

# 13. CITY OF SAN JOSÉ

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## 13.1 HAZARD MITIGATION PLAN POINT OF CONTACT

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## 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 10<sup>th</sup> 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																								
<p>Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan?</p> <ul style="list-style-type: none"> <li>If yes, give the estimated area annexed and estimated number of parcels or structures.</li> </ul>	<p>Yes</p> <p>0.89 square miles, approximately 32 parcels</p>																								
<p>Is your jurisdiction expected to annex any areas during the performance period of this plan?</p> <ul style="list-style-type: none"> <li>If yes, please describe land areas and dominant uses.</li> <li>If yes, who currently has permitting authority over these areas?</li> </ul>	<p>Yes</p> <p>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.</p> <p>County of Santa Clara</p>																								
<p>Are any areas targeted for development or major redevelopment in the next five years?</p> <ul style="list-style-type: none"> <li>If yes, please briefly describe, including whether any of the areas are in known hazard risk areas</li> </ul>	<p>Yes</p> <p>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.</p>																								
<p>How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?</p>	<table border="1"> <thead> <tr> <th></th> <th>2011</th> <th>2012</th> <th>2013</th> <th>2014</th> <th>2015</th> </tr> </thead> <tbody> <tr> <td>Single Family</td> <td>89</td> <td>214</td> <td>280</td> <td>399</td> <td>170</td> </tr> <tr> <td>Multi-Family</td> <td>20</td> <td>87</td> <td>110</td> <td>118</td> <td>106</td> </tr> <tr> <td>Other (commercial, mixed use, etc.)</td> <td>115</td> <td>110</td> <td>114</td> <td>148</td> <td>119</td> </tr> </tbody> </table>		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
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Single Family	89	214	280	399	170																				
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Other (commercial, mixed use, etc.)	115	110	114	148	119																				
<p>Please provide the number of permits for each hazard area or provide a qualitative description of where development has occurred.</p>	<p>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.</p>																								
<p>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.</p>	<p>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.</p>																								

## 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?
<b>Codes, Ordinances, &amp; Requirements</b>				
<b>Building Code</b> <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>	Yes	No	Yes	No
<b>Zoning Code</b> <i>Comment: Municipal Code, Title 20, Zoning, Ord. 26248, February 2001, undergoes periodic review and revisions (<a href="http://www.sanjoseca.gov/index.aspx?NID=2108">http://www.sanjoseca.gov/index.aspx?NID=2108</a>)</i>	Yes	No	Yes	No
<b>Subdivisions</b> <i>Comment: Municipal Code, Title 19, Subdivisions</i>	Yes	No	Yes	No
<b>Stormwater Management</b> <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>	Yes	Yes	Yes	No
<b>Post-Disaster Recovery</b> <i>Comment: None located</i>	No	No	No	No
<b>Real Estate Disclosure</b> <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	No	Yes	No
<b>Growth Management</b> <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>	Yes	No	Yes	No
<b>Site Plan Review</b> <i>Comment: Municipal Code, Title 20, Chapter 20.100, Administration and Permits, Ord. 26248, February 2001</i>	Yes	No	No	No
<b>Environmental Protection</b> <i>Comment: Municipal Code, Title 21, Environmental Clearance, Ord. 24551; California Environmental Quality Act</i>	Yes	Yes	Yes	No
<b>Flood Damage Prevention</b> <i>Comment: Municipal Code, Title 17, Chapter 17.08, Special Flood Hazard Area Regulations, Ord. 28512</i>	Yes	No	No	No
<b>Emergency Management</b> <i>Comment: Municipal Code, Title 8, Office of Emergency Services, Ord. 25213</i>	Yes	No	No	No
<b>Climate Change</b> <i>Comment: City of San José Greenhouse Gas Reduction Strategy, Resolution No. 77618, December 2015 (<a href="http://www.sanjoseca.gov/documentcenter/view/9388">http://www.sanjoseca.gov/documentcenter/view/9388</a>); California SB-379</i>	Yes	No	Yes	Yes
<b>Other: N/A</b> <i>Comment: None located</i>	No	No	No	No
<b>Planning Documents</b>				
<b>General Plan</b> <i>Envision San José 2040 General Plan, Resolution No. 76042, revised December 13, 2016. Comment: The Envision San José 2040 General Plan is in compliance with Assembly Bill 2140. (<a href="http://www.sanjoseca.gov/DocumentCenter/Home/View/474">http://www.sanjoseca.gov/DocumentCenter/Home/View/474</a>)</i>	Yes	No	Yes	Yes
<b>Capital Improvement Plan</b> <i>Comment: 2017 – 2021 Capital Improvement Program (CIP), updated annually (<a href="http://www.sanjoseca.gov/index.aspx?nid=5052">http://www.sanjoseca.gov/index.aspx?nid=5052</a>)</i>	Yes	No	No	Yes
<b>Floodplain or Watershed Plan</b> <i>Comment: None located</i>	No	No	No	No
<b>Stormwater Plan</b> <i>Comment: City of San José Stormwater Management Annual Report 2015-2016, September 2016, prepared annually (<a href="http://www.sanjoseca.gov/ArchiveCenter/ViewFile/Item/2931">http://www.sanjoseca.gov/ArchiveCenter/ViewFile/Item/2931</a>)</i>	Yes	No	No	No

	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 (<a href="https://www.sanjoseca.gov/DocumentCenter/View/57483">https://www.sanjoseca.gov/DocumentCenter/View/57483</a>)</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 (<a href="http://www.sanjoseca.gov/DocumentCenter/View/47603">http://www.sanjoseca.gov/DocumentCenter/View/47603</a>)</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 <sup>a</sup> \$1,919,489,100 <sup>a</sup> \$6,725,447 <sup>a</sup>
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 <sup>a</sup> 210 <sup>a</sup> \$3,537,347.91 <sup>a</sup>

