGT-7, LGT-9, LGT-20, LGT-21	LGT-3, LGT-19	LGT-7		LGT-10		
Severe Weather	LGT-1, LGT-7, LGT-9, LGT-20, LGT-21	LGT-3, LGT-19	LGT-7		LGT-10		
Wildfire	LGT-1, LGT-7, LGT-9, LGT-20, LGT-21	LGT-3, LGT-19	LGT-7		LGT-10		

a. See the introduction to this volume for explanation of mitigation types.

8. CITY OF MILPITAS

8.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

Toni Charlop, Emergency Services Coordinator
Milpitas Fire Department – Office of Emergency Services
777 S. Main St
Milpitas, CA 95035
Phone: (408) 586-2801
E-mail: tcharlop@ci.milpitas.ca.gov

Alternate Point of Contact

Robert Mihovich, Fire Chief
Milpitas Fire Department
777 S. Main St.
Milpitas, CA 95035
Phone: (408) 586-2811
E-mail: rmihovich@ci.milpitas.ca.gov

8.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—January 6, 1954
- **Current Population**—75,521 as of January 1, 2016
- **Population Growth**—Over the course of the last six years (2010 – 2016), Milpitas’ population has grown at an average rate of 2.1 percent. Over this duration, the highest rate of population growth was in 2014-2015 at 4.2 percent. 2010-2011 had the lowest rate of growth at 0.3 percent. According to most recent statistics, the Milpitas population grew 1.9 percent in 2015 – 2016. (Source: CA Dept. of Finance)
- **Location and Description**—Located at the southern tip of San Francisco Bay, between Fremont (north) and San José (south), the City of Milpitas is a progressive community that is an integral part of the high tech Silicon Valley. Milpitas (incorporated area) is often called the “Crossroads of Silicon Valley” with most of its 13.63 square miles of land situated between two major freeways (I-880 and I-680), State Route 237 and County Expressway. Milpitas is home to The Great Mall of the Bay Area, which is the largest enclosed mall in Northern California at approximately 1.1 million square feet of leasable space. (Source: www.ci.milpitas.ca.gov/milpitas/about-milpitas/)
- **Brief History**—Milpitas was first inhabited by the Tamyen, a linguistic subgroup of the Muwekma Ohlone people who resided in the San Francisco Bay Area for thousands of years. During the Spanish expeditions, Milpitas served as a crossroads between Mission San José de Guadalupe (modern day Fremont, CA) and Mission Santa Clara de Asis (modern day Santa Clara, CA). In the 1850s – 80s large numbers of European settlers descended to farm the fertile lands of Milpitas. By mid-20th century Milpitas found itself being swallowed up by its neighbor to the south, San José, thus resulting in the incorporation of Milpitas, January 26, 1954. Seven years later San José attempted to annex Milpitas, in which the “Milpitas Minutemen” quickly organized to oppose the annexation of Milpitas into San José and keep it independent, hence the Minuteman in the Milpitas seal. (Source: Wikipedia)
- **Climate**—Milpitas enjoys warm, sunny weather with few extreme temperatures. Rainfall is confined mostly to the winter months. During winter, temperatures are relatively warm at an average of 31 °F to

59 °F (-0.5°C to 15°C). Showers and cloudy days come and go during this season dropping most of the city's annual 15 inches (380 mm) of precipitation, and as spring approaches, the gentle rains gradually dwindle. In summer, the grasslands on the hillsides dehydrate rapidly and form bright, golden sheets on the mountains set off by stands of oak. Summer is dry and warm but not hot like in other parts the Bay Area. Temperatures infrequently reach over 100 °F (38 °C) with most days in the mid-70s to the high-70s. From June to September, Milpitas experiences little rain, and as autumn approaches, the weather gradually cools down. Many temperate-climate trees drop their leaves during fall in the South Bay but the winter temperature is warm enough for evergreens like palm trees to thrive. (Source: Wikipedia)

- Governing Body Format**—The city of Milpitas is governed by a five-member city council. The City consists of 13 departments, which include: Building & Safety, City Attorney, City Clerk, City Manager, Engineering, Finance, Fire, Human Resources, Information Services, Planning & Neighborhood Services, Police, Public Works, and Recreation Services. The City has 14 Commissions which report to the City Council. The City Council assumes responsibility for the adoption of this plan; the City Manager will oversee its implementation. (Source: www.ci.milpitas.ca.gov)

8.3 DEVELOPMENT TRENDS

Development for the City of Milpitas is anticipated to be high, given the City's regional location and relationship to the Silicon Valley. The City has several proposed projects such as high density, transit oriented residential development, new single family and apartment units, mixed-use in-fill developments, new hotels, and commercial remodels for adaptive re-use. The City's 1994 General Plan it serves as the master policy document to guide land use, circulation, housing, open space, sustainability, and economic development throughout the City. Given the importance of this document, the City kicked off a process to comprehensively update the General Plan in October 2016, with completion anticipated in 2018. An update of the City's Zoning Ordinance is also anticipated after completion of the General Plan update, which will update land use regulations and use regulations to reflect the policies established within the General Plan, along with associated General Plan and Zoning Land Use Maps. Table 8-1 summarizes development trends in the performance period since development of the previous hazard mitigation plan and expected future development trends.

Table 8-1. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan?	No					
<ul style="list-style-type: none"> If yes, give the estimated area annexed and estimated number of parcels or structures. 	N/A					
Is your jurisdiction expected to annex any areas during the performance period of this plan?	No					
<ul style="list-style-type: none"> If yes, please describe land areas and dominant uses. 	N/A					
<ul style="list-style-type: none"> If yes, who currently has permitting authority over these areas? 	N/A					
Are any areas targeted for development or major redevelopment in the next five years?	Unknown at this time.					
<ul style="list-style-type: none"> If yes, please briefly describe, including whether any of the areas are in known hazard risk areas 	N/A					
How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?		2011	2012	2013	2014	2015
Single Family (new)	8	66	94	129	71	
Multi-Family (new)	0	8	83	42	25	
Commercial (new)	1	3	6	3	3	

Criterion	Response					
	Other	2,921	3,267	3,810	4,451	3,785
Please provide the number of permits for each hazard area or provide a qualitative description of where development has occurred.	Development has occurred throughout the city during the performance period for this plan. For hazards with a clearly defined extent and location, the City cannot estimate development impacts. For hazards with impacts city-wide, it is safe to assume that this new development could be subject to impacts from those hazards. However, it is important to note that all new development was subject to the regulatory capabilities identified in this annex.					
Please describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	The City of Milpitas is currently undergoing the process of the General Plan Update, which will include inventory of land uses, underutilized properties, vacant lands, etc.					

8.4 CAPABILITY ASSESSMENT

8.4.1 Resources for the 2017 Planning Initiative

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for inclusion into the 2017 Multi-Jurisdiction Hazard Mitigation Plan for both Volume 1 and Volume 2 (Milpitas Annex). All of the below items were additionally reviewed as part of the full capability assessment for Milpitas.

- **Milpitas General Plan**—The General Plan, including the Land Use and Safety Elements, were reviewed for information regarding goals and policies consistent with hazard mitigation for carry over as goals and objectives.
- **Milpitas Municipal Code**—The Municipal Code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Flood Damage Prevention Ordinance**—The Flood Damage Prevention Ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Capital Improvements Plan**—Various Capital Improvement Projects/ Programs have been identified and funded to mitigate potential risks and hazards associated with critical infrastructure such as water, sewer, stormwater, and electrical utilities. These improvements include seismic evaluations to identify specific utility improvement needs, condition assessment of existing infrastructure, and design and construction of various capital improvements.
- **Milpitas Multi-Hazard Functional Plan**—The Multi-Hazard Functional Plan was reviewed to identify Continuity of Government Operations Plans, Public Health Plans and Threat, Hazard Identification and Risk Assessments.
- **2012 Emergency Operations Plan**—This plan was reviewed for Threat, Hazard Identification and Risk Assessments, and satisfies the City of Milpitas' Comprehensive Emergency Management Plan.
- **Technical Reports and Information**—Outside resources and references used to complete the Milpitas Annex are identified in Section 8.10 of this Annex.

8.4.2 Full Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 8-2. An assessment of fiscal capabilities is presented in Table 8-3. An assessment of administrative and technical capabilities is presented in Table 8-4. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 8-5. An assessment of education and outreach capabilities is presented in Table 8-6. Classifications under various community mitigation programs are presented in Table 8-7. Development and permitting capabilities are presented in Table 8-8, and the community's adaptive capacity for the impacts of climate change is presented in Table 8-9.

Table 8-2. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment: MMC Title II</i>	Yes	No	Yes	Yes
Zoning Code <i>Comment: MMC Title VI</i>	Yes	No	Yes	Yes
Subdivisions <i>Comment: MMC XI</i>	Yes	No	No	Yes
Stormwater Management <i>Comment: MMC Title VI; Santa Clara Valley Water District</i>	Yes	Yes	Yes	Yes
Post-Disaster Recovery <i>Comment: MMC Title V</i>	Yes	No	No	Yes
Real Estate Disclosure <i>Comment: Cal. Civ. Code §1102 et seq.</i>	No	No	Yes	No
Growth Management <i>Comment: MMC Title XI; Cal. Gov. Code §65300 et seq.</i>	Yes	No	Yes	No
Site Plan Review <i>Comment: MMC Title II</i>	Yes	No	No	No
Environmental Protection <i>Comment: MMC Title VI, RWQCB NPDES Permit #CAS029718; California Environmental Quality Act</i>	Yes	No	Yes	No
Flood Damage Prevention <i>Comment: MMC Title XI, Chapter 15</i>	Yes	Yes	No	Yes
Emergency Management <i>Comment: MMC Title V</i>	Yes	No	No	Yes
Climate Change <i>Comment: MMC Title II; CA SB-379</i>	Yes	No	Yes	Yes
Other: Water Conservation Measures <i>Comment: MCC Title III, Chapter 5</i>	Yes	No	No	No
Planning Documents				
General Plan <i>Is the plan compliant with Assembly Bill 2140? Yes</i> <i>Comment: Milpitas General Plan, undergoing current process of update</i>	Yes	No	Yes	Yes
Capital Improvement Plan <i>How often is the plan updated? Annually</i> <i>Comment: 2016-17 Budget, Adopted CIP, updated and reviewed annually</i>	Yes	No	No	Yes
Floodplain or Watershed Plan <i>Comment: Milpitas General Plan, 2010 SCVWD Local Hazard Mitigation Plan</i>	Yes	Yes	Yes	Yes
Stormwater Plan <i>Comment: No specific plan found, All planning/ordinance is guided by RWQCB NPDES Permit #CAS029718</i>	No	No	Yes	N/A
Urban Water Management Plan <i>Comment: 2015 UWMP, Milpitas General Plan, 2010 SCVWD Local Hazard Mitigation Plan</i>	Yes	No	Yes	Yes
Habitat Conservation Plan <i>Comment: Santa Clara Valley Habitat Plan</i>	No	Yes	Yes	Yes

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Economic Development Plan <i>Comment: In development for future</i>	No	No	No	Yes
Shoreline Management Plan <i>Comment: N/A</i>	N/A	N/A	N/A	N/A
Community Wildfire Protection Plan <i>Comment: California Fire Code; No plan located</i>	No	No	No	N/A
Forest Management Plan <i>Comment: None located</i>	No	No	No	N/A
Climate Action Plan <i>Comment: Milpitas Climate Action Plan (Adopted: May, 2013)</i>	Yes	No	No	Yes
Comprehensive Emergency Management Plan <i>Comment: 2012 Emergency Operation Plan & 2000 Multi-Hazard Functional Plan</i>	Yes	No	No	Yes
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment: 2012 Emergency Operation Plan & 2000 Multi-Hazard Functional Plan</i>	Yes	No	No	Yes
Post-Disaster Recovery Plan <i>Comment: 2012 Emergency Operation Plan & 2000 Multi-Hazard Functional Plan</i>	Yes	No	No	No
Continuity of Operations Plan <i>Comment: 2012 Emergency Operation Plan & 2000 Multi-Hazard Functional Plan, California Emergency Services Act Article 15</i>	Yes	No	No	Yes
Public Health Plan <i>Comment: 2000 Multi-Hazard Functional Plan, SCC Department of Public Health Strategic Plan, 2015-2018</i>	Yes	Yes	No	Yes
Other: <i>Comment: None located</i>	N/A	N/A	N/A	N/A

Table 8-3. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes, subject to voter approval
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	N/A

Table 8-4. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	MLP Planning & Engineering
Engineers or professionals trained in building or infrastructure construction practices	Yes	MLP Building, Engineering & Fire Prevention
Planners or engineers with an understanding of natural hazards	Yes	MLP Planning, Engineering, Public Works & Building
Staff with training in benefit/cost analysis	Yes	MLP Finance Dept.
Surveyors	Yes	On contract.
Personnel skilled or trained in GIS applications	Yes	MLP Information Systems
Scientist familiar with natural hazards in local area	Yes	On contract
Emergency manager	Yes	MLP Fire/OES
Grant writers	Yes	Varies by grant, dept. specific

Table 8-5. National Flood Insurance Program Compliance

Criteria	Response
What local department is responsible for floodplain management?	Engineering & Public Works
Who is your floodplain administrator? (department/position)	Engineering/City Engineer (or Asst. CE)
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	11/7/95 update, 1993 adoption
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Exceed; however may be in need to minor update to reflect minor required changes to the program established in 2004 Residential construction, new or substantial improvements, shall have the lowest floor, including the basement, elevated by at least one foot above the base flood elevation or at least three feet above the highest adjacent grade if no depth number is specified.
When was the most recent Community Assistance Visit or Community Assistance Contact?	8/25/2016
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If no, please state why.	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	Yes Certified Floodplain Management training
Does your jurisdiction participate in the Community Rating System (CRS)? • If yes, is your jurisdiction interested in improving CRS Classification? • Is your jurisdiction interested in joining the CRS program?	Yes Yes (currently class 7) N/A
How many flood insurance policies are in force in your jurisdiction? • What is the insurance in force? • What is the premium in force?	1,615 ^a \$408,539,600 ^a \$1,678,104 ^a
How many total loss claims have been filed in your jurisdiction? • How many claims were closed without payment/are still open? • What were the total payments for losses?	69 ^a 49/0 ^a \$75,337 ^a

a. According to FEMA statistics as of October 31, 2016.

Table 8-6. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes There is public information based on known threats- severe weather, earthquake preparedness, defer folks to valleywater.org, fema.gov, etc.
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes Facebook, Twitter, Nixel, Next Door
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes, Emergency Preparedness Commission, SAFE/CERT Program
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes AlertSCC.org/ reverse 9-1-1 call system
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes AlertSCC.org/reverse 9-1-1 call system

Table 8-7. Community Classifications

	Participating?	Classification	Date Classified
Community Rating System	Yes	7	11/2011
Building Code Effectiveness Grading Schedule	Yes	1	2016
Public Protection Classification (MLP Fire)	Yes	02/2X	2/2016
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A

Table 8-8. Development and Permit Capabilities

Criterion	Response
Does your jurisdiction issue development permits? • If no, who does? If yes, which department?	Yes Building Dept.
Does your jurisdiction have the ability to track permits by hazard area?	Technically, yes. However, our computer system is not set up to track in that manner.
Does your jurisdiction have a buildable lands inventory?	No

Table 8-9. Adaptive Capacity for Climate Change

Adaptive Capacity Assessment	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: Climate Action Plan, 2013</i>	Medium
Jurisdiction-level monitoring of climate change impacts <i>Comment: None provided</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: None provided</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: None provided</i>	Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment: Environmental impact report to monitor environmental effects of proposed projects.</i>	High
Participation in regional groups addressing climate risks <i>Comment: None provided</i>	Low
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: To the extent any project conditions have a legal nexus, Planning Commission and City Council would have the authority to impose conditions of approval related to development projects.</i>	High
Identified strategies for greenhouse gas mitigation efforts <i>Comment: Climate Action Plan: A Qualified Greenhouse Gas Reduction Strategy, Adopted May, 2013</i>	High
Identified strategies for adaptation to impacts <i>Comment: Climate Action Plan: A Qualified Greenhouse Gas Reduction Strategy, Adopted May, 2013</i>	Medium
Champions for climate action in local government departments <i>Comment: None provided</i>	Medium
Political support for implementing climate change adaptation strategies <i>Comment: Climate Action Plan: A Qualified Greenhouse Gas Reduction Strategy, Adopted May, 2013</i>	High
Financial resources devoted to climate change adaptation <i>Comment: Climate Action Plan: A Qualified Greenhouse Gas Reduction Strategy, Adopted May, 2013</i>	Medium
Local authority over sectors likely to be negative impacted <i>Comment: Climate Action Plan: A Qualified Greenhouse Gas Reduction Strategy, Adopted May, 2013</i>	Medium
Public Capacity	
Local residents knowledge of and understanding of climate risk <i>Comment: None provided</i>	Unknown
Local residents support of adaptation efforts <i>Comment: None provided</i>	Unknown
Local residents' capacity to adapt to climate impacts <i>Comment: None provided</i>	Unknown
Local economy current capacity to adapt to climate impacts <i>Comment: None provided</i>	Unknown
Local ecosystems capacity to adapt to climate impacts <i>Comment: None provided</i>	Varies/Unknown

8.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the hazard mitigation plan into local planning mechanisms:

8.5.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan:

- **City of Milpitas General Plan**—the General Plan includes a Seismic and Safety Element which addresses seismic, geologic, flooding, dam inundation, fire safety and emergency management.
- **Water Master Plan**—Addresses community wide water supply. Identifies deficiencies in the City's water distribution system and provides mitigations to correct deficiencies.
- **Sewer Master Plan**—Addresses sewer treatment capacity. Identifies deficiencies in City sewer collection system. Provides mitigation to correct deficiencies.
- **Storm Drain Master Plan**—Identifies deficiencies in the City's storm drain collection system and provides mitigation to correct deficiencies.
- **Water System Seismic Improvement Strategic Plan**—Identifies seismic risk to City's water system. Establishes backbone system and seismic event preparation requirements.
- **2015 Urban Water Management Plan**—In accordance with the California Urban Water Management Planning Act (CA Water Code Div. 6, Part 2.6, Sections 10610 through 10657), the Milpitas UWMP addresses water waste prevention to mitigate drought affects.
- **Capital Improvement Program (CIP)**—The CIP is designed to develop and maintain infrastructure. Funding sources can include State, Federal, and private funding in addition to public funds. Use of funds is based on meeting the highest priority needs of the community. (Site: 2016/17 Budget, pg. 37)
- **Milpitas Municipal Code**—The Milpitas Municipal Code adopts the California Building Codes, California Fire Codes, and other ordinances to support the safety and welfare of the community, infrastructure (both public and private), and environment in the City of Milpitas.

8.5.2 Opportunities for Future Integration

The Milpitas Annex of the Santa Clara Operational Area Hazard Mitigation Plan will be reviewed and approved by legal counsel in the City of Milpitas and, upon approval, will be moved to be adopted by the Milpitas City Council. There will be a 30 day public comment period, and it will be moved for adoption at the council meeting immediately following the 30 day open comment period. Once adoption has been completed the document will be provided to departments in the City that oversee planning documents, to include, but not limited to: Engineering, Finance, Public Works, Building and Planning. Upon the update of their planning documents, amendments based on the LHMP recommendations may be integrated as necessary and feasible. Municipal Code incorporation is initiated at the Department level, overseen by the city legal department, and ultimately approve by the Milpitas City Council. The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration:

- **CIP Program**—Add Additional Recycled Water Pipelines: Any additional recycled water lines that are installed will offset the effects of drought, a high frequency hazard.
- **CIP Proposed Project**—Add Water system redundancy/reliability: install the infrastructure to provide dual independent water sources.
- **Economic Development Plan**—The plan is intended to be developed. Such process would allow the opportunity to incorporate economic recovery plans within the document by planning for known hazards.

- **National Flood Insurance Reform Act of 2004**—Ordinance *MMC Title XI, Chapter 15*, to be updated to reflect the National Flood Insurance Reform Act of 2004.
- **Other Legal and Regulatory Capabilities**—All plans and ordinances currently take hazard mitigation into consideration, as noted in the above discussion, while in the planning adoption or updating processes. As information becomes regulatory, a Best Management Practice, and available (as applicable and financially feasible) – such as new CA Building Codes, Fire Codes, etc., the above listed plans and ordinances are amended as necessary.

8.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 8-10 lists all past occurrences of natural hazards within the jurisdiction.

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Weather	N/A	1/8/17	\$37,800
Severe Weather	N/A	12/17/14	N/A
Severe Weather	213589	1/18/10	N/A
Wildfire	3287	6/20/08	N/A
Wildfire	2766	5/22/08	N/A
Hurricane	3248	8/29/05	N/A
Wildfire	2465	9/23/02	N/A
Severe Weather	1203	2/2/98	N/A
Severe Weather	1155	12/28/96	N/A
Severe Weather	1046	2/13/95	N/A
Severe Weather	1044	1/3/95	N/A
Severe Weather	894	12/19/90	N/A
Earthquake	845	10/17/89	N/A
Flood	758	2/12/86	N/A
Wildfire	739	6/26/85	N/A
Severe Weather	677	1/21/83	N/A
Flood	651	12/19/81	N/A
Drought	3023	1/20/77	N/A

8.7 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities:

- A significant portion of the City is within the 0.2 percent annual chance flood hazard area (estimated 60 percent of total population and 82 percent of total replacement value). Flood damage prevention regulations and mandatory flood insurance purchase requirements do not apply within these areas.

8.8 HAZARD RISK RANKING

Table 8-11 presents the ranking of the hazards of concern.

Table 8-11. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Flood	33	Medium
2	Severe Weather	33	Medium
3	Landslide	18	Medium
4	Drought	9	Low
5	Dam and Levee Failure	6	Low
6	Wildfire	0	None

8.9 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 8-12 lists the actions that make up the City of Milpitas hazard mitigation action plan. Table 8-13 identifies the priority for each action. Table 8-14 summarizes the mitigation actions by hazard of concern and the six mitigation types.

Table 8-12. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
MLP-1 —CIP 7130 Water Valve Replacement: Replacement of water valves on the water system. This action supports system isolation during an emergency, and planned water system maintenance.						
Existing	Earthquake	3,6,8	Public Works	High	Bonds; HMGP	Long-term (exact timeline TBD)
MLP-2 —CIP 7129 Recycled Water Pipeline: This project would extend current recycled water lines through-out the city, eliminating the use of potable water for non-domestic uses.						
New and Existing	Drought	6	Public Works	High	Bonds; HMGP	Long-term (exact timeline TBD)
MLP-3 —CIP 7100 Water System Seismic Improvement: Develops a comprehensive water system seismic improvements program. Including seismic rehabilitation to the city's "backbone" water system as defined in the Water Seismic Improvement Strategy Plan.						
Existing	Earthquake	6, 8	Public Works	High	Bonds	Long-term (exact timeline TBD)
MLP-4 —Update Flood Ordinance to reflect the 2004 Flood Insurance Reform Act of 2004.						
Existing	Flood	3, 8	Engineering	Low	Operating Budget	Short-term
MLP-5 —CIP 6119 Sewer Conditions Assessment: a citywide conditions assessment program is needed to determine the condition of the City's sanitary sewer system.						
Existing	All Hazards	2, 6, 8	Public Works	Medium	Sewer Revenue Fund; Possible Grants	Ongoing
MLP-6 —3713 Trash Removal Devices: Install 2 trash removal devices within the City's storm drain system.						
New	Flood, Severe Weather	3, 8	Engineering	High \$350,000	Storm Fund; HMGP	Short-term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
MLP-7—7127 SCADA: The SCADA system will allow authorized water technicians to be able to monitor and operate pumps and valves remotely. During an emergency situation, this can mean reducing hours of a potential response time, mitigating and possibly eliminating damage and potential emergencies.						
New	All Hazards	1, 2, 5, 7, 8, 9	Public Works	Medium \$6,050,000	Grants & Water Fund	Ongoing
MLP-8—City Tree Maintenance Program: Ongoing tree maintenance program. Promote tree health, removal of dead branches and trees that may become a hazard in severe weather, earthquake or a result of drought.						
Existing	All Hazards	6, 8	Public Works	Low \$170/year	Operating Budget	Ongoing
MLP-9—SCVWD Creek Flood Improvement Program: SCVWD maintains a CIP for flood protection with construction and maintenance. The SCVWD is responsible for Berryessa and Coyote Creeks, which run through the City of Milpitas in the low lying flood areas. Milpitas will support SCVWD in pursuing projects outlined in the CIP and impacting Milpitas.						
Existing	Flood	2, 4, 5, 6, 8, 9	SCVWD; Public Works	Low (for Milpitas)	SCVWD CIP; Milpitas Personnel Budget; HMGP, FMA	Ongoing
MLP-10—Develop Disaster Documentation Program: to include tracking disasters affecting Milpitas, and tracking via photos damage incurred during and after disaster events. This data can be used for tracking and trending, and ultimately mitigation planning.						
New	Flood, Earthquake, Landslide	1, 2, 4, 5, 6	Emergency Services	Low	Operating Budget	Short-term & Ongoing
MLP-11—Adoption of CA 2016 Building Codes						
New	All Hazards	2, 3	Building Dept.	Low	Operating Budget	Short-term
MLP-12—CIP 7126 Water Conservation Program: Develop, implement and manage a new City wide water rationing and conservation plan, including community outreach and education. This project will begin the conversion of City and private-owned irrigation facilities from potable to recycled water where they are adjacent to recycled water pipelines. Implementation of new State mandated water conservation programs.						
New	Drought	1, 2, 3, 4, 5	Public Works	Medium	Water & Park Fund	Long-term
MLP-13—2017 AlertSCC Public Outreach Campaign						
Existing	All Hazards	2, 4, 9	Emergency Services	Low	Operating Budget	Short-term & Ongoing
MLP-14— Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community.						
Existing	All Hazard	2, 3, 4, 6	Planning	Low	Operating Budget	Ongoing
MLP-15—Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP). This will be accomplished through the implementation of floodplain management programs that will, at a minimum, meet the requirements of NFIP: Enforcement of the flood damage prevention ordinance. Participate in the floodplain identification and mapping updates. Provide public assistance/information on floodplain requirements and impacts.						
New and Existing	Flood	1, 2, 3, 5, 6, 7, 8	Engineering	Low	Personnel Budget	Ongoing
MLP-16—Work with Building officials to identify ways to improve the jurisdictions' BCEGS classification.						
New and Existing	All Hazards	3, 8	Building Dept.	Low	Personnel Budget	Ongoing
MLP-17—Consider the development of a post-disaster recovery plan and a debris management plan.						
New and Existing	All Hazards	1, 2, 4, 5, 6, 7, 8	Emergency Services	Medium	Personnel & Operating Budget; Possible Grants	Ongoing

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
MLP-18 —Consider the participation in programs such as StormReady and the Community Rating System.						
New and Existing	Severe Weather, Flood	2, 3, 4, 6, 7, 8	DPW/Engineering	Low	Personnel Budget	Ongoing
MLP-19 —Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.						
Existing	All Hazards	4, 5, 6, 7, 8	Planning/ Building Department	High	HMGP, PDM, FMA	Short-term
MLP-20 —Actively participate in the plan maintenance protocols outlined in Volume 1 of the hazard mitigation plan.						
New and Existing	All Hazards	1, 5	Fire Department – Office of Emergency Services	Low	Staff Time, General Funds	Short-term

Table 8-13. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
MLP-1	3	High	High	Yes	Yes	No	Med	High
MLP-2	1	Med	High	No	Yes	No	Low	Med
MLP-3	2	High	High	Yes	Yes	No	Med	High
MLP-4	2	Med	Low	Yes	No	Yes	High	Low
MLP-5	3	Med	Med	Yes	Possible	Yes	High	High
MLP-6	2	High	High	Yes	Yes	Yes	High	High
MLP-7	6	High	Med	Yes	Yes	Yes	High	High
MLP-8	2	Med	Low	Yes	No	Yes	High	Low
MLP-9	6	High	Low	Yes	Yes	Yes	High	High
MLP-10	5	Med	Low	Yes	No	Yes	High	Na
MLP-11	2	High	Low	Yes	No	Yes	High	Low
MLP-12	5	Med	Med	Yes	No	Yes	High	Low
MLP-13	3	High	Low	Yes	No	Yes	High	Low
MLP-14	4	Med	Low	Yes	No	Yes	High	Low
MLP-15	7	Med	Low	Yes	No	Yes	High	Low
MLP-16	2	Med	Low	Yes	No	Yes	High	Low
MLP-17	7	Med	Med	Yes	Possible	Yes	High	Med
MLP-18	6	High	Low	Yes	No	Yes	High	Low
MLP-19	5	High	High	Yes	Yes	No	Med	High
MLP-20	2	Low	Low	Yes	No	Yes	High	Low

Table 8-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a						
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects	7. Climate Resilient
Earthquake	MLP-1, MLP-10, MLP-11, MLP-14, MLP-16, MLP-20	MLP-3, MLP-7, MLP-8, MLP-19	MLP-13	MLP-7, MLP-8	MLP-1, MLP-2, MLP-3, MLP-5, MLP-7, MLP-17	MLP-1, MLP-3,	
Flood	MLP-4, MLP-10, MLP-11, MLP-14, MLP-15, MLP-16, MLP-20	MLP-6, MLP-7, MLP-8, MLP-9, MLP-19	MLP-13, MLP-18	MLP-6, MLP-7, MLP-8, MLP-9	MLP-5, MLP-6, MLP-7, MLP-17	MLP-6, MLP-9,	
Severe Weather	MLP-10, MLP-11, MLP-14, MLP-16, MLP-20	MLP-6, MLP-7, MLP-8, MLP-19	MLP-13, MLP-18	MLP-6, MLP-7, MLP-8	MLP-5, MLP-6, MLP-7, MLP-17	MLP-6,	
Landslide	MLP-10, MLP-11, MLP-14, MLP-16, MLP-20	MLP-7, MLP-8, MLP-19	MLP-13	MLP-7	MLP-5, MLP-7, MLP-17		
Drought	MLP-10, MLP-11, MLP-12, MLP-14, MLP-16, MLP-20	MLP-7, MLP-8, MLP-19	MLP-12, MLP-13	MLP-2, MLP-7, MLP-8, MLP-11, MLP-12	MLP-2, MLP-7, MLP-17	MLP-2, MLP-12	MLP-2, MLP-12
Dam and Levee Failure	MLP-10, MLP-11, MLP-14, MLP-16, MLP-20	MLP-7, MLP-19	MLP-13	MLP-7	MLP-7, MLP-17		

a. See the introduction to this volume for explanation of mitigation types.

8.10 ADDITIONAL RESOURCES

California Department of Finance population statistics and projections and Wikipedia were used in the development of the jurisdiction profile.

The hazard mitigation plan annex development tool-kit was used in the natural hazard event history, hazard risk ranking and action plan development.

9. CITY OF MONTE SERENO

9.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

Debra Figone, Interim City Manager
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Monte Sereno, CA 95030
Telephone: (408) 354-7635, ext. 11
e-mail Address: dfigone@cityofmontesereno.org

Alternate Point of Contact

Jeannie Hamilton, Associate Planner
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Monte Sereno, CA 95030
Telephone: (408)354-7635, ext. 16
e-mail Address: jeannie@cityofmontesereno.org

9.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—May 14, 1957
- **Current Population**—3,475
- **Population Growth**—0.9 percent increase from 1/2015. Projected population through 2030, 3,600, a 0.03 percent increase.
- **Location and Description**— The City of Monte Sereno, approximately 1.6 square miles in size, is located in Northern California, some 50 miles south of San Francisco, within the San José metropolitan area. The city is located in the foothills of the Santa Cruz Mountains, about 10 miles (16 km) southwest of San José, immediately northwest of Los Gatos, and southeast of Saratoga. The city is named for the 2,249-foot El Sereno Mountain, upon the slopes of which the southern portion of the city is built. State Route 9 runs through the city and it is located within easy access to State Highways 17 and 85.
- **Brief History**—Monte Sereno was established in the early 1900s as a rural agricultural community. The area was dotted with ranch houses, orchards, dairies and livestock, and the mountain slopes of the southern portion of the city contained summer homes, recreational properties and a few large estates. The beauty and tranquility of the area attracted artists and writers looking for a peaceful and inspirational place to pursue their craft. A few of the City points of interest are the home in which American author John Steinbeck wrote the *Grapes of Wrath* and the site of the Billy Jones Rail Road. Unlike many other cities in Santa Clara County, Monte Sereno did not form on a crossroads or from an historical village. Consequently, a commercial core never developed in the City, leaving Monte Sereno strictly residential. Monte Sereno is a quiet residential community, approximately 1.6 square miles in size.
- **Climate**—Monte Sereno receives approximately 25 inches of rain per year, the US average is 37 inches. The number of days with any measureable rain is about 58. On average, there are 263 sunny days per year. The temperature for Monte Sereno ranges between 86 degrees in July and 38 degrees in January.
- **Governing Body Format**—Monte Sereno is a general law City, comprised of a Council Manager form of government. The voters elect five City Councilmembers to serve four year terms on the City Council. The City Council appoints a professional City Manager to serve as the Chief Administrative Officer.

Monte Sereno provides services to its residents either directly or by working with other agencies. The City directly provides administrative services, building permits/inspections, planning/design review, engineering/public works, city clerk/election services and finance. The City Council assumes responsibility for the adoption of this plan; the City Manager will oversee its implementation.

9.3 DEVELOPMENT TRENDS

Monte Sereno is strictly a residential community with both recently constructed single-family homes as well as older homes built in the 1950s through 1970s. The majority of development in the City consists of home remodels and additions, as well as replacement of an older home with new construction. The City has also seen a number of secondary units constructed as a result of newly adopted incentives and reduced regulatory requirements.

Table 9-1 summarizes development trends in the performance period since development of the previous hazard mitigation plan and expected future development trends.

Table 9-1. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan? • If yes, give the estimated area annexed and estimated number of parcels or structures.	Yes, February 1, 2011 1.45 acres. One single-family lot adjacent to City boundaries.					
Is your jurisdiction expected to annex any areas during the performance period of this plan? • If yes, please describe land areas and dominant uses. • If yes, who currently has permitting authority over these areas?	Yes Properties immediately adjacent to City Boundary. Santa Clara County					
Are any areas targeted for development or major redevelopment in the next five years? • If yes, please briefly describe, including whether any of the areas are in known hazard risk areas	No N/A					
How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?		2011	2012	2013	2014	2015
	Single Family	5	6	11	6	3
	Multi-Family	0	0	0	0	0
	Other (commercial, mixed use, etc.)	0	0	0	0	0
Please provide the number of permits for each hazard area or provide a qualitative description of where development has occurred.	Development has occurred in the city during the performance period for this plan. For hazards with a clearly defined extent and location, the City cannot estimate development impacts. For hazards with impacts city-wide, it is safe to assume that this new development could be subject to impacts from those hazards. However, it is important to note that all new development was subject to the regulatory capabilities identified in this annex.					
Please describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	There are five parcels of underdeveloped land within the City limits. According to the General Plan, the total potential units for these parcels is 33 units.					

9.4 CAPABILITY ASSESSMENT

9.4.1 Resources for the 2017 Planning Initiative

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for inclusion into the 2017 Multi-Jurisdiction Hazard Mitigation Plan for both Volume 1 and Volume 2 City of Monte Sereno Annex). All of the below items were additionally reviewed as part of the full capability assessment for the City of Monte Sereno

- **City of Monte Sereno General Plan**—The General Plan, including the Land Use, Open Space and Conservation, and Health and Safety Elements, were reviewed for information regarding goals and policies consistent with hazard mitigation for carry over as goals and objectives.
- **City of Monte Sereno Municipal Code**—The Municipal Code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Flood Damage Prevention Ordinance**—The Flood Damage Prevention Ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Capital Improvements Plan**—The Capital Improvements Plan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.
- **Technical Reports and Information**—Outside resources and references used to complete the City of Monte Sereno Annex are identified in Section 9.11 of this annex.

9.4.2 Full Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 9-2. An assessment of fiscal capabilities is presented in Table 9-3. An assessment of administrative and technical capabilities is presented in Table 9-4. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 9-5. An assessment of education and outreach capabilities is presented in Table 9-6. Classifications under various community mitigation programs are presented in Table 9-7. Development and permitting capabilities are presented in Table 9-8, and the community's adaptive capacity for the impacts of climate change is presented in Table 9-9.

Table 9-2. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment: Monte Sereno Municipal Code Title 9</i>	Yes	No	Yes	No
Zoning Code <i>Comment: Monte Sereno Municipal Code Title 10</i>	Yes	No	Yes	No
Subdivisions <i>Comment: Monte Sereno Municipal Code Title 13</i>	Yes	No	Yes	No
Stormwater Management <i>Comment: Monte Sereno Municipal Code Title 9 and NPDES Permit Requirements/ RWQCB, State Fish and Wildlife, Army Corp</i>	Yes	Yes	Yes	No
Post-Disaster Recovery <i>Comment: Monte Sereno plans to develop and adopt a City Recovery Plan following the development of the County's Recovery Framework.</i>	Yes	No	No	Yes
Real Estate Disclosure <i>Comment: Monte Sereno adopts and implements Real Estate Disclosure Laws Cal. Civ. Code §1102 et seq.</i>	No	No	Yes	No
Growth Management <i>Comment: General Plan serves as Growth Plan; Cal. Gov. Code §65300 et seq.</i>	Yes	No	Yes	No

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Site Plan Review <i>Comment: Monte Sereno Municipal Code Title 10</i>	Yes	No	No	No
Environmental Protection <i>Comment: Monte Sereno adopts and implements California Environmental Quality Act Regulations (Guidelines: California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387)</i>	Yes	No	Yes	No
Flood Damage Prevention <i>Comment: Monte Sereno Municipal Code Title 10.21/Santa Clara Valley Water District/Army Corps of Engineers</i>	Yes	Yes	Yes	No
Emergency Management <i>Comment: Municipal Code Title Chapter 2.06 Emergency organization and functions. The City Manager serves as the City's EM point-of-contact. City's EM program is supported by Santa Clara County Fire Department; The City of Monte Sereno participates in Emergency Management Planning as a Santa Clara County Fire District served community.</i>	Yes	No	Yes	Yes
Climate Change <i>Comment: The City of Monte Sereno's General Plan states the jurisdiction's position in the Goals and Policies section; California SB-379: Land Use: General Plan: Safety Element</i>	Yes	No	Yes	Yes
Other: <i>Comment: None Identified</i>	N/A	N/A	N/A	N/A
Planning Documents				
General Plan <i>Is the plan compliant with Assembly Bill 2140? Yes</i> <i>Comment: Updated in 2015</i>	Yes	No	Yes	Yes
Capital Improvement Plan <i>How often is the plan updated? Annually with the Budget</i> <i>Comment:</i>	Yes	No	No	Yes
Floodplain or Watershed Plan <i>Comment: N/A – not local capability</i>	No	No	Yes	No
Stormwater Plan <i>Comment: N/A – not local capability</i>	No	No	Yes	No
Urban Water Management Plan <i>Comment: Water Program managed by West Valley Clean Water Program, which provides information on water use and supply in the City of Monte Sereno including groundwater, local surface water, imported water, and water recycling, historical water use, water conservation programs, demand projections, water shortage contingency and supply interruption planning, reliability and threats to reliability.</i>	No	Yes	No	No
Habitat Conservation Plan <i>Comment: N/A – not local capability</i>	No	No	No	No
Economic Development Plan <i>Comment: No Commercial lands in city.</i>	No	No	No	No
Shoreline Management Plan <i>Comment: No shorelines in city</i>	No	No	No	No
Community Wildfire Protection Plan <i>Comment: Cooperate with Central Fire District/Goals and Policies in General Plan</i>	Yes	No	Yes	Yes
Forest Management Plan <i>Comment: Tree Preservation regulations in Municipal Code work to maintain and enhance Urban Forest</i>	Yes	No	No	No
Climate Action Plan <i>Comment: The City of Monte Sereno's General Plan states the jurisdiction's position in the Goals and Policies section.</i>	No	No	Yes	Yes

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Comprehensive Emergency Management Plan	Yes	Yes	Yes	Yes
<i>Comment: Town of Los Gatos- City of Monte Sereno Emergency Operations Plan, 2015; Santa Clara County Fire Department supports City's EM program including EOP [CEMP] development.</i>				
Threat & Hazard Identification & Risk Assessment (THIRA)	No	No	Yes	Yes
<i>Comment: Threat and Hazard & Risk Assessment- Emergency Operations Plan , 2015 page 14</i>				
Post-Disaster Recovery Plan	No	No	No	Yes
<i>Comment: Town of Los Gatos-City of Monte Sereno Emergency Operations Plan 2015 page 34. The City of Monte Sereno participates in Emergency Management Planning as a Santa Clara County Fire District served community. As such, the Town is currently participating in the development of an Operational Area Recovery Framework (anticipated publication and promulgation 2017/2018) that follows guidance provided by the State of California and the Federal Emergency Management Agency.</i>				
Continuity of Operations Plan	No	No	No	Yes
<i>Comment: No COOP/COG currently exists – will consider as mitigation action</i>				
Public Health Plan	No	Yes	Yes	No
<i>Comment: The City of Monte Sereno falls under the authority of the Santa Clara County Department of Public Health, which has the following public health plans: 2015-2020 Community Health Assessment and Health Improvement Plan; 2014 Emergency Medical Services Plan; 2013 EMS Strategic Plan; 2013 Santa Clara County EMS System Strategic Implementation Plan; Santa Clara County EMS Trauma System Plan; and Santa Clara County EMS Stroke Plan.</i>				

Table 9-3. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	No

Table 9-4. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Planning/Associate Planner
Engineers or professionals trained in building or infrastructure construction practices	Yes	Building/Building Official
Planners or engineers with an understanding of natural hazards	Yes	Planning/Associate Planner
Staff with training in benefit/cost analysis	Yes	Finance/Finance Officer
Surveyors	Yes	Building/Contract Surveyor
Personnel skilled or trained in GIS applications	No	
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	City Manager
Grant writers	No	

Table 9-5. National Flood Insurance Program Compliance

Criteria	Response
What local department is responsible for floodplain management?	Planning Department
Who is your floodplain administrator? (department/position)	City Planner
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	December 2016
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	Unknown
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If no, please state why.	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No
Does your jurisdiction participate in the Community Rating System (CRS)? • If yes, is your jurisdiction interested in improving CRS Classification? • Is your jurisdiction interested in joining the CRS program?	No No
How many flood insurance policies are in force in your jurisdiction? • What is the insurance in force? • What is the premium in force?	21 ^a \$6,972,000 ^a \$7,824 ^a
How many total loss claims have been filed in your jurisdiction? • How many claims were closed without payment/are still open? • What were the total payments for losses?	4 ^a 2/0 ^a \$41,973.57 ^a

a. According to FEMA statistics as of October 31, 2016.

Table 9-6. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes, Public Information Officer (City Clerk)
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	No
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes Website Subscription Service
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes City Website

Table 9-7. Community Classifications

	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	Yes	2/2Y	2015
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A

Table 9-8. Development and Permit Capabilities

Criterion	Response
Does your jurisdiction issue development permits? • If no, who does? If yes, which department?	Yes Planning Department
Does your jurisdiction have the ability to track permits by hazard area?	No. We do not have any automated data tracking. We would have to go back through them by address.
Does your jurisdiction have a buildable lands inventory?	Yes

Table 9-9. Adaptive Capacity for Climate Change

Adaptive Capacity Assessment	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: None provided.</i>	Low
Jurisdiction-level monitoring of climate change impacts <i>Comment: None provided.</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: None provided.</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: None provided.</i>	Low
Capital planning and land use decisions informed by potential climate impacts <i>Comment: None provided.</i>	Low
Participation in regional groups addressing climate risks <i>Comment: None provided.</i>	Medium
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: None provided.</i>	Low
Identified strategies for greenhouse gas mitigation efforts <i>Comment: None provided.</i>	Low
Identified strategies for adaptation to impacts <i>Comment: None provided.</i>	Low
Champions for climate action in local government departments <i>Comment: None provided.</i>	Low
Political support for implementing climate change adaptation strategies <i>Comment: None provided.</i>	Medium
Financial resources devoted to climate change adaptation <i>Comment: None provided.</i>	Low

Adaptive Capacity Assessment	Jurisdiction Rating
Local authority over sectors likely to be negative impacted <i>Comment: None provided.</i>	High
Public Capacity	
Local residents knowledge of and understanding of climate risk <i>Comment: None provided.</i>	Medium
Local residents support of adaptation efforts <i>Comment: None provided.</i>	Medium
Local residents' capacity to adapt to climate impacts <i>Comment: None provided.</i>	Medium
Local economy current capacity to adapt to climate impacts <i>Comment: None provided.</i>	Medium
Local ecosystems capacity to adapt to climate impacts <i>Comment: None provided.</i>	Medium

9.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the hazard mitigation plan into local planning mechanisms.

9.5.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan:

- City of Monte Sereno General Plan—The City's General Plan includes discussion of risk from natural hazards in the Open Space and Conservation Element and the Health and Safety Element.

9.5.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration:

- General Plan—At the time of the next update, information obtained in the update of the hazard mitigation plan will be integrated into the General Plan as appropriate.
- Capital Improvement Projects—Capital improvement project proposals may take into consideration hazard mitigation potential as a means of evaluating project prioritization.

9.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 9-10 lists all past occurrences of natural hazards within the jurisdiction.

Table 9-10. Natural Hazard Events

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Earthquake	DR-845	10/17/89	\$1,409,677,726.18
Freeze	DR-894	02/11/91	Unknown
Severe Storm	DR-1044	01/10/95	\$17,482,926.56
Severe Storm	DR-1046	03/12/95	\$9,331,377.98
Severe Storm	DR-1155	01/04/97	\$21,792,068.12
Severe Storm	DR-1203	02/09/98	\$25,537,087.33
Heavy Rain	N/A	12/15/02	Unknown
Heavy Rain	N/A	01/3-13/17	Unknown

9.7 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include:

- The City of Monte Sereno has limited response capabilities due to government size and high level of dependence on outside agencies to provide public works and safety functions.

9.8 HAZARD RISK RANKING

Table 9-11 presents the ranking of the hazards of concern.

Table 9-11. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Wildfire	54	High
2	Earthquake	48	High
3	Severe Weather	33	Medium
4	Flood	18	Medium
4	Landslide	18	Medium
5	Drought	9	Low
6	Dam and Levee Failure	0	None

9.9 STATUS OF PREVIOUS PLAN ACTIONS

The status of previous actions from the 2011 ABAG LHMP for Monte Sereno can be found in Appendix D of this volume.

9.10 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 9-12 lists the actions that make up the City of Monte Sereno hazard mitigation action plan. Table 9-13 identifies the priority for each action. Table 9-14 summarizes the mitigation actions by hazard of concern and the six mitigation types.

9.11 ADDITIONAL RESOURCES

The hazard mitigation plan annex development tool-kit was used in the development of this annex to the Santa Clara Operational Area Hazard Mitigation Plan.

