



# 2021 Multijurisdictional Local Hazard Mitigation Plan

Volume 2b—Planning Partner Annexes  
*Municipalities: East Palo Alto – Pacifica*

Public Review Draft



August | 2021



TETRA TECH



# 2021 Multijurisdictional Local Hazard Mitigation Plan

August 2021

## PREPARED FOR

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### County of San Mateo Department of Emergency Management

501 Winslow  
Redwood City, CA 94063

## PREPARED BY

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### Tetra Tech

1999 Harrison St., Suite 500  
Oakland, CA 94612  
510-302-6300 | tetrattech.com

## NOTE ABOUT VOLUME 2

Volume 2 of the *San Mateo County 2021 Multijurisdictional Local Hazard Mitigation Plan*, which presents annexes for all planning partners who participated in this plan, has been divided into multiple parts to maintain manageable file sizes.

Parts 2a through 2d include the complete table of contents and the introduction, along with annexes for the following partners:

- Volume 2a—San Mateo County and municipalities alphabetically from Atherton through Daly City
- Volume 2b—Municipalities alphabetically from East Palo Alto through Pacifica
- Volume 2c—Municipalities alphabetically from Portola Valley through Woodside
- Volume 2d—Special-purpose districts

Part 2e includes the complete table of contents and the Volume 2 appendices.

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## Appendices

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- Appendix A. Planning Partner Expectations
- Appendix B. Procedures for Linking to Hazard Mitigation Plan
- Appendix C. Annex Instructions and Templates

## ACRONYMS

The following acronyms are used throughout the annexes in this volume:

- AB—Assembly Bill
- ACWA—Association of California Water Agencies
- BART—Bay Area Rapid Transit
- BAWSCA—Bay Area Water Supply & Conservation Agency
- BCEGS— Building Code Effectiveness Grading Schedule
- BMP—best management practice
- BRIC—Building Resilient Infrastructure and Communities
- C/CAG— City/County Association of Governments of San Mateo County
- Cal OES—California Office of Emergency Services
- CAL FIRE—California Department of Forestry and Fire Protection
- CBC—city building code
- CCFD—Central County Fire Department
- CCR—California Code of Regulations
- CCWD—Coastside County Water District
- CDAA—California Disaster Assistance Act
- CDFA—California Department of Food and Agriculture
- CDD—Community Development Department
- CEQA— California Environmental Quality Act
- CERPP—Citizens’ Emergency Response and Preparedness Program
- CERT—Community Emergency Response Team
- CFPD—Colma Fire Protection District
- CFR—Code of Federal Regulations
- CIP—capital improvement program
- CMAP—Climate Mitigation and Adaptation Plan
- COOP/COG—continuity of operations plan and continuity of government
- CPAW—Community Partners for Wildfire Assistance
- CSM—College of San Mateo
- CWPP—community wildfire protection plan
- DEM—San Mateo County Department of Emergency Management
- DWR—Department of Water Resources
- EAP—emergency action plan
- EIR—Environmental Impact Report
- EMID—Estero Municipal Improvement District
- EOC—emergency operations center
- EOP—emergency operations plan
- EPA—Environmental Protection Agency
- FEMA—Federal Emergency Management Agency
- FMA—Flood Mitigation Assistance Grant Program
- FPD—fire protection district
- FSLRRD—Flood & Sea Level Rise Resiliency District
- GHG—greenhouse gas
- GIS—geographic information system
- HMA—Hazard Mitigation Assistance
- HMB—Half Moon Bay
- HMGP—Hazard Mitigation Grant Program
- HMP—hazard mitigation plan

- HRD—Highlands Recreation District
- IBC—International Building Code
- ISO—Insurance Services Office (insurance underwriter)
- JPA—joint powers authority
- LCP— Local Coastal Program
- LHMP—local hazard mitigation plan
- LUP—land use plan
- MJLHMP—Multijurisdictional Local Hazard Mitigation Plan
- MPFPD—Menlo Park Fire Protection District
- MPWD—Mid-Peninsula Water District
- MRP— Municipal Regional Stormwater Permit
- MWSD—Montara Water and Sanitary District
- NCCWD— North Coast County Water District
- NEPA—National Environmental Policy Act
- NFIP—National Flood Insurance Program
- NIMS— National Incident Management System
- NOAA—National Oceanic and Atmospheric Administration
- NRCS—Natural Resources Conservation Service
- OPC—California Ocean Protection Council
- POC—point of contact
- RCD—resource conservation district
- RHNA—Regional Housing Needs Allocation
- RICAPS—Regionally Integrated Climate Action Planning Suite
- SB—Senate Bill
- SCC—California State Coastal Conservancy
- SFHA—special flood hazard area
- SFO—San Francisco International Airport
- SFPUC—San Francisco Public Utilities Commission
- SLR—sea-level rise
- SMCCD—San Mateo Community College District
- SMCFire or SMCFD—San Mateo County Fire Department
- SMCO—San Mateo County
- SMRCD—San Mateo Resource Conservation District
- SSF—South San Francisco
- SSFFD—South San Francisco Fire Department
- SSMP—Sanitary Sewer Management Plan
- SWRCB—California State Water Resources Control Board
- TEP—Training and Exercise Program
- THIRA—Threat & Hazard Identification & Risk Assessment
- TMDL—total maximum daily load
- UASI—Urban Area Security Initiative
- USDA—U.S. Department of Agriculture
- UWMP—urban water management plan
- WFPD—Woodside Fire Protection District
- WUI—wildland urban interface
- WWD—Westborough Water District



# INTRODUCTION

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## BACKGROUND

The Federal Emergency Management Agency (FEMA) encourages multi-jurisdictional planning for hazard mitigation. All participating jurisdictions must meet the requirements of Chapter 44 of the Code of Federal Regulations (44 CFR):

“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 *San Mateo County 2021 Multi-Jurisdictional Local Hazard Mitigation Plan*, a planning partnership was formed to leverage resources and to meet requirements of the federal Disaster Mitigation Act for as many eligible local governments as possible. The Disaster Mitigation Act 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.”

In addition, federally recognized tribes may participate in local/tribal multi-jurisdictional plans as long as the requirements of Section 201.7 of 44 CFR are met for tribal components of the plan.

Two types of planning partners participated in this process for the *2021 Multi-Jurisdictional Local Hazard Mitigation Plan*, with distinct needs and capabilities:

- Incorporated municipalities
- Special districts

Each participating planning partner 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

A planning team made up of San Mateo County and consultant staff solicited the participation of all eligible municipalities and special districts at the outset of this project. A kickoff meeting was held on January 5, 2021, 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 in the planning area were invited to attend. The goals of the meeting were as follows:

- Provide an overview of the Disaster Mitigation Act.
- Review the *2016 San Mateo County Hazard Mitigation Plan* and planning partnership
- Outline the work plan for this hazard mitigation plan.
- Describe the benefits of multi-jurisdictional planning.
- Outline planning partner expectations.
- Solicit planning partners.
- Solicit volunteers/recommendations for the steering committee.

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 lead and alternate points of contact for their jurisdiction. In all, the planning team received formal commitment from 37 planning partners in addition to the County. A map showing the location of participating special purpose districts is provided at the end of this introduction. Maps showing risk assessment results for participating cities are provided in the individual annexes for each city. Risk assessment maps for all planning areas countywide are provided in Volume 1 of this hazard mitigation plan.

## Planning Partner Expectations

The planning team developed the following list of planning partner expectations, which were provided and discussed at the kickoff meeting (see Appendix A for details):

- Complete a “letter of intent to participate.”
- Designate lead and primary points of contact for this effort.
- Support and participate in the selection and function of the Steering Committee.
- Provide support required to implement the public involvement strategy.
- Participate in the process through opportunities such as:
  - Steering Committee meetings
  - Public meetings or open houses
  - Workshops and planning partner specific training sessions
  - Public review and comment periods prior to adoption.
- Attend the mandatory Phase 3 jurisdictional annex workshop.
- Complete the jurisdictional annex.
- Perform a “consistency review” of all technical studies, plans and ordinances specific to hazards.
- Review the risk assessment and identify hazards and vulnerabilities specific to the jurisdiction.
- Review and determine if the mitigation recommendations chosen in Volume 1 will meet the needs of the jurisdiction.

- Create an action plan that identifies each project, who will oversee the task, how it will be financed, and when it is estimated to occur.
- Formally adopt the hazard mitigation 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.

## Final Coverage

Two jurisdictions that submitted letters of intent to participate withdrew from the planning process prior to its completion. The rest fully met the participation requirements for this update, completed an annex template, and will be covered by the updated hazard mitigation plan upon FEMA approval and adoption by their governing bodies. This final coverage will apply to the following jurisdictions:

- Cities/County
  - Town of Atherton
  - City of Belmont
  - City of Brisbane
  - City of Burlingame
  - Town of Colma
  - City of Daly City
  - City of East Palo Alto
  - City of Foster City
  - City of Half Moon Bay
  - Town of Hillsborough
  - City of Menlo Park
  - City of Millbrae
  - City of Pacifica
  - Town of Portola Valley
  - City of Redwood City
  - City of San Bruno
  - City of San Carlos
  - City of San Mateo
  - City of South San Francisco
  - Town of Woodside
  - San Mateo County
- Special Purpose Districts
  - Coastside County Water District
  - Colma Fire Protection District
  - Highlands Recreation District
  - Menlo Park Fire Protection District
  - Midpeninsula Regional Open Space District
  - Mid-Peninsula Water District
  - Montara Water & Sanitary District
  - North Coast County Water District
  - San Mateo Community College District
  - San Mateo County Flood & Sea Level Rise Resiliency District
  - San Mateo County Harbor District
  - San Mateo County Office of Education
  - San Mateo Resource Conservation District
  - Westborough Water District
  - Woodside Fire Protection District

## Linkage Procedures

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

## **PARTNER ANNEX DEVELOPMENT**

### **Capability Assessment**

All participating jurisdictions compiled an inventory and analysis of existing authorities and capabilities called a “capability assessment.” A capability assessment creates an inventory of a jurisdiction’s mission, programs, and policies, and evaluates its capacity to carry them out. This assessment identifies potential gaps in the jurisdiction’s capabilities. If the capability assessment identified an opportunity to add a missing core capability or expand an existing one, then doing so has been selected as an action in the jurisdiction’s action plan. The sections below describe the specific capabilities evaluated under the assessment.

#### **Planning and Regulatory Capabilities**

Jurisdictions can develop policies and programs and implement rules and regulations to protect and serve residents. Local policies are typically identified in planning documents, implemented via a local ordinance, and enforced by a governmental body. Because the planning and regulatory authority of municipal partners is generally broader than that of special-purpose districts, the assessment of these capabilities is more detailed for the municipal partners.

#### **Development and Permitting Capability**

This set of capabilities is not applicable to special purpose districts and was assessed only for municipal partners (cities and the County). Municipal jurisdictions regulate land use through the adoption and enforcement of zoning, subdivision, and land development ordinances, building codes, building permit ordinances, floodplain, and stormwater management ordinances. When effectively prepared and administered, these regulations can lead to hazard mitigation.

#### **Fiscal Capabilities**

Assessing a jurisdiction’s fiscal capability provides an understanding of the ability to fulfill the financial needs associated with hazard mitigation projects. This assessment identifies both outside resources, such as grant-funding eligibility, and local jurisdictional authority to generate internal financial capability, such as through impact fees.

#### **Administrative and Technical Capabilities**

Without appropriate personnel, the mitigation strategy may not be implemented. Administrative and technical capabilities focus on the availability of personnel resources responsible for implementing all the facets of hazard mitigation. These resources include technical experts, such as engineers and scientists, as well as personnel with capabilities that may be found in multiple departments, such as grant writers.

#### **Education and Outreach Capability**

Regular engagement with the public on issues regarding hazard mitigation provides an opportunity to directly interface with community members. Assessing this outreach and education capability illustrates the connection between the government and community members, which opens a two-way dialogue that can result in a more resilient community based on education and public engagement.

## **Compliance with National Flood Insurance Program Requirements**

The National Flood Insurance Program (NFIP) is not available to special purpose districts, so this set of capabilities was assessed only for municipal partners (cities and the County). Flooding is the costliest natural hazard in the United States and homeowners face increasingly high flood insurance premiums. Community participation in the NFIP opens up opportunity for additional grant funding associated specifically with flooding issues. Assessment of a jurisdiction's current NFIP status and compliance provides a greater understanding of the local flood management program, opportunities for improvement, and available grant funding opportunities.

## **Participation and Classification in Other Programs**

Other programs, such as the Community Rating System, Storm/Tsunami Ready, and Firewise USA, can enhance a jurisdiction's ability to mitigate, prepare for, and respond to natural hazards. These programs indicate a jurisdiction's desire to go beyond minimum requirements set forth by local, state, and federal regulations in order to create a more resilient community. These programs complement each other by focusing on communication, mitigation, and community preparedness to save lives and minimize the impact of natural hazards on a community. The programs reviewed here are applicable to municipal partners only so they are not included in the capability assessments for special-purpose districts.

## **Adaptive Capacity**

An adaptive capacity assessment evaluates a jurisdiction's ability to anticipate impacts from future conditions. By looking at public support, technical adaptive capacity, and other factors, jurisdictions identify their core capability for resilience against issues such as sea level rise. The adaptive capacity assessment provides jurisdictions with an opportunity to identify areas for improvement by ranking their capacity high, medium, or low.

## **Mitigation Action Plan Development**

### **Risk Ranking**

In the risk-ranking exercise, each planning partner was asked to review the ranked risk specifically for its jurisdiction, based on the impact on its population and/or facilities. Municipalities based this ranking on probability of occurrence and the potential impact on people, property, and the economy. Special purpose districts based this ranking on probability of occurrence and the potential impact on their constituency, their vital facilities, and the facilities' functionality after an event. Additionally, to support the social equity lens for this plan update, a social vulnerability ranking factor and weighting was established to support planning partners wishing to apply an equity lens to their risk ranking and project identification and prioritization. The risk-ranking methodology for partner annexes was the same as that used for the countywide risk ranking, as described in Volume 1.

The objectives of this exercise were to familiarize the partnership with how to use the risk assessment as a tool to support other planning and hazard mitigation processes and to help prioritize types of mitigation actions that should be considered. Hazards that were ranked as "high" and "medium" for each jurisdiction as a result of this exercise were considered to be priorities for identifying mitigation actions, although jurisdictions also identified actions to mitigate "low" ranked hazards, as appropriate.

## **Information Reviewed to Develop Action Plan**

The tool kits were used during the workshops and in follow-up work conducted by the planning partners. A large portion of the workshop focused on how the tool kit should be used to develop the mitigation action plan. Planning partners were specifically asked to review the following to assist in the identification of actions:

- The Jurisdiction’s Capability Assessment—Reviewed to identify capabilities that the jurisdiction does not currently have but should consider pursuing or capabilities that should be revisited and updated to include best available information; also reviewed to determine how existing capabilities can be leveraged to increase or improve hazard mitigation in the jurisdiction.
- The Jurisdiction’s National Flood Insurance Program Compliance Table—Reviewed to identify opportunities to increase floodplain management capabilities.
- The Jurisdiction’s Review of Its Adaptive Capacity for Climate Change—Reviewed to identify ways to leverage or continue to improve existing capacities and to improve understanding of other capacities.
- The Jurisdiction’s Identified Opportunities for Future Integration—Reviewed to identify specific integration actions to be included in the mitigation strategy.
- Jurisdiction-Specific Vulnerabilities—Reviewed to identify actions that will help reduce known vulnerabilities.
- The Mitigation Best Practices Catalog—Reviewed to identify actions that the jurisdiction should consider including in its action plan.
- Public Input—Reviewed to identify potential actions and community priorities.

## **Action Plan Prioritization**

The actions recommended in the action plan were prioritized based on the following factors:

- Cost and availability of funding
- Benefit, based on likely risk reduction to be achieved
- Number of plan objectives achieved
- Timeframe for project implementation
- Eligibility for grant funding programs

Two priorities were assigned for each action:

- A high, medium, or low priority for implementing the action (with and without considerations of social equity)
- A high, medium, or low priority for pursuing grant funding for the action.

The sections below describe the analysis of benefits and costs and the assignment of the two priority ratings.

## ***Benefit/Cost Review***

The action plan must be prioritized according to a benefit/cost analysis of the proposed actions (44 CFR, Section 201.6(c)(3)(iii)). For this hazard mitigation plan, a qualitative benefit-cost review was performed for each action by assigning ratings for benefit and cost as follows:

- Cost:
  - **High**—Existing funding will not cover the cost of the action; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).
  - **Medium**—The action could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the action would have to be spread over multiple years.
  - **Low**—The action could be funded under the existing budget. The action is part of or can be part of an ongoing existing program.
- Benefit:
  - **High**—Action will provide an immediate reduction of risk exposure for life and property.
  - **Medium**—Action will have a long-term impact on the reduction of risk exposure for life and property, or action will provide an immediate reduction in the risk exposure for property.
  - **Low**—Long-term benefits of the action are difficult to quantify in the short term.

To assign priorities, each action with a benefit rating equal to or higher than its cost rating (such as high benefit/medium cost, medium benefit/medium cost, medium benefit/low cost, etc.) was considered to be cost-beneficial. This is not the detailed level of benefit/cost analysis required for some FEMA hazard-related grant programs. Such analysis would be performed at the time a given action is being submitted for grant funding.

### ***Implementation Priority***

Implementation priority ratings were assigned as follows:

- **High Priority**—An action that meets multiple objectives, has benefits that exceed costs, and has a secured source of funding. Action can be completed in the short term (1 to 5 years).
- **Medium Priority**—An action that meets multiple objectives, has benefits that exceed costs, and is eligible for funding though no funding has yet been secured for it. Action 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, has benefits that do not exceed the costs or are difficult to quantify, has no secured source of funding, and is not eligible for any known grant funding. Action can be completed in the long term (1 to 10 years). Low-priority actions may be eligible for grant funding from programs that have not yet been identified.

### ***Social Equity Implementation Priority***

For planning partners that chose to apply an equity lens to their prioritization scheme, the following parameters were established:

- **High Priority**—The mitigation action is designed to reduce harm to multiple socially vulnerable groups in the County from one or more of the hazards identified in the hazard mitigation plan.
- **Medium Priority**— The mitigation action is designed to reduce harm to a single socially vulnerable population in the County from at least one hazard identified in the hazard mitigation plan.
- **Low Priority**— The mitigation action fails to advance social equity in any measurable way in the County

## ***Grant Pursuit Priority***

Grant pursuit priority ratings were assigned as follows:

- **High Priority**—An action that meets identified grant eligibility requirements, has high benefits, and is listed as high or medium implementation priority; local funding options are unavailable or available local funds could be used instead for actions that are not eligible for grant funding.
- **Medium Priority**—An action that meets identified grant eligibility requirements, has medium or low benefits, and is listed as medium or low implementation priority; local funding options are unavailable.
- **Low Priority**—An action that has not been identified as meeting any grant eligibility requirements.

## **Classification of Actions**

Each recommended action was classified based on the hazard it addresses and the type of mitigation it involves. Mitigation types used for this classification 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 residents 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, wetland restoration and preservation, and green infrastructure.
- **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 Resiliency**—Actions that incorporate methods to mitigate and/or adapt to the impacts of climate change. Includes aquifer storage and recovery activities, incorporating future conditions projections in project design or planning, or actions that specifically address jurisdiction-specific climate change risks, such as sea-level rise or urban heat island effect.
- **Community Capacity Building**—Actions that increase or enhance local capabilities to adjust to potential damage, to take advantage of opportunities, or to respond to consequences. Includes staff training, memorandums of understanding, development of plans and studies, and monitoring programs.



## Annex-Preparation Process

### Templates

Templates were created to help the planning partners prepare their jurisdiction-specific annexes. Separate templates were created for the two types of jurisdictions participating in this plan. The templates were created so that all criteria of Section 201.6 of 44 CFR for local governments would be met based on the partners' capabilities and mode of operation. Separate templates were available for partners updating a previous hazard mitigation plan and those developing a first-time hazard mitigation plan. These templates were deployed in three phases during the course of this plan update process. These phases are described as follows:

- **Phase 1**—Profile, Trends, Previous Plan Status
  - Deployed: February 19, 2021
  - Due: March 19, 2021
- **Phase 2**—Capability Assessment and Information Sources
  - Deployed: April 2, 2021
  - Due: May 21, 2021
- **Phase 3**—Risk Ranking, Action Plan, and Information Sources
  - Deployed: June 11, 2021
  - Workshops: June 14 – 16, 2021
  - Due: July 23, 2021

The templates were set up to lead all partner through steps to generate Disaster Mitigation Act-required elements specific to their jurisdictions. The templates and their instructions are included in Appendix C of this volume.

### Tool Kit

Each planning partner was provided with a tool kit to assist in completing the annex template and developing an action plan. The tool kits contained the following:

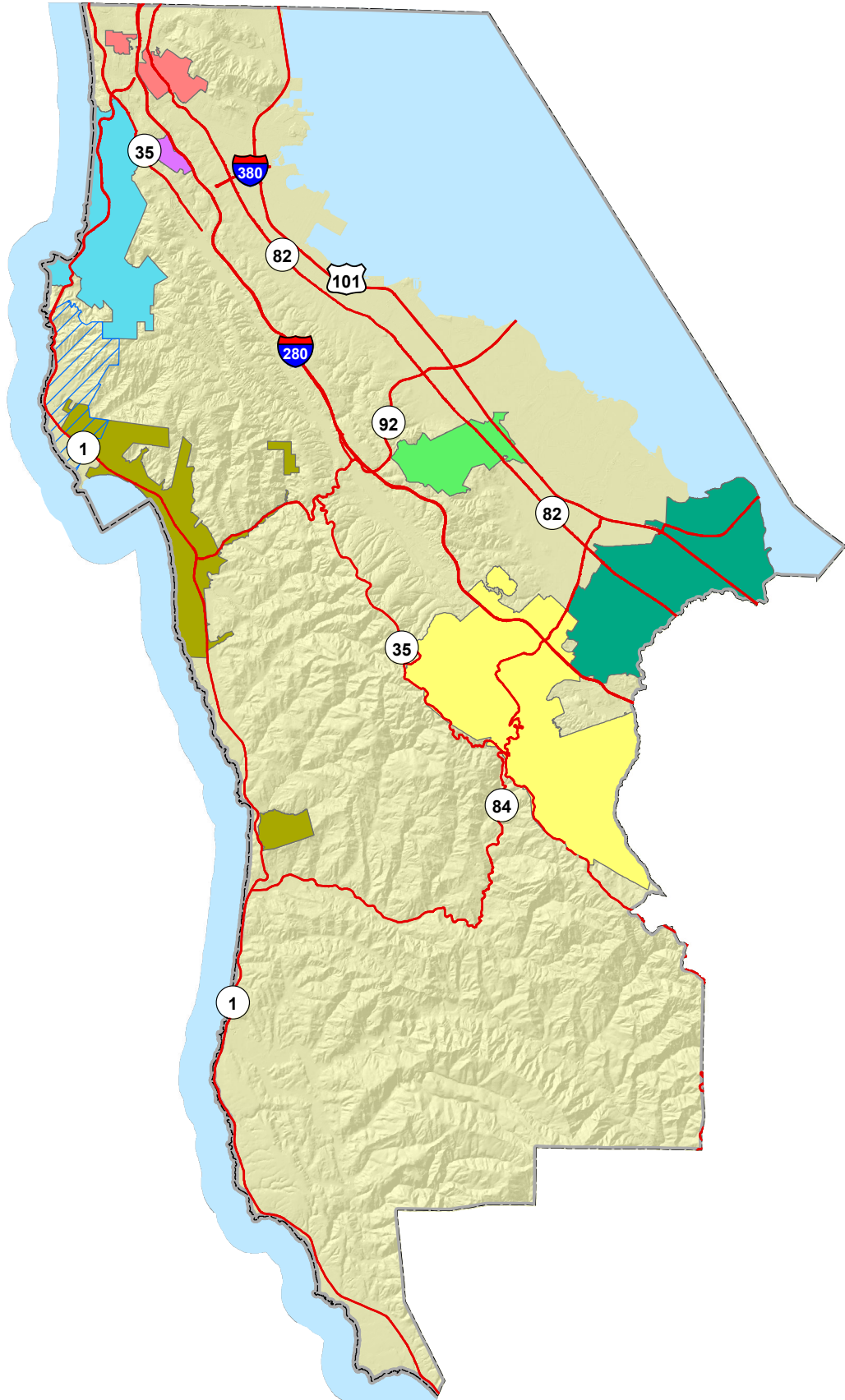
- The *2016 San Mateo County Hazard Mitigation Plan* annexes
- A catalog of mitigation best practices and adaptive capacity
- The guiding principle, goals and objectives developed for the update to the plan
- A list of jurisdiction-specific issues noted during the risk assessment
- Information on the FEMA Hazard Mitigation Assistance grant program
- Information on past hazard events that have impacted the planning area
- County-wide and jurisdiction-specific maps for hazards of concern
- Special district boundary maps showing the sphere of influence for each special purpose district partner
- The risk assessment results developed for this plan
- Information on climate change and expected impacts in the planning area

- Jurisdiction-specific annex templates, with instructions for completing them
- FEMA guidance on plan integration
- The results of a public survey conducted as part of the public involvement strategy
- A copy of the presentation that was given at the workshop sessions.



### **Workshop**

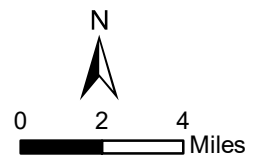
All partners were required to participate in a technical assistance workshop, where key elements of the template were discussed and the templates were subsequently completed by a designated point of contact for each partner and a member of the planning team. Multiple online workshops were held the week of June 14, 2021 and attended by at least one representative from each planning partner, addressed the following topics:

- The templates and the tool kit
- Natural events history
- Jurisdiction-specific issues
- Risk ranking
- Status of prior actions
- Developing your action plan
- Cost/benefit review
- Prioritization protocol
- Next steps.



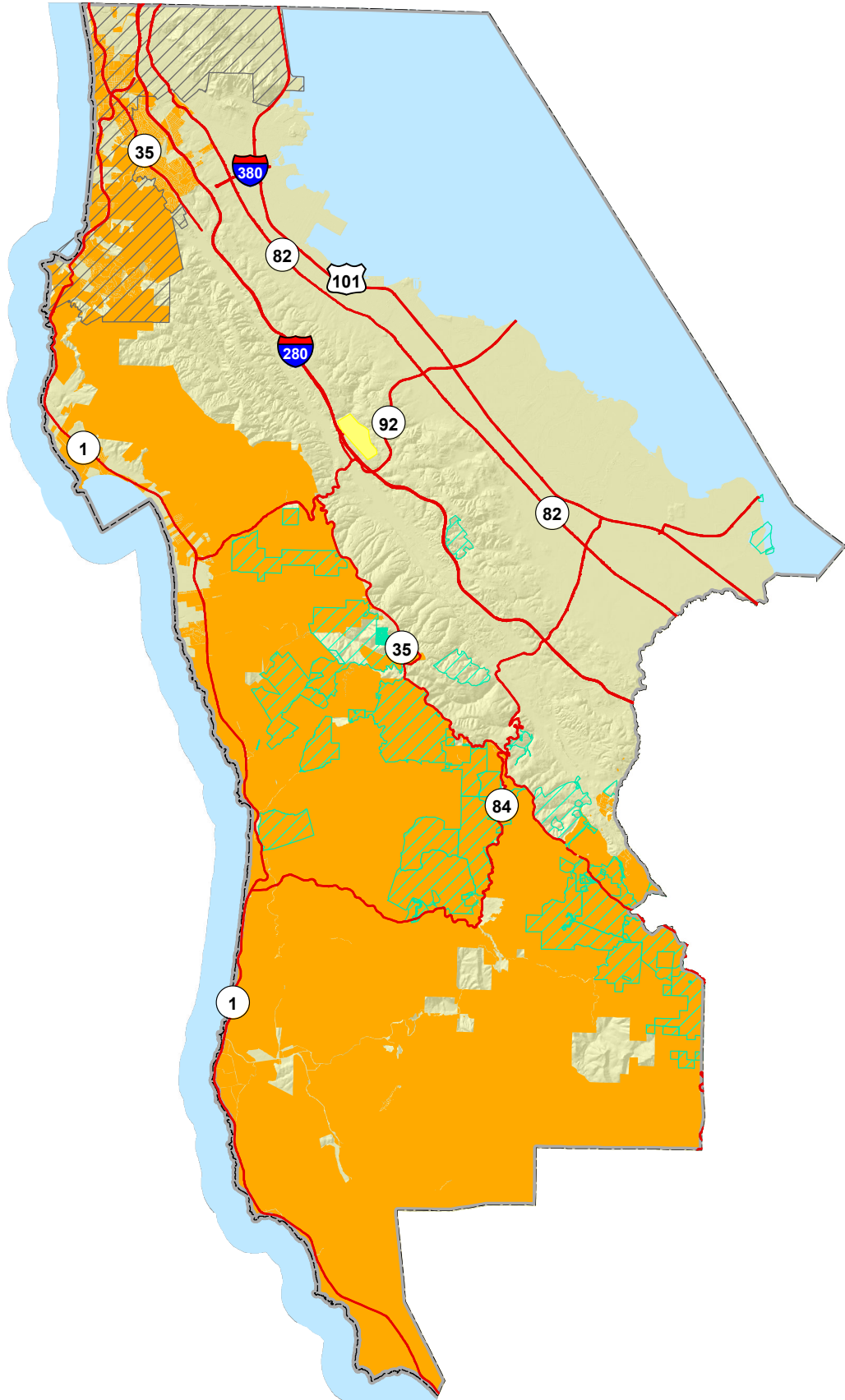
**Special Purpose District Planning Partners, 1 of 2**

- |   |  |   |
|---|--|---|
|  Highways        |  Colma FPD      |  Coastside County WD   |
|  County Boundary |  Menlo Park FPD |  Mid-Peninsula WD      |
|   |  Woodside FPD   |  North Coast County WD |
|   |  Montara WSD    |  Westborough WD        |



Data Sources: San Mateo Co.

San Mateo County Community College District, San Mateo County Flood and Sea Level Rise Resiliency District, San Mateo County Harbor District, and San Mateo County Office of Education extend countywide.



**Special Purpose District Planning Partners, 2 of 2**

- Highways
  - County Boundary
- Jefferson Union High School District
  - Highlands Recreation District
  - Midpeninsula Regional Open Space District
  - San\_Mateo Resource Conservation District

N

0 2 4 Miles

Data Sources: San Mateo Co.

## 8. CITY OF EAST PALO ALTO

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### 8.1 LOCAL HAZARD MITIGATION PLANNING TEAM

#### Primary Point of Contact

Daniel Berumen, Senior Planner  
1960 Tate Street  
East Palo Alto, CA 94303  
650-853-3151  
dberumen@cityofepa.org

#### Alternate Point of Contact

Elizabeth Lam, Community Service Officer  
141 Demeter Street  
East Palo Alto, CA 94303  
650-853-5939  
elam@cityofepa.org

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 8-1.

**Table 8-1. Local Mitigation Planning Team Members**

Name	Title
Daniel Berumen	Senior Planner
Elizabeth Lam	Community Service Officer
Humza Javed	City Engineer
Amy Chen	Community and Economic Development Director
Kamal Fallaha	Public Works Director
Elena Lee	Planning Manager
Janet Nunez	Building Permit Technician

### 8.2 JURISDICTION PROFILE

#### 8.2.1 Location and Features

The City of East Palo Alto is a community located in Silicon Valley at the southernmost edge of San Mateo County. The city is approximately 2.6 square miles in size. The city currently employs 105 people. The city is surrounded by the City of Menlo Park to the north and to the west, the City of Palo Alto to the south, and San Francisco Bay to the east.

The City of East Palo Alto has a Mediterranean Climate with cool, wet winters and warm, dry summers. The average annual precipitation is around 16 inches per year.

## 8.2.2 History

East Palo Alto was incorporated on July 1, 1983. The area that is now East Palo Alto has supported human settlement for over two millennia. Various tribes of Costanoan Native Americans, also known as the Ohlone, were the first known human inhabitants in the San Francisco Bay Area. The first European settlers in the area were Spanish ranchers and Gold Rush enriched land speculators. In 1849, a wharf was built at the foot of Bay Road – then just an unimproved dirt cart road – and the community of “Ravenswood” grew around it. The community was primarily agricultural in nature but there was also some shipping activity through the wharf, largely related to the bricks produced at a local factory. The area remained generally in agricultural use through the rest of the 19th century.

The development of East Palo Alto into primarily a residential suburban community began after World War II. Housing tract developers acquired larger tracts from nearby farms along with some of the colony lots and began subdividing them into much smaller, densely populated residential parcels. African American migrants first arrived in East Palo Alto around the end of World War II. Most of these Southern migrants moved in to take advantage of low cost housing and because, unlike surrounding peninsula communities, the area had few restrictive housing covenants. By the 1960s jobs and the possibility for higher education brought a second wave of African American settlers.

As the high-tech industry in Silicon Valley enjoyed an economic boom in the 1980s and 1990s, East Palo Alto was one of the most affordable places to live as property values in nearby communities skyrocketed. The city’s prime location near Highway 101 and the Dumbarton Bridge, combined with affordable housing rates, attracted a very diverse population to the growing community. Today, Hispanic, African American, and Pacific Islander residents represent the largest ethnic groups in East Palo Alto, making it one of the most multicultural and multilingual communities in the San Francisco Bay Area.

## 8.2.3 Governing Body Format

A General Law City with a Council Manager form of government and as a municipal corporation, the City of East Palo Alto establishes its own zoning and land use regulations.

The Planning Commission will make a recommendation to City Council to adopt the Hazard Mitigation Plan and direct the City Manager to direct staff to implement the plan.

## 8.3 CURRENT TRENDS

### 8.3.1 Population

According to the California Department of Finance, the population of East Palo Alto as of January 2020 was 30,794. Since 2016, the population has grown at an average annual rate of 0.2 percent.

### 8.3.2 Development

The City of East Palo Alto has been experiencing a steady amount of growth since the adoption of the previous hazard mitigation plan. There has been a significant push for more housing with projects like rehabilitation of Light Tree Apartments, Serenity Senior Apartments on University Avenue, and the 965 Weeks Street affordable housing development that were entitled within the past 5 years. Proposals for office developments have also

increased. Projects like the Sobrato Phase I and II project on University Avenue were either built or entitled. Major activity is occurring in the Ravenswood / 4 Corners Specific Plan area of the city with multiple multi-family residential, office, and mixed-use projects being proposed.

Table 8-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

**Table 8-2. Recent and Expected Future Development Trends**

Criterion	Response					
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan? <i>If yes, give the estimated area annexed and estimated number of parcels or structures.</i>	No					
Is your jurisdiction expected to annex any areas during the performance period of this plan? <i>If yes, describe land areas and dominant uses. If yes, who currently has permitting authority over these areas?</i>	No					
Are any areas targeted for development or major redevelopment in the next five years? <i>If yes, briefly describe, including whether any of the areas are in known hazard risk areas</i>	Yes The Ravenswood/4 Corners TOD Specific Plan Area. A portion of this area is in the designated Special Flood Hazard Area.					
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?		<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
	Single Family	1	1	0	4	4
	Multi-Family	0	0	0	0	2
	Other (commercial, mixed use, etc.)	0	0	2	2	0
	<b>Total</b>	<b>3</b>	<b>1</b>	<b>2</b>	<b>6</b>	<b>6</b>
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	<ul style="list-style-type: none"> <li>• Special Flood Hazard Areas: 4</li> <li>• Landslide: N/A</li> <li>• High Liquefaction Areas: N/A</li> <li>• Tsunami Inundation Area: N/A</li> <li>• Wildfire Risk Areas: N/A</li> </ul>					
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 currently experiencing a high amount of development permit applications. There are a number of proposed commercial building, mixed-use, and residential projects that are under review by the Planning Division. A majority of the activity is occurring in the Ravenswood Business District.					

## 8.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of planning and regulatory capabilities is presented in Table 8-3.
- Development and permitting capabilities are presented in Table 8-4.
- An assessment of fiscal capabilities is presented in Table 8-5.

- An assessment of administrative and technical capabilities is presented in Table 8-6.
- An assessment of education and outreach capabilities is presented in Table 8-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 8-8.
- Classifications under various community mitigation programs are presented in Table 8-9.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 8-10.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions.