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., winger 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
<b>Technical Capacity</b>	
<b>Jurisdiction-level understanding of potential climate change impacts</b>	High
<p><i>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.</i></p> <p><i>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.</i></p>	
<b>Jurisdiction-level monitoring of climate change impacts</b>	High
<p><i>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.</i></p>	
<b>Technical resources to assess proposed strategies for feasibility and externalities</b>	High
<p><i>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.</i></p>	
<b>Jurisdiction-level capacity for development of greenhouse gas emissions inventory</b>	Low
<p><i>Comment: The City recently hired consultants (AECOM) to updated 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.</i></p>	
<b>Capital planning and land use decisions informed by potential climate impacts</b>	High
<p><i>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.</i></p>	
<b>Participation in regional groups addressing climate risks</b>	Medium
<p><i>Comment: Joint venture Silicon Valley, South Bay Shoreline Levee Project, Resilient By Design.</i></p>	
<b>Implementation Capacity</b>	
<b>Clear authority/mandate to consider climate change impacts during public decision-making processes</b>	High
<p><i>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.</i></p>	
<b>Identified strategies for greenhouse gas mitigation efforts</b>	High
<p><i>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.</i></p>	
<b>Identified strategies for adaptation to impacts</b>	High
<p><i>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.</i></p>	
<b>Champions for climate action in local government departments</b>	High
<p><i>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.</i></p>	

Adaptive Capacity Assessment	Jurisdiction Rating
<b>Political support for implementing climate change adaptation strategies</b> <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
<b>Financial resources devoted to climate change adaptation</b> <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
<b>Local authority over sectors likely to be negative impacted</b> <i>Comment: None provided</i>	Medium
<b>Public Capacity</b>	
<b>Local residents knowledge of and understanding of climate risk</b> <i>Comment: None provided</i>	Medium
<b>Local residents support of adaptation efforts</b> <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
<b>Local residents' capacity to adapt to climate impacts</b> <i>Comment: None provided</i>	High
<b>Local economy current capacity to adapt to climate impacts</b> <i>Comment: None provided</i>	High
<b>Local ecosystems capacity to adapt to climate impacts</b> <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 adaptation 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	XXXXX
Strong Wind	—	2/6/2015	XXXXX
Strong Wind	—	2/6/2015	XXXXX
Strong Wind	—	2/6/2015	XXXXX
Flood	—	2/6/2015	XXXXX
Strong Wind	—	12/30/2014	XXXXX
Strong Wind	—	12/30/2014	XXXXX
Strong Wind	—	12/30/2014	XXXXX
Strong Wind	—	12/30/2014	XXXXX
Strong Wind	—	12/30/2014	XXXXX
Strong Wind	—	12/30/2014	XXXXX
Strong Wind	—	12/30/2014	XXXXX
Strong Wind	—	12/30/2014	XXXXX
Strong Wind	—	12/30/2014	XXXXX
Flood	—	12/2/2014	XXXXX
Flash Flood	—	2/28/2014	XXXXX
Flood	—	2/28/2014	XXXXX
Strong Wind	—	1/21/2012	XXXXX
Landslide	—	11/30/2011	XXXXX
Strong Wind	—	11/30/2011	XXXXX
Strong Wind	—	1/28/2010	XXXXX
Strong Wind	—	1/22/2010	XXXXX
Strong Wind	—	1/20/2010	XXXXX
Flood	—	1/20/2010	XXXXX
Strong Wind	—	1/19/2010	XXXXX
Flood	—	1/18/2010	XXXXX
Frost/Freeze	—	12/8/2009	XXXXX
High Wind	—	10/27/2009	XXXXX
High Wind	—	10/13/2009	XXXXX
Heat	—	5/17/2009	XXXXX
Strong Wind	—	4/14/2009	XXXXX
Strong Wind	—	12/25/2008	XXXXX
Frost/Freeze	—	1/6/2007	XXXXX
Heat	—	7/20/2006	XXXXX
Fire	2465	9/23/2002	XXXXX
Flash Flood	—	2/8/1998	XXXXX
Flash Flood	—	2/7/1998	XXXXX
Flash Flood	—	2/3/1998	XXXXX
Severe Storm(s)	1203	2/2/1998	XXXXX
Severe Storm(s)	1155	12/28/1996	XXXXX

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Storm(s)	1046	2/13/1995	XXXXX
Severe Storm(s)	1044	1/3/1995	XXXXX
Freezing	894	12/19/1990	XXXXX
Earthquake	845	10/17/1989	XXXXX
Flood	758	2/12/1986	XXXXX
Fire	739	6/26/1985	XXXXX
Coastal Storm	—	1/21/1983	XXXXX
Flood	651	12/19/1981	XXXXX
Drought	3023	1/20/1977	XXXXX