Table 9-12. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
MTS-1 —Consider the development of an information and awareness program, as well as guidance material to support private property owners attempting to perform emergency repairs to areas of the watershed and floodplain that may transect their property.						
New and Existing	Flood	1, 2, 3, 4, 6, 8	Building	Medium	General Funds, the Federal Emergency Management Performance Grant	Short-term
MTS-2 —Continually develop and improve the means and methods of integrating more fully the EM decision making processes of the City of Monte Sereno and the Town of Los Gatos to improve both jurisdiction's EM programs and planning capability through all phases of the EM cycle, including Post-Disaster policies/plans.						
New and existing	All hazards	1, 2, 3, 5, 9	City Manager	Low	General Funds, the Federal Hazard Mitigation Grant Program, the Federal Emergency Management Performance Grant	Ongoing
MTS-3 —Develop system for identifying and tracking property that has been permitted to be developed in known hazard areas.						
New and Existing	All hazards	1, 2, 4, 6, 7, 9	Building	Low	General Funds	Short-term
MTS-4 —Explore options to expand GIS capability before, during, and after disasters through such means as: enhancing and refining relationship between City of Monte Sereno and County ISD/GIS, contract for specialized GIS products and/or platforms, develop local capability by conducting training for employees of the City Monte Sereno, etc.						
New	All hazards	1, 2, 4, 9	Planning	Low	General Funds, the Federal Emergency Management Performance Grant	Short-term
MTS-5 —Review current capital improvement projects for mitigation action potential and consider additional means of integrating mitigation planning into the capital improvement project planning process.						
New and Existing	All hazards	2, 3, 6, 7	Public Works	Medium	General Funds	Ongoing
MTS-6 —Participate, as appropriate, in the update and improvement of the Operational Area CWPP						
New and Existing	Wildfire	1, 2, 3, 4, 5, 6, 7, 8, 9	Building	Medium	General Funds	Ongoing
MTS-7 —Develop Wildfire Annex to City of Monte Sereno's Emergency Operations Plan						
New	Wildfire	1, 2, 4, 9	Planning	Medium	General Funds, the Federal Hazard Mitigation Grant Program, the Federal Emergency Management Performance Grant	Short-term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
MTS-8 —Explore administrative/financial feasibility and public demand for a community-based wildfire awareness and safety program, such as FireWise.						
New	Wildfire	1, 2, 3, 4, 5, 6, 7, 8, 9	Building	Medium	General Funds; Santa Clara County Fire Department General Budget	Short-term
MTS-9 —Consider development of COOP/COG for essential functions within the City's government						
New	All hazards	1, 2, 5, 8, 9	City Manager	Low	General Fund; Santa Clara County Fire Department General Budget; the Federal Hazard Mitigation Grant Program; the Federal Emergency Management Performance Grant	Short-term
MTS-10 —Review General Plan to assess the potential for incorporating mitigation planning into the current General Plan development process.						
New and Existing	All hazards	2, 3, 6, 7	Planning	Medium	General Funds	Short-term
MTS-11 —Develop a public outreach and education program for city residents to learn about actions they can take to reduce the impacts of disasters to their properties and integrate with any applicable Operational Area's public engagement strategies						
New and Existing	All hazards	1, 2, 4, 5, 6, 8, 9	City Manager	High	General Funds; Santa Clara County Fire Department General Budget; the Federal Emergency Management Performance Grant	Ongoing
MTS-12 — Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.						
Existing	All Hazards	4, 5, 6, 7, 8	Planning and Public Works	High	the Federal Hazard Mitigation Grant Program, Pre-Disaster Mitigation Program, and Flood Mitigation Assistance	Short-term
MTS-13 — Actively participate in the plan maintenance protocols outlined in Volume 1 of the hazard mitigation plan.						
New and Existing	All Hazards	1, 5	City Manager	Low	Staff Time, General Funds	Short-term
MTS-14 — Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP). This will be accomplished through the implementation of floodplain management programs that will, at a minimum, meet the requirements of the NFIP:						
<ul style="list-style-type: none"> • Enforcement of the flood damage prevention ordinance • Participate in floodplain identification and mapping updates • Provide public assistance/information on floodplain requirements and impacts. 						
New and Existing	Flood	1, 2, 3, 4, 7, 8	Planning	Low	Staff Time, General Funds	Ongoing

Table 9-13. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
MTS-1	6	Medium	Medium	Yes	Possibly	Possibly	Medium	Medium
MTS-2	5	High	Low	Yes	Possibly	Yes	High	Medium
MTS-3	6	Medium	Low	Yes	No	Yes	High	Low
MTS-4	4	Medium	Low	Yes	Possibly	Yes	High	Medium
MTS-5	4	Medium	Medium	Yes	No	Possibly	Medium	Low
MTS-6	9	Medium	Medium	Yes	No	Possibly	Medium	Low
MTS-7	4	Medium	Medium	Yes	Possibly	Possibly	Medium	Medium
MTS-8	9	Low	Medium	No	No	Possibly	Low	Low
MTS-9	5	Medium	Low	Yes	Yes	Yes	High	High
MTS-10	4	High	Medium	Yes	No	Possibly	Medium	Low
MTS-11	8	High	High	Yes	Possibly	No	Medium	Medium
MTS-12	5	High	High	Yes	Yes	No	Medium	High
MTS-13	2	Low	Low	Yes	No	Yes	High	Low
MTS-14	6	Medium	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

Table 9-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a						
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects	7. Climate Resilient
Wildfire	MTS-2, MTS-3, MTS-4, MTS-5, MTS-6, MTS-10, MTS-13	MTS-12	MTS-8, MTS-11		MTS-7, MTS-9		
Earthquake	MTS-2, MTS-3, MTS-4, MTS-5, MTS-10, MTS-13	MTS-12	MTS-11		MTS-9		
Severe Weather	MTS-2, MTS-3, MTS-4, MTS-5, MTS-10, MTS-13	MTS-12	MTS-11		MTS-9		
Flood	MTS-2, MTS-3, MTS-4, MTS-5, MTS-10, MTS-13, MTS-14	MTS-1, MTS-12, MTS-14	MTS-1, MTS-11, MTS-14	MTS-1	MTS-9		
Landslide	MTS-2, MTS-3, MTS-4, MTS-5, MTS-10, MTS-13	MTS-12	MTS-11		MTS-9		
Drought	MTS-2, MTS-3, MTS-4, MTS-5, MTS-10, MTS-13	MTS-12	MTS-11		MTS-9		
Dam and Levee Failure	MTS-2, MTS-3, MTS-4, MTS-5, MTS-10, MTS-13, MTS-14	MTS-12, MTS-14	MTS-14		MTS-9		

a. See the introduction to this volume for explanation of mitigation types.

10. CITY OF MORGAN HILL

10.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

Jennifer Ponce
Emergency Services Coordinator
16200 Vineyard Boulevard
Morgan Hill, CA 95037
Telephone: 408-776-7310
e-mail Address: jennifer.ponce@morganhill.ca.gov

Alternate Point of Contact

John Lang
Economic Development Coordinator
17575 Peak Avenue
Morgan Hill, CA 95037
Telephone: 408-310-4652
e-mail Address: john.lang@morganhill.ca.gov

10.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—November 10, 1906
- **Current Population**—43,645
- **Population Growth**—Over the last five years (2011-2016) Morgan Hill has experienced an annual average of 2.6 percent population growth. The current population (as of January 1, 2016) is 43,645 and is expected to grow to 48,000 by 2020. By 2035, Morgan Hill's population is estimated to be 58,200.
- **Location and Description**—Morgan Hill is approximately 39 kilometers (24 miles) south of downtown San José, 21 kilometers (13 miles) north of Gilroy, and 24 kilometers (15 miles) inland from the Pacific coast. The City of Morgan Hill is located in Santa Clara County nestled between the Diablo Mountain Range to the east and Santa Cruz Mountains to the west. To the north of Morgan Hill is the City of San José and to the south is the unincorporated area of San Martin. The predominant ingress and egress through Morgan Hill is Highway 101 which runs north and south. Prior to the building of Highway 101, the City of Morgan Hill was served by Monterey Highway. Monterey Highway runs through Downtown Morgan Hill and provides the main north south arterial connection for Morgan Hill residents. Morgan Hill is 12 square miles with a mixture of commercial, industrial, retail, agriculture and residential uses.

Morgan Hill is located within the seismically active San Francisco Bay region. The significant earthquakes in the region are generally associated with crustal movements along well-defined, active fault zones. The nearest known active faults are the San Andreas Fault, approximately 19 kilometers (12 miles) southwest, and the Calaveras Fault, approximately 1.6 kilometers (1 mile) northeast. Both faults have produced major earthquakes in the past, and have estimated maximum credible Richter magnitudes of 8.3 and 7.3, respectively. The Sargent-Berrocal Fault, a potentially active fault, lies 16 kilometers (10 miles) away from the Morgan Hill and has an estimated maximum credible Richter magnitude of 7.4. The Coyote Creek Fault is located in Morgan Hill and is classified as potentially active as well. In addition, several unnamed faults traverse the western slopes of the upland areas. Geomorphic evidence suggests that these faults were active during recent geologic time. However, these fault-related geomorphic features are not as fresh as those of the active Calaveras Fault and are considered to be somewhat older.

- Brief History**— In 1845 Martin Murphy, Sr. acquired 9,000 acres known as the Rancho Ojo de Agua de la Coche. Murphy had been a leader of the first party of pioneers to cross the Sierra Nevada range at Truckee Pass, later to become the route for the Southern Pacific Railroad. The Murphy family made its home in the valley below El Toro Mountain. By 1870 Martin’s seven sons and daughters had managed to acquire more than 70,000 acres. In 1851 the youngest son, Daniel, married Maria Fisher, heiress to the neighboring 19,000 acre Rancho Laguna Seca. Diana, their precocious daughter secretly married Hiram Morgan Hill in 1882. When Daniel Murphy died, Diana inherited 4,500 acres of their original rancho in the shadow of El Toro. Diana and Hiram Morgan Hill built their estate, the Villa Mira Monte, between the railroad and Monterey Road in 1886. When the first Southern Pacific station was built in 1898, the railroad referred to this area as Huntington. Many visitors would request the train stop at “Morgan Hill’s Ranch,” changing the name to Morgan Hill. By 1896 the growing community had a population of 250 with a post office, depot, two hotels, a restaurant, and several churches and shops. There was much controversy over the incorporation of the city. The Times printed many editorials supporting the issue, while those opposed were fearful of higher taxes. But the “yes” vote won by a margin of 65-36 and Morgan Hill became incorporated November 10, 1906. By 1909 the population rose to 1,000. The first school was built in 1894, but was soon outgrown and in 1907 architect William Weeks designed a new school. By the 1920s the City was known for its agricultural products including prunes, apricots, peaches, pears, apples, walnuts, and almonds. The region boasted prosperous vineyards until Prohibition demanded that production temporarily cease. Around the 1950s Morgan Hill experienced an economic transformation from an agricultural center to a suburban residential community. Growth began to accelerate rapidly in the 1970s as Silicon Valley developed and workers were attracted to Morgan Hill’s small town atmosphere, sense of community and reasonable housing prices. On November 3, 1973 the Morgan Hill Civic Center and library were proudly dedicated to the community of 7,000. By 1980 the population increased to approximately 18,000 residents. The 2010 census confirmed that 37,882 citizens called Morgan Hill their home.
- Climate**—Morgan Hill receives over 250 days of sunshine, with an average daily temperature of 73 degrees. Morgan Hill is predominantly a Mediterranean climate with dry summers with cooling evenings and wet winter. Annually, the City of Morgan Hill receives 20 inches of rain during the months of December through April. Historically the annual average high temperature for Morgan Hill is 75 degrees and the average low temperature is 47 degrees.
- Governing Body Format**—Morgan Hill is a general law city with a Council-manager form of government. The Morgan Hill City Council assume responsibility for adoption of this plan, the Office of Emergency Services for the City of Morgan Hill will oversee its implementation.

10.3 DEVELOPMENT TRENDS

Annually the City of Morgan Hill permits 200 units of housing through its residential development control system. This allows for consistent residential development within the City. Over the last two years there has been significant public and private investment into Morgan Hill's downtown. A combined \$75 million dollars of investment in infrastructure including new housing and commercial development is transforming the character and nature of the downtown. Table 10-1 summarizes development trends in the performance period since development of the previous hazard mitigation plan and expected future development trends.

Table 10-1. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan? • If yes, give the estimated area annexed and estimated number of parcels or structures.	No					
Is your jurisdiction expected to annex any areas during the performance period of this plan? • If yes, please describe land areas and dominant uses. • If yes, who currently has permitting authority over these areas?	No					
Are any areas targeted for development or major redevelopment in the next five years? • If yes, please briefly describe, including whether any of the areas are in known hazard risk areas	Yes Downtown continues to redevelop with new housing planned over the next two years. A portion of the Downtown is located in the 100 year floodplain.					
How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?		2011	2012	2013	2014	2015
	Single Family	1,053 Mostly Housing	1,050 Mostly Housing	1,734 Mostly Housing	1,966 Mostly Housing	2,106 Mostly Housing
Please provide the number of permits for each hazard area or provide a qualitative description of where development has occurred.	In general recent development activity has primarily occurred in the following hazard zones: Liquefaction, high fire hazard and FEMA flood area. Development has occurred throughout the City during the performance period for this plan. For those hazards with a clearly defined extent and location, the City cannot estimate development impacts. For those hazards with impacts City-wide, it is safe to assume that this new development could be subject to impacts from those hazards. However, it is important to note that all new development was subject to the regulatory capabilities identified in this annex.					
Please describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	The City of Morgan Hill has 800 acres of undeveloped and underutilized residential land left which would represent approximately 3,100 units. The City of Morgan Hill has 200 acres of developable industrial/commercial land available which represents approximately 3 million square feet of commercial built space.					

10.4 CAPABILITY ASSESSMENT

10.4.1 Resources for the 2017 Planning Initiative

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for inclusion into the 2017 Multi-Jurisdiction Hazard Mitigation Plan for both Volume I and Volume II (City of Morgan Hill Annex). All of the below items were additionally reviewed as part of the full capability assessment for City of Morgan Hill.

- **City of Morgan Hill 2035 General Plan**—The 2035 General Plan, including the Safety, Service and Infrastructure (SSI) element were reviewed for information regarding goals, policies and actions consistent with hazard mitigation for carry over as goals and objectives.
- **City of Morgan Hill Municipal Code**—The Municipal Code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Flood Damage Prevention Ordinance**—The Flood Damage Prevention Ordinance was reviewed for compliance with the National Flood Insurance Program.

- **Capital Improvements Plan**—The Capital Improvements Plan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.
- **Parks, Recreation, Bike and Trail Masterplan**—The Parks, Recreation, Bike and Trail Masterplan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.
- **Sewer Masterplan**—The Sewer Masterplan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.
- **Wastewater Masterplan**—The Wastewater Masterplan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.
- **Stormwater Management Plan**—The Stormwater Management Plan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.
- **Santa Clara County Community Wildfire Protection Plan**—The Santa Clara County Community Wildfire Protection Plan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.
- **Technical Reports and Information**—Outside resources and references used to complete the City of Morgan Hill Annex are identified in Section 0 of this Annex.

10.4.2 Full Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 10-2. An assessment of fiscal capabilities is presented in Table 10-3. An assessment of administrative and technical capabilities is presented in Table 10-4. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 10-5. An assessment of education and outreach capabilities is presented in Table 10-6. Classifications under various community mitigation programs are presented in Table 10-7. Development and permitting capabilities are presented in Table 10-8, and the community's adaptive capacity for the impacts of climate change is presented in Table 10-9.

Table 10-2. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity
Codes, Ordinances, & Requirements				
Building Code <i>Comment: Morgan Hill Municipal Code, Title 15, Chapter 15.08.010, Ord. No. 2221</i>	Yes	No	Yes	Yes
Zoning Code <i>Comment: Morgan Hill Municipal Code, Title 18, Chapter 18.02.010, Ord. No. 559</i>	Yes	No	Yes	Yes
Subdivisions <i>Comment: Morgan Hill Municipal Code, Title 17, Chapter 17.04.010, Ord. No. 635</i>	Yes	No	Yes	No
Stormwater Management <i>Comment: Morgan Hill Municipal Code, Title 13, Chapter 13.30.010, Ord. No. 1989</i>	Yes	No	Yes	Yes
Post-Disaster Recovery <i>Comment: None located</i>	No	No	No	No
Real Estate Disclosure <i>Comment: Cal. Civ. Code §1102 et seq.</i>	No	Yes	Yes	No
Growth Management <i>Comment: Morgan Hill Municipal Code, Title 18, Chapter 18.78.010, Ord. No. 1010; Cal. Gov. Code §65300 et seq.</i>	Yes	No	Yes	No
Site Plan Review <i>Comment: Morgan Hill Municipal Code, Title 18</i>	Yes	No	No	No
Environmental Protection <i>Comment: California Environmental Quality Act</i>	Yes	No	Yes	No

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity
Flood Damage Prevention <i>Comment: Morgan Hill Municipal Code, Title 18, Chapter 18.42.010, Ord. No. 1398</i>	Yes	No	Yes	Yes
Emergency Management <i>Comment: Morgan Hill Municipal Code, Title 2, Chapter 2.44: Civil Disaster and Emergency Organization</i>	Yes	No	Yes	No
Climate Change <i>Comment: General Plan 2035-GOAL NRE-15 Climate Change; CA SB-379</i>	Yes	No	Yes	No
Other: Fire Code <i>Comment: Morgan Hill Municipal Code, Title 15</i>	Yes	No	Yes	Yes
Planning Documents				
General Plan <i>Comment: General Plan 2035-GOAL SSI-10 Built environment protects residents from impacts of climate change.</i>	Yes	No	Yes	Yes
Capital Improvement Plan <i>Comment: Annually updated</i>	Yes	No	Yes	Yes
Floodplain or Watershed Plan <i>Comment: Morgan Hill Municipal Code, Title 18, Chapter 18.42.010, Ord. No. 1398</i>	Yes	Yes	Yes	Yes
Stormwater Plan <i>Comment: Morgan Hill Municipal Code, Title 18, Chapter 18.71.120, Ord. No. 1993</i>	Yes	No	Yes	Yes
Urban Water Management Plan <i>Comment: Every 5 years</i>	Yes	No	Yes	Yes
Habitat Conservation Plan <i>Comment: Morgan Hill Municipal Code, Title 18, Chapter 18.69.010, Ord. No. 2057; Santa Clara Valley Habitat Plan</i>	No	Yes	No	No
Economic Development Plan <i>Comment: Economic Blueprint</i>	Yes	No	No	No
Shoreline Management Plan <i>Comment: N/A</i>	No	No	No	No
Community Wildfire Protection Plan <i>Comment: Morgan Hill Municipal Code, Title 15, Chapter 15.44.190, Ord. No. 2221; The Santa Clara County Community Wildfire Protection Plan, Annex 11: City of Morgan Hill</i>	Yes	Yes	No	No
Forest Management Plan <i>Comment: N/A</i>	No	No	Yes	No
Climate Action Plan <i>Comment: General Plan 2035- Policy NRE-15.3 Climate Action Plan</i>	Yes	Yes	No	No
Comprehensive Emergency Management Plan <i>Comment: Emergency Operations Plan, June 6, 2013</i>	Yes	No	Yes	No
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment: None located</i>	No	No	No	No
Post-Disaster Recovery Plan <i>Comment: None located</i>	No	No	No	No
Continuity of Operations Plan <i>Comment: None located</i>	No	No	No	No
Public Health Plan <i>Comment: Public Health Department, County of Santa Clara</i>	No	Yes	Yes	No

Table 10-3. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	No

Table 10-4. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Planning/City of Morgan Hill /Planner
Engineers or professionals trained in building or infrastructure construction practices	Yes	Building/Morgan Hill/Chief Building Official
Planners or engineers with an understanding of natural hazards	Yes	Planning/Morgan Hill/Planner
Staff with training in benefit/cost analysis	Yes	Economic Development/Morgan Hill/Economic Development Coordinator
Surveyors	No	Dept./Agency/Title
Personnel skilled or trained in GIS applications	Yes	Planning/Morgan Hill/Planner
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Office of Emergency Services/Morgan Hill/OES Coordinator
Grant writers	Yes	Office of Emergency Services/Morgan Hill/OES Coordinator

Table 10-5. National Flood Insurance Program Compliance

Criteria	Response
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	Public Works/Director of Public Works
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date of adoption of your flood damage prevention ordinance?	1998
Does your floodplain management program meet or exceed minimum requirements?	Complies with AB 162; however, ordinance needs to be updated to comply with 2004 required revisions
• If exceeds, in what ways?	
When was the most recent Community Assistance Visit or Community Assistance Contact?	October 6, 2016
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
• If so, please state what they are.	

Criteria	Response
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If no, please state why.	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No
Does your jurisdiction participate in the Community Rating System (CRS)? • If yes, is your jurisdiction interested in improving CRS Classification? • Is your jurisdiction interested in joining the CRS program?	Yes Yes (currently class 7) Currently Participates
How many flood insurance policies are in force in your jurisdiction? • What is the insurance in force? • What is the premium in force?	559 ^a \$157,559,200 ^a \$458,907 ^a
How many total loss claims have been filed in your jurisdiction? • How many claims were closed without payment/are still open? • What were the total payments for losses?	65 ^a 22 ^a \$482,726.02 ^a

a. According to FEMA statistics as of October 31, 2016.

Table 10-6. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes The City's Office of Emergency services website provides information to the community on preparedness, links to resources partners to help with preparedness and resources to contact in case of an emergency.
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes We use the following tools for education and outreach related to hazard mitigation; AlertSCC, Nextdoor, Facebook, and website postings
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes (Planning Commission)
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes We use the following tools to alert the community; AlertSCC, Nextdoor, Facebook, and website postings
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes We use the following tools to alert the community; AlertSCC, Nextdoor, Facebook, and website postings.

Table 10-7. Community Classifications

	Participating	Classification	Date Classified
Community Rating System	Yes	7	09/23/2011
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection (Insurance Standards Organization)	Yes	3/3	2013
Storm Ready	No	N/A	N/A
Firewise (Jackson Oaks Homeowners Association)	Yes	-	09/27/16

Table 10-8. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? • If no, who does? If yes, which department?	Yes Development Services (Planning and Building)
Does your jurisdiction have the ability to track permits by hazard area?	The City of Morgan Hill will have the ability in the near future to map and plot development permits by hazard zones.
Does your jurisdiction have a buildable lands inventory?	Yes

Table 10-9. Adaptive Capacity for Climate Change

Adaptive Capacity Assessment Question	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: None provided</i>	Medium
Jurisdiction-level monitoring of climate change impacts <i>Comment:</i>	Medium
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: Very limited staffing resources familiar with climate change externalities</i>	Low
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: General Plan goals associated with greenhouse gas emissions</i>	Medium
Capital planning and land use decisions informed by potential climate impacts <i>Comment: General Plan goals associated with land use decision making</i>	Medium
Participation in regional groups addressing climate risks <i>Comment: Morgan Hill participates in regional initiatives including Joint Venture Silicon Valley Network.</i>	Medium
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: Conformance with General Plan</i>	Medium
Identified strategies for greenhouse gas mitigation efforts <i>Comment: Conformance with General Plan</i>	Medium
Identified strategies for adaptation to impacts <i>Comment: None provided</i>	
Champions for climate action in local government departments <i>Comment: None provided</i>	Medium
Political support for implementing climate change adaptation strategies <i>Comment: None provided</i>	Medium
Financial resources devoted to climate change adaptation <i>Comment:</i>	Low
Local authority over sectors likely to be negatively impacted <i>Comment: None provided</i>	Low
Public Capacity	
Local residents knowledge of and understanding of climate risk <i>Comment: None provided</i>	Medium
Local residents support of adaptation efforts <i>Comment: None provided</i>	Unknown
Local residents' capacity to adapt to climate impacts	Unknown

Adaptive Capacity Assessment Question	Jurisdiction Rating
<i>Comment: None provided</i>	
Local economy current capacity to adapt to climate impacts	Low
<i>Comment: None provided</i>	
Local ecosystems capacity to adapt to climate impacts	Low
<i>Comment: None provided</i>	

10.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the hazard mitigation plan into local planning mechanisms.

10.5.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan:

- **General Plan 2035**—The recent adoption of the General Plan 2035 includes the Safety, Services, and Infrastructure Element which aims to protect the community from unreasonable risk by identifying the following hazards and establishing policies and actions to avoid or minimize those hazards:
 - Geologic and Seismic Hazards
 - Fire Hazards
 - Hazardous Materials
 - Flood Control
 - Impacts from Climate Change
- **Building Code and Fire Codes**—The recent adoption of the 2016 California Building and Fire codes incorporated local modifications given the climatic, topographic and geographic conditions that exist in Morgan Hill. In particular given the area is prone to earthquakes, severe weather and wildfires.

10.5.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration:

- The City of Morgan Hill is conducting a comprehensive update to Title 18, Zoning Code. The opportunity to incorporate additional mitigation and abatement measures are contemplated for inclusion into Title 18.
- The City of Morgan Hill's last approved Flood Damage Prevention Ordinance was in 1998. The opportunity is to bring current to FEMA standards of 2004.
- Santa Clara County Fire Department recently adopted the Santa Clara County Community Wildfire Protection Plan. The plan includes City annexes throughout the County that identify specific measures to reduce impacts from wildfires. The Morgan Hill Annex identified specific elements to implement under the Community Wildfire Protection Plan.

10.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 10-10 lists all past occurrences of natural hazards within the jurisdiction.

Table 10-10. Natural Hazard Events

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Flooding	TBD	2/21/2017	unknown
Flooding	TBD	01/08/2017	\$103,322
Loma Wildfire	TBD	9/26/2016	unknown
Earthquake 2.5	N/A	7/24/2015	unknown
Earthquake 2.7	N/A	12/7/14	unknown
Flooding	N/A	2/28/2014	unknown
Flooding	N/A	10/13/2009	\$400,000
Earthquake 3.6	N/A	4/30/2009	unknown
Earthquake 4.3	N/A	3/30/2009	unknown
Earthquake 3.0	N/A	3/12/2009	unknown
Earthquake 3.7	N/A	11/6/2003	unknown
Flooding	N/A	12/10/1996	unknown
Morgan Hill Central Earthquake 6.2	N/A	4/24/1984	\$8 million

10.7 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 1
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include:

- Areas of high and very high fire hazard located (and mapped) within and adjacent to city boundaries.
- Several drainage improvements are needed throughout the City.

10.8 HAZARD RISK RANKING

Table 10-11 presents the ranking of the hazards of concern.

Table 10-11. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe Weather	33	Medium
3	Wildfire	27	Medium
3	Dam and Levee Failure	18	Medium
3	Flood	18	Medium
3	Landslide	18	Medium
4	Drought	9	Low

10.9 STATUS OF PREVIOUS PLAN ACTIONS

The status of previous actions from the 2011 ABAG LHMP for Santa Clara County can be found in Appendix D of this volume.

10.10 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 10-12 lists the actions that make up the City of Morgan Hill hazard mitigation action plan. Table 10-13 identifies the priority for each action. Table 10-14 summarizes the mitigation actions by hazard of concern and the six mitigation types.

Table 10-12. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
MGH-1 —Integrate the hazard mitigation plan into the Zoning Code, Title 18 code update						
Existing and New	All Hazards	2,3,7	Planning	Low	Staff Time, General Fund	Short-Term
MGH-2 —Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP):						
<ul style="list-style-type: none"> Bring current and enforce Morgan Hill's Flood damage prevention ordinance Participate in floodplain identification and mapping updates Implement flood risk reduction projects in Morgan Hill Provide public assistance/information on floodplain requirements and impacts. 						
New and Existing	Flood	2,3,4	Public Works	Low	Capital Improvement Fund, HMGP/PDM	Ongoing
MGH-3 —Support neighborhoods seeking to become certified Firewise Communities						
New and Existing	Wildfire	1,2,3,4,5,7,8	CalFire	Low	Staff Time, General Fund, HMGP	Ongoing
MGH-4 —Enhance Public Education and Awareness of Natural Hazards and Disaster Preparedness						
New and Existing	All Hazards	7	Office of Emergency Services	Low	Staff Time, General Fund	Ongoing
MGH-5 —Retrofit the Anderson Dam to make it seismically stable to withstand a large magnitude earthquake						
Existing	Dam Failure	1,2,3,4,6,8	Santa Clara Valley Water District	High	Federal Funding, Rate payer funding, HMGP	Long-term
MGH-6 —Retrofit of high water use landscape & irrigation systems for water saving technology						
New and Existing	Drought and Climate Change	1,2,6,8	Community Services	Low	General Fund, Possible Grants	Long-term
MGH-7 —Conduct Drought Public Education and Outreach						
New and Existing	Drought and Climate Change	1,2,6,8	Community Services	Low	General Fund	Ongoing
MGH-8 —Develop GIS based maps that can be used during emergency incidents						
New and Existing	All Hazards	2,4,9	Public Works	Medium	Staff Time, General Fund	Ongoing
MGH-9 —Harden infrastructure, such as locating utilities underground.						
New and Existing	All Hazards	1,2,3,7,8	Public Works*, PG&E, Frontier Communications	High	Capital Improvement Fund, PDM. HMGP	Ongoing
MGH-10 —Update Stormwater management masterplan						
New and Existing	Flood	1,2,3,4,7,8	Public Works	Medium	Capital Improvement Fund	Ongoing
MGH-11 —Coordinate disaster preparation and mitigation practices with private sector, public institutions and other public bodies.						
New and Existing	All Hazards	1,4,7,9	Office of Emergency Services	Low	Staff Time, General Fund	Ongoing

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
MGH-12 —Develop roadside fuel treatment programs						
New and Existing	Wildfire	2,4,5,6,7,8	Public Works*, CalFire	Medium	Public Works	Ongoing
MGH-13 —Improve firefighting water supplies in Holiday Lakes and Jackson Oaks subdivisions.						
Existing	Wildfire	7,8	Public Works*, CalFire	High	General Fund, HMGP	Ongoing
MGH-14 —Address density of livestock in wildfire prone areas to provide plan in an event of wildfire						
Existing	Wildfire	1,4,7	Public Works*, CalFire	Medium	General Fund	Ongoing
MGH-15 —Implement infiltration and inflow preventative measures in wastewater system (mitigation measure needed during flooding events) City-wide						
New and Existing	Severe Weather and Flood	1,2,3	Public Works	Medium	Capital Improvement Fund	Ongoing
MGH-16 —Construct concrete aprons at culvert openings at Butterfield Channel and drain outlets to keep areas clear of vegetation growth to allow water flow and visibility for inspection.						
Existing	Severe Weather and Flood	6,7,8	Public Works	Medium	Capital Improvement Fund, HMGP, PDM	Short-Term
MGH-17 —After Upper Llagas Flood Control project is complete, install a new outlet in the creek channel on the south side of Spring Street, at a lower elevation than existing, to delay flooding and speed drainage.						
New and Existing	Flood and Severe Weather	6,7,8	Public Works	Medium	Capital Improvement Fund, HMGP, PDM	Long-Term
MGH-18 —Implement CIP project addressing flooding at Burnett and Monterey. Improved facilities to direct stormwater out of the area or increase retention capacity.						
Existing	Flood and Severe Weather	6,7,8	Public Works	Medium	Capital Improvement Fund, HMGP, PDM	Short-Term
MGH-19 —Improve facilities at the intersection of Main and Casa to direct flooding out of this area or otherwise increase retention capacity.						
Existing	Flood and Severe Weather	6,7,8	Public Works	High	Capital Improvement Fund, HMGP, PDM	Short-Term
MGH-20 —Raise pavement level at intersection of Mission View and Half Road or install storm drains.						
New and Existing	Flood and Severe Weather	6,7,8	Public Works	Medium	Development Impact Fees, Capital Improvement Fund, HMGP, PDM	Short-Term
MGH-21 —Evaluate silt issue at Circle Lane and Oak View to determine appropriate repair.						
Existing	Flood and Severe Weather	6,7,8	Public Works	Medium	Staff Time, General Fund	Short-Term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
MGH-22 —Implement projects to increase drainage including, but not limited to: <ul style="list-style-type: none"> Sabini Ct : Install drain to nearby channel Oak Canyon Dr.: Install concrete apron to reduce impacts from silting Gallop Dr.: Inlet above Gallop needs re-work, some cobbles are loose. Re-design to reduce sediment build up, provide access from street Peak Ave.: Increase inlet capacity Fisher Creek retention basin: Lower elevation of large pond inlet so it retains more water during major storms Teresa Ditch (behind homes on Teresa Lane): Improve ditch to reduce silting Hayloft Ct: Investigate installing a catch basin and replacing curb/gutter area Condit, at Ramada Inn: Extend storm drain so water from parking lot and street drain properly. 						
Existing	Flood and Severe Weather	6,7,8	Public Works	Medium	Capital Improvement Fund, HMGP, PDM	Short-Term
MGH-23 —Support Santa Clara Valley Water District in the Llagas Creek Flood Protection Project.						
New and Existing	Flood and Severe Weather	6,7,8	Public Works	Medium	Staff Time; Santa Clara Valley CIP for Project Funds	Short-Term
MGH-24 — Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.						
Existing	All Hazards	4, 5, 6, 7, 8	Public Works, Planning	High	HMGP, PDM, FMA	Short-term
MGH-25 — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All Hazards	1, 5	Office of Emergency Services	Low	Staff Time, General Funds	Short-term

* - denotes lead agency, other agencies are support agencies

Table 10-13. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority	Grant Pursuit Priority
MGH-1	3	Medium	Low	Yes	No	Yes	Medium	Low
MGH-2	3	High	Medium	Yes	Yes	Yes	High	Medium
MGH-3	7	Medium	Medium	Yes	Yes	Yes	Medium	Medium
MGH-4	1	Medium	Low	Yes	No	Yes	Medium	Medium
MGH-5	6	High	High	Yes	Yes	Yes	High ^a	High
MGH-6	4	Low	Medium	No	Yes	No	Medium	Low
MGH-7	4	Low	Low	Yes	No	Yes	Medium	Low
MGH-8	3	Medium	Low	Yes	No	Yes	Medium	Medium
MGH-9	5	Medium	High	No	Yes	Yes	Medium	Medium
MGH-10	6	Low	Medium	No	Yes	Yes	Medium	Medium
MGH-11	4	Medium	Medium	Yes	No	Yes	Medium	Low
MGH-12	6	Medium	Medium	Yes	Yes	Yes	Medium	Low
MGH-13	2	High	High	Yes	Yes	Yes	High ^a	High
MGH-14	3	Low	Medium	No	No	Yes	Medium	Medium
MGH-15	3	Low	Medium	No	Yes	Yes	Medium	Medium
MGH-16	3	Medium	Medium	Yes	Yes	Yes	Medium	Medium
MGH-17	3	Medium	Medium	Yes	Yes	Yes	Medium	Medium
MGH-18	3	Medium	Medium	Yes	Yes	Yes	Medium	Medium
MGH-19	3	Medium	High	No	Yes	No	Low	Medium
MGH-20	3	Medium	Medium	Yes	Yes	Yes	Medium	Medium
MGH-21	3	Medium	Medium	Yes	No	Yes	Medium	Low
MGH-22	3	Medium	Medium	Yes	Yes	Yes	Medium	Medium
MGH-23	3	Medium	Medium	Yes	No	Yes	Medium	Low
MGH-24	5	High	High	Yes	Yes	No	Medium	High
MGH-25	2	Low	Low	Yes	No	Yes	High	Low

a. High priority for implementation; however, funding source is needed

Table 10-14. Analysis of Mitigation Action

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a						
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects	7. Climate Resilient
Earthquake	MGH-1, MGH-4, MGH-8, MGH-9, MGH-10, MGH-25	MGH-9, MGH-24	MGH-1, MGH-4, MGH-8, MGH-10, MGH-11		MGH-4, MGH-8		
Severe Weather	MGH-1, MGH-4, MGH-9, MGH-15, MGH-25	MGH-9, MGH-15, MGH-24	MGH-1, MGH-4, MGH-11	MGH-15	MGH-4	MGH-15, MGH-16, MGH-17, MGH-18, MGH-19, MGH-20, MGH-21, MGH-22, MGH-23	MGH-15
Wildfire	MGH-1, MGH-4, MGH-12, MGH-13, MGH-14, MGH-25	MGH-9, MGH-12, MGH-13, MGH-24	MGH-1, MGH-8, MGH-11, MGH-12, MGH-13, MGH-14	MGH-12	MGH-8, MGH-12, MGH-13		
Dam and Levee Failure	MGH-1, MGH-4, MGH-5, MGH-11, MGH-25	MGH-5, MGH-24	MGH-1, MGH-4, MGH-5, MGH-8, MGH-11	MGH-5	MGH-5	MGH-5	
Flood	MGH-1, MGH-2, MGH-4, MGH-8, MGH-11, MGH-15, MGH-25	MGH-2, MGH-13, MGH-24	MGH-1, MGH-2, MGH-4, MGH-8	MGH-2, MGH-10, MGH-15	MGH-11	MGH-2, MGH-10, MGH-15, MGH-16, MGH-17, MGH-18, MGH-19, MGH-20, MGH-21, MGH-22, MGH-23	MGH-15
Landslide	MGH-1, MGH-4, MGH-25	MGH-24	MGH-1, MGH-4				
Drought	MGH-1, MGH-4, MGH-9, MGH-15, MGH-25	MGH-9, MGH-15, MGH-24	MGH-1, MGH-4, MGH-11	MGH-15	MGH-4	MGH-15	MGH-6

a. See the introduction to this volume for explanation of mitigation types.

10.11 ADDITIONAL RESOURCES

The hazard mitigation plan annex development tool-kit was used in the development of this annex to the Santa Clara Operational Area Hazard Mitigation Plan.

11. CITY OF MOUNTAIN VIEW

11.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

Lynn Brown, Office of Emergency Services Coordinator
1000 Villa Street
Mountain View, CA 94041
Telephone: 650-903-6825
e-mail Address: lynn.brown@mountainview.gov

Alternate Point of Contact

Juan Diaz, Fire Chief
1000 Villa Street
Mountain View, CA 94041
Telephone: 650-903-6365
e-mail Address: juan.diaz@mountainview.gov

11.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—November 7, 1902
- **Current Population**—77,925 as of January 1, 2016
- **Population Growth**—Mountain View had a growth rate of 1.6 percent from 2015 to 2016. In 2020, the population is expected to be approximately 81,500. In 2030, it is expected to be approximately 88,600 (based on land use projections developed by the Community Development Department).
- **Location and Description**—The City of Mountain View is located in the heart of the Silicon Valley on the San Francisco Peninsula, at the north end of State Route 85, where it meets US Route 101. The historic route El Camino Real also runs through Mountain View. Located 10 miles north of San José and 35 miles south of San Francisco, Mountain View is situated between the Santa Cruz Mountains and the San Francisco Bay. It is bounded to the northwest by Palo Alto, to the southwest by Los Altos, to the east by Sunnyvale, to the northeast by Moffett Federal Airfield, and to the north by the San Francisco Bay.

The City of Mountain View covers 12 square miles and is home to just under 78,000 residents, as well as Fortune 1000 companies Google, Symantec, Microsoft and Intuit. Forty-two percent of the City's land area is developed with housing; twenty six percent with commercial, office, and industrial uses; twenty percent with parks and open space; eight percent public/institutional uses and two percent vacant land.
- **Brief History**—Like most Bay Area cities, the history of Mountain View begins with the Ohlone and the early influences of Spanish and Mexican settlers. It also reflects the creative and ambitious character of the first Americans to arrive in the area, many of whom came to California in search of gold, and stayed on to build successful businesses. Finally, Mountain View's history since incorporation is a story of phenomenal change, affecting everything from the size of the population, to the nature of the economy and the function of the City government.
- **Climate**—Mountain View has a Mediterranean climate. Summers are warm and dry, while winters are mild and wet. However, both summers and winters are somewhat moderated due to its relative proximity to the Pacific, although it has a lesser maritime influence than San Francisco further north on the peninsula. The average year round temperature is 60 degrees and average annual rainfall is 14 inches, with the majority of precipitation during the winter months.

- **Governing Body Format**—The City of Mountain View is governed by a seven-member city council. The City consists of eleven departments: City Attorney, City Clerk, City Manager, Community Development, Community Services, Finance and Administrative Services, Fire, Information Technology, Library, Police and Public Works. The City has eleven subcommittees, and thirteen commissions and advisory bodies, which report to the City Council. The City Council assumes responsibility for the adoption of this plan; the City Manager will oversee its implementation.

11.3 DEVELOPMENT TRENDS

Mountain View’s diverse mix of land uses includes neighborhoods with single-family and multi-family residences, a vibrant Downtown, commercial streets and shopping districts as well as industrial districts. Most of the land in Mountain View is occupied by residential, public, institutional and open space uses. There are smaller areas of commercial use and vacant land. Current land uses will serve as a benchmark to evaluate land use change over time.

On July 10, 2012, the City Council adopted the 2030 General Plan, a comprehensive update to the City's 1992 General Plan. The 2030 General Plan is the guiding document for the City's physical development and preservation. It includes goals, policies and graphics that convey a long-term vision and guide local decision-making to achieve that vision. The General Plan is the foundation for zoning regulations, subdivisions and public works plans. It also addresses other issues related to the City’s physical environment, such as noise and safety. Table 11-1 summarizes development trends in the performance period since development of the previous hazard mitigation plan and expected future development trends.

11.4 CAPABILITY ASSESSMENT

11.4.1 Resources for the 2017 Planning Initiative

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for inclusion into the 2017 Multi-Jurisdiction Hazard Mitigation Plan for both Volume 1 and Volume 2 (Mountain View Annex). All of the below items were additionally reviewed as part of the full capability assessment for Mountain View

- **Mountain View General Plan**—The General Plan, including the Land Use and Public Safety Elements, were reviewed for information regarding goals and policies consistent with hazard mitigation for carry over as goals and objectives.
- **Mountain View Municipal Code**—The Municipal Code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Flood Damage Prevention Ordinance**—The Flood Damage Prevention Ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Capital Improvements Plan**—The Capital Improvements Plan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.
 - Capital Improvement Plan-Adopted Fiscal Year 2016-17, includes projects to maintain, replace and improvement city infrastructure.
 - Capital Improvement Plan-Adopted Fiscal Year 2015-16, Planned FY 2016-17 through FY 2019-20 (five year plan) includes projects to maintain, replace and improvement city infrastructure.
- **Technical Reports and Information**—Outside resources and references used to complete the Mountain View Annex are identified in Section 11.11 of this annex.

Table 11-1. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan? • If yes, give the estimated area annexed and estimated number of parcels or structures.	No					
Is your jurisdiction expected to annex any areas during the performance period of this plan? • If yes, please describe land areas and dominant uses. • If yes, who currently has permitting authority over these areas?	N/A					
Are any areas targeted for development or major redevelopment in the next five years? • If yes, please briefly describe, including whether any of the areas are in known hazard risk areas	Yes One 17-acre parcel may be annexed in the next five years, located at the corner of Moffett Blvd and Middlefield Rd. The property is an unincorporated island. It is currently occupied by military housing and owned by the Federal Government. If annexed, it would be redeveloped, most likely with high-density housing. Federal Government					
How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?	Yes Several areas are identified as “Change Areas” in the General Plan. North Bayshore (the area north of 101), will have new office development, and is being considered for new residential uses. East Whisman (the area east of Whisman Rd) will also have new office development and is being considered for residential uses. El Camino Real will have new residential development. San Antonio Center and the surrounding blocks will have new residential, retail and office development, and Moffett Blvd will have new residential development. North Bayshore has some flood zone areas, and is within the liquefaction area.					
Please provide the number of permits for each hazard area or provide a qualitative description of where development has occurred.		2011	2012	2013	2014	2015
	Single Family	51	40	51	49	11
	Multi-Family	54	52	41	71	64
Please describe the level of buildout in the jurisdiction, based on your jurisdiction’s buildable lands inventory. If no such inventory exists, provide a qualitative description.	Other (commercial, mixed use, etc.)	2	14	24	21	1
	Development in the northern 3rd of the City is at risk of liquefaction; development in this area has included several large new office buildings and several hundred new dwelling units (mostly attached single-family residences). A similar number of office buildings and housing have been built in flood zones, which are located along creeks throughout the City and in a large area in the northern part of the City.					
	Mountain View is built out.					

11.4.2 Full Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 11-2. An assessment of fiscal capabilities is presented in Table 11-3. An assessment of administrative and technical capabilities is presented in Table 11-4. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 11-5. An assessment of education and outreach capabilities is presented in Table 11-6. Classifications under various community mitigation programs are presented in Table 11-7. Development and permitting capabilities are presented in Table 11-8, and the community’s adaptive capacity for the impacts of climate change is presented in Table 11-9.

Table 11-2. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment: City Code, Chapter 8, article , Ord. No. 11.13, § 7, 10/22/13</i>	Yes	No	Yes	No
Zoning Code <i>Comment: City Code, Chapter 36, Division 1, Ord. No. 18.13, § 1, 12/10/13</i>	Yes	No	No	No
Subdivisions <i>Comment: City Code, Chapter 28, other: California Subdivision Map Act (Government Code)</i>	Yes	No	No	No
Stormwater Management <i>Comment: City Code, Chapter 35, division 4</i>	Yes	No	Yes	Yes
Post-Disaster Recovery <i>Comment: None located</i>	No	No	No	Yes
Real Estate Disclosure <i>Comment: CA. State Civil Code 1102 requires full disclosure on natural hazard exposure of the sale/re-sale of any and all real property.</i>	No	Yes	Yes	No
Growth Management <i>Comment: CA State Government Code §65300 et seq.</i>	No	No	Yes	No
Site Plan Review <i>Comment: City Code, Chapter 36</i>	Yes	No	No	No
Environmental Protection <i>Comment: City Code, Chapter 2, Article 7, Ord. No. 13.73, 5/7/73, Other: California Environmental Quality Act</i>	Yes	Yes	Yes	Yes
Flood Damage Prevention <i>Comment: Local: City Code Chapter 8, Other: Santa Clara Valley Water District</i>	Yes	Yes	Yes	Yes
Emergency Management <i>Comment: City Code, Chapter 11</i>	Yes	Yes	No	Yes
Climate Change <i>Comment: Approved by City Council 2/12/2013; Other: CA SB-379</i>	Yes	No	Yes	Yes
Other: <i>Comment: None Located</i>	N/A	N/A	N/A	N/A
Planning Documents				
General Plan <i>Is the plan compliant with Assembly Bill 2140? No</i> <i>Comment: Mountain View General Plan 2030</i>	Yes	No	Yes	No
Capital Improvement Plan <i>How often is the plan updated? Every 5 years</i> <i>Comment: City Council adopts and funds a new CIP each fiscal year. Every 2-years they also adopt a five year proposed plan.</i>	Yes	No	No	Yes
Floodplain or Watershed Plan <i>Comment: Other is Santa Clara Valley Water District</i>	Yes	Yes	No	Yes
Stormwater Plan <i>Comment: City code, Chapter 35, Article 3, Division 4</i>	Yes	Yes	Yes	Yes
Urban Water Management Plan <i>Comment: Updated June 2016, others Santa Clara Valley Water District and San Francisco Public Utility Commission should also have current UWMP.</i>	Yes	Yes	Yes	Yes
Habitat Conservation Plan <i>Comment: Burrowing Owl Preservation Plan at Shoreline Park monitored by our city's biologist</i>	Yes	Yes	Yes	Yes

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Economic Development Plan <i>Comment: Approved by City Council 5/25/2004</i>	Yes	No	No	Yes
Shoreline Management Plan <i>Comment: None located</i>	No	No	No	No
Community Wildfire Protection Plan <i>Comment: None located</i>	No	No	No	No
Forest Management Plan <i>Comment: City has adopted a Community Tree Master Plan and has a Forestry Division which manages our 27,000 trees</i>	Yes	Yes	Yes	No
Climate Action Plan <i>Comment: On 2/12/2013 City council approved the development Climate Action Plans for both city operations and the community as a whole, with both plans identifying strategies, policies, and programs that will reduce our carbon emissions 80% below 2005 levels by 2050</i>	Yes	No	No	Yes
Comprehensive Emergency Management Plan <i>Comment: Emergency Operations Plan</i>	Yes	No	No	No
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment: None located</i>	No	No	No	No
Post-Disaster Recovery Plan <i>Comment: None located</i>	No	No	No	Yes
Continuity of Operations Plan <i>Comment: None located</i>	No	No	No	Yes
Public Health Plan <i>Comment: Santa Clara County Health Department</i>	No	Yes	No	No
Other: <i>Comment: None located</i>	N/A	N/A	N/A	N/A

Table 11-3. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes, restricted to grant requirements
Capital Improvements Project Funding	Yes depending on funding source
Authority to Levy Taxes for Specific Purposes	Yes, 2/3 vote required
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes, vote is required
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	N/A

Table 11-4. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Public Works/Engineering/Principal Civil Engineer Community Development Department
Engineers or professionals trained in building or infrastructure construction practices	Yes	Public Works/Engineering/Principal Civil Engineer
Planners or engineers with an understanding of natural hazards	Yes	Public Works/Engineering/Principal Civil Engineer
Staff with training in benefit/cost analysis	Yes	Community Development Dept.
Surveyors	No	No surveyors on staff
Personnel skilled or trained in GIS applications	Yes	Information Technology and Community Development Departments
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Fire Department/Office of Emergency Services Coordinator
Grant writers	Yes	Fire Department, Office of Emergency Services Coordinator

Table 11-5. National Flood Insurance Program Compliance

Criteria	Response
What local department is responsible for floodplain management?	Department Public Works
Who is your floodplain administrator? (department/position)	Public Works Director
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date of adoption of your flood damage prevention ordinance?	1/13/1998, last amended 11/22/16
Does your floodplain management program meet or exceed minimum requirements?	Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	11/10/2010
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	Yes Continuing education
Does your jurisdiction participate in the Community Rating System (CRS)? • If yes, is your jurisdiction interested in improving CRS Classification?	Yes No
How many flood insurance policies are in force in your jurisdiction? • What is the insurance in force? • What is the premium in force?	603 ^a \$174,302,800 ^a \$492,397 ^a
How many total loss claims have been filed in your jurisdiction? • How many claims were closed without payment/are still open? • What were the total payments for losses?	5 ^a 0 ^a \$10,919 ^a

a. According to FEMA statistics as of October 31, 2016.