**Table 8-3. Planning and Regulatory Capability**

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Codes, Ordinances, &amp; Requirements</b>				
<b>Building Code</b> <i>Comment: CBC 2019</i>	Yes	No	Yes	No
<b>Zoning Code</b> <i>Comment: EPA Development Code, adopted 2018</i>	Yes	No	No	No
<b>Subdivisions</b> <i>Comment: EPA Development Code, Article 5, adopted 2018</i>	Yes	No	Yes	No
<b>Stormwater Management</b> <i>Comment: Chapter 13.12 adopted in November 19, 2013</i>	Yes	No	Yes	No
<b>Post-Disaster Recovery</b> <i>Comment: Emergency Management Plan adopted in April 2011</i>	Yes	No	Yes	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>	Yes	No	Yes	No
<b>Growth Management</b> <i>Comment: Vista 2035 General Plan, Ravenswood/ 4 Corners TOD Specific Plan adopted in 2012.</i>	Yes	No	No	No
<b>Site Plan Review</b> <i>Comment: EPA Development Code, Article 2, adopted 2018</i>	Yes	No	Yes	No
<b>Environmental Protection</b> <i>Comment: Title 17, adopted in November 19, 2013</i>	Yes	No	Yes	No
<b>Flood Damage Prevention</b> <i>Comment: Muni Code Chapter 15.52, adopted in November 19, 2013</i>	Yes	No	Yes	No
<b>Emergency Management</b> <i>Comment: Multi Aid Agreements with the County, Police Department, Public Works, Building Division</i>	Yes	No	Yes	Yes
<b>Climate Change</b> <i>Comment: Vista 2035 General Plan adopted 2016</i>	Yes	No	Yes	No
<b>Other</b> <i>Comment: Chapter 8.12 (Environmental Health), Chapter 8.16 (Fire Code and Prevention), Chapter 8.44 (Individual Sewage Disposal Systems), Chapter 13.08 (Sanitary Sewers), Chapter 15.44 (Backflow Prevention)</i>	Yes	No	No	No



	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Planning Documents</b>				
<b>General Plan</b> <i>Is the plan compliant with Assembly Bill 2140? Yes</i> <i>Comment: Last updated in 2016</i>	Yes	No	Yes	No
<b>Capital Improvement Plan</b> <i>How often is the plan updated? Every 2 years</i> <i>Comment: Currently being updated by the Public Works Division</i>	Yes	No	Yes	No
<b>Disaster Debris Management Plan</b> <i>Comment: Countywide planning process – expected plan in 2022</i>	Yes	Yes	Yes	Yes
<b>Floodplain or Watershed Plan</b> <i>Comment: San Francisquito Creek Joint Powers Authority, City of East Palo Alto Storm Drain Master Plan</i>	Yes	Yes	Yes	No
<b>Stormwater Plan</b> <i>Comment: Storm Drain Master Plan (City of East Palo Alto website), adopted October 23, 2012</i>	Yes	No	Yes	No
<b>Urban Water Management Plan</b> <i>Comment: Currently being updated, to be adopted end June</i>	Yes	Yes	Yes	No
<b>Habitat Conservation Plan</b> <i>Comment: General Plan adopted in 2016</i>	No	Yes	Yes	No
<b>Economic Development Plan</b> <i>Comment: Ravenswood 4/ Corners TOD Specific Plan, adopted in 2012.</i>	Yes	No	Yes	No
<b>Shoreline Management Plan</b> <i>Comment:</i>	No	No	Yes	No
<b>Community Wildfire Protection Plan</b> <i>Comment: Chapter 7a of the Building Code (Wildland Urban Interface) adopted in January 2011</i>	Yes	No	Yes	No
<b>Forest Management Plan</b> <i>Comment:</i>	No	No	Yes	No
<b>Climate Action Plan</b> <i>Comment: Climate Action Plan, adopted in 2014.</i>	Yes	No	No	No
<b>Emergency Operations Plan</b> <i>Comment: Multi Agency Committee (MAC), Public Works Mutual Aid Agreement (adopted 2015), California Building Officials/ OES Mutual Aid Agreement (adopted 2009), California Conservation Corps.(adopted December 2012), updated NIMS program; Emergency Operations Plan, adopted April 2011.</i>	Yes	No	Yes	Yes
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b> <i>Comment: A threat assessment was conducted when compiling the Emergency Operation Plan (EOP) which was adopted in April 2011. The outcome was published in EOP Volume 1: Threat Summary Assessment</i>	Yes	No	Yes	No
<b>Post-Disaster Recovery Plan</b> <i>Comment: Emergency Operations Plan, Volume 1; Chapter 4: Recovery.</i>	Yes	No	Yes	No
<b>Continuity of Operations Plan</b> <i>Comment: Emergency Operations Plan, Volume 2; page 28, adopted in 2011.</i>	Yes	No	Yes	No
<b>Public Health Plan</b> <i>Comment: Section in 1999 General Plan, MOU with clinic, part of Emergency Plan, COAD of South San Mateo County</i>	Yes	No	No	No
<b>Other</b> <i>Comment: Ravenswood/4 Corners Transit-oriented Development Specific Plan (2012), Bicycle Transportation Plan (2016), Gateway 101 Specific Plan (1993), Water System Master Plan (2010), Updated Urban Water Management Plan (2021)</i>	Yes	Yes	No	No

**Table 8-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? <i>If no, who does? If yes, which department?</i>	Yes Planning Division
Does your jurisdiction have the ability to track permits by hazard area?	Yes, flood zone
Does your jurisdiction have a buildable lands inventory?	Yes

**Table 8-5. Fiscal Capability**

Financial Resource	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 (established fee schedule)
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, Cal-OES Hazard grants
Development Impact Fees for Homebuyers or Developers	Yes
Other	N/A

**Table 8-6. Administrative and Technical Capability**

Staff/Personnel Resource	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Community and Economic Development Department/ Planning Division/ Engineering Division
Engineers or professionals trained in building or infrastructure construction practices	Yes	Community and Economic Development Department/ Engineering Division
Planners or engineers with an understanding of natural hazards	Yes	Community and Economic Development Department/ Engineering Division
Staff with training in benefit/cost analysis	Yes	Community and Economic Development Department/ Management Analyst
Surveyors	Yes	State Licensed Consultants
Personnel skilled or trained in GIS applications	Yes	Staff, Contract IT
Scientist familiar with natural hazards in local area	Yes	USGS, Cal-Conservation, UC Berkley
Emergency manager	Yes	Administrative Services Director
Grant writers	No	No one on staff
Other	No	N/A

**Table 8-7. Education and Outreach Capability**

Criterion	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? <i>If yes, briefly describe.</i>	Yes Cityofepa.org (Flood Preparedness Webpage, Hazard Mitigation Plan link, etc.)
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe.</i>	Yes East Palo Alto Next Door, Facebook
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe.</i>	Yes Program for Public Information (PPI) Group
Do you have any other programs already in place that could be used to communicate hazard-related information? <i>If yes, briefly describe.</i>	Yes COAD of South San Mateo County
Do you have any established warning systems for hazard events? <i>If yes, briefly describe.</i>	Yes SMC Alert

**Table 8-8. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Community and Economic Development/ Planning and 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 that your flood damage prevention ordinance was last amended?	2018
Does your floodplain management program meet or exceed minimum requirements? <i>If exceeds, in what ways?</i>	Exceeds 18" minimum freeboard requirement
When was the most recent Community Assistance Visit or Community Assistance Contact?	Fall of 2020
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <i>If so, state what they are.</i>	No
Are any RiskMAP projects currently underway in your jurisdiction? <i>If so, state what they are.</i>	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <i>If no, state why.</i>	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? <i>If so, what type of assistance/training is needed?</i>	Yes There may be a transition from Planning to Public Works. City would need a Certified Floodplain Manager (CFM).
Does your jurisdiction participate in the Community Rating System (CRS)? <i>If yes, is your jurisdiction interested in improving its CRS Classification?</i> <i>If no, is your jurisdiction interested in joining the CRS program?</i>	Yes Yes
How many flood insurance policies are in force in your jurisdiction? <i>What is the insurance in force?</i> <i>What is the premium in force?</i>	830 \$225,732,400 \$1,040,343
How many total loss claims have been filed in your jurisdiction? <i>What were the total payments for losses?</i>	32 \$156,763

a. According to FEMA statistics as of March 31, 2021

**Table 8-9. Community Classifications**

	Participating?	Classification	Date Classified
FIPS Code	Yes	0608120956	N/A
DUNS#	Yes	155104870	N/A
Community Rating System	Yes	8	October 8, 2020
Building Code Effectiveness Grading Schedule	Yes	3	2019
Public Protection	Yes	2	2012
Storm Ready (Flood Warning)	Yes	7	1/27/2012
Firewise	Yes	2	2012
Tsunami Ready	No	N/A	N/A

**Table 8-10. Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Ratings
<b>Technical Capacity</b>	
<b>Jurisdiction-level understanding of potential climate change impacts</b> <i>Comment: The jurisdiction has participated in sea level rise workshops/ assessments</i>	Medium
<b>Jurisdiction-level monitoring of climate change impacts</b> <i>Comment: The City is monitoring climate change impacts, but no direct department is designated</i>	Medium
<b>Technical resources to assess proposed strategies for feasibility and externalities</b> <i>Comment: The City is lacking internal resources at this time</i>	Low
<b>Jurisdiction-level capacity for development of greenhouse gas emissions inventory</b> <i>Comment: This work has not been done, it's project-specific at this time</i>	Low
<b>Capital planning and land use decisions informed by potential climate impacts</b> <i>Comment: The Ravenswood Business District is an area of the city that is being evaluated through a Specific Plan Update. Climate change impacts are being reviewed.</i>	Medium
<b>Participation in regional groups addressing climate risks</b> <i>Comment: Cooling Centers, San Francisquito Creek JPA, Reach Code adoption</i>	High
<b>Implementation Capacity</b>	
<b>Clear authority/mandate to consider climate change impacts during public decision-making processes</b> <i>Comment: Specific projects are being evaluated and considered for climate change impacts</i>	Medium
<b>Identified strategies for greenhouse gas mitigation efforts</b> <i>Comment: Transportation Demand Management Ordinance</i>	Medium
<b>Identified strategies for adaptation to impacts</b> <i>Comment: Energy Reach Code</i>	Medium
<b>Champions for climate action in local government departments</b> <i>Comment: Public Works/ Community and Economic Development</i>	Medium
<b>Political support for implementing climate change adaptation strategies</b> <i>Comment: City Council and local support is strong when it comes to climate change adaptation strategies</i>	High
<b>Financial resources devoted to climate change adaptation</b> <i>Comment: Limited financial resources have been allocated for climate change adaptation. Grant funding is needed</i>	Low
<b>Local authority over sectors likely to be negative impacted</b> <i>Comment: Limited authority exists at this time</i>	Low

Criterion	Jurisdiction Ratings
<b>Public Capacity</b>	
<b>Local residents knowledge of and understanding of climate risk</b> <i>Comment: Local residents have a strong interest and understanding of climate risk.</i>	High
<b>Local residents support of adaptation efforts</b> <i>Comment: City Council and local residents support adaptation efforts but direct programs still need to be implemented</i>	Medium
<b>Local residents' capacity to adapt to climate impacts</b> <i>Comment: Resiliency is a strength of the community, but more attention needs to be placed on countering climate impacts</i>	Medium
<b>Local economy current capacity to adapt to climate impacts</b> <i>Comment: Local economy needs improvement and will need more time build up adaptation to climate impacts</i>	Low
<b>Local ecosystems capacity to adapt to climate impacts</b> <i>Comment: This is difficult to answer at this time, depends on the scale or range of change</i>	Unsure

- a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement;  
Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

## 8.5 INTEGRATION WITH OTHER PLANNING INITIATIVES

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

### 8.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- The General Plan 2035 Update fulfills requirements for AB2140. Chapter 10: Safety and Noise, subchapter goal and policies. We have conducted public outreach and have adopted a comprehensive list of codes including Title 24. We also have a collaborative enforcement of CCR Titles 8, 19, 24, and 25. We adopted floodplain and earthquake safety requirements as per the state and national standards.

### 8.5.2 Opportunities for Future Integration

The capability assessment presented in this annex identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- The city will upgrade the levees and increase partnerships with COAD and the Program for Public Information group. Applying resources to abate the special flood hazard areas of the city. The city will remove any and all impediments of storm water flow in the floodplain. Building, Planning, Public Works, County of San Mateo, and San Francisquito Joint Powers Authority are working on mitigation efforts for sea level rise.
- *Disaster Debris Management Plan* – The City of East Palo Alto is currently working with the San Mateo County Joint Powers Authority and San Mateo County Emergency Manager’s Association on this plan.

- *Comprehensive Emergency Management Plan/ Emergency Management Plan* – The City of East Palo Alto has an Emergency Management Plan on file and currently working to update this plan.

## 8.6 RISK ASSESSMENT

### 8.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 8-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

**Table 8-11. Past Natural Hazard Events**

Type of Event	FEMA Disaster #	Date	Damage Assessment
Severe Storm/ Flooding	N/A	12/10/2016	\$0.00
Severe Storm / Flooding	N/A	December 23, 2012	\$2,627,000
Severe Storm / Flooding	DR-1203	February 9, 1998	\$12,000,000
Severe Storm(s)	DR-1155	January 4, 1997	Unknown
Severe Storm(s)	DR-1046	March 12, 1995	Unknown
Severe Storm(s)	DR-1044	January 10, 1995	Unknown
Earthquake	DR-845	October 18, 1989	Unknown

### 8.6.2 Hazard Risk Ranking

Table 8-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy. Mitigation actions target hazards with high and medium rankings.

**Table 8-12. Hazard Risk Ranking (Social Equity Lens applied)**

Rank	Hazard	Risk Ranking Score	Risk Category
1	Sea Rise Level Rise / Climate Change	63	High
2	Flood	57	High
3	Landslide/Mass Movements	45	High
4	Earthquake	42	High
5	Dam Failure	30	Medium
6	Severe Weather/Extreme Weather	24	Medium
7	Drought	9	Low
8	Tsunami	2	Low
9	Wildfire	0	Low

### 8.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

## **Repetitive Loss Properties**

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: *None*
- Number of FEMA-identified Severe-Repetitive-Loss Properties: *None*
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: *None*

## **Other Noted Vulnerabilities**

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Soft-Story Retrofit
- Concrete Tilt-up Building Seismic Retrofit
- Unreinforced masonry

## **8.7 STATUS OF PREVIOUS PLAN ACTIONS**

Table 8-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 8-13. Status of Previous Plan Actions**

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<b>Action EPA-1</b> Partner on the new levee project from San Francisquito Joint Powers Authority <b>Comment:</b> Improvements have been made on the levee project in Gardens area of the city in 2018.	√			
<b>Action EPA -2</b> Conduct Water main upgrades and improvements <b>Comment:</b> The Public Works Department is looking to make improvements in the future.			√	EPA-8
<b>Action EPA-3</b> Ensure Potable water access via Pad D and Gloria Way Wells <b>Comment:</b> Gloria Way Well was completed in 2018. Pad D Emergency Water Well went through an environmental impact analysis in December 2020.	√			
<b>Action EPA-4</b> Establish New Water Storage Tanks for Commercial Projects <b>Comment:</b> No action yet, proposed projects are discussing this possibility.			√	EPA-9
<b>Action EPA-5</b> Conduct Storm Drain Improvements <b>Comment:</b> Ongoing efforts with the Public Works Department.			√	EPA-8
<b>Action EPA-6</b> Develop a Soft Story Retrofit Ordinance <b>Comment:</b> No action during this mitigation cycle due to staff turnover.			√	EPA-6
<b>Action EPA-7</b> Develop database for unreinforced masonry <b>Comment:</b> No action during this mitigation cycle due to staff turnover.			√	EPA-6

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<b>Action EPA-8</b> Develop a Concrete Tilt-up Building Seismic Retrofit Ordinance <b>Comment:</b> No action during this mitigation cycle due to staff turnover.			✓	EPA-6
<b>Action EPA-9</b> Participate in programs such as Firewise and StormReady. <b>Comment:</b> The city is continuing to work with our CERT partners on Palo Alto and in the Menlo Park Fire district for community outreach programs.			✓	EPA-7
<b>Action G-1</b> —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. <b>Comment:</b> No action on this item yet, staff will need to prioritize for next cycle.			✓	EPA-1
<b>Action G-2</b> —Maintain good standing under the National Flood Insurance Program and continue participation in CRS by exceeding the minimum NFIP requirements. <b>Comment:</b> Staff maintains in good standing with CRS, currently a Class 7 rating.			✓	EPA-4
<b>Action G-3</b> —Where feasible, implement a program to record high water marks following high-water events. <b>Comment:</b> Ongoing effort in coordination with the JPA and City of Palo Alto.			✓	EPA-11
<b>Action G-4</b> —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment. <b>Comment:</b> Ongoing efforts to integrate within the General Plan.			✓	EPA-2
<b>Action G-5</b> —Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting. <b>Comment:</b> No action during this mitigation cycle due to staff turnover.		✓		
<b>Action G-6</b> — Support the County-wide initiatives identified in Volume I of the hazard mitigation plan. <b>Comment:</b> Ongoing through collaborative efforts with San Mateo County.			✓	EPA-3
<b>Action G-7</b> — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan. <b>Comment:</b> Ongoing through collaborative efforts with San Mateo County.			✓	EPA-3

## 8.8 HAZARD MITIGATION ACTION PLAN

Table 8-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 8-15 identifies the priority for each action. Table 8-16 summarizes the mitigation actions by hazard of concern and mitigation type.

**Table 8-14. Hazard Mitigation Action Plan Matrix**

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action EPA-1</b> —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas. <i>Hazards Mitigated:</i>	Climate Change/Sea Level Rise, Earthquake, Flood, Landslide/ Mass Movements, Severe Weather, Tsunami, Wildfire					
Existing	1, 2, 3, 4, 6, 8, 9	Building Division	County of San Mateo	High	Grant funding	Short-term



Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action EPA-2</b> — Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including EPA Municipal Code and Capital Improvement Program (CIP)						
<i>Hazards Mitigated:</i> Climate Change/Sea Level Rise, Dam Failure, Earthquake, Flooding, Landslide/ Mass Movements, Severe Weather, Drought, Tsunami, Wildfire						
New & Existing	All	Planning Division	Public Works	Low	Staff Time, General Funds	Ongoing
<b>Action EPA-3</b> —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<i>Hazards Mitigated:</i> Climate Change/Sea Level Rise, Dam Failure, Earthquake, Flood, Landslide / Mass Movements, Severe Weather, Drought, Tsunami, Wildfire						
New & Existing	All	Planning Division	Public Works	Low	Staff Time, General Funds	Short-term
<b>Action EPA-4</b> —Continue to maintain good standing and compliance under the NFIP and Community Rating System (CRS) through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:						
<ul style="list-style-type: none"> <li>• Enforce 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>						
<i>Hazards Mitigated:</i> Climate Change/Sea Level Rise, Flood, Dam Failure, Tsunami						
Existing	1, 2, 5, 8	Planning Division	Public Works	Low	Staff Time, General Funds	Ongoing
<b>Action EPA-5</b> —Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following: Sea Level Rise, Flooding, Severe Weather, and Drought						
<i>Hazards Mitigated:</i> Climate Change/Sea Level Rise, Flood, Severe Weather/ Extreme Weather, Drought						
New & Existing	1, 2, 6,7	Planning Division	Public Works	Low	Staff Time, General Funds	Short-term
<b>Action EPA-6</b> — Develop Soft Story Retrofit and Concrete Tilt-up Building Seismic Retrofit Ordinances as well as developing database for unreinforced masonry.						
<i>Hazards Mitigated:</i> Earthquake, Landslide/ Mass Movements						
Existing	3,4	Building Division	Planning Division	Low	Staff Time	Short-term
<b>Action EPA-7</b> —Participate in programs such as Firewise and StormReady.						
<i>Hazards Mitigated:</i> Flood, Dam Failure, Severe Storm, Wildfire						
Existing	2, 5, 6, 8, 9	Planning Division	Public Works/ Environmental Services	Low	Staff Time, General Funds	Ongoing
<b>Action EPA-8</b> — Conduct Water main upgrades and storm drain improvements						
<i>Hazards Mitigated:</i> Flood, Dam Failure, Severe Storm, Tsunami						
New and Existing	2, 5, 6, 8	Public Works	CEDD	High	Water capital improvement surcharge	Long-term
<b>Action EPA-9</b> —Establish New Water Storage Tanks for Commercial Projects.						
<i>Hazards Mitigated:</i> Drought						
Existing	7	Public Works	Planning	High	Water capital improvement surcharge	Long-term
<b>Action EPA-10</b> — Ensure Potable water access via new emergency well projects.						
<i>Hazards Mitigated:</i> Earthquake, Drought						
Existing	4, 7	Public Works	Planning	High	Water capital improvement surcharge	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<p><b>Action EPA-11</b>— 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.</p> <p><u>Hazards Mitigated:</u> Climate Change/Sea Level Rise, Flood, Severe Weather, Tsunami</p>						
New and Existing	1, 5, 6, 7, 8	San Mateo County Flood and Sea Level Rise Resiliency District (FSLRRD)	County, All municipalities	Medium	General Fund	Short-term
<p><b>Action EPA-12</b> — Request a new Flood Insurance Study (FIS) from FEMA for Gardens Area after levee upgrades to San Francisquito Creek are completed.</p> <p><u>Hazards Mitigated:</u> Climate Change, Flood</p>						
Existing	1,2	San Francisquito Creek Joint Powers Authority/ Public Works	Planning Division	Low	FEMA Grant Funds (Public Assistance)	Short-term
<p><b>Action EPA-13</b>— Incorporate consideration of the FEMA 100-year tide and sea level rise, and climate change-driven extreme storms, into land use planning and shoreline development. This includes new policies by local jurisdictions, and County and City actions regarding their General Plans, Climate-related Plans, and the development applications.</p> <p><u>Hazards Mitigated:</u> Climate Change/Sea Level Rise, Flood, Severe Weather</p>						
New and Existing	1, 2, 6	San Mateo County Flood and Sea Level Rise Resiliency District (FSLRRD)	County, All municipalities	Low	General Fund, Private Developers, City Capital Project Funding	Ongoing
<p><b>Action EPA-14</b>— Improve stormwater drainage to alleviate repeated localized flooding, especially storm drain systems connected to San Mateo County Flood and Sea Level Rise Resiliency District (FSLRRD) Flood Zone channels and infrastructure.</p> <p><u>Hazards Mitigated:</u> Climate Change/Sea Level Rise, Flood, Severe Weather</p>						
New and Existing	1, 2, 6	San Mateo County Flood and Sea Level Rise Resiliency District (FSLRRD)	County, All municipalities	Medium	Tax-Funded Flood Zones, Property/Vehicle Fees, Stormwater Fees, State Grants (Caltrans, CA DWR), Federal Grants (EPA), City Capital Project Funding	Ongoing
<p><b>Action EPA-15</b>— Advance long-term resilience to sea level rise and extreme storms for the communities and critical assets adjacent to the San Francisquito Creek and nearby areas of the shoreline with the Cities of Menlo Park and East Palo Alto, as well as provide environmental, recreation, community/connectivity enhancements where possible.</p> <p><u>Hazards Mitigated:</u> Climate Change/Sea Level Rise, Flood, Severe Weather</p>						
New and Existing	1, 2, 6	East Palo Alto, Menlo Park, (FSLRRD)	San Francisquito Creek Joint Powers Authority, Caltrans, Metropolitan Transportation Commission	Medium	State Grant (CA DWR), Federal Grants (FEMA BRIC/HMGP), City Capital Project Funding	Long-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action EPA-16</b> —Continue to develop, maintain, and enhance the County’s classification under the Community Rating System by improving community response to flood emergencies in various ways, including but not limited to:						
<ul style="list-style-type: none"> <li>• Upgrade and expand the countywide flood early warning system.</li> <li>• Conduct community flood preparation, education, and recovery outreach.</li> </ul>						
<u>Hazards Mitigated:</u> Climate Change/Sea Level Rise, Flood, Severe Weather						
New and Existing	1, 2, 6	San Mateo County Flood and Sea Level Rise Resiliency District, All municipalities	County	Low	State Grant (CA DWR SWERG)	Short-term
<b>Action EPA-17</b> —Continue to identify and plan upgrades of utility systems, equipment, and critical facilities, including pump stations, generators, tide gates, stream gages, open channel, and culvert/pipeline infrastructure.						
<u>Hazards Mitigated:</u> Climate Change/Sea Level Rise, Flood, Severe Weather						
New and Existing	1, 2, 6	San Mateo County Flood and Sea Level Rise Resiliency District	County, All municipalities	Medium	Tax Funded Flood Zones, State Grants, Federal Grants	Ongoing
<b>Action EPA-18</b> — Support green infrastructure projects that enhance resiliency to natural disasters and incorporate green design elements into hazard mitigation projects where feasible.						
<u>Hazards Mitigated:</u> Climate Change/Sea Level Rise, Flood, Severe Weather. Landslide/ Mass Movements, Drought						
New and Existing	1, 2, 3, 6, 7	County, C/CAG	San Mateo County Flood and Sea Level Rise Resiliency District (FSLRRD), All municipalities	Medium	Tax-Funded Flood Zones, Property/Vehicle Fees, Stormwater Fees, State Grants (Caltrans, CA DWR), Federal Grants (EPA), City Capital Project Funding	Ongoing

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

**Table 8-15. Mitigation Action Priority**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Outside Funding Source Priority <sup>a</sup>	Social Equity Priority <sup>a</sup>
1	7	High	High	Yes	Yes	No	Medium	High	High
2	9	Medium	Low	Yes	No	Yes	High	Low	Medium
3	9	Low	Low	Yes	No	Yes	High	Low	Medium
4	4	Medium	Low	Yes	No	Yes	High	Low	High
5	4	Medium	Low	Yes	No	Yes	High	Medium	High
6	2	High	Medium	Yes	Yes	No	Medium	High	Medium
7	5	Medium	Low	Yes	Yes	Yes	Medium	Medium	Medium
8	4	High	High	Yes	Yes	No	High	High	High
9	1	High	High	No	Yes	No	Medium	Medium	Low

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Outside Funding Source Priority <sup>a</sup>	Social Equity Priority <sup>a</sup>
10	2	Medium	Medium	Yes	Yes	No	Medium	Medium	Medium
11	5	High	Medium	Yes	Yes	Yes	High	Medium	Medium
12	2	High	Medium	Yes	Yes	Yes	High	Medium	High
13	3	High	Low	Yes	Yes	Yes	High	High	Medium
14	3	High	Medium	Yes	Yes	Yes	High	High	Medium
15	3	High	Medium	Yes	Yes	Yes	High	High	High
16	3	High	Low	Yes	Yes	Yes	High	Low	High
17	3	High	Medium	Yes	Yes	Yes	High	High	Medium
18	5	Medium	Medium	Yes	Yes	Yes	High	Medium	Medium

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

**Table 8-16. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>								
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building	
<b>High-Risk Hazards</b>									
Sea Level Rise / Climate Change	EPA-1, 2, 3, 5, 11, 15	EPA-1, 15	EPA-1, 2, 4, 16	EPA-13, 15	_____	EPA 8, 9, 10, 16, 18	EPA-5, 13, 15, 17, 18	EPA-13	
Flood	EPA-1, 2, 3, 4, 12, 15	EPA-1, 8, 14, 15	EPA-1, 2, 4, 12, 16	EPA-13, 15	EPA-7, 10	EPA-8, 17, 18	EPA-5, 12, 15, 17, 18	EPA-13	
Landslide/ Mass Movements	EPA-1, 2,	EPA-1, 6	EPA-2, 3	_____	EPA-6, 10	EPA-10, 18	EPA-18	EPA-2, 3	
Earthquakes	EPA-1, 2, 3	EPA-1, 6	EPA-2, 3	_____	EPA-10	EPA 8, 9, 10	EPA-18	EPA- 2, 3	
<b>Medium-Risk Hazards</b>									
Dam Failure	EPA-1, 2, 3	EPA-1	EPA-2, 3	_____	_____	EPA-10,	_____	EPA-2, 3	
Severe Weather/ Extreme Weather	EPA-1, 2, 3, 15	EPA-1	EPA-4, 15, 16	_____	EPA-7	EPA-8, 18	EPA-15	EPA-2, 3, 13	
<b>Low-Risk Hazards</b>									
Drought	EPA-2, 3	EPA-7	EPA-2, 3	_____	EPA-9, 10	EPA-7, 8, 9, 10	EPA-9	EPA-2, 3	
Tsunami	EPA-2, 3	_____	EPA-11	_____	_____	EPA-8	_____	EPA-2, 3	
Wildfire	EPA-1, 2, 3	EPA-1, 7	EPA-7	_____	EPA-7	EPA-1	EPA-1	EPA-2, 3	

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

## 8.9 PUBLIC OUTREACH

Table 8-17 lists public outreach activities for this jurisdiction.

**Table 8-17. Local Public Outreach**

Local Outreach Activity	Date	Number of People Involved
Nuestra casa hazard mitigation focus group	June 10, 2021	38
CRC LHMP Workshop	June 23, 2021	24

## 8.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.








- **East Palo Alto Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **East Palo Alto Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
- **East Palo Alto Capital Improvement Program (CIP) - Infrastructure Projects**
- **City of East Palo Alto Vista 2035 General Plan – Goals and Policies**
- **City of East Palo Alto Development Code- Zoning and Development Standards**

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

# East Palo Alto

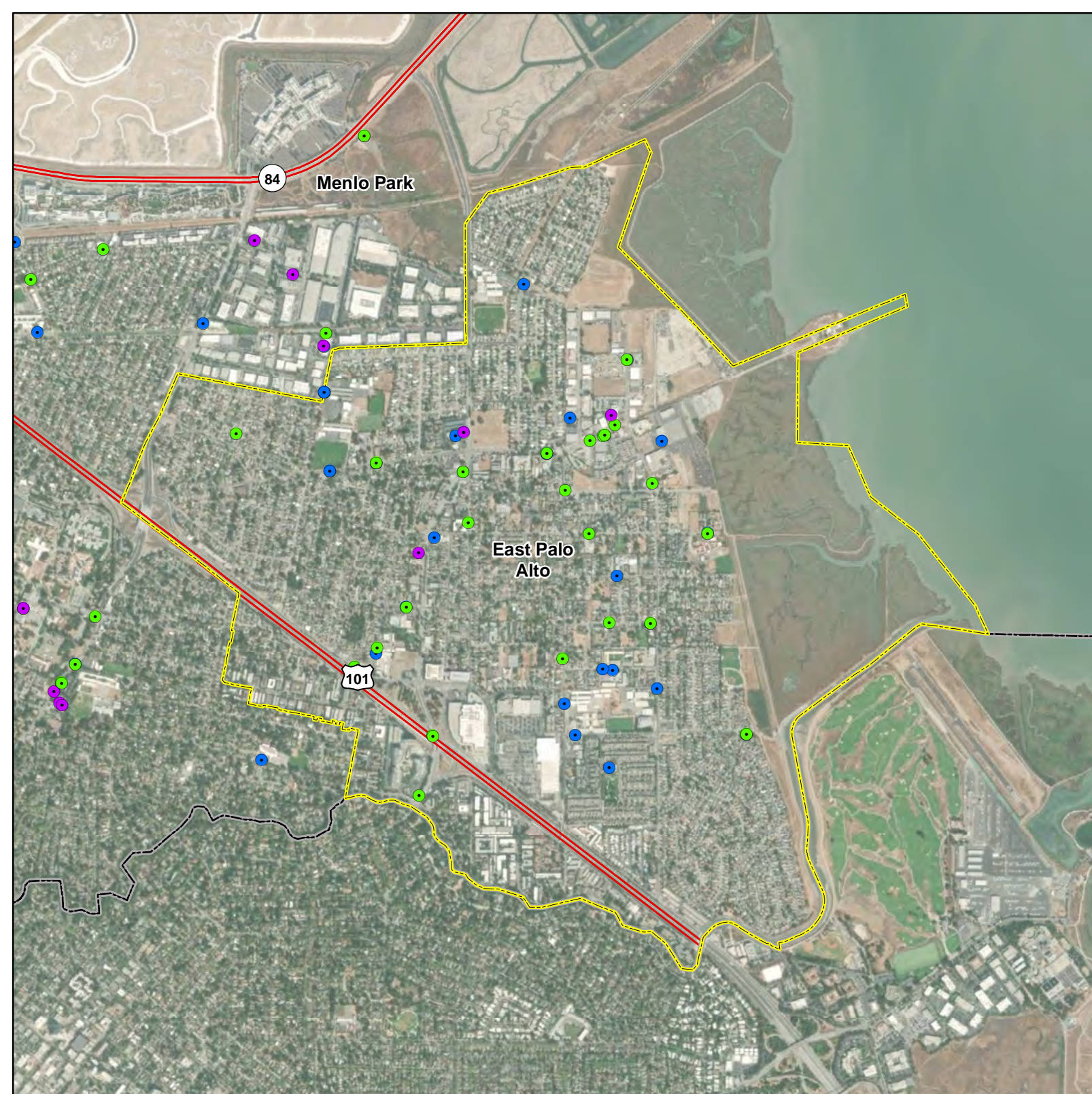
## Critical Facilities, 1 of 2

-  Food, Water, Shelter
-  Health and Medical
-  Safety and Security
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., DHS HIFLD



0 0.125 0.25 0.5  
Miles



# East Palo Alto

## Critical Facilities, 2 of 2

- Communications
- Energy
- Hazardous Materials
- Transportation
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary
- Highways

Data Sources: ESRI Basemap, San Mateo Co., DHS HIFLD









0 0.125 0.25 0.5 Miles



# East Palo Alto

## Dam Failure Inundation Area Used for Risk Assessment

-  Inundation Area
-  Dam
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CA DWR










0 0.125 0.25 0.5  
Miles





# East Palo Alto

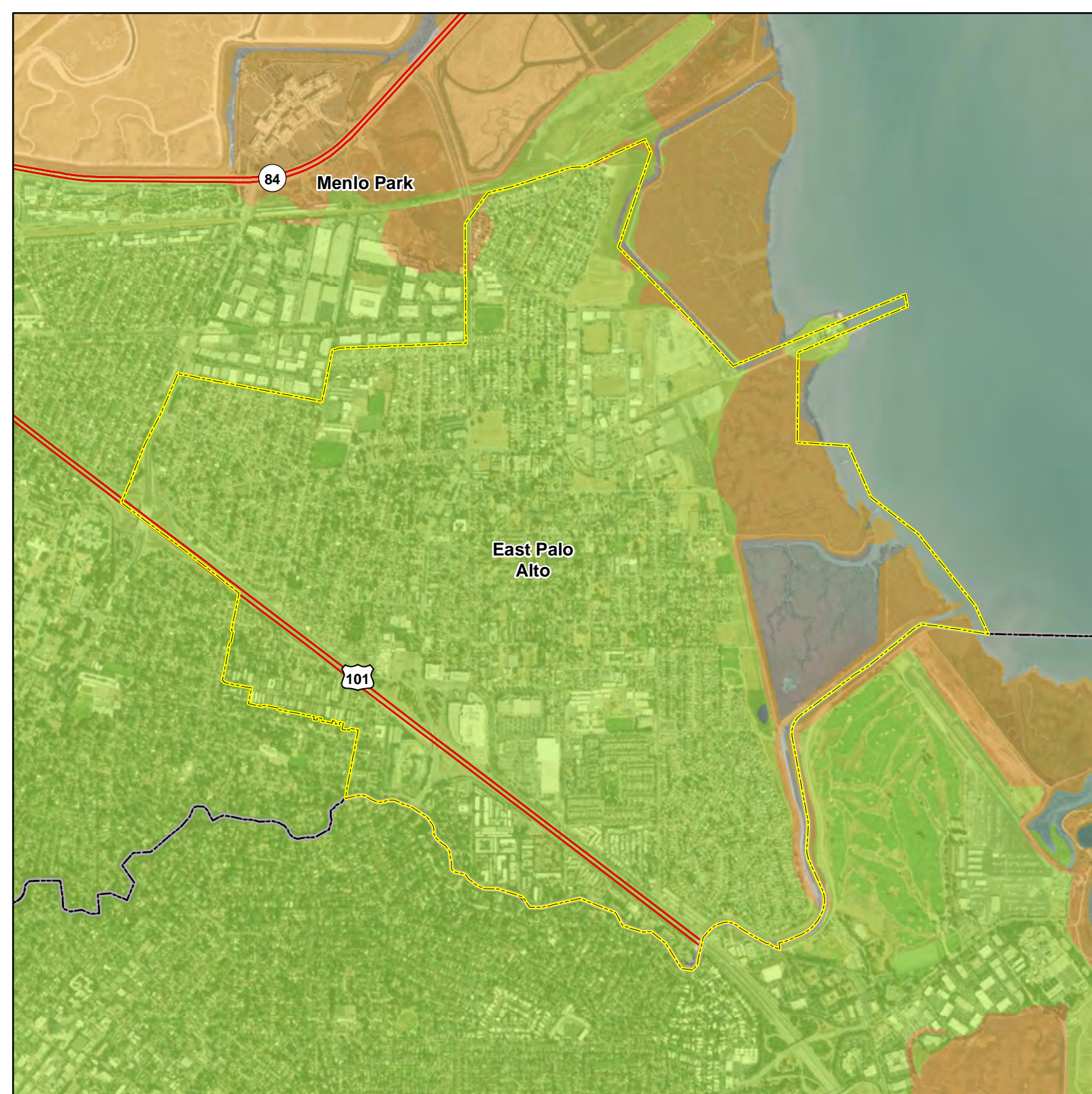
## NEHRP Soil Class

-  C (Dense soil/soft rock)
-  D (Stiff soil)
-  E (Soft clay)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CGS