## 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.

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 <sup>a</sup>	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
<p><b>SJ-1</b>—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.</p>						
New	Flood, Wildfire	1, 2, 6	Planning, Building and Code Enforcement	XXXXX	XXXXX	XXXXX
<p><b>SJ-2</b>—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.</p>						
New and Existing	Dam Failure, Earthquake, Flood	4, 6	Planning, Building and Code Enforcement	XXXXX	XXXXX	XXXXX
<p><b>SJ-3</b>—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).</p>						
New	Dam Failure, Earthquake, Flood	4	PRNS	XXXXX	XXXXX	XXXXX
<p><b>SJ-4</b>—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.</p>						
New	All Hazards	4, 9	Public Works	XXXXX	XXXXX	XXXXX
<p><b>SJ-5</b>—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.</p>						
New	All Hazards	2	Office of Emergency Services, Public Works	XXXXX	XXXXX	XXXXX
<p><b>SJ-6</b>—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).</p>						
New and Existing	Dam Failure, Earthquake, Flood, Levee Failure, Wildfire	3	Emergency Services	XXXXX	XXXXX	XXXXX
<p><b>SJ-7</b>—Develop and execute agreements with fueling sources to provide supply during power outages when the City's supply has been fully utilized.</p>						
New	Dam Failure, Earthquake, Flood, Levee Failure, Wildfire	2	Public Works	XXXXX	XXXXX	XXXXX
<p><b>SJ-8</b>—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.</p>						
Existing	Earthquake, Wildfire	3, 4	Fire	XXXXX	XXXXX	XXXXX
<p><b>SJ-9</b>—Develop and maintain public education materials and outreach in multiple languages to ensure the public is knowledgeable regarding hazard disaster preparedness.</p>						
Existing	All Hazards	4	Emergency Services, Public Works	XXXXX	XXXXX	XXXXX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>SJ-10</b> —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	XXXXX	XXXXX	XXXXX
<b>SJ-11</b> —Encourage property owners to make improvements through elevating their homes within flood hazard areas.						
Existing	Flood	4	Planning, Building and Code Enforcement	XXXXX	XXXXX	XXXXX
<b>SJ-12</b> —Develop a Post-Disaster Recovery Plan.						
New	All Hazards	3	Office of Emergency Services	XXXXX	XXXXX	XXXXX
<b>SJ-13</b> —Develop a Debris Management Plan.						
New	All Hazards	3	Office of Emergency Services	XXXXX	XXXXX	XXXXX
<b>SJ-14</b> —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	XXXXX	XXXXX	XXXXX
<b>SJ-15</b> —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	XXXXX	XXXXX	XXXXX
<b>SJ-16</b> —Annually track building permits issued for new construction within hazard areas.						
New	Earthquake, Flood, Landslide, Wildfire	2	Planning, Building and Code Enforcement	XXXXX	XXXXX	XXXXX
<b>SJ-17</b> —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	XXXXX	XXXXX	XXXXX
<b>SJ-18</b> —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	XXXXX	XXXXX	XXXXX
<b>SJ-19</b> —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	XXXXX	XXXXX	XXXXX
<b>SJ-20</b> —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	XXXXX	XXXXX	XXXXX



Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>SJ-21</b> —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	XXXXX	XXXXX	XXXXX
<b>SJ-22</b> —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	XXXXX	XXXXX	XXXXX
<b>SJ-23</b> —Sponsor the formation and training of Community Emergency Response Teams (CERT) for employees and residents.						
Existing	All Hazards	1, 2, 4	Emergency Services	XXXXX	XXXXX	XXXXX
<b>SJ-24</b> —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 <a href="http://quake.abag.ca.gov/eqhouse.html">http://quake.abag.ca.gov/eqhouse.html</a> ).						
Existing	Earthquake	1, 2, 4	Planning, Building and Code Enforcement	XXXXX	XXXXX	XXXXX
<b>SJ-25</b> —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	XXXXX	XXXXX	XXXXX
<b>SJ-26</b> —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	XXXXX	XXXXX	XXXXX
<b>SJ-27</b> —Maintain the local government’s emergency operations center in a fully functional state of readiness.						
Existing	All Hazards	5, 9	Emergency Services	XXXXX	XXXXX	XXXXX
<b>SJ-28</b> —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	XXXXX	XXXXX	XXXXX
<b>SJ-29</b> —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	XXXXX	XXXXX	XXXXX
<b>SJ-30</b> —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	XXXXX	XXXXX	XXXXX
<b>SJ-31</b> —Actively pursue implementation of projects identified in the City’s deferred maintenance program.						
Existing	Earthquake, Flood, Levee Failure	7, 8	Public Works, Transportation	XXXXX	XXXXX	XXXXX
<b>SJ-32</b> —Implement a ring levee at the San José-Santa Clara Regional Wastewater Treatment Plant.						
Existing	Flood	7	Environmental Services	XXXXX	XXXXX	XXXXX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<b>SJ-33</b> —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	XXXXX	XXXXX	XXXXX
<b>SJ-34</b> —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	XXXXX	XXXXX	XXXXX
<b>SJ-35</b> —Eliminate homeless encampments within waterways.						
Existing	Flood, Levee Failure	2, 4	Housing	XXXXX	XXXXX	XXXXX
<b>SJ-36</b> —Develop emergency response and continuity plans for city departments as appropriate.						
New	All Hazards	2	Emergency Services	XXXXX	XXXXX	XXXXX
<b>SJ-37</b> —Ensure pump stations in flood-prone areas are appropriately sized and maintained.						
Existing	Flood	8	Public Works, Transportation	XXXXX	XXXXX	XXXXX
<b>SJ-38</b> —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	XXXXX	XXXXX	XXXXX
<b>SJ-39</b> — 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	XXXXX	XXXXX	XXXXX
<b>SJ-40</b> — 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"> <li>• Enforcement of the flood damage prevention ordinance</li> <li>• Participate in floodplain identification and mapping updates</li> <li>• Provide public assistance/information on floodplain requirements and impacts.</li> </ul>						
New and Existing	Flood	1, 2, 3, 4, 7, 8	Public Works	XXXXX	XXXXX	XXXXX
<b>SJ-41</b> — Install and maintain flow gauges in waterways.						
New and Existing	Flood	2, 4	Public Works, Transportation	XXXXX	XXXXX	XXXXX
<b>SJ-42</b> — 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	XXXXX	XXXXX	XXXXX

**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 <sup>a</sup>	Grant Pursuit Priority <sup>a</sup>
SJ-1	3	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-2	2	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-3	1	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-4	2	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-5	1	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-6	1	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-7	1	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-8	2	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-9	1	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-10	2	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-11	1	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-12	1	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-13	1	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-14	4	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-15	1	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-16	1	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-17	2	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-18	2	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-19	4	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-20	4	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-21	4	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-22	1	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-23	3	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-24	3	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-25	3	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-26	4	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-27	2	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-28	3	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-29	2	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-30	3	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-31	2	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-32	1	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-33	3	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-34	2	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-35	2	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-36	1	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-37	1	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-38	2	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-39	2	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-40	6	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX

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 <sup>a</sup>	Grant Pursuit Priority <sup>a</sup>
SJ-41	2	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX
SJ-42	2	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX	XXXXX

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 <sup>a</sup>						
	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.

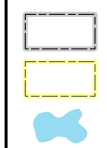
## 13.10 ADDITIONAL RESOURCES

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.