Table 11-6. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes Local hazard mitigation plan is on the city website
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes The city uses Facebook, Twitter, and other social media to provide education and outreach
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes Community Emergency Response Team (CERT) program, with over 800 residents in the database
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes AlertSCC is a telephone/text/email based system used by all cities in the county

Table 11-7. Community Classifications

	Participating?	Classification	Date Classified
Community Rating System	Yes	8	5/1/2002
Building Code Effectiveness Grading Schedule	No	—	—
Public Protection	Yes	1	6/14/2014
Storm Ready	No	—	—
Firewise	No	—	—

Table 11-8. Development and Permit Capabilities

Criterion	Response
Does your jurisdiction issue development permits? • If no, who does? If yes, which department?	Yes Community Development Department
Does your jurisdiction have the ability to track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	No

Table 11-9. Adaptive Capacity for Climate Change

Adaptive Capacity Assessment Question	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: A Sea Level Rise study was conducted in 2013: http://laserfiche.mountainview.gov/Weblink/ElectronicFile.aspx?docid=64135&dbid=0</i>	High
Jurisdiction-level monitoring of climate change impacts <i>Comment: None provided.</i>	Low
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: None provided.</i>	Medium
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: Though we lack in-house capacity to conduct an inventory, the City uses consultants to complete an inventory every few years. The City has an adopted Greenhouse Gas Reduction Program, which was adopted in 2012, and will be updated within the next 2 to 3 years.</i>	High
Capital planning and land use decisions informed by potential climate impacts <i>Comment: The City has completed a Sea Level Rise study, and has plans to implement the recommended measures. The City has also invested heavily in using recycled water where feasible. And, the City has given significant attention to land use impacts, particularly in its North Bayshore area, which is the most susceptible to these impacts. As required through the California Environmental Quality Act.</i>	High
Participation in regional groups addressing climate risks <i>Comment: The City is a long-standing and regular participant in Joint Venture Silicon Valley's</i>	Medium
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: As required through the California Environmental Quality Act and through implementation of the Greenhouse Gas Reduction Program</i>	Medium
Identified strategies for greenhouse gas mitigation efforts <i>Comment: The City has developed Climate Action Plans for both city operations and the community as a whole, with both plans identifying strategies, policies, and programs that will reduce our carbon emissions 80% below 2005 levels by 2050. Included in the Greenhouse Gas Reduction Program.</i>	High
Identified strategies for adaptation to impacts <i>Comment: None provided.</i>	Medium
Champions for climate action in local government departments <i>Comment: None provided.</i>	Medium
Political support for implementing climate change adaptation strategies <i>Comment: None provided.</i>	Medium
Financial resources devoted to climate change adaptation <i>Comment: None provided.</i>	Low
Local authority over sectors likely to be negative impacted <i>Comment: None provided.</i>	Low
Public Capacity	
Local residents knowledge of and understanding of climate risk <i>Comment: None provided.</i>	High
Local residents support of adaptation efforts <i>Comment: None provided.</i>	High
Local residents' capacity to adapt to climate impacts <i>Comment: None provided.</i>	Medium
Local economy current capacity to adapt to climate impacts <i>Comment: None provided.</i>	High
Local ecosystems capacity to adapt to climate impacts <i>Comment: None provided.</i>	Medium

11.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the hazard mitigation plan into local planning.

11.5.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan:

- **Emergency Operations Plan**—Ongoing effort to ensure the most effective and economical uses of all resources for the maximum benefit and protection of the civilian population in time of an emergency. Mitigation is incorporated into the Emergency Plan with a focus on not only responding to emergencies and disasters but also planning for future events to reduce the risks of hazards.
- **Public Safety Element of the General Plan**—Establishes policies and actions to protect the community from risks associated with earthquakes, floods, fires, toxic waste, crime, and other hazards. The plan was reviewed for information regarding goals and policies consistent with hazard mitigation for carry over as goals and objectives.
- **Land Use Element of the General Plan**—Constraints on how buildings are constructed and where different types of development should be located to reduce the risks to people and property. Mitigation is considered in land use integration, environmental impacts of development, and long-term sustainability for new development and city operations.
- **Housing Element of the General Plan**—Protecting overall community health, welfare and safety remains the key focus of housing development regulations and review in Mountain View. Mitigation will be integrated into future updates to ensure housing and development reduces risk and improves safety.
- **Capital Improvement Plan**—Includes adopted and requested projects that can help mitigate potential hazards. The development of the Hazard Mitigation Plan and selection of necessary mitigation activities enable the City to ensure consistency between the Hazard Mitigation Plan, the current Capital Improvement Plan and future versions of the Capital Improvement Plan. The Hazard Mitigation Plan may also assist with identifying new possible funding sources for capital improvement projects.

11.5.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration:

- **Climate Action Plan**—Provides the City with an opportunity to directly reference the LHMP during subsequent updates of the plan and integrate hazard mitigation with existing goals and objectives. Since the Climate Action Plan provides guidance for minimizing the impact of human activity on the environment integration of hazard mitigation relating to air quality, land use and other factors is a fitting strategic next step. The City's Climate Action Plan will be the primary document that addresses our programs and mitigation actions for climate adaptation.
- **Storm Water Management**—The City requires permanent storm water pollution prevention measures for development and redevelopment projects in order to reduce water quality impacts of storm water runoff. This ordinance was reviewed for information regarding goals and policies consistent with hazard mitigation for carry over as goals and objectives.
- **Urban Water Management Plan**—The Urban Water Management Plan (UWMP) provides an analysis of the City's available water supply, during normal and dry-year scenarios, compared to current and future projected water demand. The UWMP is a link between land use planning and water supply planning developed to ensure sufficient water is available to meet the needs of Mountain View's existing and future water customers. Mitigation will be integrated into future updates to reduce risks from hazards and improve the safety of water systems.

- **Flood Damage Prevention**— the City will continue efforts to reduce our CRS rating to reduce flood risks to those property owners in FEMA designated flood zones.
- **Floodplain or Watershed Plan**—In conjunction with the Santa Clara Valley Water District and San Francisco Public Utility Commission, the City will integrate mitigation into future updates to reduce risks from hazards and improve floodplain safety.
- **Emergency Management**— the City has a strong and active Emergency Management program including CERT, Amateur Radio, regular Emergency Operations Center exercises and outreach to businesses and schools. Mitigation will be integrated into all aspects of these programs to reduce risks from hazards and address hazard mitigation as part of a targeted outreach program.
- **Climate change**—The City has developed Climate Action Plans for both city operations and the community as a whole, with both plans identifying strategies, policies, and programs that will reduce our carbon emissions 80 percent below 2005 levels by 2050. Mitigation will be integrated into all aspects of these plans to reduce risks from hazards and address hazard mitigation.
- **Post-Disaster Recovery Plan**—Mountain View does not have a Post-Disaster Recovery Plan and intends to develop one as a mitigation planning action during the next five years.
- **Continuity of Operations Plan**—Mountain View does not have a Continuity of Operations Plan and intends to develop one as a mitigation planning action during the next five years.

11.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 11-10 lists all past occurrences of natural hazards within the jurisdiction.

Table 11-10. Natural Hazard Events

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Drought	N/A	Ongoing	N/A
Wildland fire/Strike Team Deployment/Erskine Fire	N/A	6/24/16	N/A
Wildland fire/Strike Team Deployment/Soberanes Fire	N/A	7/26/16	N/A
Wildland fire/Strike Team Deployment/Clayton Fire/	N/A	8/14/2016	N/A
Wildland fire/Strike Team Deployment/ Blue Cut Fire	N/A	8/14/2016	N/A
Wildland fire/Strike Team Deployment/Cedar Fire	N/A	8/22/2016	N/A
Wildland fire/Strike Team Deployment/Gap Fire	N/A	8/28/2016	N/A
Wildland fire/Strike Team Deployment/Loma Fire	N/A	9/26/2016	N/A
Summit Fire	2766	5/22/2008	N/A
Croy Fire	2465	9/25/2002	N/A
Severe Storms	1203	2/19/1998	N/A
Severe Freeze	894	2/11/1991	N/A
Loma Prieta Earthquake	845	10/18/1989	N/A
Drought	3023	1/20/1977	N/A

11.7 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include:

- There are a number of structures in the City built with soft-story construction.

11.8 HAZARD RISK RANKING

Table 11-11 presents the ranking of the hazards of concern.

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe Weather	33	Medium
3	Flood	18	Medium
4	Drought	9	Low
5	Dam and Levee Failure	3	Low
6	Landslide	0	None
6	Wildfire	0	None

11.9 STATUS OF PREVIOUS PLAN ACTIONS

The status of previous actions from the 2011 ABAG LHMP for Mountain View can be found in Appendix D of this volume.

11.10 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 11-12 lists the actions that make up the City of Mountain View hazard mitigation action plan. Table 11-13 identifies the priority for each action. Table 11-14 summarizes the mitigation actions by hazard of concern and the six mitigation types.

11.11 ADDITIONAL RESOURCES

The hazard mitigation plan annex development tool-kit was used in the development of this annex to the Santa Clara Operational Area Hazard Mitigation Plan.

Table 11-12. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
MTV-1—Create Continuity of Operations Plan						
New and existing	All hazards	3, 5	Fire Department/Office of Emergency Services	Medium	Staff time, general fund, Grants	Ongoing
MTV-2—Create Disaster Recovery Plan						
New and existing	All hazards	3, 5	Fire Department/Office of Emergency Services	Medium	Staff time, general fund, Grants	Ongoing
MTV-3—Complete soft story study: scoping of process to address issues related to potentially hazardous buildings containing soft, weak or open front stories						
Existing	Earthquake	2, 3, 4, 5, 9	Community Development	Medium	Staff time, general fund, Grants	Fiscal year 2016/2017 (Short-term)
MTV-4—Coordinate disaster preparation and mitigation practices with private sector, public institutions and public agencies						
New and existing	All hazards	7	Fire Department/Office of Emergency Services	Low	Staff time, general fund	Ongoing
MTV-5—Continue to maintain ISO class one rating for Fire Department						
New and existing	All hazards	2, 3, 5	Fire Department/Office of Emergency Services	Low	Staff time, general fund	Ongoing
MTV-6—Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP). This will be accomplished through the implementation of floodplain management programs that will, at a minimum, meet the requirements of the NFIP:						
<ul style="list-style-type: none"> • Enforcement of the flood damage prevention ordinance • Participate in floodplain identification and mapping updates • Provide public assistance/information on floodplain requirements and impacts. 						
New and Existing	Flooding	2, 3, 4	Public Works	Low	Staff time, general fund	Ongoing
MTV-7—Enhance public education and awareness of natural hazards and disaster preparation						
New and existing	All hazards	7	Fire Department/Office of Emergency Services	Low	Staff time, general fund	Ongoing
MTV-8—Develop GIS based maps for emergency incidents						
New and existing	All hazards	5, 8	Information Technology	Low	Staff time, general fund	Ongoing
MTV-9—Continue Community Emergency Response Team (CERT) program						
New and existing	All hazards	7	Fire Department/Office of Emergency Services	Low	Staff time, general fund, Grants	Ongoing
MTV-10—Implement projects from storm water master plan						
New and Existing	Flooding	2, 3, 4	Public Works	Medium	Capital Improvement Fund, Grants	Fiscal year 2017-2018 (Short-term)
MTV-11—Implement projects from sea level rise study						
New and Existing	Flooding	2, 3, 4, 6	Public Works	Medium	Capital Improvement Fund, Grants	Fiscal year 2017-2018 (Short-term)
MTV-12—Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.						
Existing	All hazards	4, 5, 6, 7, 8	Community Development/ Public Works	High	FEMA (HMGP, PDM, FMA)	Short-term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
MTV-13 — Continue to integrate the hazard mitigation plan into other plans, ordinances and programs such as the Climate Action Plan, Stormwater Management, Urban Water Management Plan, Floodplain Management Program, etc.						
New and Existing	All hazards	2, 4,	Community Development/ Public Works	Low	Staff time, general funds	Ongoing
MTV-14 —Actively participate in the plan maintenance protocols outlined in Volume 1 of the hazard mitigation plan.						
New and Existing	All hazards	1, 5	Office of Emergency Services	Low	Staff time, general funds	Short-term

Table 11-13. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
MTV-1	2	High	Medium	Yes	Yes	Yes	High	High
MTV-2	2	High	Medium	Yes	Yes	Yes	High	High
MTV-3	5	High	Medium	Yes	Yes	Yes	High	High
MTV-4	1	Medium	Low	Yes	No	Yes	High	Medium
MTV-5	3	Medium	Low	Yes	No	Yes	High	Low
MTV-6	3	Low	Low	Yes	No	Yes	High	Low
MTV-7	1	Medium	Low	Yes	No	Yes	High	Low
MTV-8	2	High	Low	Yes	No	Yes	High	Low
MTV-9	1	Medium	Low	Yes	Yes	Yes	High	Medium
MTV-10	3	Low	Medium	No	Yes	Yes	High	Medium
MTV-11	4	Low	Medium	No	Yes	Yes	High	Medium
MTV-12	5	High	High	Yes	Yes	No	Medium	High
MTV-13	2	Medium	Low	Yes	No	Yes	High	Low
MTV-14	2	Low	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

Table 11-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a						
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects	7. Climate Resilient
Earthquake	MTV-4, MTV-7, MTV-9, MTV-13, MTV-14	MTV-3, MTV-12	MTV-4, MTV-7, MTV-9	MTV-4, MTV-6, MTV-10, MTV-11	MTV-5, MTV-9		
Severe Weather	MTV-4, MTV-7, MTV-9, MTV-13, MTV-14	MTV-3, MTV-12	MTV-4, MTV-7, MTV-9		MTV-5, MTV-9		MTV-10, MTV-11
Flood	MTV-4, MTV-7, MTV-9, MTV-13, MTV-14	MTV-3, MTV-12	MTV-4, MTV-7, MTV-9	MTV-4, MTV-7, MTV-9	MTV-5, MTV-9	MTV-10, MTV-11	MTV-10, MTV-11
Drought	MTV-4, MTV-7, MTV-9, MTV-13, MTV-14	MTV-3, MTV-12	MTV-4, MTV-7, MTV-9		MTV-5, MTV-9		
Dam and Levee Failure	MTV-4, MTV-7, MTV-9, MTV-13, MTV-14	MTV-3, MTV-12	MTV-4, MTV-7, MTV-9		MTV-5, MTV-9		

a. See the introduction to this volume for explanation of mitigation types.

12. CITY OF PALO ALTO

12.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

Nathan Rainey, Emergency Services Coordinator
275 Forest Avenue
Palo Alto, CA 94301
Telephone: 650-617-3197
e-mail Address:
Nathaniel.rainey@cityofpaloalto.org

Alternate Point of Contact

Ken Dueker, Director of Emergency Services
275 Forest Avenue
Palo Alto, CA 94301
Telephone: 650-329-2419
e-mail Address:
Kenneth.dueker@cityofpaloalto.org

12.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—April 23, 1894
- **Current Population**—68,207 as of January 1, 2016
- **Population Growth and Demographics**—Palo Alto’s population has increased only slightly during the last 30 years compared to Santa Clara County as a whole. The number of residents increased by 4.7 percent from 55,966 in 1970 to 58,598 in 2000, and 9.9 percent between 2000 and 2010 (U.S. Census 1980, 1990, 2000, and 2010). As of the 2010 Census, population in the City has increased to 64,403. While the average number of people per household declined from 2.7 in 1970 to 2.3 in 2000, the number of housing units increased (See Table 12-1).

Table 12-1. Historical Population Growth in Palo Alto, 1990-2010

Year	Population	Numerical Change	Percent Change
1990	55,225	741	1.3
2000	58,598	675	1.2
2010	64,403	5,805	9.9

Source: US Census 1990, 2000, 2010.

Although 64.2 percent of Palo Alto’s population is White, the City is becoming more ethnically diverse. Asians, Native Hawaiian, and Other Pacific Islanders comprise 27.3 percent, while 0.2 percent are American Indian/Alaska Native, 6.2 percent are Hispanic, 1.9 percent are Black and 6.4 percent identify themselves as some other race or two or more races.

The median age of Palo Alto’s population has increased dramatically over the last few decades. In 1970, the median age was 29.5 for men and 33.7 for women. By 1990, these figures had increased to 36.7 and 40.0 respectively. In the year 2000, the median age for the entire population of Palo Alto was 40.2 years, which is considerably higher than the County median age of 34 years, and in 2010 it raised further to 41.9

years. The increase in median age has been accompanied by an increase in Palo Alto's senior population; the number of persons over 65 increased from 10 to 15.6 percent of the population between 1970 and 2000, and 17.1 percent in 2010. The number of older adults is expected to continue to increase in the future. At the other end of the age spectrum, the number of children under five has increased significantly over the last two decades and has resulted in an increase in the number of children entering childcare and school. However, the number of women of childbearing age has decreased markedly after increasing during the 1980s and 1990s and the middle-aged population has increased significantly indicating that Palo Alto will continue to grow older during the next decade.

- **Location and Description**—Part of the metropolitan San Francisco Bay Area and the Silicon Valley, Palo Alto is located within Santa Clara County and borders San Mateo County.

The City's boundaries extend from San Francisco Bay on the east to the Skyline Ridge of the coastal mountains on the west, with Menlo Park to the north, and Mountain View to the south. The City encompasses an area of approximately 26 square miles, of which one-third is open space. The city shares its borders with East Palo Alto, Los Altos, Los Altos Hills, Stanford, Menlo Park, Mountain View, Portola Valley, and portions of unincorporated San Mateo County and Santa Clara County (including the unincorporated areas of Cupertino and Saratoga in the foothills). It is named after a redwood tree called El Palo Alto. The city includes portions of Stanford University and its affiliates, is headquarters to a number of Silicon Valley high-technology companies, including Hewlett-Packard, VMware, Tesla Motors, SAP and Palintir and has served as an incubator to several other high-technology companies, such as Google, Facebook, Logitech, Intuit, and PayPal.

A blend of business and residential neighborhoods, anchored by a vibrant downtown, defines Palo Alto's unique character. A charming mixture of old and new, Palo Alto's tree-lined streets and historic buildings reflect its California heritage. At the same time, Palo Alto is recognized worldwide as a leader in cutting-edge development, as a quintessential part of Silicon Valley.

Based on data from the City's business registry in January 2016, there are 168 Firms in Palo Alto with over 50 employers collectively employing 56,410 employees. While this doesn't account for all businesses it shows that the business community is at least the size of the residential population of Palo Alto. So while the City's public services are sized for the residential community, they are serving a population at least double that size.

The City Auditor's Sales Tax Digest Summary Report from January 2016 lists the top 25 Sales/Use Tax contributors. The list is in alphabetical order and represents the year ended 2nd Quarter 2015. The Top 25 Sales/Use Tax contributors generate 48.5 percent of Palo Alto's total sales and use tax revenue are as follows:

- | | | |
|--------------------------|----------------------------------|---------------------------|
| ➤ Anderson Honda | ➤ Integrated Archive Systems | ➤ Tesla Lease Trust |
| ➤ Apple Stores | ➤ Loral Space Systems | ➤ Tesla Motors |
| ➤ Audi Palo Alto | ➤ Macy's Department Store | ➤ Tiffany & Company |
| ➤ Bloomingdale's | ➤ Magnussen's Toyota | ➤ Urban Outfitters |
| ➤ Critchfield Mechanical | ➤ Neiman Marcus Department Store | ➤ Valero Service Stations |
| ➤ CVS/Pharmacy | ➤ Nordstrom Department Store | ➤ Varian Medical Systems |
| ➤ Eat Club | ➤ Pottery Barn Kids | ➤ Wilkes Bashford |
| ➤ Fry's Electronics | ➤ Shell Service Stations | |
| ➤ Hewlett-Packard | ➤ Stanford University Hospital | |

- **Brief History**—Palo Alto was incorporated in 1894 and received its name from the tall landmark Redwood tree, *El Palo Alto*, which still grows on the east bank of San Francisquito Creek across from Menlo Park. One trunk of the twin-trunked tree can still be found by the railroad trestle near Alma Street in El Palo Alto Park.

Leland Stanford Junior University opened to 465 students in 1891, as a memorial by Leland and Jane Stanford to their son who died in 1884 while traveling in Europe. Stanford University played a significant role in the development of the Palo Alto landscape; it has since grown into a world renowned teaching and research university with more than 16,000 undergraduate and graduate students.

In 1925 the town of Mayfield, the original settlement that developed in the area in 1853, was annexed to the larger Palo Alto. In the decades that followed, Palo Alto continued to expand southward reaching the border it currently shares with Mountain View.

The population more than doubled from 25,000 to 55,000 residents by 1960, and since then has increased to roughly 68,000 today. During these boom years Palo Alto was transformed from agricultural fields to urban forest and became the birthplace of the Silicon Valley.

- **Climate**—Typical of the San Francisco Bay Area, Palo Alto has a Mediterranean Climate with cool, wet winters and warm, dry summers. Typically, in the warmer months, as the sun goes down, the fog bank flows over the foothills to the west and covers the night sky, thus creating a blanket that helps trap the summer warmth absorbed during the day (USClimateData.com, 2017). Average high and low temperature and precipitation by month are shown in Table 12-2.

Table 12-2. Average High and Low temperature and Precipitation by Month

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Average high in °F:	58	62	66	70	74	78	79	79	80	74	65	58
Average low in °F:	38	41	43	45	49	52	57	55	53	48	42	38
Av. precipitation in inch:	3.07	3.19	2.48	0.98	0.47	0.08	0.04	0.04	0.16	0.75	1.97	2.95

The record high temperature was 107 °F (42 °C) on June 15, 1961, and the record low temperature was 15 °F (−9 °C) on November 17, 2003. Temperatures reach 90 °F (32 °C) or higher on an average of 9.9 days. Temperatures drop to 32 °F (0 °C) or lower on an average of 16.1 days.

Due to the Santa Cruz Mountains to the west, there is a "rain shadow" in Palo Alto, resulting in an average annual rainfall of only 15.32 inches (389 mm). Measurable rainfall occurs on an average of 57 days annually. The wettest year on record was 1983 with 32.51 inches (826 mm) and the driest year was 1976 with 7.34 inches (186 mm). The most rainfall in one month was 12.43 inches (316 mm) in February 1998 and the most rainfall in one day was 3.75 inches (95 mm) on February 3, 1998. Measurable snowfall is very rare in Palo Alto, but 1.5 inches (38 mm) fell on January 21, 1962.

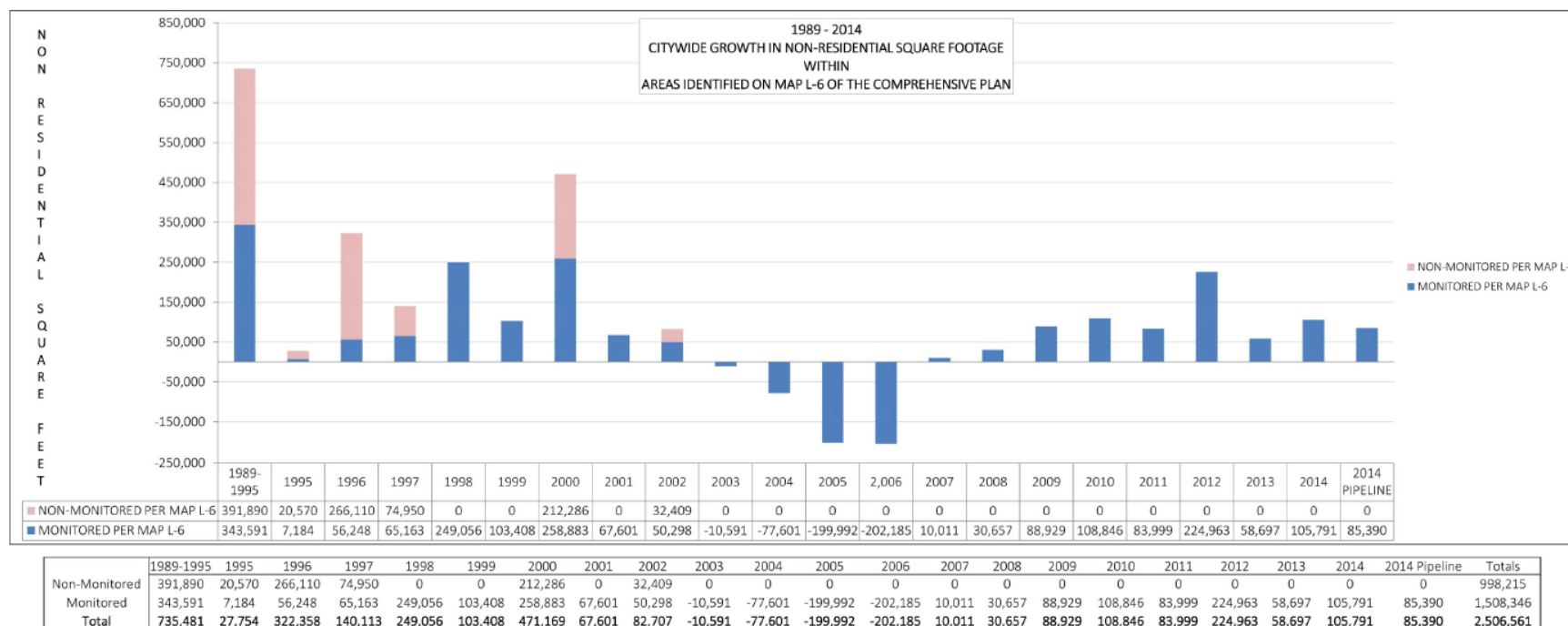
- **Governing Body Format**—Palo Alto is a Charter City and has a council-manager form of government in which the nine-member, popularly-elected City Council appoints the City Manager, who in turn oversees a dynamic Executive Leadership Team in the operation of thirteen departments employing 1,000 staff. This vibrant organization enjoys a strong, collaborative, and open environment. The Fiscal Year 2016 citywide expenditure budget amounts to \$563.6 million, with a General Fund budget of \$185.7 million, a Capital Budget of \$124.7 million, and Enterprise Funds of \$342.5 million. The City Council assumes responsibility for the adoption of this plan, the Office of Emergency Services, on behalf of the City Manager, will oversee its implementation.

12.3 DEVELOPMENT TRENDS

Palo Alto comprises 16,627 acres, or about 26 square miles. Approximately 40 percent of this area is in parks and preserves and another 15 percent consists of agriculture and other open space uses. The remaining area is nearly completely developed, with single family uses predominating. Less than one percent of the City's land area consists of vacant, developable land (City of Palo Alto, 2007). The City of Palo Alto Comprehensive Plan 2007, Land Use & Community Design Element and 2007 Zoning Regulations guide the development of public and private property of which local land use and growth management is a central topic. Figure 12-1 shows the annual net change in non-residential square footage, based on project applications processed by the Department of Planning and Community Environment. Net square footage numbers shown represent the total square footage added by all developments approved in the planning area for the given period, minus the total square footage demolished. Negative numbers in the table indicate that more non-residential square footage was demolished (or approved for demolition) than was approved or constructed. As shown, the period between 2010 and 2014 has seen by far the greatest net increase in non-residential square footage (City of Palo Alto, 2014). Table 12-3 summarizes development trends in the performance period since development of the previous hazard mitigation plan and expected future development trends.

Table 12-3. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan?	No					
• If yes, give the estimated area annexed and estimated number of parcels or structures.	N/A					
Is your jurisdiction expected to annex any areas during the performance period of this plan?	No					
• If yes, please describe land areas and dominant uses.	N/A					
• If yes, who currently has permitting authority over these areas?	N/A					
Are any areas targeted for development or major redevelopment in the next five years?	Yes					
• If yes, please briefly describe, including whether any of the areas are in known hazard risk areas	Commercial and some residential redevelopment occurs continually within Palo Alto through the normal course of property management. However, one project in the Fry's Building / California Avenue area may be redeveloped in the next five years in which the City will play a leading role. All of Palo Alto is in a seismic risk area, so any development will have seismic risks.					
How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?		2011	2012	2013	2014	2015
	Single Family	87	99	113	90	246
	Multi-Family	1	12	4	2	5
	Other (commercial, mixed use, etc.)	17	25	16	13	17
Please provide the number of permits for each hazard area or provide a qualitative description of where development has occurred.	<ul style="list-style-type: none"> • Special Flood Hazard Areas: 129 • Landslide: 2 • High Liquefaction Areas: 40 • Wildfire Risk Areas: 4 					
Please describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	Palo Alto is 99% built out.					

**Highlights:**

- Average Annual Growth (Monitored) 1989-2014 = 58,013 sq ft/yr
- Average Annual Growth (Monitored) 1989-2007 = 37,951 sq ft/yr
- Average Annual Growth (Monitored) 2008-2014 = 112,467 sq ft/yr
- Average Annual Growth = (Sum of Total gain / number of years)

Average Annual Growth (All) 1989-2014 = 96,406 sq ft/yr
 Average Annual Growth (All) 1989-2007 = 90,489 sq ft/yr
 Average Annual Growth (All) 2008-2014 = 112,467 sq ft/yr

Notes:

- 1989-1995 Data not available on Annual Basis
- Data excludes Mayfield Development Agreement Projects which demolishes approximately 323k of non-residential square feet and replaces 300k of the demolished square feet into Stanford Research Park
- Data excludes the Stanford Medical Center (SMC) expansion, although it has Planning Entitlements and Building Permits, total buildout and occupancy is expected in the year 2025

Figure 12-1. Citywide Growth in Non-Residential Square Footage 1989-2014

12.4 CAPABILITY ASSESSMENT

12.4.1 Resources for the 2017 Planning Initiative

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for inclusion into the 2017 Multi-Jurisdiction Hazard Mitigation Plan for both Volume 1 and Volume 2 (Palo Alto Annex). All of the below items were additionally reviewed as part of the full capability assessment for Palo Alto.

- **City of Palo Alto Comprehensive Plan**—The Comprehensive Plan was reviewed for information regarding goals and policies consistent with hazard mitigation for carry over as goals and objectives. Additionally, development trends from the Land Use section of the Comprehensive Plan informed the development section of this annex.
- **City of Palo Alto Municipal Code**—The Municipal Code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Flood Damage Prevention Ordinance**—The Flood Damage Prevention Ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Capital Improvements Plan**—The Capital Improvements Plan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.
- **State of California Local Hazards Mitigation Plan**—The state plan was helpful for reviewing goals and also in assessing hazards.
- **County of Santa Clara and City of Palo Alto Local Hazards Mitigation Plan (2012)**—The previous LHMP provided a baseline of information for the writing of this document.
- **Palo Alto Threats and Hazards Identification and Risk Assessment (THIRA)**—The THIRA helped to inform the hazard analysis portion of this plan, as well as a source for mitigation actions.
- **Palo Alto Energy Assurance Plan**—The Energy Assurance Plan provided information for the jurisdiction profile as well as a source for mitigation actions.
- **Sustainability / Climate Adaptation Plan**—This plan provided information for our hazards analysis as well as identification of mitigation actions.
- **Foothills Wildfire Management Plan / Santa Clara County Community Wildfire Prevention Plan**—These plans informed our hazards analysis as well as identifying wildfire mitigation actions.
- **Technical Reports and Information**—Outside resources and references used to complete the City of Palo Alto Annex are identified in Section 12.13 of this annex.

12.4.2 Full Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 12-4. An assessment of fiscal capabilities is presented in Table 12-5. An assessment of administrative and technical capabilities is presented in Table 12-6. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 12-7. An assessment of education and outreach capabilities is presented in Table 12-8. Classifications under various community mitigation programs are presented in Table 12-9. Development and permitting capabilities are presented in Table 12-10, and the community's adaptive capacity for the impacts of climate change is presented in Table 12-11.

Table 12-4. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code	Yes	Yes	Yes	No
<i>Comment:</i> Palo Alto has adopted the 2016 California Building Code				
Zoning Code	Yes	Yes	Yes	No
<i>Comment:</i> Municipal Code, Title 18, effective 13 June 2016				
Subdivisions	Yes	No	No	No
<i>Comment:</i> Municipal Code, Title 21, effective 13 June 2016				
Stormwater Management	No	No	No	No
<i>Comment:</i> None located.				
Post-Disaster Recovery	No	No	No	No
<i>Comment:</i> None located.				
Real Estate Disclosure	No	No	Yes	No
<i>Comment:</i> Cal. Civ. Code §1102 et seq.				
Growth Management	Yes	Yes	Yes	No
<i>Comment:</i> Growth management falls under Palo Alto's 2007 Zoning Regulations and is more discreetly addressed in the City's Comprehensive Plan; Cal. Gov. Code §65300 et seq.				
Site Plan Review	Yes	Yes	Yes	No
<i>Comment:</i> Site Plan review falls under Palo Alto's 2007 Zoning Regulations and is well practiced in the permitting process.				
Environmental Protection	Yes	Yes	Yes	No
<i>Comment:</i> Ordinance 5107, 13 December 2010, to provide green building standards and environmental protections; California Environmental Quality Act (Guideline: California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387)				
Flood Damage Prevention	Yes	Yes	No	No
<i>Comment:</i> Municipal Code, Chapter 16.52 effective 13 June 2016				
Emergency Management	Yes	Yes	Yes	No
<i>Comment:</i> Municipal Code, Chapter 2.12 effective 13 June 2016				
Climate Change	Yes	No	Yes	No
<i>Comment:</i> Ordinance No. 5345, 31 August 2015, to comply with California Energy Code 2013 edition; California SB-379: Land Use: General Plan: Safety Element				
Other: Seismic Hazards Identification Program	Yes	Yes	No	No
<i>Comment:</i> In 1986, the City Council adopted the Seismic Hazards and Identification Program codified at Section 16.42 of the Municipal Code. This ordinance established a mandatory evaluation and reporting program and created incentives for property owners to voluntarily upgrade their structurally deficient buildings.				
Planning Documents				
General Plan (As Comprehensive Plan)	Yes	No	Yes	No
Palo Alto is undergoing an update to the comprehensive plan, which will be completed in 2017. This updated plan will be compliant with Assembly Bill 2140.				
<i>Comment:</i> The 2007 City of Palo Alto Comprehensive Plan (Comp Plan) and 2007 Zoning Regulations guide land use and growth management decisions in the City. The Land Use & Design, Housing, and Natural Environment Elements contain goals, policies, and programs related to natural hazards; however, the City is in the process of updating the current Comprehensive Plan which will derive a new Safety Element from the Natural Environment Element.				
Capital Improvement Plan	Yes	Yes	Yes	Yes
<i>Comment:</i> The 2017-2021 Capital Improvement Program Plan for the City of Palo Alto guides the City in the planning and scheduling of infrastructure improvement projects over the five year period. Annually, the City publishes a Capital Improvement Program budget to guide annual funding of scheduled projects.				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Floodplain or Watershed Plan <i>Comment:</i> Santa Clara Valley Water District	No	Yes	No	Yes
Stormwater Plan <i>Comment:</i> The City has a Storm Drain Master Plan, see Other plans below.	Yes	No	No	No
Urban Water Management Plan <i>Comment:</i> . The 2010 Urban Water Management Plan (UWMP) outlines actions that the City could take to achieve varying degree of water use reduction. The UWMP will be updated by June 30, 2016. Urban Water Management Plans are designed to assess the reliability of the City's water sources, support to our long-term resource planning, and ensure adequate water supplies are available to meet existing and future water demands. Every five years, an Urban Water Management Plan (UWMP) is prepared and submitted as required to the California Department of Water Resources, per the Urban Water Management Planning Act.	Yes	No	Yes	No
Habitat Conservation Plan <i>Comment:</i> 2013 - Santa Clara Valley Habitat Plan	No	Yes	No	Yes
Economic Development Plan <i>Comment:</i> The primary considerations for this are included in the City's Comprehensive Plan.	No	No	No	No
Shoreline Management Plan <i>Comment:</i> Baylands Master Plan 2008. The 2008 plan is an information update with the goal of producing an up-to-date record of Council approved policies and actions in the Baylands. It includes the history, environmental setting and adopted planning goals and policies for the Baylands area.	Yes	No	No	No
Community Wildfire Protection Plan <i>Comment:</i> Palo Alto has integrated our local CWPP into the Santa Clara County CWPP.	Yes	Yes	No	Yes
Forest Management Plan <i>Comment:</i> 2013 - The purpose of the plan is to establish long-term management goals and strategies to foster a sustainable urban forest in Palo Alto. It was developed using an inter-departmental team of staff in conjunction with Canopy and community partners.	Yes	No	No	No
Climate Action Plan <i>Comment:</i> 2014 - The City of Palo Alto launched a new Sustainability and Climate Action Plan (S/CAP) initiative in August 2014 to chart a path to a more sustainable future, find ways to improve our quality of life, grow prosperity and create a thriving and resilient community—all while dramatically reducing our carbon footprint. Palo Alto is already a world leader in climate protection strategies. The S/CAP will build on that leadership — and our successes exceeding the goals of our 2007 climate plan — to create an ambitious plan that also considers broader issues of sustainability, such as land use and biological resources. Palo Alto staff is already integrating our efforts with other Bay Area communities and agencies involved in these efforts.	Yes	No	No	Yes
Emergency Operations Plan <i>Comment:</i> 2016 - The Palo Alto Emergency Operations Plan (EOP) identifies the City's emergency planning, organization, and response policies and procedures. The EOP also addresses the integration and coordination with other governmental levels and volunteer agencies when required. It is meant to be considered as a preparedness document, intended to be read and understood before an emergency occurs. The major purposes of the plan are to distinguish who is in charge, to ensure essential jobs are accomplished, to provide for the continuity of government, to help citizens and City staff understand the City's emergency organization, to provide guidance for disaster education and training, and to provide for the proper transfer of command during an emergency. Palo Alto integrated this effort with the other jurisdictions in the Northern geography of Santa Clara County including Los Altos, Mountain View, and Sunnyvale.	Yes	No	No	Yes
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment:</i> City of Palo Alto THIRA, 2014: To evaluate the City of Palo Alto's capabilities for addressing all hazard incidents, the City of Palo Alto Office of Emergency Services (OES) conducted a collaborative planning process in order to develop the City of Palo Alto 2014 Threat and Hazard Identification and Risk Assessment (THIRA). It is compliant with the U.S. Department of Homeland Security (DHS) Comprehensive Preparedness Guide (CPG) 201, Second Edition, released in August 2013, which outlines a process to help communities identify capability targets and resource requirements necessary to address anticipated and unanticipated risks. The result of the THIRA process is an organized evaluation of vulnerability and implementation measures based on the necessary capabilities to deal with the hazards/threats of most concern. This report should inform ongoing City and University planning efforts. Bay Area UASI, 2016: The Bay Area UASI is required to develop a THIRA as part of grant funding requirements.	Yes	Yes	No (Partial)	No

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Post-Disaster Recovery Plan	No	No	No	Yes
Comment: Palo Alto does not currently have a Post Disaster Recovery Plan				
Continuity of Operations Plan	Yes	No	No	No
Comment: In 2015-2016 Palo Alto initiated planning activities to develop a Continuity of Governance / Continuity of Operations Plan. We will complete this planning effort in 2017.				
Public Health Plan	No	Yes	Yes	No
Comment: The Santa Clara County Department of Public Health has responsibility for public health planning across the County.				
Other:	Yes	Yes	No	Yes
WUI/Foothills Fire Management Plan: This plan was recently updated in 2016. As part of the City's mitigation of wildland and urban fires, we have implemented the Palo Alto Foothills Fire Management Plan in cooperation with the Santa Clara County Midpeninsula Fire Safe Council. This plan pertains to the Palo Alto Foothills area west of the Foothills Expressway and Junipero Serra Boulevard, which represents a Wildland Urban Interface (WUI) area.				
Storm Drain Master Plan: To mitigate ongoing flood risks, in 1990, the City created an independent enterprise fund to fund needed improvements to the storm drain system with revenue generated through user fees and developed a Storm Drain Master Plan in 1993 to identify and prioritize a set of projects to increase system capacity and reduce the incidence of street flooding. Property owners approved a ballot measure in 2005 to increase the City's monthly storm drain fee and thereby provided funding to implement a set of seven high-priority capital improvement projects to upgrade the storm drain system.				

Table 12-5. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes

Table 12-6. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Planning & Community Environment/Planner Community Services Department/Open Space Ranger
Engineers or professionals trained in building or infrastructure construction practices	Yes	Public Works/Engineer Development Services/Building Inspector
Planners or engineers with an understanding of natural hazards	Yes	Public Works/Engineer Development Services/Building Inspector
Staff with training in benefit/cost analysis	Yes	Administrative Services/Program Manager Planning & Community Environment/Program Manager
Surveyors	Yes	Public Works/Surveyor
Personnel skilled or trained in GIS applications	Yes	Planning & Community Environment, Technical Analyst Police Department
Scientist familiar with natural hazards in local area	Yes	USGS, NWS
Emergency manager	Yes	Office of Emergency Services/Coordinator
Grant writers	No	

Table 12-7. National Flood Insurance Program Compliance

Criteria	Response
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	Public Works Engineer
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date of adoption of your flood damage prevention ordinance?	2004
Does your floodplain management program meet or exceed minimum requirements?	Meets
When was the most recent Community Assistance Visit or Community Assistance Contact?	2015
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If no, please state why.	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	Yes Additional staffing
Does your jurisdiction participate in the Community Rating System (CRS)? • If yes, is your jurisdiction interested in improving CRS Classification? • Is your jurisdiction interested in joining the CRS program?	Yes Yes (currently class 7)
How many flood insurance policies are in force in your jurisdiction? • What is the insurance in force? • What is the premium in force?	3,665 ^a \$957,293,500 ^a \$4,126,988 ^a
How many total loss claims have been filed in your jurisdiction? • How many claims were closed without payment/are still open? • What were the total payments for losses?	473 ^a 104 / 0 ^a \$ 8,984,657.71 ^a

a. According to FEMA statistics as of October 31, 2017

Table 12-8. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes. The City Communications Office, Public Safety public information officers, and Utilities Communication Manager provide public information officer functions.
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes. www.cityofpaloalto.org/lhmap & www.cityofpaloalto.org/thira Palo Alto maintains and follows an Open data initiative that makes large amounts of governmental information available to the public. We have a local hazards mitigation page on the city website.
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes We have implemented the use of social media using Nextdoor to communicate these types of information to the public at large.
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes - Citizen Corps is a best practice and model advocated by the federal government to integrate volunteers, non-government entities, the private sector, and other groups with local programs related to homeland security and emergency management (HS/EM). The City first formed a Citizen Corps Council (CCC) in 2004. The City later revised the structure of the in 2009.
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes The City of Palo Alto Website also provides several sources for hazard related information including a threats and hazards page, but also in our comprehensive plan. Our emergency services volunteer program also serves as a communications network in their outreach to neighborhood members as well as their participation in community events.
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes The City participates in the County of Santa Clara mass notification system, AlertSCC, to get emergency warnings sent directly to cell phone, mobile device, email, or landline.

Table 12-9. Community Classifications

	Participating?	Classification	Date Classified
Community Rating System	Yes	7	1990
Building Code Effectiveness Grading Schedule	Yes	1	2015
Public Protection (Palo Alto Fire Department)	Yes	2	2012
Storm Ready	Yes	N/A	2015
Firewise	No	N/A	N/A

Table 12-10. Development and Permit Capabilities

Criterion	Response
Does your jurisdiction issue development permits? • If no, who does? If yes, which department?	Yes Development Services Department
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory?	No

Table 12-11. Adaptive Capacity for Climate Change

Adaptive Capacity Assessment	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts	High
Comment: The City has a Sustainability Officer who manages a stakeholder team of both internal staff members and external agency representatives to understand the climate change issues in our area. The City's Sustainability and Climate Action Plan demonstrates our understanding of climate change impacts; Palo Alto is engaged in Bay Area conservation planning groups that are also involved in climate change impacts.	
Jurisdiction-level monitoring of climate change impacts	High
Comment:	
Technical resources to assess proposed strategies for feasibility and externalities	High
Comment: Staff members are assigned to assess and propose strategies for climate change impacts. These strategies are then included in our Comprehensive Plan, Hazard Mitigation Planning, and Sustainability and Climate Action Plan.	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	High
Comment: In 2009 Palo Alto published the City's Climate Protection Plan to reduce greenhouse gas emissions. The Climate Protection Plan provides a comprehensive inventory of emissions, reduction targets, and steps to reach those targets (http://www.cityofpaloalto.org/civicax/filebank/documents/9986). In 2014 the City updated this plan with new emissions data, goals, and actions. Additionally, the City has developed several programs to further reduce emissions including a long term road map coordinated through the Sustainability and Climate Action Plan as well as the City's carbon neutral electric plan. http://www.cityofpaloalto.org/gov/depts/utl/residents/resources/pcm/carbon_neutral_portfolio.asp	
Capital planning and land use decisions informed by potential climate impacts	High
Comment: As a result of the technical resources assigned to this planning element, Palo Alto incorporates decisions into Comprehensive Planning, Local Hazard Mitigation Planning, and Sustainability and Climate Action Planning.	
Participation in regional groups addressing climate risks	High
Comment: Palo Alto staff members are involved in Local, Regional, and National groups studying climate/change and adaption issues.	
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes	High
Comment: The Palo Alto City Council has established an aggressive GHG reduction goal and is in process of updating its Comprehensive Plan and adopting a Sustainability and Climate Action Plan that will mandate considering climate change impacts during public decision-making processes	
Identified strategies for greenhouse gas mitigation efforts	High
Comment: The City's Sustainability and Climate Action Plan (scheduled for approval 11/28) identifies strategies for reducing GHG emissions 80 percent by 2030 (against a 1990 baseline) and for adapting to expected climate change impacts. These include strong energy efficiency requirements in building codes; exploring electrification (switching customers from natural gas to carbon neutral electricity); embedding sustainability and climate considerations into the city's purchasing, operations and capital investment processes; encouraging shift of private and public vehicles to EVs, supported by expanded EV infrastructure; continued pursuit of the City's zero waste goals.	
Identified strategies for adaptation to impacts	High
Comment: Sustainability and Climate Action Plan	
Champions for climate action in local government departments	High
Comment: Chief Sustainability Officer sitting on City's Executive Leadership Team; multi-department Sustainability Board composed of department directors; 5 to 10 percent of City employees membership of voluntary "green team"	
Political support for implementing climate change adaptation strategies	High
Comment: Strong community and Council support	
Financial resources devoted to climate change adaptation	Low
Comment: Currently, the city provides funding for staff members to engage in change adaptation planning including a Chief Sustainability Officer, and additional departmental staff members on an ad hoc basis. The City has a Capital Improvement Plan (CIP) fund that will provide funding for designated projects. The City Council can allocate funding for change adaptation projects as well.	
Local authority over sectors likely to be negatively impacted	Low
Comment: The City has not studied intently the sectors likely to be negatively impacted by climate change.	

Adaptive Capacity Assessment		Jurisdiction Rating
Public Capacity		
Local residents knowledge of and understanding of climate risk		High
<i>Comment: Palo Alto includes a highly educated community, many of whom we believe understand climate risks. Palo Alto OES hosted a keynote speaker at a 2016 community town-hall event who spoke on the theory of sea level rise and the worldwide and local impacts of this threat.</i>		
Local residents support of adaptation efforts		High
<i>Comment: There is strong local support from what we can tell now for adaptation efforts. The City sponsored a public facing sustainability workshop in 2016 with the participation of hundreds of community members; many community members are speaking up about their concerns of climate change, and several organizations have organized action groups (i.e. Palo Alto Green, Save Palo Alto Groundwater)</i>		
Local residents' capacity to adapt to climate impacts		Medium
<i>Comment: TBD. Overall, Palo Alto is one of the national jurisdictions leading the country in consciousness and thought; but the Palo Alto environment may challenge residential adaptation given our moderate climate (so temperature impacts will probably not be severe except for our elderly population), and the lifestyle of many high income residents. However, Palo Alto has launched an active "cool block" pilot program engaging neighbors in joint mitigation/adaptation efforts.</i>		
Local economy current capacity to adapt to climate impacts		Medium
<i>Comment: Generally strong economy; very energy efficient compared to US; substantial local food production capacity; but generally unrecognized risk to long term water supplies (impacting potable water, hydropower and agriculture).</i>		
Local ecosystems capacity to adapt to climate impacts		Medium
<i>Comment: Depends on the extent of the impacts. We can expect successional pressure on ecosystems from temperature and precipitation changes, other impacts from wildfires and flooding.</i>		

12.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the hazard mitigation plan into local planning.