0 0.125 0.25 0.5  
Miles



# East Palo Alto

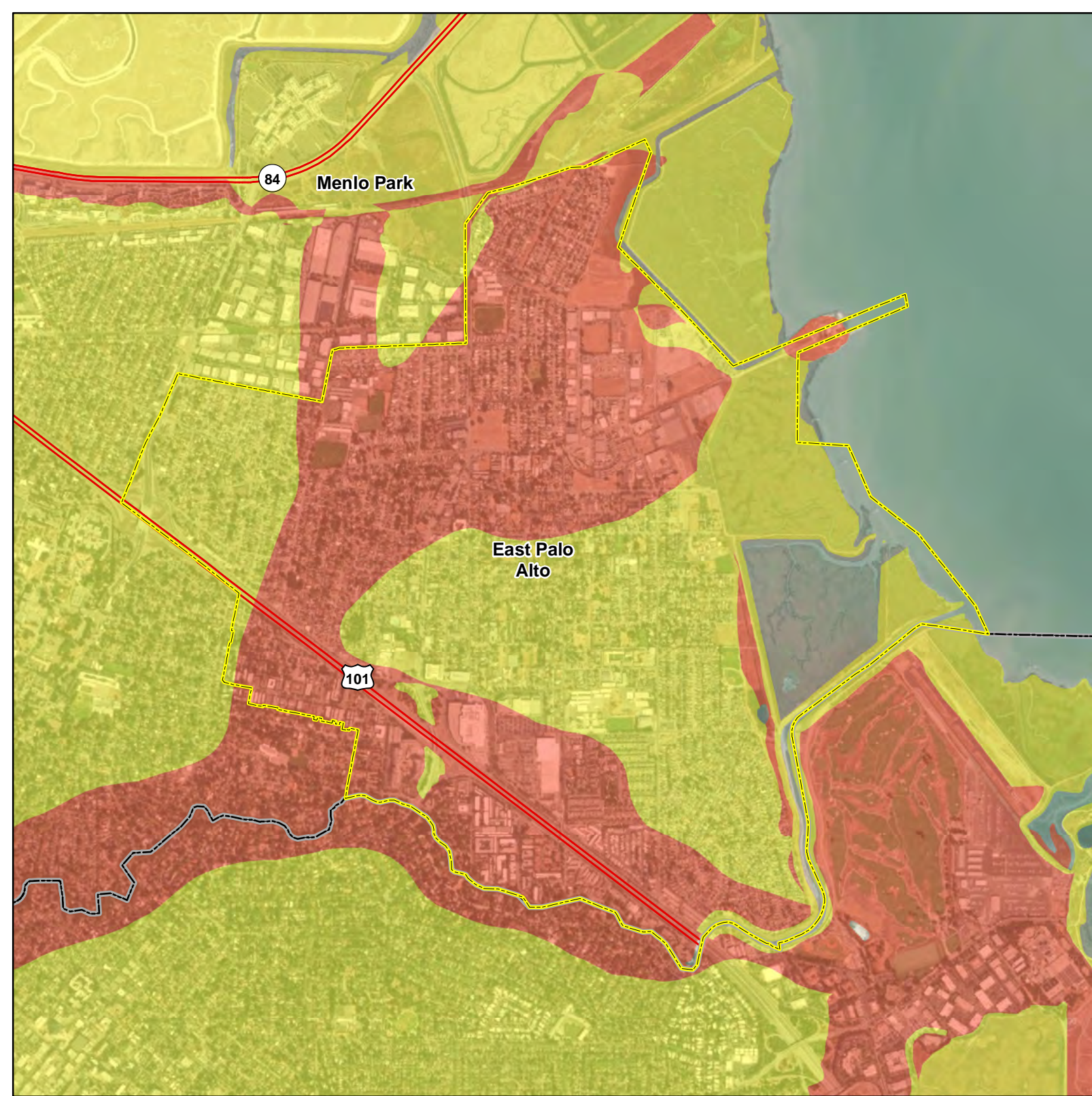
## Liquefaction Susceptibility

- Very Low
- Low
- Moderate
- High
- Very High
- Selected City
- Incorporated Cities
- County Boundary
- Highways

Data Sources: ESRI Basemap, San Mateo Co., ABAG (USGS)



0 0.125 0.25 0.5 Miles



# East Palo Alto

## Butano M6.93 Earthquake Scenario

### Mercalli Intensity Scale

- VI (Strong/Light)
- VII (Very Strong/Moderate)
- Selected City
- Incorporated Cities
- County Boundary
- Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS




0 0.125 0.25 0.5  
Miles



# East Palo Alto

## Monte Vista Shannon M7.14 Earthquake Scenario

### Mercalli Intensity Scale

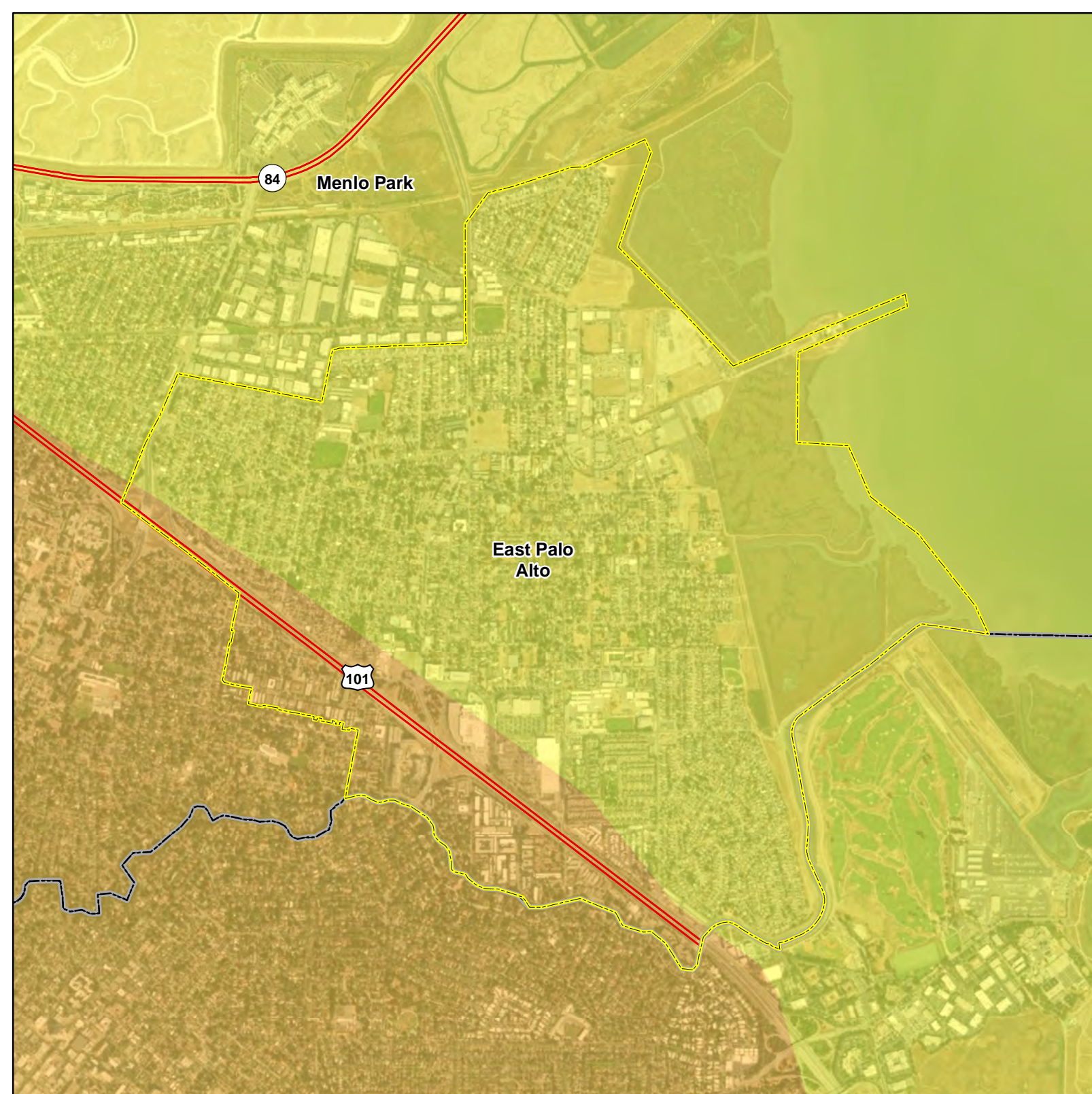
-  VII (Very Strong/Moderate)
-  VIII (Severe/Moderate-Heavy)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



0 0.125 0.25 0.5  
Miles



# East Palo Alto

## 100-Year Probabilistic Earthquake Scenario

### Mercalli Intensity Scale

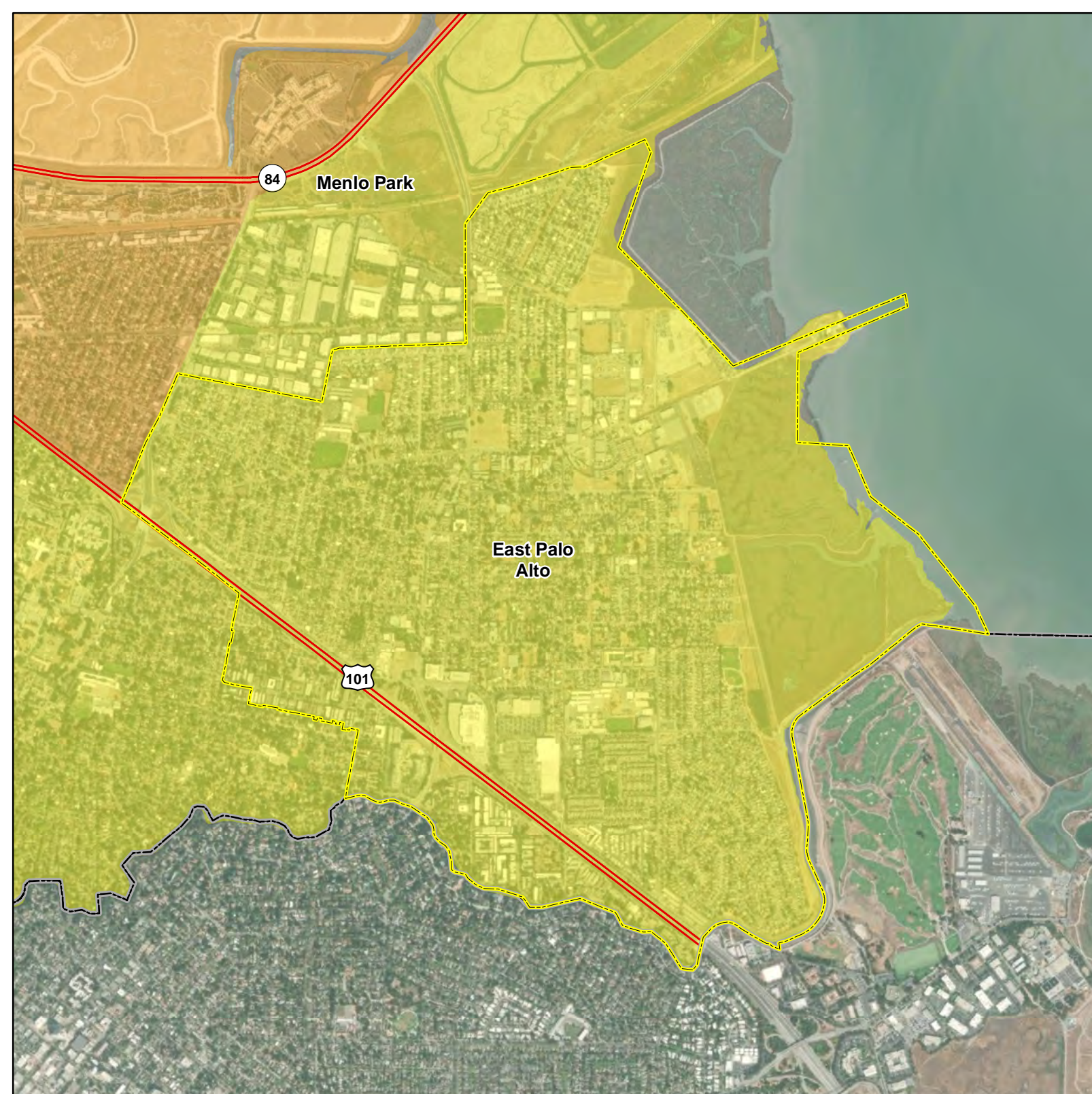
-  VII (Very Strong/Moderate)
-  VIII (Severe/Moderate-Heavy)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



0 0.125 0.25 0.5  
Miles



# East Palo Alto

## San Andreas Peninsula M7.38 Earthquake Scenario

### Mercalli Intensity Scale

 VII (Very Strong/Moderate)

 Selected City

 Incorporated Cities

 County Boundary

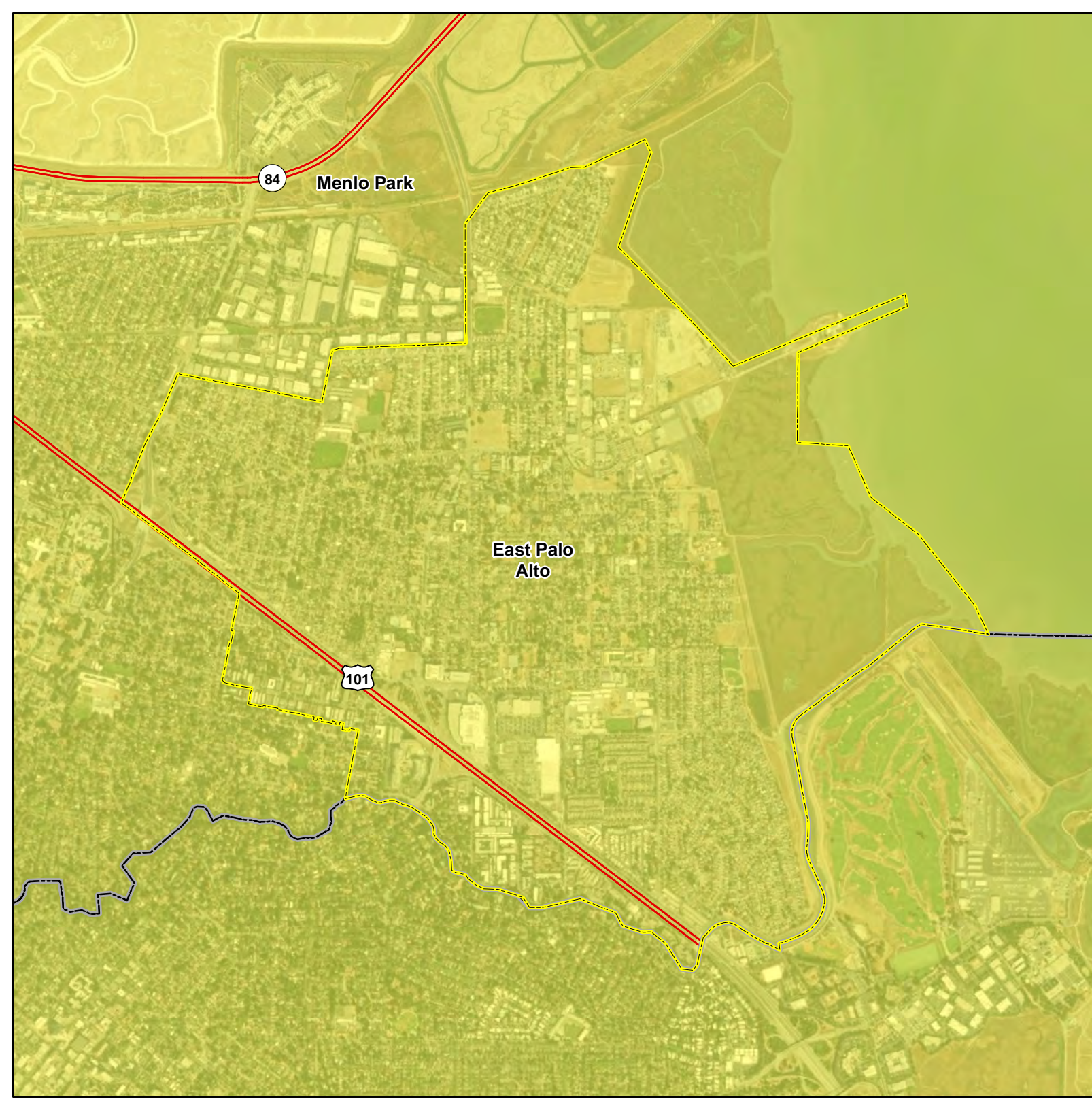
 Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS









0 0.125 0.25 0.5  
Miles



# East Palo Alto

## San Gregorio North M7.44 Earthquake Scenario

### Mercalli Intensity Scale

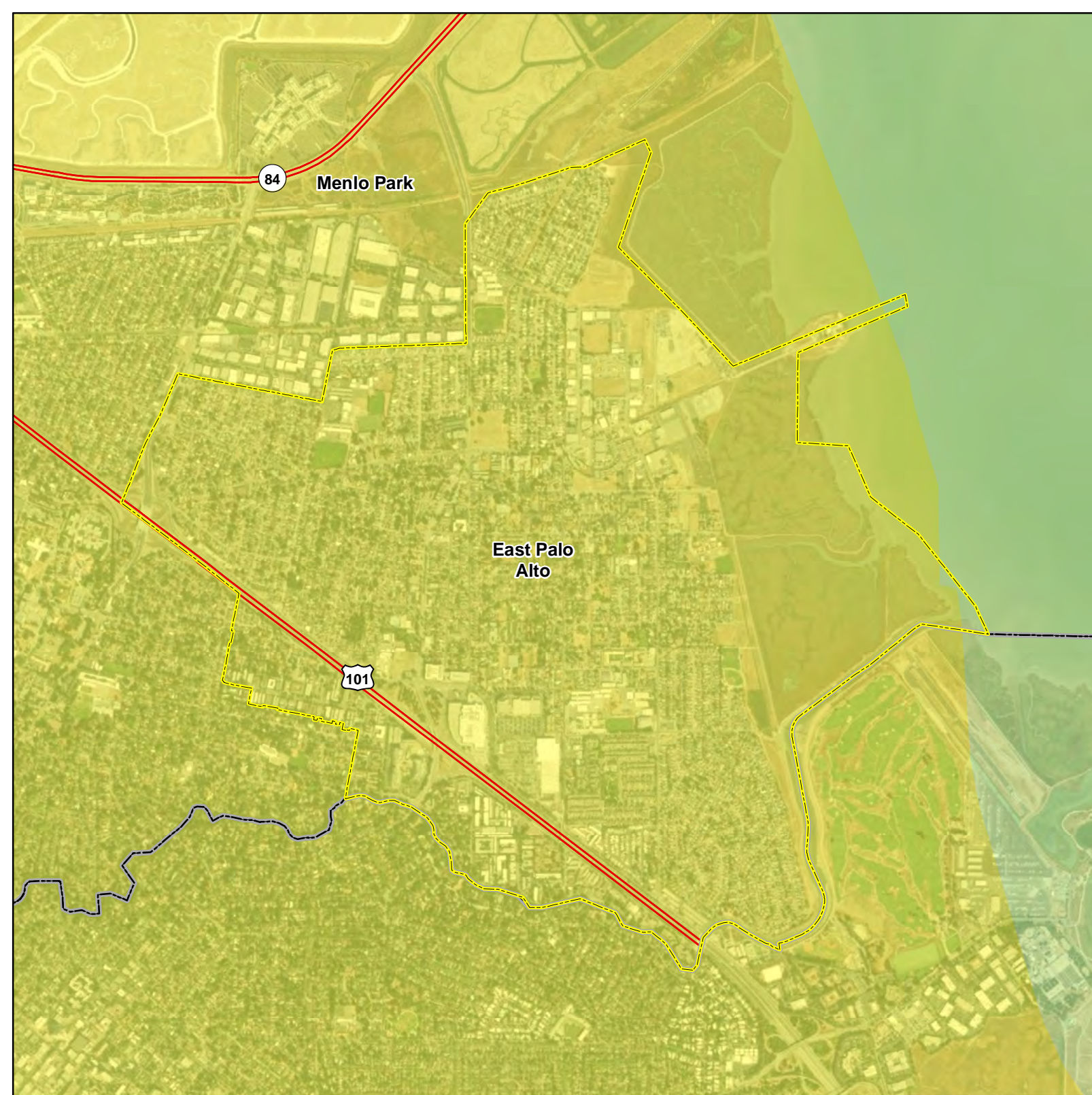
-  VI (Strong/Light)
-  VII (Very Strong/Moderate)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS









0 0.125 0.25 0.5  
Miles



# East Palo Alto

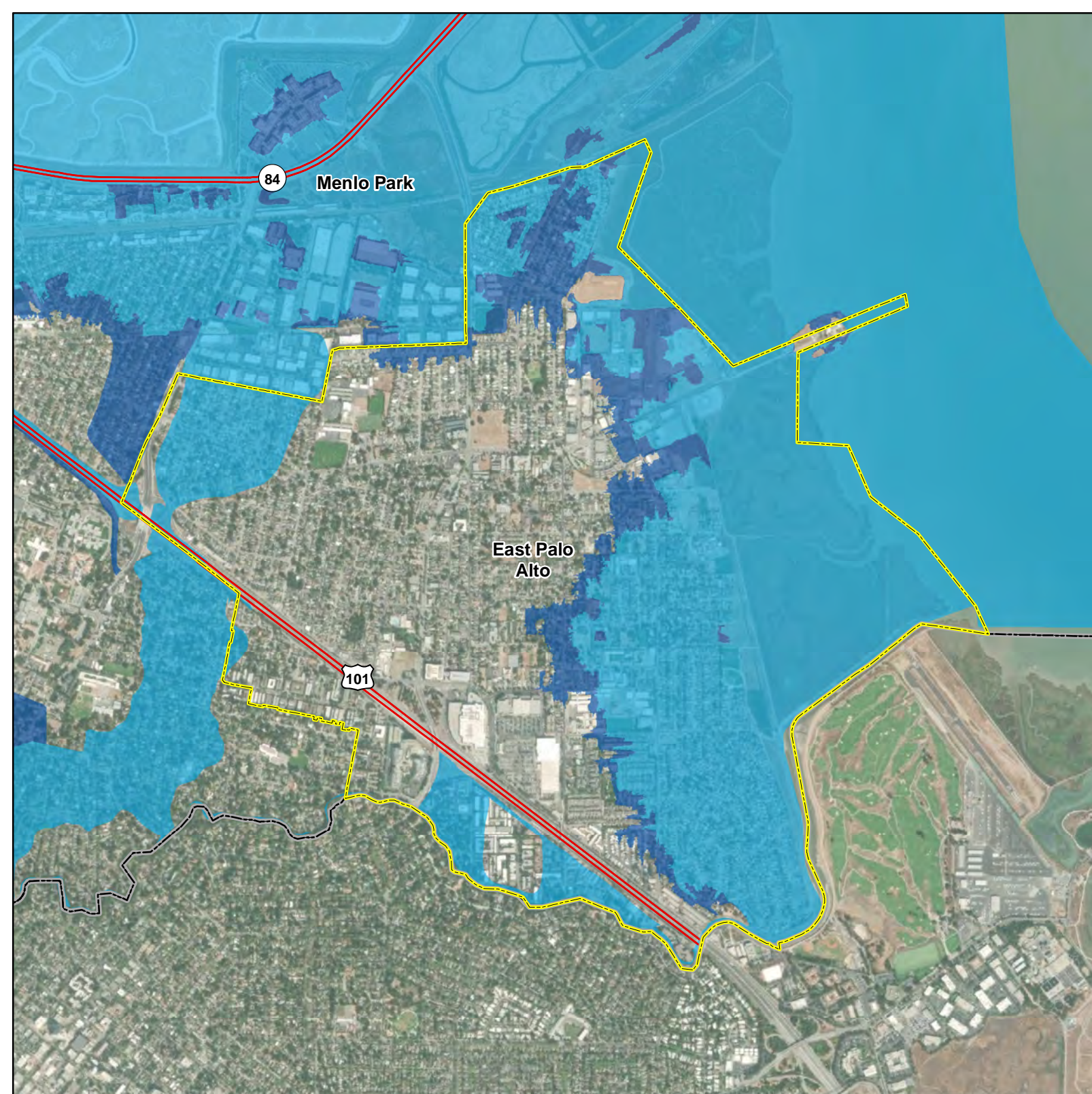
## FEMA Flood Hazard Areas

-  1% Annual Chance Flood (100-Year)
-  0.2% Annual Chance Flood (500-Year)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap, San Mateo Co., FEMA











0 0.125 0.25 0.5 Miles





# East Palo Alto

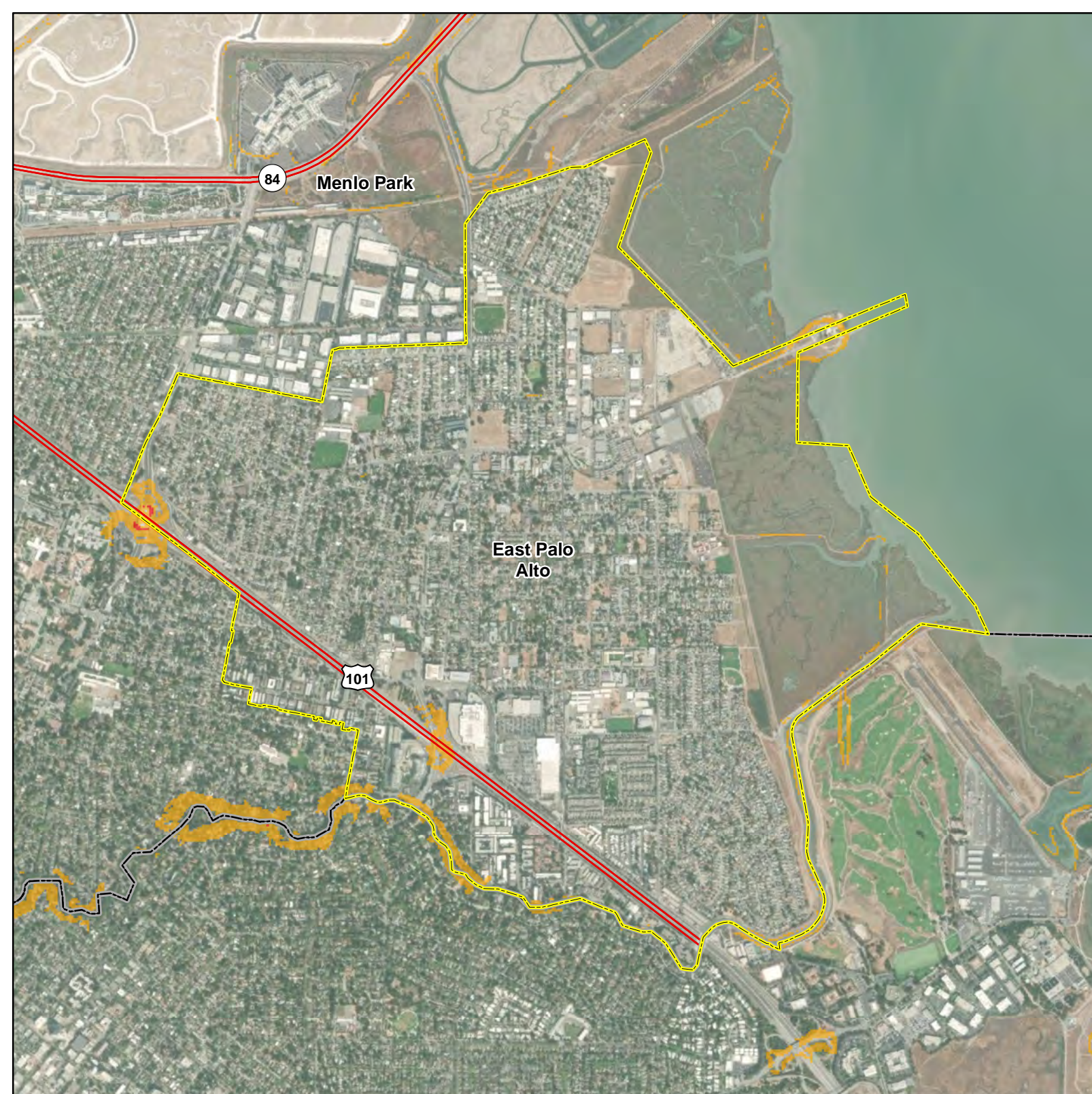
## Susceptibility to Deep-Seated Landslides

-  Low
-  Moderate
-  High
-  Very High
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CGS








0 0.125 0.25 0.5  
Miles



# East Palo Alto

## Sea Level Rise

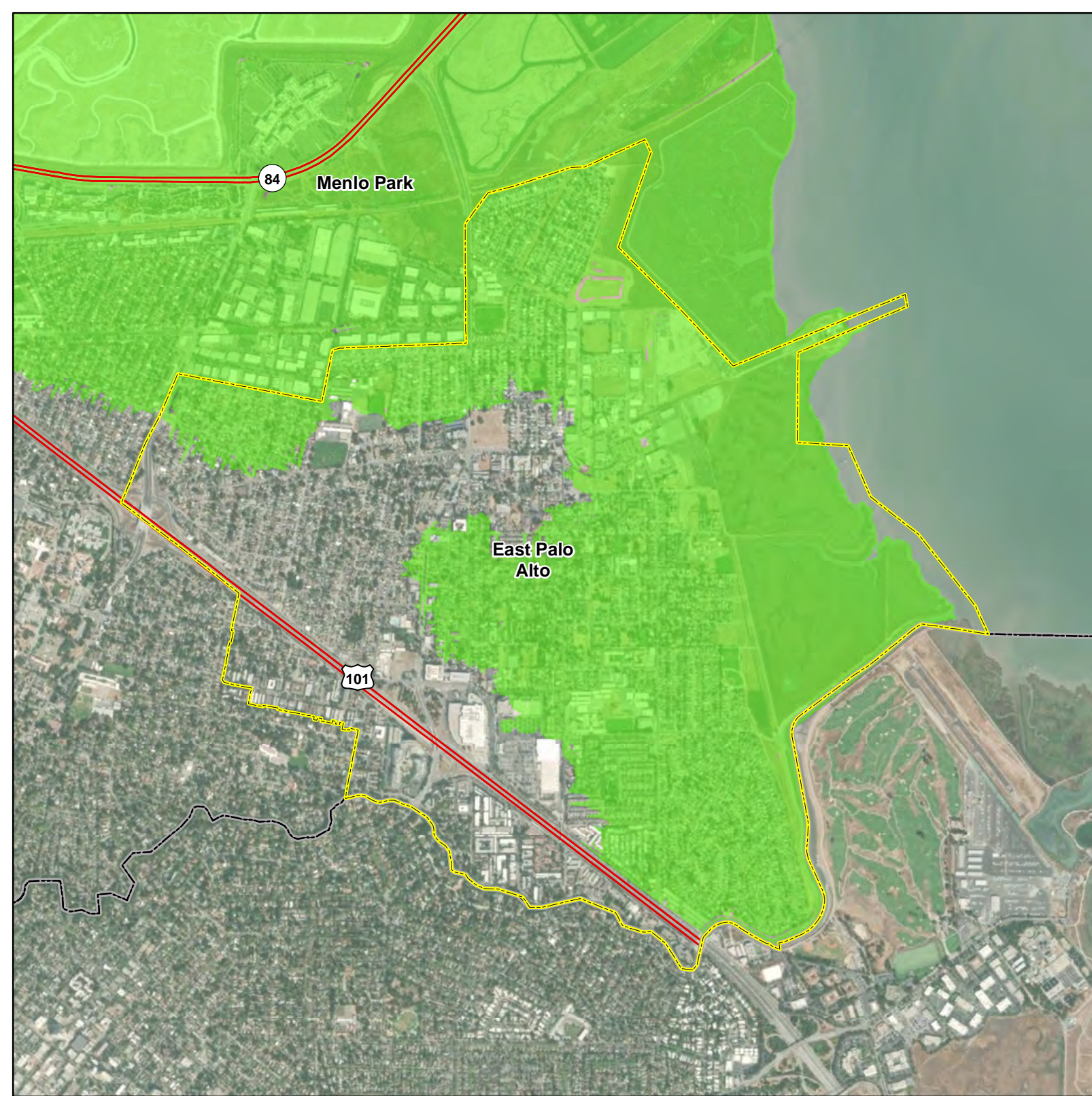
-  Inundation Area
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Inundation areas are a combination of Our Coast Our Future 200cm (6.6 feet) of SLR with 100-year storm for the Pacific Ocean coastline, and Adapting to Rising Tides 108 inches (9 feet) of SLR for the San Francisco Bay coastline.

Data Sources: ESRI Basemap, San Mateo Co., ART, OCOF








0 0.125 0.25 0.5 Miles



# East Palo Alto

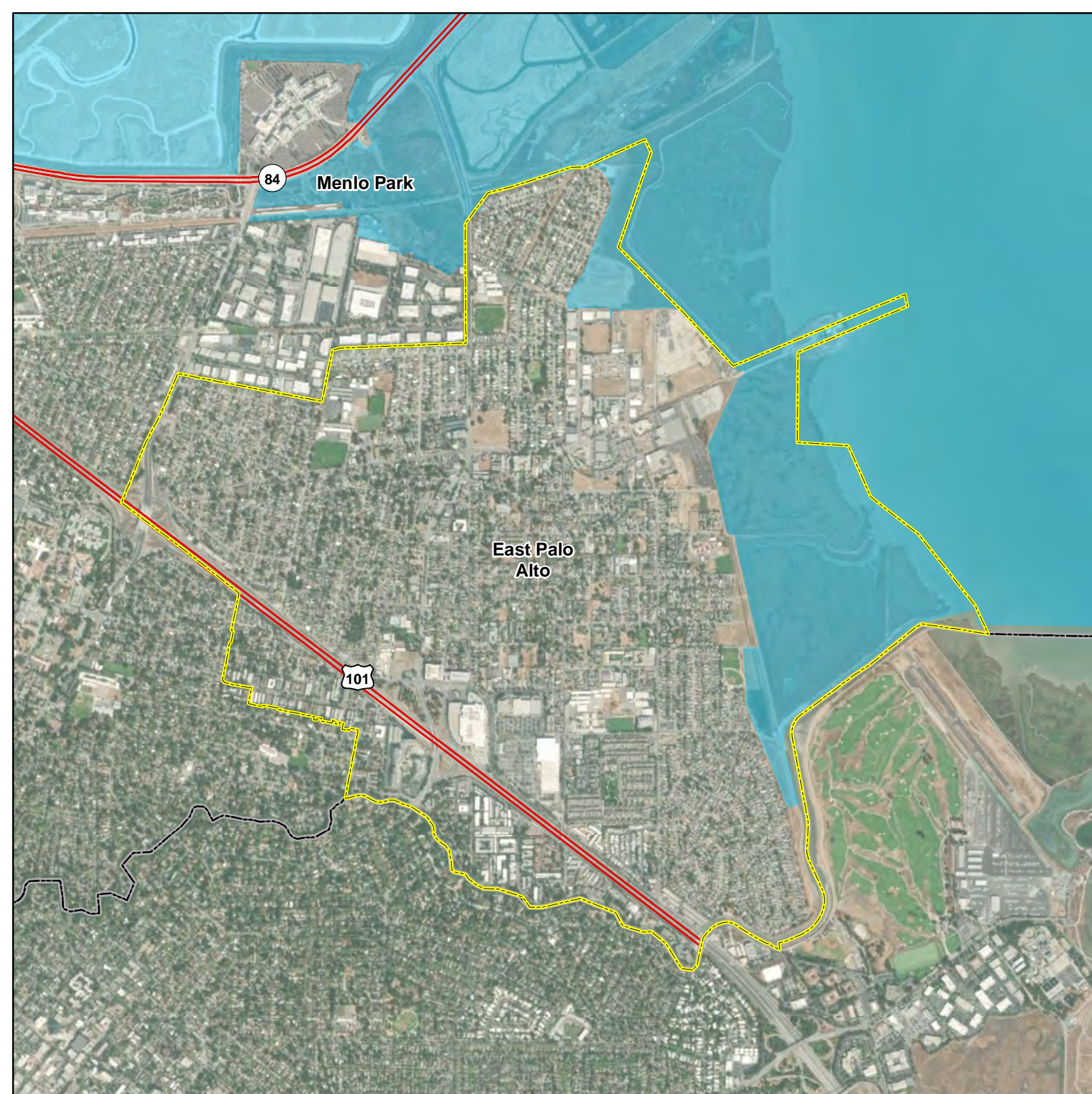
## Tsunami Hazard Areas

-  Hazard Areas
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CGS



0 0.125 0.25 0.5  
Miles





## 9. CITY OF FOSTER CITY

### 9.1 LOCAL HAZARD MITIGATION PLANNING TEAM

#### Primary Point of Contact

Kacey Treadway, Emergency Services Specialist  
 1900 O’Farrell St, Ste. 375  
 San Mateo, CA 94403  
 650-522-7962  
[ktreadway@smcfire.org](mailto:ktreadway@smcfire.org)

#### Alternate Point of Contact

Peter Pirnejad, City Manager  
 610 Foster City Boulevard  
 Foster City, CA 94404  
 650-286-3288  
[ppirnejad@fostercity.org](mailto:ppirnejad@fostercity.org)

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 9-1.