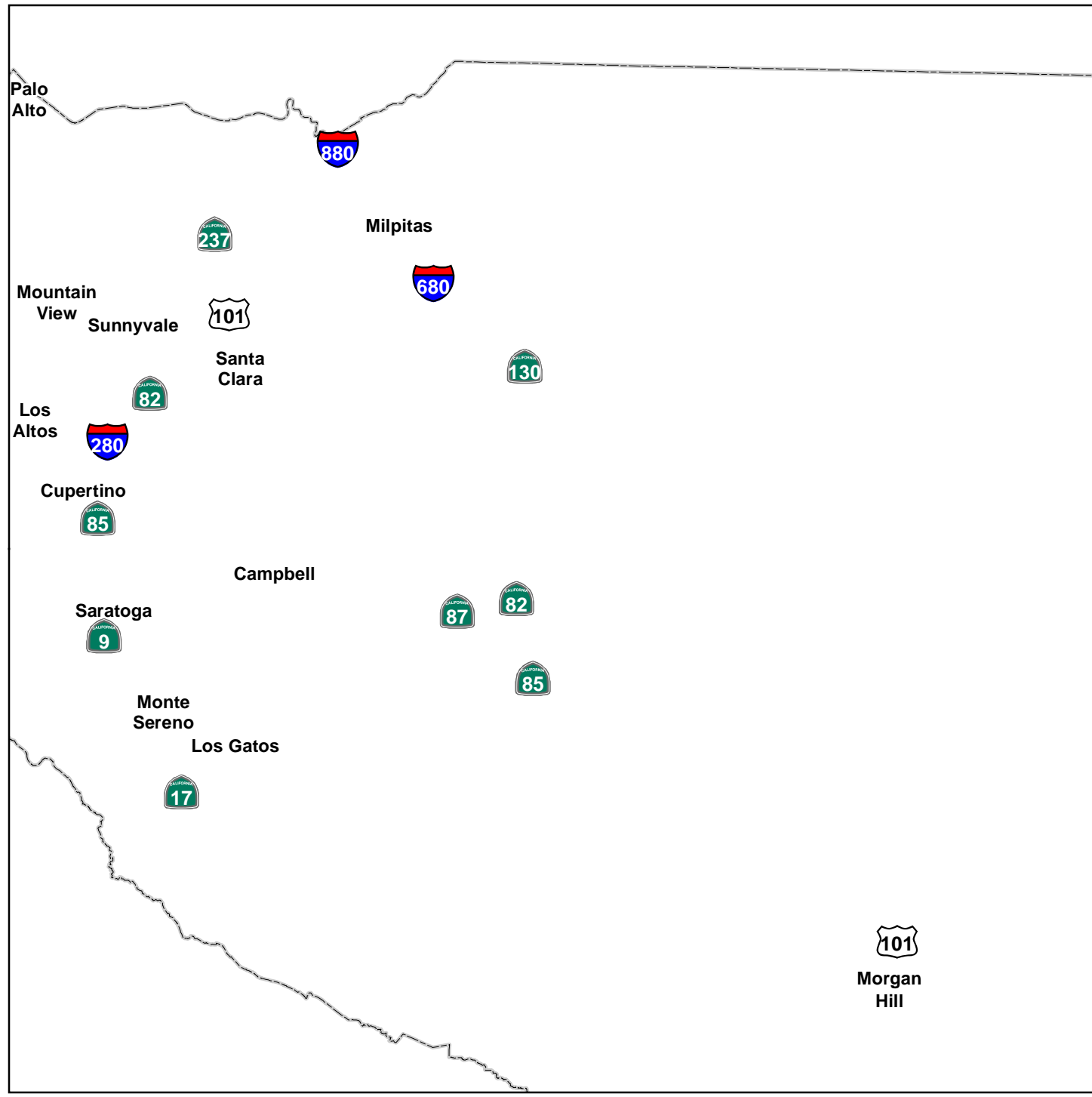
# The City of San Jose

## Critical Facilities

XXXXX



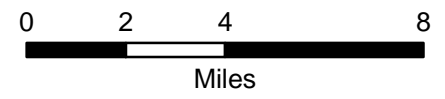
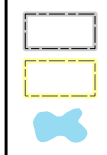
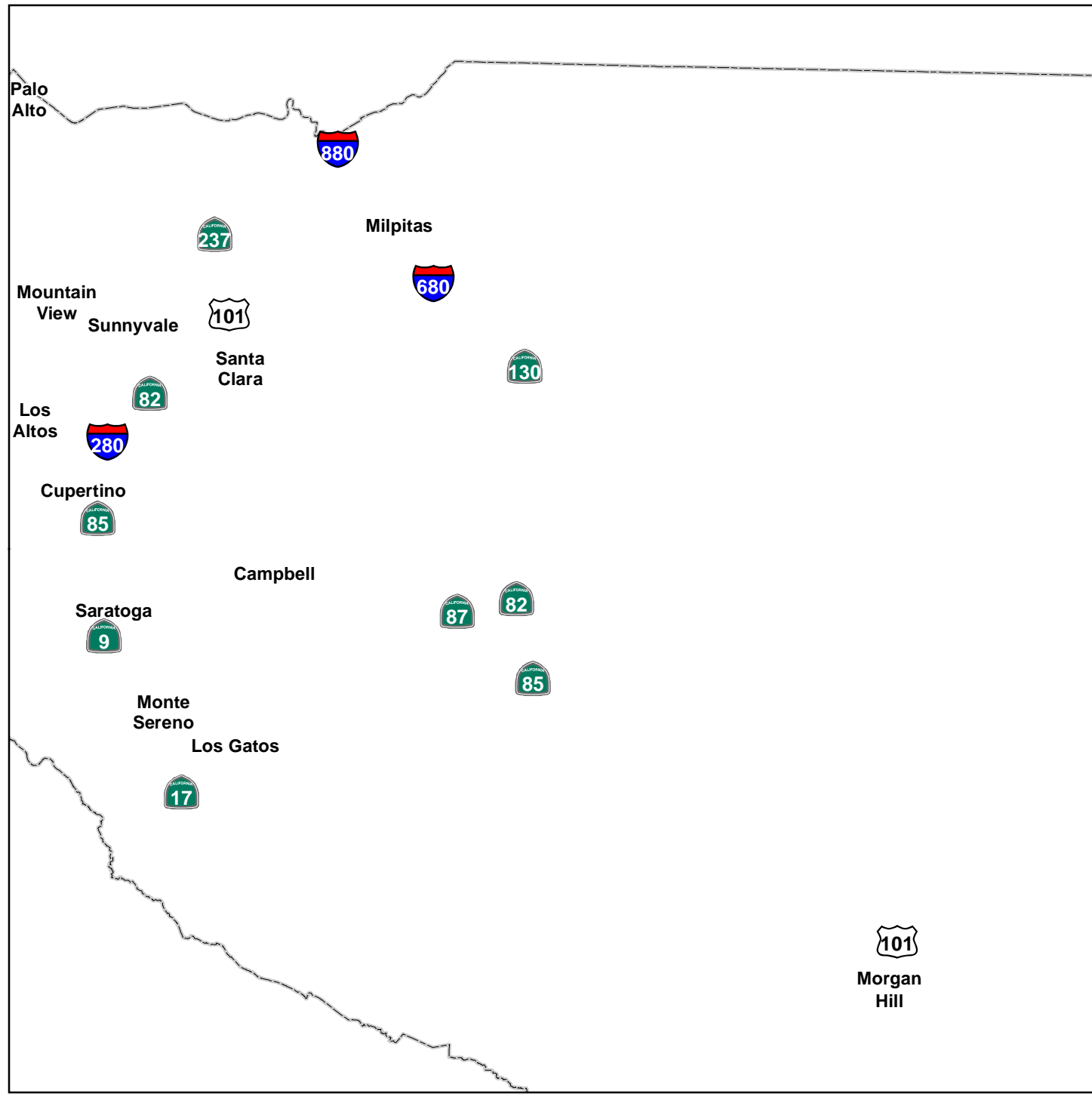
Map Data Sources: Santa Clara County, CalTrans, Hazus 3.1, EPA, SCVWD, USDA