12.5.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan:

- **Comprehensive Plan**—The Local Hazard Mitigation Plan is nested within the City's Comprehensive Plan, and many of the policies and programs in the Comprehensive Plan now have mitigation linkages for the hazards addressed in this plan.
- **Municipal Code**—The City of Palo Alto Municipal Code establishes risk mitigation standards for building codes that impact our seismic and flood risks.
- **Sustainability / Climate Action Plan**—The City's Sustainability and Climate Action Plan will be the primary document that addresses our programs and mitigation actions for climate adaptation.
- **Seismic Hazards Identification Program**—This program will evolve in the near future to provide additional policies to reduce risks to seismic prone buildings.
- **Community Rating System**—Palo Alto will continue efforts to reduce our CRS rating to reduce flood risks to those property owners in FEMA designated flood zones.
- **Energy Assurance Plan**—Palo Alto will continue to develop programs and actions that improves our energy assurance for certain critical infrastructure.
- **Foothills Fire Management Plan**—This plan addresses a broad range of integrated activities and planning documents to identify and mitigate the impacts of fire hazards in the Palo Alto Foothills Area. Fire mitigation project areas include the boundaries of Foothills Park and Pearson-Arastradero Preserve and each year the City allocates resources to treat segments of the project area and to provide public education and awareness.

- **Water Conservation Best Management Practices (BMP)**—Since 2002, the City has partnered with the Santa Clara Valley Water District (SCVWD) to promote and cost-share water efficiency programs for Palo Alto customers. Through this cost-sharing agreement, the City pays roughly half of the cost of the programs, with SCVWD administering many of these programs including onsite water audits, and rebates for landscape conversion as well as water efficient fixtures and appliances. The City also administers other water conservation programs in-house or through separate contracts with outside vendors, such as the Home Water Report program. The City continues to evaluate opportunities for program partnership opportunities with the Bay Area Water Supply and Conservation Agency and other regional alliances.

12.5.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration. They will be reviewed, developed and updated to include information on hazard risk reduction as feasible and appropriate.

- **Capital Improvement Program (CIP)**—Many of the CIP projects being implemented have a direct or indirect application to local hazards. Specific projects will become part of our mitigation action plan.
- **Foothills Fire Management Plan /Community Wildfire Prevention Plan**—These action plans will have a direct correlation to the mitigation action plan in the reduction of fire hazards to our wildland urban interface area.
- **Post Disaster Recovery Plan**—The City does not have a Post-Disaster Recovery Plan and intends to develop one as a mitigation planning action during the next five years.
- **Sustainability/Climate Action Plan**—The plan will provide strategies for dealing with anticipated impacts of climate change in our community. Some of these strategies will manifest mitigation actions that may be incorporated into future local hazard mitigation planning.
- **Floodplain Management Plan**—The City intends to develop a Floodplain Management Plan.
- **Firewise**—The City intends to meet the Firewise requirements as a public education mitigation action during the next five years.
- **Comprehensive Conservation Plan**—The City will develop two habitat related plans during the next five years. The Baylands Comprehensive Conservation Plan will be completed in FY 2017 to address our shoreline/baylands region; and in FY 2019 we will develop the Foothills, Arastradero, and Esther Clarke Comprehensive Conservation Plan to cover our additional highlands open spaces.

12.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 12-12 lists all past occurrences of natural hazards within the jurisdiction.

Table 12-12. Natural Hazard Events

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment ^a
Flood	DR-1203	1998	\$23 million ^a
Earthquake	DR-845	1989	Unknown ^a
Flood	None	1982	Unknown ^a
Flood	None	1967	Unknown ^a
Flood	None	1958	Unknown ^a
Flood	None	1955	Unknown ^a
Flood	None	1911	Unknown ^a
Flood	None	1862	Unknown

a. Damage assessment information from San Francisquito Creek Joint Powers Authority (2006), except 1862 flood information from PaloAltoHistory.org (2017).

12.7 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 1
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include:

- Preponderance of city staff employees reside outside of Palo Alto
- Seismically at risk essential services and public facilities
- High density of seismically at risk soft story, concrete tilt up, concrete shear wall buildings
- Roughly 20 percent of Palo Alto is exposed to special flood hazard areas
- Single grid tied high voltage transmission connection to PG&E
- Palo Alto Critical Infrastructure is at risk to the natural hazards identified in this report; the City's Threat and Hazards Identification and Risk Analysis provides impacts to Critical Infrastructure.

12.8 HAZARD RISK RANKING

Table 12-13 presents the ranking of the hazards of concern.

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	48	High
2	Flood	42	High
3	Severe Weather	33	Medium
4	Wildfire	15 ^a	Medium
4	Dam and Levee Failure	15 ^a	Medium
5	Drought	9	Low
6	Landslide	0	None

a. Results were modified based on institutional knowledge not fully captured in the quantitative risk assessment.

12.9 STATUS OF PREVIOUS PLAN ACTIONS

The status of previous actions from the 2011 ABAG LHMP for Santa Clara County can be found in Appendix D of this volume.

12.10 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 12-14 lists the actions that make up the City of Palo Alto hazard mitigation action plan. Table 12-15 identifies the priority for each action. Table 12-16 summarizes the mitigation actions by hazard of concern and the six mitigation types.

Table 12-14. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
PA-1—San Francisquito Creek Lower Reach Flood Reduction and Ecosystem Restoration Project						
New	Flood / Severe Weather	5, 6, 8	San Francisquito Creek Joint Powers Authority	\$34 million: Low	General Fund; HMGP; FMA	0-1 Years (Short-term)
PA-2—San Francisquito Creek Upper Reach Flood Reduction and Ecosystem Restoration Project						
New	Severe Storm / Flood	2, 5, 6, 8	San Francisquito Creek Joint Powers Authority	Medium	General Fund; HMGP; FMA	1-2 Years (Short-term)
PA-3—Newell Creek Bridge replacement project to accommodate a 100 year flood event						
New	Flood / Severe Weather	2, 5, 6, 8	Palo Alto Public Works	Low	CALTRANS / SCVWD	2-5 Years (Short-term)
PA-4—Pope Chaucer Street Bridge replacement project to address 100 year flood event						
Existing	Flood / Severe Weather	2, 5, 6, 8	Santa Clara Valley Water District	Low	SCVWD	2-5 Years (Short-term)
PA-5—Matadero Creek Storm Water Pump Station Improvements						
New	Flood / Severe Weather	6, 8	Palo Alto Public Works	\$6 million: Low	CIP: SD-13003	0-1 Years (Short-term)
PA-6—Storm Drain System Replacement and Rehabilitation						
Existing	Flood / Severe Weather	6, 8	Palo Alto PW	\$ 1.5 million: Low	CIP: SD-06101	Annually (Ongoing)
PA-7—Recycled Water Pipeline Expansion Project to expand the recycled water purple pipeline within South Palo Alto towards Stanford Research Park						
Existing	Drought	5, 6	Palo Alto Public Works	\$30 million: Low	CIP: WS-07001	1-3 Years (Short-term)
PA-8—Continue to maintain good standing and compliance in the NFIP and improve Community Rating System Class to provide higher CRS premium discounts						
Existing	Flood / Severe Weather	1, 2, 3, 4	Palo Alto Public Works	Low	General Fund	2-3 Years (Short-term)
PA-9—Execute the SAFER Bay Project to protect critical infrastructure and property and restore historic marshlands						
New	Severe Storm / Flood / Sea Level Rise	2, 5, 6, 8	San Francisquito Creek Joint Powers Authority	High	Combination CIP: OS-09002	Unknown (Long-term)
PA-10—Construct new Public Safety Building to mitigate current risks to public safety essential services						
New	Earthquake	6, 9	Palo Alto Public Works	\$57 million: Medium	CIP: PE-15001	5 -7 Years (Long-term)
PA-11—Rebuild Fire Stations 3 and 4 to mitigate current risks to essential services						
New	Earthquake / Flood / Sea Level Rise	6, 8	Palo Alto Public Works	\$15 million: Low	CIP: PE-15003	2-4 Years (Short-term)
PA-12—Continue 7 year cycle for high priority of tree trimming						
Existing	Earthquake/ Flood / Severe Weather	6,8	Palo Alto Public Works	Low	General Fund	Annually (Ongoing)
PA-13—Replace the Baylands Tide Gate						
Existing	Flood / Severe Weather	6, 8	Santa Clara Valley Water District	Medium	SCVWD	Unknown (Long-term)
PA-14—Consider the use of alternative energy sources for critical infrastructure (essential facilities, key resources)						
Existing	Earthquake / Severe Weather	3, 5	Palo Alto Office of Sustainability	High	Staff Time; General Fund	Unknown (Long-term)

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
PA-15—Implement Wastewater Long-Range Facilities Plan						
Existing	Flood / Severe Weather / Earthquake / Sea Level Rise	6, 8	Palo Alto Public Works	\$3-20 million: Low	CIP: WQ-10001	Annually (Ongoing)
PA-16—Conduct a feasibility analysis concerning the continued use of water reservoirs in the Foothills region						
Existing	Earthquake / Wildfire / Drought	5, 6	Palo Alto Utilities	Medium	General Fund	3-5 Years (Short-term)
PA-17—Consider construction of a new water reservoir in the low lying areas of Palo Alto						
New	Earthquake / Drought	5, 6	Palo Alto Utilities	Medium	General Fund; Possibly HMGP	3-5 Years (Short-term)
PA-18—Rebuild and Reconfigure Electric System in Stanford Hospital/Mall Area to increase reliability during emergencies						
Existing	Earthquake / Severe Weather	5, 8	Palo Alto Utilities	Low	CIP: EL-17004	3-5 Years (Short-term)
PA-19—Install Fiber Optic Service to Black Mountain Radio Repeater Site to improve public safety communications along Skyline Drive						
New	Earthquake / Severe Weather / Wildfire	9	Palo Alto Utilities	Medium	CIP: TBD	2-3 Years (Short-term)
PA-20—Convert overhead utility lines to underground transmission. Installation of new underground electric, communication, and cable television systems in Electric Underground Districts 46 and 47						
Existing	Earthquake / Severe Weather	6, 8	Palo Alto Utilities	\$2.0 million: Low	CIP: EL-12001 / EL-11010	1-4 Years (Short-term)
PA-21—Construct a second electrical transmission interconnection to PG&E using a new corridor						
New	Earthquake / Severe Weather	1, 5	Palo Alto Utilities	High	CIP; Possible HMGP, PDM	Unknown (Long-term)
PA-22—Construct a second water interconnection from Palo Alto Utilities to Stanford Hospital						
New	Earthquake / Severe Weather	2, 6	Palo Alto Utilities	High	CIP; Possible HMGP, PDM	3-5 Years (Short-term)
PA-23—Connect Palo Alto to adjacent Public Safety agencies' Public Safety Answering Points by Fiber						
Existing	Earthquake / Severe Weather	9	Palo Alto Police Department	High	CIP; Possible HMGP, PDM	Unknown (Long-term)
PA-24—Implement a Public Safety Wireless Data Network						
New	Earthquake / Severe Weather /	9	Palo Alto Police Department	High	CIP; Possible EMPG	Unknown (Long-term)
PA-25—Conduct a Hydrology Study on Buck-Eye Creek for flood protection and erosion control at Foothills Park						
Existing	Flood / Severe Weather	6, 8	Palo Alto Community Services Department	\$105 K: Low	CIP: PG-15000	2-4 Years (Short-term)
PA-26—Develop a Baylands Comprehensive Conservation Plan						
Existing	Flood / Severe Weather / Sea Level Rise	1, 3	Palo Alto Community Services Department	\$330 K: Low	CIP: PG-17000	1-2 Years (Short-term)
PA-27—Address hazardous fuels and reduce structural ignitability in the Foothills region in accordance with the Community Wildfire Protection Plan and Foothills Fire Management Plan						
Existing	Wildfire	2, 3, 6, 8	Palo Alto Fire Department	\$150 K: Low	General Funds	Annually (Ongoing)
PA-28—Encourage creation by Foothills Residents of a Firewise Ready Community						
Existing	Wildfire	2, 3, 4, 8	Palo Alto OES	Low	Staff Time; General Funds	1-2 Years (Short-term)

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
PA-29 —Consider a policy for Seismic Retrofitting of earthquake prone structures						
Existing	Earthquake	2, 3, 5, 8	Palo Alto Development Services	Low	Staff Time; General Funds	1-2 Years (Short-term)
PA-30 —Develop a Policy for Sea-Level Rise considerations (what actions should the City take)						
Existing	Sea Level Rise	2, 3, 5, 8	Sustainability	Low	Staff Time; General Funds	1-2 Years (Short-term)
PA-31 —Develop a post-disaster Community Long-term Recovery Plan						
New	All Hazards	1, 2, 4	Palo Alto OES	Medium	Staff Time; General Funds	3-5 Years (Short-term)
PA-32 —Conduct public education that raises awareness of Palo Alto threats and hazards and improves community resilience						
Existing	All Hazards	1, 2, 4	Palo Alto OES	Low	Staff Time; General Funds	Annually (Ongoing)
PA-33 —Maintain Storm Ready Community designation						
Existing	Severe Storm	2, 4, 9	Palo Alto OES	Low	Staff Time; General Funds	Annually (Ongoing)
PA-34 —Improve Palo Alto Fire Department ISO rating						
Existing	All Hazards	1, 2, 3, 4,	Palo Alto Fire Department	Low	Staff Time; General Funds	1-2 Years (Short-term)
PA-35 —Maintain Building Effectiveness Grading Schedule classification of 1						
Existing	All Hazards	3, 8	Palo Alto Development Services	Low	Staff Time; General Funds	Annually (Ongoing)
PA-36 —Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses						
Existing	All Hazards	4, 5, 6, 7, 8	Palo Alto Development Services	High	HMGP, PDM, FMA	Short-term
PA-37 —Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community						
New and Existing	All Hazards	2, 4,	Development Services Department	Low	Staff Time, General Funds	Ongoing
PA-38 —Actively participate in the plan maintenance protocols outlined in Volume 1 of the hazard mitigation plan.						
New and Existing	All Hazards	1, 5	Palo Alto OES	Low	Staff Time; General Funds	Short-term

Table 12-15. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
PA-1	3	High	Low	Yes	Yes	Yes	High	High
PA-2	4	High	Medium	Yes	Yes	Yes	High	High
PA-3	4	High	Low	Yes	Yes	Yes	High	High
PA-4	4	High	Low	Yes	Yes	Yes	High	High
PA-5	2	Medium	Low	Yes	Yes	Yes	High	High
PA-6	2	Medium	Low	Yes	Yes	Yes	High	High
PA-7	2	Low	Low	Yes	No	Yes	High	Low
PA-8	4	Medium	Low	Yes	No	Yes	High	Low
PA-9	4	Medium	High	No	Yes	No	Low	Low
PA-10	2	High	Medium	Yes	No	Yes	High	Low
PA-11	2	High	Low	Yes	No	Yes	High	Low
PA-12	2	High	Low	Yes	No	Yes	High	Low
PA-13	2	Medium	Medium	Yes	No	Yes	Medium	Low
PA-14	2	Low	High	No	Yes	No	Low	Low
PA-15	2	Medium	Low	Yes	No	Yes	High	Low
PA-16	2	Medium	Medium	Yes	No	No	Medium	Low
PA-17	2	Medium	Medium	Yes	Yes	No	Medium	Medium
PA-18	2	High	Low	Yes	No	Yes	High	Low
PA-19	1	Medium	Medium	Yes	No	No	Low	Low
PA-20	2	High	Low	Yes	No	Yes	High	Low
PA-21	2	Medium	High	No	No	No	Medium	Low
PA-22	2	Medium	High	No	No	No	Medium	Low
PA-23	1	Medium	High	No	Yes	No	Low	Low
PA-24	1	Medium	High	No	No	No	Medium	Low
PA-25	2	Low	Low	Yes	No	Yes	High	Low
PA-26	2	Medium	Low	Yes	No	Yes	High	Low
PA-27	4	High	Low	Yes	Yes	Yes	High	High
PA-28	4	High	Low	Yes	No	Yes	High	Low
PA-29	4	Medium	Low	Yes	Yes	Yes	High	High
PA-30	4	Medium	Low	Yes	Yes	Yes	High	High
PA-31	3	Medium	Medium	Yes	Yes	Yes	High	Medium
PA-32	3	High	Low	Yes	No	Yes	High	Low
PA-33	3	High	Low	Yes	No	Yes	High	Low
PA-34	4	High	Low	Yes	No	Yes	High	Low
PA-35	2	High	Low	Yes	No	Yes	High	Low
PA-36	5	High	High	Yes	Yes	No	Medium	High
PA-37	2	Medium	Low	Yes	No	Yes	High	Low
PA-38	2	Low	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

Table 12-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a						
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects	7. Climate Resilient
Earthquake	PA-14, PA-15, PA-35, PA-37, PA-38	PA-16, PA-29, PA-36	PA-31, PA-32		PA-14, PA-18, PA-19, PA-22, PA-23, PA-24, PA-34, PA-35	PA-10, PA-11, PA-17, PA-20, PA-21	
Flood	PA-1, PA-2, PA-3, PA-4, PA-5, PA-6, PA-9, PA-13, PA-15, PA-25, PA-26, PA-30, PA-35, PA-37, PA-38	PA-1, PA-2, PA-3, PA-4, PA-5, PA-6, PA-9, PA-13, PA-30, PA-36	PA-8, PA-31, PA-32	PA-9, PA-25, PA-26	PA-8, PA-34, PA-35	PA-11, PA-17, PA-21	PA-1, PA-2, PA-9
Severe Weather	PA-1, PA-2, PA-3, PA-4, PA-5, PA-6, PA-9, PA-15, PA-26, PA-35, PA-37, PA-38	PA-1, PA-2, PA-3, PA-4, PA-5, PA-6, PA-9, PA-36	PA-8, PA-31, PA-32, PA-33	PA-26	PA-8, PA-18, PA-19, PA-22, PA-23, PA-24, PA-33, PA-34, PA-35	PA-20, PA-21	
Wildfire	PA-27, PA-35, PA-37, PA-38	PA-16, PA-27, PA-28, PA-36	PA-28, PA-31, PA-32	PA-27	PA-27, PA-34, PA-35		
Dam and Levee Failure	PA-37, PA-38	PA-36	PA-31, PA-32		PA-34	PA-9	
Drought	PA-37, PA-38	PA-16, PA-36	PA-31, PA-32	PA-7			PA-17

a. See the introduction to this volume for explanation of mitigation types.

12.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

The City of Palo Alto has identified that more information is needed to understand the potential for impacts from the Searsville Dam. Palo Alto's susceptibility to risks associated with inundation caused by the failure of local Dams is a function of how much water is actually stored in the three dams within the watersheds that flow through Palo Alto. The City of Palo Alto Comprehensive Plan Environmental Impact Report provides an analysis of the risks provided by Felt Lake Dam, Lagunitas Reservoir Dam, and Searsville Dam (City of Palo Alto, 2016). We have strong evidence that Felt Lake and Lagunitas Reservoir Dams have negligible impact due to the low volumes of water they store. Searsville Dam is now heavily silted and stores only approximately 30 percent of its total capability. We will work with Stanford University to develop a better understanding of risks and impacts from this Dam.

12.12 PALO ALTO PLANNING PROCESS

The City of Palo Alto began our LHMP planning process in 2015 by participating in the Association of Bay Area Governments (ABAG) mitigation planning workshops. We followed up this preparation in January 2016 with the development of a project management plan that described how we would implement the local mitigation planning process. This effort was started in advance of the Santa Clara County effort to receive Mitigation Planning Grant funding. Palo Alto created two planning structures as recommended by ABAG and included an inter-departmental city staff planning team as well as an external stakeholder group comprised of various local organizations representative of our 'whole community.' Over the year, the planning process followed the recommended steps in the FEMA Process Map and joined the Santa Clara County planning process in August 2016.

Palo Alto also created an online website (cityofpaloalto.org/lhmap) in February 2016 that described our planning process and served as a data repository for our project teams and for the general public. In May 2016 we highlighted this process on the City's Homepage.

Meeting documentation including internal planning team minutes, stakeholder team minutes and community engagement summaries can be found online at: www.cityofpaloalto.org/lhmap

Hazard Mitigation & Climate Adaptation Planning: Meeting Roadmap

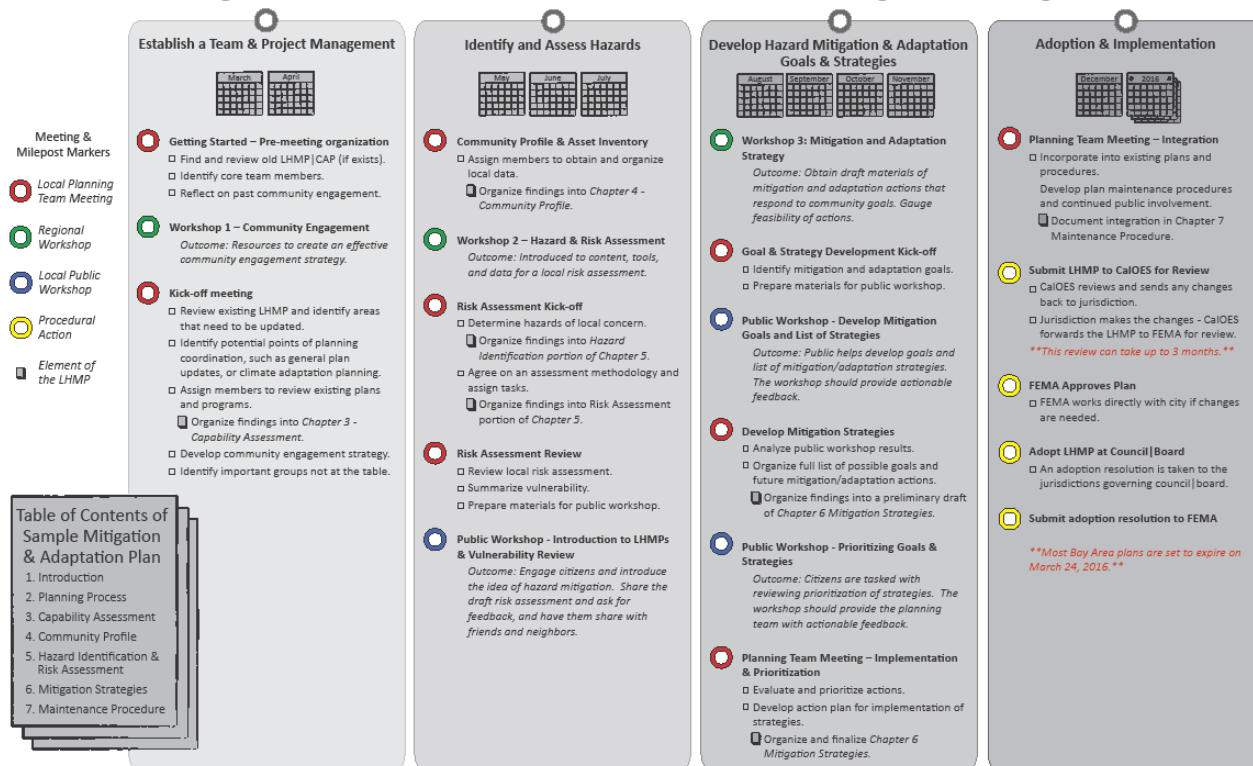


Figure 12-2. Meeting Roadmap for ABAG Planning Process



Figure 12-3. City of Palo Alto Homepage with Information on Local Hazard Mitigation Plan

12.13 ADDITIONAL RESOURCES

The following sources were used for information throughout this annex:

City of Palo Alto. 2007. City of Palo Alto Comprehensive Plan 2007, p. L-4. Accessed online at <http://www.cityofpaloalto.org/civicax/filebank/documents/8170>

City of Palo Alto. 2014. Comprehensive Plan Update: Land Use; Draft Existing Conditions Report – City of Palo Alto, August 29, 2014, p. 8-31. http://www.paloaltocompplan.org/wp-content/uploads/2014/09/8_LandUse.pdf

City of Palo Alto. 2016. City of Palo Alto Comprehensive Plan Environmental Impact Report, 2016. Hydrology and Water Quality, p. 4.8-38 & 39. Accessed online at http://www.paloaltocompplan.org/wp-content/uploads/2016/02/4-8_HydrologyWaterQuality.pdf

PaloAltoHistory.org. 2017. The Christmas Flood: “All Through the House... was Mud”. Web page accessed online at <http://www.paloaltohistory.org/the-christmas-flood.php>.

San Francisquito Creek Joint Powers Authority Proposition 1E Grant Proposal. http://www.water.ca.gov/irwm/grants/docs/Archives/Prop1E/Submitted_Applications/PIE_Round1_SWFM/San%20Francisquito%20Creek%20Joint%20Powers%20Authority/Att7_SWF_DReduc_1of3.pdf.

San Francisquito Creek Joint Powers Authority. 2006. San Francisquito Creek Flood Damage Reduction and Ecosystem Restoration Project Report. Accessed online at <http://www.cityofpaloalto.org/cityagenda/publish/jpa-meetings/63.pdf>.

USClimateData.Com. 2017. Palo Alto Climate Data web page. Accessed online at <http://www.usclimatedata.com/climate/palo-alto/california/united-states/usca0830>

13. CITY OF SAN JOSÉ

13.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

Cay Denise MacKenzie, CEM
Senior Emergency Services Planner
Office of Emergency Services
855 N. San Pedro St., Room 404
San José, CA 95110
Telephone: 408-794-7055
e-mail Address: cay.mackenzie@sanjoseca.gov

Alternate Point of Contact

Jared Hart, AICP, CPSWQ
Supervising Planner
Planning, Building and Code Enforcement
200 E. Santa Clara Street, 3rd Fl.
San José, CA 95113
Telephone: 408-535-7896
e-mail Address: jared.hart@sanjoseca.gov

13.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—The City of San José was officially incorporated on March 27, 1850, 73 years after its founding as Pueblo de San José, California’s first civilian settlement, on November 29, 1777.
- **Current Population**—As of January 1, 2016, the City of San José population was 1,042,094.
- **Population Growth**—The overall population has increased 9.2 percent between January 1, 2010 (945,942) and January 1, 2016 (1,042,094). San José is projected to have a population of approximately 1,379,000 residents in 2040.
- **Location and Description**—The City of San José is an urban area of 180.2 square miles nestled in a valley at the foot of the Santa Cruz and Diablo Mountain Ranges. San José is bordered by the San Francisco Bay and the City of Milpitas to the north, the cities of Santa Clara, Cupertino, Saratoga, Los Gatos, and Campbell to the west, and unincorporated lands to the south and east. Its lowest point is in Alviso, located at the southern end of the San Francisco Bay at sea level while the highest point in San José is Copernicus Peak, near Lick Observatory on Mt. Hamilton, which rises to 4,372 feet above sea level. San José is the 10th largest city in the United States, and the third largest city in California. It is the Capital of Silicon Valley and, as such, boasts the highest number of Fortune 500 companies headquartered in San José. Additionally, the City has the highest median income of a large U.S. city, and over 40 percent of the City’s adult residents hold a post-secondary educational degree. Forty percent of the city’s population was born outside the U.S. San José has the largest populations of Chinese, Vietnamese, and Indian residents within the San Francisco Bay area.
- **Brief History**—In November 1777, El Pueblo San José de Guadalupe became the first civil settlement in California. The settlement was mostly occupied by the Ohlone Indians along the Guadalupe River and Spanish settlers. At that time, San José was a farming community cultivating a number of different crops, which served the military communities in San Francisco and Monterey. In 1850, San José became the first capital of California, but this honor remained for only two years due to flooding in downtown and the lack of hotel capacity. Furthering San José’s difficulties, the city was plagued with floods, earthquakes,

and fires in the early 1900s. However, over the next century, San José experienced one of the most significant economic changes in California history, transforming from an agricultural community to what is known today as the “Capital of Silicon Valley.”

- **Climate**—The City of San José is located inland from the Pacific Coast in northern California. The climate in San José is a typical Mediterranean type modified by marine breezes from the Pacific Ocean. The principal characteristics of the local climate are warm and very dry summers with cool and relatively rainy winters. The average annual temperature is 60°F and the annual average rainfall is 14.42 inches.
- **Governing Body Format**—The municipal government established by the City of San José’s Charter is known as the “Council-Manager” form of government. All powers of the City and the determination of all matters of policy are vested in the Council, subject to the provisions of the Charter and Constitution of the State of California. As regards the San José Annex to the County of Santa Clara’s Local Hazard Mitigation Plan dated 2017, City Council assumes responsibility for adoption of the Plan, and the City Manager will oversee its implementation.

13.3 DEVELOPMENT TRENDS

Development in San José has increased significantly since the end of the Great Recession in mid-2009 and adoption of *Envision San José 2040* General Plan (November 2011). Between November 2011 and the end of Fiscal Year 15-16, San José issued building permits for new construction of approximately 15,500 housing units, 6.9 million square feet of commercial development, and 5.4 million square feet of industrial development. The City’s current General Plan, *Envision San José 2040*, embodies twelve Major Strategies, which collectively inform the Land Use/Transportation Diagram and the Goals, Policies and Implementation Actions formulated to guide the physical development of San José and the evolving delivery of City services over the life of the General Plan. Table 13-1 summarizes development trends in the performance period since development of the previous hazard mitigation plan and expected future development trends.

Table 13-1. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan? <ul style="list-style-type: none">If yes, give the estimated area annexed and estimated number of parcels or structures.	Yes 0.89 square miles, approximately 32 parcels					
Is your jurisdiction expected to annex any areas during the performance period of this plan? <ul style="list-style-type: none">If yes, please describe land areas and dominant uses.If yes, who currently has permitting authority over these areas?	Yes The City of San José is likely to annex properties in unincorporated areas adjacent the City, which apply for development permits over the timeframe of this plan. The number of properties and land area is expected to be minimal, consistent with annexations over the timeframe of the previous hazard mitigation plan. County of Santa Clara					
Are any areas targeted for development or major redevelopment in the next five years? <ul style="list-style-type: none">If yes, please briefly describe, including whether any of the areas are in known hazard risk areas	Yes The Envision San José 2040 General Plan directs and promotes growth within identified Growth Areas, particularly areas proximate to Downtown and with access to existing and planned transit facilities. Various General Plan identified Growth Areas have Flood Zones within their boundaries.					
How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?		2011	2012	2013	2014	2015
	Single Family	89	214	280	399	170
	Multi-Family	20	87	110	118	106
	Other (commercial, mixed use, etc.)	115	110	114	148	119
Please provide the number of permits for each hazard area or provide a qualitative description of where development has occurred.	Development has occurred throughout the city during the performance period for this plan. For hazards with a clearly defined extent and location, the City cannot estimate specific development impacts. For hazards with impacts city-wide, it is safe to assume that this new development could be subject to impacts from those hazards. However, it is important to note that all new development was consistent with General Plan policies and municipal code standards and as a result most development has occurred outside of identified hazard zones.					
Please describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	Periodically, the City completes a Vacant Land Inventory that documents its remaining vacant land according to land use designation. As of July 2015, total vacant land within San José's Urban Service Area/Urban Growth Boundary was approximately 4,700 acres. It is estimated that approximately 200 to 500 acres of vacant land may be developed over the next five years.					

13.4 CAPABILITY ASSESSMENT

13.4.1 Resources for the 2017 Planning Initiative

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for inclusion into the 2017 Multi-Jurisdiction Hazard Mitigation Plan for both Volume 1 and Volume 2 (City of San José Annex). All of the below items were additionally reviewed as part of the full capability assessment for the City of San José.

- Envision San José 2040 General Plan**—The General Plan, including the Land Use and Safety Elements, were reviewed for information regarding goals and policies consistent with hazard mitigation for carry over as goals and objectives. The General Plan establishes goals and policies to incorporate safety

considerations into the City’s planning and decision-making processes to reduce risks of hazards. Since it is not possible to eliminate all such risks, the City and its residents must decide, based on personal, social, and economic costs and benefits, the degree of risk that is acceptable for various hazards. High risks in existing structures may be lowered to an acceptable level by physical alteration, relocation, demolition or changes in use. For new development, the emphasis of the *Envision General Plan* policies is to regulate construction so as to minimize identifiable risks.

The Natural Hazards policies in the Plan are based on substantial background data and analysis about existing conditions in the City of San José and in the Santa Clara Valley. In the event of a fire, geologic, or other hazardous occurrence, the City of San José’s Emergency Plan provides comprehensive, detailed instructions and procedures regarding the responsibilities of City personnel and coordination with other agencies to ensure the safety of San José’s citizens. The Emergency Plan includes evacuation procedures but does not delineate evacuation routes. Instead, procedures are outlined for different types of emergencies occurring in different locations of San José.

- **City of San José Municipal Code**—The Municipal Code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Flood Damage Prevention Ordinance**—The Flood Damage Prevention Ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Capital Improvements Plan**—The Capital Improvements Plan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.
- **The Plant Master Plan**—The Plant Master Plan was reviewed to identify strategies for preparing for sea-level rise as it relates to protecting regional critical infrastructure.
- **Technical Reports and Information**—Outside resources and references used to complete the City of San José Annex are identified in Section 13.10 of this Annex.

13.4.2 Full Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 13-2. An assessment of fiscal capabilities is presented in Table 13-3. An assessment of administrative and technical capabilities is presented in Table 13-4. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 13-5. An assessment of education and outreach capabilities is presented in Table 13-6. Classifications under various community mitigation programs are presented in Table 13-7. Development and permitting capabilities are presented in Table 13-8, and the community’s adaptive capacity for the impacts of climate change is presented in Table 13-9.

Table 13-2. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code	Yes	No	Yes	No
<i>Comment: 2016 California State building code (CCR, Title 24): Building, Residential, Electrical, Mechanical, Plumbing, Building Energy Efficiency Standards, Historical Building, Existing Building, Green Building Standards; and 2015 International Existing Building Code. Municipal Code, Title 24, Technical Codes, October 2016</i>				
Zoning Code	Yes	No	Yes	No
<i>Comment: Municipal Code, Title 20, Zoning, Ord. 26248, February 2001, undergoes periodic review and revisions (http://www.sanjoseca.gov/index.aspx?NID=2108)</i>				
Subdivisions	Yes	No	Yes	No
<i>Comment: Municipal Code, Title 19, Subdivisions</i>				
Stormwater Management	Yes	Yes	Yes	No
<i>Comment: Municipal Code, Title 15, Chapter 15.14, Sewer Use Regulations, Ord. 24800; Municipal Code, Title 20, Chapter 20.95, Storm Water Management, Ord. 26995</i>				
Post-Disaster Recovery	No	No	No	No
<i>Comment: None located</i>				
Real Estate Disclosure	No	No	Yes	No
<i>Comment: CA. State Civil Code 1102 requires full disclosure on natural hazard exposure of the sale/re-sale of any and all real property.</i>				
Growth Management	Yes	No	Yes	No
<i>Comment: Municipal Code, Title 18, Chapter 18.30, Greenline/Urban Growth Boundary, Ords. 25301, 25302, 25706, 26082; Cal. Gov. Code §65300 et seq.</i>				
Site Plan Review	Yes	No	No	No
<i>Comment: Municipal Code, Title 20, Chapter 20.100, Administration and Permits, Ord. 26248, February 2001</i>				
Environmental Protection	Yes	Yes	Yes	No
<i>Comment: Municipal Code, Title 21, Environmental Clearance, Ord. 24551; California Environmental Quality Act</i>				
Flood Damage Prevention	Yes	No	No	No
<i>Comment: Municipal Code, Title 17, Chapter 17.08, Special Flood Hazard Area Regulations, Ord. 28512</i>				
Emergency Management	Yes	No	No	No
<i>Comment: Municipal Code, Title 8, Office of Emergency Services, Ord. 25213</i>				
Climate Change	Yes	No	Yes	Yes
<i>Comment: City of San José Greenhouse Gas Reduction Strategy, Resolution No. 77618, December 2015 (http://www.sanjoseca.gov/documentcenter/view/9388); California SB-379</i>				
Other: N/A	No	No	No	No
<i>Comment: None located</i>				
Planning Documents				
General Plan	Yes	No	Yes	Yes
<i>Envision San José 2040 General Plan, Resolution No. 76042, revised December 13, 2016.</i>				
<i>Comment: The Envision San José 2040 General Plan is in compliance with Assembly Bill 2140. (http://www.sanjoseca.gov/DocumentCenter/Home/View/474)</i>				
Capital Improvement Plan	Yes	No	No	Yes
<i>Comment: 2017 – 2021 Capital Improvement Program (CIP), updated annually (http://www.sanjoseca.gov/index.aspx?nid=5052)</i>				
Floodplain or Watershed Plan	No	No	No	No
<i>Comment: None located</i>				
Stormwater Plan	Yes	No	No	No
<i>Comment: City of San José Stormwater Management Annual Report 2015-2016, September 2016, prepared annually (http://www.sanjoseca.gov/ArchiveCenter/ViewFile/Item/2931)</i>				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Urban Water Management Plan <i>Comment: San José Municipal Water System 2015 Urban Water Management Plan, June 2016 (https://www.sanjoseca.gov/DocumentCenter/View/57483)</i>	Yes	No	Yes	No
Habitat Conservation Plan <i>Comment: Santa Clara Valley Habitat Conservation Plan/Natural Communities Conservation Plan; Municipal Code, Title 18, Chapter 18.40, Habitat Conservation Plan, Ord. 29203, January 2013</i>	Yes	No	No	No
Economic Development Plan <i>Comment: None located</i>	No	No	No	No
Shoreline Management Plan <i>Comment: None located</i>	No	No	No	No
Community Wildfire Protection Plan <i>Comment: None located</i>	No	No	No	No
Forest Management Plan <i>Comment: None located</i>	No	No	No	No
Climate Action Plan <i>Comment: The City's Environmental Services Department is currently developing an Environmental Sustainability Plan (Climate Action Plan).</i>	No	No	No	Yes
Comprehensive Emergency Management Plan <i>Comment: City of San José Emergency Operations Plan, August 2004 (http://www.sanjoseca.gov/DocumentCenter/View/47603)</i>	Yes	No	No	Yes
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment: None located</i>	Yes	No	No	No
Post-Disaster Recovery Plan <i>Comment: None located</i>	No	No	No	No
Continuity of Operations Plan <i>Comment: None located</i>	No	No	No	Yes
Public Health Plan <i>Comment: None located</i>	No	No	No	No
Other: N/A <i>Comment: None located</i>	No	No	No	No

Table 13-3. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes (water, sanitary and storm sewer)
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes

Table 13-4. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Planning, Building and Code Enforcement/Planning Division, Planners Public Works, Civil Engineers
Engineers or professionals trained in building or infrastructure construction practices	Yes	Planning, Building and Code Enforcement/Building Division, Engineers and Building Inspectors
Planners or engineers with an understanding of natural hazards	Yes	Public Works, Civil Engineers Office of Emergency Services, Emergency Services Planners
Staff with training in benefit/cost analysis	Yes	Multiple City departments, Analysts
Surveyors	Yes	Public Works/Engineering Services, Land Surveyors, Engineers
Personnel skilled or trained in GIS applications	Yes	Multiple City departments and positions (e.g., GIS Specialists, Planners, etc.)
Scientist familiar with natural hazards in local area	Yes	Public Works, Engineers
Emergency manager	Yes	Fire Department, Office of Emergency Services, Director
Grant writers	Yes	Multiple departments have grant writing capability as a secondary function

Table 13-5. National Flood Insurance Program Compliance

Criteria	Response
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	Arlene Lew, Floodplain Manager
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date of adoption of your flood damage prevention ordinance?	August 2, 1982; last updated April 7, 2009
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	Meets the minimum requirements
When was the most recent Community Assistance Visit or Community Assistance Contact?	2011
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If no, please state why.	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No
Does your jurisdiction participate in the Community Rating System (CRS)? • If yes, is your jurisdiction interested in improving CRS Classification? • Is your jurisdiction interested in joining the CRS program?	Yes No N/A
How many flood insurance policies are in force in your jurisdiction? • What is the insurance in force? • What is the premium in force?	7,668 ^a \$1,919,489,100 ^a \$6,725,447 ^a
How many total loss claims have been filed in your jurisdiction? • How many claims were closed without payment/are still open? • What were the total payments for losses?	477 ^a 210 ^a \$3,537,347.91 ^a

a. According to FEMA statistics as of October 31, 2016.

Table 13-6. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? If yes, please briefly describe.	Yes In addition to other information, the Office of Emergency Services has information on their website on emergency preparedness (e.g., winder storm preparedness, family preparedness, emergency kits), self-reliance in a power outage, and safety tips.
Do you utilize social media for hazard mitigation education and outreach? If yes, please briefly describe.	Yes The City used NextDoor and Facebook to reach community members related to participation in the Hazard Mitigation Plan Update survey employed as part of the Operational Area's LHMP update process.
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
Do you have any other programs already in place that could be used to communicate hazard-related information? If yes, please briefly describe.	No
Do you have any established warning systems for hazard events? If yes, please briefly describe.	Yes An AlertSCC for smartphone/cell alerts is available for the public to sign up for; however no physical alert systems exist at this time.

Table 13-7. Community Classifications

	Participating?	Classification	Date Classified
Community Rating System	Yes	7	June 16, 2010
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	Yes	3	2016
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A

Table 13-8. Development and Permit Capabilities

Criterion	Response
Does your jurisdiction issue development permits? • If no, who does? If yes, which department?	Yes Planning, Building and Code Enforcement and Public Works
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory?	Although the City has the ability to track permits by hazard area, this capability is not currently being utilized.

Table 13-9. Adaptive Capacity for Climate Change

Adaptive Capacity Assessment	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts	High
<p>Comment: The City's Environmental Services Department is currently developing an Environmental Sustainability Plan focused on greenhouse gas emissions reduction, energy usage reduction, and a sustainable water supply. The City went through an RFP process in and selected PriceWaterhouseCoopers (PwC) to develop the plan.</p> <p>In addition, the City of San José was recently selected as a participating City Energy Project (CEP) city. The CEP is a national initiative from the Institute for Market Transformation and the Natural Resources Defense Council to create healthier and more prosperous American cities by improving the energy efficiency of buildings. Working in partnership, the Project and participating cities support innovative and practical solutions that boost local economies, reduce pollution, and create healthier environments.</p>	
Jurisdiction-level monitoring of climate change impacts	High
<p>Comment: The City has a certified Greenhouse Gas Reduction Strategy, and is in the process of drafting a Greenhouse Gas Reduction Strategy Implementation Policy to further implements the Greenhouse Gas Reduction Strategy through the development review process on a project level. Additionally, the City's greenhouse gas emissions inventory is periodically updated during the City's General Plan Four-Year Major Review process.</p>	
Technical resources to assess proposed strategies for feasibility and externalities	High
<p>Comment: The development and implementation of the Environmental Sustainability Plan and participation in the CEP will provide additional information on additional staff and tool needs to implement climate-change related projects.</p>	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Low
<p>Comment: The City recently hired consultants (AECOM) to update its greenhouse gas emissions inventory. The previous GHG inventory was completed in 2008 as part of a comprehensive update of the City's General Plan. As mentioned above, the City's greenhouse gas emissions inventory is periodically updated during the City's General Plan Four-Year Major Review process.</p>	
Capital planning and land use decisions informed by potential climate impacts	High
<p>Comment: The City's General Plan contains multiple policies to support the implementation of environmental best practices, including those to minimize San José's contribution to climate change while remaining adaptable to impacts from climate change. The City also considers climate change impacts as part of capital improvement planning efforts and projects.</p>	
Participation in regional groups addressing climate risks	Medium
<p>Comment: Joint venture Silicon Valley, South Bay Shoreline Levee Project, Resilient By Design.</p>	
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes	High
<p>Comment: The City of San José has authority in the decision-making process to consider climate change impacts. This also driven by State legislation to reduce GHG emissions.</p>	
Identified strategies for greenhouse gas mitigation efforts	High
<p>Comment: As mentioned above, the City's General Plan contains multiple policies to support the implementation of environmental best practices, including those to minimize San José's contribution to climate change while remaining adaptable to impacts from climate change. The City also has a certified Greenhouse Gas Reduction Strategy, and implements Green Building policies for private sector and municipal buildings. Among other related projects and planning efforts, the City is currently developing an Environmental Sustainability Plan (ESP), a citywide plan focused on water and greenhouse gas emissions as they relate to energy and mobility.</p>	
Identified strategies for adaptation to impacts	High
<p>Comment: The City's General Plan includes goals and policies focused on hazards and the incorporation of safety considerations into the City's planning and decision-making processes to reduce those risks.</p>	
Champions for climate action in local government departments	High
<p>Comment: Multiple departments including, Planning, Building and Code Enforcement, Department of Transportation, and Environmental Services, implement the goals of the General Plan related to climate change, and lead various other planning and project specific efforts to reduce greenhouse gas emissions in San José.</p>	

Adaptive Capacity Assessment	Jurisdiction Rating
Political support for implementing climate change adaptation strategies <i>Comment: San José's commitment to environmental sustainability is embodied in its 30-year legacy of progressive land use planning, environmental protection, water and energy conservation programs. Recent actions, such as development of the City's Green Vision (adopted in October 2007), the City's adoption of the Urban Environmental Accords in 2005, and the Measurable Sustainability/Environmental Stewardship Major Strategy and incorporation of Environmental Leadership policies in the Envision San José 2040 General Plan extend that legacy.</i>	High
Financial resources devoted to climate change adaptation <i>Comment: In addition to funded staff positions on the Environmental Services Department's (ESD) energy team, ESD has obtained a \$200,000 City Energy Project (CEP) grant.</i>	Medium
Local authority over sectors likely to be negative impacted <i>Comment: None provided</i>	Medium
Public Capacity	
Local residents knowledge of and understanding of climate risk <i>Comment: None provided</i>	Medium
Local residents support of adaptation efforts <i>Comment: An extensive community engagement process was undertaken during the last comprehensive update of the City's General Plan. One of the top three planning priorities identified by the community was Environmental Leadership, including addressing climate change.</i>	Medium
Local residents' capacity to adapt to climate impacts <i>Comment: None provided</i>	High
Local economy current capacity to adapt to climate impacts <i>Comment: None provided</i>	High
Local ecosystems capacity to adapt to climate impacts <i>Comment: None provided</i>	Medium

13.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the hazard mitigation plan into local planning mechanisms.

13.5.1 Existing Integration

- **Envision San José 2040 General Plan**—The General Plan establishes goals and policies to incorporate safety considerations into the City's planning and decision-making processes to reduce risks of hazards. At the time of the next update, information obtained in the update of the hazard mitigation plan will be integrated into the General Plan as appropriate.

13.5.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration. At the time of their development or update information from the mitigation plan will be integrated as feasible and as appropriate:

- **Greenprint**—The Greenprint is a long-term strategic plan that guides the future expansion of San José's parks, recreation facilities and community services. The City is undertaking a major update of its existing Greenprint. The process will involve extensive public engagement and is expected to take approximately 12-18 months.
- **Green Infrastructure Plan**—The City's Environmental Service's Department is developing a Green Infrastructure Plan as required by the San Francisco Bay Municipal Regional Stormwater NPDES Permit.