**Table 9-1. Local Mitigation Planning Team Members**

Name	Title
Leslie Carmichael	Consulting Planner
Sofia Mangalam	Planning Manager
Kai Ruess	Associate Attorney
David Liu	Human Resources Analyst
Yelena Capello	Deputy City Clerk
Jennifer Phan	Principal Management Analyst
Peter Pirnejad	City Manager
Fiti Rusli	Assistant Finance Director
Rob Lasky	IT Manager
Bill Sandri	Police Lieutenant
Martin Ticas	Police Captain
Frank Fanara	Parks Manager
Laura Galli	Public Works Engineering Manager
Marty Cooper	Chief Building Official
Robert Marshall	Fire Marshal
Kacey Treadway	Emergency Services Specialist
Pat Halleran	Emergency Services Specialist
Bill Euchner	Battalion Chief

## 9.2 JURISDICTION PROFILE

### 9.2.1 Location and Features

Foster City is located midway between San Francisco and San Jose on the western shoreline of the San Francisco Bay, east of U.S. 101. The City is bisected by State Route 92 (the J. Arthur Younger Freeway), which runs between Half Moon Bay to the west and to Hayward and Highway 880 to the east via the San Mateo-Hayward Bridge. The City encompasses 12,345 acres, of which 8,726 acres are part of the San Francisco Bay and Belmont Slough, and 2,619 acres are reclaimed marshland. This equates to approximately 4 square miles of land area.

Foster City enjoys a marine-like climate characterized by mild and moderately wet winters and dry, cool summers. The summer weather is dominated by a cool sea breeze. Low overcast often occurs for a few hours in the morning. Summer nights are comfortably cool, with minimum temperatures averaging in the fifties. The average minimum and maximum temperature range is 47.1 °F to 71.1 °F.

Historical records show that sea level in San Francisco Bay has risen about seven (7) inches over the past 100 years. Scientists agree that the rate of sea level rise is accelerating, but projections of future sea levels vary considerably. Present California coastline projections reported by the California Natural Resource Agency and the California Energy Commission predict 10 to 18 inches of sea level rise by 20250 (using 200 as the base line) and between 40 and 55 inches by 2100, depending upon the emission scenario used.

California in general should expect overall the hotter and drier conditions with a reduction in winter rain (and concurrent snow in the mountains), as well as increased average temperatures. There is a likelihood that extreme weather events, including heat waves, wildfires, droughts, and floods will be among the earliest climate impacts experienced. In San Mateo County, higher average sea levels means that storms will impact the Pacific Coast and Bay shore more severely with high storm surges, more extensive inland flooding, and increased erosion.

### 9.2.2 History

Foster City had its beginnings as reclaimed marshlands devoted to dairy farming and evaporation ponds. At the turn of the century, the approximately 2,600 acres of tidal marshlands now occupied by Foster City were owned by Frank Brewer, and the land was called Brewer Island. During the late 1950s, T. Jack Foster, in association with Bay Area developer Richard Grant, purchased an option to acquire Brewer Island for the development of a complete community. In 1960 the California Legislature created the Estero Municipal Improvement District (EMID or District), the state's first such public agency. EMID was granted most of the government powers associated with an incorporated municipality, except the powers to zone and approve development and certain police powers. T. Jack Foster prepared a master plan for the development of Brewer Island (Foster City) and submitted it to the County in 1961. The plan envisioned a self-contained community with a variety of housing types, waterfront lots and parks, an internal lagoon for public recreation, marinas, offices, stores, industry, and public services. The engineering firm of Wilsey Ham developed a plan to raise the surface level of the island four to five feet and to dig a central drainage basin area that would also serve as a runoff storage area. This drainage basin is the Foster City Lagoon. EMID issued bonds to finance the improvements, including the lagoon, water systems, sewer system, roads, bridges, and other necessary improvements. Foster City was incorporated in April 1971, with the newly elected City Council assuming the powers of the EMID Board. Foster City's Master Plan was amended and adopted as the City's General Plan.

### 9.2.3 Governing Body Format

The City of Foster City and the Estero Municipal Improvement District provide governmental services to the citizens of Foster City. The members of the City Council serve as the policy-making body for both governmental agencies. City voters elect Council members to staggered terms of four years each. The City uses the Council-Manager form of government, with the City Manager appointed by and responsible to the five-member City Council.

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

## 9.3 CURRENT TRENDS

### 9.3.1 Population

According to the California Department of Finance, the population of Foster City as of January 2020 was 33,033. Since 2015, the population has grown at an average annual rate of 0.39 percent.

### 9.3.2 Development

Identifying previous and future development trends is achieved through a comprehensive review of permitting since completion of the previous plan and in anticipation of future development. Tracking previous and future growth in potential hazard areas provides an overview of increased exposure to a hazard within a community. Table 9-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

**Table 9-2. Recent and Expected Future Development Trends**

Criterion	Response				
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan? <i>If yes, give the estimated area annexed and estimated number of parcels or structures.</i>	No				
Is your jurisdiction expected to annex any areas during the performance period of this plan? <i>If yes, describe land areas and dominant uses. If yes, who currently has permitting authority over these areas?</i>	No				
Are any areas targeted for development or major redevelopment in the next five years? <i>If yes, briefly describe, including whether any of the areas are in known hazard risk areas</i>	Yes  Mariners Point Golf Center				
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?	2016	2017	2018	2019	2020
Single Family	0	0	0	1	0
Multi-Family	5	0	0	5	3
Other (commercial, mixed use, etc.)	9	4	6	13	7
<b>Total</b>	<b>14</b>	<b>4</b>	<b>6</b>	<b>19</b>	<b>10</b>

Criterion	Response
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred. – CDD (raising the levee – where are we designated right now)	Special Flood Hazard Areas: 0 Landslide: 0 High Liquefaction Areas: 2 Tsunami Inundation Area: 0 Wildfire Risk Areas: 0
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.	We are fully built out within the City proper there is one area within the wetlands that might be developed in future.

## 9.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

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

**Table 9-3. Planning and Regulatory Capability**

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Codes, Ordinances, &amp; Requirements</b>				
<b>Building Code</b>	Yes (ordinance 629)	Yes – SMCFD and Estero Municipal Improvement District (EMID)	Yes – changing state laws	Yes
<b>Zoning Code</b>	Yes – Title 17	No	Yes – see above	Yes
<b>Subdivisions</b>	Yes Chapter 16.28	Yes – SMCFD and Estero (reviewing)	Yes –State Subdivision Map Act?	No
<b>Stormwater Management</b>	Yes Chapter 13.12	Yes –San Mateo Water Pollution Prevention Program	Yes - MRP & Regional Water Quality Control Board	Yes – pollution incident or fuel leak



	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Post-Disaster Recovery</b>	Yes Chapters 2.40 and 17.82	Yes - FEMA, mutual aid agreements, Cal OES	Yes – State Emergency Orders	Yes – have pieces of a plan but could be an opportunity for a project
<b>Real Estate Disclosure</b>	No	No	No	No
<b>Growth Management –</b>	No	No	No	No
<b>Site Plan Review —</b>	Yes – (Chapter 17.72)	Yes – SMCDF reviews and EMID	No	No
<b>Environmental Protection</b>	Yes – (CEQA Guidelines)	Yes	Yes	Yes
<i>Comment: Foster City has Environmental Review Guidelines adopted 10/1/2007. Actions must be consistent with California Environmental Quality Act (CEQA).</i>				
<b>Flood Damage Prevention</b>	Yes (Chapter 15.36)	Yes – FEMA, neighboring agencies potentially	Yes – in FEMA costal flood hazard studies, NFIP	Yes
<b>Emergency Management</b>	Yes - (Chapter 2.4)	Yes – SMCDF, FEMA, Cal OES, mutual & automatic aid agreement	Yes – CA Emergency Services Act	Yes
<b>Climate Change</b>	Yes – <a href="#">Climate Action Plan</a>	Yes - CA	No	Yes
<i>Comment: Climate Action Plan is being updated.</i>				
<b>Planning Documents</b>				
<b>General Plan</b>	Yes	No	Yes	Yes
<i>Is the plan compliant with Assembly Bill 2140? Yes</i>				
<b>Capital Improvement Plan</b>	Yes –	No – unless driven by a regulation like FEMA	No – good budgetary practice	Yes
<i>How often is the plan updated?</i> updated annually, detailed 5 years, and projected for 10				
<b>Disaster Debris Management Plan</b>	Yes - language in franchise agreement with Recology	Yes – County, EPA, Cal OES	No	Yes
<i>Comment: Countywide Annex in development</i>				
<b>Floodplain or Watershed Plan</b>	Yes – Lagoon Management Plan	No	Yes– Regional Quality Board	Yes
<i>Comment: Lagoon Management Plan</i>				
<b>Stormwater Plan</b>	Yes – MRP	No	Yes – Regional Quality Board Permit	Yes
<i>Comment: This is technically our permit from MRP</i>				
<b>Urban Water Management Plan</b>	Yes – updated every 5 years, 2020 is year of update and is currently being updated	Yes- PW to review SFPUC and BAWSCA allocations that inform the plan	Yes- 1983 Act – CA Water Code Section 10610-10657 and submit to Department of Water Resources – AB 2067	Yes
<b>Habitat Conservation Plan</b>	No	No	No	No
<b>Economic Development Plan</b>	Yes – City Manager’s Office to confirm year 2016/2017	No	No	No

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Shoreline Management Plan</b>	No	Yes – San Mateo County Flood and Sea Level Rise Resiliency District (FSLRRD)	No	Yes
<i>Comment:</i> County led initiative flood and sea level rise agency – paying for startup cost year 3 of 3 - erosion and resiliency study has been started				
<b>Community Wildfire Protection Plan</b>	No	Yes – CAL FIRE	No	No
<b>Forest Management Plan</b>	No	No	No	No
<b>Climate Action Plan</b>	Yes - <a href="#">CAP</a>	No	No	Yes
<b>Emergency Operations Plan</b>	Yes – EOP 2007	Yes - SMCFD	Yes –CA Emergency Services Act	Yes
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	Yes	No	No	Yes
<i>Comment:</i> Bay Area UASI THIRA Plan				
<b>Post-Disaster Recovery Plan</b>	No	Yes SMCFD	No – OES to review	Yes
<b>Continuity of Operations Plan</b>	Yes	No – SMCFD assists with updates	No - recommend	Yes
<b>Public Health Plan</b>	No	Yes – County Health	No	No – County driven
<b>Other - America’s Water Infrastructure Act – Emergency Response Plans and Risk Assessment – Plan being produced end of this fiscal year Dam Annexes such as Crystal Springs</b>	No - pending	No	Yes- EPA	Yes

**Table 9-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? <i>If no, who does? If yes, which department?</i>	Yes CDD (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 9-5. Fiscal Capability**

Financial Resource	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 and sewer in master fee services schedule
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

Financial Resource	Accessible or Eligible to Use?
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other – Property Taxes, Transient Occupancy Tax, Business License Fees, Franchise Fees, Misc. State Fees	Yes

Table 9-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	CDD & PW/Parks
Engineers or professionals trained in building or infrastructure construction practices	Yes	Chief Building Official and Senior Engineer
Planners or engineers with an understanding of natural hazards	Yes	CDD & PW/Parks
Staff with training in benefit/cost analysis	Yes	Finance
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	IT
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	City Manager & Fire (Fire Chief)
Grant writers	Yes	Citywide
Other	No	

Table 9-7. Education and Outreach Capability

Criterion	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? <i>If yes, briefly describe.</i>	Yes <a href="#">Hazard Mitigation Plan and Maps</a>
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe.</i>	Yes Foster City's Facebook, Twitter, and City Newsletters
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe.</i>	Yes City Council Subcommittee
Do you have any other programs already in place that could be used to communicate hazard-related information? <i>If yes, briefly describe.</i>	Yes CERT, Parks and Recreation Classes & social media
Do you have any established warning systems for hazard events? <i>If yes, briefly describe.</i>	Yes SMC Alert & Nixle

**Table 9-8. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	CDD
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 that your flood damage prevention ordinance was last amended?	Ordinance 626 – 2019 Chapter 15.36
Does your floodplain management program meet or exceed minimum requirements? <i>If exceeds, in what ways?</i>	Meets
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? <i>If so, state what they are.</i>	No  In designated Zone X until levee is completed
Are any RiskMAP projects currently underway in your jurisdiction? <i>If so, state what they are.</i>	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <i>If no, state why.</i>	No  In designated Zone X until levee is completed
Does your floodplain management staff need any assistance or training to support its floodplain management program? <i>If so, what type of assistance/training is needed?</i>	Yes  All
Does your jurisdiction participate in the Community Rating System (CRS)? <i>If yes, is your jurisdiction interested in improving its CRS Classification?</i> <i>If no, is your jurisdiction interested in joining the CRS program?</i>	No No No
How many flood insurance policies are in force in your jurisdiction? <sup>a</sup> <i>What is the insurance in force?</i> <i>What is the premium in force?</i>	188 \$63,075,000 \$82,662
How many total loss claims have been filed in your jurisdiction? <sup>a</sup>  <i>What were the total payments for losses?</i>	11  \$103,099

a. According to FEMA statistics as of March 31, 2021

**Table 9-9. Community Classifications**

	Participating?	Classification	Date Classified
FIPS Code	Yes	0608125338	Unknown
DUNS#	Yes	091847145	Unknown
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	Yes	2	2014
Public Protection (Fire)	Yes	ISO Class 2	2012
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

Table 9-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Ratings
<b>Technical Capacity</b>	
<b>Jurisdiction-level understanding of potential climate change impacts</b> <i>Comment: The City is raising the levee in anticipation of sea level rise; understand reduced snowpack impacts on water supply;</i>	High
<b>Jurisdiction-level monitoring of climate change impacts</b> <i>Comment: The City has and continues to collaborate with the multiple regional groups (County of San Mateo, San Mateo County Flood and Sea Level Rise Resiliency District (FSLRRD), and the Bay Area Clean Water Agency) including sharing of any applicable monitoring information.</i>	High
<b>Technical resources to assess proposed strategies for feasibility and externalities</b> <i>Comment: The City utilizes technical experts as needed.</i>	Medium
<b>Jurisdiction-level capacity for development of greenhouse gas emissions inventory</b> <i>Comment: The City utilizes technical experts as needed.</i>	Low
<b>Capital planning and land use decisions informed by potential climate impacts</b> <i>Comment: As new information becomes available, it will be shared and factored into considerations for future land uses and the City's capital planning.</i>	Medium
<b>Participation in regional groups addressing climate risks</b> <i>Comment: The City continues to collaborate with multiple regional groups.</i>	Medium
<b>Implementation Capacity</b>	
<b>Clear authority/mandate to consider climate change impacts during public decision-making processes</b> <i>Comment: Per Climate Action Plan</i>	Medium
<b>Identified strategies for greenhouse gas mitigation efforts</b> <i>Comment: Per Climate Action Plan</i>	High
<b>Identified strategies for adaptation to impacts</b> <i>Comment: Per Climate Action Plan</i>	High
<b>Champions for climate action in local government departments</b> <i>Comment: Per Climate Action Plan</i>	Medium
<b>Political support for implementing climate change adaptation strategies</b> <i>Comment: Political support for updating Climate Action Plan and Levee Improvements</i>	High
<b>Financial resources devoted to climate change adaptation</b> <i>Comment: Resources allocated to update Climate Action Plan and Levee Improvements</i>	High
<b>Local authority over sectors likely to be negatively impacted</b> <i>Comment: Individual privately held properties that are likely to be negatively impacted due to their location may include a range of sectors from residential, commercial and utilities. The City may exert limited authority over privately held property through its development review process.</i>	Low
<b>Public Capacity</b>	
<b>Local residents' knowledge of and understanding of climate risk</b> <i>Comment: The draft Local Hazard Mitigation Plan will include identification of climate risk factors such as urban fire zone, etc. The draft plan will be shared with the community to build knowledge and understanding of climate risk. The City will hold public meeting on the draft plan and consider community input prior to adoption.</i>	Medium
<b>Local residents' support of adaptation efforts</b> <i>Comment: Overwhelming support of levee bond measure.</i>	High
<b>Local residents' capacity to adapt to climate impacts</b> <i>Comment: No information available.</i>	Unsure

Criterion	Jurisdiction Ratings
Local economy current capacity to adapt to climate impacts <i>Comment: No information available.</i>	Unsure
Local ecosystems capacity to adapt to climate impacts <i>Comment: No information available.</i>	Unsure

- a. High = Capacity exists and is in use; Medium = Capacity may exist but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

## 9.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

### 9.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **Capital Improvement Program Planning** – The City Council annually approves a detailed Capital Improvement Plan (CIP) for a five-year period and identifies and begins to fund upcoming infrastructure projects on a 10-year horizon. The Planning Commission reviews the CIP for consistency with the General Plan. The City Council annually appropriates funding for the current year phases of Capital Improvement Projects. Infrastructure projects identified in this document have been or will be included in the five-year Capital Improvement Project Plan for the years in which they are planned for implementation.
- **Annual Budget** – The City Council annually adopts a Fiscal Year Budget which authorizes the funding for all operations, services, and projects for the fiscal year planning. Priority projects identified in the Local Hazard Mitigation Plan/Safety Element that require an expenditure output will be included in the Annual Budget in the years in which they are planned for implementation. The Annual Budget includes the appropriation of funding for the Capital Improvement Program discussed above.
- **Five Year Financial Plan** – The City Council annually approves a Five-Year Financial Plan which includes revenue and expenditure expectations for the five-year period. Approved projects in the Capital Improvement Plan, including any related to the Local Hazard Mitigation Plan/Safety Element would be included in the five-year plan to ensure that appropriate funding is available for project completion.
- **Foster City Municipal Code** – The City Municipal Code includes several ordinances that would directly impact mitigation measures identified in the Local Hazard Mitigation Plan/Safety Element, for instance updates to the Code may be required in order to implement the post- disaster response measures and/or building code recommendations. Chapter 15.36 includes the City’s Flood Plain Management Regulations related to the City’s participation in the National Flood Insurance Program.
- **Estero Municipal District Code** – The District Code includes several ordinances that would directly impact mitigation measures identified in the Local Hazard Mitigation Plan/Safety Element, for instance

updates to the Code may be required in order to implement the post- disaster response measures and/or changes to the Water Distribution system or Wastewater Collection system.

- **Crime Prevention Programs** – Proactive crime prevention makes Foster City a place where residents and visitors are safe from crime. Foster City is frequently listed among the safest cities in the State of California because of the efforts that go into preventing crime before it happens.
- **CERT** – The Community Emergency Response Teams train regularly to be prepared for emergency response and recovery. Having these teams in place with training in triage, medical response and search and rescue will enhance responsiveness after a disaster and mitigate the impact that effects would have had on individuals and property if left unattended.
- **General Plan Annual Report** – This annual report assesses progress in implementation of programs included in the General Plan and in turn, helps shape the City Council’s annual priorities for staff work efforts, the budget, and the capital improvement program.
- **Climate Action Plan** – The Climate Action Plan was adopted by the City Council in February 2016 and contains 40 measures that will be prioritized to improve the environmental sustainability of Foster City and the Bay Area region. Specific to the Local Hazard Mitigation Plan/Safety Element, the Climate Action Plan measures are intended to reduce the production of greenhouse gasses and mitigate the potential impact of sea level rise.

### 9.5.2 Opportunities for Future Integration

The capability assessment presented in this annex identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

Please see the following from the above tables of where LHMP could be integrated in the future.

- Building Code
- Zoning Code
- Stormwater Management
- Post-Disaster Recovery
- Environmental Protection
- Flood Damage Prevention
- Emergency Management
- Climate Change
- General Plan
- Capital Improvement Plan
- Disaster Debris Management Plan
- Lagoon Management Plan
- Stormwater Plan
- Urban Water Management Plan
- Shoreline Management Plan

- Climate Action Plan
- Comprehensive Emergency Management Plan
- Threat & Hazard Identification & Risk Assessment (THIRA)
- Post-Disaster Recovery Plan
- Continuity of Operations Plan
- America’s Water Infrastructure Act: Emergency Response Plans and Risk Assessments—Plan being produced end of this fiscal year
- Dam Annexes—such as Crystal Springs
- Clean Water Program

## 9.6 RISK ASSESSMENT

### 9.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 9-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

**Table 9-11. Past Natural Hazard Events**

Type of Event	FEMA Disaster #	Date	Damage Assessment (Description)
Power Outages/ Disruption	N/A	Fall 2019 Summer 2020 Fall 2020	Pacific Gas & Electric’s Public Safety Power Shutoff (PSPS) program and Rolling Blackouts done in response to Climate Change and Severe Weather Conditions to help prevent wildfires and prevent strain on the power grid (Secondary Hazard to Climate Change, Extreme Weather, Windstorms, Severe Storms and Wildfire Hazards) Damage Assessment: Unknown
Extreme Weather	N/A	Winter 2018 Fall 2019 Winter 2019 Summer 2020	Extreme temperatures including summer heat and winter cold linked to Climate Change. Foster City has activated cooling centers and shelters for citizens in response. Damage Assessment: Unknown
Windstorm	N/A	2021	Strong winds and storms throughout the Bay Area. Damage to Foster City included down trees. Damage Assessment: Unknown
Severe Storm	N/A	2019	Downed trees in this storm impacted Foster City and residents. Damage Assessment: Unknown
Drought	N/A	2014-2017 July 8, 2021	In January 2014, the Governor proclaimed a State of Emergency and directed State officials to take all necessary actions to prepare for drought conditions. As of July 8, 2021, San Mateo County has been included in the Governor’s emergency declaration. Damage Assessment: Unknown
Winter Storm	N/A	2014	Winter Storm damage resulted in San Mateo County’s Proclamation of State of Emergency on December 19, 2014, and the Governor’s Proclamation of a State of Emergency on December 22, 2014. Foster City personnel worked overtime and provided sandbags to City residents. Damage Assessment: Unknown
Loma Prieta Earthquake	DR-845	October 17, 1989	Minor damage to City owned facilities. Damage Assessment: Unknown



## 9.6.2 Hazard Risk Ranking

Table 9-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy. Mitigation actions target hazards with high and medium rankings.

**Table 9-12. Hazard Risk Ranking (Social Equity Lens applied)**

Rank	Hazard	Risk Ranking Score	Risk Category
1	Sea Level Rise / Climate Change	63	High
2	Flood	63	High
3	Dam Failure	42	High
4	Earthquake	42	High
5	Severe Weather/Extreme Weather	24	Medium
6	Drought	9	Low
7	Tsunami	2	Low
8	Landslide/Mass Movements	0	Low
9	Wildfire	0	Low

## 9.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

### Repetitive Loss Properties

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

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Evacuation – Due to Foster City’s geographical nature and infrastructure, the egress and ingress routes are limited which would present issues when evacuation is needed in response to an emergency.

Mitigation actions addressing these issues were prioritized for consideration in the action plan for this annex.

## 9.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 9-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 9-13. Status of Previous Plan Actions**

Action Item	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p><b>S-A-1-a Protect City’s Infrastructure and Facilities.</b> The City will protect the City’s infrastructure and facilities from damage due to seismic and geologic hazards through proper design and retrofitting older facilities to current standards.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-1
<p><b>S-A-1-b Police Station Assessment.</b> Conduct an assessment of the Police Department facility and its use related to an earthquake to identify strategies that can improve the facility’s resilience, including determining the feasibility of replacing the building.</p> <p><b>Comment:</b> This item is not completed and should carry over to the next plan with language modifications.</p>			X	FOS-1
<p><b>S-A-1-c Recreation Center Assessment.</b> Conduct an assessment of the Recreation Center facility (a potential emergency shelter location) and its use related to an earthquake to identify strategies that can improve the facility’s resilience, including determining the feasibility of replacing the building. (High Priority)</p> <p><b>Comment:</b> This item has been worked on such as the red cross partnerships for the sheltering aspect. This should be carried over to the next plan and was not completed because of budget allocation.</p>			X	FOS-1
<p><b>S-A-1-d Emergency Power for Critical Infrastructure.</b> The City provides emergency power at critical City facilities such as major sewer lift stations and lagoon pumps. A new CIP will replace ten sewer lift station generators that are at the end of its useful life.</p> <p><b>Comment:</b> This item is an ongoing action that should be carried over to the next 5-year plan because the need for emergency power and maintenance of emergency power is perpetual. In FY 2021-22 replacement of 10 of the generators located at 14 of the District’s major wastewater lift stations is scheduled.</p>			X	FOS-2
<p><b>S-A-1-e Monitoring of Water, Sewer and Lagoon Systems.</b> The City provides and maintains a Supervisory Control and Data Acquisition (SCADA) for the water distribution system, the wastewater collection system, and the lagoon system that is monitored 24 hours a day by Public Works staff or Police Department staff.</p> <p><b>Comment:</b> Monitoring is an ongoing process that will carry over to the next 5-year plan since the need for monitoring is perpetual. SCADA measures the following: Wastewater System: effluent flow from LS 59 pump station to the WWTP, the pumps and water levels in the District’s 48 lift stations and pump station 59; Water System: the flow in the 24-inch transmission main, the tank levels in tanks 1-4, the 4 engines in the water booster pump station; Lagoon System: The lagoon levels at 3 locations on the lagoon (rainbow bridge, pitcairn by intake, lagoon pump station by outfall) and the level of the bay. CIP 660, which is currently in Design will address repairs to the transmitters on two of the water tanks-Construction schedule for 2022. Staff is installing an analyzer on Tank 4 to measure chlorine residuals in 2021. A flow probe will be replaced on the 24-inch transmission main as a part of CIP 636- construction to be complete by early 2022.</p>			X	FOS-1
<p><b>S-A-1-f Bridge Inspections.</b> Facilitate 2-year (above water) and 5-year (underwater) inspections by the California Department of Transportation (Caltrans) of City owned bridges (Bicentennial, Foster City Boulevard, Rainbow and Shell Boulevard) and there is an active CIP to address any deficiencies noted in the inspections.</p> <p><b>Comment:</b> Bridge Inspections are perpetual and are required every 2-years for above-water elements and every 5-years for under-water elements of the bridges. In FY2022/23 to 2023/2024 a project will addresses the design and construction of improvements necessary based on the latest Caltrans inspection reports.</p>			X	FOS-3

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p><b>S-A-1-g Earthquake Resilient Pipelines.</b> The City utilizes flexible expansion joints to protect the City's pipelines from stresses produced by seismic activity or gradual soil subsidence.</p> <p><b>Comment:</b> The District has installed flexible connections on each of the steel waterlines at bridge crossings. CIP 660 includes the installation of flexible expansion joints at the City's water tanks.</p>			X	FOS-4
<p><b>S-A-2-a Levee Protection Planning and Improvements.</b> CIP 657 is an active project to raise the City's levees in order to retain FEMA accreditation and protect the City against sea level rise. (High Priority) The project is anticipated to be completed by January 2024.</p> <p><b>Comment:</b> Project under construction. Keep as ongoing.</p>			X	FOS-5
<p><b>S-A-2-b Maintain Levees and Lagoon for Flood Protection.</b> The City will maintain the City's levees and lagoon for flood protection pursuant to the "Operation and Maintenance Manual, Foster City Levees and Pump Station" and the "Lagoon Management Plan."</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-5
<p><b>S-A-2-c Lagoon Pump Station Building Seismic Evaluation.</b> New CIP will provide recommendations for seismic improvements for this 60-year-old building to meet current code standards. (High Priority)</p> <p><b>Comment:</b> Analysis to be completed in FY 2022/2023 and design and construction in subsequent years. Keep as ongoing.</p>			X	FOS-6
<p><b>S-A-3-a Water Supply and Delivery for Fire-Fighting.</b> The City will maintain a water supply and delivery system that can meet potential firefighting demands through annual exercising of fire hydrants and periodic review of storage needs.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-7
<p><b>S-A-3-b Water Supply.</b> The District stores 20 MG of water, which is more than adequate to meet fire and domestic water demands of the City. City will be pursuing alternative water supplies in response to water cutbacks by SFPUC during periods of drought. The 2020 Urban Water Management Plan to be completed by June 30, 2021.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-7
<p><b>S-A-3-c Water Delivery System.</b> The City's Public Works Maintenance Division performs regular hydrant flushing, exercises water valves, and replaces failed parts as identified on a regular basis.</p> <p><b>Comment:</b> Ongoing.</p>			X	FOS-8
<p><b>S-A-3-d Water Booster Pump Station Seismic Retrofit.</b> CIP 660 incorporates a seismic vulnerability assessment, design, and construction to bring the pump station to meet seismic code. (High Priority)</p> <p><b>Comment:</b> PW – Construction is anticipated to begin in Fall 2021 - This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-8
<p><b>S-A-3-e Potable Water Tank Seismic Evaluation Retrofit.</b> CIP 660 incorporates a seismic vulnerability assessment, design, and construction to bring the City's water tanks to current seismic code. (High Priority)</p> <p><b>Comment:</b> PW – Construction anticipated to begin in Fall 2021 - This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-8
<p><b>S-A-3-f Water Transmission Main Evaluation.</b> Continue to evaluate the single 24-inch water supply transmission main on an ongoing basis. (High Priority)</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-8

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p><b>S-A-3-g Water System Pressure Reducing Station Evaluation.</b> Continue to evaluate the water pressure reducing stations that reduce SFPUC’s supply pressure to EMID system pressure. (High Priority)</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-8
<p><b>S-A-4-a Wastewater Treatment Plant Improvements.</b> The WWTP Improvements project (CIP 652) will replace the facility’s aging infrastructure and meet regulatory requirements. (High Priority)</p> <p><b>Comment:</b> Ongoing – Anticipated commissioning of the WWTP is FY 2023/24.</p>			X	FOS-9
<p><b>S-A-4-b Lift Station #59 Improvements.</b> Maintain and improve the City’s main wastewater lift station with replacement of components that provide adequate levels of redundancy.</p> <p><b>Comment:</b> Assessment done next week to commence in 2022 - This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-10
<p><b>S-A-4-c Evaluation/Replacement of Air Release Valves on Wastewater Line between Lift Station #59 and WWTP.</b> The air release valves are evaluated on a yearly basis and are replaced in-house and on an as-needed basis. (High Priority)</p> <p><b>Comment:</b> Ongoing perpetually.</p>			X	FOS-10
<p><b>S-A-4-d Wastewater Lift Stations Rehabilitation.</b> The City’s Wastewater Master Plan incorporates the rehabilitation of the City’s 49 sewer lift stations via a phased approach by performing preventative maintenance and upgrades to improve the reliability, durability, and sustainability of the lift stations. (High Priority)</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-10
<p><b>S-B-1-a Emergency Response.</b> The City will prepare to respond to emergencies through use of established procedures, programs of ongoing training, periodic exercises of the City’s Emergency Operations Plan, and mutual aid agreements.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-11
<p><b>S-B-1-b Emergency Plan.</b> The City will maintain the City’s Emergency Operations Plan indicating responsibilities and procedures for responding to an emergency.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan. CDD will verify its status before submitting to final plan.</p>			X	FOS-11
<p><b>S-B-1-c Mutual Aid.</b> Participate in general mutual-aid agreement and agreements with adjoining jurisdictions for cooperative response to fires, floods, earthquakes, and other disasters.</p> <p><b>Comment:</b> Completed but ongoing – ratified agreements – check with city clerk. This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-11
<p><b>S-B-1-d Police Services.</b> The City will provide adequate personnel, training, and equipment to support the provision of police services.</p> <p><b>Comment:</b> This item needs addition language but is in accordance with other items include here so it should carry over to the next plan.</p>			X	FOS-12
<p><b>S-B-2-a Emergency Operations Center.</b> Maintain the local government’s emergency operations center in a full functional state of readiness.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-13
<p><b>S-B-2-b Back-up Emergency Operations Center.</b> As an infrastructure operator, designate a back-up Emergency Operations Center with redundant communications systems.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-13

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p><b>S-B-2-c Emergency Power for Critical Buildings.</b> Pre-position emergency power generation capacity (or have generation rental/lease agreement for these generators) in critical buildings to maintain continuity of government and services.</p> <p><b>Comment:</b> PW to verify some generators available. his item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-2
<p><b>S-B-2-d Critical Traffic Signalized Intersections.</b> All City signalized intersections either have an emergency generator or battery-back up power in case of loss of permanent power. Maintenance and replacement of battery back-ups and generators is allocated.</p> <p><b>Comment:</b> Ongoing perpetually since need for maintenance of battery back-ups and emergency generators.</p>			X	FOS-2
<p><b>S-B-2-e Post-Disaster Repair of Water and Wastewater Systems.</b> Public Works Maintenance Division maintains an inventory of spare parts for emergency use (e.g., valves, pumps, pipelines of critical size) at the City's Corporation Yard.</p> <p><b>Comment:</b> PW - Ongoing perpetually.</p>			X	FOS-14
<p><b>S-C-1-a Incorporate Sea Level Rise Consideration into Planning Process.</b> Incorporate consideration of sea level rise into the development review and infrastructure planning processes, including response strategies that increase resilience to mid-century sea level rise risks for both new and existing development.</p> <p><b>Comment:</b> The levee project will increase the height and width of the levee to improve protection against storm/tide surges, meet sea level rise projections through 2050, and make the levee more resistant to earthquakes. The improvements will be implemented with either a concrete flood wall, earthen levee, or hybrid sheet pile wall. Construction started in September 2020 and is anticipated to be complete in January 2024.</p>			X	FOS-15
<p><b>S-C-2-a Use of Uniform Codes.</b> The City will adopt and enforce the most current uniform codes with additional local requirements as necessary tailored to Foster City.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-22
<p><b>S-C-2-b Site Specific Geotechnical Analyses.</b> The City will require site specific geotechnical and engineering reports for new structures.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-16
<p><b>S-C-3-a Flood Plain Regulations.</b> The City will evaluate any proposed development within special flood hazard areas for conformance with the City's flood plain regulations as contained in Chapter 15.36 of the Foster City Municipal Code.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-17
<p><b>S-C-3-b FEMA's National Flood Insurance Program.</b> Participate in FEMA's National Flood Insurance Program for affected properties.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-18
<p><b>S-C-3-c Protect Flood Protection Qualities of Natural Areas.</b> The City will protect and preserve natural features such as wetlands that serve as natural mitigation against the impacts of flooding.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-19
<p><b>S-C-4-a Development Review for Fire Safety.</b> The City will review proposals for new and modified buildings to ensure that fire safety provisions are included as required by the most current uniform codes and local regulations.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-20

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p><b>S-C-4-b Annual Inspections for Fire Safety and Hazardous Materials.</b> The City will conduct annual inspections of businesses and multi-family dwellings in order to ensure compliance with fire safety and hazardous materials requirements. The City will continue to provide inspections of residential care facilities at the request of the Department of Social Services.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-20
<p><b>S-C-4-c Fire Sprinklers.</b> Require fire sprinklers in all new or substantially remodeled housing, regardless of distance from a fire station.</p> <p><b>Comment:</b> Ongoing – R. Marshall</p>			X	FOS-20
<p><b>S-C-5-a Hazardous Materials.</b> The City will continue to enforce applicable codes related to hazardous materials.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-20
<p><b>S-C-6-a Post-Disaster Services.</b> Consider and adopt regulations to guide City operations following a disaster, such as suspension of some types of government services.</p> <p><b>Comment:</b> Some preliminary work has been done but due to prioritization, should carry over to next year cycle This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-11
<p><b>S-D-1-a CERT Classes.</b> Continue to provide emergency preparedness classes and Community Emergency Response Team (CERT) training.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-21
<p><b>S-D-1-b Emergency Preparedness Education and Outreach.</b> Continue to utilize available means to educate the public, including schools, businesses, and community groups, about emergency preparedness, including but not limited to the City’s website, media, classes, and special events. (High Priority)</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-21
<p><b>S-D-2-a Geotechnical Reports Library.</b> The City will maintain a geotechnical report library.</p> <p><b>Comment:</b> Currently in Docuphase.</p>			X	FOS-16
<p><b>S-D-2-b Seismic Safety Education.</b> The City will include seismic safety education in the Fire Department’s public education programs, such as Community Emergency Response Team (CERT) training and earthquake preparedness training.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-21
<p><b>S-D-2-c Non-Structural Hazards Assessment.</b> The City will include an assessment of non-structural seismic hazards as part of annual inspections of businesses as part of a public education program.</p> <p><b>Comment:</b> This function is not supported by the fire code, this item should be removed.</p>			X	
<p><b>S-D-2-d Private Utility Lines at Bridges.</b> City performs general public outreach to homeowner associations to educate them about the need for earthquake- resistant flexible connections when pipes enter and exit the bridges.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-21
<p><b>S-D-3-a Fire Education/Prevention.</b> The City will provide a fire education/prevention program to the public, including schools, businesses and community groups through publications, training classes and other means.</p> <p><b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.</p>			X	FOS-20

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<b>S-D-4-a Crime Prevention/Education.</b> The City will provide a variety of crime prevention programs to educate and involve the community, including but not limited to Neighborhood Watch, Apartment Watch, Business Watch, newsletter, security surveys, and programs with community groups and organizations. <b>Comment:</b> Police representatives say this ongoing item is completed enough to remove.	X			
<b>S-D-4-b Development Review for Crime Prevention.</b> The City will review proposals for new and modified buildings for compliance with crime prevention requirements. <b>Comment:</b> Police representatives say this ongoing item is completed enough to remove.	X			
<b>S-E-1-a Community Events.</b> The City will actively promote community events in order to bring together individuals and groups within the community for a common purpose. <b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.			X	FOS-21
<b>S-E-1-b Cross-Cultural Events.</b> The City will actively promote cross-cultural events in order to celebrate the diversity of the community as well as to bring together individuals and groups so that they become more inter-connected. <b>Comment:</b> This item has been worked on in the past 5 years but it is ongoing so it should carry over to the next plan.			X	FOS-21
<b>S-E-1-a Police Services.</b> The City will provide adequate personnel, training, and equipment to support the provision of police services. <b>Comment:</b> Police confirmed that this is completed and can be removed from future plans.	X			
<b>S-E-2-a Crime Prevention.</b> The City will promote community-based crime prevention through Neighborhood Watch, Apartment Watch, Business Watch, newsletter, security surveys, and programs with community groups and organizations. <b>Comment:</b> Ongoing item but Police representatives say it is completed enough to remove from the plan.	X			

## 9.8 HAZARD MITIGATION ACTION PLAN

Table 9-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 9-15 identifies the priority for each action. Table 9-16 summarizes the mitigation actions by hazard of concern and mitigation type.