# The City of San Jose

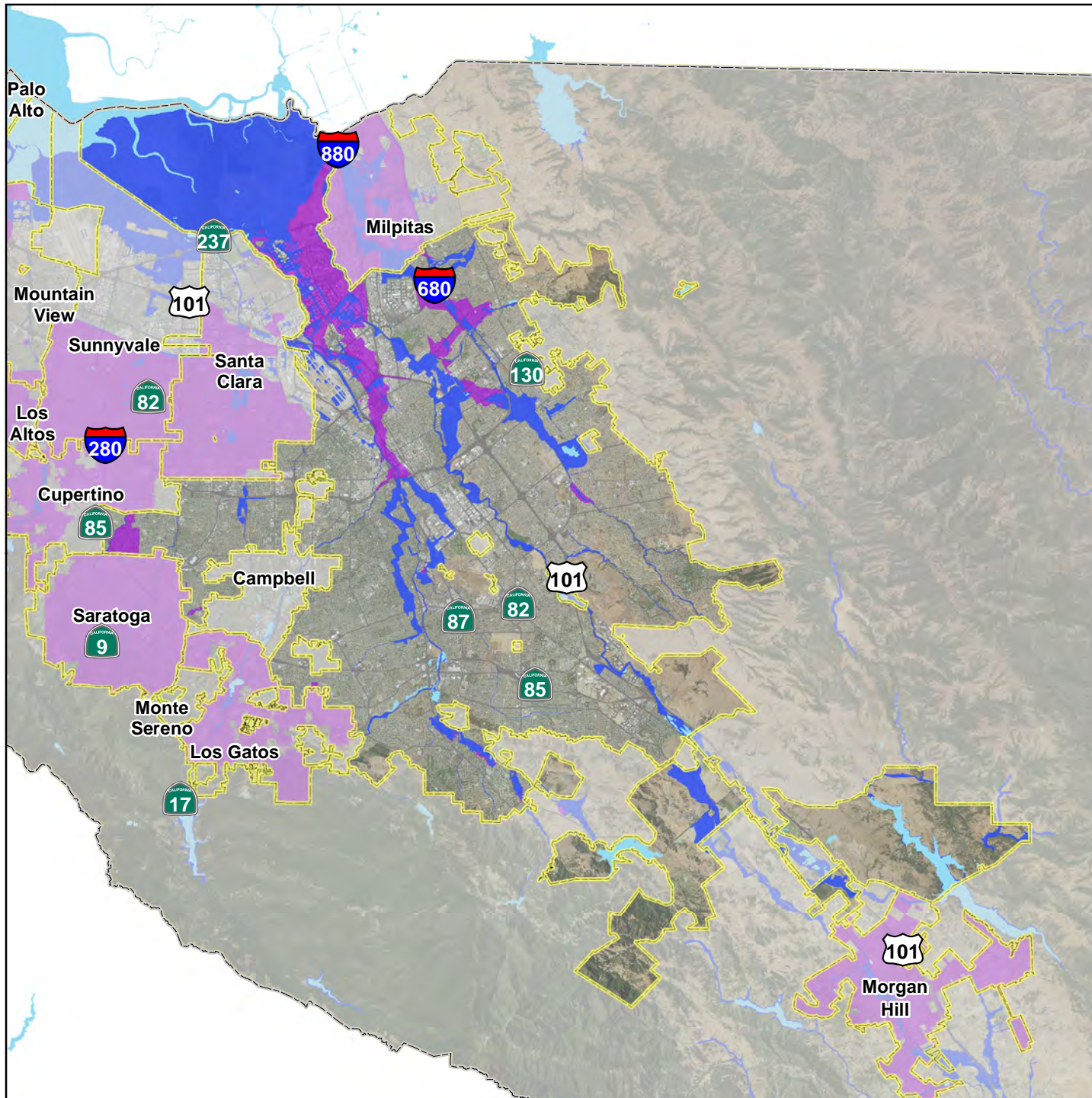
## Critical Infrastructure

XXXXX








Map Data Sources: Santa Clara County, CalTrans, Hazus 3.1, EPA, SCVWD, USDA





# The City of San Jose

## FEMA Effective DFIRM Flood Hazard Boundaries

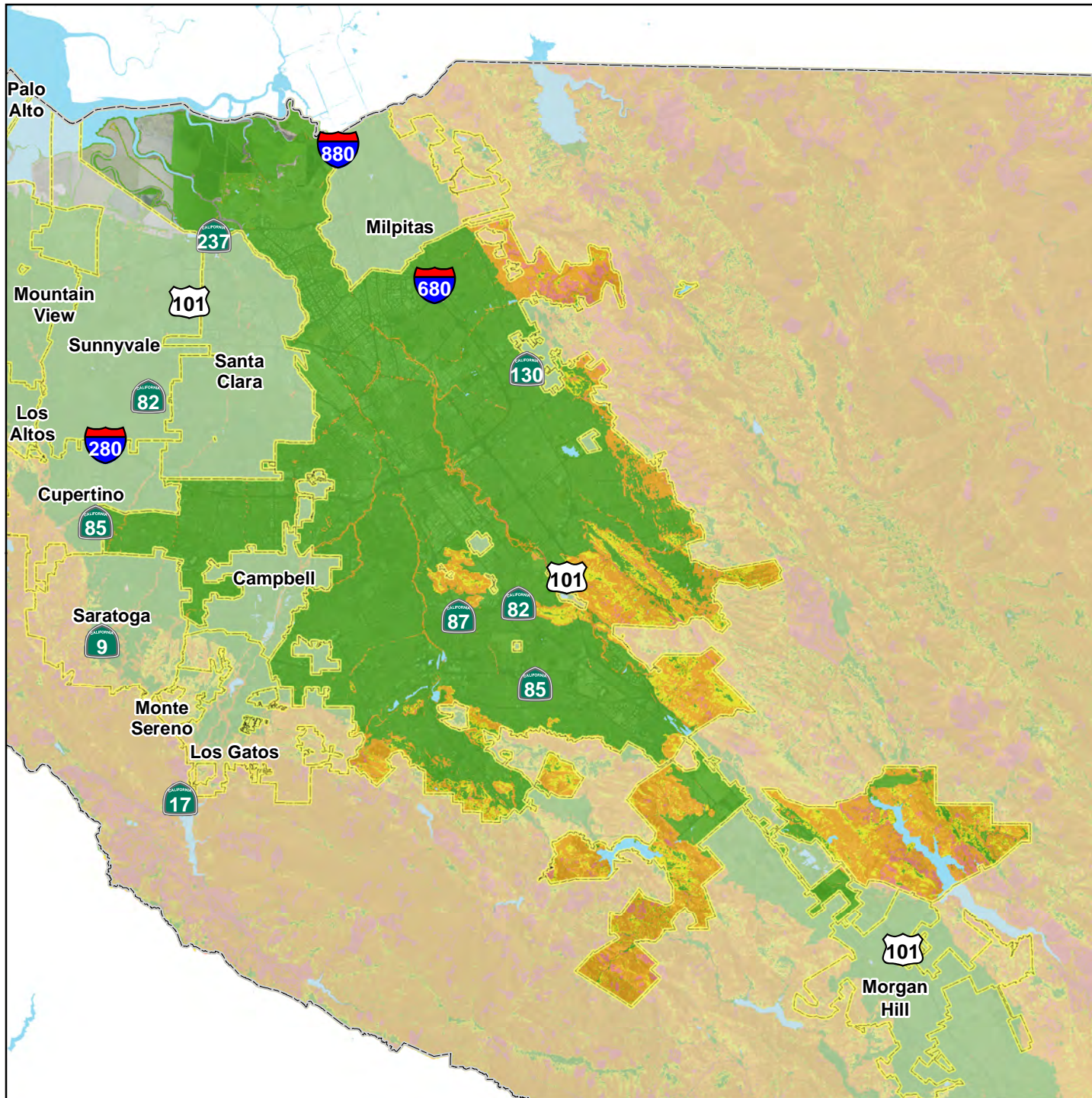
-  1% Annual Chance (100-Year) Flood Zone
-  0.2% Annual Chance (500-Year) Flood Zone
-  Santa Clara County Boundary
-  Jurisdictional Boundaries
-  Water Bodies & Channels

Flood hazard areas as depicted on Effective FEMA Digital Insurance Rate Maps (DFIRM)