- **Zoning Code**—The Zoning Code promotes and protects the public peace, health, safety, and general welfare by guiding, controlling, and regulating future growth and development in the City.
- **Capital Improvement Program (CIP)**—The Five-Year Capital Improvement Plan (Program) is a long-range study of financial wants, needs, expected revenues, and policy intentions. The projects identified in the program will be reviewed to incorporate mitigation strategies as appropriate.
- **Greenhouse Gas Reduction Strategy**—The City’s Greenhouse Gas Reduction Strategy, prepared in conjunction with the Envision San José 2040 General Plan provides an implementation tool consistent with the requirements of State Assembly Bill 32 – the Global Warming Solutions Act of 2006.
- **Environmental Sustainability Plan**—The City’s Environmental Services Department is currently developing an Environmental Sustainability Plan (Climate Action Plan) focused on greenhouse gas emissions reduction, energy usage reduction, and a sustainable water supply.
- **Sanitary Sewer Master Plan**—The Sanitary Sewer Master Plan identifies capital improvement projects needed to improve the sewer system to address sewer system capacity deficiencies and to provide for planned future growth in the City. The projects identified in the program will be reviewed to incorporate mitigation strategies as appropriate.
- **Deferred Maintenance Infrastructure Log**—The Deferred Maintenance Infrastructure Log identifies City facilities deferred infrastructure maintenance and associated costs.
- **Plant Master Plan**—The Plant Master Plan (Plan) identifies projects and funding needed to repair and replace the San José/Santa Clara Water Pollution Control Plant’s aging facilities and processes as well, as a land use plan that defines the future treatment needs along with guidelines for the future development, restoration, and use of the Plant’s four-and-a-half square mile site. The projects identified in the program will be reviewed to incorporate mitigation strategies as appropriate.
- **Storm Sewer Master Plan**—The City of San José is currently developing a comprehensive citywide storm sewer system master plan. As part of this process, the City is evaluating the storm drain system capacity deficiencies and improvement alternatives, and is planning for climate change and adaption as it relates to the storm drain system.
- **Urban Village Plans**—The development of Urban Villages is the fifth of 12 major strategies embodied within the Envision San José 2040 General Plan. The General Plan establishes the Urban Villages concept to create a policy framework to direct a significant amount new job and housing growth to occur within Urban Villages. The General Plan identifies 68 Urban Villages. Preparation of an Urban Village Plan for each Urban Village area will provide for community involvement in the implementation of the General Plan and for land use and urban design issues to be addressed at a finer level of detail. Where these Urban Village boundaries overlap with identified hazards, the Urban Village Plans provide an opportunity to integrate land use planning that recognizes and is sensitive to existing hazards. Additionally, Urban Villages are planned to be walkable, bike friendly, with access to transit and other existing infrastructure and facilities, which furthers climate change goals to reduce automobile related greenhouse gas emissions.
- **Emergency Plans**—The City of San José has a number of plans that address emergency situations. The information obtained in the hazard mitigation plan through the risk assessment and discussion of likely impacts will be used to inform the update of these plans, and others, as appropriate:
 - City of San José Emergency Operations Plan
 - Mineta San José International Airport Emergency Response Plan
 - Department of Public Works Emergency Preparedness and Response Plan
 - City of San José Catastrophic Earthquake Mass Transportation/Evacuation Plan and City of San José Catastrophic Earthquake Mass Care and Sheltering Plan.

13.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 13-10 lists all past occurrences of natural hazards within the jurisdiction.

Table 13-10. Natural Hazard Events			
Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Funnel Cloud	—	5/14/2015	Not Available
Strong Wind	—	2/6/2015	\$1,500
Strong Wind	—	2/6/2015	\$2,000
Strong Wind	—	2/6/2015	\$2,000
Flood	—	2/6/2015	Not Available
Strong Wind	—	12/30/2014	\$2,500
Strong Wind	—	12/30/2014	\$1,000
Strong Wind	—	12/30/2014	\$1,500
Strong Wind	—	12/30/2014	\$1,500
Strong Wind	—	12/30/2014	\$1,500
Strong Wind	—	12/30/2014	\$10,000
Strong Wind	—	12/30/2014	\$1,500
Strong Wind	—	12/30/2014	\$15,000
Strong Wind	—	12/30/2014	\$1,500
Flood	—	12/2/2014	Not Available
Flash Flood	—	2/28/2014	\$500
Flood	—	2/28/2014	Not Available
Strong Wind	—	1/21/2012	\$4,000
Landslide	—	11/30/2011	Not Available
Strong Wind	—	11/30/2011	\$1,000
Strong Wind	—	1/28/2010	\$3,000
Strong Wind	—	1/22/2010	\$12,000
Strong Wind	—	1/20/2010	\$45,000
Flood	—	1/20/2010	Not Available
Strong Wind	—	1/19/2010	\$5,000
Flood	—	1/18/2010	Not Available
Frost/Freeze	—	12/8/2009	\$20,000
High Wind	—	10/27/2009	\$50,000
High Wind	—	10/13/2009	\$125,000
Heat	—	5/17/2009	Not Available
Strong Wind	—	4/14/2009	\$50,000
Strong Wind	—	12/25/2008	\$6,000
Frost/Freeze	—	1/6/2007	\$50,000
Heat	—	7/20/2006	Not Available
Fire	2465	9/23/2002	Not Available
Flash Flood	—	2/8/1998	Not Available
Flash Flood	—	2/7/1998	Not Available
Flash Flood	—	2/3/1998	\$20,000
Severe Storm(s)	1203	2/2/1998	Not Available
Severe Storm(s)	1155	12/28/1996	Not Available

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Storm(s)	1046	2/13/1995	Not Available
Severe Storm(s)	1044	1/3/1995	Not Available
Freezing	894	12/19/1990	Not Available
Earthquake	845	10/17/1989	Not Available
Flood	758	2/12/1986	Not Available
Fire	739	6/26/1985	Not Available
Coastal Storm	—	1/21/1983	Not Available
Flood	651	12/19/1981	Not Available
Drought	3023	1/20/1977	Not Available

13.7 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 1
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include:

- More than 900 structures in the City are located in areas that will be impacted by sea level rise of 77 inches above mean higher high water.

13.8 HAZARD RISK RANKING

Table 13-11 presents the ranking of the hazards of concern.

Table 13-11. Hazard Risk Ranking			
Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe Weather	33	Medium
3	Flood	18	Medium
3	Dam and Levee Failure ^a	18	Medium
3	Landslide	18	Medium
3	Wildfire	18	Medium
4	Drought	9	Low

a. If considered separately, Dam Failure is ranked as medium while Levee Failure is ranked as low.

13.9 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 13-12 lists the actions that make up the City of San José hazard mitigation action plan. Table 13-13 identifies the priority for each action. Table 13-14 summarizes the mitigation actions by hazard of concern and the six mitigation types.

Table 13-12. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SJ-1 —Consider establishing development review and possible Municipal Code change to require that for all new private development, consideration of increased risks (from flooding, water quality, water flow for firefighting, etc.) to neighboring public and private structures and infrastructure, are to be identified and disclosed in the Planning staff assessment of the development permitting action and in the memorandum to the Planning Commission and/or City Council during deliberation on the permitting action. The intention is to ensure efforts are increased to minimize impacts to neighborhood facilities.						
New	Flood, Wildfire	1, 2, 6	Planning, Building and Code Enforcement	Low	General Fund	Long-term
SJ-2 —Develop trail route map for the public that provides the quickest possible trail routes/connections from the San José downtown core to suggested pedestrian evacuation corridors out of the city.						
New and Existing	Dam Failure, Earthquake, Flood	4, 6	Planning, Building and Code Enforcement	Medium	General Fund, Grant (EMPG, UASI)	Short-term
SJ-3 —Develop trails/trail connections that provide for mass pedestrian egress from all parts of San José to allow citizen self-evacuation to appropriate locations to be determined (e.g. central and/or southern California, and other locations).						
New	Dam Failure, Earthquake, Flood	4	PRNS	High	Capital Budget, Grants	Long-term
SJ-4 —Assess options, fund, and implement a public notification and mass warning system(s) with redundant features throughout the city to reach 90% of the affected population in multiple languages within 10 minutes of notification. This is to include assessment of the strategic siting of infrastructure that would be needed for such a system.						
New	All Hazards	4, 9	Public Works	High	General Fund	Long-term
SJ-5 —Assess needs, specify appropriate equipment and procure back-up power generators for critical facilities and to operate 10 Disaster District Offices and a minimum of 60 shelter locations that would support 250 persons each.						
New	All Hazards	2	Office of Emergency Services, Public Works	High	General Fund, Grant (EMPG, UASI)	Long-term
SJ-6 —Assess fuel needs, develop re-fueling plan and identify gap needs for critical city and utility infrastructure operations in the case of an extended power outage (assume one month outage).						
New and Existing	Dam Failure, Earthquake, Flood, Levee Failure, Wildfire	3	Emergency Services	Medium	General Fund, Grants	Long-term
SJ-7 —Develop and execute agreements with fueling sources to provide supply during power outages when the City's supply has been fully utilized.						
New	Dam Failure, Earthquake, Flood, Levee Failure, Wildfire	2	Public Works	Low	General Fund	Short-term
SJ-8 —Consider transition of fire hydrant water supply from potable to recycled water, where feasible, in order to preserve potable water for drinking use in the event of an emergency, and to more fully utilize the recycled water supply.						
Existing	Earthquake, Wildfire	3, 4	Fire	High	Capital Budget, Bonds, Grants	Long-Term
SJ-9 —Develop and maintain public education materials and outreach in multiple languages to ensure the public is knowledgeable regarding hazard disaster preparedness.						
Existing	All Hazards	4	Emergency Services, Public Works	Medium	General Fund, Grants	Ongoing

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SJ-10 —Assist in ensuring adequate hazard disclosure by working with real estate agents to improve enforcement of real estate disclosure requirements for residential properties with regarding to the following seven natural hazard zones: 1) Special Flood Hazard Areas; 2) Areas of Potential Flooding from dam failure inundation; 3) Very High Fire Hazard Severity Zones; 4) Wildland Fire Zones; 5) Earthquake Fault Zones; and 6) Liquefaction Zones; and 7) Landslide Hazard Zones.						
New	Flood, Wildfire, Earthquake, Landslide	4, 7	Emergency Services, Planning, Building and Code Enforcement	Low	General Fund, Grants	Short-term
SJ-11 —Encourage property owners to make improvements through elevating their homes within flood hazard areas.						
Existing	Flood	4	Planning, Building and Code Enforcement	Low	General Funds, Grants (HMGP, FMA)	Long-term
SJ-12 —Develop a Post-Disaster Recovery Plan.						
New	All Hazards	3	Office of Emergency Services	Medium	General Fund, Grants (EMPG, UASI)	Long-term
SJ-13 —Develop a Debris Management Plan.						
New	All Hazards	3	Office of Emergency Services	Medium	General Fund, Grants (EMPG, UASI)	Long-term
SJ-14 —Initiate having the SJ/SC Regional Wastewater Facility, and the San José Municipal Water System, join the CalWARN network.						
Existing	Flood	3, 5, 7, 9	Environmental Services	Medium	General Fund, Grants	Long-term
SJ-15 —Develop public-private council of emergency management professionals for coordination of needs assessments in the event a disruption(s) of continuity of business and sharing of emergency planning assumptions for assistance in identifying private sector needs expected from the public sector, assessment of capability to fill appropriate gaps and development.						
New	All Hazards	5	Emergency Services	Medium	Public and Private	Long-term
SJ-16 —Annually track building permits issued for new construction within hazard areas.						
New	Earthquake, Flood, Landslide, Wildfire	2	Planning, Building and Code Enforcement	Low	Staff time	Ongoing
SJ-17 —Retrofit or replace critical lifeline infrastructure facilities, their backup facilities, and supply systems that are shown to be vulnerable to damage in natural disasters.						
Existing	All Hazards	6, 7	Public Works	High	General Fund, Grants (HMGP, PDM, FMA)	Long-term
SJ-18 —Encourage replacing above ground 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.						
Existing	Dam Failure, Earthquake, Flood, Landslide, Levee Failure, Wildfire	3, 6	Public Works	Low	Staff time, Developer Fees	Ongoing
SJ-19 —Retrofit seismically- deficient bridges and road structures by working with Caltrans and other appropriate governmental agencies.						
Existing	Earthquake	5, 6, 7, 8	Public Works, Transportation	High	General Fund, State and Federal Funding, Grants (HMGP, PDM)	Long-term
SJ-20 —Construct new or replace or retrofit water-retention structures that are determined to be structurally deficient, including levees, dams, reservoirs and tanks, particularly those protecting critical infrastructure.						
Existing	Dam Failure, Earthquake, Flood, Levee Failure	2, 6, 7, 8	Public Works	High	Staff time, Developer Fees (HMGP, PDM, FMA)	Ongoing

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SJ-21 —Assist, coordinate, support, and/or encourage the U.S. Army Corp of Engineers, various Flood Control and Water Conservation Districts, and other responsible agencies to locate and maintain funding for the development of flood control projects that have high cost-benefit ratios.						
Existing	Dam Failure, Flood, Levee Failure	5, 6, 7, 8	Public Works	Low	Staff time, General Fund	Ongoing
SJ-22 —Provide materials to the public related to coping with disrupted storm drains, sewage lines, and wastewater treatment (such as materials developed by ABAG's Sewer Smart Program).						
Existing	Flood	4	Environmental Services	Low	Storm sewer and sanitary sewer fees	Ongoing
SJ-23 —Sponsor the formation and training of Community Emergency Response Teams (CERT) for employees and residents.						
Existing	All Hazards	1, 2, 4	Emergency Services	Medium	General Fund, Grants	Long-term
SJ-24 —Work to educate building owners, local government staff, engineers, and contractors on privately-owned soft-story retrofit procedures and incentives using materials such as those developed by ABAG and the City of San José (see http://quake.abag.ca.gov/eqhouse.html).						
Existing	Earthquake	1, 2, 4	Planning, Building and Code Enforcement	Medium	Staff time, General Fund	Short-term
SJ-25 —Conduct periodic fire-safety inspections of all multi-family buildings, as required by State law.						
Existing	Fire	3, 7, 8	Planning, Building and Code Enforcement	Low	General Fund, CDBG Grants	Ongoing
SJ-26 —To reduce flood risk, thereby reducing the cost of flood insurance to private property owners, work to qualify for the highest-feasible rating under the Community Rating System of the National Flood Insurance Program.						
Existing	Flood	6, 7, 8, 9	Public Works	Low	General Fund, Development Fees	Ongoing
SJ-27 —Maintain the local government's emergency operations center in a fully functional state of readiness.						
Existing	All Hazards	5, 9	Emergency Services	Low	General Fund, Grants	Ongoing
SJ-28 —Identify and explore methods for the elevation of hazardous materials storage outside of flood zones.						
Existing	Flood	1, 2, 6	Environmental Services, Planning, Building and Code Enforcement	Medium	General Fund, Storm Sewer Fees, Grants (HMGP, FMA)	Ongoing
SJ-29 —Make energy efficiency a priority through building code improvements, retrofitting city facilities with energy efficient lighting and urging employees to conserve energy and save financial resources.						
Existing	Drought, Flood, Severe Weather, Wildfire	3, 6	Environmental Services, Planning, Building and Code Enforcement	Medium	General Fund, Grants	Ongoing
SJ-30 —Maintain healthy urban forests; promote tree planting to increase shading and to absorb CO2.						
Existing	Drought, Flood, Severe Weather, Wildfire	3, 4, 6	Environmental Services, Planning, Building and Code Enforcement, Transportation	Medium	General Fund, Grants, Development Fees	Ongoing
SJ-31 —Actively pursue implementation of projects identified in the City's deferred maintenance program.						
Existing	Earthquake, Flood, Levee Failure	7, 8	Public Works, Transportation	High	General Fund, Grants	Ongoing
SJ-32 —Implement a ring levee at the San José-Santa Clara Regional Wastewater Treatment Plant.						
Existing	Flood	7	Environmental Services	High	Grants (HMGP, FMA), Sanitary Sewer Fees	Long-term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SJ-33 —Ensure temporary homeless shelters are prepared to conduct outreach and shelter in the event of flooding and extreme temperature events.						
Existing	Flood, Severe Weather	4, 5, 9	Housing	Low	General Fund, Grants	Ongoing
SJ-34 —Provide public outreach for, as well as encourage and support homeowners to retrofit structures (such as brace and bolt of mobile home structures) of vulnerable structures.						
Existing	Earthquake	4, 8	Planning, Building and Code Enforcement	Medium	General Fund, Grants (HMGP, PDM)	Short-term
SJ-35 —Eliminate homeless encampments within waterways.						
Existing	Flood, Levee Failure	2, 4	Housing	High	General Fund, Grants, State and Federal Funding	Ongoing
SJ-36 —Develop emergency response and continuity plans for city departments as appropriate.						
New	All Hazards	2	Emergency Services	Medium	General Fund, Grants	Long-term
SJ-37 —Ensure pump stations in flood-prone areas are appropriately sized and maintained.						
Existing	Flood	8	Public Works, Transportation	Medium	General Fund, Grants (HMGP, FMA)	Ongoing
SJ-38 —Continue to integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community.						
New and Existing	All Hazards	2, 4,	Planning, Building and Code Enforcement and Public Works	Low	Staff Time, General Funds	Ongoing
SJ-39 — Actively participate in the plan maintenance protocols outlined in Volume 1 of the hazard mitigation plan.						
New and Existing	All Hazards	1, 5	Office of Emergency Services	Low	Staff Time, General Funds	Short-term
SJ-40 — Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP). This will be accomplished through the implementation of floodplain management programs that will, at a minimum, meet the requirements of the NFIP:						
<ul style="list-style-type: none"> • Enforcement of the flood damage prevention ordinance • Participate in floodplain identification and mapping updates • Provide public assistance/information on floodplain requirements and impacts. 						
New and Existing	Flood	1, 2, 3, 4, 7, 8	Public Works	Low	Staff Time, General Funds	Ongoing
SJ-41 — Install and maintain flow gauges in waterways.						
New and Existing	Flood	2, 4	Public Works, Transportation	Low	Grants, General Funds	Short term
SJ-42 — Partner with local agencies and engage in projects to implement flood control and flow remediation improvements to waterways.						
New and Existing	Flood	2, 4	Public Works, Transportation	High	General Funds	Short term

Table 13-13. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
SJ-1	3	Medium	Low	Yes	No	Yes	Medium	Low
SJ-2	2	Medium	Medium	Yes	Yes	Yes	Low	Low
SJ-3	1	Medium	Medium	Yes	Yes	No	Low	Low
SJ-4	2	High	High	Yes	Yes	No	High ^{b, c}	High
SJ-5	1	High	High	Yes	Yes	No	Medium	Medium
SJ-6	1	Medium	Medium	Yes	Yes	Yes	Medium	Low
SJ-7	1	Medium	Medium	Yes	No	Yes	Medium	Low
SJ-8	2	Low	High	No	Yes	No	Low	Low
SJ-9	1	Medium	Low	Yes	Yes	Yes	Medium	Medium
SJ-10	2	Low	Low	Yes	No	No	Low	Low
SJ-11	1	High	High	Yes	Yes	Yes	Low	Low
SJ-12	1	Medium	Medium	Yes	Yes	No	Medium	Medium
SJ-13	1	Medium	Medium	Yes	Yes	No	Medium	Medium
SJ-14	4	Medium	Medium	Yes	Yes	No	Medium	Medium
SJ-15	1	Medium	Medium	Yes	No	No	Low	Low
SJ-16	1	Low	Low	Yes	No	Yes	Medium	Low
SJ-17	2	High	High	Yes	Yes	No	High ^{b, c}	High
SJ-18	2	High	High	Yes	Yes	Yes	Medium	High
SJ-19	4	High	High	Yes	Yes	No	High ^{b, c}	High
SJ-20	4	High	High	Yes	Yes	Yes	High	High
SJ-21	4	High	High	Yes	Yes	No	High ^b	High
SJ-22	1	Medium	Low	Yes	No	Yes	Medium	Low
SJ-23	3	Medium	Medium	Yes	Yes	No	Medium	Medium
SJ-24	3	Medium	Low	Yes	No	Yes	Medium	Low
SJ-25	3	High	Medium	Yes	Yes	Yes	High	High
SJ-26	4	Medium	Low	Yes	No	No	Low	Low
SJ-27	2	High	Medium	Yes	Yes	Yes	High	Medium
SJ-28	3	Medium	Medium	Yes	Yes	No	Low	Low
SJ-29	2	Low	Medium	No	Yes	Yes	Medium	Medium
SJ-30	3	Low	Medium	No	Yes	Yes	Medium	Medium
SJ-31	2	High	High	Yes	Yes	No	High ^b	High
SJ-32	1	High	High	Yes	Yes	No	Medium	Medium
SJ-33	3	High	Medium	Yes	Yes	No	Medium	Medium
SJ-34	2	Medium	Low	Yes	Yes	No	Low	Low
SJ-35	2	High	High	Yes	Yes	No	High ^b	High
SJ-36	1	Medium	Medium	Yes	Yes	No	Medium	Medium
SJ-37	1	High	High	Yes	Yes	Yes	Medium	Medium
SJ-38	2	Medium	Low	Yes	No	Yes	High	Low
SJ-39	2	Low	Low	Yes	No	Yes	High	Low
SJ-40	6	Medium	Low	Yes	No	Yes	High	Low

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
SJ-41	2	Medium	Low	Yes	Yes	Yes	High	High
SJ-42	2	High	High	Yes	Yes	No	Medium	High

a. See the introduction to this volume for explanation of priorities.

b. High priority for City; however, funding has not been secured

c. Action can be initiated in the short-term once funding is secured

Table 13-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a						
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects	7. Climate Resilient
Dam Failure	SJ-20, SJ-21, SJ-38, SJ-39	SJ-20, SJ-21	SJ-2, SJ-3, SJ-4, SJ-9		SJ-5, SJ-6, SJ-7, SJ-12, SJ-13, SJ-15, SJ-23, SJ-27, SJ-36	SJ-17, SJ-18, SJ-20, SJ-21	
Drought	SJ-31, SJ-32, SJ-38, SJ-39		SJ-9	SJ-29, SJ-30	SJ-12, SJ-13, SJ-15, SJ-23, SJ-27, SJ-36	SJ-17	SJ-8
Earthquake	SJ-20, SJ-24, SJ-31, SJ-34, SJ-38, SJ-39	SJ-20	SJ-2, SJ-3, SJ-4, SJ-9, SJ-10, SJ-16, SJ-24, SJ-34		SJ-5, SJ-6, SJ-7, SJ-8, SJ-12, SJ-13, SJ-15, SJ-23, SJ-27, SJ-36	SJ-17, SJ-18, SJ-19, SJ-20, SJ-31	SJ-8
Flood	SJ-1, SJ-11, SJ-20, SJ-21, SJ-26, SJ-28, SJ-29, SJ-30, SJ-31, SJ-32, SJ-35, SJ-36, SJ-38, SJ-39, SJ-40, SJ-41	SJ-1, SJ-11, SJ-20, SJ-21, SJ-26, SJ-32, SJ-36, SJ-40	SJ-1, SJ-2, SJ-3, SJ-4, SJ-9, SJ-10, SJ-11, SJ-16, SJ-22, SJ-40	SJ-28, SJ-29, SJ-30, SJ-35	SJ-5, SJ-6, SJ-7, SJ-12, SJ-13, SJ-14, SJ-15, SJ-23, SJ-27, SJ-33, SJ-35, SJ-36, SJ-41	SJ-17, SJ-18, SJ-20, SJ-21, SJ-28, SJ-31, SJ-32, SJ-36, SJ-42	SJ-21, SJ-32
Landslide	SJ-38, SJ-39		SJ-4, SJ-9, SJ-10, SJ-16		SJ-5, SJ-12, SJ-13, SJ-15, SJ-23, SJ-27, SJ-36	SJ-17, SJ-18	
Levee Failure	SJ-20, SJ-21, SJ-31, SJ-35, SJ-38, SJ-39	SJ-20, SJ-21	SJ-2, SJ-3, SJ-4, SJ-9	SJ-35	SJ-5, SJ-6, SJ-7, SJ-12, SJ-13, SJ-15, SJ-23, SJ-27, SJ-35, SJ-36	SJ-17, SJ-18, SJ-20, SJ-21, SJ-31	
Severe Weather	SJ-38, SJ-39		SJ-4, SJ-5, SJ-9	SJ-29, SJ-30	SJ-4, SJ-5, SJ-12, SJ-13, SJ-15, SJ-23, SJ-27, SJ-33, SJ-36	SJ-17	
Wildfire	SJ-1, SJ-25, SJ-29, SJ-30, SJ-38, SJ-39	SJ-1	SJ-1, SJ-4, SJ-9, SJ-10, SJ-16	SJ-29, SJ-30	SJ-5, SJ-6, SJ-7, SJ-8, SJ-12, SJ-13, SJ-15, SJ-23, SJ-27, SJ-36	SJ-17, SJ-18	

a. See the introduction to this volume for explanation of mitigation types.

13.10 ADDITIONAL RESOURCES

The hazard mitigation plan annex development tool-kit was used in the development of this annex to the Santa Clara Operational Area Hazard Mitigation Plan.

14. CITY OF SANTA CLARA

14.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

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14.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—July 5, 1852
- **Current Population**—123,752 as of January 1, 2016
- **Population Growth**—Based on the data tracked by the state Department of Finance, the City of Santa Clara has experienced a gradual rate of growth since the year 2000. The overall population has increased by 4.14 percent since 2010 and growth averaged 1.23 percent per year from 2000 to 2014. The City is an important employment center and houses approximately 122,000 jobs. The City is projected by the Association of Bay Area Governments (ABAG) in 2030 to have a resident population of 141,700 and to support 137,480 jobs.
- **Location and Description**—The City of Santa Clara encompasses 18.41 square miles, and is located 45 miles south of San Francisco and 382 miles north of Los Angeles. The City of Santa Clara is situated near to the south end of San Francisco Bay in Santa Clara County, also known as Silicon Valley in recognition of the region’s leadership in worldwide technology innovations. The City boundaries are completely urbanized, and the City is bordered by other urbanized areas, including San José, Cupertino and Sunnyvale. The City is developed on relatively flat terrain and drained by three seasonal creeks, San Tomas Aquino, Saratoga and Calabazas creeks, all of which empty into the southern portion of San Francisco Bay. The Guadalupe River, which also drains into the Bay, defines part of the city’s eastern boundary.
- **Brief History**—By 1850, when California became a state, Santa Clara was an established frontier settlement. In 1851, Santa Clara College, now Santa Clara University, was founded on the Mission site. The incorporation of Santa Clara as a City followed in 1852. In 1866, the City officially established a grid street system to accommodate anticipated growth. The City of Santa Clara, “The Mission City,” has been transformed over the past century, from a small agricultural town to a major employment and community center in Silicon Valley. It is called the “Mission City” in reference to the Mission Santa Clara de Asis, which opened in 1777 as one of 21 Spanish missions established by Franciscan padres along El Camino Real in California. The central core of the City grew outward from the original downtown and the Old

Quad residential area around the University and Agnew Village - a satellite area that established a base for residential neighborhoods in north Santa Clara. Primarily an agricultural community through the mid-1900s, the City of Santa Clara evolved to become a family-oriented, suburban community of comfortable neighborhoods in the post-World War II era, and as the heart of Silicon Valley in the electronics industry boom of the 1970s. In 2014, Levi's Stadium opened in Santa Clara as the home of the San Francisco 49ers football team and a premier sports and entertainment venue that hosted Super Bowl 50.

- **Climate**—The City of Santa Clara's climate is Mediterranean in nature, with mild temperatures year-round. January is on average the coolest month with an average low temperature of 42°F and an average high temperature of 58°F. July is on average the warmest month with an average low temperature of 58°F and an average high temperature of 82°F. Average annual rainfall is 14 inches, with rain concentrated in the winter months (November through March).
- **Governing Body Format**—Santa Clara is a Charter City with a City Council - City Manager form of government, with the City Manager and City Attorney appointed by City Council. The City of Santa Clara is governed by a seven-member city council. The Police Chief and City Clerk are elected positions. The City Manager is responsible for hiring all other City staff, preparing an annual budget, and general oversight of City operations, including the City's utilities. The City consists of fourteen departments: Community Development, Electric Utilities (Silicon Valley Power), Finance, Fire, Human Resources, Information Technology, Library, Parks and Recreation, Public Works, Police, Water and Sewer Utilities, City Attorney's Office, City Clerk's Office and the City Manager's Office. The City also has a separate Stadium Authority and Housing Authority which are overseen by the City Council. The City has nine commissions which report to the City Council. The City Council assumes responsibility for the adoption of this plan; the City Manager will oversee its implementation.

14.3 DEVELOPMENT TRENDS

The City of Santa Clara has seen remarkable interest and activity in both commercial and residential development during 2015 and 2016, and economic forecasts anticipate this to continue at a steady level in the next few years. Building permit valuations projected for permit activities in 2015-16 show \$1.4 billion in valuation attributed to 8,000 building permits, versus \$890 million in valuation attributed to 7,180 building permits in the previous fiscal year. The strength of the economy has spurred a number of new developments, in addition to advancing a number of significant private development projects that were previously approved by the City prior to the last recession. These projects are providing construction jobs and tenant employment, leading to secondary jobs, new rental housing and home sales, and consumer and business spending. Table 14-1 summarizes development trends in the performance period since development of the previous hazard mitigation plan and expected future development trends.

14.4 CAPABILITY ASSESSMENT

14.4.1 Resources for the 2017 Planning Initiative

This sections lists the technical reports, plans, and regulatory mechanisms reviewed to provide information for inclusion in the 2017 Multi-Jurisdiction Hazard Mitigation Plan for both Volume 1 and Volume 2 (Santa Clara Annex).

Table 14-1. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan? • If yes, give the estimated area annexed and estimated number of parcels or structures.	No					
Is your jurisdiction expected to annex any areas during the performance period of this plan? • If yes, please describe land areas and dominant uses. • If yes, who currently has permitting authority over these areas?	Yes Small leftover areas, generally vacant and adjacent to creeks. All are infill parcels. County of Santa Clara.					
Are any areas targeted for development or major redevelopment in the next five years? • If yes, please briefly describe, including whether any of the areas are in known hazard risk areas	Yes General Plan contains nine focus areas where significant development is anticipated, plus substantial redevelopment is expected in various employment areas, particularly in many areas north of the Caltrain tracks. The entire City is in an area of earthquake risk, and many of the areas expected to redevelop may be subject to flooding hazards, especially in North Santa Clara.					
How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?		2011	2012	2013	2014	2015
	Single Family	35	49	74	42	58
	Multi-Family	15	7	2	23	11
	Other (commercial, mixed use, etc.)	1704	1775	1895	1965	2388
Please provide the number of permits for each hazard area or provide a qualitative description of where development has occurred.	<ul style="list-style-type: none"> • Special Flood Hazard Areas: Yes, average 3-4 per year • Landslide: N/A • High Liquefaction Areas: No. According to the USGS map, the high liquefaction area is approximately 3 miles west of Guadalupe River along Northeast of City of Santa Clara boundary. The land uses are mostly open land with a small area of low and medium densities of residential, mixed use, and industrial. • Tsunami Inundation Area: N/A • Wildfire Risk Areas: N/A 					
Please describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	Appendix 8.12-B of the Housing Element has an inventory of underutilized sites. Santa Clara is mostly built-out, and most development opportunity sites involve redevelopment and intensification of parcels that are currently developed.					

All of the below items were additionally reviewed as part of the full capability assessment for Santa Clara.

- **City of Santa Clara 2010-2035 General Plan**—The General Plan, including the Land Use and Safety Elements, were reviewed for information regarding goals and policies consistent with hazard mitigation for carry over as goals and objectives. The General Plan provides a comprehensive set of goals and policies for the delivery of City services as well as a long term plan for land use (Land Use Element). The Land Use Element takes into consideration hazard avoidance, such as floodplains, when establishing allowed land uses. The Land Use Element is supported by policies which require avoidance of hazardous conditions for new land development. The General Plan includes policies which address safety within other topic areas (e.g., rail safety, bicycle and pedestrian safety, etc.), policies related to public safety through the delivery of Police and Fire services, and specific safety goals and policies related to environmental issues such as avoidance of safety impacts due to flooding, hazardous materials, airport operations, seismic, geologic and soil hazards and noise. The City's Climate Action Plan is one of the

General Plan Appendices. The Climate Action Plan identifies steps to reduce Citywide greenhouse gas emissions, which relate to avoidance of drought and severe weather events.

- **City of Santa Clara Municipal Code**—The Municipal Code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Flood Damage Prevention Ordinance**—The Flood Damage Prevention Ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Capital Improvements Plan**—The Capital Improvements Plan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.
- **The City of Santa Clara Emergency Operations Plan (EOP)**—This plan was reviewed to complete the Planning Documents portion of this Annex.
- **Technical Reports and Information** – Outside resources and references used to complete the City of Santa Clara Annex are identified in Section 1.10 of this Annex.

14.4.2 Full Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 14-2. An assessment of fiscal capabilities is presented in Table 14-3. An assessment of administrative and technical capabilities is presented in Table 14-4. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 14-5. An assessment of education and outreach capabilities is presented in Table 14-6. Classifications under various community mitigation programs are presented in Table 14-7. Development and permitting capabilities are presented in Table 14-8, and the community's adaptive capacity for the impacts of climate change is presented in Table 14-9.

Table 14-2. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code	Yes	No	Yes	Yes
<i>Comment: 2016 Building Code Adopted; Santa Clara Muni Code Title 15: Buildings and Construction</i>				
Zoning Code	Yes	No	Yes	Yes
<i>Comment: Update underway; Santa Clara Muni Code Title 18: Zoning</i>				
Subdivisions	Yes	Yes	Yes	No
<i>Comment: Updated in 2003; Santa Clara Muni Code Chapter 17.05 Subdivisions</i>				
Stormwater Management	Yes	Yes	Yes	Yes
<i>Comment: Santa Clara Muni Code 13.20 Original in 1994, Updated in May 20, 2014 by Ordinance 1925 City of Santa Clara protects stormwater quality via Municipal Regional NPDES Permit compliance activities which include: municipal operations, new and redevelopment controls, commercial/industrial facility inspections, illegal discharge/illicit connection enforcement, active construction site inspections, public education, trash load reduction, mercury and PCB reduction, and pesticide toxicity reduction programs. The City has a Long term Trash load Reduction Plan in place and is working to prepare a Green Infrastructure Plan. Regionally, the Santa Clara Valley Urban Runoff Pollution Prevention Program is in progress of preparing a Basin Plan.</i>				
Post-Disaster Recovery	No	No	No	No
<i>Comment: None Located</i>				
Real Estate Disclosure	No	No	Yes	No
<i>Comment: Cal. Civ. Code §1102 et seq.</i>				
Growth Management	Yes	No	Yes	Yes
<i>Comment: General Plan policies; no separate ordinance; Cal. Gov. Code §65300 et seq.</i>				
Site Plan Review	Yes	Yes	Yes	Yes
<i>Comment: Conducted pursuant to the City's Zoning Code</i>				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Environmental Protection	Yes	Yes	Yes	Yes
<i>Comment: Pursuant to General Plan, Zoning, and Building Code requirements; California Environmental Quality Act (Guideline: California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387)</i>				
Flood Damage Prevention	Yes	Yes	Yes	Yes
<i>Comment: Pursuant to Floodplain Ordinance; Santa Clara Muni Code Chapter 15.45: Prevention of Flood Damage Code</i>				
Emergency Management	Yes	No	Yes	Yes
<i>Comment: Pursuant to City Charter Chapter 2.140</i>				
Climate Change	Yes	Yes	Yes	Yes
<i>Comment: Climate Action Plan adopted; California SB-379</i>				
Other:	No	No	No	No
<i>Comment: None Located</i>				
Planning Documents				
General Plan	Yes	Yes	Yes	Yes
<i>Is the plan compliant with Assembly Bill 2140? Yes</i>				
<i>City of Santa Clara General Plan, adopted in 2010 and updated regularly (most recently in November 2016) is compliant with AB 2140.</i>				
Capital Improvement Plan	Yes	No	Yes	Yes
<i>How often is the plan updated? Annually</i>				
<i>Comment: State mandated: City Charter Sec 1312 Capital project funds, Charter Chapter 11 of State Statutes of 2000</i>				
Floodplain or Watershed Plan	Yes	Yes	Yes	Yes
<i>Comment: City adopted the FEMA flood damage prevention code in 1987. General Plan Safety Goals in Section 5.10.5 address floodplain and watershed protections.</i>				
Stormwater Plan	Yes	Yes (SCVWD)	Yes	Yes
<i>Comment: Storm Drain Maser Plan prepared in Dec. 2015</i>				
Urban Water Management Plan	Yes	No	Yes	Yes
<i>Comment: Adopted November 22, 2016</i>				
Habitat Conservation Plan	No	Yes	No	No
<i>Comment: Santa Clara Valley Habitat Plan</i>				
Economic Development Plan	Yes	No	No	Yes
<i>Comment: Pursuant to General Plan</i>				
Shoreline Management Plan	No	Yes	No	No
<i>Comment: Santa Clara does not have shoreline; however, the Bay Conservation and Development Commission has jurisdiction over San Francisco Bay shoreline modifications.</i>				
Community Wildfire Protection Plan	No	No	No	No
<i>Comment: N/A</i>				
Forest Management Plan	No	No	No	No
<i>Comment: N/A</i>				
Climate Action Plan	Yes	Yes	Yes	Yes
<i>Comment: Climate Action Plan was adopted in December 2013.</i>				
Comprehensive Emergency Management Plan	Yes	Yes	Yes	Yes
<i>Comment: Santa Clara County Emergency Operations Plan, City Emergency Operations Plan (EOP)</i>				
Threat & Hazard Identification & Risk Assessment (THIRA)	No	Yes	Yes	No
<i>Comment: UASI THIRA - 2016</i>				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Post-Disaster Recovery Plan <i>Comment: part of EOP</i>	Yes	Yes	Yes	Yes
Continuity of Operations Plan <i>Comment: N/A</i>	No	No	No	No
Public Health Plan <i>Comment: County Public Health has authority</i>	No	Yes	Yes	No
Other: <i>Comment: None Located</i>	No	No	No	No

Table 14-3. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes, though voter approval required
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	No, voter approval required
Incur Debt through Special Tax Bonds	No, voter approval required
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes, nexus study required
Other working capital reserves	Yes

Table 14-4. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Com Dev/Director
Engineers or professionals trained in building or infrastructure construction practices	Yes	DPW, Utilities/Directors
Planners or engineers with an understanding of natural hazards	No	Com Dev, DPW, Utilities/Directors
Staff with training in benefit/cost analysis	Yes	Finance/Director
Surveyors	Yes	Land Surveyor, DPW
Personnel skilled or trained in GIS applications	Yes	DPW, IT, Com Dev, Utilities
Scientist familiar with natural hazards in local area	No	NA
Emergency manager	Yes	Fire, ESC
Grant writers	Yes	Fire, Police, DPW, IT, Parks and Rec

Table 14-5. National Flood Insurance Program Compliance

Criteria	Response
What local department is responsible for floodplain management?	Community Development
Who is your floodplain administrator? (department/position)	Director of Community Development
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	1987, revision in process
Does your floodplain management program meet or exceed minimum requirements?	May not currently meet minimum NFIP requirements N/A
<ul style="list-style-type: none"> If exceeds, in what ways? 	
When was the most recent Community Assistance Visit or Community Assistance Contact?	5-year Cycle Visit in 2012
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
<ul style="list-style-type: none"> If so, please state what they are. 	
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
<ul style="list-style-type: none"> If no, please state why. 	
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes
<ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	Training on the CRS Manual
Does your jurisdiction participate in the Community Rating System (CRS)?	Yes
<ul style="list-style-type: none"> If yes, is your jurisdiction interested in improving CRS Classification? Is your jurisdiction interested in joining the CRS program? 	Yes (currently class 8) N/A
How many flood insurance policies are in force in your jurisdiction?	955 ^a
<ul style="list-style-type: none"> What is the insurance in force? What is the premium in force? 	\$279,319,600 ^a \$735,904 ^a
How many total loss claims have been filed in your jurisdiction?	29 ^a
<ul style="list-style-type: none"> How many claims were closed without payment/are still open? What were the total payments for losses? 	CWOP = 15 Still open = 0 ^a \$309,753.09 ^a

a. According to FEMA statistics as of October 31, 2016

Table 14-6. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	The Fire Department has an emergency preparedness webpage that includes links to various resources.
Do you utilize social media for hazard mitigation education and outreach?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Twitter, Facebook and NextDoor
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Web-based notification such as Enotify and Nixle
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Countywide Alert SCC program

Table 14-7. Community Classifications

	Participating?	Classification	Date Classified
Community Rating System	Yes	8	5/1/2002
Building Code Effectiveness Grading Schedule	No	99	N/A
Public Protection	Yes	2	2015
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A

Table 14-8. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? • If no, who does? If yes, which department?	Yes Community Development
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory?	Yes

Table 14-9. Adaptive Capacity for Climate Change

Adaptive Capacity Assessment Question	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts <i>Comment: None provided</i>	Medium
Jurisdiction-level monitoring of climate change impacts <i>Comment: Sea level rise is expected to have minimal impacts to Santa Clara properties</i>	Medium
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment: None provided</i>	High
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment: Climate Action Plan contains a comprehensive inventory, and the update of the Climate Action Plan in the next 1-3 years will include an inventory update</i>	Medium
Capital planning and land use decisions informed by potential climate impacts <i>Comment: General Plan principles, including the Climate Action Plan criteria, consider climate implications</i>	High
Participation in regional groups addressing climate risks <i>Comment: Staff participates in regular regional climate change meetings as time permits</i>	Medium
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment: Climate Action Plan is incorporated into the General Plan and is considered as part of the decision-making process</i>	High
Identified strategies for greenhouse gas mitigation efforts <i>Comment: The Climate Action Plan (CAP) addresses statewide GHG reduction goals through 2020, and the City expects to update the CAP in the next 1 – 3 years to address the new statewide GHG reduction goals for 2030 and 2050.</i>	High
Identified strategies for adaptation to impacts <i>Comment: None provided</i>	Medium
Champions for climate action in local government departments <i>Comment: Hiring of new sustainability manager is expected in 1-2 months. Initial multi-departmental working group convening now.</i>	Medium
Political support for implementing climate change adaptation strategies <i>Comment: Sustainability is continually gaining additional support in the community and with the Council.</i>	Medium

Adaptive Capacity Assessment Question	Jurisdiction Rating
Financial resources devoted to climate change adaptation <i>Comment: None provided</i>	Medium
Local authority over sectors likely to be negatively impacted <i>Comment: None provided</i>	Medium
Public Capacity	
Local residents knowledge of and understanding of climate risk <i>Comment: Some members are highly educated. More City outreach could contribute to overall knowledge base.</i>	Medium
Local residents support of adaptation efforts <i>Comment: None provided</i>	Medium
Local residents' capacity to adapt to climate impacts <i>Comment: None provided</i>	High
Local economy current capacity to adapt to climate impacts <i>Comment: None provided</i>	High
Local ecosystems capacity to adapt to climate impacts <i>Comment: None provided</i>	Medium

14.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the hazard mitigation plan into local planning mechanisms.

14.5.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan:

- **General Plan**—Considers land use integration, environmental impacts of development, and long-term sustainability for new development and city operations. At the time of the next update, information obtained in the update of the hazard mitigation plan will be integrated into the General Plan as appropriate.
- **Climate Action Plan**—Integrated into the General Plan, the CAP identifies steps for the City to take in its own operations and in review/approval of new development to reduce greenhouse gas emissions. At the time of the next update, information obtained in the update of the hazard mitigation plan will be integrated into the Climate Action Plan as appropriate.

14.5.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration:

As the City continues to update its policies and ordinances, including but not limited to updates to the Building Code (next scheduled for adoption in 2019), the General Plan (anticipated in the next 3-8 years), Zoning Ordinance (expected in the next 1-2 years) and Climate Action Plan (expected in next 1-3 years), the City will evaluate consistency with the hazard mitigation plan and incorporate recommendations as needed.

14.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 14-10 lists all past occurrences of natural hazards within the jurisdiction.

Table 14-10. Natural Hazard Events

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Weather	-	1-8-17	\$65,000
Wildfire	2465	9-23-16	\$34,199
Wildfire	2766	5-22-2008	\$362,378
Hurricane Evacuation	3248	9-13-2005	\$988,951
Severe Weather / High Wind	1203	6-21-2001	\$80,757
Earthquake	845	10-17-1989	\$100,000

14.7 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include:

- There are a number of older structures built before modern building codes.

14.8 HAZARD RISK RANKING

Table 14-11 presents the ranking of the hazards of concern.

Table 14-11. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe Weather	33	Medium
3	Flood	18	Medium
3	Dam and Levee Failure	18	Medium
4	Drought	9	Low
5	Landslide	0	Low
6	Wildfire	0	Low

14.9 STATUS OF PREVIOUS PLAN ACTIONS

The status of previous actions from the 2011 ABAG LHMP for the City of Santa Clara can be found in Appendix D of this volume.

14.10 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 14-12 lists the actions that make up the City of Santa Clara hazard mitigation action plan. Table 14-13 identifies the priority for each action. Table 14-14 summarizes the mitigation actions by hazard of concern and the six mitigation types.