**Table 9-14. Hazard Mitigation Action Plan Matrix**

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action FOS 1 - Protect and Assess City's Infrastructure and Facilities –</b> Protect infrastructure and facilities from damage due to seismic and geologic hazards through proper design and retrofitting older facilities to current standards. Also, identify strategies that can improve the facility's resilience, including determining the feasibility of replacement where appropriate. This includes identified projects such as:						
<ul style="list-style-type: none"> <li>• S-A-1-a - Protect City's Infrastructure and Facilities</li> <li>• S-A-1-b - Police Station Assessment</li> <li>• S-A-1-c - Recreation Center Assessment</li> <li>• S-A-1-e Monitoring of Water, Sewer and Lagoon Systems</li> </ul>						
<i>Hazards Mitigated:</i> Climate Change, Earthquake, Severe Weather/Extreme Weather, Flood, Tsunami, Sea Level Rise						
New & Existing	1, 6, 7, 8, 9	Foster City		Medium	Staff Time, General Fund, Grant Funding	Long-Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<p><b>Action FOS 2</b> - Emergency Power for Critical Infrastructure &amp; Facilities – Ensure adequate emergency power at critical City facilities including major sewer lift stations and lagoon pumps for continuity of government and services.</p> <ul style="list-style-type: none"> <li>S-A-1-d – Emergency Power for Critical Infrastructure</li> <li>S-B-2-c – Emergency Power for Critical Facilities</li> <li>S-B-2-d Critical Traffic Signalized Intersections</li> </ul> <p><u>Hazards Mitigated:</u> Climate Change, Earthquake, Severe Weather/Extreme Weather, Flood, Drought, Tsunami, Sea Level Rise</p>						
New & Existing	1, 5, 6, 7, 8	Foster City		High	Staff Time, Grant Funding	Short-Term
<p><b>Action FOS 3</b> – Bridge Inspections - Facilitate 2-year (above water) and 5-year (underwater) inspections by the California Department of Transportation (Caltrans) of City owned bridges (Bicentennial, Foster City Boulevard, Rainbow and Shell Boulevard) and there is an active CIP to address any deficiencies noted in the inspections (S-A-1-f).</p> <p><u>Hazards Mitigated:</u> Earthquake, Flood, Tsunami, Sea Level Rise</p>						
New & Existing	1, 6, 7,8	Foster City		Low	Staff Time, General Fund	Ongoing
<p><b>Action FOS 4</b> - Earthquake Resilient Pipelines - Utilize flexible expansion joints to protect the City’s pipelines from stresses produced by seismic activity or gradual soil subsidence (S-A-1-g).</p> <p><u>Hazards Mitigated:</u> Earthquake</p>						
New & Existing	1, 6, 7, 8	Foster City		Low	Staff Time, General Fund	Ongoing
<p><b>Action FOS 5</b> - Levee Protection Planning and Improvements - CIP 657 is an active project to raise the City’s levees in order to retain FEMA accreditation and protect the City against sea level rise. The project is anticipated to be completed by January 2024. Maintenance and communication for the project will be needed. This includes identified projects such as:</p> <ul style="list-style-type: none"> <li>S-A-2-a - Levee Protection Planning and Improvements</li> <li>S-A-2-b Maintain Levees and Lagoon for Flood Protection</li> </ul> <p><u>Hazards Mitigated:</u> Climate Change, Earthquake, Severe Weather/Extreme Weather, Flood, Tsunami, Sea Level Rise</p>						
New & Existing	1, 6, 7, 8	Foster City	San Mateo County Flood and Sea Level Rise Resiliency District (FSLRRD)	Low	Staff Time, General Fund, Grant Funding	Ongoing
<p><b>Action FOS 6</b> - Lagoon Pump Station Building Seismic Evaluation - New CIP will provide recommendations for seismic improvements for this 60-year-old building to meet current code standards (S-A-2-c).</p> <p><u>Hazards Mitigated:</u> Climate Change, Earthquake, Severe Weather/Extreme Weather, Flood, Tsunami, Sea Level Rise</p>						
New & Existing	1, 6, 7, 8	Foster City		Medium	Staff Time, General Fund, Grant Funding	Short-Term
<p><b>Action FOS 7</b> - The Estero Municipal Improvement District (EMID) stores 20 MG of water, which is more than adequate to meet fire and domestic water demands of the City. City will be pursuing alternative water supplies in response to water cutbacks by SFPUC during periods of drought. The 2020 Urban Water Management Plan to be completed by June 30, 2021. This includes identified projects such as:</p> <ul style="list-style-type: none"> <li>S-A-3-a Water Supply and Delivery for Firefighting</li> <li>S-A-3-b - Water Supply</li> </ul> <p><u>Hazards Mitigated:</u> Climate Change, Earthquake, Severe Weather/Extreme Weather, Flood, Drought, Sea Level Rise</p>						
New & Existing	1, 6, 7, 8	Foster City	EMID	Medium	Staff Time, General Fund, Grant Funding	Long-Term



Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<p><b>Action FOS 8</b> - Ensure that potable water supply system including but not limited to; water tanks, transmission mains and booster pump stations are assessed, designed, and constructed to meet current seismic codes (ref CIP 660). This includes identified projects such as:</p> <ul style="list-style-type: none"> <li>• S-A-3-c Water Delivery System</li> <li>• S-A-3-d Water Booster Pump Station Seismic Retrofit</li> <li>• S-A-3-e Potable Water Tank Seismic Evaluation Retrofit</li> <li>• S-A-3-f Water Transmission Main Evaluation</li> <li>• S-A-3-g Water System Pressure Reducing Station Evaluation</li> </ul> <p><u>Hazards Mitigated:</u> Earthquake, Drought</p>						
New & Existing	1, 5, 6, 7, 8	Foster City	City of San Mateo	Medium	Staff Time, General Fund, Grant Funding	Short-Term
<p><b>Action FOS 9</b> - Wastewater Treatment Plant Improvements - The WWTP Improvements project (CIP 652) will replace the facility's aging infrastructure and meet regulatory requirements (S-A-4-a).</p> <p><u>Hazards Mitigated:</u> Earthquake</p>						
New & Existing	1, 5, 6, 7, 8	Foster City		Low	Staff Time, General Fund	Short-Term
<p><b>Action FOS 10</b> - Maintain and improve the City's main wastewater system to ensure improved reliability, durability, redundancy and sustainability through preventative maintenance and upgrades. This includes identified projects such as:</p> <ul style="list-style-type: none"> <li>• S-A-4-b Lift Station #59 Improvements</li> <li>• S-A-4-c Evaluation/Replacement of Air Release Valves on Wastewater Line between Lift Station #59 and WWTP</li> <li>• S-A-4-d Wastewater Lift Stations Rehabilitation</li> </ul> <p><u>Hazards Mitigated:</u> Earthquake, Flood, Drought</p>						
New & Existing	1, 5, 6, 7, 8	Foster City		Medium	Staff Time, General Fund, Grant Funding	Short-Term
<p><b>Action FOS 11</b> - Maintain and update the City's Emergency Operations Plan including outlining of responsibilities and procedures for responding to emergencies through participation in general mutual-aid and other agreements with adjoining jurisdictions for cooperative response to fires, floods, earthquakes, and other disasters. Also, use established procedures and programs of ongoing training, and regular exercising of the City's Emergency Operations Plan, and mutual aid agreements. This includes identified projects such as:</p> <ul style="list-style-type: none"> <li>• S-B-1-a Emergency Response</li> <li>• S-B-1-b Emergency Plan</li> <li>• S-B-1-c Mutual Aid</li> <li>• S-C-6-a Post-Disaster Services.</li> </ul> <p><u>Hazards Mitigated:</u> Climate Change, Dam Failure, Earthquake, Severe Weather/Extreme Weather, Flood, Drought, Tsunami, Sea Level Rise</p>						
New & Existing	1, 3, 4, 5, 6, 7, 8, 9, 10	Foster City	SMCFire	Medium	Staff Time, General Fund	Short-Term
<p><b>Action FOS 12</b> - Police Services - The City will provide adequate personnel, training, and equipment to support the provision of police services for continuity of operations (S-B-1-d).</p> <p><u>Hazards Mitigated:</u> Earthquake, Severe Weather/Extreme Weather</p>						
New & Existing	1, 3, 5, 6, 7, 8, 9, 11	Foster City		Low	Staff Time, General Fund	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<p><b>Action FOS 13-</b> Maintain the City’s Emergency Operations Center in a full functional state of readiness and designate a back-up Emergency Operations Center with redundant communications systems. This includes identified projects such as:</p> <ul style="list-style-type: none"> <li>• S-B-2-a Emergency Operations Center</li> <li>• S-B-2-b Back-up Emergency Operations Center</li> <li>• Develop and implement MAC policy and procedures with other SMCFire JPA cities</li> </ul> <p><u>Hazards Mitigated:</u> Climate Change, Dam Failure, Earthquake, Severe Weather/Extreme Weather, Flood, Drought, Tsunami, Sea Level Rise</p>						
New & Existing	1, 5, 6, 7, 8,10	Foster City	SMCFire	Medium	Staff Time, General Fund, Grant Funding	Ongoing
<p><b>Action FOS 14 –</b> Maintain Inventory of Critical Parts for Water and Wastewater Systems – The City to prepare for emergencies will maintain an inventory of critical spare parts (e.g., valves, pumps, pipelines of critical size) at the City’s facility/facilities (S-B-2-e).</p> <p><u>Hazards Mitigated:</u> Climate Change, Earthquake, Severe Weather/Extreme Weather, Flood, Drought, Tsunami, Sea Level Rise</p>						
New & Existing	1, 5, 6, 7, 8	Foster City	City of San Mateo	Medium	Staff Time, General Fund, Grant Funding	Ongoing
<p><b>Action FOS 15-</b> Incorporate Sea Level Rise Consideration into Planning Process- Incorporate consideration of sea level rise into the development review and infrastructure planning processes, including response strategies that increase resilience to mid-century sea level rise risks for both new and existing development (S-C-1-a).</p> <p><u>Hazards Mitigated:</u> Climate Change, Flood, Sea Level Rise</p>						
New & Existing	1, 3, 5, 6, 7, 8, 11	Foster City		Medium	Staff Time, General Fund	Short-Term
<p><b>Action FOS 16-</b> The City will require site specific geotechnical and engineering reports for new structures and maintain a geotechnical report library. This includes identified projects such as:</p> <ul style="list-style-type: none"> <li>• S-C-2-b Site Specific Geotechnical Analyses</li> <li>• S-D-2-a Geotechnical Reports Library</li> </ul> <p><u>Hazards Mitigated:</u> Earthquake</p>						
New & Existing	1, 5, 6	Foster City		Medium	Staff Time, General Fund	Short-Term
<p><b>Action FOS 17 -</b> Flood Plain Regulations. The City will evaluate any proposed development within special flood hazard areas for conformance with the City’s flood plain regulations as contained in Chapter 15.36 of the Foster City Municipal Code (S-C-3-a)</p> <p><u>Hazards Mitigated:</u> Climate Change, Severe Weather/Extreme Weather, Flood, Sea Level Rise</p>						
New & Existing	1, 5, 6, 7, 8,9	Foster City	FSLRRD	Medium	Staff Time, General Fund, Grant Funding	Ongoing
<p><b>Action FOS 18 -</b> Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements (S-C-3-b):</p> <ul style="list-style-type: none"> <li>• Enforce 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> <p><u>Hazards Mitigated:</u> Climate Change, Earthquake, Severe Weather/Extreme Weather, Flood, Tsunami, Sea Level Rise</p>						
New & Existing	1, 6, 7,8	Foster City	FSLRRD	Low	Staff Time, General Fund, Grant Funding	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action FOS 19</b> - Protect Flood Protection Qualities of Natural Areas. The City will protect and preserve natural features such as wetlands that serve as natural mitigation against the impacts of flooding (S-C-3-c).						
<u>Hazards Mitigated:</u> Climate Change, Flood, Drought, Tsunami, Sea Level Rise						
New & Existing	1, 5, 6, 7, 8, 9, 14	Foster City		Medium	Staff Time, General Fund, Grant Funding	Ongoing
<b>Action FOS 20</b> —Through the City's Joint Powers Authority Fire/Rescue provider, the San Mateo Consolidated Fire Department, adopt the most current uniform codes and local regulations, conduct annual inspections of businesses and multi-family dwellings to ensure compliance with fire/life safety and hazardous materials requirements, with inspections of residential care facilities done as requested by of the Department of Social Services. This includes identified projects such as:						
<ul style="list-style-type: none"> <li>• S-C-4-a Development Review for Fire Safety</li> <li>• S-C-4-b Annual Inspections for Fire Safety and Hazardous Materials</li> <li>• S-C-4-c Fire Sprinklers</li> <li>• S-C-5-a Hazardous Materials</li> <li>• S-D-3-a Fire Education/Prevention</li> </ul>						
<u>Hazards Mitigated:</u> Earthquake						
New & Existing	1, 3, 5, 6, 7, 8, 9	Foster City	SMCFire	Low	Staff Time, JPA Budget	Ongoing
<b>Action FOS 21</b> - Utilize available means to educate the public, including schools, businesses, and community groups, about emergency preparedness, including but not limited to the City's website, media, classes, and special events. This includes identified projects such as:						
<ul style="list-style-type: none"> <li>• S-D-1-a CERT Classes</li> <li>• S-D-1-b Emergency Preparedness Education and Outreach</li> <li>• S-D-2-b Seismic Safety Education</li> <li>• S-E-1-a Community Events.</li> <li>• S-E-1-b Cross-Cultural Events</li> <li>• S-D-2-d Private Utility Lines at Bridges. (Outreach to homeowner associations to educate them about the need for earthquake-resistant flexible connections when pipes enter and exit the bridges.)</li> </ul>						
<u>Hazards Mitigated:</u> Climate Change, Earthquake, Severe Weather/Extreme Weather, Flood, Drought, Tsunami, Sea Level Rise						
New & Existing	1, 3, 5, 6, 7, 8, 9, 11	Foster City	SMCFire	High	Staff Time, General Fund, JPA Budget	Ongoing
<b>Action FOS 22</b> - Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including Foster City's General Plan.						
<u>Hazards Mitigated:</u> Hazards Mitigated: Climate Change, Dam Failure, Earthquake, Severe Weather/Extreme Weather, Flood, Drought, Tsunami, Sea Level Rise						
New & Existing	1, 3, 5, 6, 7, 8, 9, 10, 11	Foster City	SMCFire	High	Staff Time, General Fund	Ongoing
<b>Action FOS 23</b> - Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<u>Hazards Mitigated:</u> Climate Change, Dam Failure, Earthquake, Severe Weather/Extreme Weather, Flood, Drought, Tsunami, Sea Level Rise						
New & Existing	1, 5, 6, 7, 8, 10, 11	Foster City	SMCFire	Low	Staff Time, General Fund	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action FOS 24</b> - Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following:						
<ul style="list-style-type: none"> <li>• Conduct Climate Action Plan (CAP) Assessment to reevaluate previous 2015 Climate Action Plan (CAP) to build off of and initiate update of CAP to reflect new State legislation, changing priorities, and environmental sustainability and greenhouse gas (GHG) reduction policies and goals</li> <li>• Adopt modifications to existing plans and procedures to meet climate change issues and impacts.</li> </ul>						
<u>Hazards Mitigated:</u> Climate Change, Sea Level Rise						
New & Existing	1, 3, 5, 6, 7, 8, 9,14	Foster City		Low	Staff Time, General Fund	Short-Term
<b>Action FOS 25</b> – Evacuation Planning - Adopt current best practices for evacuation procedures and public education.						
<u>Hazards Mitigated:</u> Earthquake						
New	1, 3, 5, 6, 7, 8, 11	Foster City	SMCFire	Medium	Staff Time, General Fund	Short-Term/Ongoing
<b>Action FOS 26</b> - Community Engagement Platform – The City has identified a need for community engagement on various items of public interest to solicit feedback, including but not limited to projects for infrastructure to mitigate hazards. The platform would also help communicate and update stakeholders in these projects and development.						
<u>Hazards Mitigated:</u> Climate Change, Earthquake, Severe Weather/Extreme Weather, Flood, Drought, Tsunami						
New	1, 3, 5, 6, 7, 8, 9,11	Foster City		High	Staff Time, General Fund, Grant Funding	Short-Term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

**Table 9-15. Mitigation Action Priority**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Eligible for Outside Funding?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Outside Funding Source Pursuit Priority <sup>a</sup>	Social Equity Priority
1	5	High	Medium	Yes	Yes	No	Medium	High	High
2	5	High	High	Yes	Yes	No	Medium	High	Low
3	4	Medium	Low	Yes	No	Yes	Medium	Low	High
4	4	High	Low	Yes	No	Yes	Medium	Low	High
5	4	Medium	Low	Yes	Yes	Yes	High	Medium	High
6	4	Medium	Medium	Yes	Yes	Yes	Medium	Medium	High
7	4	High	Medium	Yes	Yes	Yes	Medium	Medium	High
8	5	High	Medium	Yes	Yes	Yes	Medium	Medium	High
9	5	High	Low	Yes	No	Yes	High	Low	High
10	5	High	Medium	Yes	Yes	Yes	Medium	Medium	High
11	9	Medium	Medium	Yes	Yes	Yes	High	Medium	High
12	8	Medium	Low	Yes	No	Yes	High	Low	High
13	6	Medium	Medium	Yes	Yes	Yes	Medium	Medium	Low
14	5	Medium	Medium	Yes	Yes	Yes	Medium	Medium	High
15	7	Medium	Medium	Yes	No	Yes	Medium	Low	High
16	3	Medium	Medium	Yes	No	Yes	High	Low	High

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Eligible for Outside Funding?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Outside Funding Source Priority <sup>a</sup>	Social Equity Priority
17	6	Medium	Medium	Yes	Yes	Yes	High	Medium	High
18	4	Medium	Medium	Yes	Yes	Yes	High	Medium	High
19	7	Medium	Medium	Yes	Yes	Yes	High	Medium	High
20	7	High	Low	Yes	No	Yes	Medium	Low	High
21	8	Medium	High	No	No	No	Medium	Medium	High
22	9	High	Low	Yes	No	Yes	Medium	Low	Low
23	7	Medium	Low	Yes	No	Yes	Medium	Low	Low
24	8	Medium	Low	Yes	No	Yes	Medium	Low	High
25	7	High	Medium	Yes	No	Yes	High	Low	High
26	8	High	High	Yes	Yes	No	Medium	High	High

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

**Table 9-16. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
<b>High-Risk Hazards</b>								
Sea Level Rise / Climate Change	2, 7, 11, 15, 17, 18, 19, 22, 23	1, 2, 5, 6, 13, 14, 18, 19	26	5, 14, 17, 18, 19, 24	1, 2, 7, 11, 13	2, 5, 6	1, 5, 15, 24	16, 21, 26
<b>High-Risk Hazards</b>								
Dam Failure	11, 22, 23	13			11,13			
Earthquake	2, 7, 8, 11, 16, 18, 20, 22, 23	1, 2, 3, 4, 5, 6, 9, 10, 13, 14, 18, 20	20, 21, 25, 26	5, 14, 18	1, 2, 7, 8, 11, 12, 13, 25	2, 3, 4, 5, 6, 9,10	1, 5	21, 26
Flood	1, 2, 7, 11, 15, 16, 17, 18, 19, 22, 23	1, 2, 3, 5, 6, 10, 13, 14, 18, 19	21, 26	5, 14, 17, 18, 19	1, 2, 7, 11, 13	2, 3, 5, 6, 10	1, 5, 15	15, 21, 26
<b>Medium-Risk Hazards</b>								
Severe Weather/ Extreme Weather	2, 7, 11, 17, 18, 22,23	1, 2, 5, 6, 13, 14,18	21, 26	5, 14, 17, 18	1, 2, 7, 11, 12, 13	2, 5, 6	1, 5	21,26
<b>Low-Risk Hazards</b>								
Drought	7, 8, 11, 19, 22	10, 13, 14, 19	21,25	14,19	7, 8, 11, 13, 25	10		21
Landslide/Mass Movement								
Tsunami	2, 11, 18, 19, 22, 23	1, 2, 3, 5, 6, 13, 14, 18, 19	21, 26	5, 14, 18, 19	1, 2, 11, 13	2, 3, 5,6	1, 5	21,26
Wildfire								

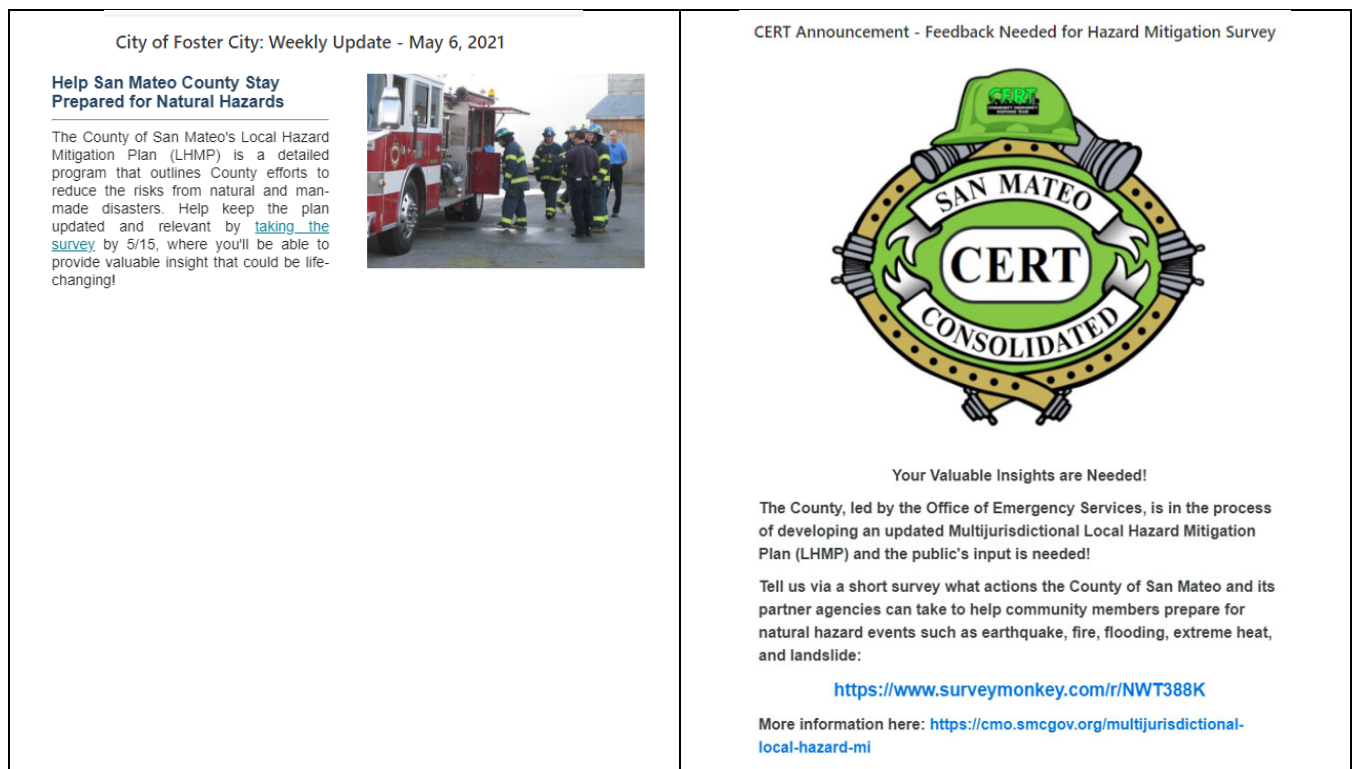
a. See the introduction to this volume for explanation of mitigation types.

## 9.9 PUBLIC OUTREACH

Table 9-17 lists public outreach activities for this jurisdiction. Figure 9-1 shows example public outreach announcements.

**Table 9-17. Local Public Outreach**

Local Outreach Activity	Date	Number of People Involved
Distribution of Survey #1 Via City Newsletter and Social Media Platforms	May 6, 2021	94
Distribution of CERT Survey Via Neon	June 11, 2021	62



**Figure 9-1. Public Outreach Announcements**

## 9.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **Foster City Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration. Flood damage prevention ordinance is included in Muni Code.
- **Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.

- **City Budget** – The budget was reviewed for funding of action items and assisted with prioritization setting.
- **City Mutual Aid Agreements** – Foster City Mutual Aid Agreements were used to assess capacity.
- **City’s Emergency Operations Plan** – The City’s EOP was used when doing the assessment of action items.
- **Previous City’s LHMP** – The prior LHMP was reviewed when creating this document.
- **City’s General Plan** – The City’s General Plan was reviewed during this process for prioritization and mitigation action item building.
- **City’s Climate Action Plan** – The City’s CAP was used in the mitigation action building phase as well as to assess the City’s climate action assessment (see Table 9-10).

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- **Various San Mateo County Plans and Resources** – Resources provided from the County, including previous plans, data sources, etc. were used in analyzing and preparing this document.
- **California DWR Dam Inundation Map** – This resource was used to demonstrate to planning partners how dam inundation for the respective City appears.

## 9.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

An analysis of risks including but not limited to flood and dam inundation need to be adjusted for local infrastructure (pumping abilities) for a more accurate risk assessment.

Foster City based on local knowledge does not have a previous history of flooding from prior storm events. There are systems with multiple redundancies in place for this risk.

South San Francisco

# Foster City

## Critical Facilities, 1 of 2

Foster City

Redwood City

Menlo Park

San Mateo

Belmont

San Carlos

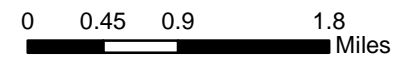
92

101

82

- Food, Water, Shelter
- Health and Medical
- Safety and Security
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary
- Highways

Data Sources: ESRI Basemap, San Mateo Co., DHS HIFLD





South San Francisco

# Foster City

## Critical Facilities, 2 of 2

- Communications
- Energy
- Hazardous Materials
- Transportation
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary
- Highways

Foster City

San Mateo

92

101

82

Belmont

San Carlos

Redwood City

Menlo Park

Data Sources: ESRI Basemap, San Mateo Co., DHS HIFLD









0 0.45 0.9 1.8 Miles



South San Francisco

# Foster City

## Dam Failure Inundation Area Used for Risk Assessment

-  Inundation Area
-  Dam
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Foster City

San Mateo

92

Redwood City

Belmont

82

101

San Carlos

Menlo Park

Data Sources: ESRI Basemap, San Mateo Co., CA DWR










0 0.45 0.9 1.8 Miles



South San Francisco

# Foster City

## NEHRP Soil Class

-  C (Dense soil/soft rock)
-  D (Stiff soil)
-  E (Soft clay)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Foster City

San Mateo

92

101

82

Belmont

San Carlos

Redwood City

Menlo Park

Data Sources: ESRI Basemap, San Mateo Co., CGS



0 0.45 0.9 1.8 Miles

South San Francisco

# Foster City

## Liquefaction Susceptibility

- Very Low
- Low
- Moderate
- High
- Very High
- Selected City
- Incorporated Cities
- County Boundary
- Highways

Data Sources: ESRI Basemap, San Mateo Co., ABAG (USGS)



0 0.45 0.9 1.8 Miles

Foster City

San Mateo 92

101

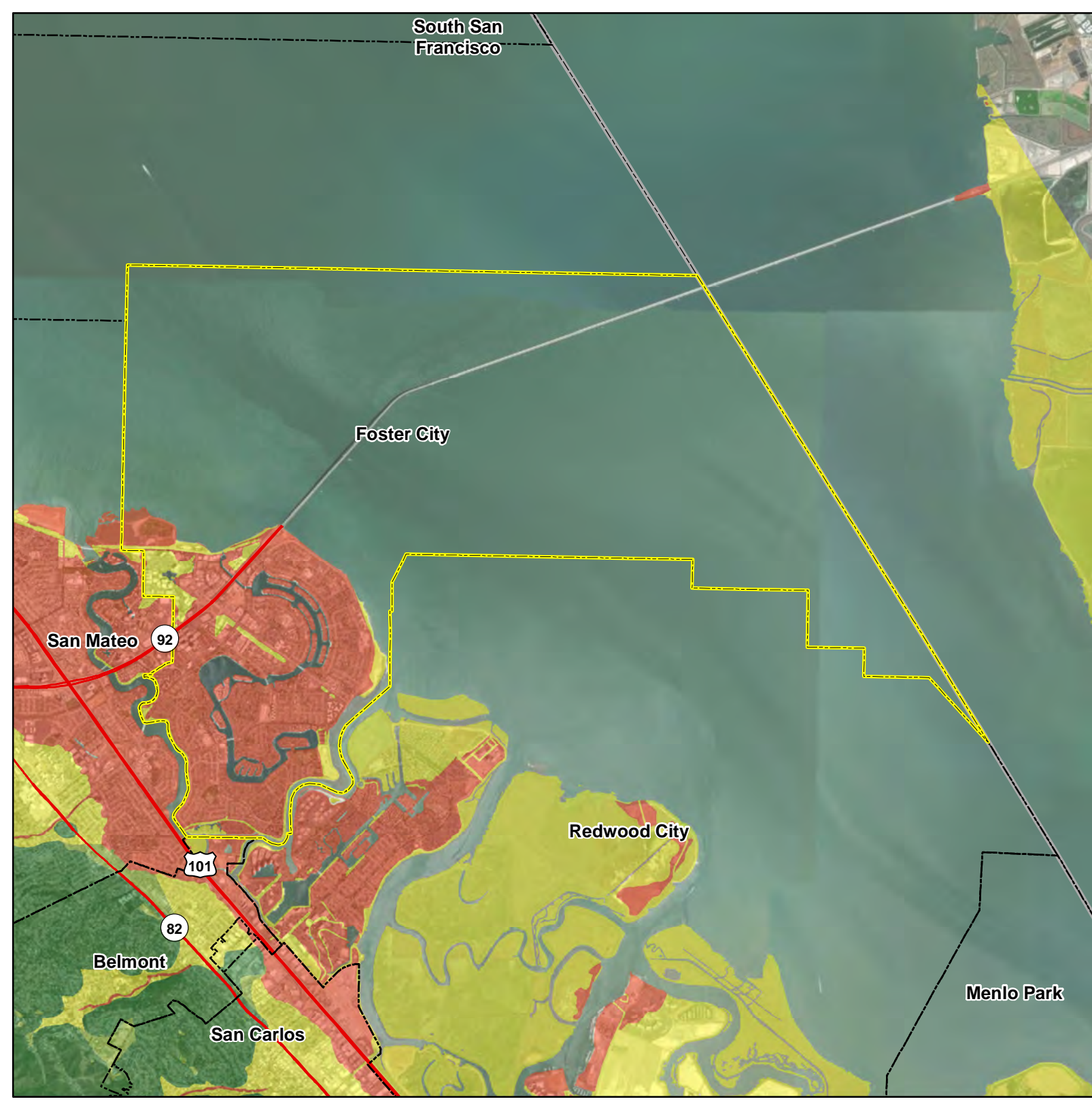
82

Belmont

San Carlos

Redwood City

Menlo Park



South San Francisco

# Foster City

## Butano M6.93 Earthquake Scenario

### Mercalli Intensity Scale

- V (Moderate/Very Light)
- VI (Strong/Light)
- VII (Very Strong/Moderate)
- Selected City
- Incorporated Cities
- County Boundary
- Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



0 0.45 0.9 1.8 Miles

Foster City

Redwood City

Menlo Park

San Mateo

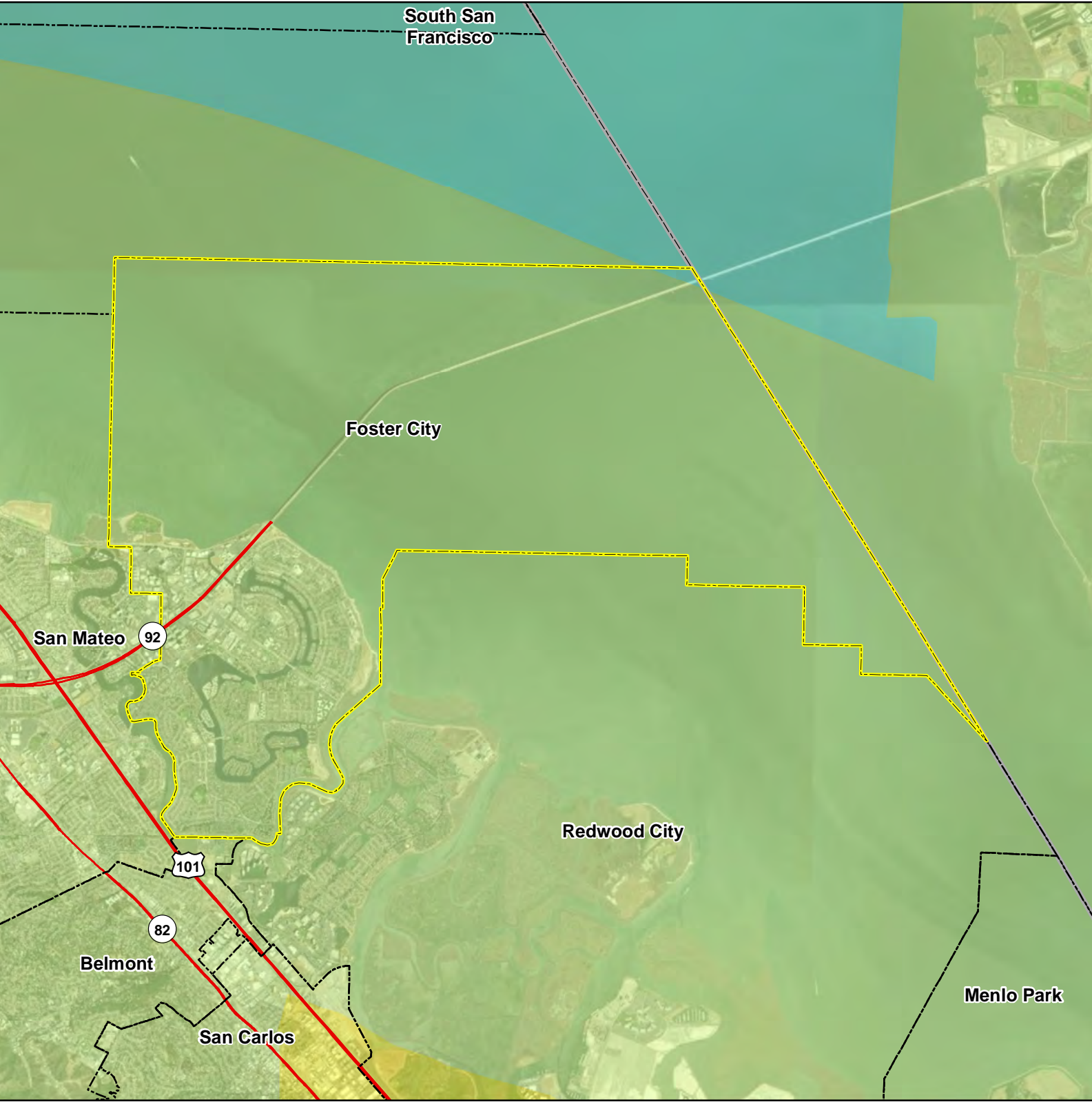
92

101

82

Belmont

San Carlos



South San Francisco

# Foster City

## Monte Vista Shannon M7.14 Earthquake Scenario

### Mercalli Intensity Scale

- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- Selected City
- Incorporated Cities
- County Boundary
- Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap, San Mateo Co., USGS



0 0.45 0.9 1.8 Miles

Foster City

Redwood City

Menlo Park

San Mateo

92

101

82

Belmont

San Carlos

South San Francisco

# Foster City

## 100-Year Probabilistic Earthquake Scenario

### Mercalli Intensity Scale

-  VII (Very Strong/Moderate)
-  VIII (Severe/Moderate-Heavy)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



0 0.45 0.9 1.8 Miles

Foster City

San Mateo

92

101

82

Belmont

San Carlos

Redwood City

Menlo Park

South San  
Francisco

# Foster City

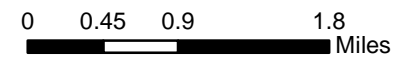
## San Andreas Peninsula M7.38 Earthquake Scenario

### Mercalli Intensity Scale

- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- Selected City
- Incorporated Cities
- County Boundary
- Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



Foster City

Redwood City

Menlo Park

San Mateo

Belmont

San Carlos

92

101

82



South San Francisco

# Foster City

## San Gregorio North M7.44 Earthquake Scenario

### Mercalli Intensity Scale

VI (Strong/Light)

VII (Very Strong/Moderate)