Map Data Sources: Santa Clara County, CalTrans, FEMA, USDA



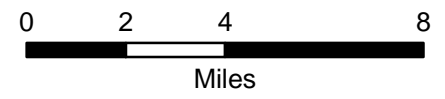


# The City of San Jose

## Landslide Susceptibility Zones

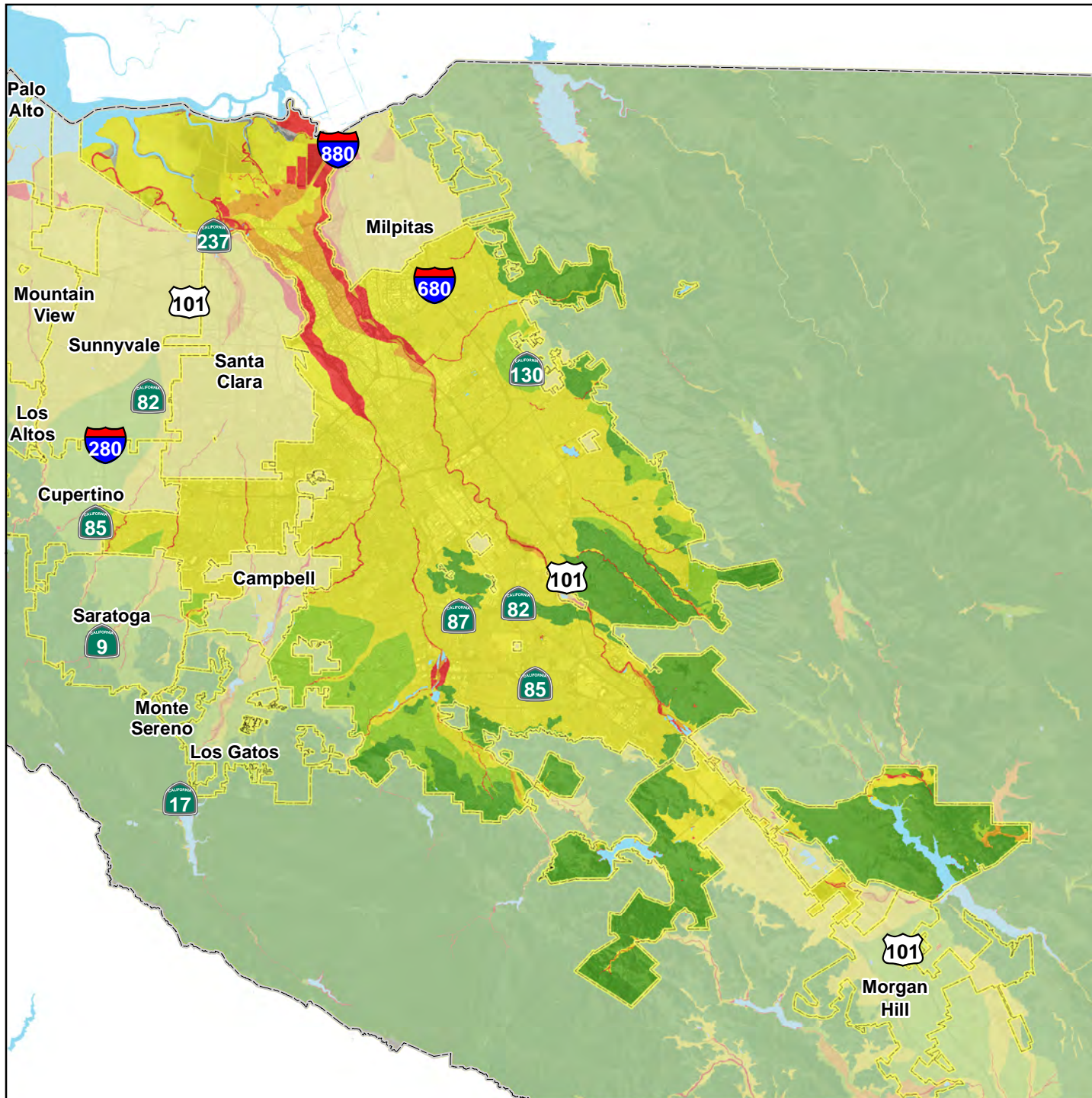
- Santa Clara County Boundary
  - Jurisdictional Boundaries
  - Water Bodies & Channels
- Type**
- Low
  - Moderate
  - High
  - Very High / Existing

Source dataset created by Wills C.J., Perez, F., Gutierrez, C., 2011, Susceptibility to deep-seated landslides in California: California Geological Survey Map Sheet 58







Map Data Sources: Santa Clara County, CalTrans, California Geological Survey, USDA, USGS








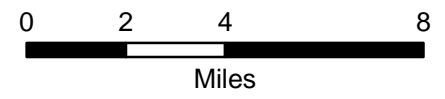
# The City of San Jose

## Liquefaction Susceptibility

-  Santa Clara County Boundary
-  Jurisdictional Boundaries
-  Water Bodies & Channels
-  No Liquefaction Data Available