Table 14-12. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SC-1 —Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses						
New and existing	All hazards	1-9	OES/Fire and Community Development	High	PDM, HMGP, Local Budget (local match)	Dependent on Funding (Short-term)
SC-2 —Continue to support the Planning Area-wide actions identified in this plan.						
New and Existing	All hazards	1-9	OES/Fire	Low	Local Budget	Ongoing
SC-3 —Actively participate in the plan maintenance strategy identified in this plan.						
New and Existing	All hazards	1-9	OES/Fire	Low	Local Budget	Ongoing
SC-4 —Consider participation in incentive-base programs such as Tree City and Storm ready.						
New and Existing	All hazards	1-9	Community Development and Public Works	Low	Local Budget	Ongoing
SC-5 —Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include enforcing an updated, adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts. Continue participating in the Santa Clara County Multi-jurisdictional Program for Public Information.						
New and Existing	Flood	1-9	Community Development and Public Works	Low	Local Budget	Ongoing
SC-6 —Integrate the Hazard Mitigation Plan into other plans, programs, or resources that dictate land use or redevelopment, such as the General Plan, Climate Action Plan, Zoning Ordinance, Building Code, etc..						
New and Existing	All hazards	1-9	All City Departments	Low	Local Budget	Ongoing
SC-7 —Based on EOC staffing capabilities assessment, ensure that mandated training is provided to all employees in SEMS, FEMA ICS-100, ICS-200, IS-700, and IS-800; and ensure that employee training records are securely maintained.						
Existing	All hazards	1,2,4,9	OES/Fire	Low	Local Budget	Ongoing
SC-8 —Based on EOC staffing capabilities assessment, ensure that mandated training is provided to employees who require advanced knowledge and application of the ICS, such as primary and alternate EOC Section Chiefs and senior field personnel, to include at least ICS-300, ICS-400, and the FEMA Professional Development Series; and ensure that employee training records are securely maintained.						
Existing	All hazards	1,2,4,9	All City Departments	Medium	Local Budget	Ongoing
SC-9 —Based on EOC staffing capabilities assessment, ensure that all Fire and Police Department staff who may be assigned the role of incident commander at an emergency/disaster scene have received Incident Commander training; and ensure that employee training records are securely maintained.						
Existing	All hazards	1,2,4,9	OES, Fire and Police	Medium	Local Budget	Ongoing
SC-10 —Monitor local availability of upcoming training opportunities for city staff regarding incident staffing, disaster response, and recovery.						
Existing	All hazards	1,2,4,9	All City Departments	Medium	Local Budget	Ongoing
SC-11 —Continue to conduct EOC tabletop exercise(s) to evaluate capabilities and train employees in their assigned EOC role(s).						
N/A	All hazards	1,2,4,9	OES/Fire	Medium	Local Budget, UASI, HSGP	Long-term
SC-12 —Develop and exercise a Disaster Debris Management Plan.						
New	Dam failure, Earthquake, Flood, Severe weather	1,2,3,4,5,6,7,8	Public Works OES/Fire	Medium	Local Budget, HSGP, UASI	Long-term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SC-13 —Enhance public education and awareness of natural and manmade hazards in the community and public understanding of disaster preparedness, including foreign language translations.						
New	All hazards	1,3,4,5,8,9	OES/Fire	Medium	Local Budget, UASI	Long-term
SC-14 —Develop improved capabilities to incorporate GIS technology by all departments into services provided to the public and for use during emergency/disaster incidents.						
Existing	Dam Failure, Earthquake, Flood,	1,2,3,6,9	OES/Fire	Medium	Local Budget, PDM	Long-term
SC-15 —Conduct a test of emergency communications and information systems interoperability, to establish baseline capabilities for employee call-back, communications between the EOC and incident command, and communications with the Operational Area and Mutual Aid resources.						
Existing	All hazards	1,5,6,9	OES/Fire	Medium	Local Budget, UASI, HSGP	Long-term
SC-16 —Conduct a gap analysis of the Santa Clara City Emergency/Disaster preparedness and response program, to include a comprehensive review of employee training requirements and needs, plans and procedures, EOC equipment and staffing capabilities, and related analyses.						
New	All hazards	1-9	OES/Fire	Medium	Local Budget, HSGP	Long-term
SC-17 - Acquire a mobile Emergency Operations Center.						
New	All hazards	1,4,8,9	OES/Fire	High	Local Budget, UASI, HSGP	Long-term
SC-18 —Develop unmanned aerial vehicle (UAV) capability for hazard mitigation surveys and post-disaster damage assessments; and develop policies, procedures and staff training guidelines for UAV use.						
New	Dam Failure, Flood, Earthquake, Severe Weather	2,4,6,8,9	OES, Fire, Police	High	Local Budget, PDM, HMGP	Long-term
SC-19 —Enhance Fire Department field inspection system using portable computers for engine company inspections and Fire Prevention inspections, to integrate inspections, re-inspections, invoicing, permits, CUPA and business license data.						
Existing	All hazards	1,2,3,6,8	Fire	Low	Local Budget, UASI	Ongoing
SC-20 —Conduct seismic and functional assessment of Emergency Operations Center.						
Existing	All hazards	1,2,4,8,9	OES/Fire	Medium	Local Budget, PDM, HMGP	Ongoing
SC-21 —Acquire emergency generators for the City’s critical facilities, specifically Fire Stations 5, 7, 8 and 9.						
Existing	All hazards	6,8,9	Public Works	Low	Local Budget, PDM, HMGP	Short-term
SC-22 —Maintain and improve Water and Sewer Utilities as necessary to ensure systems are able to maintain their functionality in response to potential hazards such as drought, flood or earthquakes.						
Existing	Drought, Flood, Earthquake	1,2,3,4,5,6,7,8	Water and Sewer	High	Local Budget, PDM, HMGP	Long-term
SC-23 —Integrate climate change and natural hazards planning in to current city plan revisions and future planning initiatives.						
New and Existing	All hazards	1-9	Community Development	Low	Local Budget, Grants	Ongoing
SC-24 —Develop and maintain a landscape design manual to provide general guidance and education to the public on water efficiency in landscaping and to serve as a resource for water efficient landscape design and installation in compliance with the State Water Efficiency Landscape Ordinance (as amended), including lists of recommended site appropriate native and drought-tolerant plant species.						
New and Existing	Drought	1-9	Community Development	Low	Local Budget, Grants	Ongoing

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SC-25 —Continue to improve the City's bike network in coordination with partner agencies, such as the Valley Transportation Authority.						
New and Existing	All hazards	3, 5, 6	Public Works and Community Development	Medium	Local Budget, Grants	Ongoing
SC-26 —Hire or assign a management-level staff member as the Sustainability Manager to coordinate sustainability efforts among different departments and outside agencies.						
New and Existing	All hazards	1-9	OES/Fire	Low	Local Budget, Grants	Ongoing
SC-27 —Continue to implement and monitor the current 2014 Climate Action Plan (CAP) and prepare a comprehensive update to the CAP to comply with state greenhouse gas reduction targets. Include adaptation strategies within the updated CAP.						
New and Existing	All hazards	1-9	All City Departments	Medium	Local Budget, Grants	Ongoing
SC-28 —Increase situational awareness capacity in the EOC by expanding GIS resources and providing air to ground communications.						
New and Existing	All hazards	1, 2, 5, 6, 7, 9	OES/Fire	Medium	Local Budget, PDM	Ongoing
SC-29 —Secure all critical infrastructure in the EOC, the EOC perimeter, and immediate vicinity.						
New and Existing	All hazards	1, 2, 3, 6, 7, 8, 9	OES/Fire and Police	Medium	Local Budget, PDM	Long-term
SC-30 —Restore the original storage capacity of the Westside Water Retention Basin to hold additional storm water and reduce flooding risk by desilting the basin.						
Existing	Flood	1, 2, 3, 6, 7, 8	Public Works	High	Local Budget	Short-term

Table 14-13. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
SC-1	9	High	High	Yes	Yes	No	Medium	High
SC-2	9	Medium	Low	Yes	No	Yes	High	Low
SC-3	9	Medium	Low	Yes	Yes	Yes	High	Medium
SC-4	9	Medium	Low	Yes	No	Yes	Medium	Low
SC-5	4	Medium	Low	Yes	No	Yes	High	Low
SC-6	9	Medium	Low	Yes	No	Yes	High	Low
SC-7	4	Medium	Low	Yes	No	Yes	Medium	Low
SC-8	4	Medium	Low	Yes	No	Yes	Medium	Low
SC-9	4	Medium	Low	Yes	No	Yes	Medium	Low
SC-10	4	Low	Low	Yes	No	Yes	Low	Low
SC-11	4	High	Medium	Yes	Yes	Yes	High	High
SC-12	8	Medium	Medium	Yes	Yes	Yes	Medium	Medium
SC-13	6	Medium	Medium	Yes	Yes	Yes	Medium	Medium
SC-14	5	Medium	Medium	Yes	Yes	Yes	Medium	Medium
SC-15	4	High	Medium	Yes	Yes	Yes	High	High
SC-16	9	Medium	Medium	Yes	Yes	Yes	Medium	Medium
SC-17	4	High	Medium	Yes	Yes	No	Medium	Medium
SC-18	5	Medium	Medium	Yes	Yes	Yes	Medium	Medium
SC-19	5	High	Low	Yes	Yes	Yes	High	High
SC-20	5	High	Medium	Yes	Yes	Yes	Medium	High
SC-21	3	Medium	Low	Yes	Yes	Yes	High	High
SC-22	9	High	High	Yes	No	Yes	High	Low
SC-23	9	High	Low	Yes	Possibly	Yes	High	Medium
SC-24	1	Medium	Low	Yes	Possibly	Yes	Medium	Medium
SC-25	8	Low	Medium	No	Possibly	Yes	Medium	Medium
SC-26	9	High	Low	Yes	Possibly	Yes	High	Medium
SC-27	9	High	Medium	Yes	Possibly	No	Medium	High
SC-28	6	Medium	Medium	Yes	Yes	No	Medium	Medium
SC-29	7	High	Medium	Yes	Yes	No	Medium	High
SC-30	6	High	High	Yes	Possibly	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

Table 14-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a						
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects	7. Climate Resilient
Dam and Levee Failure	SC-2, SC-3, SC-4, SC-5, SC-6, SC-12, SC-14, SC-19, SC-23	SC-1, SC-5, SC-19, SC-21, SC-22, SC-29	SC-2, SC-3, SC-4, SC-5, SC-13, SC-19, SC-25, SC-28		SC-2, SC-4, SC-7, SC-8, SC-9, SC-10, SC-11, SC-15, SC-16, SC-17, SC-18, SC-28, SC-29	SC-29	SC-2, SC-3, SC-4, SC-5, SC-6, SC-12, SC-14, SC-19, SC-23
Drought	SC-2, SC-3, SC-6, SC-14, SC-23, SC-27	SC-1, SC-29	SC-2, SC-3, SC-13, SC-26, SC-27, SC-28	SC-24, SC-26, SC-27	SC-2, SC-7, SC-8, SC-9, SC-10, SC-11, SC-15, SC-16, SC-17, SC-28, SC-29	SC-29	SC-2, SC-3, SC-6, SC-14, SC-23, SC-27
Earthquake	SC-2, SC-3, SC-6, SC-12, SC-14, SC-19, SC-23	SC-1, SC-19, SC-20, SC-21, SC-22, SC-29	SC-2, SC-3, SC-13, SC-19, SC-25		SC-2, SC-7, SC-8, SC-9, SC-10, SC-11, SC-15, SC-16, SC-17, SC-18, SC-28, SC-29	SC-29	SC-2, SC-3, SC-6, SC-12, SC-14, SC-23
Flood	SC-2, SC-3, SC-4, SC-5, SC-6, SC-14, SC-19, SC-23	SC-1, SC-4, SC-5, SC-19, SC-21, SC-22, SC-29	SC-2, SC-3, SC-4, SC-5, SC-13, SC-19, SC-25, SC-28	SC-4, SC-5	SC-2, SC-4, SC-5, SC-7, SC-8, SC-9, SC-10, SC-11, SC-5, SC-16, SC-17, SC-18, SC-28, 2 SC-9	SC-29	SC-2, SC-3, SC-4, SC-5, SC-6, SC-14, SC-19, SC-23
Severe Weather	SC-2, SC-3, SC-4, SC-6, SC-12, SC-14, SC-19, SC-23, SC-27	SC-1, SC-19, SC-21, SC-22, SC-27, SC-29	SC-2, SC-3, SC-4, SC-13, SC-19, SC-25, SC-26, SC-27, SC-28	SC-4, SC-26, SC-27	SC-2, SC-4, SC-7, SC-8, SC-9, SC-10, SC-11, SC-15, SC-16, SC-17, SC-18, SC-28, SC-29	SC-29	SC-2, SC-3, SC-4, SC-6, SC-12, SC-14, SC-19, SC-23, SC-27

a. See the introduction to this volume for explanation of mitigation types.

14.11 ADDITIONAL RESOURCES

2015 Urban Water Management Plan - <http://santaclaraca.gov/home/showdocument?id=48088>

1989 Loma Prieta Earthquake Damage - [Seismic Study by G&E Engineering report](#)

City's General Plan - <http://www.santaclaraca.gov/government/departments/community-development/planning-division/general-plan>

Climate Action Plan - <http://www.santaclaraca.gov/home/showdocument?id=10170>

15. CITY OF SARATOGA

15.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

Michael Taylor, Recreation & Facilities Director, Risk Manager
19655 Allendale Avenue
Saratoga, CA 95070
Telephone: 408-868-1250
e-mail Address: mtaylor@saratoga.ca.us

Alternate Point of Contact

James Lindsay, City Manager
13777 Fruitvale Avenue
Saratoga, CA 95070
Telephone: 408-868-1213
e-mail Address: jlindsay@saratoga.ca.us

15.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—1956
- **Current Population**—30,219 (January 1, 2016)
- **Population Growth**—Based on data from the State Department of Finance, the City of Saratoga is a “slow growth” City with an overall population increase of approximately 0.5 percent per year since 2010.
- **Location and Description**—Tucked away in the foothills of the Santa Cruz Mountains of California, Saratoga is a residential community with a small-town feel, located south of San José and Cupertino, and northwest of Los Gatos. The City is well known for its excellent schools, fine dining, unique shops, and distinctive cultural institutions. Saratoga offers a high quality of life to its residents and a chance to escape the hustle of Silicon Valley.
- **Brief History**—From a frontier town to an industrial settlement, from a village of fruit orchards to a residential city, Saratoga has continually evolved over its colorful 160-year history. It began with a sawmill. Before long, the sawmill was joined by a tannery, furniture factory, and paper and flour mills. The community that grew up around them was known for short periods of time as Tollgate, McCartysville, and Bank Mills. The settlement received a permanent name after residents discovered a mineral spring in the early 1860s. The spring’s mineral content was quite similar to that of Congress Spring at Saratoga Springs in New York, and in 1865 the town was officially named Saratoga. At the same time, industry in Saratoga gradually gave way to fruit orchards and vineyards. From cherries and apricots to French prunes, Saratoga’s bountiful fruit harvests made it a popular trading post. In 1890, renowned winemaker Paul Masson opened his Mountain Winery in Saratoga, planting a variety of grapes in the Santa Cruz mountain soil. Saratoga’s identity continued to transform throughout the 1900s, as orchards were replaced by homes and the estates of the valley’s wealthy businessmen and politicians. One of the most impressive of these is Villa Montalvo, established in 1912 by United States Senator James Phelan, and now a hub for Saratoga’s art and music scene. The valley’s shift towards suburban and urban living in the years after World War II cemented Saratoga’s status as a residential community and its

reputation as an excellent place to live. In 1956, wary of potential annexation plans from San José, the residents of Saratoga voted to incorporate and establish their own City government.

- **Climate**—Saratoga weather is typical of the Northern California coast, with mild summers and cool, wet winters. It rarely freezes in the winter and it is rarely hot in the summer. Annual average rainfall is over 40 inches, with 80 percent of that falling from November through April. The average year-round temperature is 59°F. Humidity averages 72 to 87 percent. Prevailing winds are from the north and average 5 mph.
- **Governing Body Format**—The City of Saratoga is a General Law City governed by a Council-City Manager form of government with a five-member city council, who are elected to overlapping four-year terms. The Mayor is selected annually by the City Council. The Mayor and Council appoint the City Manager who is charged with implementing policy decisions made by the elected Council, which the City Manager accomplishes through delegation to appropriate departments. The City consists of five departments: Administrative Services, Community Development, Public Works, Recreation & Facilities, and the City Manager's Office. The City is a minimum services City that contracts many municipal services, including the Santa Clara County Sheriff's Office for law enforcement services. The Santa Clara County Library and two sanitary districts also provide services. The City has six commissions and two committees, which report to the City Council. The City Council assumes responsibility for adoption of this plan, City staff will oversee its implementation under the direction of the City Manager.

15.3 DEVELOPMENT TRENDS

Anticipated development levels for Saratoga are low, consisting primarily of residential infill development.

Table 15-1 summarizes development trends in the performance period since development of the previous hazard mitigation plan and expected future development trends.

15.4 CAPABILITY ASSESSMENT

15.4.1 Resources for the 2017 Planning Initiative

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for inclusion into the 2017 Multi-Jurisdiction Hazard Mitigation Plan for both Volume I and Volume II (Saratoga Annex). All of the below items were additionally reviewed as part of the full capability assessment for Saratoga.

- **Saratoga General Plan**—The General Plan, including the Land Use and Safety Elements, were reviewed for information regarding goals and policies consistent with hazard mitigation for carry over as goals and objectives.
- **Saratoga Municipal Code**—The Municipal Code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Flood Damage Prevention Ordinance**—The Flood Damage Prevention Ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Capital Improvements Plan**—The Capital Improvements Plan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects. The Fiscal Year 2016/17 Operating & Capital Budget is available at: <http://www.saratoga.ca.us/civicax/filebank/blobdload.aspx?BlobID=9697>
- **Technical Reports and Information**—Outside resources and references used to complete the Saratoga Annex are identified in the pertinent Sections of this Annex and in Section 15.11.

Table 15-1. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan? • If yes, give the estimated area annexed and estimated number of parcels or structures.	Yes Quarry Park (64 acres)					
Is your jurisdiction expected to annex any areas during the performance period of this plan? • If yes, please describe land areas and dominant uses. • If yes, who currently has permitting authority over these areas?	No N/A N/A					
Are any areas targeted for development or major redevelopment in the next five years? • If yes, please briefly describe, including whether any of the areas are in known hazard risk areas	No N/A					
How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?		2011	2012	2013	2014	2015
	Single Family	3	5	5	6	5
	Multi-Family	0	0	0	0	0
	Other (commercial, mixed use, etc.)	0	0	0	0	0
Please provide the number of permits for each hazard area or provide a qualitative description of where development has occurred.	Development has occurred throughout the city during the performance period for this plan. For those hazards with a clearly defined extent and location, the City cannot estimate development impacts. For those hazards with impacts city-wide, it is safe to assume that this new development could be subject to impacts from those hazards. However, it is important to note that all new development was subject to the regulatory capabilities identified in this annex.					
Please describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	Housing Element has list of vacant land. A small percentage of home remodels have occurred in hillside areas. New development is expected to consist primarily of infill development.					

15.4.2 Full Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 15-2. An assessment of fiscal capabilities is presented in Table 15-3. An assessment of administrative and technical capabilities is presented in Table 15-4. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 15-5. An assessment of education and outreach capabilities is presented in Table 15-6. Classifications under various community mitigation programs are presented in Table 15-7. Development and permitting capabilities are presented in Table 15-8, and the community's adaptive capacity for the impacts of climate change is presented in Table 15-9.

Table 15-2. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment:</i> Chapter 16 of Municipal Code adopted by reference the 2016 California Building Standards Code; 2016 Fire Code Incorporated by reference. Saratoga Fire District and County of Santa Clara Fire Department are responsible for administration; California Building Standards Commission promulgates model Statewide Uniform Code every 3 years.	Yes	Yes	Yes	Yes
Zoning Code <i>Comment:</i> Chapter 15 of Municipal Code contain City's Zoning Regulations. Authority derived from CA State Planning, Zoning Development Laws for General Law Cities.	Yes	No	Yes	Yes
Subdivisions <i>Comment:</i> Chapter 14 of Municipal Code contain City's Subdivision Ordinance. Authority derived from CA State Planning, Zoning Development Laws for General Law Cities.	Yes	No	Yes	Yes
Stormwater Management <i>Comment:</i> Required by Zoning Code 15-47.060. Santa Clara Valley Water District; West Valley Clean Water Program; CA Dept. of Fish & Wildlife Services.	Yes	Yes	Yes	Yes
Post-Disaster Recovery <i>Comment:</i> None Located.	No	No	No	Yes
Real Estate Disclosure <i>Comment:</i> CA Department of Real Estate. CA State Real Estate Law Cal. Civ. Code §1102 et seq.	No	Yes	Yes	Yes
Growth Management <i>Comment:</i> General Plan. Governor's Office of Planning and Research; CA Dept. of Housing and Community Development. Cal. Gov. Code §65300 et seq.	Yes	Yes	No	Yes
Site Plan Review <i>Comment:</i> Design Review required by Zoning Code. Authority derived from CA State Planning, Zoning Development Laws for General Law Cities.	Yes	No	Yes	Yes
Environmental Protection <i>Comment:</i> Authority derived from CA Environmental Quality Act (CEQA). Santa Clara Valley Water District and Federal Government. California Fish and Wildlife authority derived from CA Environmental Quality Act (CEQA).	Yes	Yes	Yes	Yes
Flood Damage Prevention <i>Comment:</i> Authority from City Code Article 16-66 – Flood Plain Management. Santa Clara Valley Water District and Federal Government.	Yes	Yes	Yes	Yes
Emergency Management <i>Comment:</i> Association of Bay Area Governments (ABAG) Pooled Liability Assurance Network (PLAN)	Yes	Yes	No	Yes
Climate Change <i>Comment:</i> Bay Area Air Quality Mgmt. District; Environmental Protection Agency. SB-32 California Global Warming Solutions Act of 2006 and SB-379 Land use: general plan: safety element	No	Yes	Yes	Yes
Other: <i>Comment:</i> None Located.	No	N/A	N/A	N/A
Planning Documents				
General Plan <i>Is the plan compliant with Assembly Bill 2140?</i> YES. Safety Element adopted 2/20/2103. Governor's Office of Planning and Research; CA Dept. of Housing and Community Development. Authority derived from CA State Planning, Zoning Development Laws for General Law Cities. <i>Comment:</i> General Plan is available at: http://www.saratoga.ca.us/cityhall/cd/general_plan.asp	Yes	Yes	Yes	Yes
Capital Improvement Plan <i>How often is the plan updated?</i> Annually <i>Comment:</i> Available at: http://www.saratoga.ca.us/civicax/filebank/blobdload.aspx?BlobID=9697	Yes	No	No	Yes
Floodplain or Watershed Plan <i>Comment:</i> Authority from City Code Article 16-66 – Flood Plain Mgmt. Santa Clara Valley Water District and Federal Government.	Yes	Yes	Yes	Yes

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Stormwater Plan	Yes	Yes	Yes	Yes
<i>Comment: Authority from City Code Article 16-66 – Flood Plain Mgmt. Santa Clara Valley Water District and Federal Government.</i>				
Urban Water Management Plan	No	No	No	No
<i>Comment: N/A</i>				
Habitat Conservation Plan	No	No	No	No
<i>Comment: N/A</i>				
Economic Development Plan	No	No	No	No
<i>Comment: N/A</i>				
Shoreline Management Plan	No	No	No	No
<i>Comment: N/A</i>				
Community Wildfire Protection Plan	No	Yes	No	Yes
<i>Comment: Santa Clara County Fire, Santa Clara County Community Wildfire Protection Plan</i>				
Forest Management Plan	Yes	No	No	Yes
<i>Comment: Tree preservation plans are needed in some instances</i>				
Climate Action Plan	None adopted	Yes	No	Yes
<i>Comment: Bay Area Air Quality Mgmt. District</i>				
Comprehensive Emergency Management Plan	Yes	Yes	No	Yes
<i>Comment: Santa Clara County Operational Area</i>				
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	Yes	Yes	Yes
<i>Comment: Santa Clara County Operational Area</i>				
Post-Disaster Recovery Plan	No	No	No	Yes
<i>Comment: N/A</i>				
Continuity of Operations Plan	No	No	No	Yes
<i>Comment: N/A</i>				
Public Health Plan	No	Yes	No	Yes
<i>Comment: Santa Clara County Health Department</i>				
Other:	No	No	No	No
<i>Comment: N/A</i>				

Table 15-3. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes – part of Santa Clara County Joint Powers Authority
Capital Improvements Project Funding	Yes – part of Annual Budget
Authority to Levy Taxes for Specific Purposes	Yes – subject to Prop 218 and local politics
User Fees for Water, Sewer, Gas or Electric Service	No – political resistance
Incur Debt through General Obligation Bonds	Yes – subject to local political will
Incur Debt through Special Tax Bonds	Yes – subject to local political will
Incur Debt through Private Activity Bonds	Yes – highly unlikely
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes – subject to local political will
Other	Yes

Table 15-4. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	City of Saratoga Community Development Director; Planning/Building staff
Engineers or professionals trained in building or infrastructure construction practices	Yes	John Cherbone, Public Works Director; Iveta Harvancik, Senior Civil Engineer; Poh Yee, Sr. Plan Checker/Building Inspector
Planners or engineers with an understanding of natural hazards	Yes	Community Development Director
Staff with training in benefit/cost analysis	Yes	Community Development Director; Mary Furey, Finance & Admin Service Director
Surveyors	Yes	Mark Helton, Contract City Surveyor
Personnel skilled or trained in GIS applications	Yes	Sung Kwon, Senior Planner Iveta Harvancik, Sr. Civil Engineer
Scientist familiar with natural hazards in local area	Yes	Ted Sayres, Contract City Geologist
Emergency Manager	Yes	James Lindsay, City Manager; Michael Taylor, Recreation & Facilities Director
Grant writers	Yes	John Cherbone, Public Works Director; Community Development Director

Table 15-5. National Flood Insurance Program Compliance

Criteria	Response
What local department is responsible for floodplain management?	Public Works and Community Developments
Who is your floodplain administrator? (department/position)	City Manager or designee per City Code Section 16-66.070
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	1996
Does your floodplain management program meet or exceed minimum requirements? • If exceeds, in what ways?	May Not Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	Unknown
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If no, please state why.	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	Yes Update in regulation implementation
Does your jurisdiction participate in the Community Rating System (CRS)? • If yes, is your jurisdiction interested in improving CRS Classification? • Is your jurisdiction interested in joining the CRS program?	No N/A No
How many flood insurance policies are in force in your jurisdiction? • What is the insurance in force? • What is the premium in force?	177 ^a \$57,046,900 ^a \$87,916 ^a
How many total loss claims have been filed in your jurisdiction? • How many claims were closed without payment/are still open? • What were the total payments for losses?	16 ^a 7 / 9 ^a \$26,680.53 ^a

a. According to FEMA statistics as of October 31, 2016

Table 15-6. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes – City Manager's Office
Do you have personnel skilled or trained in website development?	Yes – City Manager's Office
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes CERT, PEP, Safety Element, Associated Maps
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes CERT, PEP
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes – Planning Commission and City Council
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes KSAR Community Access TV
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes – AlertSCC Crisis Communications Plan

Table 15-7. Community Classifications

	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection (Santa Clara County Fire Department)	Yes	2/2Y	December 2015
Storm Ready	No	N/A	N/A
Firewise	Yes	N/A	N/A

Table 15-8. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? • If no, who does? If yes, which department?	Yes Saratoga Community Development Department
Does your jurisdiction have the ability to track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	Yes

Table 15-9. Adaptive Capacity for Climate Change

Adaptive Capacity Assessment	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts	Low
<i>Comment: None provided.</i>	
Jurisdiction-level monitoring of climate change impacts	Low
<i>Comment: None provided.</i>	
Technical resources to assess proposed strategies for feasibility and externalities	Low
<i>Comment: None provided.</i>	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Low
<i>Comment: None provided.</i>	
Capital planning and land use decisions informed by potential climate impacts	Low
<i>Comment: None provided.</i>	
Participation in regional groups addressing climate risks	Low
<i>Comment: None provided.</i>	
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Low
<i>Comment: None provided.</i>	
Identified strategies for greenhouse gas mitigation efforts	Low
<i>Comment: None provided.</i>	
Identified strategies for adaptation to impacts	Low
<i>Comment: None provided.</i>	
Champions for climate action in local government departments	Low
<i>Comment: None provided.</i>	
Political support for implementing climate change adaptation strategies	Low
<i>Comment: None provided.</i>	
Financial resources devoted to climate change adaptation	Low
<i>Comment: None provided.</i>	
Local authority over sectors likely to be negative impacted	Low
<i>Comment: None provided.</i>	
Public Capacity	
Local residents knowledge of and understanding of climate risk	Low
<i>Comment: None provided.</i>	
Local residents support of adaptation efforts	Low
<i>Comment: None provided.</i>	
Local residents' capacity to adapt to climate impacts	Low
<i>Comment: None provided.</i>	
Local economy current capacity to adapt to climate impacts	Low
<i>Comment: None provided.</i>	
Local ecosystems capacity to adapt to climate impacts	Low
<i>Comment: None provided.</i>	

15.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the hazard mitigation plan into local planning mechanisms.

15.5.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan:

- General Plan Safety Element—Includes all policies and maps. At the time of the next update, information obtained in the update of the hazard mitigation plan will be integrated into the General Plan as appropriate. The General Plan is available at:
<http://www.saratoga.ca.us/civicax/filebank/blobdload.aspx?blobid=3501>
- Geotechnical Clearance—Clearance is required for any new building or structure, or addition to any existing building or structure, located in areas with geologic and geotechnical hazards and constraints. A Ground Movement Map is available at:
http://www.saratoga.ca.us/cityhall/pw/engineering/geotechnical_clearance/ground.asp

15.5.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration.

- Annual Capital Improvement Budget—Actions and programs identified in the hazard mitigation plan will be integrated into the annual capital improvement budget as is feasible and appropriate.
- Legal and Regulatory Capabilities—Those capabilities identified as providing an integration opportunity in Table 15-1 will be reviewed and updated to include information on hazard risk reduction as feasible and appropriate.

15.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 15-10 lists all past occurrences of natural hazards within the jurisdiction.

Table 15-10. Natural Hazard Events

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Drought	3023	01/20/1977	Not available
Severe Weather (Wind/Rain)	758	02/12/1986	Not available
Earthquake	845	10/17/1989	Not available
Severe Weather (Freeze)	894	12/19/1990	Not available
Severe Weather (Wind/Rain)	1044	01/03/1995	Not available
Severe Weather (Wind/Rain)	1155	12/28/1996	Not available
Severe Weather (Wind/Rain)	1203	02/02/1998	Not available
Severe Weather (Wind/Rain)	N/A	12/15/2002	Not available.
Drought	N/A	01/15/2012	Not available
Severe Weather (Wind/Rain)	N/A	12/03/2014	Not available

15.7 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include:

- The City of Saratoga shares a significant reliance on technology and communications that could be disrupted during a hazard event.

15.8 HAZARD RISK RANKING

Table 15-11 presents the ranking of the hazards of concern.

Table 15-11. Hazard Risk Ranking			
Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	48	High
2	Wildfire	45	High
3	Severe Weather	36	High
4	Landslide	18	Medium
5	Flood	15	Medium
6	Drought	9	Low
7	Dam and Levee Failure	0	None

15.9 STATUS OF PREVIOUS PLAN ACTIONS

The status of previous actions from the 2011 ABAG LHMP for the City of Saratoga can be found in Appendix D of this volume.

15.10 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 15-12 lists the actions that make up the City of Saratoga hazard mitigation action plan. Table 15-13 identifies the priority for each action. Table 15-14 summarizes the mitigation actions by hazard of concern and the six mitigation types.

15.11 ADDITIONAL RESOURCES

The hazard mitigation plan annex development tool-kit was used in the development of this annex to the Santa Clara Operational Area Hazard Mitigation Plan.

Table 15-12. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SAR-1 —Norton/Villa Montalvo Emergency Route. Construction of an emergency access road connecting Montalvo with Norton Road (evacuation route).						
New	Earthquake	7, 8	Public Works	High (\$1,000,000)	HMGP, CIP	Short Term
SAR-2 —Install El Camino Grande Storm Drain Pump to reduce flood risk to assets in the area.						
New	Flood	7, 8	Public Works	High (\$361,000)	HMGP, FMA, CIP	Short Term
SAR-3 —Build the Damon Lane Retaining Wall to reduce the potential for damage to assets in likely slide areas.						
New and Existing	Landslide	7, 8	Public Works	High (\$190,000)	HMGP, HR	Short Term
SAR-4 —Engage in annual storm drain upgrades to improve drainage throughout the City.						
New and Existing	Flood	7, 8	Public Works	High (\$200,000)	CIP, Possibly HMGP or FMA	Ongoing
SAR-5 —Engage in curb and gutter maintenance and repairs to improve drainage throughout the City.						
New and Existing	Flood	7, 8	Public Works	High (\$50,000)	CIP, Possibly HMGP or FMA	Ongoing
SAR-6 —Conduct bridge maintenance and repairs to mitigate against risk from the earthquake hazard.						
Existing	Earthquake	7, 8	Public Works	High (\$200,000)	HMGP, CIP	Long Term
SAR-7 —Improve Saratoga Hills Storm Drains to reduce flood risk to assets in the area.						
New and Existing	Flood	7, 8	Public Works	High (\$200,000)	CIP, Possibly HMGP or FMA	Ongoing
SAR-8 —Conduct Well Drilling Project to increase redundancy in the City's water supply.						
New	Drought/Earthquake	7, 8	Public Works	High (\$1,000,000)	HMGP, CIP	Long Term
SAR-9 —Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.						
Existing	All Hazards	4, 5, 6, 7, 8	Planning and Public Works	High	HMGP, PDM, FMA, CDBG-DR	Short-term
SAR-10 —Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community						
New and Existing	All Hazards	2, 4,	Planning	Low	Staff Time, General Funds	Ongoing
SAR-11 —Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All Hazards	1, 5	Recreation and Facilities Department	Low	Staff Time, General Funds	Short-term
SAR-12 —Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP). This will be accomplished through the implementation of floodplain management programs that will, at a minimum, meet the requirements of the NFIP:						
<ul style="list-style-type: none"> • Update the flood damage prevention ordinance with required changes and adopt those changes • Enforcement of the flood damage prevention ordinance • Participate in floodplain identification and mapping updates • Provide public assistance/information on floodplain requirements and impacts. 						
New and Existing	Flood	1, 2, 3, 4, 7, 8	Public Works	Low	Staff Time, General Funds	Ongoing

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SAR-13 —Provide incentives for private owners to retrofit soft story buildings. These incentives could take the form of reduced planning application, building permit and inspection fees, or other suitable incentives.						
Existing	Earthquake	4, 8	Planning	Low	Staff Time, General Funds, Possible HMGP or PDM	Ongoing
SAR-14 —Recognize that a multi-agency approach is needed to mitigate flooding by having flood control districts, cities, counties, and utilities meet at least annually to jointly discuss their capital improvement programs for most effectively reducing the threat of flooding. Work toward making this process more formal to insure that flooding is considered at existing joint-agency meetings.						
New and Existing	Flood	1, 2, 5	Santa Clara Valley Water District; Community Development and Public Works	Low	Staff Time, General Funds	Ongoing

Table 15-13. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
SAR-1	2	High	High	Yes	Yes	No	Medium	High
SAR-2	2	Medium	High	No	Yes	No	Low	Medium
SAR-3	2	High	High	Yes	Yes	No	Medium	High
SAR-4	2	Medium	High	No	Possibly	No	Low	Medium
SAR-5	2	Medium	High	No	Possibly	No	Low	Medium
SAR-6	2	High	High	Yes	Yes	No	Medium	High
SAR-7	2	Medium	High	No	Possibly	No	Low	Medium
SAR-8	2	Medium	High	No	Yes	No	Low	Medium
SAR-9	5	High	High	Yes	Yes	No	Medium	High
SAR-10	2	Medium	Low	Yes	No	Yes	High	Low
SAR-11	2	Low	Low	Yes	No	Yes	High	Low
SAR-12	6	Medium	Low	Yes	No	Yes	High	Low
SAR-13	2	High	Low	Yes	Possibly	Yes	High	High
SAR-14	3	Medium	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

Table 15-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a						
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects	7. Climate Resilient
Severe Weather	SAR-10, SAR-11	SAR-9					
Wildfire	SAR-10, SAR-11	SAR-9,					
Earthquake	SAR-10, SAR-11, SAR-13	SAR-6, SAR-8, SAR-9, SAR-13	SAR-13		SAR-1		
Landslide	SAR-10, SAR-11	SAR-9,				SAR-3	
Flood	SAR-10, SAR-11, SAR-12, SAR-14	SAR-2, SAR-3, SAR-4, SAR-5, SAR-9, SAR-12	SAR-12		SAR-2	SAR-7	
Drought	SAR-10, SAR-11	SAR-9,					SAR-8
Dam and Levee Failure	SAR-10, SAR-11, SAR-12	SAR-9, SAR-12	SAR-12				

a. See the introduction to this volume for explanation of mitigation types.

16. CITY OF SUNNYVALE

16.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

Vinicio Mata, Lt. / OES Coordinator
700 All America Way
Sunnyvale, CA 94088
Telephone: 408-730-7198
e-mail Address: vmata@sunnyvale.ca.gov

Alternate Point of Contact

Shawn Ahearn, Captain
700 All America Way
Sunnyvale, CA 94088
Telephone: 408-730-4503
e-mail Address: sahearn@sunnyvale.ca.gov

16.2 JURISDICTION PROFILE

The following is a summary of key information about the jurisdiction and its history:

- **Date of Incorporation**—1912
- **Current Population**—148,372 (CA Department of Finance January 2016 estimate)
- **Population Growth**—Based on the data tracked by the state Department of Finance, Sunnyvale has experienced an increase of 1.2 percent growth in population within the last year. This makes it the fifth largest city in the San Francisco Bay Area and the second largest in Santa Clara County. The population projection for Sunnyvale for 2030 is approximately 164,732. This number is based on projections from the 2009 ABAG (Association of Bay Area Governments) projection and the Draft Sunnyvale LUTE (Land Use and Transportation Element) projection.
- **Location and Description**—The City of Sunnyvale is located in Santa Clara County, California. It encompasses 24 square miles. Santa Clara County makes up the southern portion of the San Francisco Bay Area. Sunnyvale is bordered by the San Francisco Bay and portions of San José to the north, Moffett Federal Airfield to the northwest, Mountain View to the west, Los Altos to the southwest, Cupertino to the south and Santa Clara to the east. US highway 101 and the historic El Camino Real traverse the city.
- **Brief History**—Sunnyvale’s history has always been based on its economy. Initially, the area’s vast open space and fertile soil were ideal for the fruit orchards that supported the settlement’s first residents. With the arrival of the railroad in 1864, the economic base of the community was able to expand, as canneries to process the fruit from the surrounding orchards were built near the rail lines. In 1906, the Hendy Iron Works relocated from San Francisco to Sunnyvale, continuing the area’s industrial development.

By 1940, the population had grown to about 4,400 and the Hendy Iron Works was taken over by Westinghouse to support the war effort. After the war, the defense-related industry arrived, capitalizing on the pleasant climate and Moffett Naval Air Station. Lockheed Missiles & Space Company moved to Sunnyvale in 1956, and soon became Sunnyvale’s largest employer. The 1950s and 1960s became the periods of largest growth for the community, resulting in a population of 96,000 in 1970.

The defense era gave way to the high-tech era when the microprocessor was introduced in 1971. During the years that followed, companies with foresight saw the potential of computers and the power of

semiconductors. The City became the nexus of research, development and manufacturing that created Silicon Valley, and that legacy continues today in the era of the Internet.

- **Climate**—Sunnyvale’s weather is typical of the Northern California coast, which can be categorized as a Mediterranean climate. It has mild, moist winters and comfortably warm very dry summers. The average precipitation in inches per year is approximately 15.71. The average temperature ranges from 71 to 53 degrees Fahrenheit. Average daytime summer temperatures are in the high 70s, and during the winter, average daytime high temperatures rarely stay below 50 °F (10 °C).
- **Governing Body Format**—The City of Sunnyvale is a charter city. The charter authorizes the creation of the city and outlines its powers, functions, and organization. The original Charter of the City of Sunnyvale was established by vote of the people of the City of Sunnyvale as the organic law of the City under the authority of the Constitution of the State of California and became effective May 18, 1949. The municipal government provided by the Charter is known as the “Council-Manager” form of government. The elective officers of the City consist of a City Council composed of seven members. The Mayor and Vice-Mayor are not directly elected. They are selected from the City Council members by the City Council serving two-year and one-year terms, respectively.

The City of Sunnyvale consists of 11 departments: City Attorney, City Manager, Community Development, Environmental Services, Finance, Human Resources, Information Technology, Library and Community Services, NOVA Workforce Services, Public Safety and Public Works.

The City of Sunnyvale has a strong tradition of community participation, one of which is through service on a board or commission. There are 10 boards and commissions that report to the City Council.

The City Council assumes responsibility for the adoption of this plan, while the City Manager will oversee its implementation.

16.3 DEVELOPMENT TRENDS

The development levels for the City of Sunnyvale can be categorized from moderate to high within the last number of years consisting of residential as well as commercial development. The City of Sunnyvale adopted its general plan in 2011. Sunnyvale’s General Plan consists of a Community Vision and five supporting chapters addressing the physical development of the City. These chapters group related topics together such as Community Character, Safety and Noise, and Environmental Management.

The top five industries by employment in the city consist of: Professional, Scientific and Technical Services; Manufacturing; Information; Health Care and Social Assistance; Recreation/Hospitality. The top 10 employers in Sunnyvale include: Lockheed Martin Space Systems; Network Appliance, Inc.; Apple, Inc.; Northrop Grumman Marine; Yahoo! Inc.; LinkedIn Corp.; Juniper Networks; Intuitive Surgical, Inc.; Google; A2Z Development Center, Inc. (Lab 126). Table 16-1 summarizes development trends in the performance period since development of the previous hazard mitigation plan and expected future development trends.

Table 16-1. Recent and Expected Future Development Trends

Criterion	Response					
Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan? • If yes, give the estimated area annexed and estimated number of parcels or structures.	Yes The City annexed 5.3 acres of land along Wolfe Road between El Camino Real and Fremont Ave. It has not been subdivided yet.					
Is your jurisdiction expected to annex any areas during the performance period of this plan? • If yes, please describe land areas and dominant uses. • If yes, who currently has permitting authority over these areas?	No N/A N/A					
Are any areas targeted for development or major redevelopment in the next five years? • If yes, please briefly describe, including whether any of the areas are in known hazard risk areas	Yes After major delays on the Sunnyvale Downtown Specific Plan, the downtown redevelopment project is back on track with a new developer. It will include entertainment as well as mixed use housing/commercial. The Lawrence Station Specific Plan identifies opportunities for higher-density housing development as well as mixed-use in proximity to transit. There is also a Peery Park Specific Plan which addresses a vision and broad policy concepts to guide development in that area which consists of 77% industrial use, 12% commercial and less than 1% residential. Continued development of the Moffet Park Specific Plan which addresses a large commercial and industrial area of the city. None of the anticipated development is in known hazard risk areas.					
How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?		2011	2012	2013	2014	2015
	Total	4,370	4,758	5,027	5,387	6,020
Please provide the number of permits for each hazard area or provide a qualitative description of where development has occurred.	Special Flood Hazard Areas- 3 Landslide- N/A High Liquefaction Areas- 0 Tsunami Inundation Area - 0 Wildfire Risk Areas – N/A					
Please describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	The City is considered to be at 90 percent build out.					

16.4 CAPABILITY ASSESSMENT

16.4.1 Resources for the 2017 Planning Initiative

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for inclusion into the 2017 Multi-Jurisdiction Hazard Mitigation Plan for both Volume I and Volume II (City of Sunnyvale). All of the below items were additionally reviewed as part of the full capability assessment for the City of Sunnyvale.

- Sunnyvale General Plan—The General Plan, including the Land Use and Safety Elements, were reviewed for information regarding goals and policies consistent with hazard mitigation for carry over as goals and objectives.
- Sunnyvale Municipal Code—The Municipal Code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.

- **Flood Damage Prevention Ordinance**—The Flood Damage Prevention Ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Capital Improvements Plan**—The Capital Improvements Plan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.
- **City of Sunnyvale Climate Action Plan**—The Climate Action Plan was reviewed to identify areas that have been addressed by the plan and potential cross-planning initiatives.
- **2015 Urban Water Management Plan**—The Urban Water Management Plan was reviewed for cross-referencing purposes.
- **Sunnyvale Local Hazard Mitigation Plan June 11, 2012**—The Local Hazard Mitigation Plan, was reviewed for information regarding goals, policies and projects consistent with hazard mitigation for carry over as goals and objectives.
- **Technical Reports and Information**—Outside resources and references used to complete the Sunnyvale Annex are identified in Section 16.11 of this Annex.

16.4.2 Full Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 16-2. An assessment of fiscal capabilities is presented in Table 16-3. An assessment of administrative and technical capabilities is presented in Table 16-4. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 16-5. An assessment of education and outreach capabilities is presented in Table 16-6. Classifications under various community mitigation programs are presented in Table 16-7. Development and permitting capabilities are presented in Table 16-8, and the community's adaptive capacity for the impacts of climate change is presented in Table 16-9.

Table 16-2. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment: 2016 California Building Code adopted Nov. 15, 2016. Ordinance 3100-16.</i>	Yes	Yes	Yes	Yes
Zoning Code <i>Comment: Sunnyvale Municipal Code Title 19 Zoning</i>	Yes	No	No	No
Subdivisions <i>Comment: Sunnyvale Municipal Code Title 18 Subdivisions</i>	Yes	No	No	No
Stormwater Management <i>Comment: Sunnyvale Municipal Code 12.60 / San Francisco Bay Regional Water Quality Control Board via Order No. R2-2015-0049, NPDES Permit No. CAS612008 issued Nov. 19, 2015 / Permit requires development of a Green Infrastructure Master Plan by June 30, 2019.</i>	Yes	Yes	Yes	Yes
Post-Disaster Recovery <i>Comment: None Located</i>	No	No	Yes	No
Real Estate Disclosure <i>Comment: Cal. Civ. Code §1102 et seq.</i>	No	No	Yes	No
Growth Management <i>Comment: Cal. Gov. Code §65300 et seq.</i>	No	No	Yes	No
Site Plan Review <i>Comment: None located.</i>	No	No	No	No
Environmental Protection <i>Comment: California Environmental Quality Act (Guideline: California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387)</i>	Yes	No	Yes	No

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Flood Damage Prevention	Yes	Yes	Yes	No
<i>Comment: Standards for construction in flood zones is regulated by FEMA and the State. Local ordinance was most recently updated in 2010 (Ordinance #2916-10)</i>				
Emergency Management	Yes	Yes	Yes	Yes
<i>Comment: Emergency Operations Plan (2005) New plan is being finalized (will probably be approved by Council 2017)</i>				
Climate Change	Yes	No	Yes	Yes
<i>Comment: City has adopted a Climate Action Plan in May 2014 specifying actions to reduce communitywide GHG emissions from Sunnyvale. California SB-379: Land Use: General Plan: Safety Element</i>				
Other:	N/A	N/A	N/A	N/A
<i>Comment: None Located</i>				
Planning Documents				
General Plan	Yes	Yes	Yes	Yes
<i>Is the plan compliant with Assembly Bill 2140? Yes</i>				
<i>Comment:</i>				
Capital Improvement Plan	Yes	No	No	Yes
<i>How often is the plan updated?</i>				
<i>Comment: The CIP is updated every two years.</i>				
Floodplain or Watershed Plan	No	No	No	No
<i>Comment: None Located.</i>				
Stormwater Plan	No	No	No	No
<i>Comment: None Located.</i>				
Urban Water Management Plan	Yes	Yes	Yes	No
<i>Comment: Adopted by City Council on June 21, 2016. Resolution 758-16. It meets the requirement to the California Urban Water Management Planning Act, Water Code Division 6, Part 2.6, sections 10610 through 10656.</i>				
Habitat Conservation Plan	No	No	No	No
<i>Comment: None Located.</i>				
Economic Development Plan	Yes	No	No	No
<i>Comment: Economy is addressed in the General Plan Land Use and Transportation element</i>				
Shoreline Management Plan	No	No	No	No
<i>Comment: None Located.</i>				
Community Wildfire Protection Plan	No	No	No	No
<i>Comment: None Located.</i>				
Forest Management Plan	Yes	No	No	No
<i>Comment: The Urban Forest Management Plan is not scheduled for routine updates, only as needed. Last adopted in September 2014.</i>				
Climate Action Plan	Yes	No	No	Yes
<i>Comment: Adopted May 20, 2014 / Completed by the Community Development Department. The plan was completed following guidelines from the California Environmental Quality Act (CEQA)</i>				
Comprehensive Emergency Management Plan	Yes	Yes	Yes	Yes
<i>Comment: The new Emergency Operations Plan has been completed and will be adopted by City Council on 2017.</i>				
Threat & Hazard Identification & Risk Assessment (THIRA)	No	No	No	No
<i>Comment: None Located.</i>				
Post-Disaster Recovery Plan	No	No	No	Yes
<i>Comment: There is not one in place, however there are plans to develop a Post-Disaster Recovery Plan</i>				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Continuity of Operations Plan	No	No	No	No
<i>Comment: There is not one in place, however there are plans to develop a Continuity of Operations Plan</i>				
Public Health Plan	No	No	No	No
<i>Comment: None Located.</i>				
Other:	N/A	N/A	N/A	N/A
<i>Comment: None Located.</i>				

Table 16-3. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Other	No

Table 16-4. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Community Development Department/ Planners Department of Public Works / Director, Assistant Director, Senior Engineer, Civil Engineer, Engineering Assistant II
Engineers or professionals trained in building or infrastructure construction practices	Yes	Community Development Department/Engineers Department of Public Works / Director, Assistant Director, Senior Engineer, Civil Engineer, Engineering Assistant II
Planners or engineers with an understanding of natural hazards	Yes	Community Development Department/ Planners
Staff with training in benefit/cost analysis	Yes	Finance Department
Surveyors	Yes	Community Development Department
Personnel skilled or trained in GIS applications	Yes	Information Technology/Senior Programmer Analyst
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Department of Public Safety/Special Operations /Office of Emergency Services Coordinator
Grant writers	Yes	Department of Public Safety / Special Operations / Management Analyst Department of Public Works / Varies (no staff specifically assigned) NOVA Workforce Services / Workforce Development Analysts, Employment Training Manager

Table 16-5. National Flood Insurance Program Compliance

Criteria	Response
What local department is responsible for floodplain management?	Community Development Department
Who is your floodplain administrator? (department/position)	Community Development Department/ Director
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date of adoption of your flood damage prevention ordinance?	Most recent ordinance adopted 1994. Have made minor revisions in 2010.
Does your floodplain management program meet or exceed minimum requirements?	Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	March 12, 2015
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? • If so, please state what they are.	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If no, please state why.	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	No
Does your jurisdiction participate in the Community Rating System (CRS)? • If yes, is your jurisdiction interested in improving CRS Classification? • Is your jurisdiction interested in joining the CRS program?	Yes (Class 7) No N/A
How many flood insurance policies are in force in your jurisdiction? • What is the insurance in force? • What is the premium in force?	1,057 \$275, 627, 200 ^a \$996,831 ^a
How many total loss claims have been filed in your jurisdiction? • How many claims were closed without payment/are still open? • What were the total payments for losses?	10 ^a 5/0 ^a \$68,655.19 ^a

a. According to FEMA statistics as of October 31, 2016.