Selected City

Incorporated Cities

County Boundary

Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



0 0.45 0.9 1.8 Miles

Foster City

San Mateo

92

Redwood City

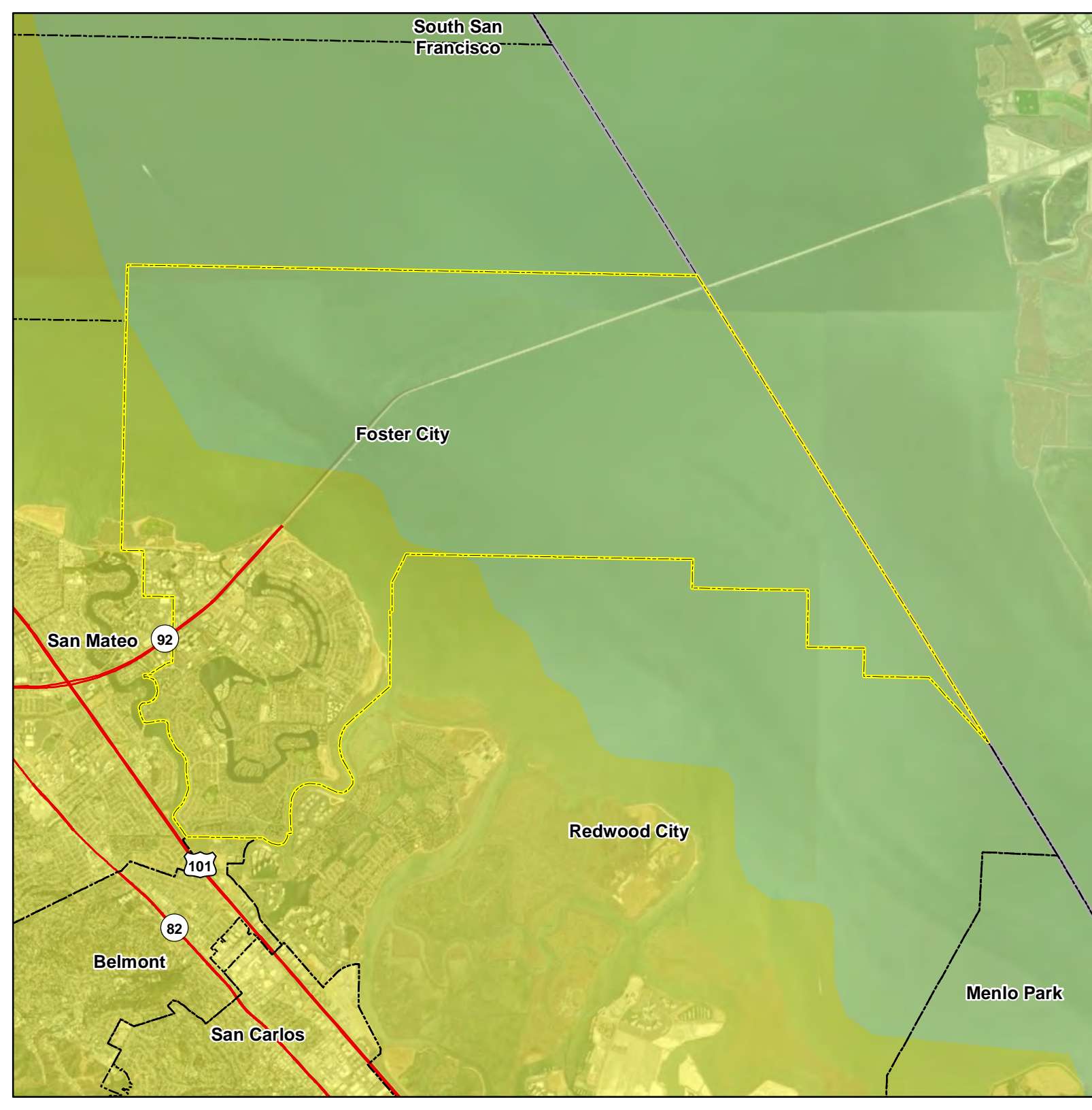
101

Belmont

82

San Carlos







Menlo Park



South San Francisco

# Foster City

## FEMA Flood Hazard Areas

-  1% Annual Chance Flood (100-Year)
-  0.2% Annual Chance Flood (500-Year)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Foster City

San Mateo

92

Redwood City

101

Belmont

82

San Carlos

Menlo Park

Data Sources: ESRI Basemap, San Mateo Co., FEMA



0 0.45 0.9 1.8 Miles



South San Francisco

# Foster City

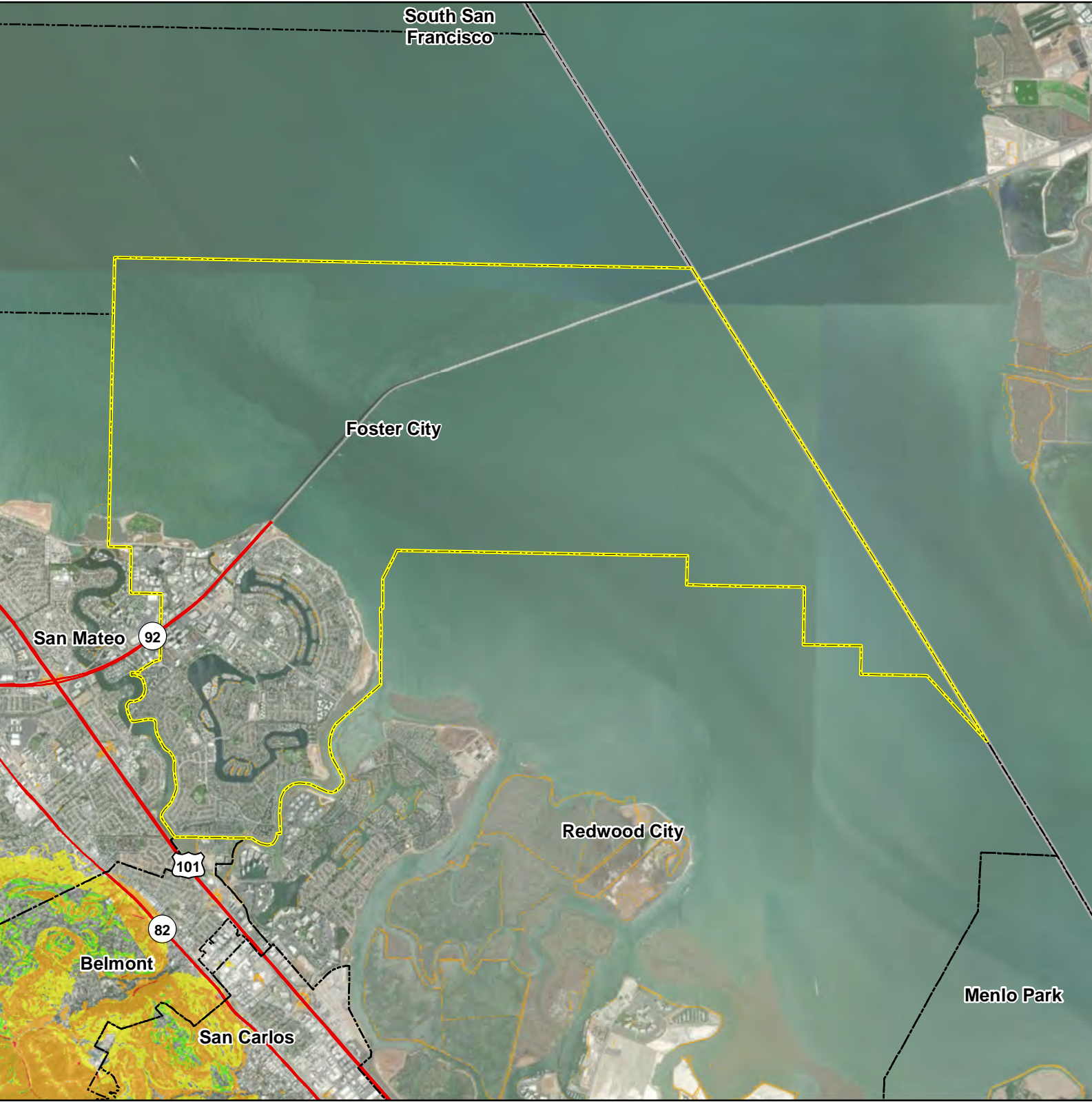
## Susceptibility to Deep-Seated Landslides

- Low
- Moderate
- High
- Very High
- Selected City
- Incorporated Cities
- County Boundary
- Highways

Data Sources: ESRI Basemap, San Mateo Co., CGS








0 0.45 0.9 1.8 Miles



South San Francisco

# Foster City

## Sea Level Rise

-  Inundation Area
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Inundation areas are a combination of Our Coast Our Future 200cm (6.6 feet) of SLR with 100-year storm for the Pacific Ocean coastline, and Adapting to Rising Tides 108 inches (9 feet) of SLR for the San Francisco Bay coastline.

Data Sources: ESRI Basemap, San Mateo Co., ART, OCOF








0 0.45 0.9 1.8 Miles



South San  
Francisco

# Foster City

## Tsunami Hazard Areas

-  Hazard Areas
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Foster City

San Mateo

92

Redwood City

101

Belmont

82

San Carlos

Menlo Park

Data Sources: ESRI Basemap,  
San Mateo Co., CGS










0 0.45 0.9 1.8  
Miles

South San Francisco

# Foster City

## Wildfire Hazard Severity Zones

-  Moderate
-  High
-  Very High
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Foster City

San Mateo

92

Redwood City

101

Belmont

82

San Carlos

Menlo Park

Data Sources: ESRI Basemap, San Mateo Co., CAL FIRE



0 0.45 0.9 1.8 Miles



# 10. CITY OF HALF MOON BAY

## 10.1 LOCAL HAZARD MITIGATION PLANNING TEAM

### Primary Point of Contact

Corie Stocker, Management Analyst  
501 Main Street  
Half Moon Bay, CA 94404  
650-750-2002  
cstocker@hmcity.com

### Alternate Point of Contact

Veronika Vostinak, Sustainability Analyst  
501 Main Street  
Half Moon Bay, CA 94404  
650-750-2019  
vvostinak@hmcity.com

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 10-1.

**Table 10-1. Local Mitigation Planning Team Members**

Name	Title
Corie Stocker	Management Analyst
Veronika Vostinak	Sustainability Analyst
Matthew Chidester	Deputy City Manager
Brittney Cozzolino	Associate Planner
Jill Ekas	Community Development Director
John Doughty	Public Works Director
Lisa Lopez	Administrative Services Director

## 10.2 JURISDICTION PROFILE

### 10.2.1 Location and Features

The City of Half Moon Bay is a small city in San Mateo County, California. The City is 6.2 square miles in area and is approximately 6.5 miles long and a little less than a mile wide. It is located on the Pacific Coast 23 miles south of San Francisco. The developed portion of the City is located on relative flat land between coastal bluff tops to the west and foothills of the Santa Cruz Mountains to the east. State Route 1 provides the only contiguous access from north to south; State Route 92 provides access to the east side of the San Francisco Peninsula.

Half Moon Bay’s 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 26 inches, with 80% between November to March. The average year-round temperature is 59°F. Humidity averages 57 to 100 percent. Winds speeds vary from 0 to 19 mph (calm breeze) and rarely exceed 23 mph (fresh breeze).

## 10.2.2 History

The Planning Area is in a region historically occupied by the tribelets of the Costanoan linguistic group. Descendants of Costanoan speakers prefer to be called by the name of the tribelet from which they are descended. When their heritage is mixed or the specifics have been lost over generations, they prefer the use of a native term, Ohlone, rather than the European-imposed term Costanoan (“coastal dwellers”). The rich resources of the ocean, bays, valleys, and mountains in the region provided Ohlone-speaking peoples with food and all their material needs. The primary food staple was the acorn, supplemented by a great variety of animal and plant resources.

The Ohlones were composed of 50 or more tribes in the southern San Francisco Bay Region, ten of which were situated along the peninsula. The Portola Expedition, set out to claim land for Spanish territory, encountered several Ohlone villages after their arrival in the late 1760’s, including the Chinguan village in today’s Half Moon Bay. Spanish explorer records indicate that the Spanish received meals, directions, and guidance from the Ohlones leading up to the 1769 ascent up Sweeney Ridge. This marked the point of Spanish discovery and settlement of the San Francisco Bay. When Mexico won its independence from the Spanish crown in 1821, California fell under rule of Mexican territorial governors who granted much of the former Spanish mission lands to Mexican subjects. These land grants effectively displaced the Ohlones, ignoring any of their remaining territorial rights.

The early community became known as “Spanishtown” because of the number of Spanish-speaking inhabitants. In 1874, Spanishtown officially became known as Half Moon Bay, named for the beautiful crescent-shaped harbor that lies just north of town. The City of Half Moon Bay was incorporated in 1959. The City of Half Moon Bay still has many reminders of its early beginnings in the mid-1800s as an agricultural town.

## 10.2.3 Governing Body Format

The City of Half Moon Bay is a General Law City with a council-manager form of governance. A five-member City Council establishes policy and provides direction for all City operations; while the City Manager serves as the chief executive officer for implementation and the day-to-day provision of services. The City Planning Commission has final authority under the Municipal Code and otherwise is advisory to City Council. The Parks and Recreation Commissions advisory to the City Council. From time to time, the City Council establishes task forces and advisory committees that focus on plans and projects. The City consists of five departments: The City Manager’s Office, the Communication/City Clerk’s Office, Administrative Services, Public Works, and Community Development. The City contracts with the San Mateo County Sheriff’s Office for police services. The City is served by the Coastside Fire Protection District, the Coastside County Water District, and participates in the Sewer Authority Mid-Coastside Joint Powers Authority. Services such as library, senior services and animal control are supported by the City; however, day-to-day operations are the responsibility of the respective agencies and non-profits.

The City Council is responsible for the adoption of the Half Moon Bay Annex of the Local Hazard Mitigation Plan (Plan), and the City Manager will oversee its implementation.



## 10.3 CURRENT TRENDS

### 10.3.1 Population

According to the California Department of Finance the population of Half Moon Bay as of January 2020 was 12,431. Since 2016, the population has decreased at an average annual rate of 0.2 percent.

### 10.3.2 Development

Half Moon Bay's development pattern is largely characterized by a defined town center, alternating residential and agricultural land uses outside of the town center, and public open space and recreation lands along the shoreline. Development is primarily comprised of infill residential, small-scale commercial, and town center mixed-use projects. Residential development is paced by a voter-adopted growth control measure that provides for an annual residential growth rate of 1-1.5%, while commercial projects typically involve changing uses within existing buildings or new small-scale projects in town center infill sites. In recent years, City Council priorities have led to incentivizing development in the town center and established neighborhoods where public infrastructure and services exist. Since 2016, the City has averaged approximately fifteen (15) building permits issued per year for new construction, the majority of which are for new single-family residences.

Table 10-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

**Table 10-2. Recent and Expected Future Development Trends**

Criterion	Response					
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan? <i>If yes, give the estimated area annexed and estimated number of parcels or structures.</i>	No					
Is your jurisdiction expected to annex any areas during the performance period of this plan? <i>If yes, describe land areas and dominant uses. If yes, who currently has permitting authority over these areas?</i>	No					
Are any areas targeted for development or major redevelopment in the next five years? <i>If yes, briefly describe, including whether any of the areas are in known hazard risk areas</i>	Yes					
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?	2016	2017	2018	2019	2020	
Single Family	10	24	11	5	15	
Multi-Family	0	0	0	1	0	
Other (commercial, mixed use, etc.)	6	3	0	1	0	
<b>Total</b>	<b>16</b>	<b>27</b>	<b>11</b>	<b>7</b>	<b>15</b>	

Criterion	Response
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	<ul style="list-style-type: none"> <li>• Special Flood Hazard Areas: 8</li> <li>• Landslide: 0</li> <li>• High Liquefaction Areas: 0</li> <li>• Tsunami Inundation Area: 4</li> <li>• Wildfire Risk Areas: 0</li> </ul>
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.	Approximately 2,600 acres out of Half Moon Bay’s total of 3,990 acres (or about 65% of the city) are occupied by open space, park land, golf course, open field agriculture, and public right-of-way (streets, easements). Of the remaining potentially buildable lands with residential, non-residential, and mixed-use zoning, there are approximately 375 vacant/undeveloped acres (or about 9% of the city).

## 10.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

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

Table 10-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Codes, Ordinances, &amp; Requirements</b>				
<b>Building Code</b> <i>Comment: Muni Code 14.04.020 , 2019</i>	Yes	No	Yes	Yes
<b>Zoning Code</b> <i>Comment: Muni Code 18, 1996</i>	Yes	Yes	Yes	Yes
<b>Subdivisions</b> <i>Comment: Muni Code 17, 1994</i>	Yes	Yes	Yes	Yes
<b>Stormwater Management</b> <i>Comment: Muni Code 13.15, 1994 LUP Chapter 6, 2020</i>	Yes	Yes	Yes	Yes
<b>Post-Disaster Recovery</b> <i>Comment: Emergency Operations Plan, 2017; Muni Code 2.25, 2007</i>	Yes	Yes	Yes	Yes
<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. LUP Chapter 7, 2020</i>	Yes	No	Yes	Yes
<b>Growth Management</b> <i>Comment: Muni Code 14.38, 1989 Muni Code 17.06, 2009</i>	Yes	No	No	No
<b>Site Plan Review</b> <i>Comment: Muni Code 18, 1996</i>	Yes	No	No	Yes
<b>Environmental Protection</b> <i>Comment: CEQA Muni Code 18.38, 1996 LUP Chapter 6, 2020</i>	Yes	Yes	Yes	Yes
<b>Flood Damage Prevention</b> <i>Comment: Muni Code 14.34, 2002</i>	Yes	No	Yes	Yes
<b>Emergency Management</b> <i>Comment: Emergency Operations Plan, 2017; Muni Code 2.25, 2007</i>	Yes	Yes	Yes	Yes
<b>Climate Change</b> <i>Comment:</i>	No	Yes	Yes	No
<b>Other</b> <i>Comment:</i>	N/A	N/A	N/A	No
<b>Planning Documents</b>				
<b>General Plan</b>  <i>Is the plan compliant with Assembly Bill 2140? No Comment: Land Use Element update completed 2020. Safety Element update pending.</i>	Yes Update Pending	Yes	Yes	Yes
<b>Capital Improvement Plan</b> <i>How often is the plan updated? Annually Comment: <a href="https://www.half-moon-bay.ca.us/DocumentCenter/View/1758/CURRENT-CIP?bidId=">https://www.half-moon-bay.ca.us/DocumentCenter/View/1758/CURRENT-CIP?bidId=</a> New CIP will be published in July 2021 (will use same link)</i>	Yes	No	No	Yes
<b>Disaster Debris Management Plan</b> <i>Comment: San Mateo County Plan</i>	Yes	Yes	Yes	Yes
<b>Floodplain or Watershed Plan</b> <i>Comment: <a href="#">Storm Drain Master Plan (2016)</a></i>	Yes	No	Yes	Yes

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Stormwater Plan</b> <i>Comment: Storm Drain Master Plan (2016), Green Infrastructure Plan 2019</i>	Yes	No	No	Yes
<b>Urban Water Management Plan</b> <i>Comment: 2020 UWMP pending adoption by Coastside County Water District in 2021</i>	No	Yes	Yes	No
<b>Habitat Conservation Plan</b> <i>Comment:</i>	No	No	No	No
<b>Economic Development Plan</b> <i>Comment: In progress</i>	No	No	No	Future
<b>Shoreline Management Plan</b> <i>Comment:</i>	No	No	No	No
<b>Community Wildfire Protection Plan</b> <i>Comment:</i>	No	No	No	No
<b>Forest Management Plan</b> <i>Comment:</i>	No	No	No	No
<b>Climate Action Plan</b> <i>Comment: Draft Summer 2021, pending adoption winter 2021-22</i>	Yes	No	No	No
<b>Emergency Operations Plan</b> <i>Comment: Emergency Operations Plan, 2017</i>	Yes	No	No	Yes
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b> <i>Comment: Emergency Operations Plan, 2017</i>	Yes	No	No	Yes
<b>Post-Disaster Recovery Plan</b> <i>Comment: In progress</i>	No	No	No	Future
<b>Continuity of Operations Plan</b> <i>Comment: In progress</i>	No	No	No	Future
<b>Public Health Plan</b> <i>Comment: San Mateo County</i>	Yes	No	No	No
<b>Other</b> <i>Comment:</i>	N/A	N/A	N/A	N/A

**Table 10-4. Development and Permitting Capability**

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

**Table 10-5. Fiscal Capability**

<b>Financial Resource</b>	<b>Accessible or Eligible to Use?</b>
Community Development Block Grants	Yes, eligible to use through the County
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 (only Sewers)
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	N/A

**Table 10-6. Administrative and Technical Capability**

<b>Staff/Personnel Resource</b>	<b>Available?</b>	<b>Department/Agency/Position</b>
Planners or engineers with knowledge of land development and land management practices	Yes	Community Development Director , Public Works Director, City Engineer, Senior Planner, others
Engineers or professionals trained in building or infrastructure construction practices	Yes	Building Inspector, City Engineer
Planners or engineers with an understanding of natural hazards	Yes	CDD / Community Development Director Public Works Director, Senior Planner, City Engineer
Staff with training in benefit/cost analysis	Yes	With contractors
Surveyors	Yes	With contractors
Personnel skilled or trained in GIS applications	Yes	With contractors
Scientist familiar with natural hazards in local area	Yes	With contractors
Emergency manager	Yes	Management Analyst & Deputy City Manager
Grant writers	Yes	All departments / Management Analyst
Other	Yes	With contractors

**Table 10-7. Education and Outreach Capability**

<b>Criterion</b>	<b>Response</b>
Do you have a public information officer or communications office?	Yes, Communications Department, Director is PIO
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe.</i>	Yes 2010 Multi-Jurisdictional Local Hazard Mitigation Plan, Storm and Tsunami readiness
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe.</i>	Yes We utilize email newsletters and various social media for community outreach, communication and for Storm and Tsunami readiness

Criterion	Response
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe.</i>	Yes Coastside Emergency Action Program
Do you have any other programs already in place that could be used to communicate hazard-related information? <i>If yes, briefly describe.</i>	Yes Coastside Emergency Action Program Emergency Operations Plan
Do you have any established warning systems for hazard events? <i>If yes, briefly describe.</i>	Yes San Mateo County Alert System / Tsunami Alerts Horns

**Table 10-8. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	City Engineer
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	2002
Does your floodplain management program meet or exceed minimum requirements? <i>If exceeds, in what ways?</i>	Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	May 2021
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <i>If so, state what they are.</i>	No
Are any RiskMAP projects currently underway in your jurisdiction? <i>If so, state what they are.</i>	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <i>If no, state why.</i>	Unknown There is insufficient data on coastal flood plain smaller creeks and streams
Does your floodplain management staff need any assistance or training to support its floodplain management program? <i>If so, what type of assistance/training is needed?</i>	Yes FEMA Training, Association of State Floodplain Managers Training
Does your jurisdiction participate in the Community Rating System (CRS)? <i>If yes, is your jurisdiction interested in improving its CRS Classification?</i> <i>If no, is your jurisdiction interested in joining the CRS program?</i>	No N/A No
How many flood insurance policies are in force in your jurisdiction? <sup>a</sup> <i>What is the insurance in force?</i> <i>What is the premium in force?</i>	80 \$27,080,400 \$42,629
How many total loss claims have been filed in your jurisdiction? <sup>a</sup> <i>What were the total payments for losses?</i>	8 \$56,296

<sup>a</sup>n According to FEMA statistics as of March 31, 2021

**Table 10-9. Community Classifications**

	Participating?	Classification	Date Classified
FIPS Code	Yes	0608131708	N/A
DUNS#	Yes	020005971	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection (Coastside FPD)	No	ISO Class 3/3X	May 2018
Storm Ready	Yes	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	Yes	N/A	N/A

**Table 10-10. Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
<b>Jurisdiction-level understanding of potential climate change impacts</b> <i>Comment: Climate Action and Adaptation Plan in progress</i>	Medium
<b>Jurisdiction-level monitoring of climate change impacts</b> <i>Comment:</i>	Low
<b>Technical resources to assess proposed strategies for feasibility and externalities</b> <i>Comment: Technical assistance available through County RICAPS program</i>	Medium
<b>Jurisdiction-level capacity for development of greenhouse gas emissions inventory</b> <i>Comment: Available through County RICAPS program</i>	Medium
<b>Capital planning and land use decisions informed by potential climate impacts</b> <i>Comment: Addressed in Land Use Plan, will be further addressed in Climate Action and Adaptation Plan</i>	High
<b>Participation in regional groups addressing climate risks</b> <i>Comment: Dedicated staff member actively participates in and seeks out new regional group efforts to address climate risks applicable to Half Moon Bay</i>	High
<b>Implementation Capacity</b>	
<b>Clear authority/mandate to consider climate change impacts during public decision-making processes</b> <i>Comment: City Council Priority</i>	High
<b>Identified strategies for greenhouse gas mitigation efforts</b> <i>Comment: Identified in Climate Action and Adaptation Plan draft</i>	High
<b>Identified strategies for adaptation to impacts</b> <i>Comment: To be identified in Climate Action and Adaptation Plan</i>	Medium
<b>Champions for climate action in local government departments</b> <i>Comment: Dedicated Staff member in Public Works</i>	High
<b>Political support for implementing climate change adaptation strategies</b> <i>Comment: Strong public support demonstrated in past efforts</i>	Medium
<b>Financial resources devoted to climate change adaptation</b> <i>Comment:</i>	Low
<b>Local authority over sectors likely to be negative impacted</b> <i>Comment:</i>	Low

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Public Capacity</b>	
<b>Local residents’ knowledge of and understanding of climate risk</b> <i>Comment: Ongoing, active outreach efforts with local resident groups including those who reach vulnerable populations such as non-English speakers, youth, and seniors</i>	Medium
<b>Local residents’ support of adaptation efforts</b> <i>Comment: High levels of participation and interest in past outreach and efforts</i>	High
<b>Local residents’ capacity to adapt to climate impacts</b> <i>Comment: High levels of local participation and interest in in climate impact outreach events</i>	Medium
<b>Local economy current capacity to adapt to climate impacts</b> <i>Comment:</i>	Unsure
<b>Local ecosystems capacity to adapt to climate impacts</b> <i>Comment:</i>	Unsure

a. High = Capacity exists and is in use; Medium = Capacity may exist but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

## 10.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

### 10.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **Emergency Operations Plan** — The City integrates hazard mitigation for storm and tsunami readiness, along with annexes related to other natural disasters (i.e., earthquake, all hazard)
- **Local Coastal Land Use Plan** — The City integrates hazard mitigation relative to environmental hazards including sea level rise and other shoreline hazards, geologic and seismic hazards, fire hazards, and fluvial flooding.
- **General Plan** – The City integrates hazard mitigation for all pertinent hazards in the adopted Safety Element.

### 10.5.2 Opportunities for Future Integration

The capability assessment presented in this annex identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **General Plan** — The City is currently planning to integrate hazard mitigation for all pertinent hazards in an update to the adopted Safety Element.



- **Emergency Operations Plan** — The City is currently planning to integrate the updated hazard mitigation plan. Other plans in progress include Continuity of Operations, Post Disaster recovery, etc.
- **Climate Action and Adaptation Plan** – The City is planning to integrate climate change adaptation into the Climate Action and Adaptation Plan
- **Public Outreach** – The City recognizes that there are currently opportunities available to facilitate public engagement regarding hazard mitigation. The City will continue to provide a robust and targeted program that involves using current capabilities to expand and enhance outreach to local residents.
- **Coastside Recovery Initiative-** The Coastside Recovery Initiative is a partnership between the City of Half Moon Bay, Half Moon Bay Coastside Chamber of Commerce, and San Mateo County. The goals of the Initiative are 1) to address immediate needs of business and the Coastside community to effectively recover from the impacts of COVID-19 and 2) advance strategies that lead to a more equitable, vibrant, and resilient Coastside economy. The City plans to utilize the relationships to identify areas of inequity and weakness in the community, which potentially can mitigate some of the recognized high risk category hazards.
- **Evacuation Plan-** The City is currently collaborating with the San Mateo County Department of Emergency Services on regional evacuation planning and will integrate hazard mitigation information into the final plans.

## 10.6 RISK ASSESSMENT

### 10.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 10-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

**Table 10-11. Past Natural Hazard Events**

Type of Event	FEMA Disaster #	Date	Damage Assessment
CZU Lightning Complex fires	FM-5336-CA	August 16, 2020	Over 1,400 buildings damaged, covered 86,000 acres. County opened a Resource Center at the HMB High School
COVID-19 Pandemic	DR-4482	January 20, 2020	Not Available
PSPS Power Shut Offs	Not Available	October 25, 2020	Not Available
PSPS Power Shut Offs	Not Available	October 14, 2020	Not Available
PSPS Power Shut Offs	Not Available	October 24, 2019	Not Available
PSPS Power Shut Offs	Not Available	October 9, 2019	Community Resource Center (CRC) opened in HMB. Tom Lantos Tunnel closed temporarily. Local businesses took a loss of over \$1,000,000 in the October 2019 PSPS events combined
Severe Winter Storms, Flooding, and Coastal Erosion	DR-4308	February 1 – 23, 2017	\$411,065.50 in temporary repairs for emergency stabilization of Seymour Ditch.
Severe Winter Storms, Flooding, and Coastal Erosion	DR-4305	January 18 – 23, 2017	Not Available
Severe Storm / Flooding	Not Available	December 10, 2014	Not Available

Type of Event	FEMA Disaster #	Date	Damage Assessment
Earthquake Tsunami	Not Available	February 27, 2010	Not Available
Severe Storm	Not Available	April 1, 2006	Not Available
Severe Storm / Flooding	DR-1203	February 9, 1998	Not Available
Severe Storm / Flooding	DR-1155	January 4, 1997	Not Available
Severe Storm / Flooding	DR-1046	March 12, 1995	Not Available
Severe Storm / Flooding	DR-1044	January 10, 1995	Not Available
Earthquake	DR-845	October 18, 1989	Not Available
Flood	DR-758	February 21, 1986	Not Available
Flood	Not Available	1984	Not Available
Severe Storm	DR-677	February 9, 1983	Not Available
Flood	DR-651	January 7, 1982	Not Available
Drought	EM-3023	January 20, 1977	Not Available

### 10.6.2 Hazard Risk Ranking

Table 10-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy. Mitigation actions target hazards with high and medium rankings.

**Table 10-12. Hazard Risk Ranking (Social Equity Lens applied)**

Rank	Hazard	Risk Ranking Score	Risk Category
1	Earthquake	66	High*
2	Wildfire	72	High
3	Tsunami	27	High*
4	Severe Weather	24	High*
5	Dam Failure	46	Medium*
6	Landslide/Mass Movement	42	Medium*
7	Flood	51	Low
8	Drought	9	Low
9	Sea Level Rise/Climate Change	24	Low

\* Based on local knowledge, the following adjustments were made to the risk categories:

Earthquake was moved further up the list due to proximity to the San Andreas fault and fault lines. Evacuation for such event would be challenging.

Tsunami moves up due to our proximity to the ocean and residential properties in the new inundation maps.

Severe Weather was moved up due to the extreme heat episodes that have occurred and issues with cooling, as well as lightning storms and rainstorms.

Dam Failure’s risk category was downgraded to Medium as the spread versus depth of the damage needs to be assessed.

Landslide/Mass Movement was moved down and downgraded to Medium due to the lack of property where coastal erosion occurs.

There is a low risk to life and property.

### 10.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

## **Repetitive Loss Properties**

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

Mitigation actions addressing these issues were prioritized for consideration in the action plan for this annex.

## **10.7 STATUS OF PREVIOUS PLAN ACTIONS**

Table 10-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 10-13. Status of Previous Plan Actions**

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<b>HMB 1</b> – Rehabilitate the Main Street Bridge over Pilarcitos Creek. <b>Comment:</b> Listed as Capital Project in CIP, some grant funding has been secured, in design, estimated construction in 2023-2024			✓	HMB-9
<b>HMB 2</b> - Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP). This will be accomplished through the implementation of flood plain management programs. <b>Comment:</b> Ongoing. Community Assistance Visit (CAV) scheduled for this year			✓	HMB-4
<b>HMB 3</b> - Create sea level rise vulnerability assessments of City's facilities and infrastructure. <b>Comment:</b> Ongoing. <a href="#">HMB Sea Level Rise Vulnerability Assessment (2016)</a> <a href="#">Sea Change SMC (2018)</a> – includes most of HMB but not the Ritz Carlton Hotel.			✓	HMB-14
<b>HMB 4</b> - Continue to participate in developing and maintaining communications for first responders from cities, counties, special districts, state, and federal agencies. <b>Comment:</b> Ongoing.			✓	HMB-13
<b>HMB 5</b> - Maintain and participate in the San Mateo County's Standardized Emergency Management System Plan. <b>Comment:</b> Ongoing, creating updated City Emergency Operations Plan.			✓	HMB-11
<b>HMB 6</b> - Participate in general mutual-aid agreements with adjoining jurisdictions for cooperative responses to fires, floods, earthquakes, and other disasters. <b>Comment:</b> Ongoing.			✓	HMB-13
<b>HMB 7</b> - Continue to sponsor the training and maintenance of the Community Emergency Response Team (CERT) through partnership with local businesses. <b>Comment:</b> Coastside Fire Protection District took over sponsorship of CERT moving forward.		✓		
<b>HMB 8</b> –Maintain regulations to limit development in areas prone to landslide and erosion. Monitor slopes and hillsides during and after major storms. <b>Comment:</b> Done in 2020 LUP update policies and will also address in Safety Element	✓			
<b>HMB 9</b> - Continue to repair and make structural improvements to storm drains, pipelines, and/or channels to enable them to perform to their capacity in handling water flows as part of regular maintenance activities. <b>Comment:</b> Ongoing.			✓	HMB-9

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p><b>HMB 10</b> – Develop a better understanding of the earthquake hazard through data collection.</p> <p><b>Comment:</b> Ongoing.</p>			✓	
<p><b>Action G-1</b>—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.</p> <p><b>Comment:</b> 2020 LUP has some policies that address this, and this may not be relevant to all hazard areas.</p>			✓	HMB 1
<p><b>Action G-2</b>—Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.</p> <p><b>Comment:</b> Currently participate in StormReady; may explore participation with other programs in the future.</p>	✓			
<p><b>Action G-3</b>—Where feasible, implement a program to record high water marks following high-water events.</p> <p><b>Comment:</b></p>			✓	HMB-14
<p><b>Action G-4</b>—Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.</p> <p><b>Comment:</b> Will reference in Climate Action and Adaptation Plan. Referenced in 2020 LUP update and will reference in Safety Element update.</p>	✓			
<p><b>Action G-5</b>—Consider the development and implementation of a Capital Improvements Program (CIP) to increase regulatory, financial, and technical capability to implement mitigation actions.</p> <p><b>Comment:</b> 2021 – 2026 5-year CIP adopted June 15, 2021 <a href="https://www.half-moon-bay.ca.us/DocumentCenter/View/1758/CURRENT-CIP?bidId=">https://www.half-moon-bay.ca.us/DocumentCenter/View/1758/CURRENT-CIP?bidId=</a></p>	✓			
<p><b>Action G-6</b>—Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.</p> <p><b>Comment:</b> We have given some grant funds for rehabilitation. We don't have a lot of incentive/need for this since we don't have a lot of development in high hazard risk areas.</p>		✓		
<p><b>Action G-7</b>— Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.</p> <p><b>Comment:</b> Ongoing.</p>			✓	HMB-3
<p><b>Action G-8</b>— Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.</p> <p><b>Comment:</b> Ongoing.</p>			✓	HMB-3

## 10.8 HAZARD MITIGATION ACTION PLAN

Table 10-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 10-15 identifies the priority for each action. Table 10-16 summarizes the mitigation actions by hazard of concern and mitigation type.