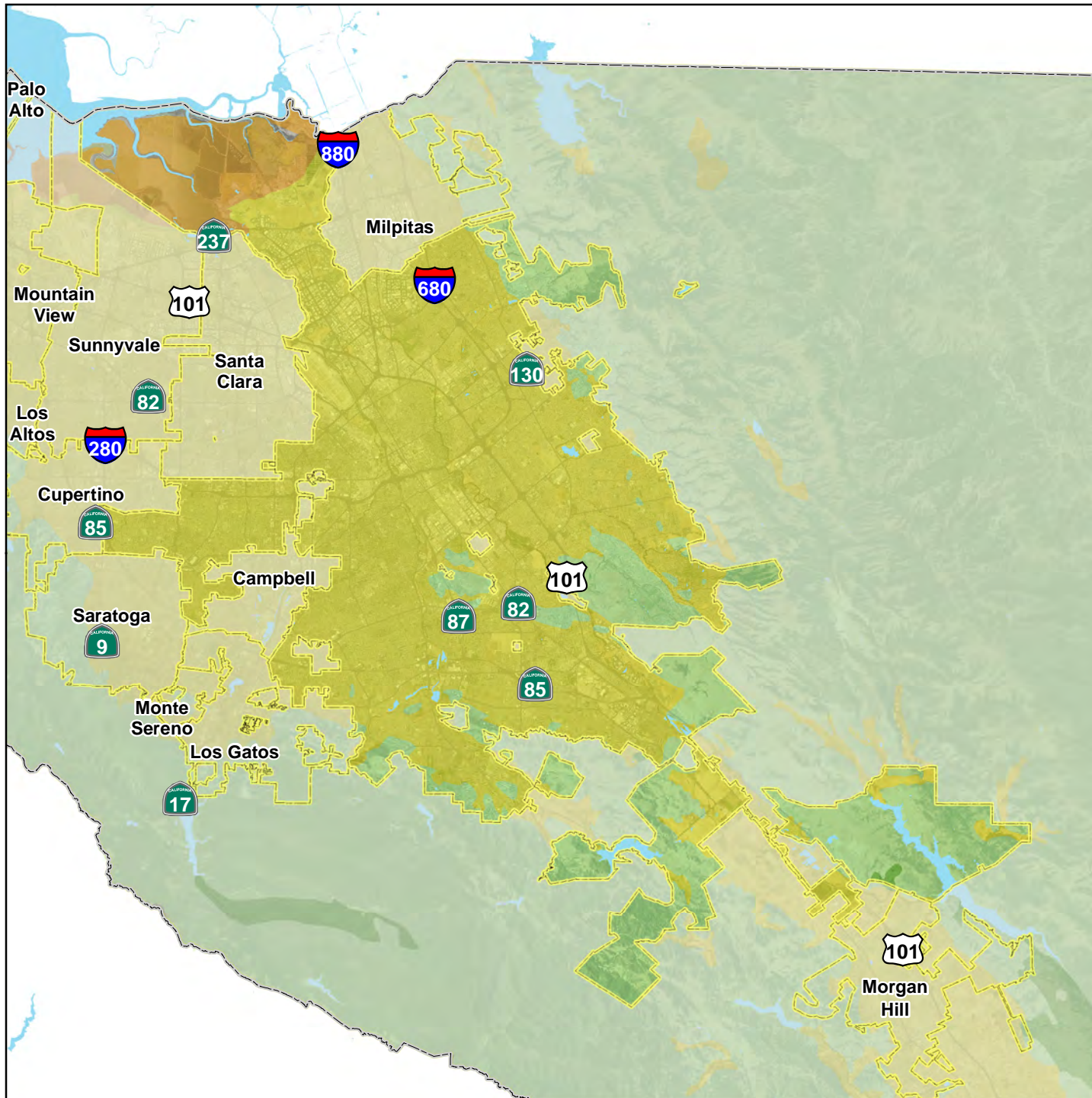
### Susceptibility to Liquefaction

-  Very Low
-  Low
-  Medium
-  High
-  Very High






Map Data Sources: Santa Clara County, CalTrans, California Geological Survey, USDA, USGS








# The City of San Jose

## NEHRP (National Earthquake Hazard Reduction Program) Soils

-  Santa Clara County Boundary
-  Jurisdictional Boundaries
-  Water Bodies & Channels

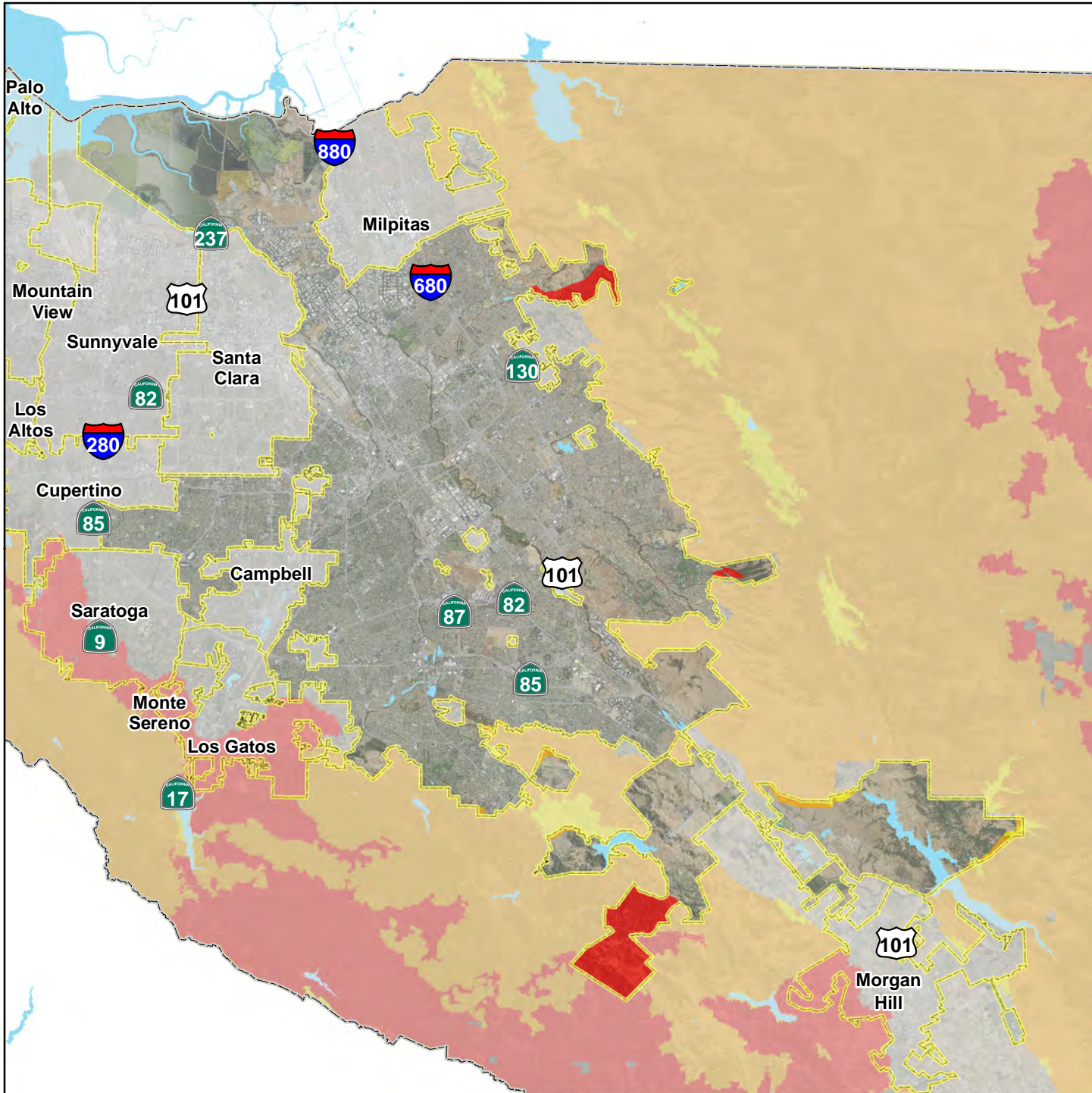
### NEHRP Site Class / Soil Profile

-  B / Rock
-  C / Very Dense Soil - Soft Rock
-  D / Stiff Soil
-  E / Soft Soil









Map Data Sources: Santa Clara County, CalTrans, California Department of Conservation, USDA

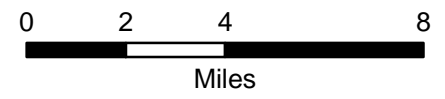




# The City of San Jose

## Wildfire Severity Zones

-  Santa Clara County Boundary
  -  Jurisdictional Boundaries
  -  Water Bodies & Channels
- Wildfire Severity Zone**
-  Moderate
  -  High
  -  Very High



Map Data Sources: Santa Clara County, CalTrans, CalFIRE, USDA