Table 16-6. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	Yes Information regarding the process as well as a survey has been uploaded to the Department of Public Safety Emergency Preparedness web page. Information regarding Floodplain Management and Flood and Storm safety is included on the Department of Public Works web page.
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes We provide emergency preparedness information.
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes We are migrating to a new website. There is a plan to make the LHMP available. In the last few years, our social media presence has increased. We are planning to use social media for hazard related information.
Do you have any established warning systems for hazard events? • If yes, please briefly describe.	Yes AlertSCC (Santa Clara County's emergency notification system); Community Notification system (currently Nixle and transitioning to Everbridge); social media platforms; 1680 AM radio station; Access to Emergency Alerting System.

Table 16-7. Community Classifications

	Participating?	Classification	Date Classified
Community Rating System	Yes	7	May 1, 2009
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	Yes	2	July 1, 2013
StormReady	No	N/A	N/A
Firewise	No	N/A	N/A

Table 16-8. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits? • If no, who does? If yes, which department?	Yes Community Development
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory?	No

Table 16-9. Adaptive Capacity for Climate Change

Adaptive Capacity Assessment	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts	Medium
<i>Comment: Most staff is aware of issues, but more could be done to provide information on specific impacts and how to address.</i>	
Jurisdiction-level monitoring of climate change impacts	Low
<i>Comment: Project specific impacts including greenhouse gas emissions as well as compliance with the City's Climate Action Plan are evaluated on project by project basis during California Environmental Quality Act (CEQA) review. If project does not meet the State allowances, mitigation measures are required but the City Council can still approve the project with "overriding considerations" if the project will result in significant Green House Gas (GHG) emissions beyond what can be mitigated.</i>	
<i>Sunnyvale does not currently have the resources/tools to conduct jurisdiction-level monitoring of climate change impacts.</i>	
Technical resources to assess proposed strategies for feasibility and externalities	Low
<i>Comment: Do not have this capacity.</i>	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	High
<i>Comment: Sunnyvale has conducted GHG emissions inventories and plans to conduct them biennially per City's Climate Action Plan.</i>	
Capital planning and land use decisions informed by potential climate impacts	Medium
<i>Comment: Project specific impacts including greenhouse gas emissions as well as compliance with the City's Climate Action Plan are evaluated on project by project basis during California Environmental Quality Act (CEQA) review. If project does not meet the State allowances mitigation measure are required but the City Council can still approve the project with "overriding considerations" if the project will result in significant GHG emissions beyond what can be mitigated.</i>	
Participation in regional groups addressing climate risks	Medium
<i>Comment: City staff participate in several regional groups addressing climate risks including but not limited to Joint Venture Silicon Valley Public Sector Climate Protection Task Force, Santa Clara Valley Water District South Bay Shoreline Study, and County of Santa Clara Silicon Valley 2.0 Risk Assessment Tool. However, each of these forums tends to be more information sharing. South Bay lacks unified approach to adaption planning and response. It seems there are multiple entities involved but not a single lead agency.</i>	
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Low
<i>Comment: Sunnyvale's adopted Climate Action Plan and Adaptation Chapter. Action A.3.1 calls for City to "analyze and disclose possible impacts of climate change on the project or plan area with an emphasis on sea level rise."</i>	
<i>Project specific impacts including greenhouse gas emissions as well as compliance with the City's Climate Action Plan are evaluated on project by project basis during California Environmental Quality Act (CEQA) review. If project does not meet the State allowances mitigation measure are required but the City Council can still approve the project with "overriding considerations" if the project will result in significant GHG emissions beyond what can be mitigated.</i>	
Identified strategies for greenhouse gas mitigation efforts	Medium
<i>Comment: City Council adopted Sunnyvale's Climate Action Plan in May 2014. City is currently implementing; however, while plan will meet the State's near-term 2020 target, CAP does not meet 2030 or 2050 GHG reduction targets. City Council considering actions to update CAP to meeting long-term targets and formally adopt State targets as local goal.</i>	
Identified strategies for adaptation to impacts	Low
<i>Comment: Sunnyvale's CAP includes a chapter on Adaptation; however, the identified actions are general and emphasize participation on regional groups. The City could benefit through the development of a City specific adaption plan; however, resources and capacity are limited.</i>	
Champions for climate action in local government departments	Medium
<i>Comment: Most staff are generally aware of Climate Change issues, especially CDD, DPW, ESD involved in CAP and development projects. Staff could benefit from more information about specific climate impacts to Sunnyvale and by having more tools and resources on how to address adaption as a part of their work.</i>	
Political support for implementing climate change adaptation strategies	High
<i>Comment: Elected officials, Sustainability Commission, and community groups (SunnyvaleCool, Livable Sunnyvale, etc.) are actively engaged on climate issues and supportive of City action.</i>	
Financial resources devoted to climate change adaptation	Low
<i>Comment: City currently has no funding dedicated to climate change adaptation; any funding would have to come from the General Fund.</i>	

Adaptive Capacity Assessment	Jurisdiction Rating
Local authority over sectors likely to be negative impacted	Low
Comment:	
Public Capacity	
Local residents knowledge of and understanding of climate risk	Medium
Comment: Small group of Sunnyvale resident community is aware and actively engaged; broader community is aware but not engaged.	
Local residents support of adaptation efforts	Low
Comment: Small group of Sunnyvale resident community is aware and actively engaged; broader community is aware but not engaged or interested in changing their behaviors or taking actions on climate issues.	
Local residents' capacity to adapt to climate impacts	Medium
Comment: Not a lot of information on specific adaptation actions a resident can take; broader community may be aware but not engaged or interested in changing their behaviors or taking actions on climate issues.	
Local economy current capacity to adapt to climate impacts	Medium
Comment: Most large companies in area are engaged and take precautions to adapt/mitigate their own effects on climate. Mid-size and small companies may not have the resources to address or engage on the issue.	
Local ecosystems capacity to adapt to climate impacts	Low
Comment: North Sunnyvale borders the South San Francisco Bay and its wetland and marsh habitats. This area is included in the South San Francisco Shoreline Study. The goal of the Shoreline Study is to protect the parts of Santa Clara County's shoreline with the highest potential damages and threats to human health and safety from flooding, using a combination of flood protection levees and wetlands. This approach using natural infrastructure would provide increased flood protection and restored Bay habitats, as well as a flood protection system that can evolve in the future. The Shoreline Study is coordinated with another project in the area, the South Bay Salt Pond Restoration Project, which seeks to restore historic wetlands on 15,100 acres of former salt ponds in the South Bay. This study is moving forward in phases and the first phase selected is the Alviso reach which does not include Sunnyvale. Lack specific information on how other aspects of our local ecosystem would adapt such as open space areas and urban forest.	

16.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the hazard mitigation plan into local planning mechanisms.

16.5.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan.

City of Sunnyvale General Plan

The following are excerpts from the plan illustrating how hazard mitigation has been integrated into the plan:

- General Plan
 - The City actively encourages and requires property owners to maintain their properties and to preserve the safety and integrity of their structures through the Neighborhood Preservation Program. The City's Public Safety Department is one of the oldest fully-integrated Police, Fire, and Emergency Medical Services public entities in the United States. Each of the City's 201 sworn officers is highly trained and certified to perform the functions of police officer, firefighter, and emergency medical technician services. Together with the City management team, the staff prepares contingency plans to address possible future emergencies, ranging from an industrial explosion with toxic materials to a major earthquake. A 2015 community satisfaction survey indicated a rating of 78% on the overall quality of life and an 83% overall feeling of safety among Sunnyvale residents. Sunnyvale has a relatively low risk factor for fire loss and past fire experience has demonstrated Sunnyvale to be a relatively fire-safe community. The City maintains a trained and well equipped fire service to respond

to fires and other incidents. While the potential for extraordinary disaster always exists, and while the aging process of the City and its buildings will have some adverse impact on fire loss, the overall environment is comparatively fire-safe.

- The majority of Sunnyvale is located in the 100-year floodplain, although a 100-year flood event has never occurred in the City. The Santa Clara Valley Water District maintains Calabazas Creek, Stevens Creek, and the Sunnyvale East and West flood control channels, and has made numerous improvements to the channels to increase their capacity. These channels, coupled with the City's 150 mile storm drain system, take the majority of surface run-off to the Bay. In addition, low lying areas in the northern areas of the City are assisted by two pumping stations. Within the next few years, the Santa Clara Valley Water District has planned additional improvements to local creeks to ensure they will be able to contain the runoff from a 100-year flood. Sunnyvale enforces specific building code requirements in the flood prone areas to minimize potential property damage, including minimum foundation pad heights above the projected flood depth as specific on the Flood Insurance Rate Map (FIRM). The City participates in the National Flood Insurance Program Community Rating System. Without the present system of dikes and levees, parts of Sunnyvale would be subjected to flooding by tides. If these dikes and levees were to fail or their banks overflow, tidal flooding could occur. In 2006, the City's Department of Public Works completed a capital improvement project to repair and strengthen the levees surrounding the holding ponds, reducing the chance that the levees would fail in the event of a major earthquake. Maintenance work continues to be completed in this area.

- Land Use Element

- Sunnyvale is nearly fully developed; only 0.5% of land is vacant. The City of Sunnyvale does not build housing, but through its land use regulations it can influence and control the type and quality of housing that is developed. With regard to commercial and industrial space, the adopted 1997 Land Use and Transportation Element of the General Plan would accommodate a total of 49 million square feet, about 14 million square feet more than currently exists. At today's intensity of building use, this would yield a total of about 160,000 jobs. When this figure is compared to the City's 2025 projection of 109,570 jobs for the city, it is apparent that Sunnyvale has more than adequate capacity for projected job growth.

- Housing Element

- Under the Sunnyvale General Plan, the State-required Housing element has become the Housing and Community Revitalization Sub-element, and is found under a broader Community Development element that includes Community Design, Open Space, and Seismic Safety. The City actively participates in the State of California Seismic Hazards Mapping Program. All geotechnical reports received by the City are forwarded to the State of California for additional review. Un-reinforced masonry (URM) buildings are particularly susceptible to ground shaking. In compliance with URM legislation enacted 1986, Sunnyvale is continuing to perform hazard mitigation on URM buildings. Only ten URM buildings remain in Sunnyvale, all of which are located in the South Murphy Avenue historical area which is exempt from the State URM legislation; none of these URM's are residential structures.

- Seismic Safety- Safety Sub-Element

- The purpose of the Seismic Safety –Safety Sub-Element to Sunnyvale's General Plan is to examine seismic safety and other safety issues in Sunnyvale and to establish a planning document to guide land use decisions. The City believes that incorporating knowledge of existing safety hazards into the planning and development review process is essential.

- Planning and Development—The majority of industrial zoned land lies in the northern portion of the City, which is considered to be more vulnerable to damage resulting from an earthquake. As the land is at or below sea level, a system of dikes and levees is necessary to maintain its status.
- Water Resources Sub-Element
 - Sunnyvale's Water Resources Sub-Element to the General Plan details the City's water supply reliability issues and infrastructure replacement needs. The three key goals outlined in this document are to acquire and manage an adequate supply of water, to maintain reliable water distribution system infrastructure, and to ensure that water meets all quality, health, and regulatory standards.
 - Water Supply—Sources of the City's water supply include local groundwater wells, imported supplies from the Santa Clara Valley Water District (SCVWD) and the San Francisco Public Utilities Commission (SFPUC), and interagency connections with other local water suppliers in case of an emergency. Recycled water is also a source of water and acts as a drought-resistant supply for the City. This document assures that barring catastrophic events, the City of Sunnyvale has adequate supply commitments and facilities to reliably meet the projected water needs of its residents and businesses for the foreseeable future. It is a goal of the City to provide a redundancy in the water supply system so that potable water demand and fire suppression requirements can be met under both normal and emergency circumstances. The SFPUC system, however, needs to be upgraded and designed to current seismic standards so that it is able to deliver water even in the event of a major earthquake. SFPUC is therefore undertaking a Water System Improvement Program that will enhance the ability of its water supply system to meet identified service goals for water quality, seismic reliability, delivery reliability, and water supply.
 - In 2002, San Francisco and the SFPUC were required to prepare an emergency response plan, in consultation with the Bay Area Water Users Association, focusing on how water service can be restored promptly after an earthquake and prohibiting discrimination against wholesale customers in the allocation of water during such a crisis. The Bay Area Water Supply and Conservation Agency monitors the progress of SFPUC's Capital Improvements Program, in particular regional projects to enhance seismic safety. SCVWD has an active conjunctive use program to optimize the use of groundwater and surface water, and to prevent groundwater overdraft and land subsidence. The SCVWD completed a Water Infrastructure Reliability Project in 2005 that assessed the vulnerability of its regional raw and treated water delivery systems. The study identified the following hazards as those that pose a risk to system functionality: San Andreas Fault magnitude 7.0 earthquake, Southern Hayward Fault magnitude 6.67 earthquake, 100 year flood, 500 year flood, and a regional electric power outage.
 - Water System and Infrastructure—Approximate 80% of the water main pipelines serving Sunnyvale were constructed in the 1960s and the remainder in the 1980s. The 1960s pipelines will reach their estimated 50 year useful service life within the next several years and will need to be improved. Sunnyvale has established methods to provide resources for the repair, replacement, and rehabilitation of the water system and these projects are of high priority in the City's Capital Improvements Plan. The City's fire hydrants are also continuously maintained so they can be used to mitigate fire hazards.
 - Water Demand and Demand Management—Ongoing water conservation efforts have led to the City decreasing the amount of water used in Sunnyvale per day. Increased use of recycled water is another City controlled method to reduce demand for potable supply. The City's drought response is based on the Sunnyvale Water Conservation Plan. This plan includes mandatory and voluntary water use restrictions associated with different levels of reduction and approaches for enforcement. In the 2015 Urban Water Management Plan the City projects increased water demands in the commercial sector, however water demand in the residential sector is expected to level off as old housing developments are replaced with high density more water efficient developments.

At the time of the next update, information obtained in the update of the hazard mitigation plan will be integrated into the General Plan as appropriate.

Flood Damage Prevention Ordinance (Floodplain Management Ordinance)

In an effort to reduce the risk of loss of life, health, and property due to periodic flood inundation, the City of Sunnyvale has developed a Prevention of Flood Damage Ordinance. The ordinance is designed to minimize the expenditure of public money for flood control projects, the need for rescue and relief efforts, business interruptions, and damage to public facilities and utilities. The ordinance also ensures that if potential buyers inquire, they are informed if a property is in an area of special flood hazard and that those who occupy property in those areas are held responsible for their actions. The Director of Community Development is responsible for enforcing this ordinance.

One of the provisions of this plan is that a development permit must be obtained before any construction or development begins and that certain construction standards such as; anchoring, building with flood resistant materials, and elevating and flood proofing, are required within an area of special flood hazard. The plan also enforces that new and replacement water and sanitary sewage systems should be designed to minimize flood water infiltration and discharge into flood waters.

Standards are also included for subdivisions and manufactured homes. Since floodways are extremely hazardous, no new development is permitted to be constructed in these areas unless certification by a professional engineer or architect is provided demonstrating that the development will not increase base flood elevations. This ordinance also has special regulations for new development within a coastal high hazard area. These regulations ensure that new construction is located on the landward side of the reach of mean high tide, the space below the lowest floor is free of obstructions or constructed with breakaway walls and is not used for human habitation, there is no manmade alteration of sand dunes, and that fill is not used as structural support of a building.

Capital Improvements Plan

The City of Sunnyvale lists various projects in their Capital Improvement Program (CIP) that are currently being undertaken by the Public Works Department, many of which may help mitigate potential hazards. In the downtown section, an investigation and remediation of HAZMAT is taking place. Numerous street and traffic projects such as bridge repairs, roadway and pavement rehabilitation, installing bike and pedestrian corridors, sidewalk replacement, curb and gutter replacement and traffic signal replacement are designed to maintain roads and minimize traffic and pedestrian accidents. Undergrounding of overhead utilities is being considered to reduce potential hazards from down power lines. An inspection and evaluation of bridges and levees is scheduled to take place in an effort to ensure safety and to create a database of the study's findings. Replacement, maintenance, and emergency backup of infrastructure for the City's storm/sanitary and water systems are also listed as active projects in Sunnyvale's CIP. These projects may mitigate a possible utility mishap within the City.

Downtown Revitalization

The City of Sunnyvale created an Environmental Impact Report for their Downtown Improvement Program to describe the potential impacts the project has on soil and geologic conditions and to identify mitigations for potentially significant effects. It has been determined that the project site would not be subject to land sliding or other slope instability hazards because it is situated on generally level land. In addition, erosion hazards during construction are expected to be low due to the gentle slopes and relatively high percentage of existing impervious surfaces. Therefore, since no significant impact has been identified, no mitigation strategies have been required. Downtown development and infrastructure improvements facilitated by the project may be subject to foundation and infrastructure damage from expansive soils or settlement of soils. In an effort to mitigate this potentially significant impact, the City should follow normal procedures and require and review of geologic reports that

describe potential hazards and identify engineering specifications necessary to reduce all ground failure risks to an acceptable level.

All urban development in the region are subject to strong to very strong seismic shaking and possible liquefaction in the event of a major earthquake on the Hayward, San Andreas, or Calaveras fault systems. This project would be designed and in accordance with the Uniform Building Code guidelines for Seismic Zone 4 to avoid or minimize potential damage from seismic shaking. These measures would be expected to reduce project-related seismic safety impacts to less than significant levels. Although this project has experienced significant delays, it is now back in track with a new developer.

16.5.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration:

- **Climate Action Plan (CAP)**—The CAP is fairly new plan. As a result of the hazard mitigation plan review process it has been determined that there is an excellent opportunity for future integration between these two plans.
- **Post Disaster Recovery Plan**—This plan has not been written. Once it is completed, it offers an opportunity for integration with the hazard mitigation plan.
- **Legal and Regulatory Capabilities**—Those capabilities identified as providing an integration opportunity in Table 16-1 will be reviewed and updated to include information on hazard risk reduction as feasible and appropriate.

16.6 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 16-10 lists all past occurrences of natural hazards within the jurisdiction.

Table 16-10. Natural Hazard Events			
Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Storms	1203	2/2/98	N/A
Earthquake	845	10/17/1998	N/A

16.7 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: 0

Other noted vulnerabilities include:

- Ten URM buildings remain in Sunnyvale, all of which are located in the South Murphy Avenue historical area, which is exempt from the State URM legislation; none of these URM's are residential structures.
- A major industrial zone in the City is in an area considered to be more vulnerable to damage resulting from an earthquake. This land is at or below sea level and is protected by a system of dikes and levees.
- The San Francisco Public Utilities Commission system needs to be upgraded and designed to current seismic standards so that it is able to deliver water even in the event of a major earthquake.

16.8 HAZARD RISK RANKING

Table 16-11 presents the ranking of the hazards of concern.

Table 16-11. Hazard Risk Ranking			
Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe Weather	33	Medium
3	Flood	24	Medium
4	Drought	9	Low
5	Dam and Levee Failure	6	Low
6	Landslide	0	None
6	Wildfire	0	None

16.9 STATUS OF PREVIOUS PLAN ACTIONS

The status of previous actions from the 2011 ABAG LHMP for Sunnyvale can be found in Appendix D of this volume.

16.10 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 16-12 lists the actions that make up the City of Sunnyvale hazard mitigation action plan. Table 16-13 identifies the priority for each action. Table 16-14 summarizes the mitigation actions by hazard of concern and the six mitigation types.

16.11 ADDITIONAL RESOURCES

The hazard mitigation plan annex development tool-kit was used in the development of this annex to the Santa Clara Operational Area Hazard Mitigation Plan.

Table 16-12. Hazard Mitigation Action Plan Matrix						
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SNY-1 —Flex couplings being added to the Mary Carson Water Tank #1. This is a water storage tank owned by the City. This is in progress.						
Existing	Earthquake	2, 8	Dept. of Public Works	Low	Staff time, General Funds	Ongoing
SNY-2 —Flex coupling will be added to the Mary Carson Water Tank #2. This project is in the design stage.						
Existing	Earthquake	2, 8	Dept. of Public Works	Low	Staff time, General Funds	Short term
SNY-3 —Widening and retrofitting to meet current seismic requirements of the Fair Oaks Overpass Bridge. This project is in the design stage.						
Existing	Earthquake	2, 8	Dept. of Public Works	Medium	Staff time, General Funds, HMGP, PDM	Short term
SNY-4 —Widening and retrofitting to meet current seismic requirements of the Old Mountain View-Alviso Overpass Bridge. This project is in the design stage.						
Existing	Earthquake	2, 8	Dept. of Public Works	Medium	Staff time, General Funds, HMGP, PDM	Short term

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SNY-5 —Flood related improvement project on the East Channel. This project is in the permitting stage.						
Existing	Flood	2, 3, 8	Santa Clara Valley Water District* Sunnyvale Environmental Services Dept.	Medium	Possibly FMA, HMGP	Short term
SNY-6 —Flood related improvement project on the West Channel. This project is in the permitting stage.						
Existing	Flood	2, 3, 8	Santa Clara Valley Water District* Sunnyvale Environmental Services Dept.	Medium	Possibly FMA, HMGP	Short term
SNY-7 —Develop a disaster recovery plan.						
New	All Hazards	1, 2, 3, 5,	Dept. of Public Safety* Finance Dept.	Low	Staff time, General Funds	Short term
SNY-8 —Review/update the debris management plan.						
Existing	All Hazards	1, 2, 3, 5,	Dept. of Public Safety* Environmental Services Dept.	Low	Staff time, General Funds	Ongoing
SNY-9 —Enhance emergency preparedness page on City website by cross-referencing different City department mitigation efforts like flood control projects and climate change initiatives.						
Existing	All Hazards	4	Dept. of Public Safety	Low	Staff time, General Funds	Short term
SNY-10 —Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.						
Existing	All Hazards	4, 5, 6, 7, 8	Community Development and Public Works	High	HMGP, PDM, FMA, CDBG-DR	Short-term
SNY-11 —Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community.						
New and Existing	All Hazards	2, 4,	Community Development	Low	Staff Time, General Funds	Ongoing
SNY-12 — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All Hazards	1, 5	OES Coordinator	Low	Staff Time, General Funds	Short-term
SNY-13 — Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP). This will be accomplished through the implementation of floodplain management programs that will, at a minimum, meet the requirements of the NFIP:						
<ul style="list-style-type: none"> Enforcement of the flood damage prevention ordinance Participate in floodplain identification and mapping updates Provide public assistance/information on floodplain requirements and impacts. 						
New and Existing	Flood	1, 2, 3, 4, 7, 8	Community Development	Low	Staff Time, General Funds	Ongoing

Table 16-13. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
SNY- 1	2	Low	Low	Yes	No	Yes	High	Low
SNY-2	2	Low	Low	Yes	No	Yes	High	Low
SNY-3	2	Medium	Medium	Yes	Yes	Yes	High	Medium
SNY-4	2	Medium	Medium	Yes	Yes	Yes	High	Medium
SNY-5	3	Medium	Medium	Yes	Yes	Yes	Medium	Medium
SNY-6	3	Medium	Medium	Yes	Yes	Yes	Medium	Medium
SNY-7	4	Medium	Low	Yes	No	Yes	High	Low
SNY-8	4	Medium	Low	Yes	No	Yes	High	Low
SNY-9	1	Medium	Low	Yes	No	Yes	Medium	Low
SNY-10	5	High	High	Yes	Yes	No	Medium	High
SNY-11	2	Medium	Low	Yes	No	Yes	High	Low
SNY-12	2	Low	Low	Yes	No	Yes	High	Low
SNY-13	6	Medium	Low	Yes	No	Yes	High	Low

a. See the introduction to this volume for explanation of priorities.

Table 16-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a						
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects	7. Climate Resilient
Dam and Levee Failure	SNY-11, SNY-12, SNY-13	SNY-5, SNY-6, SNY-10, SBY-13	SNY-9, SNY-13		SNY-7, SNY-8, SNY-9		
Drought	SNY-11, SNY-12	SNY-10	SNY-9		SNY-7, SNY-8, SNY-9		
Earthquake	SNY-11, SNY-12	SNY-1, SNY-2, SNY-3, SNY-4, SNY-10	SNY-9		SNY-7, SNY-8, SNY-9	SNY-3, SNY-4	
Flood	SNY-11, SNY-12, SNY-13	SNY-5, SNY-6, SNY-10, SBY-13	SNY-9, SNY-13		SNY-7, SNY-8, SNY-9		
Severe Weather	SNY-11, SNY-12	SNY-5, SNY-6, SNY-10	SNY-9		SNY-7, SNY-8, SNY-9		

a. See the introduction to this volume for explanation of mitigation types.

17. SANTA CLARA COUNTY FIRE DEPARTMENT

17.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

Brian Glass, Battalion Chief
14700 Winchester Blvd.
Los Gatos, Ca 95032
Telephone: 408-455-9129
e-mail Address: brian.glass@sccfd.org

Alternate Point of Contact

Deborah Stocksick, Staff Battalion Chief
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e-mail Address: deborah.stocksick@sccfd.org

17.2 JURISDICTION PROFILE

17.2.1 Overview

Established in 1947, the Central Fire Protection District (dba) Santa Clara County Fire Department (SCCFD) provides fire services for Santa Clara County, California and the communities of Campbell, Cupertino, Los Altos, Los Altos Hills, Los Gatos, Monte Sereno, and Saratoga. The department also provides protection for the unincorporated areas adjacent to those cities. Wrapping in an approximately 20 mile arc around the southern end of "Silicon Valley," the SCCFD has grown to include 15 fire stations, an administrative headquarters, a maintenance facility, five other support facilities, 19 pieces of apparatus and 3 command vehicles, to cover 128.3 square miles (267 square km) and a population of approximately 250,000. The department employs over 288 fire prevention, suppression, investigation, administration, and maintenance personnel; daily emergency response consists of 66 employees. The department's suppression force is also augmented by approximately 30 volunteer firefighters. This staffing model and service trend are anticipated to remain consistent through the 2017 plan performance period. The anticipated service trend will remain consistent with a possibility for a slight increase in service over the next five years.

The SCCFD is a "Special Fire Protection District" formed under California Health and Safety Code, Section 13862, which empowers the Department to provide fire protection services, rescue services, emergency medical services, hazardous materials emergency response services, and other services relating to the protection of lives and property.

The Department's authority is granted by the California Health and Safety Code, Div. 12, Part 2.7, of the Fire Protection District Law of 1987, also known as the Bergeson Fire District Law. The Santa Clara County Board of Supervisors, sitting as the Department's Board of Directors, governs the Department. As such, the Department is classified as a dependent district. The Fire Chief is appointed by the Board of Supervisors, and is responsible for the proper administration of all affairs of the Department. The primary funding method for the fire district is through property taxes. The Central Fire Protection District was formed in 1947 and during the mid 1990s began contracting fire protection services to several communities in Santa Clara County.

The Santa Clara County Board of Supervisors assumes responsibility for the adoption of the hazard mitigation plan and the Fire Chief or designee of the Santa Clara County Fire department will oversee the plans implementation, maintenance, training, exercise, and revision of the plan.

17.2.2 Assets

Table 17-1 summarizes the critical assets of the district and their value.

Table 17-1. Special District Assets	
Asset	Value
Property	
Approximately 10 acres of land	\$5,000,000
Critical Infrastructure and Equipment	
Fire Engines	\$12,500,000
Fire Trucks	\$4,000,000
Hazmat Unit	\$1,000,000
Command Vehicles	\$1,000,000
Rescues	\$2,500,00
Total:	\$21,000,000
Critical Facilities	
Cupertino Fire Station	\$8,600,000
Seven Springs Fire Station	\$6,200,000
SCCFD Headquarters	\$13,000,000
Redwood Fire Station	\$1,000,000
Monta Vista Fire Station	\$4,800,000
Quito Fire Station	\$3,500,000
West Valley Fire Station	\$2,200,000
Total:	\$39,300,000

17.3 CAPABILITY ASSESSMENT

17.3.1 Resources for the 2017 Planning Initiative

The following technical reports, plans, and regulatory mechanisms were reviewed to inform the 2017 Multi-Jurisdiction Hazard Mitigation Plan for Volume 2, the Santa Clara County Fire Department Annex. All of the below items were additionally reviewed as part of the full capability assessment for the Santa Clara County Fire Department.

- SCCFD Business Plan—Outlines current business operations of the fire district.
- SCCFD Strategic Plan—Outlines long term strategic planning of the fire district.
- California Health and Safety Code, Section 13862—Provides the Fire Districts its authority.
- SCCFD Policy 303, 934 & 1037—Policies related to disasters and staffing in disasters.
- Fire Resource and Assessment Program (FRAP)—Outlines wildland fire hazard zones
- SCCFD Community Wildfire Protection Plan (CWPP)—Provides an analysis of fire-related conditions in the community and includes proposed projects developed through community workshops.
- Technical Reports and Information—Outside resources and references used to complete the Santa Clara County Fire Department Annex are identified in the pertinent Sections of this Annex and in Section 17.9.

17.3.2 Planning and Regulatory Capabilities

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- Regulatory
 - California Health and Safety Code, Section 13862
- Planning Capability
 - SCCFD Business Plan
 - SCCFD Strategic Plan
 - SCCFD Headquarters Evacuation Plan
 - SCCFD Continuity of Operations Plan
 - SCCFD CWPP

17.3.3 Fiscal, Administrative and Technical Capabilities

An assessment of fiscal capabilities is presented in Table 17-2. An assessment of administrative and technical capabilities is presented in Table 17-3.

Table 17-2. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes with a 2/3 voter approval
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Federal-Sponsored Grant Programs	Yes

Table 17-3. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	No	
Engineers or professionals trained in building or infrastructure construction practices	Yes	Fire Protection Engineers
Planners or engineers with an understanding of natural hazards	Yes	Fire Protection Engineers
Staff with training in benefit/cost analysis	Yes	Emergency Manager
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	Full time GIS Staff
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Emergency Manager
Grant writers	Yes	Staff that has successfully written grants
Information Technology	Yes	Full time IT Staff

17.3.4 Education and Outreach Capabilities

An assessment of education and outreach capabilities is presented in Table 17-4.

Table 17-4. Education and Outreach	
Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes; Full time public information officer on staff, ICS qualified Type 1
Do you have personnel skilled or trained in website development?	Yes; Full time IT staff
Do you have hazard mitigation information available on your website? <ul style="list-style-type: none"> If yes, please briefly describe. 	Yes Seasonal Safety Information. Available online at: http://www.sccfd.org/community-education/safety-information-referral-assistance/seasonal-safety-information
Do you utilize social media for hazard mitigation education and outreach? <ul style="list-style-type: none"> If yes, please briefly describe. 	Yes Twitter and Facebook
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <ul style="list-style-type: none"> If yes, please briefly specify. 	No
Do you have any other programs already in place that could be used to communicate hazard-related information? <ul style="list-style-type: none"> If yes, please briefly describe. 	Yes Emergency Preparedness program includes: <ul style="list-style-type: none"> Be Ready: Seniors Prepared! Business Emergency Planning Community emergency Response Team Personal Emergency Preparedness (PEP) School Emergency Planning & Safety Wildland Urban Interface Preparedness. More information available online at: http://www.sccfd.org/community-education/emergency-preparedness
Do you have any established warning systems for hazard events? <ul style="list-style-type: none"> If yes, please briefly describe. 	Yes Alert SCC, Social Media

17.3.5 Adaptive Capacity Assessment

An assessment of the jurisdiction's adaptive capacity for the impacts of climate change is presented in Table 17-5.

Table 17-5. Adaptive Capacity for Climate Change

Adaptive Capacity Assessment Question	Jurisdiction Rating
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts	Medium
<i>Comment: None provided.</i>	
Jurisdiction-level monitoring of climate change impacts	Low
<i>Comment: None provided.</i>	
Technical resources to assess proposed strategies for feasibility and externalities	Low
<i>Comment: None provided.</i>	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Low
<i>Comment: None provided.</i>	
Capital planning and land use decisions informed by potential climate impacts	Low
<i>Comment: None provided.</i>	
Participation in regional groups addressing climate risks	Low
<i>Comment: None provided.</i>	
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Medium
<i>Comment: None provided.</i>	
Identified strategies for greenhouse gas mitigation efforts	Low
<i>Comment: None provided.</i>	
Identified strategies for adaptation to impacts	Low
<i>Comment: None provided.</i>	
Champions for climate action in local government departments	Low
<i>Comment: None provided.</i>	
Political support for implementing climate change adaptation strategies	Low
<i>Comment: None provided.</i>	
Financial resources devoted to climate change adaptation	Low
<i>Comment: None provided.</i>	
Local authority over sectors likely to be negative impacted	Low
<i>Comment: None provided.</i>	
Public Capacity	
Local residents knowledge of and understanding of climate risk	Medium
<i>Comment: None provided.</i>	
Local residents support of adaptation efforts	Medium
<i>Comment: None provided.</i>	
Local residents' capacity to adapt to climate impacts	Medium
<i>Comment: None provided.</i>	
Local economy current capacity to adapt to climate impacts	Medium
<i>Comment: None provided.</i>	
Local ecosystems capacity to adapt to climate impacts	Medium
<i>Comment: None provided.</i>	

17.4 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction’s process for integrating the hazard mitigation plan into existing plans and programs.

17.4.1 Existing Integration

The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan:

- SCCFD Strategic Plan— SCCFD Strategic Plan outlines in Goal 7 & 8 Objectives for Emergency Management which includes hazard mitigation.
- Santa Clara County Emergency Operations Plan
- SCCFD Strategic Plan Goals 7 & 8
- Santa Clara County Community Wildfire Protection Plan
- SCCFD Space Needs Analysis and Facilities Master Plan Vol. 2

At the time of the next update, information obtained in the update of the hazard mitigation plan will be integrated into these plans and programs as appropriate.

17.4.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration:

- SCCFD Continuity of Operations Plan (COOP)—An opportunity exists for the integration of the Hazard Mitigation Plan to be integrated with the current revision of the SCCFD COOP. Information obtained in the risk assessment will be used to revise and update the plan as appropriate.

17.5 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 17-6 lists all past occurrences of natural hazards within the jurisdiction.

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Wildfire	Loma	2016	Not available
Flooding	West Side of County	2010	Not available
Wildfire	Stevens	2003	Not available
Flash Flood	West Side of County	1997	Not available
Earthquake	Loma Prieta (DR-845)	1989	Not available
Wildfire	Lexington (DR-739)	1985	Not available

17.6 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities the jurisdiction include:

- The various SCCFD facilities have a wide range of construction types, but most utilize a form of lightweight wood construction. Compared against ever increasing standards for seismic structural design, virtually all of the facilities have some level of seismic deficiency that should be addressed.

17.7 HAZARD RISK RANKING

Table 17-7 presents the ranking of the hazards of concern.

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	51	High
2	Wildfire	39	High
4	Landslide	21	High ^a
3	Severe Weather	30	Medium
5	Drought	15	Low
6	Flood	10	Medium ^b
7	Dam and Levee Failure	9	Low

- a. Although the risk rating score for the landslide hazard resulted in a medium ranking, SCCFD staff concluded that the ranking should be high based on potential impacts to District assets and staff.
- b. Although the risk rating score for the flood hazard resulted in a low ranking, SCCFD staff concluded that the ranking should be high based on potential impacts to District assets and staff.

17.8 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 17-8 lists the actions that make up the Santa Clara County Fire Department hazard mitigation action plan. Table 17-9 identifies the priority for each action. Table 17-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

17.9 ADDITIONAL RESOURCES

The hazard mitigation plan annex development tool-kit was used in the development of this annex to the Santa Clara Operational Area Hazard Mitigation Plan.

Table 17-8. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SCCFD-1 —Conduct structural seismic retrofits of fire stations.						
Existing	Earthquake	2, 8	SCCFD	Medium (\$15 million)	HMGP, PDM	Long-term
SCCFD-2 —Conduct non-structural seismic retrofits of fire stations.						
Existing	Earthquake	2, 8	SCCFD	Medium	General Funds, HMGP, PDM	Long-term
SCCFD-3 —Update the Community Wildfire Protection Plan and integrate it with the hazard mitigation plan.						
Existing	Wildfire	1,3,4,5,7	SCCFD	Medium (\$25,000)	Possible State Grants, General Funds	Short-term
SCCFD-4 —Actively participate in the plan maintenance protocols outlined in Volume 1 of the hazard mitigation plan.						
New and Existing	All hazards	1, 5	SCCFD	Low	Staff Time, General Funds	Short-term
SCCFD-5 —Integrate the hazard mitigation plan into other plans and programs in the District. Use information obtained in the risk assessment, goals and objectives, and identified actions to inform updates and enhancements.						
New and Existing	All hazards	2, 4,	SCCFD	Low	Staff Time, General Funds	Ongoing
SCCFD-6 —Continue to offer the wide variety of emergency preparedness programs and seek ways to educate program participants on the importance of mitigation.						
New and Existing	All hazards	2, 4, 5, 6	SCCFD	Low	General Funds, Possible State and Federal Grants	Ongoing

Table 17-9. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
SCCFD-1	2	High	Medium	Yes	Yes	Yes	Medium	High
SCCFD-2	2	High	Medium	Yes	Yes	Yes	Medium	High
SCCFD-3	5	Medium	Medium	Yes	Possible	Yes	High	Medium
SCCFD-4	2	Low	Low	Yes	No	Yes	High	Low
SCCFD-5	2	Low	Low	Yes	No	Yes	High	Low
SCCFD-6	4	High	Low	Yes	Possible	Yes	High	Medium

a. See the introduction to this volume for explanation of priorities.

Table 17-10. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a						
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects	7. Climate Resilient
Earthquake	SCCFD-4, SCCFD-5	SCCFD-1, SCCFD-2	SCCFD-6		SCCFD-1, SCCFD-2		
Wildfire	SCCFD-3, SCCFD-4, SCCFD-5		SCCFD-3, SCCFD-6	SCCFD-3			
Landslide	SCCFD-4, SCCFD-5		SCCFD-6				
Severe Weather	SCCFD-4, SCCFD-5		SCCFD-6				
Drought	SCCFD-4, SCCFD-5		SCCFD-6				
Flood	SCCFD-4, SCCFD-5		SCCFD-6				
Dam and Levee Failure	SCCFD-4, SCCFD-5		SCCFD-6				

a. See the introduction to this volume for explanation of mitigation types.

Santa Clara Operational Area Hazard Mitigation Plan

Appendix A. Planning Partner Expectations

A. PLANNING PARTNER EXPECTATIONS

ACHIEVING DMA COMPLIANCE FOR ALL PLANNING PARTNERS

One of the goals of the multi-jurisdictional approach to hazard mitigation planning is to achieve compliance with the Disaster Mitigation Act (DMA) for all participating members in the planning effort. DMA compliance must be certified for each member in order to maintain eligibility for the benefits under the DMA. Whether our planning process generates ten individual plans or one large plan that has a chapter for each partner jurisdiction, the following items must be addressed by each planning partner to achieve DMA compliance:

- **The Estimated level of effort.** It is estimated that the total time commitment to meet these “participation” requirements for a planning partner not participating on the Steering Committee would be approximately 40 hours over the 6 to 8 month period. Approximately sixty percent of this time would be allocated to meeting items F through L described below. This time is reduced somewhat for special purpose districts.
- **Participate in the process.** It must be documented in the plan that each planning partner “participated” in the process that generated the plan. There is flexibility in defining “participation”. Participation can vary based on the type of planning partner (i.e.: City or County, vs. a Special Purpose District). However, the level of participation must be defined and the extent for which this level of participation has been met for each partner must be contained in the plan context.
- **Consistency Review.** Review of existing documents pertinent to each jurisdiction to identify policies or recommendations that are not consistent with those documents reviewed in producing the “parent” plan or have policies and recommendations that complement the hazard mitigation actions selected (i.e.: comp plans, basin plans or hazard specific plans).
- **Action Review.** For Plan updates, a review of the strategies from your prior action plan to determine those that have been accomplished and how they were accomplished; and why those that have not been accomplished were not completed.
- **Update Localized Risk Assessment.** Personalize the Risk Assessment for each jurisdiction by removing hazards not associated with the defined jurisdictional area or redefining vulnerability based on a hazard’s impact to a jurisdiction. This phase will include:
 - A ranking of the risk
 - A description of the number and type of structures at risk
 - An estimate of the potential dollar losses to vulnerable structures
 - A general description of land uses and development trends within the community, so that mitigation options can be considered in future land use decisions.
- **Capability assessment.** Each planning partner must identify and review their individual regulatory, technical and financial capabilities with regards to the implementation of hazard mitigation actions.
- **Personalize mitigation recommendations.** Identify and prioritize mitigation recommendations specific to the each jurisdiction’s defined area.
- **Create an Action Plan.**

- **Incorporate Public Participation.** Each jurisdiction must present the Plan to the public for comment at least once, within two weeks prior to adoption.
- **Plan must be adopted by each jurisdiction.**

One of the benefits to multi-jurisdictional planning is the ability to pool resources. This means more than monetary resources. Resources such as staff time, meeting locations, media resources, technical expertise will all need to be utilized to generate a successful plan. In addition, these resources can be pooled such that decisions can be made by a peer group applying to the whole and thus reducing the individual level of effort of each planning partner. This will be accomplished by the formation of a steering committee made up of planning partners and other “stakeholders” within the planning area. The size and makeup of this steering committee will be determined by the planning partnership. This body will assume the decision making responsibilities on behalf of the entire partnership. This will streamline the planning process by reducing the number of meetings that will need to be attended by each planning partner. The assembled Steering Committee for this effort will meet monthly on an as needed basis as determined by the planning team, and will provide guidance and decision making during all phases of the plan’s development.

With the above participation requirements in mind, each partner is expected to aid this process by being prepared to develop its section of the plan. To be an eligible planning partner in this effort, each Planning Partner shall provide the following:

14. A “Letter of Intent to participate” or Resolution to participate to the Planning Team (see exhibit A).
Already completed
15. Designate a lead point of contact for this effort. This designee will be listed as the hazard mitigation point of contact for your jurisdiction in the plan. **Already Completed**
16. Support and participate in the selection and function of the Steering Committee selected to oversee the development of this plan.
17. Provide support in the form of mailing list, possible meeting space, and public information materials, such as newsletters, newspapers or direct mailed brochures, required to implement the public involvement strategy developed by the Steering Committee.
18. Participate in the process. There will be many opportunities as this plan evolves to participate. Opportunities such as:
 - a. Steering Committee meetings
 - b. Public meetings or open houses
 - c. Workshops/ Planning Partner specific training sessions
 - d. Public review and comment periods prior to adoption
19. At each and every one of these opportunities, attendance will be recorded. Attendance records will be used to document participation for each planning partner. No thresholds will be established as minimum levels of participation. However, each planning partner should attempt to attend all possible meetings and events.
20. There will be one ***mandatory*** workshop that all planning partners will be required to attend. This workshop will cover the proper completion of the jurisdictional annex template which is the basis for each partner’s jurisdictional chapter in the plan. Failure to have a representative at this workshop will disqualify the planning partner from participation in this effort. The schedule for this workshop will be such that all committed planning partners will be able to attend.
21. After participation in the mandatory template workshop, each partner will be required to complete their template and provide it to the planning team in the time frame established by the Steering Committee. Failure to complete your template in the required time frame may lead to disqualification from the partnership.

22. Each partner will be expected to perform a “consistency review” of all technical studies, plans, ordinances specific to hazards to determine the existence of any not consistent with the same such documents reviewed in the preparation of the County (parent) Plan. For example, if your community has a floodplain management plan that makes recommendations that are not consistent with any of the County’s Basin Plans, that plan will need to be reviewed for probable incorporation into the plan for your area.
23. Each partner will be expected to review the Risk Assessment and identify hazards and vulnerabilities specific to its jurisdiction. Contract resources will provide the jurisdiction specific mapping and technical consultation to aid in this task, but the determination of risk and vulnerability will be up to each partner.
24. Each partner will be expected to review and determine if the mitigation recommendations chosen in the parent plan will meet the needs of its jurisdiction. Projects within each jurisdiction consistent with the parent plan recommendations will need to be identified and prioritized, and reviewed to determine their benefits vs. costs.
25. Each partner will be required to create its own action plan that identifies each project, who will oversee the task, how it will be financed and when it is estimated to occur.
26. Each partner will be required to sponsor at least one public meeting to present the draft plan to its constituents at least 2 weeks prior to adoption.
27. Each partner will be required to formally adopt the plan.

Templates and instructions to aid in the compilation of this information will be provided to all committed planning partners. Each partner will be expected to complete their templates in a timely manner and according to the timeline specified by the Steering Committee.

**** Note**:** Once this plan is completed, and DMA compliance has been determined for each partner, maintaining that eligibility will be dependent upon each partner implementing the plan implementation-maintenance protocol identified in the plan. At a minimum, this means completing the on-going plan maintenance protocol identified in the plan. Partners that do not participate in this plan maintenance strategy may be deemed ineligible by the partnership, and thus lose their DMA eligibility.

Exhibit A

Example Letter of Intent to Participate

Santa Clara County Hazard Mitigation Planning Partnership

C/O Jessica Cerutti, Tetra Tech, Inc.

1999 Harrison, Suite 500

Oakland, CA 94612

Dear Santa Clara County Planning Partnership,

Please be advised that the _____ (*insert City or district name*) is committed to participating in the update to the Santa Clara County Regional Hazard Mitigation Plan. As the jurisdictional representative tasked with this planning effort, I certify that we will commit all necessary resources in order to meet Partnership expectations as outlined in the “Planning Partners expectations” document provided by the planning team, in order to obtain Disaster Mitigation Act (DMA) compliance for our jurisdiction.

Mr./Ms. _____ will be our jurisdiction’s point of contact for this process and they can be reached at (*insert: address, phone number and e-mail address*).

Sincerely,

Name _____

Title _____

Exhibit B**Planning Team Contact information**

Name	Representing	Address	Phone	e-mail
Darrell Ray	SCC OES	55 W. Younger Ave. Suite 450 San José, California 95110-1721	(208) 577-4750	Darrell.Ray@oes.sccgov.org
Rob Flaner	Tetra Tech, Inc.	90 S. Blackwood Ave Eagle, ID 83616	(208) 939-4391	Rob.flaner@tetrattech.com
Jessica Cerutti	Tetra Tech, Inc.	1999 Harrison, Suite 500 Oakland, CA 94612	(510) 302-6304	Jessica.Cerutti@tetrattech.com
Chris Godley	Tetra Tech, Inc.	1999 Harrison, Suite 500 Oakland, CA 94612	(858) 775-6132	Christopher.Godley@tetrattech.com
Carol Bauman	Tetra Tech, Inc.	1020 SW Taylor St., Ste. 530 Portland, Oregon 97205	(503) 223-5388	Carol.Baumann@tetrattech.com
Stephen Veith	Tetra Tech, Inc.	1020 SW Taylor St., Ste. 530 Portland, Oregon 97205	(503) 223-5388	Stephen.veith@tetrattech.com

Exhibit C

Overview of HAZUS

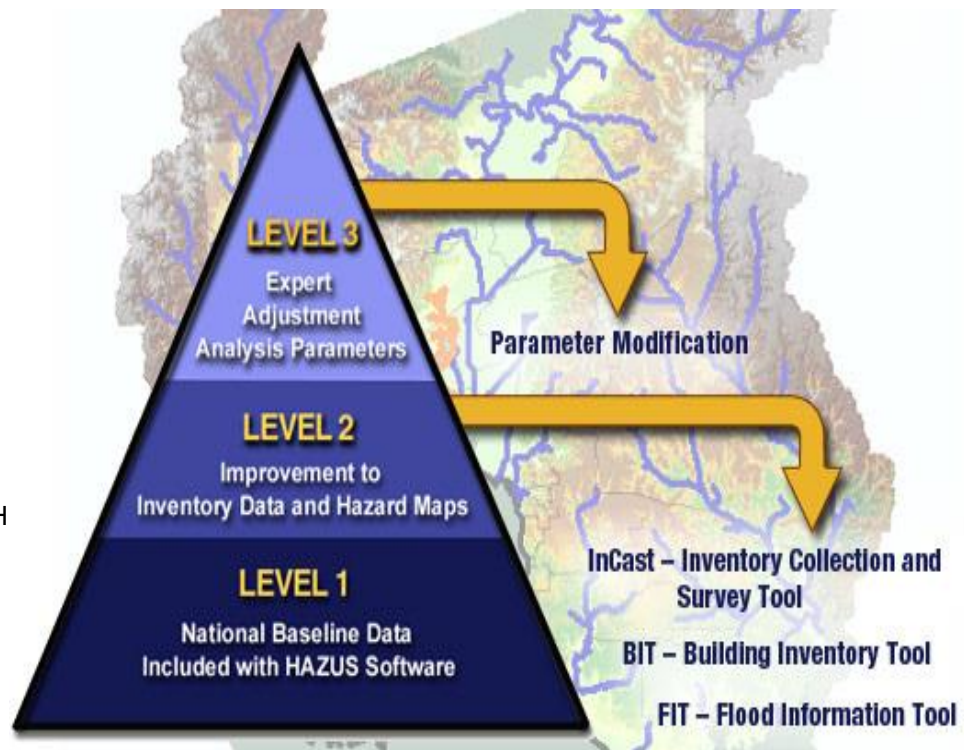
Overview of HAZUS-MH (Multi-Hazard)

http://www.fema.gov/hazus/dl_mhpres.shtm HAZUS-MH, is a nationally applicable standardized methodology and

software program that contains models for estimating potential losses from earthquakes, floods, and hurricane winds.