**Table 10-14. Hazard Mitigation Action Plan Matrix**

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
<b>Action HMB-1</b> —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
<i>Hazards Mitigated:</i> Dam Failure, Earthquake, Flooding, Landslide/Mass Movements, Severe Weather, Tsunami, Wildfire						
Existing	6, 8, 9, 10, 13	Half Moon Bay		High	Grant Funding	Short-term
<b>Action HMB-2</b> — Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including the Local Coastal Program, Climate Action and Adaptation Plan and Emergency Operations Plan.						
<i>Hazards Mitigated:</i> Sea Level Rise/Climate Change, Dam Failure, Earthquake, Flooding, Landslide/Mass Movements, Severe Weather, Tsunami, Wildfire						
New & Existing	1, 2, 5, 7, 8, 10	Half Moon Bay		Low	Staff Time, General Funds	Ongoing
<b>Action HMB-3</b> —Actively participate in the plan maintenance protocols and initiatives outlined in Volume 1 of this hazard mitigation plan.						
<i>Hazards Mitigated:</i> Flooding, Severe Weather						
New & Existing	4, 6, 10	Half Moon Bay		Low	Staff Time, General Funds	Short-term
<b>Action HMB-4</b> —Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:						
<ul style="list-style-type: none"> <li>• Enforce 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>						
<i>Hazards Mitigated:</i> Flooding, Severe Weather						
New & Existing	1, 2, 5, 8, 9	Half Moon Bay		Low	Staff Time, General Funds	Ongoing
<b>Action HMB-5</b> —Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following:						
<ul style="list-style-type: none"> <li>• Adopt the City's first Climate Action and Adaptation Plan to outline and prioritize City strategies for adaptation to impacts</li> <li>• Analyze local economy and ecosystems capacity to adapt to climate change impacts</li> </ul>						
<i>Hazards Mitigated:</i> Sea Level Rise/Climate Change, Flooding, Severe Weather, Wildfire						
New & Existing	1, 4, 5,7	Half Moon Bay		Low	Staff Time, General Funds	Short-term
<b>Action HMB-6</b> — Purchase generators for critical facilities and infrastructure that lack adequate backup power, including the Half Moon Bay Library.						
<i>Hazards Mitigated:</i> Dam Failure, Earthquake, Flooding, Landslide/Mass Movements, Severe Weather, Tsunami, Wildfire						
Existing	8,9	Half Moon Bay		Medium	General Fund	Short-term
<b>Action HMB-7</b> — Finalize the design and environmental components for permanent erosion stabilization of the Seymour Ditch including an analysis of erosion stabilization alternatives, design of the preferred alternative, permitting for the preferred alternative and ultimate construction of permanent stabilization measures for the Seymour ditch. Provide environmental recreation, community/connectivity enhancements where possible.						
<i>Hazards Mitigated:</i> Flooding, Severe Weather, Landslide/Mass Movements						
New & Existing	4, 6, 7,8	Half Moon Bay	County of San Mateo, San Mateo Resource Conservation District, Peninsula Open Space Trust, Coastside Land Trust, FSLRRD	Medium	Capital Improvement Fund, General Fund	Short-Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
<p><b>Action HMB-8</b>— Complete the Poplar Gateways Master Plan and implement a phased program for erosion mitigation, bluff restoration, and initiate work on the easterly re-alignment of the Coastal Trail between Poplar Street and Kelly Avenue.</p> <p><u>Hazards Mitigated:</u> Sea Level Rise/Climate Change, Flooding, Severe Weather, Landslide/Mass Movements</p>						
New & Existing	3, 5, 6, 7, 14	Half Moon Bay		Medium	Capital Improvement Fund, General Fund	Short-Term
<p><b>Action HMB-9</b>—Continue to update and implement projects outlined within the Capital Improvement Projects, including rehabilitating Main St. Bridge over Pilarcitos Bridge Creek, addressing hazard mitigation and response. These actions include but are not limited to: The urban forestry management program, repairs and rehabilitations of stormwater outfalls, corporation yard improvements, flood management and coastal bluff preservation.</p> <p><u>Hazards Mitigated:</u> Dam Failure, Earthquake, Flooding, Landslide/Mass Movements, Severe Weather, Tsunami, Wildfire</p>						
Enter Response	4, 5, 6, 7, 8	Half Moon Bay		Medium	Capital Improvement Fund, Grant Funding	Ongoing
<p><b>Action HMB-10</b>— Replace the existing main electrical service equipment at the Sewer Authority of Mid-Coastside’s Wastewater Treatment Plant with new equipment to mitigate arc flash hazards, remove a single point of failure by creating a “main-tie-main” configuration, and to address the potential for flooding of the main electrical service components by relocating above flood level and SLR level.</p> <p><u>Hazards Mitigated:</u> Flooding, Severe Weather</p>						
New & Existing	6, 7, 8, 9, 13	Half Moon Bay	Sewer Authority Midcoast	Medium	Capital Improvement Fund	Short-term
<p><b>Action HMB-11</b>—Update the City’s Emergency Operations Plan and work in tandem with the County on an Evacuation Plan. These documents will be continuously updated and address actions from mitigation all the way through recovery.</p> <p><u>Hazards Mitigated:</u> Wildfire, Earthquake, Tsunami, Severe Weather, Flood, Dam Failure, Landslide/Mass Movements</p>						
Enter Response	1, 2, 5, 7, 8, 10, 11	Half Moon Bay	County	Low	Staff time, General Fund	Short-Term
<p><b>Action HMB-12</b>— Continue to monitor bluff and drainage system regressions and continue to assess appropriate mitigation opportunities (such as clean closure) for the closed Half Moon Bay landfill located on the coastal bluffs near Poplar Beach.</p> <p><u>Hazards Mitigated:</u> Sea Level Rise/Climate Change, Earthquake, Landslide/Mass Movements</p>						
Enter Response	1, 5, 10	Half Moon Bay	County	Medium	General fund, Grant Funding	Long-Term
<p><b>Action HMB-13</b>—Create broadband redundancy to allow for better digital infrastructure. The City plans to add additional connectivity on the coastside for communication prior to, during and after an emergency. This includes working with other agencies, participating in mutual aid agreements, and identifying weak signal areas to prevent hazard related disruptions</p> <p><u>Hazards Mitigated:</u> Dam Failure, Earthquake, Flooding, Landslide/Mass Movements, Severe Weather, Tsunami, Wildfire</p>						
New & existing	4, 8, 11	Half Moon Bay	County	Medium	Grant Funding	Short-term
<p><b>Action HMB-14</b>— Develop and implement a program to capture perishable data after significant events (e.g., sea level rise, high water marks, preliminary damage estimates, damage photos) and critical facilities assessment to support future mitigation efforts including the implementation and maintenance of the hazard mitigation plan.</p> <p><u>Hazards Mitigated:</u> Sea Level Rise/Climate Change, Flood, Severe Weather, Tsunami</p>						
New & Existing	1, 5, 6, 7, 8	Half Moon Bay	FSLRRD, County	Medium	General Fund	Short Term
<p><b>Action HMB-15</b>— Incorporate consideration of the FEMA 100-year tide and sea level rise, and climate change-driven extreme storms, into land use planning and shoreline development. This includes new policies by local jurisdictions, and County and City actions regarding their General Plans, Climate-related Plans, and the development applications.</p> <p><u>Hazards Mitigated:</u> Sea Level Rise/Climate Change, Flood, Severe Weather</p>						
New & Existing	1, 2, 5, 6, 7, 8, 9, 13, 14	Half Moon Bay	FSLRRD, County	Low	General Fund, Private Developers, City Capital Project Funding	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
<b>Action HMB-16</b> — Continue to identify and plan upgrades of utility systems, equipment, and critical facilities, including pump stations, generators, tide gates, stream gages, open channel, and culvert/pipeline infrastructure.						
<i>Hazards Mitigated:</i> Sea Level Rise/Climate Change, Flood, Severe Weather						
New & Existing	2, 6, 7,8	Half Moon Bay	FSLRRD, County	Medium	Tax-Funded Flood Zones, Grant Funding	Ongoing
<b>Action HMB-17</b> — Support green infrastructure projects that enhance resiliency to natural disasters and incorporate green design elements into hazard mitigation projects where feasible.						
<i>Hazards Mitigated:</i> Sea Level Rise/Climate Change, Landslide, Flood, Severe Weather, Drought						
New & Existing	2, 6, 7, 8, 14	Half Moon Bay	FSLRRD, County, C/CAG	Medium	Tax-Funded Flood Zones, Property/Vehicle Fees, Stormwater Fees, Grant Funding, City Capital Project Funding	Ongoing
<b>Action HMB-18</b> — Improve stormwater drainage to alleviate repeated localized flooding, especially storm drain systems connected to San Mateo County Flood and Sea Level Rise Resiliency District Flood Zone channels and infrastructure.						
<i>Hazards Mitigated:</i> Sea Level Rise/Climate Change, Flood, Severe Weather						
New & Existing	1, 2, 4, 6, 7,8	Half Moon Bay	FSLRRD, County	Medium	Tax-Funded Flood Zones, Property/Vehicle Fees, Stormwater Fees, Grant Funding, City Capital Project Funding	Ongoing
<b>Action HMB-19</b> — Plan, design, and implement long-term resilience to sea level rise, extreme storms, and coastal erosion for culverts, roadways, and bridges in the vicinity of other flood protection projects, including assets identified in the Caltrans District 4 Adaptation Priorities Report.						
<i>Hazards Mitigated:</i> Sea Level Rise/Climate Change, Landslide, Flood, Severe Weather						
New & Existing	2, 4, 6, 7, 8,13	Half Moon Bay	FSLRRD, Caltrans, County	Medium	Grant Funding	Ongoing
<b>Action HMB-20</b> — Identify and pursue strategies to enhance recycled water infrastructure planning/implementation in the vicinity of San Mateo County Flood and Sea Level Rise Resiliency District projects.						
<i>Hazards Mitigated:</i> Drought						
New & Existing	1, 6, 7,8		FSLRRD, County	Medium	Grant Funding	Ongoing
<b>Action HMB-21</b> — Advance long-term resilience to sea level rise, extreme storms, and coastal erosion for Pillar Point Harbor and the surrounding area.						
<i>Hazards Mitigated:</i> Sea Level Rise/Climate Change, Flood, Severe Weather						
New & Existing	6, 7, 8, 13, 14	Half Moon Bay	FSLRRD, County, San Mateo County Harbor District, San Mateo Resource Conservation District	Medium	County Funding (Measure K), Grant Funding	Long-term
<b>Action HMB-22</b> — Advance long-term resilience to sea level rise, extreme storms, and coastal erosion for the California Coastal Trail.						
<i>Hazards Mitigated:</i> Sea Level Rise/Climate Change, Flood, Severe Weather						
New & Existing	6, 7, 8, 10, 13, 14	Half Moon Bay	FSLRRD, County, Caltrans, California State Coastal Conservancy	Low	County Funding (Measure K), Grant Funding	Long-term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

**Table 10-15. Mitigation Action Priority**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Eligible for Outside Funding?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority <sup>a</sup>	Outside Funding Source Pursuit Priority <sup>a</sup>	Social Equity Priority <sup>a</sup>
1	3	High	High	Yes	Yes	No	Medium	High	High
2	7	Medium	Low	Yes	No	Yes	High	Low	Low
3	3	Low	Low	Yes	No	Yes	High	Low	Low
4	6	Medium	Low	Yes	No	Yes	High	Low	Low
5	7	Medium	Low	Yes	No	Yes	High	Medium	Medium
6	3	High	Medium	Yes	Yes	No	Medium	High	High
7	4	Medium	Medium	Yes	Yes	Yes	High	High	Low
8	5	Medium	Medium	Yes	Yes	Yes	High	Medium	Low
9	5	High	Medium	Yes	Yes	Yes	High	High	High
10	5	High	Medium	Yes	Yes	Yes	High	High	High
11	7	High	Low	Yes	No	Yes	High	Low	High
12	3	Medium	Medium	Yes	Yes	Yes	High	Low	Low
13	3	Medium	Medium	Yes	Yes	No	Medium	High	High
14	5	Medium	Medium	Yes	Yes	Yes	High	Medium	Medium
15	9	High	Low	Yes	Yes	Yes	High	High	Medium
16	4	High	Medium	Yes	Yes	Yes	High	High	Medium
17	5	Medium	Medium	Yes	Yes	Yes	High	Medium	Medium
18	6	High	Medium	Yes	Yes	Yes	High	High	Medium
19	6	High	Medium	Yes	Yes	Yes	High	High	Medium
20	4	Medium	Medium	Yes	Yes	Yes	High	Medium	Low
21	5	High	Medium	Yes	Yes	Yes	High	High	Medium
22	6	High	High	Yes	Yes	No	Medium	High	Medium

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

**Table 10-16. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
<b>High-Risk Hazards</b>								
<b>Earthquake</b>	HMB-1, 9, 12, 13	HMB-1,9	HMB-11		HMB-6, 9, 11, 13	HMB-9		HMB-2, 11, 13
<b>Wildfire</b>	HMB-1, 9, 13	HMB-1,9	HMB-5,11		HMB-6, 9, 11, 13	HMB-9	HMB-2, 5	HMB-2, 11, 13
<b>Tsunami</b>	HMB-1, 9, 13	HMB-1,9	HMB-11,14		HMB-6, 9, 11, 13	HMB-9		HMB-2, 11, 13
<b>Severe Weather</b>	HMB-1, 3, 4, 7, 9, 10, 13, 14, 5, 16, 17, 18, 21, 22	HMB-1, 4, 9, 10, 18	HMB-4, 5, 11, 14, 16	HMB-7,8	HMB-6, 9, 11, 13	HMB-9, 10, 16, 19	HMB-2, 5, 19, 21, 22	HMB-2, 11, 13



Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
<b>Medium-Risk Hazards</b>								
Dam Failure	HMB-1, 9, 13	HMB-1,9	HMB-11		HMB-6, 9, 11, 13	HMB-9		HMB-2, 11, 13
Landslide/ Mass Movement	HMB-1, 7, 9, 12, 13, 17	HMB-9	HMB-5,11	HMB-7,8	HMB-6, 9, 11, 13	HMB-9,19	HMB-2.5,19	HMB-2, 11, 13
<b>Low-Risk Hazards</b>								
Flood	HMB-1, 3, 4, 7, 9, 10, 13, 15, 16, 17, 18, 21, 22	HMB-1, 4, 9, 10, 1	HMB-4, 5, 11, 14, 16	HMB-7,8	HMB-6, 9, 11, 13	HMB-9, 10, 16, 19	HMB-2, 5, 19, 21, 22	HMB-2, 11, 13
Drought	HMB-17,20							
Sea Level Rise/ Climate Change	HMB-12, 15, 16, 17, 18, 21, 22	HMB-18	HMB-5, 14, 16	HMB-8		HMB- 16,19	HMB-2, 5, 19, 21, 22	HMB-2

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

## 10.9 PUBLIC OUTREACH

Table 10-17 lists public outreach activities for this jurisdiction.

**Table 10-17. Local Public Outreach**

Local Outreach Activity	Date	Number of People Involved
Presentation/Discussion at Evergreen Coastsiders	May 13, 2021	11

## 10.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **City of Half Moon Bay Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **City of Half Moon Bay Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
- **City of Half Moon Bay Local Coastal Land Use Plan**—Chapter 7. Environmental Hazards of the Local Coastal Land Use Plan was utilized to identify hazards and land use policies for avoiding hazards in new development projects.
- **City of Half Moon Bay Emergency Operations Plan**—The Emergency Operations Plan was utilized to identify hazards and determine mitigation efforts.

The following outside resources and references were reviewed:








- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

## **10.11 ADDITIONAL COMMENTS**

Changes to the hazard risk rankings and categories noted in comments in that section.

# Half Moon Bay

## Critical Facilities, 1 of 2

-  Food, Water, Shelter
-  Health and Medical
-  Safety and Security
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., DHS HIFLD



0 0.375 0.75 1.5  
Miles



# Half Moon Bay

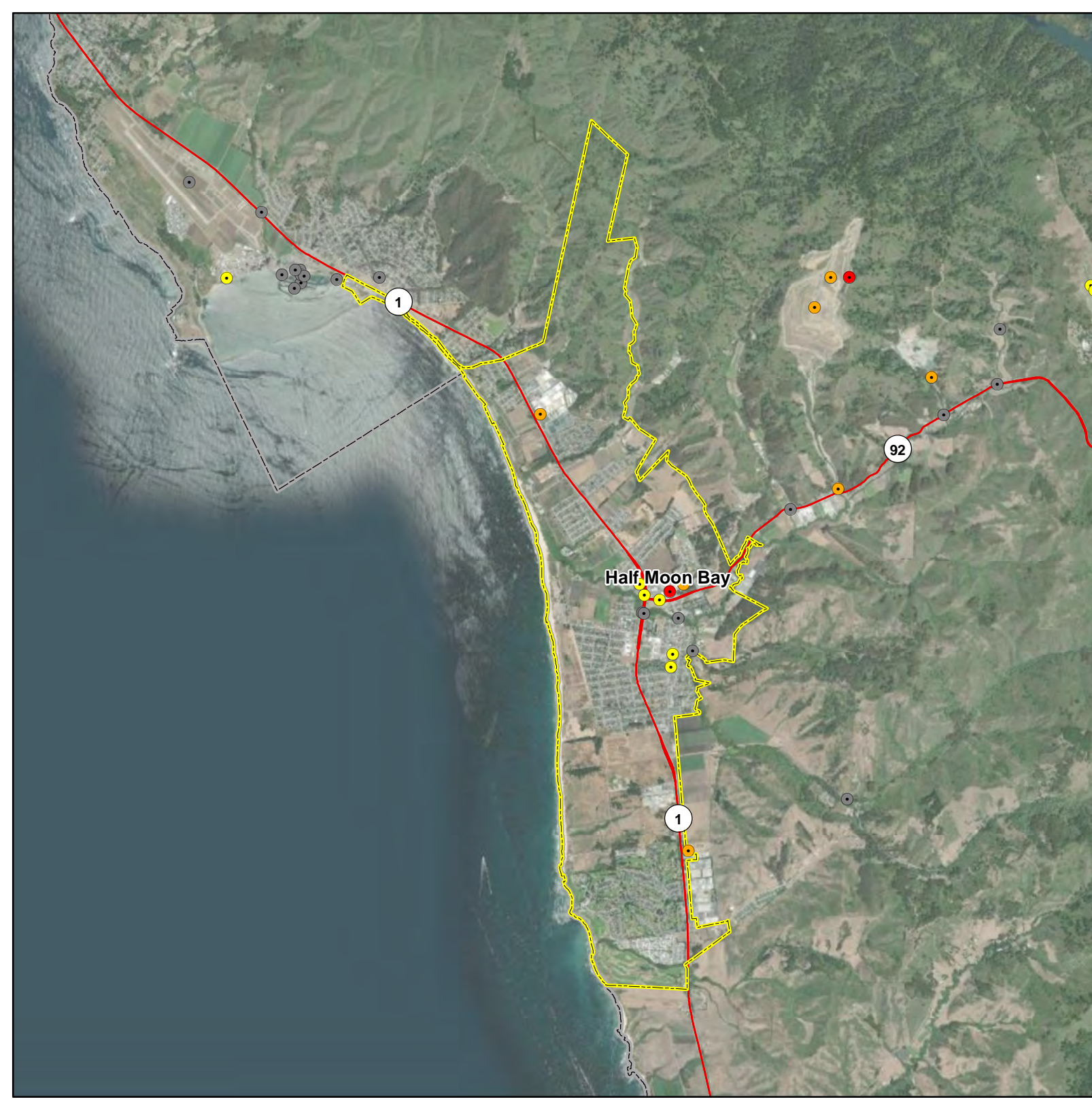
## Critical Facilities, 2 of 2

- Communications
- Energy
- Hazardous Materials
- Transportation
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary
- Highways

Data Sources: ESRI Basemap,  
San Mateo Co., DHS HIFLD









0 0.375 0.75 1.5  
Miles



# Half Moon Bay

## Dam Failure Inundation Area Used for Risk Assessment

-  Inundation Area
-  Dam
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CA DWR










0 0.375 0.75 1.5  
Miles



# Half Moon Bay

## NEHRP Soil Class

-  C (Dense soil/soft rock)
-  D (Stiff soil)
-  E (Soft clay)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CGS












0 0.375 0.75 1.5  
Miles



# Half Moon Bay

## Liquefaction Susceptibility

-  Very Low
-  Low
-  Moderate
-  High
-  Very High
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., ABAG (USGS)



0 0.375 0.75 1.5  
Miles



# Half Moon Bay

## Butano M6.93 Earthquake Scenario

### Mercalli Intensity Scale

 VI (Strong/Light)

 VII (Very Strong/Moderate)

 Selected City

 Incorporated Cities

 County Boundary

 Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



0 0.375 0.75 1.5  
Miles









# Half Moon Bay

## Monte Vista Shannon M7.14 Earthquake Scenario

### Mercalli Intensity Scale

-  VII (Very Strong/Moderate)
-  VIII (Severe/Moderate-Heavy)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



0 0.375 0.75 1.5  
Miles



# Half Moon Bay

## 100-Year Probabilistic Earthquake Scenario

### Mercalli Intensity Scale

 VII (Very Strong/Moderate)

 Selected City

 Incorporated Cities

 County Boundary

 Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS




0 0.375 0.75 1.5  
Miles



# Half Moon Bay

## San Andreas Peninsula M7.38 Earthquake Scenario

### Mercalli Intensity Scale

-  VII (Very Strong/Moderate)
-  VIII (Severe/Moderate-Heavy)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



0 0.375 0.75 1.5  
Miles



# Half Moon Bay

## San Gregorio North M7.44 Earthquake Scenario

### Mercalli Intensity Scale

-  VII (Very Strong/Moderate)
-  VIII (Severe/Moderate-Heavy)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS









0 0.375 0.75 1.5  
Miles



# Half Moon Bay

## FEMA Flood Hazard Areas

-  1% Annual Chance Flood (100-Year)
-  0.2% Annual Chance Flood (500-Year)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap, San Mateo Co., FEMA











0 0.375 0.75 1.5 Miles



# Half Moon Bay

## Susceptibility to Deep-Seated Landslides

-  Low
-  Moderate
-  High
-  Very High
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CGS








0 0.375 0.75 1.5  
Miles



# Half Moon Bay

## Sea Level Rise

-  Inundation Area
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Inundation areas are a combination of Our Coast Our Future 200cm (6.6 feet) of SLR with 100-year storm for the Pacific Ocean coastline, and Adapting to Rising Tides 108 inches (9 feet) of SLR for the San Francisco Bay coastline.

Data Sources: ESRI Basemap, San Mateo Co., ART, OCOF








0 0.375 0.75 1.5  
Miles



# Half Moon Bay

## Tsunami Hazard Areas

-  Hazard Areas
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CGS










0 0.375 0.75 1.5  
Miles





# Half Moon Bay

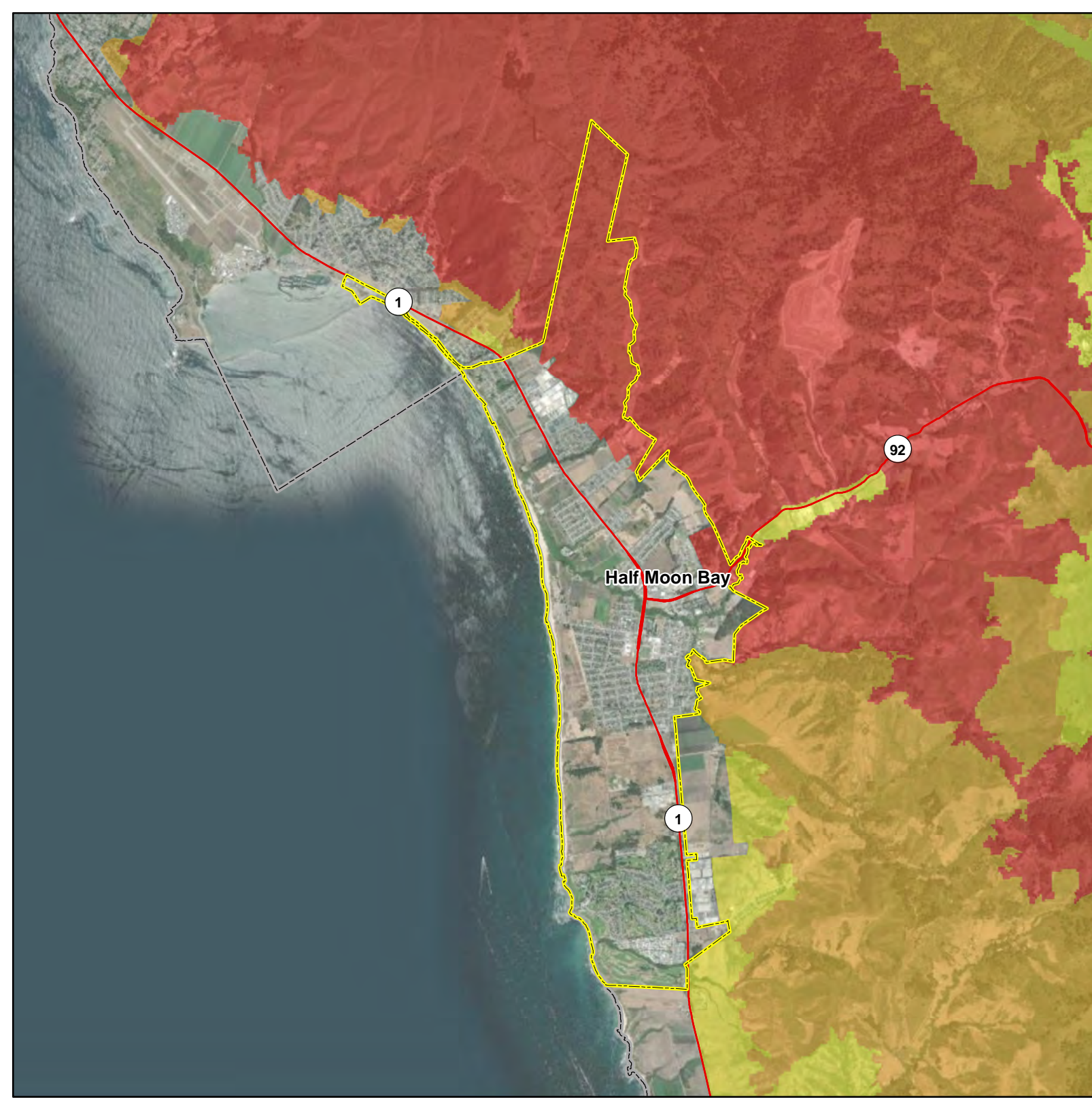
## Wildfire Hazard Severity Zones

-  Moderate
-  High
-  Very High
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap, San Mateo Co., CAL FIRE



0 0.375 0.75 1.5 Miles





# 11. TOWN OF HILLSBOROUGH

## 11.1 LOCAL HAZARD MITIGATION PLANNING TEAM

### Primary Point of Contact

Mandy Brown, Senior Management Analyst  
1600 Floribunda Avenue  
Hillsborough, CA 94010  
(650) 375-7409  
mbrown@hillsborough.net

### Alternate Point of Contact

Dena Gunning, Community Risk & Resilience Specialist  
1399 Rollins Road  
Burlingame, CA  
(650) 558-7609  
dgunning@ccfd.org

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 11-1.

**Table 11-1. Local Mitigation Planning Team Members**

Name	Title
Ann Ritzma	City Manager, Hillsborough
Bruce Barron	Fire Chef, CCFD
Mandy Brown	Senior Management Analyst, Hillsborough
Dena Gunning	Community Risk and Resiliency Specialist
Christine Reed	Fire Marshal
Paul Willis	Director of Public Works
Sarah Fleming	Director of Building & Planning

## 11.2 JURISDICTION PROFILE

### 11.2.1 Location and Features

The Town of Hillsborough is a residential community located in San Mateo County, California. It is west of U.S. Highway 101 and El Camino Real and east of Interstate 280 within a short commute to San Francisco and minutes from San Francisco International Airport. The Town is bordered on the north and east by the City of Burlingame, to the east and south by the City of San Mateo, and to the west by the San Francisco Peninsula watershed. The Town maintains about 250 acres of open space; the local police station has historic significance connected to the early days of Southern Pacific Railroad.

Hillsborough has a Mediterranean climate with the vast majority of the precipitation from the months of November to April. On average, Hillsborough receives 17 inches of rain. With coastal mountains to the west of Hillsborough, it is blocked in the winter from much of the rainfall over Half Moon Bay, and in the summer it is blocked from virtually all the fog of the coast. Hillsborough receives an average of 307 days of sunshine annually, with 52 days of recordable precipitation per year.

## 11.2.2 History

William Davis Merry Howard, son of a wealthy Hillsboro, New Hampshire shipping magnate, sailed on one of his father's ships from Boston around Cape Horn to the West Coast. Upon returning home, he convinced his father of the fortunes to be made in the West and returned to California some 15 years later. Howard became a partner in a general merchandising firm in 1845.

The following year, he purchased "Rancho San Mateo" from the Mexican governor, Pio Pico. The Rancho was a tract of land that became the city of San Mateo. He paid \$25,000 for the tract, or approximately \$3.88 an acre. For the next few years, Howard and his wife, Agnes, lived in a comfortable life on the isolated Peninsula. Here they built a fine home which they called "El Cerrito" and made San Mateo a successful working ranch.

When the gold rush began a few years later, the thousands of prospectors flooding California needed provisions and only a few outlets were present. In a short span of time, Howard and his partner became wealthier than even the most successful gold seekers.

As San Mateo and Burlingame continued to grow, the need for money to make improvements became acute, and the residents began to show interest in annexing the estate owners' lands. The owners of the estates were not well disposed to contributing tax dollars toward the improvement of neighboring city life; nor were they interested in any of the benefits incorporation would bring, e.g., sidewalks and other amenities which would detract from the rural atmosphere of their area. Accordingly, in 1910, residents filed incorporation papers with the County Board of Supervisors and on April 25 of the same year, by popular vote of 60-1 a "perfumed city" (as one San Francisco newspaper put it) was born. "Hillsborough" had 89 registered voters at the time out of an estimated population of 750. Women, children, and servants did not participate in the election. Hillsborough was incorporated on May 5, 1910.

Between 1910 and 1938, Hillsborough's population grew from an estimated 750 to over 2,500, but the era of large estates came a close. Uplands, Home Place, La Dolphine, and other classic estates were gradually subdivided into smaller lots, usually leaving the original house and several acres intact.

## 11.2.3 Governing Body Format

The Town is a general law city operating with a Council / Manager form of government. Policy-making and legislative authority are vested in the governing City Council, which consists of a Mayor, a Vice-Mayor and three City Council members. City Council members are elected to overlapping 4-year terms, in even numbered years. The City Council members select the Mayor and Vice-Mayor every year. The City Council is responsible, among other things, for passing ordinances, adopting the budget, appointing committee and board members, and hiring the City Manager and the City Attorney. The City Manager is responsible for carrying out the policies and ordinances of the City Council, for overseeing the day-to-day operations and for appointing department heads. Central County Fire Department (a separate agency) provides fire and emergency management services for the city.

The Town of Hillsborough assumes responsibility for the adoption of this plan; the Central County Fire Department will oversee its implementation.

## 11.3 CURRENT TRENDS

### 11.3.1 Population

According to the California Department of Finance, the population of Hillsborough as of January 2020 was 11,418. Since 2016, the population has decreased at an average annual rate of 0.59 percent.

### 11.3.2 Development

The Town has one zoning district, “Residence District” or RD. Permitted uses within RD include single family homes and related accessory structures, public schools, private schools, open space, parks, Town facilities, one golf course and one country club. Future development is anticipated to be limited to replacement of existing homes, additions, and accessory dwelling units. The RD zone does allow multifamily rental housing to be developed on private school sites via a special permit, and the country club site by right. However, the Town has received no development applications for such housing in recent years and is not anticipating any submissions in the near future.

It is important to note that in recent years the State of California has become increasingly fixated on addressing the State’s housing shortage through the bills aimed at deregulating land use and abrogating local control over such decisions. Given this, it is possible in the near future that the Town will be required to make changes to its development regulations in order to accommodate additional density as mandated by the State.

Table 11-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

**Table 11-2. Recent and Expected Future Development Trends**

Criterion	Response					
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan? <i>If yes, give the estimated area annexed and estimated number of parcels or structures.</i>	No					
	N/A					
Is your jurisdiction expected to annex any areas during the performance period of this plan? <i>If yes, describe land areas and dominant uses. If yes, who currently has permitting authority over these areas?</i>	No					
	N/A					
	N/A					
Are any areas targeted for development or major redevelopment in the next five years? <i>If yes, briefly describe, including whether any of the areas are in known hazard risk areas</i>	Yes					
	Potential redevelopment of Town Hall campus to upgrade facilities and possibly incorporate housing to address RHNA 6 allocation requirements– The campus is directly adjacent to El Camino Real, and is not in the Wildland Urban Interface (WUI) designated area, flood zone or other hazard risk area.					
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?		2016	2017	2018	2019	2020
Single Family		1	3	3	4	5
Multi-Family		0	0	0	0	0
Other (commercial, mixed use, etc.)		0	0	0	0	0
<b>Total</b>		<b>1</b>	<b>3</b>	<b>3</b>	<b>4</b>	<b>5</b>

Criterion	Response
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	<ul style="list-style-type: none"> <li>• Special Flood Hazard Areas: 0</li> <li>• Landslide: 0</li> <li>• High Liquefaction Areas: 0</li> <li>• Tsunami Inundation Area: 0</li> <li>• Wildfire Risk Areas: 15</li> </ul>
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.	While no buildable lands inventory exists, the Town is generally considered to be at maximum build out for net new homes. Occasionally a property will be purchased and subdivided, however that is the exception and not the rule. The Town does expect to see continued increase in Accessory Dwelling Unit development on existing single-family lots.

## 11.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 11-3.
- Development and permitting capabilities are presented in Table 11-4.
- An assessment of fiscal capabilities is presented in Table 11-5.
- An assessment of administrative and technical capabilities is presented in Table 11-6.
- An assessment of education and outreach capabilities is presented in Table 11-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 11-8.
- Classifications under various community mitigation programs are presented in Table 11-9.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 11-10.

Table 11-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Codes, Ordinances, &amp; Requirements</b>				
<b>Building Code</b>	Yes	No	Yes	Yes
<i>Comment: Last updated 2013. Municipal code Title 15</i>				
<b>Zoning Code</b>	Yes	No	No	Yes
<i>Comment: Last updated 2016. Municipal code Title 17</i>				
<b>Subdivisions</b>	Yes	No	Yes	No
<i>Comment: Last updated 2011. Municipal code Title 16; State gov't code section 66410 et seq</i>				
<b>Stormwater Management</b>	Yes	No	Yes	No
<i>Comment: Annual program NPDS. Municipal code Title 13; state gov't</i>				
<b>Post-Disaster Recovery</b>	No	Yes	No	No
<i>Comment: Managed by Central County Fire Department. EOP currently being revised. Managed by Central County Fire Department</i>				
<b>Real Estate Disclosure</b>	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>				
<b>Growth Management</b>	Yes	No	No	No
<i>Comment: Last Building Code update 2013. Local zoning code &amp; general plan</i>				
<b>Site Plan Review</b>	Yes	No	Yes	No
<i>Comment: Last Building Code update 2013. Local municipal code and state codes</i>				
<b>Environmental Protection</b>	Yes	No	Yes	No
<i>Comment: Title 14 last updated in 2004; Title 17 in 2008. General Plan scheduled for update in 2017. Local municipal code (Titles 14, 17) General Plan and state laws.</i>				
<b>Flood Damage Prevention</b>	Yes	No	No	No
<i>Comment: Last updated 2014. Municipal code title 15</i>				
<b>Emergency Management</b>	Yes	Yes	No	No
<i>Comment: Municipal code Title 2; chapter 2 – updated in 2005. Managed by Central County Fire Department</i>				
<b>Climate Change</b>	Yes	No	Yes	No
<i>Comment: Local climate plan and general plan; state laws</i>				
<b>Wildland-Urban Interface Code</b>	Yes	Yes	No	No
<i>Comment: Municipal code Title 15; Chapter 21 – Adopted in 2018. Managed by Central County Fire Department</i>				
<b>Planning Documents</b>				
<b>General Plan</b>	Yes	No	No	Yes
<i>Is the plan compliant with Assembly Bill 2140? Yes</i>				
<i>Comment: General Plan update beginning 2022</i>				
<b>Capital Improvement Plan</b>	Yes	No	No	No
<i>How often is the plan updated? Reviewed annually</i>				
<i>Comment: CIP reviewed and updated annually</i>				
<b>Disaster Debris Management Plan</b>	No	No	No	Yes
<i>Comment: San Mateo County Debris Management Plan currently out for RFP. Completion anticipated in early 2022.</i>				
<b>Floodplain or Watershed Plan</b>	Yes	No	No	No
<i>Comment: Ongoing program/plan (updated every 2 - 3 years)</i>				
<b>Stormwater Plan</b>	Yes	No	No	No
<i>Comment: Annual review. 2 year master department plan – Stormwater Master Plan</i>				
<b>Urban Water Management Plan</b>	Yes	Yes	Yes	No
<i>Comment:</i>				
<b>Habitat Conservation Plan</b>	Yes	No	No	No
<i>Comment: Habitat conservation policy</i>				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Economic Development Plan</b> <i>Comment: Does not have a plan</i>	No	No	No	No
<b>Shoreline Management Plan</b> <i>Comment: N/A – Town has no shoreline</i>	No	Yes	No	No
<b>Community Wildfire Protection Plan</b> <i>Comment: Annual review. *Managed by Central County Fire Department (CCFD) In 2010, a collaborative group consisting of CAL FIRE, Resource Conservation District of Santa Cruz County, San Mateo Resource Conservation District, and the US Fish and Wildlife Service worked together to create a draft Community Wildfire Protection Plan (CWPP). The Plan identifies fire protection agencies with jurisdiction, volunteer organizations, large landowners, communities, neighborhoods, open spaces, and other environmental resources in the planning area that may be at risk of fire hazards. Community Risk Assessment In August 2018, the Central County Fire Department (CCFD) contracted with Anchor Point Group to perform a wildfire risk assessment for the three cities in its jurisdiction.</i>	No	Yes*	No	Yes
<b>Forest Management Plan</b> <i>Comment: None</i>	No	Yes	No	No
<b>Climate Action Plan</b> <i>Comment: Climate Action Plan 2010 CCFD Emergency Management integrating Climate Adaptation Planning for EOP completed training 06/2019</i>	Yes	No	No	Yes
<b>Emergency Operations Plan</b> <i>Comment: Managed by Central County Fire Department; current being updated; last revision 2007 CCFD hired a full time Community Risk &amp; Resiliency Specialist to manage all aspects of the Emergency Management Plan for Burlingame/Hillsborough in January 2019.</i>	No	Yes	No	Yes
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b> <i>Comment: CCFD, Public Works, and Building Departments CCFD continues to assess all threats, hazards and risks including those that have climate change impacts such as severe weather and drought. CCFD continues to participate in the Northern California Regional Intelligence Center to stay informed of trends and local threats. CCFD also utilizes Haystax (Cal COP) to maintain current critical infrastructure inventory and provide a common operating picture.</i>	Yes	No	No	Yes
<b>Post-Disaster Recovery Plan</b> <i>Comment: Included with the EOP. Managed by Central County Fire Department; current being updated; last revision 2007 In process. Due to COVID-19 will look at establishing Disaster Recovery Planning Team in early 2022.</i>	No	Yes	No	Yes
<b>Continuity of Operations Plan</b> <i>Comment: Included with the EOP. Managed by Central County Fire Department; current being updated; last revision 2007 Updating current plan and compiling department continuity plans from the last 18 months of COVID-19 response. In progress of updating Critical Transportation and Supply chain information based on the current regional trainings and exercise coming up in November.</i>	No	Yes	No	Yes
<b>Public Health Plan</b> <i>Comment: Managed by County Health agency</i>	No	Yes	No	No
<b>Other</b> <i>Comment:</i>				

**Table 11-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? <i>If no, who does? If yes, which department?</i>	Yes Building & Planning
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory?	No



**Table 11-5. Fiscal Capability**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes – Water and 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	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes

**Table 11-6. Administrative and Technical Capability**

Staff/Personnel Resource	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Planning & Public Works
Engineers or professionals trained in building or infrastructure construction practices	Yes	Engineering / Public Works
Planners or engineers with an understanding of natural hazards	Yes	Public Works
Staff with training in benefit/cost analysis	Yes	Public Works
Surveyors	Yes	Contractors
Personnel skilled or trained in GIS applications	Yes	Public Works
Scientist familiar with natural hazards in local area	No	N/A
Emergency manager	Yes	Central County Fire Dept. (CCFD) – Community Risk & Resiliency Specialist/ Emergency Manager
Grant writers	Yes	Public Works, CCFD (Community Risk & Resiliency Specialist/Emergency Manager/CERT Program Manager)

**Table 11-7. Education and Outreach Capability**

Criterion	Response
Do you have a public information officer or communications office?	Yes – Hillsborough Police Captain and Senior Management Analyst
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe.</i>	Yes Link under Current Town Projects
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe.</i>	Yes Through neighbor network program and the emergency and disaster information webpage.