HAZUS-MH was developed by the Federal Emergency Management Agency (FEMA) under contract with the National Institute of Building Sciences (NIBS). NIBS maintains committees of wind, flood, earthquake and software experts to provide technical oversight and guidance to HAZUS-MH development. Loss estimates produced by HAZUS-MH are based on current scientific and engineering knowledge of the effects of hurricane winds, floods, and

earthquakes. Estimating losses is essential to decision-making at all levels of government, providing a basis for developing mitigation plans and policies, emergency preparedness, and response and recovery planning.



HAZUS-MH uses state-of-the-art geographic information system (GIS) software to map and display hazard data and the results of damage and economic loss estimates for buildings and infrastructure. It also allows users to estimate the impacts of hurricane winds, floods, and earthquakes on populations. The latest release, HAZUS-MH MR1, is an updated version of HAZUS-MH that incorporates many new features which improve both the speed and functionality of the models. For information on software and hardware requirements to run HAZUS-MH MR1, see HAZUS-MH [Hardware and Software Requirements](#).

HAZUS-MH Analysis Levels

HAZUS-MH provides for three levels of analysis:

- A **Level 1** analysis yields a rough estimate based on the nationwide database and is a great way to begin the risk assessment process and prioritize high-risk communities.



- A **Level 2** analysis requires the input of additional or refined data and hazard maps that will produce more accurate risk and loss estimates. Assistance from local emergency management personnel, city planners, GIS professionals, and others may be necessary for this level of analysis.
- A **Level 3** analysis yields the most accurate estimate of loss and typically requires the involvement of technical experts such as structural and geotechnical engineers who can modify loss parameters based on the specific conditions of a community. This level analysis will allow users to supply their own techniques to study special conditions such as dam breaks and tsunamis. Engineering and other expertise is needed at this level.

Three data input tools have been developed to support data collection. The **Inventory Collection Tool (InCAST)** helps users collect and manage local building data for more refined analyses than are possible with the national level data sets that come with HAZUS. InCAST has expanded capabilities for multi-hazard data collection. HAZUS-MH includes an enhanced Building Inventory Tool (BIT) allows users to import building data and is most useful when handling large datasets, such as tax assessor records. The **Flood Information Tool (FIT)** helps users manipulate flood data into the format required by the HAZUS flood model. All Three tools are included in the HAZUS-MH MR1 Application DVD.

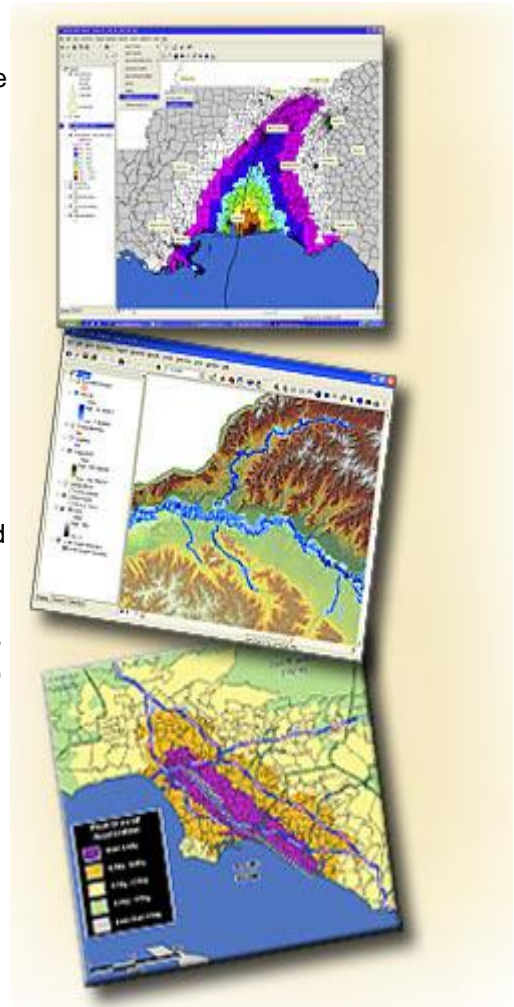
HAZUS-MH Models

The **HAZUS-MH Hurricane Wind Model** gives users in the Atlantic and Gulf Coast regions and Hawaii the ability to estimate potential damage and loss to residential, commercial, and industrial buildings. It also allows users to estimate direct economic loss, post-storm shelter needs and building debris. In the future, the model will include the capability to estimate wind effects in island territories, storm surge, indirect economic losses, casualties, and impacts to utility and transportation lifelines and agriculture. Loss models for other severe wind hazards will be included in the future. [Details about the Hurricane Wind Model.](#)

The **HAZUS-MH Flood Model** is capable of assessing riverine and coastal flooding. It estimates potential damage to all classes of buildings, essential facilities, transportation and utility lifelines, vehicles, and agricultural crops. The model addresses building debris generation and shelter requirements. Direct losses are estimated based on physical damage to structures, contents, and building interiors. The effects of flood warning are taken into account, as are flow velocity effects. [Details about the Flood Model.](#)

The **HAZUS-MH Earthquake Model**, The HAZUS earthquake model provides loss estimates of damage and loss to buildings, essential facilities, transportation and utility lifelines, and population based on scenario or probabilistic earthquakes. The model addresses debris generation, fire-following, casualties, and shelter requirements. Direct losses are estimated based on physical damage to structures, contents, inventory, and building interiors. The earthquake model also includes the Advanced Engineering Building Module for single- and group-building mitigation analysis. [Details about the Earthquake Model.](#)

The updated earthquake model released with HAZUS-MH includes:



- The (September 2002) National Hazard Maps
- Project '02 attenuation functions
- Updated historical earthquake catalog (magnitude 5 or greater)
- Advanced Engineering Building Module for single and group building mitigation analysis

Additionally, HAZUS-MH can perform multi-hazard analysis by providing access to the average annualized loss and probabilistic results from the hurricane wind, flood, and earthquake models and combining them to provide integrated multi-hazard reports and graphs. HAZUS-MH also contains a third-party model integration capability that provides access and operational capability to a wide range of natural, man-made, and technological hazard models (nuclear and conventional blast, radiological, chemical, and biological) that will supplement the natural hazard loss estimation capability (hurricane wind, flood, and earthquake) in HAZUS-MH.

Santa Clara Operational Area Hazard Mitigation Plan

Appendix B. Procedures for Linking to Hazard Mitigation Plan

B. PROCEDURES FOR LINKING TO HAZARD MITIGATION PLAN

Not all eligible local governments are included in the Santa Clara Operational Area Hazard Mitigation Plan. Some or all of these non-participating local governments may choose to “link” to the Plan at some point to gain eligibility for programs under the federal Disaster Mitigation Act (DMA). The following “linkage” procedures define the requirements established by the planning team for dealing with an increase in the number of planning partners linked to this plan. No currently non-participating jurisdiction within the defined planning area is obligated to link to this plan. These jurisdictions can choose to do their own “complete” plan that addresses all required elements of Section 201.6 of Chapter 44 of the Code of Federal Regulations (44 CFR).

INCREASING THE PARTNERSHIP THROUGH LINKAGE

Eligibility

Eligible jurisdictions located in the planning area may link to this plan at any point during the plan’s performance period. Eligible jurisdictions located in the planning area may link to this plan at any point during the plan’s performance period (5 years after final approval). Eligibility will be determined by the following factors:

- The linking jurisdiction is a local government as defined by the Disaster Mitigation Act.
- The boundaries or service area of the linking jurisdiction is completely contained within the boundaries of the planning area established during the 2016 hazard mitigation plan development process.
- The linking jurisdiction’s critical facilities were included in the critical facility and infrastructure risk assessment completed during the 2016 plan development process.

Requirements

It is expected that linking jurisdictions will complete the requirements outlined below and submit their completed template to the lead agency Santa Clara County Office of Emergency Services for review within six months of beginning the linkage process:

- The eligible jurisdiction requests a “Linkage Package” by contacting the Point of Contact (POC) for the plan:

Darrell G. Ray Jr., CEM
Emergency Management Specialist
Santa Clara County Fire Department
Santa Clara County Office of Emergency Services
55 W. Younger Ave. Suite 450
San José, California 95110-1721
Office: 408.808.7800
Cell: 408.963.3168

- The POC will provide a linkage procedure package that includes linkage information and a linkage tool-kit:
 - Linkage Information
 - Procedures for linking to the multi-jurisdictional hazard mitigation plan
 - Planning partner's expectations for linking jurisdictions
 - A sample "letter of intent" to link to the multi-jurisdictional hazard mitigation plan
 - A copy of Section 201.6 of 44 CFR, which defines the federal requirements for a local hazard mitigation plan.
 - Linkage Tool-Kit
 - Copy of Volume 1 and 2 of the plan
 - A special purpose district or municipality template and instructions
 - A catalog of hazard mitigation alternatives
 - A sample resolution for plan adoption
- The new jurisdiction will be required to review both volumes of the Santa Clara Operational Area Hazard Mitigation Plan, which include the following key components for the planning area:
 - Goals and objectives
 - The planning area risk assessment
 - Comprehensive review of alternatives
 - Countywide actions
 - Plan implementation and maintenance procedures.

Once this review is complete, the jurisdiction will complete its specific annex using the template and instructions provided by the POC.

- The development of the new jurisdiction's annex must not be completed by one individual in isolation. The jurisdiction must develop, implement and describe a public involvement strategy and a methodology to identify and vet jurisdiction-specific actions. The original partnership was covered under a uniform public involvement strategy and a process to identify actions that covered the planning area described in Volume 1 and Volume 2 of this plan. Since new partners were not addressed by these strategies, they will have to initiate new strategies and describe them in their annex. For consistency, new partners are encouraged to develop and implement strategies similar to those described in this plan.
- The public involvement strategy must ensure the public's ability to participate in the plan development process. At a minimum, the new jurisdiction must solicit public opinion on hazard mitigation at the onset of the linkage process and hold one or more public meetings to present the draft jurisdiction-specific annex for comment at least two weeks prior to adoption by the governing body. The POC will have resources available to aid in the public involvement strategy, including:
 - The questionnaire utilized in the plan development
 - Presentations from public meeting workshops and the public comment period
 - Flyers and information cards that were distributed to the public
 - Press releases used throughout the planning process
 - The plan website.
- The methodology to identify actions should include a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard and a description of the process by

which chosen actions were identified. As part of this process, linking jurisdictions should coordinate the selection of actions amongst the jurisdiction's various departments.

- Once their public involvement strategy and template are completed, the new jurisdiction will submit the completed package to the POC for a pre-adoption review to ensure conformance with the multi-jurisdictional plan format and linkage procedure requirements.
- The POC will review for the following:
 - Documentation of public involvement and action plan development strategies
 - Conformance of template entries with guidelines outlined in instructions
 - Chosen actions are consistent with goals, objectives and mitigation catalog of the Santa Clara Operational Area Hazard Mitigation Plan
 - A designated point of contact
 - A completed FEMA plan review crosswalk.
- Plans will be reviewed by the POC and submitted to California Governor's Office of Emergency Services (Cal OES) for review and approval.
- Cal OES will review plans for state compliance. Non-compliant plans are returned to the lead agency for correction. Compliant plans are forwarded to FEMA for review with annotation as to the adoption status.
- FEMA reviews the linking jurisdiction's plan in association with the approved plan to ensure DMA compliance. FEMA notifies the new jurisdiction of the results of review with copies to Cal OES and the approved plan lead agency.
- Linking jurisdiction corrects plan shortfalls (if necessary) and resubmits to Cal OES through the approved plan lead agency.
- For plans with no shortfalls from the FEMA review that have not been adopted, the new jurisdiction governing authority adopts the plan and forwards adoption resolution to FEMA with copies to lead agency and Cal OES.
- FEMA regional director notifies the new jurisdiction's governing authority of the plan's approval.

The new jurisdiction plan is then included with the multi-jurisdiction hazard mitigation plan and the linking jurisdiction is committed to participate in the ongoing plan maintenance strategy identified in Chapter 19, Volume 1 of the hazard mitigation plan.

Santa Clara Operational Area Hazard Mitigation Plan

Appendix C. Annex Instructions

C. ANNEX INSTRUCTIONS AND TEMPLATES

Insert .pdf file

Santa Clara Operational Area Hazard Mitigation Plan

Appendix D. Status of Prior Actions

D. STATUS OF PRIOR ACTIONS

This annex provides the status of prior actions identified by the planning partnership in the Association of Bay Area Governments (ABAG) regional hazard mitigation planning effort.

- Santa Clara County
- City of Campbell
- City of Cupertino
- City of Gilroy
- Town of Los Altos Hills
- Town of Los Gatos
- City of Monte Sereno.
- City of Morgan Hill
- City of Mountain View
- City of Palo Alto
- City of Santa Clara
- City of Saratoga
- City of Sunnyvale

Not all current planning partners obtained coverage under the DMA through the ABAG plan, thus, not all planning partners have status updates in this annex. It should be noted that the City of Los Altos and the City of San José may have participated in the plan, but no actions were identified and no proof of formal adoption was located.

Category	2011 No.	2011 Strategy	Responsible Agency	Status	Carry Forward to New Plan?	Comments
City of Campbell						
Soft-Story Buildings	1	Require all new construction, including public facilities, to be built according to the most recent Building and Fire Codes.	Public Works department, Community Development department	Complete	Yes	The City is currently using the 2016 Building Code for soft-story buildings. The City has also completed an inventory of soft-story multi-family units in Campbell. See CB-12.
Soft-Story Buildings	2	Consider County Ordinance to require retrofitting of multi-family soft story structures. Consistent with the ABAG definition, "multi-family" buildings consist of three or more families.	Public Works department, Community Development department	No Progress	No	The City is not aware of the status of the County Ordinance.
Soft-Story Buildings	3	Address liability concerns and obtain full access to SJSU CDM soft story inventory. Poll building owners to find out how many have already retrofitted their soft-story buildings, or if they are consistent with current code.	Public Works department, Community Development department	No Progress	No	This recommendation has not been implemented and is no longer being considered.
Soft-Story Buildings	4	Support City of San José initiative to develop Soft-Story Mitigation Program via UASI funding. Program will entail public education materials, engineering standards and financial incentives.	Public Works department, Community Development department	No Progress	No	The status of San José's program is unknown.

Category	2011 No.	2011 Strategy	Responsible Agency	Status	Carry Forward to New Plan?	Comments
Soft-Story Buildings	5	Create financial incentives and remove disincentives.	Public Works department, Community Development department	No Progress	No	We are not considering this option any longer
Soft-Story Buildings	6	Implement time limits on retrofitting mandates and incentives.	Public Works department, Community Development department	Some Progress	No	We are currently working on completing our URM program. See CB-7
Soft-Story Buildings	7	Advocate expansion of State and federal relocation assistance funds and programs to aid persons and businesses displaced from hazardous buildings.	Public Works department, Community Development department	No Progress	No	We are not considering this option any longer
Dam Failure	8	Create and distribute evacuation route maps	Public Works department, Community Development department	No Progress	No	Our current EOP addresses issues related to evacuation and we now have a robust CERT program in Campbell, which we didn't have when the ABAG plan was created.
	HSNG-e-4	Adopt one or more of the following strategies as incentives to encourage retrofitting of privately- owned seismically vulnerable residential buildings: (a) waivers or reductions of permit fees, (b) below-market loans, (c) local tax breaks, (d) grants to cover the cost of retrofitting or of a structural analysis, (e) land use (such as parking requirement waivers) and procedural incentives, or (f) technical assistance.	Building Department	No Progress	No	This recommendation has not been implemented and is no longer being considered.
	LAND-c-5	Encourage new development near floodways to incorporate a buffer zone or setback from that floodway to allow for changes in stormwater flows in the watershed over time.	Community Development	No Progress	No	This recommendation has not been implemented and is no longer being considered.
	LAND-c-6	For purposes of creating an improved hazard mitigation plan for the region as a whole, ABAG, and Bay Area cities and counties, jointly request geographically defined repetitive flooding loss data from FEMA for their own jurisdictions.	Community Development	Complete	No	We received this data as part of this process

Category	2011 No.	2011 Strategy	Responsible Agency	Status	Carry Forward to New Plan?	Comments
City of Cupertino						
Soft-Story Buildings	1	Require all new construction, including public facilities, to be built in accordance with the most recent Building and Fire Code standards.	Public Works department, Community Development department	Ongoing	Yes	Incorporate these projects in the City's Capital Improvement Plan as appropriate, and seek funding from HMGP (See CPT-1).
	ECON-b-1	Require engineered plan sets for voluntary or mandatory soft-story seismic retrofits by private owners until a standard plan set and construction details become available.	Building Dept.	Complete	No	Addressed through adopted building codes.
	ENVI-a-3	Continue to enforce and/ or comply with State- mandated requirements, such as the California Environmental Quality Act and environmental regulations to ensure that urban development is conducted in a way to minimize air pollution. For example, air pollution levels can lead to global warming, and then to drought, increased vegetation susceptibility to disease (such as pine bark beetle infestations), and associated increased fire hazard.	Environmental Programs, Environmental Affairs, Community Development	Ongoing	Yes	2005 General Plan includes Sustainability Section outlining methods to achieve these goals. The city is seeking funding (\$200k) to develop a Sustainable Land Use Plan and Green Building Policy that would expand these land-use based mitigation strategies (see CPT-2) .
	ENVI-b-11	Increase recycling rates in local government operations and in the community.	Public Works Sustainability	Ongoing	Yes	See CPT-4
	GOVT-a-4	Conduct comprehensive programs to identify and mitigate problems with facility contents, architectural components, and equipment that will prevent critical buildings from being functional after major natural disasters. Such contents and equipment includes computers and servers, phones, files, and other tools used by staff to conduct daily business.	Public Works, IT	Ongoing	Yes	See CPT-5
	ENVI-b-13	Help educate the public, schools, other jurisdictions, professional associations, business and industry about reducing global warming pollution.	Environmental Affairs	Ongoing	Yes	See CPT-6
City of Gilroy						
	1	Establish a relationship with local service providers to ensure a backup system/ process for telephonic communication with a local PSAP.	Police Department, Fire OES	On-Going	Yes	Continue/ maintain a relationship with local service providers to ensure a backup system/ process for telephonic communication with a local PSAP (see GIL-1).

Category	2011 No.	2011 Strategy	Responsible Agency	Status	Carry Forward to New Plan?	Comments
	2	Using the identified soft story maps to target the existing structures, develop a program to retrofit soft story apartment buildings in Gilroy.	Community Development Department; Building, Life, and Environmental Safety Division	Cancelled	No	Cancelled due to lack of funding and programmatic will
	3	Develop a plan for a cooperative program to retrofit or tear down unreinforced masonry buildings (downtown).	Community Development Department; Building, Life, and Environmental Safety Division	On-Going	Yes	Continue/ maintain a plan for a cooperative program to retrofit or tear down unreinforced masonry buildings (downtown) (see GIL-2).
	4	Reinforce/ retrofit existing structure to meet current building code standards for essential facility seismic safety	Public Works Department	On-Going	Yes	Continue/ maintain to reinforce/ retrofit existing structure to meet current building code standards for essential facility seismic safety (see GIL-3).
	5	Provide stand-by generators to Las Animas Fire Station, Senior Center, Wheeler Auditorium, and Community Room at Las Animas Park.	Public Works Department	Incomplete	Yes	Consider various means and alternates to supplying all city essential facilities with backup power generation capability. Examples of critical facilities include, but are not limited to: City Hall, Fire Stations, Senior Centers, Auditorium, Community Room's, alert and warning facilities etc. (See GIL-4).
LAND-c-6		For purposes of creating an improved hazard mitigation plan for the region as a whole, ABAG, and Bay Area cities and counties, jointly request geographically defined repetitive flooding loss data from FEMA for their own jurisdictions.		Cancelled	No	No longer ABAG planning effort

Category	2011 No.	2011 Strategy	Responsible Agency	Status	Carry Forward to New Plan?	Comments
City of Monte Sereno						
	1	The City of Monte Sereno is seeking to implement an effective hillside emergency response plan including evacuation route mapping in the next few years. The Hillside plan should also include an effective evaluation of at risk structures based on available building permit information, location of site and topography of the site.	Building Dept.	No Progress	Yes	Continually develop and improve the means and methods of integrating more fully the EM decision making processes of the City of Monte Sereno and the Town of Los Gatos to improve both jurisdiction's EM programs and planning capability through all phases of the EM cycle, including Post-Disaster policies/ plans (See MTS-2).
	2	Create an outreach program for city residents on actions they can take to reduce the impacts of disasters to their properties.	Planning Dept.	Ongoing	Yes	Develop a public outreach and education program for city residents to learn about actions they can take to reduce the impacts of disasters to their properties and integrate with any applicable Operational Area's public engagement strategies (see MTS-11).
	INFR-c-2	Develop a coordinated approach between fire jurisdictions and water supply agencies to identify needed improvements to the water distribution system, initially focusing on areas of highest wildfire hazard (including wildfire threat areas and in wildland-urban-interface areas).	Building Dept.	Ongoing	Yes	Participate, as appropriate, in the update and improvement of the Operational Area CWPP (see MTS-6).
City of Morgan Hill						
	1	Butterfield Channel - Inlets/ outlets at road crossings become overgrown with volunteer reeds and willows. Annual task of clearing vegetation requires extensive hand labor in a difficult to access location. Construct concrete aprons at culvert openings and drain outlets to keep areas clear of vegetation growth to allow water flow and visibility for inspection.	City of Morgan Hill	No Progress	Yes	Continue with plans for concrete aprons. Annual program to remove vegetation from channel has lessened the need for the aprons (see MGH-16).
	2	E. Dunne at Flaming Oaks valley gutter at top of slope - Slope above this location on E. Dunne has had slides each winter for the past few years. Concrete valley gutter above slope is in poor condition. Concrete v-ditch needs reconstruction	City of Morgan Hill	Complete	No	Action is complete.

Category	2011 No.	2011 Strategy	Responsible Agency	Status	Carry Forward to New Plan?	Comments
	3	Spring St. & Bisceglia - Frequent flooding due to slow drainage to creek. While it would not resolve the problem completely, installing a new outlet in the creek channel on the south side of Spring, at a lower elevation than existing, would delay flooding and speed drainage.	City of Morgan Hill	No Progress	Yes	Most effective if outlet is lowered after Upper Llagas Flood Control project. Most likely time for that is 2020 (see MGH-17).
	4	Burnett at Monterey - Flooding at intersection due to slow drainage. Nowhere for water to go once ditch on the west side of Monterey is full. Need facilities to direct stormwater out of this area or increase retention capacity	City of Morgan Hill	No Progress	Yes	Pages 38 & 39 of FY 20116/ 17 CIP (see MGH-18).
	6	Main at Casa - High School parking lot floods when ditch on Main fills up. Need facilities to direct stormwater out of this area or increase retention capacity	City of Morgan Hill	No Progress	Yes	No identified funding source. See MGH-19.
	7	Mission View & Half Road - Flooding. Raise pavement level at intersection or install storm drains	City of Morgan Hill	Ongoing	Yes	Most likely method for accomplishment is development activity in the area. See MGH-20.
	8	1390 Llagas below Castle Hill - Flooding over roadway and onto residential property three inlets become clogged. Improve inlets, ditch across street from house	City of Morgan Hill	Complete	No	Action is complete.
	9	Trail Dr. drainage channels (4) - Channels erode and silt up downstream catch basins. Construct series of step pools to slow flow and reduce silting in each channel (includes channel above Jackson School)	City of Morgan Hill	Complete	No	Action is complete.
	10	Circle Lane & Oak View - Inlet silts up. Install concrete and/ or riprap	City of Morgan Hill	No Progress	Yes	To be re-evaluated to determine the appropriate repair (see MGH-21).
	11	Cochrane Circle - Area floods frequently - storm drains are full of roots and likely damaged. Need to use root cutter throughout then video inspection to assess condition	City of Morgan Hill	Complete	No	Action is complete.
	12	Llagas Rd between Castle Ridge & Glen Ayre - Inlets on uphill side of road fill with dirt every year. Need to build up retaining structure at each inlet	City of Morgan Hill	Unclear/ Unactionable Strategy	No	This recommendation has not been implemented and is no longer being considered.
	13	Sabini Ct. - Resident filled in ditch on his own property so street floods during heavy storms. Need drain to nearby channel	City of Morgan Hill	No Progress	Yes	Future drainage project (see MGH-22).
	14	16355 Oak Canyon Dr. - Inlet fills with dirt. Needs concrete apron	City of Morgan Hill	No Progress	Yes	Future drainage project (see MGH-22).

Category	2011 No.	2011 Strategy	Responsible Agency	Status	Carry Forward to New Plan?	Comments
	15	Hill Rd. & E. Dunne Ave. - Inlet in dirt field is too low and fills with dirt. Streets crew has to place straw wattles around inlet every year. Raise inlet level and install surrounding concrete apron	City of Morgan Hill	Complete	No	Action is complete.
	16	16817 Gallop Dr. - Inlet above Gallop needs re-work, some cobbles are loose. Re-design to reduce sediment build up, provide access from street (currently have to use resident's driveway)	City of Morgan Hill	No Progress	Yes	Future drainage project (see MGH-22).
	17	17661 Peak Ave. - Alley drain can't receive water volume so back yard floods. Increase inlet capacity	City of Morgan Hill	No Progress	Yes	Future drainage project (see MGH-22).
	18	Fisher Creek retention basin - During big storm of 10/ 13/ 09 Fisher Creek flooded but large retention pond had little water in it. Lower elevation of large pond inlet so it retains more water during major storms	City of Morgan Hill	No Progress	Yes	Future drainage project (see MGH-22).
	19	17910 Woodland Ave - Erosion near booster station, undermining edge of road. Repair erosion damage	City of Morgan Hill	Complete	No	Action is complete.
	20	Teresa Ditch (behind homes on Teresa Lane) - Sediment from dirt ditch regularly clogs downstream storm drain. Improve ditch to reduce silting	City of Morgan Hill	No Progress	Yes	Future drainage project (see MGH-22).
	21	Downtown storm drains - Some storm catch basins in the old part of town are made of brick. Would need to do a survey to identify locations. Replace brick catch basins	City of Morgan Hill	No Progress	No	This recommendation has not been implemented and is no longer being considered.
	22	2776 Hayloft Ct - Water collects at bottom of driveway, has nowhere to go and asphalt curb is deteriorating. Investigate installing a catch basin & replacing curb/ gutter area	City of Morgan Hill	No Progress	Yes	Future drainage project (see MGH-22).
	23	16115 Condit, at Ramada Inn - Catch basin in street in front of the Ramada collects water from the parking lot but is not connected to any storm drain. Extend storm drain so water from parking lot and street drain. This location floods during major storms.	City of Morgan Hill	No Progress	Yes	Future drainage project (see MGH-22).
	24	Butterfield Channel between Diana & Main - Sediment has raised bottom of channel to level higher than storm drain invert in two locations. Remove sediment from channel to designed level	City of Morgan Hill	Complete	No	Action is complete.

Category	2011 No.	2011 Strategy	Responsible Agency	Status	Carry Forward to New Plan?	Comments
	25	6" pump to pump out flooded areas - Areas subject to flooding that could require use of a large pump: Monterey underpass, Biscaglia, Tennant & Railroad, California Ave. (sewer). Public Works has one 6" pump but needs another to be able to pump more than one location at a time as would be likely during a major storm	City of Morgan Hill	Complete	No	Action is complete.
	26	A 1% flood on Llagas Creek will affect more than 1,100 homes, 500 commercial and industrial buildings, and 1,300 agricultural acres. Llagas Creek Flood Protection Project	U.S. Army Corps of Engineers, Santa Clara County	Ongoing	Yes	Sponsor for project is Santa Clara Valley Water District. This project included in their CIP (see MGH-23).
City of Mountain View						
	3	Funding to develop and maintain a Business Continuity Plan and Disaster Recovery Plan. A Business Continuity Plan includes minimizing interruptions to the City's ability to provide its services, ensuring the health and safety of all personnel, minimizing financial loss, and being able to resume critical operation within a specified time after a disaster. A Disaster Recovery Plan describes how the City will deal with potential disasters and details the precautions that need to be taken so that the effects of a disaster will be minimized and the City will be able to either maintain or quickly resume mission-critical functions.	Fire Dept./ Office of Emergency Services	No Progress	Yes	See actions MTV-1 and MTV-2
City of Palo Alto						
	1	To mitigate the potential loss of the Civic Center (City Hall) complex, which houses the Police Department, the Fire Department, the 911 Dispatch Center, the legacy Emergency Operations Center, and other essential operations, the Palo Alto Police Department acquired and has now deployed a Mobile Emergency Operations Center vehicle, capable of sustaining 911 PSAP, Dispatch, EOC, and other command functions for a sustained period, even with the loss of the Civic Center. However, the need to replace critical infrastructure and facilities, such as the public safety building, remains.	City of Palo Alto	Ongoing	Yes	The Public Safety Building is currently in initial design stages. It is a City Council priority and funding has been programmed for this project. We hope to see groundbreaking of this project within five years (See PA-10).

Category	2011 No.	2011 Strategy	Responsible Agency	Status	Carry Forward to New Plan?	Comments
	3	The city plans to seek grant funding and is spending current budget on mitigation measures in the foothills Wildland Urban Interface (WUI), both for fire as well as law enforcement missions.	City of Palo Alto	Ongoing	Yes	Palo Alto provides annual General Funds for mitigation measures following the Foothills Fire Protection Plan. In 2016 Palo Alto updated the Foothills Fire Protection Plan and also completed an annex to the Santa Clara County Community Wildfire Protection Plan (CWPP) (See PA-27).
	4	Communications - The city is beginning work on exploring new off-the-grid (solar powered, etc.) data communications systems and related technologies that would 1) support the continuity of key government functions and 2) would also tie-in community entities (businesses, neighborhoods, NGOs). Augmentation of existing GIS and computer aided dispatch (CAD) systems are also envisioned.	City of Palo Alto	In-progress	Yes	See PA-14.
	6	The City is also negotiating with PG&E and other parties to establish an additional electric transmission feed to the city. Existing connections to the city are vulnerable to being impacted by aircraft from the local airport. The new electric transmission feed will provide an alternate source in case the existing connections are interrupted.	City of Palo Alto	Ongoing	Yes	The Utilities Department will continue to work with PG&E and community stakeholders to assess the feasibility of this effort over the next five year period (See PA-21).
	7	Develop a comprehensive flood control plan for San Francisquito Creek to minimize the risk of flooding.	San Francisquito Creek Joint Powers Authority, US Army Corps of Engineers	Ongoing	Yes	In conjunction with the SFCJPA, Palo Alto has developed a flood control plan to mitigate flooding along the San Francisquito Creek. The initial flood control project is underway, and funding mechanisms are in place to execute additional flood control projects in the near and long term. (Several specific projects identified in action plan)

Category	2011 No.	2011 Strategy	Responsible Agency	Status	Carry Forward to New Plan?	Comments
City of Santa Clara						
	1	Upgrade the City's storm water pump stations. The City is in hopes of requesting pre-disaster mitigation grant funding as a possible solution for upgrades and equipment replacement for the aging infrastructure.	City of Santa Clara Public Works Department	Complete	No	Complete
	2	Recoat the at grade steel tanks to extend the useful life of these assets. The City's Downtown Tank is a welded steel water storage tank built in 1975 with a capacity of 4.5 million gallons. The original tank coating has reached the end of its useful life and is in need of replacement. The project scope of work includes abrasive blasting and recoating of the interior and exterior of the tank, replacement of the existing ladders and water level indicator, upgrade of the existing access hatches, piping modifications, and other safety improvements. A Water Tank Improvement Project was recently awarded by the Santa Clara City Council on March 29, 2011. This Water Capital Improvement Multi-year Plan is for like work on the remaining five at-grade steel water storage tanks	City of Santa Clara Public Works Department	Complete	No	Complete
	GOVT-d-2	Recognize that emergency services is more than the coordination of police and fire response; it also includes planning activities with providers of water, food, energy, transportation, financial, information, and public health services.	City of Santa Clara Public Works Department	Complete	No	Complete
City of Saratoga						
Earthquakes	1	Implement mitigation strategies (placement of engineered fill, construction of retaining walls) in order to eliminate the potential for landslide areas to become critical hazards.	Public Works Development	ONGOING	YES	The City has identified a minimum of \$1 million in existing landslide mitigation projects; however, we currently do not have funding to undertake this work (see SAR-3).

Category	2011 No.	2011 Strategy	Responsible Agency	Status	Carry Forward to New Plan?	Comments
Earthquakes	2 (ECON b-3, b-4, b-7; HSNG c-3, c-4, c-7)	Provide incentives for private owners to retrofit soft story buildings. These incentives could take the form of reduced planning application, building permit and inspection fees, or other suitable incentives. The City of Saratoga has approximately 50 privately owned soft story buildings that have not been retrofitted to meet current seismic standards.	Community Development	ONGOING	YES	The City has inventoried existing soft story buildings within its jurisdiction (See SAR-13)
Flood	3 (INFR Flooding d-5, d-6)	Install new underground storm drainage throughout most vulnerable areas in the City, particularly in the Monte Vista/ El Camino Grande and Chester Avenue areas.	Public Works Development	ONGOING	YES	The City currently has approximately \$750,000 in needed storm drain upgrades; however, we do not have funding to pursue these improvements (see SAR-2, 4, 5, 7)
	GOVT-d-3	Recognize that a multi-agency approach is needed to mitigate flooding by having flood control districts, cities, counties, and utilities meet at least annually to jointly discuss their capital improvement programs for most effectively reducing the threat of flooding. Work toward making this process more formal to insure that flooding is considered at existing joint-agency meetings.	Santa Clara Valley Water District	ONGOING	YES	See SAR-14
City of Sunnyvale						
	1	To mitigate the failure of the water system, the City is proposing to retrofit the key water infrastructure components at risk.		In-progress	Yes	See SNY-1 and SNY-2
	INFR-a-4	Retrofit or replace critical lifeline infrastructure facilities and/ or their backup facilities that are shown to be vulnerable to damage in natural disasters.	Public Works, Field Services and Environmental Divisions	In-progress	Yes	See SNY-1 through SNY-5 and SNY-10

Category	2011 No.	2011 Strategy	Responsible Agency	Status	Carry Forward to New Plan?	Comments
	GOVT-a-1	Assess the vulnerability of critical facilities (such as city halls, fire stations, operations and communications headquarters, community service centers, seaports, and airports) to damage in natural disasters and make recommendations for appropriate mitigation.	Community Services, Facilities, Public Works, Field Services	Ongoing	No	<p>PWs conducted a vulnerabilities assessment of the City's water system 2004. Other efforts are ongoing.</p> <p>1. The City has all buildings that are regularly occupied inspected on an annual basis for safety and hazard issues. These include internal wiring, storage of hazardous materials, tripping hazards, proper furniture anchoring, etc.</p> <p>2. Emergency back-up power has been evaluated and identified as including equipment that is old, though rarely used. Plans are being developed to update, replace or back-up emergency generators to provide increased assurance of operation in the case of a loss of primary power. The City also has service agreements with two vendors to provide on-call service when necessary to the emergency power systems.</p> <p>3. A number of City buildings are in close proximity to very large redwood trees, that could cause significant damage if they come down on adjacent buildings. This includes City Hall, City Hall Annex, South Annex, Library and various fire stations. The trees are inspected annually for weakness or disease. See SNY-10.</p>

Category	2011 No.	2011 Strategy	Responsible Agency	Status	Carry Forward to New Plan?	Comments
Santa Clara County (Unincorporated Areas)						
Wildland Urban Interface	10.a	County-Wide CWPP - Create an integrated county-wide CWPP and get it online. Communities have very different needs and these would have to be addressed. Market and promote collaboration of agencies in WUI areas with signs, etc.... CWPP would need approval from Board of Supervisors, CalFire and the local fire agency. There is a strong feeling that active involvement from the county-wide stakeholders would make a huge difference. a. Create defensible space programs on a county-wide basis.	County Fire Funding: FY 2010 Assistance to Firefighters Grant Program Fire Prevention and Safety Grants; HMGP, PDM	In-progress	Yes	The CWPP was completed in September, 2016. Need to get all signatory entities to accept the county-wide CWPP, which is in progress (see SCC-1).
Wildland Urban Interface	13	Tactical Database - Prepare tactical information database and accurate maps ready for Incident Commanders to access when necessary. Refer to the "Los Padres model. Develop an evacuation plan for isolated communities. Evacuation routes serve the tri-role of evacuation, response and fire lines. We need to bring it all together with appropriate stakeholders (CalTrans, CHP, etc....) (Example CHP closes Highway 17 @Madrone Drive due to Wildfire. If 17 traffic goes Into Redwood Estates it's a narrow maze. If 17 traffic goes to Old Santa Cruz Highway they have 2 ways out. Does CHP know this? Sheriff's Office? Signage could be critical. Need Focused Tactical Planning for problem areas).	Funding is provided by grants from federal, state and private resources.	In-progress	Yes	Continue to prepare resources (electronic, guideline references, checklists, maps, plans, etc.) in collaboration with CalFire and Santa Clara County (See action SCC-35)
Wildland Urban Interface	14	County-Wide Task Force - Establish a county-wide Wildfire Mitigation Task Force to study the problem and coordinate efforts. Get critical stakeholders involved early in the process. A core body and extended body could be used to make efficient use of time.	Coordinate with CAL Division of Forestry, local Fire Departments & USFS; BLM	In-progress	Yes	Cal Fire and County Fire have been working together for several years to study areas susceptible to vegetation fire and develop pre-plans for response. Also included both Cal Fire and County Fire advising the FireSafe Council on projects we feel are higher priorities. (See actions SCC-2 and SCC-3)

Category	2011 No.	2011 Strategy	Responsible Agency	Status	Carry Forward to New Plan?	Comments
Wildland Urban Interface - Supplemental	17	Research and evaluate best practices. The Lexington Hills model built relationships with private property owners. Association of Bay Area Governments (ABAG) has resources available for reference. San Bernardino County and San Diego County have had frequent practice and collaboration within this area	Santa Clara County FireSafe Council	Complete	Yes	County Fire/ Cal Fire/ FireSafe Council and others continue to collaborate with other entities regarding latest research on best practices (i.e. Be Ember Aware). This is done through conferences, seminars and invitations to attend other area FireSafe Council meetings. Many of the local and regional stakeholders and interested parties have participated in guided tours through areas which have suffered significant wildfire events (Valley Fire in 2015 and Loma Fire in 2016). (See action SCC-3)
Information-Sharing	19	Create a Santa Clara County Infrastructure Council (or equivalent) as an institutional receptacle for matters pertaining to infrastructure data-sharing efforts.	County OES/ EOAC/ ISD	Not started	Yes	Create/ Incorporate Santa Clara County Information Sharing Council (or equivalent) as an institutional receptacle for matters pertaining to infrastructure data-sharing efforts. (See SCC-5)
Information-Sharing	19.a	Santa Clara County Infrastructure Council - Approach infrastructure providers and ask them to become partners in this council.	County OES/ EOAC/ ISD	Not Started	Yes	Reach out to the departments and agencies who maintain data that can be used for Emergency Management. Also, consider inviting the local private sector to the council. (See SCC-5)
Information-Sharing	19.b	Santa Clara County Infrastructure Council - Create an agenda in cooperation with council partners. Anticipated agenda items are: i. Recognize the legitimate concerns of the private sector in sharing critical infrastructure information, and address those concerns with reasonable measures (PCII, need-to-know, encryption, etc....) ii. Initially focus on water and/ or power providers to build success and momentum.	County OES/ EOAC/ ISD	Not started	Yes	Create an agenda in cooperation with council partners. Anticipated agenda items are: i. Recognize the legitimate concerns of the private sector in sharing critical infrastructure information, and address those concerns with reasonable measures (PCII, need-to-know, encryption, etc....) ii. Initially focus on water and/ or power providers to build success and momentum. (See SCC-5)

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Information-Sharing	19.c	Santa Clara County Infrastructure Council - Host Council meetings and meet on a quarterly basis.	County OES/EOAC/ ISD	Not started	Yes	Host Council meetings and meet on a quarterly basis. (See SCC-5)
Information-Sharing	19.e	Santa Clara County Infrastructure Council - Develop a common architecture interface for data to be shared between members. Request utilities provide agreed-upon information in digital, dynamic format and create a commonality of layers. Use WebEOC infrastructure for mitigation and emergency response efforts.	ISD/ GIS	On-Going	Yes	Develop, or discover, a common architecture interface for data to be shared between members. Request utilities provide agreed-upon information in digital, dynamic format and create a commonality of layers. (See SCC-5, SCC-8 and SCC-10)
Information-Sharing - Supplemental	19.g	Santa Clara County Infrastructure Council - Invite Santa Clara County FireSafe Council to join and give them access to information through WebEOC that they need. For example, they can't build a fuel break without authorization due to property boundaries. Good GIS information can facilitate this process. Well-mapped evacuation routes should be available to stakeholder agencies and the public. "Blue hydrants" could be mapped for the local fire departments.	County OES/EOAC/ ISD	Not started	Yes	Invite Santa Clara County FireSafe Council to join and give them permission to contribute and access information through sharing portals which may include WebEOC that they need. For example, they can't build a fuel break without authorization due to property boundaries. Good infrastructure GIS information can facilitate this process. Well-mapped evacuation routes should be available to stakeholder agencies and the public. Assessment of "Blue hydrants" could be mapped for the mapping by local fire departments (see SCC-5).
Information-Sharing - Supplemental	22	Coordinate with the private sector on prioritization of critical facilities before and during restoration of utility services.	ISD/ GIS	Incomplete	Yes	Coordinate with the private sector on prioritization of critical facilities before and during restoration of utility services (See SCC-35)

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Flood Mitigation	23	Survey the cities to verify their plan for replacing and/ or upgrading localized flooding pump systems and generating alternate power. Based on results, scope potential project to upgrade systems county-wide.	Council, SCVWD, Santa Clara City and San José Funding: County Staff Time, HMGP or PDM	Complete	No	Santa Clara City and San José are concerned that water is pumped up and over levees into the Guadalupe River. Streets are lower than the levee. If the power goes down, residents are at risk if the pumps are not operating. Gilroy and Morgan Hill do not have this risk, only risk to cities that touch the bay. The problem will be exacerbated by sea level rise.
Flood Mitigation	24	Build a GIS layer of localized flooding "hot spots" throughout the County.	Funding: County Staff Time, HMGP, PDM (any grants or potential for funds from SCVWD?)	Complete	Yes	Maintain and update a GIS layer of localized flooding "hot spots" throughout the County (see SCC-6).
Flood Mitigation	25	Scope potential projects to make localized flooding hot spots deeper and bigger.		Unclear/ Unactionable Strategy	No	The intent of this action is not clear.
Flood Mitigation	26	Scope potential projects to mitigate existing at-risk levee bridges.		No Progress	No	Dependent on completion of other actions. To be considered at a later date.
Flood Mitigation	27	Scope potential vegetation removal projects to expedite the flow of water away from communities and into water outlets. target high priority waterways; walk/ drive channels		Unclear/ Unactionable Strategy	No	The intent of this action is not clear.
Flood Mitigation	28	Verify with the Water District their plans for managing the risks of the oldest levees in County.		Not started	No	Dependent on completion of other actions. To be considered at a later date.
Catastrophic Dam Failure - Supplemental	34	Use GIS to evaluate catastrophic dam failure scenarios.	SCVWD	Complete	Yes	Maintain and update GIS to evaluate catastrophic dam failure scenarios. (See SCC-7)
Catastrophic Dam Failure - Supplemental	40	Evaluate "Domino Dam Effect" for potential mitigation.	SCVWD	Unclear/ Unactionable Strategy	No	Status of action is unclear as mead agency did not participate in plan update.

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Town of Los Altos Hills						
		Create resources to assist neighbors in knowing and helping neighbors.	Los Altos Hills County Fire District, LAH Parks & Red, LAH City Manager/ Office of Emergency Services	Ongoing	Yes	See Action LAH-1
		Continue tree trimming programs, brush clearance, and other defensible space outreach efforts as necessary to minimize the potential for road blockage. Maintenance of brush and vegetative growth for fire prevention is addressed in Section 4-2.115 and 4-2.116 of the Los Altos Hills Municipal Code.	LAHCFD and Public Works	Ongoing	Yes	See Action LAH-2
		Develop additional public education and outreach programs.	City Manager/ OES	Ongoing	Yes	See Action-LAH-3
		Prepare a comprehensive evacuation plan focusing on potential wildland fire threats and identifying potential evacuation routes.	City Manager/ OES/ Fire/ Law/ Public information officer	Ongoing	Yes	See Action LAH-4
		Participate in County organized efforts to develop a countywide Community Wildfire Protection Plan.		Ongoing	Yes	See Action LAH-5
		Evaluate options and resources available to support home owners in completing seismic retrofits.		Ongoing	Yes	See Action LAH-6
		Coordinate with the appropriate state and county agencies to develop a comprehensive list of bridges and overpasses within Los Altos Hills and who is responsible for their maintenance.		Ongoing	Yes	See Action LAH-7
Town of Los Gatos						
Soft-story buildings	1	The Town will inventory and map, using GIS, the location of soft-story buildings. The maps will be available to first responders during emergencies.	Town of Los Gatos	Ongoing	Yes	See LGT-12.

Category	2011 No.	2011 Strategy	Responsible Agency	Status	Carry Forward to New Plan?	Comments
Soft-story buildings	2	The Town will also consider developing a retrofit grant program for building owners. The grant program would be made more possible if the Town is able to secure mitigation grants through having an adopted Hazard Mitigation Plan. This project would also be consistent with General Plan Safety Element Policy SAF Policy 1.5, which calls for the Town to provide incentives for seismic retrofits of structures.	Town of Los Gatos	No Progress	Yes	See LGT-13.
Wildfire	1	The Town will coordinate with Santa Clara County Fire Department to develop and distribute fire prevention preparedness education information, including evacuation plans for residents. This project would also be consistent with General Plan Safety Element SAF Action 3.3.	County Fire	Complete	No	County fire lead. The Town worked with County Fire to establish evacuation routes and install signs. The Town portion of the item is complete.
Dam failure	1	The Town will coordinate with surrounding jurisdictions that are in the inundation area of the Lexington Reservoir Lenihan Dam to implement a siren warning system.	Town of Los Gatos	No Progress	Yes	See LGT-14.
Dam failure	2	Marketing and public education campaigns for dam failures will also be implemented.	Town of Los Gatos	No Progress	Yes	See LGT-15.
	ENVI-b-4	Promote transportation options such as bicycle trails, commute trip reduction programs, incentives for car pooling and public transit.	Town of Los Gatos	Ongoing	Yes	See LGT-16.
	ENVI-b-5	Increase the use of clean, alternative energy by, for example, investing in "green tags", advocating for the development of renewable energy resources, recovering landfill methane for energy production, and supporting the use of waste to energy technology.	Town of Los Gatos	Ongoing	Yes	See LGT-17.
	ENVI-b-6	Make energy efficiency a priority through building code improvements, retrofitting city facilities with energy efficient lighting and urging employees to conserve energy and save money.	Town of Los Gatos	Ongoing	Yes	See LGT-18.
	HSNG-k-12	Develop a program to provide at-cost NOAA weather radios to residents of flood hazard areas that request them, with priority to neighborhood watch captains and others trained in their use.	Town of Los Gatos	Some Progress	No	Radios were distributed to schools, but a program is not planned for development