Criterion	Response
<p>Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe.</i></p>	<p>Yes</p> <p>Neighborhood network program; drought advisory board; Firewise USA community group FireSAFE San Mateo County; Zonehaven (evacuation management software)</p>
<p>Do you have any other programs already in place that could be used to communicate hazard-related information? <i>If yes, briefly describe.</i></p>	<p>Yes</p> <p>Neighborhood network program; Firewise USA community group; CERT Program</p>
<p>Do you have any established warning systems for hazard events? <i>If yes, briefly describe.</i></p>	<p>Yes</p> <p>SMC Alert (<a href="https://cmo.smcgov.org/smc-alert">https://cmo.smcgov.org/smc-alert</a>) is an opt-in countywide notification system that can alert mobile devices, landlines and send emails Alert Center (<a href="http://www.hillsborough.net/AlertCenter.aspx">http://www.hillsborough.net/AlertCenter.aspx</a>) allows residents to sign up for notifications or to check on Town website for emergency alerts, heat advisories, severe drought notices, severe weather advisories, traffic advisories, and urgent public meeting information. Zonehaven Evacuation Management Platform which is linked to our SMCAAlert mass notification system.</p>

**Table 11-8. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	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 that your flood damage prevention ordinance was last amended?	2014
Does your floodplain management program meet or exceed minimum requirements? <i>If exceeds, in what ways?</i>	Meets
When was the most recent Community Assistance Visit or Community Assistance Contact?	2014
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <i>If so, state what they are.</i>	No
Are any RiskMAP projects currently underway in your jurisdiction? <i>If so, state what they are.</i>	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <i>If no, state why.</i>	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? <i>If so, what type of assistance/training is needed?</i>	No
Does your jurisdiction participate in the Community Rating System (CRS)? <i>If yes, is your jurisdiction interested in improving its CRS Classification?</i> <i>If no, is your jurisdiction interested in joining the CRS program?</i>	No No – flood plain area is too small
How many flood insurance policies are in force in your jurisdiction? <sup>a</sup> <i>What is the insurance in force?</i> <i>What is the premium in force?</i>	51 \$16,715,300 \$26,817
How many total loss claims have been filed in your jurisdiction? <sup>a</sup> <i>What were the total payments for losses?</i>	12 \$58,359

a. According to FEMA statistics as of May 14, 2021

**Table 11-9. Community Classifications**

	Participating?	Classification	Date Classified
FIPS Code	Yes	0608133798	2021
DUNS#	Yes	004952255	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	Yes	2	2010
Public Protection	Yes	ISO 3	2012
Storm Ready	No	N/A	N/A
Firewise	Yes	Firewise Community	2020

**Table 11-10. Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
Jurisdiction-level understanding of potential climate change impacts <i>Comment:</i>	High
Jurisdiction-level monitoring of climate change impacts <i>Comment: Utilizing and monitoring data from the National Weather Service (NWS) on changing conditions such as Drought and Wildfire risks.</i>	High
Technical resources to assess proposed strategies for feasibility and externalities <i>Comment:</i>	Medium
Jurisdiction-level capacity for development of greenhouse gas emissions inventory <i>Comment:</i>	Medium
Capital planning and land use decisions informed by potential climate impacts <i>Comment:</i>	Medium
Participation in regional groups addressing climate risks <i>Comment: Emergency Manager has attended Climate adaptation course and continues to participate in Climate change discussions locally and regionally. Participation in the Bay Area UASI planning efforts that include climate change.</i>	High
<b>Implementation Capacity</b>	
Clear authority/mandate to consider climate change impacts during public decision-making processes <i>Comment:</i>	Medium
Identified strategies for greenhouse gas mitigation efforts <i>Comment:</i>	Medium
Identified strategies for adaptation to impacts <i>Comment:</i>	Medium
Champions for climate action in local government departments <i>Comment:</i>	Medium
Political support for implementing climate change adaptation strategies <i>Comment:</i>	High
Financial resources devoted to climate change adaptation <i>Comment:</i>	Medium
Local authority over sectors likely to be negative impacted <i>Comment:</i>	Medium

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Public Capacity</b>	
<b>Local residents knowledge of and understanding of climate risk</b> <i>Comment: Residents engaged and educated through various community groups: Hillsborough Neighborhood Network, CERT Program, and Firewise. Facilitate various community events throughout the year to promote emergency preparedness, including topics related to climate risk.</i>	High
<b>Local residents support of adaptation efforts</b> <i>Comment:</i>	High
<b>Local residents' capacity to adapt to climate impacts</b> <i>Comment:</i>	High
<b>Local economy current capacity to adapt to climate impacts</b> <i>Comment:</i>	High
<b>Local ecosystems capacity to adapt to climate impacts</b> <i>Comment:</i>	High

a. High = Capacity exists and is in use; Medium = Capacity may exist but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

## 11.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

### 11.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **Retroactive Fire Sprinkler Program** – This plan has a retroactive requirement for commercial and residential occupancies to be retroactively equipped with fire sprinklers. The next planned review is 2017.
- **SAFER Smoke Alarm Program** – Our fire department engine companies retroactively install fire smoke alarms in existing dwelling units as needed upon discovery during incident calls.
- **CA Bolt & Brace Program** – CA mitigation program to strengthen house foundations.
- The current General Plan is AB 2140 compliant.
- **Interdepartmental Departmental Development Program** utilizing CRW software that analyzes and update local hazard information
- **Burlingame/Hillsborough Emergency Operations Plan** - The Burlingame/Hillsborough Emergency Operations Plan (EOP) provides the structure and processes that the jurisdictions utilize to respond to and initially recover from an incident and/or event.
- **Firewise** — The national Firewise USA recognition program provides a collaborative framework to help neighbors in a geographic area get organized, find direction, and take action to increase the ignition

resistance of their homes and community and to reduce wildfire risks at the local level. Any community that meets a set of voluntary criteria on an annual basis and retains an “In Good Standing Status” may identify itself as being a Firewise® Site.

## 11.5.2 Opportunities for Future Integration

The capability assessment presented in this annex identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Public Outreach** – The Town of Hillsborough recognizes that there are currently public information opportunities available to facilitate public engagement regarding hazard mitigation. The Town will look into developing a more robust and targeted program that involves using current capabilities to expand and enhance outreach to local residents.
- **General Plan update** is proposed to begin in fiscal year 2022/2023 and may include programs and/or ordinances related to resiliency, strategies, climate adaptations, water conservation plan (drought), and storm water management. Emergency Operation Plan – update planned for 2023 to include any updates from hazard mitigation plan and climate adaptations.
- **Building Code** review proposed
- **Zoning Code** – Update is proposed to occur in conjunction with the General Plan Update in FY 2022/23 and will likely include updates to/creation of ordinances related to water conservation, water efficient landscaping, and/or prevention of hazards attributed to the built environment.
- **Disaster Debris Management Plan** - San Mateo County Debris Management Plan. This annex will provide a framework for organizing the rapid, safe, and cost-effective separation, removal, collection, recycling, and disposal of disaster related debris; and minimizing debris-related threats to public health, safety, and the environment following an event or a major disaster.
- **Community Wildfire Protection Plan** – The Plan identifies fire protection agencies with jurisdiction, volunteer organizations, large landowners, communities, neighborhoods, open spaces, and other environmental resources in the planning area that may be at risk of fire hazards.
- **Climate Action Plan** – The County of San Mateo has an Office of Sustainability. There may be opportunities for future partnerships with this County agency.
- **Comprehensive Emergency Management Plan** – a comprehensive plan to manage multiple uses and activities to protect and conserve natural and cultural resources.
- **Threat & Hazard Identification & Risk Assessment (THIRA)** – Future assessments could be done in conjunction with State agencies, such as the State Water Board, who currently provide advice and guidance. Future integration could involve a more hands on approach by the State to prevent potential vulnerabilities to the local drinking water sources. The SFPUC, who provides the wholesale water to the Town could also be an active participant in the future.
- **Post-Disaster Recovery Plan** – Includes a set of strategies to assist a community in rebuilding after a disaster occurs. This also can include either preventive or corrective actions to lessen the impacts of a reoccurring disaster, such as severe weather.
- **Continuity of Operations Plan** – A continuity of operations plan addresses emergencies from an all-hazards approach. It establishes policy and guidance ensuring that critical functions continue, and that personnel and resources are relocated to an alternate facility in case of emergencies. The plan has procedures for alerting, activating, and deploying employees, identifying critical business functions, establishing an alternate facility, and roster of personnel with authority and knowledge of functions.

## 11.6 RISK ASSESSMENT

### 11.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 11-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

**Table 11-11. Past Natural Hazard Events**

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19 Pandemic	DR-4482	January 20, 2020 - present	Unknown
Severe Storms	N/A	2011	Not collected
Severe Storms	N/A	2006	Not collected
Severe Storms	N/A	2005	Not collected
Severe Storms	N/A	1998	Not collected
Severe Storms	N/A	1997	Not collected
Severe Storms	N/A	1995	Not collected
Earthquake (Loma Prieta)	DR-845	1989	Not collected
Severe Storms	N/A	1983	Not collected
Severe Storm	N/A	1982	Not collected

### 11.6.2 Hazard Risk Ranking

Table 11-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy. Mitigation actions target hazards with high and medium rankings.

**Table 11-12. Hazard Risk Ranking**

Rank	Hazard	Risk Ranking Score	Risk Category
1	Landslide/Mass Movements	51	High
2	Wildfire	51	High
3	Earthquake	36	High
4	Dam Failure	24	Medium
5	Severe Weather/Extreme Weather	24	Medium
6	Flood	15	Low
7	Drought	9	Low
8	Sea level Rise / Climate Change	0	Low
9	Tsunami	0	Low

### 11.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

## **Repetitive Loss Properties**

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**

No jurisdiction-specific issues were identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources.

## **11.7 STATUS OF PREVIOUS PLAN ACTIONS**

Table 11-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 11-13. Status of Previous Plan Actions**

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<b>HLS 1-</b> Establish open space fire fuels management – fire zones <b>Comment:</b> The Town continues its annual open space vegetation management and wildfire preparation outreach.			✓	HLS-7
<b>HLS 2 –</b> Develop and monitor a Storm Water Improvement Plan <b>Comment:</b> Plan developed in 2014; continuous monitoring/updating should occur.			✓	HLS-8
<b>HLS 3 -</b> Retrofit of historic buildings (old fire and police station) – wood and stucco construction <b>Comment:</b> Building assessment completed in October 2018			✓	HLS-9
<b>HLS 4 –</b> Develop Water Conservation Plan Outreach & Education <b>Comment:</b> Ongoing outreach and education; still a priority, should remain.			✓	HLS-10
<b>HLS 5 –</b> Develop Urban Forest Maintenance and Management Plan <b>Comment:</b> The Town completed a windshield tree maintenance survey, identified numerous right-of-way potential tree hazards and is noticing property owners. The Town has conducted an inventory of all Town-owned trees on Town property and has implemented a priority-based maintenance plan/schedule for them.			✓	HLS-11
<b>HLS 5 –</b> Continue to participate in developing and maintaining communications for first responders from cities and counties, special districts, state, and federal agencies. <b>Comment:</b> CCFD Community Risk and Resiliency Specialist continues to serve as Vice President on the Board of the San Mateo County Emergency Managers Association (EMA) and participates on the Bay Area Urban Area Security Initiative (UASI) Alert & Warning and Golden Eagle Exercise workgroups and serves on the Bay Area Joint Information System leadership committee to assist with improvement and utilization of Mass Notification and Response Systems that include SMCAlert, WebEOC and Zonehaven throughout the Bay Area Region. In November 2020 the Town hosted two Zonehaven “Know Your Zone” information sessions prior to the launch of the outreach campaign.			✓	HLS-12

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p><b>HLS 6</b> – Continue to sponsor the training and maintenance of CERT Program with residents</p> <p><b>Comment:</b> CCFD continues to sponsor the CERT Program for the Town of Hillsborough in collaboration with the Hillsborough Neighborhood Network volunteers and CERT Volunteer Coordinators to provide ongoing training opportunities for residents virtually. The program secured funding from Cal OES for FY 2019/2020 for training equipment and supplies. In June 2021, the program conducted the first in person hands-on skills day since COVID-19 began. The CCFD CERT Program will continue to provide a hybrid CERT online curriculum via the Cal OES Learning Management System as well as in person training to reach more residents.</p>			✓	HLS-13
<p><b>HLS 7</b> – Update GIS Mapping Storage and Accessibility</p> <p><b>Comment:</b> Regularly updated and integrated with other systems (e.g., Zonehaven)</p>			✓	HLS-14
<p><b>HLS 8</b> – Conduct sod removal / turf replacement plan through BAWSCA</p> <p><b>Comment:</b> Completed in 2015.</p>	✓			
<p><b>HLS 9</b> – Integrate updated hazard mitigation plan into plans, ordinances, and codes</p> <p><b>Comment:</b> The Town continues to update its hazard mitigation plan into plans, ordinances, and codes. The Town City Council adopted the revised Emergency Operations Plan (EOP) on September 9, 2019 which integrates the San Mateo County LHMP.</p>			✓	HLS-15
<p><b>HLS 10</b> – Maintain and monitor Wildland Urban Fire Interface</p> <p><b>Comment:</b> City Council adopted the revised WUI ordinance that confirms structure hardening and fuel modification on properties in the WUI areas. The revised ordinance went into effect January 1, 2021 due to COVID-19. Ongoing inspections by CCFD Fire Prevention staff continue. Town staff continues to conduct fuel modification and reduction on Town open space to reduce the wildfire risk.</p>			✓	HLS-16
<p><b>HLS 11</b> – Conduct Street improvements and mitigation measures from flood waters and landslides</p> <p><b>Comment:</b> Still relevant – should remain.</p>			✓	HLS-17
<p><b>HLS 12</b> – Develop a Water Supply Improvement Plan</p> <p><b>Comment:</b> Plan developed in 2016 – still relevant, should remain.</p>			✓	HLS-18
<p><b>HLS 13</b> – Strengthen Fire Hydrant Distribution System</p> <p><b>Comment:</b> Still relevant – should remain.</p>			✓	HLS-19
<p><b>Action G-1</b>—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.</p> <p><b>Comment:</b> The Town continues to work on this project and is reviewing options for grant funding. The Town continues to support and promote community education and involvement in programs such as California Earthquake Authority’s Earthquake Brace &amp; Bolt (EBB) Program. General Plan Update process to occur, action should remain.</p>			✓	HLS-20
<p><b>Action G-2</b>—Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.</p> <p><b>Comment:</b> The Town receives annual grant funding from Plan JPA, formally ABAG. The Town received annual grant funding from Plan JPA, formally ABAG to consider CRS, Tree City, and a Storm Ready programs.</p>			✓	HLS-21
<p><b>Action G-3</b>—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 adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.</p> <p><b>Comment:</b> Program reviewed by FEMA (approx. 2016) ordinance updated. We have very few properties impacted by the Flood Zone</p>			✓	HLS-22
<p><b>Action G-4</b>—Where feasible, implement a program to record high water marks following high-water events.</p> <p><b>Comment:</b> NA - We don’t have homes/ structures in the flood zone, just a few back yard areas.</p>				



Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<b>Action G-5</b> —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment. <b>Comment:</b> No record of progress on this to date – General Plan Update process to occur, action should remain.			✓	HLS-23
<b>Action G-6</b> —Consider the development and implementation of a Capital Improvements Program (CIP) to increase regulatory, financial, and technical capability to implement mitigation actions. <b>Comment:</b> Master plans done in 2015 to develop a proper CIP in sewer, water, and storm	✓			
<b>Action G-7</b> —Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting. <b>Comment:</b> No record of progress on this to date – should remain.			✓	HLS-24
<b>Action G-8</b> — Support the County-wide initiatives identified in Volume I of the hazard mitigation plan. <b>Comment:</b> Ongoing support of LHMP maintenance program.			✓	HLS-25
<b>Action G-9</b> — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan. <b>Comment:</b> Attendance at MJLHMP virtual steering committee meetings.			✓	HLS-26

## 11.8 HAZARD MITIGATION ACTION PLAN

Table 11-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 11-15 identifies the priority for each action. Table 11-16 summarizes the mitigation actions by hazard of concern and mitigation type.

**Table 11-14. Hazard Mitigation Action Plan Matrix**

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action HLS-1</b> —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
<i>Hazards Mitigated:</i> Landslide/Mass Movements, Earthquake, Severe Weather						
Existing	7, 8, 9, 13	Public Works	CCFD	High	HMGP, BRIC, FMA	Short-term
<b>Action HLS-2</b> — Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including General Plan Update, Housing Element, and Zoning Code						
<i>Hazards Mitigated:</i> Landslide/Mass Movements, Wildfire, Earthquake, Dam Failure, Severe Weather, Flood, Drought, Climate Change, Tsunami						
New & Existing	3, 5, 6, 7, 10	Building & Planning	N/A	Low	Staff Time, General Funds	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action HLS -3</b> —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<u>Hazards Mitigated:</u> Landslide/Mass Movements, Wildfire, Earthquake, Dam Failure, Severe Weather, Flood, Drought, Climate Change, Tsunami						
New & Existing	9, 10, 12	Public Works	CCFD	Low	Staff Time, General Funds	Short-term
<b>Action HLS -4</b> —Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:						
<ul style="list-style-type: none"> <li>• Enforce 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>						
<u>Hazards Mitigated:</u> Flood						
New & Existing	1, 8, 14	Public Works	City Manager's Office	Low	Staff Time, General Funds	Ongoing
<b>Action HLS -5</b> —Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following:						
<ul style="list-style-type: none"> <li>• Continue partnership with Peninsula Clean Energy</li> <li>• Comply with SB 1383 requirements to reduce organics disposal</li> <li>• Others?</li> </ul>						
<u>Hazards Mitigated:</u> Climate Change						
New & Existing	5, 7	City Manager's Office	Public Works	Low	Staff Time, General Funds	Short-term
<b>Action HLS-6</b> —Purchase generators for critical facilities and infrastructure that lack adequate backup power, including Public Works Administration (SCADA), Police Department, Fire Stations, Town Hall						
<u>Hazards Mitigated:</u> Dam failure, earthquake, flooding, landslide, severe weather, tsunami, wildfire						
Existing	9, 11	Public Works	City Manager's Office			
<b>Action HLS -7</b> —Continue open space fire fuels management – fire zones						
<u>Hazards Mitigated:</u> Wildfire						
Existing	8, 9, 14	CCFD	Public Works	Low	Staff Time, General Funds	Ongoing
<b>Action HLS -8</b> —Monitor and update Storm Water Improvement Plan						
<u>Hazards Mitigated:</u> Flood, Earthquake, Severe/Extreme Weather						
New & Existing	6, 7, 8, 9	Public Works	N/A	Low	Staff Time, General Funds	Ongoing
<b>Action HLS -9</b> —Retrofit of historic buildings (old fire and police station) – wood and stucco construction						
<u>Hazards Mitigated:</u> Earthquake, Severe Weather/Extreme Weather						
New	6, 8, 10, 13	City Manager's Office	CCFD	High	Outside funding staff time	Long-term
<b>Action HLS -10</b> —Execute Water Conservation Plan outreach and education						
<u>Hazards Mitigated:</u> Drought, Flood, Severe/Extreme Weather						
Existing	1, 2, 3	Public Works	N/A	Low	Staff Time, General Funds	Ongoing
<b>Action HLS -11</b> —Develop Urban Forest Maintenance and Management Plan						
<u>Hazards Mitigated:</u> Severe/Extreme Weather, Drought						
Existing	1, 6, 7, 8, 9, 10, 11, 13	Public Works	N/A	Medium	Staff Time, General Funds	Ongoing
<b>Action HLS -12</b> —Continue to participate in developing and maintaining communications for first responders from cities and counties, special districts, state, and federal agencies						
<u>Hazards Mitigated:</u> Landslide/Mass Movements, Wildfire, Earthquake, Dam Failure, Severe Weather, Flood, Drought, Climate Change, Tsunami						
Existing	2, 10, 12	CCFD	N/A	Low	Staff Time, General Funds	Ongoing
<b>Action HLS -13</b> —Continue to sponsor the training and maintenance of CERT Program with residents						
<u>Hazards Mitigated:</u> Landslide/Mass Movements, Wildfire, Earthquake, Dam Failure, Severe Weather, Flood, Drought, Climate Change, Tsunami						
Existing	1, 2, 3, 4, 5, 8, 10	CCFD	N/A	Low	Staff Time, General Funds	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action HLS -14</b> — Update GIS Mapping Storage and Accessibility						
<i>Hazards Mitigated:</i> Landslide/Mass Movements, Wildfire, Earthquake, Dam Failure, Severe Weather, Flood, Drought, Climate Change, Tsunami						
New & Existing	1, 2, 3, 4, 5, 7, 8, 10, 11	Public Works	N/A	Medium	Staff Time, General Funds	Ongoing
<b>Action HLS-15</b> — Integrate updated hazard mitigation plan into plans, ordinances, and codes						
<i>Hazards Mitigated:</i> Landslide/Mass Movements, Wildfire, Earthquake, Dam Failure, Severe Weather, Flood, Drought, Climate Change, Tsunami						
New	1, 2, 5, 6, 7, 8, 10, 13	Building & Planning	N/A	Low	Staff Time, General Funds	Ongoing
<b>Action HLS-16</b> — Maintain and monitor Wildland Urban Fire Interface						
<i>Hazards Mitigated:</i> Wildfire, Severe Weather/Extreme Weather						
New & Existing	1, 5, 6, 8, 13, 14	CCFD	City Manager's Office	Low	Staff Time, General Funds	Ongoing
<b>Action HLS -17</b> — Conduct Street improvements and mitigation measures from flood waters and landslides						
<i>Hazards Mitigated:</i> Landslide/Mass Movements, Earthquake, Flood						
New & Existing	6, 8, 13, 14	Public Works	N/A	High	FEMA Hazard Mitigation Grants	Long-Term
<b>Action HLS -18</b> — Implement Water Supply Improvement Plan						
<i>Hazards Mitigated:</i> Wildfire, Drought						
Existing	1, 2, 3, 5, 6, 7, 8, 10	Public Works	CCFD	High	General Fund	Long-Term
<b>Action HLS -19</b> — Strengthen Fire Hydrant Distribution System						
<i>Hazards Mitigated:</i> Wildfire, Drought						
Existing	2, 6, 7, 8, 10, 11	Public Works	CCFD	High	General Fund	Long-Term
<b>Action HLS-20</b> — 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.						
<i>Hazards Mitigated:</i> Landslide/Mass Movements, Wildfire, Earthquake, Dam Failure, Severe Weather, Flood, Drought, Climate Change, Tsunami						
New & Existing	6, 8, 10, 11, 13	City Manager's Office	N/A	High	FEMA Hazard Mitigation Grants	Long-Term
<b>Action HLS -21</b> — Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.						
<i>Hazards Mitigated:</i> Landslide/Mass Movements, Wildfire, Earthquake, Dam Failure, Severe Weather, Flood, Drought, Climate Change, Tsunami						
New & Existing	1, 2, 5, 10, 11, 12	CCFD	N/A	Low	Staff Time, General Funds	Long-term
<b>Action HLS -22</b> — 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 adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.						
<i>Hazards Mitigated:</i> Flood						
New & Existing	1, 2, 4, 5, 6	Public Works	N/A	Low	Staff Time, General Funds	Ongoing
<b>Action HLS -23</b> — Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
<i>Hazards Mitigated:</i> Landslide/Mass Movements, Wildfire, Earthquake, Dam Failure, Severe Weather, Flood, Drought, Climate Change, Tsunami						
New & Existing	1, 2, 6, 7, 8, 9, 10	Building & Planning	City Manager's Office	Low	Staff Time, General Funds	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action HLS -24</b> — Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.						
<i>Hazards Mitigated:</i> Landslide/Mass Movements, Earthquake, Severe Weather, Flood						
New & Existing	6, 8, 9, 13	Building & Planning	N/A	Low	Staff Time, General Funds	Ongoing
<b>Action HLS -25</b> —Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
<i>Hazards Mitigated:</i> Landslide/Mass Movements, Wildfire, Earthquake, Dam Failure, Severe Weather, Flood, Drought, Climate Change, Tsunami						
New & Existing	1, 2, 12	City Manager's Office	N/A	Low	Staff Time, General Funds	Ongoing
<b>Action HLS -26</b> — Ongoing support of LHMP maintenance program.						
<i>Hazards Mitigated:</i> Landslide/Mass Movements, Wildfire, Earthquake, Dam Failure, Severe Weather, Flood, Drought, Climate Change, Tsunami						
New & Existing	1, 2, 3, 10, 11, 12	City Manager's Office	CCFD, San Mateo County	Low	Staff Time, General Funds	Ongoing
<b>Action HLS -27</b> — 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.						
<i>Hazards Mitigated:</i> Climate Change/Sea Level Rise, Flood, Severe Weather, Tsunami						
New & Existing	1, 5, 6, 7, 8	Flood & Sea Level Rise Dist. (FSLRRD)	County, all municipalities including Hillsborough	Medium	General Funds	Short-Term
<b>Action HLS -28</b> — Incorporate consideration of the FEMA 100-year tide and sea level rise, and climate change-driven extreme storms, into land use planning and shoreline development. This includes new policies by local jurisdictions, and County and City actions regarding their General Plans, Climate-related Plans, and the development applications.						
<i>Hazards Mitigated:</i> Climate Change/Sea Level Rise, Flood, Severe Weather						
New & Existing	1, 2, 5, 6, 7, 8, 9, 13, 14	FSLRRD	County, all municipalities including Hillsborough	Low	General Fund, Private Developer, Town Capital Project Funding	Ongoing
<b>Action HLS -29</b> — Continue to identify and plan upgrades of utility systems, equipment, and critical facilities, including pump stations, generators, tide gates, stream gages, open channel, and culvert/pipeline infrastructure.						
<i>Hazards Mitigated:</i> Climate Change/Sea Level Rise, Flood, Severe Weather						
New & Existing	2, 6, 7, 8	FSLRRD	County, all municipalities including Hillsborough, San Mateo Resource Conservation District	Medium	Tax-Funded Flood Zones, State Grants, Federal Grants (FEMA BRIC/HMGP)	Ongoing
<b>Action HLS -30</b> — Support green infrastructure projects that enhance resiliency to natural disasters and incorporate green design elements into hazard mitigation projects where feasible.						
<i>Hazards Mitigated:</i> Climate Change/Sea Level Rise, Landslide, Flood, Severe Weather, Drought						
New & Existing	2, 6, 7, 8, 14	County, C/CAG (Action will be jointly implemented by both agencies)	FSLRRD, all municipalities including Hillsborough, San Mateo Resource Conservation District	Medium	Tax-Funded Flood Zones, Property/Vehicle Fees, Stormwater Fees, State Grants (Caltrans, CA DWR), Federal Grants (EPA), City Capital Project Funding	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action HLS -31</b> — Improve stormwater drainage to alleviate repeated localized flooding, especially storm drain systems connected to FSLRRD Flood Zone channels and infrastructure.						
<i>Hazards Mitigated:</i> Climate Change/Sea Level Rise, Flood, Severe Weather						
New & Existing	1, 2, 4, 6, 7, 8	FSLRRD	All municipalities including Hillsborough, County	Medium	Tax-Funded Flood Zones, Property/Vehicle Fees, Stormwater Fees, State Grants (Caltrans, CA DWR), EPA Grants, City Capital Project Funding	Ongoing
<b>Action HLS -32</b> — Plan, design, and implement long-term resilience to sea level rise, extreme storms, and coastal erosion for culverts, roadways, and bridges in the vicinity of other flood protection projects, including assets identified in the Caltrans District 4 Adaptation Priorities Report.						
<i>Hazards Mitigated:</i> Climate Change/Sea Level Rise, Landslide, Severe Weather						
New & Existing	2, 4, 6, 7, 8, 13	FSLRRD	Caltrans, County, all municipalities including Hillsborough, San Mateo Resource Conservation District	Medium	State Grants (Caltrans), Federal Grants (FEMA BRIC/HMGP)	Ongoing
<b>Action HLS -33</b> — Identify and pursue strategies to enhance recycled water infrastructure planning/implementation in the vicinity of FSLRRD projects.						
<i>Hazards Mitigated:</i> Drought						
New & Existing	1, 6, 7, 8	FSLRRD	County, all municipalities including Hillsborough, San Mateo Resource Conservation District	Medium	State Grants (CA Resilience Challenge, CA DWR, Prop 68), Federal Grants (EPA, FEMA BRIC/HMGP)	Ongoing
<b>Action HLS -34</b> — Improve community response to flood emergencies in various ways, including but not limited to: - Upgrade and expand the countywide flood early warning system. - Conduct community flood preparation, education, and recovery outreach.						
<i>Hazards Mitigated:</i> Climate Change/Sea Level Rise, Flood, Severe Weather						
New & Existing	2, 3, 7, 8, 9, 10, 11	FSLRRD	County, all municipalities including Hillsborough	Low	State Grant (CA DWR SWERG)	Short-term
<b>Action HLS -35</b> — Advance the long-term resilience of Hillsborough and Portola Valley to extreme storms, as well as provide environmental, recreation, and community/connectivity enhancements where possible. This may include regional stormwater capture projects that also benefit downstream, flood-prone communities.						
<i>Hazards Mitigated:</i> Flood, Severe Weather						
New & Existing	2, 4, 6, 7, 8, 14	FSLRRD, San Mateo Resource Conservation District (Action will be jointly implemented by both agencies)	Hillsborough, Portola Valley, C/CAG	Medium	Tax-Funded Flood Zones, Property/Vehicle Fees, Stormwater Fees, State Grants (Caltrans, CA DWR), Federal Grants (EPA), City Capital Project Funding	Ongoing

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

**Table 11-15. Mitigation Action Priority**

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

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

Table 11-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
<b>High-Risk Hazards</b>								
<b>Landslide/ Mass Movements</b>	HLS-2, HLS-3, HLS-13, HLS-15, HLS-23, HLS-24, HLS-25, HLS-26, HLS-30, HLS-32	HLS-1, HLS-2, HLS-6, HLS-15, HLS-17, HLS-23, HLS-24	HLS-13, HLS-14, HLS-21, HLS-23, HLS-24	HLS-2, HLS-15, HLS-23, HLS-32	HLS-6, HLS-12, HLS-23	HLS-1, HLS-17, HLS-20, HLS-23, HLS-24, HLS-30	HLS-23, HLS-30, HLS-32	HLS-3, HLS-14, HLS-21, HLS-23
<b>Wildfire</b>	HLS-2, HLS-3, HLS-7, HLS-13, HLS-15, HLS-16, HLS-18, HLS-23, HLS-25, HLS-26	HLS-2, HLS-6, HLS-7, HLS-15, HLS-16, HLS-19, HLS-23	HLS-13, HLS-14, HLS-16, HLS-21, HLS-23	HLS-2, HLS-7, HLS-15, HLS-16, HLS-18, HLS-23	HLS-6, HLS-7, HLS-12, HLS-16, HLS-19, HLS-23	HLS-16, HLS-20, HLS-23	HLS-16, HLS-18, HLS-23	HLS-3, HLS-14, HLS-16, HLS-21, HLS-23
<b>Earthquake</b>	HLS-2, HLS-3, HLS-8, HLS-9, HLS-13, HLS-15, HLS-23, HLS-24, HLS-25, HLS-26	HLS-1, HLS-2, HLS-9, HLS-15, HLS-17, HLS-23, HLS-24	HLS-13, HLS-14, HLS-21, HLS-23, HLS-24	HLS-2, HLS-15, HLS-23	HLS-12, HLS-23	HLS-1, HLS-8, HLS-9, HLS-17, HLS-20, HLS-23, HLS-24	HLS-23	HLS-3, HLS-14, HLS-21, HLS-23
<b>Medium-Risk Hazards</b>								
<b>Dam Failure</b>	HLS-2, HLS-3, HLS-13, HLS-15, HLS-23, HLS-25, HLS-26	HLS-2, HLS-6, HLS-15, HLS-23	HLS-13, HLS-14, HLS-21, HLS-23	HLS-2, HLS-15, HLS-23	HLS-6, HLS-12, HLS-23	HLS-20, HLS-23	HLS-23	HLS-3, HLS-14, HLS-21, HLS-23
<b>Severe Weather/ Extreme Weather</b>	HLS-2, HLS-3, HLS-8, HLS-9, HLS-10, HLS-11, HLS-13, HLS-15, HLS-16, HLS-23, HLS-24, HLS-25, HLS-26, HLS-27, HLS-28, HLS-30, HLS-32	HLS-1, HLS-2, HLS-6, HLS-9, HLS-10, HLS-15, HLS-16, HLS-23, HLS-24	HLS-13, HLS-14, HLS-16, HLS-21, HLS-23, HLS-24, HLS-34	HLS-2, HLS-10, HLS-11, HLS-15, HLS-16, HLS-23, HLS-32, HLS-35	HLS-6, HLS-12, HLS-16, HLS-23	HLS-1, HLS-8, HLS-9, HLS-16, HLS-20, HLS-23, HLS-24, HLS-27, HLS-30, HLS-31	HLS-10, HLS-11, HLS-16, HLS-23, HLS-27, HLS-28, HLS-29, HLS-30, HLS-31, HLS-32, HLS-35	HLS-3, HLS-14, HLS-16, HLS-21, HLS-23, HLS-27, HLS-28, HLS-29, HLS-34

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
<b>Low-Risk Hazards</b>								
<b>Flood</b>	HLS-2, HLS-3, HLS-4, HLS-8, HLS-10, HLS-13, HLS-15, HLS-21, HLS-22, HLS-23, HLS-24, HLS-25, HLS-26, HLS-27, HLS-28, HLS-30, HLS-32	HLS-2, HLS-6, HLS-10, HLS-15, HLS-17, HLS-21, HLS-22, HLS-23, HLS-24, HLS-23	HLS-4, HLS-13, HLS-14, HLS-21, HLS-22, HLS-23, HLS-24, HLS-34	HLS-2, HLS-4, HLS-10, HLS-15, HLS-23, HLS-32, HLS-35	HLS-6, HLS-12, HLS-23	HLS-8, HLS-17, HLS-20, HLS-23, HLS-24, HLS-27, HLS-29, HLS-30, HLS-31	HLS-10, HLS-23, HLS-27, HLS-28, HLS-29, HLS-30, HLS-31, HLS-32, HLS-35	HLS-3, HLS-14, HLS-21, HLS-23, HLS-27, HLS-28, HLS-34
<b>Drought</b>	HLS-2, HLS-3, HLS-10, HLS-11, HLS-13, HLS-15, HLS-18, HLS-23, HLS-25, HLS-26, HLS-30, HLS-33	HLS-2, HLS-15, HLS-19, HLS-23	HLS-10, HLS-13, HLS-14, HLS-21, HLS-23	HLS-2, HLS-10, HLS-11, HLS-15, HLS-18, HLS-23	HLS-12, HLS-19, HLS-23	HLS-20, HLS-23, HLS-30	HLS-10, HLS-11, HLS-18, HLS-23, HLS-30, HLS-33	HLS-3, HLS-14, HLS-21, HLS-23
<b>Sea Level Rise/ Climate Change</b>	HLS-2, HLS-3, HLS-5, HLS-13, HLS-15, HLS-23, HLS-25, HLS-26, HLS-27, HLS-28, HLS-30, HLS-32	HLS-2, HLS-15, HLS-23	HLS-13, HLS-14, HLS-21, HLS-23, HLS-34	HLS-2, HLS-15, HLS-23, HLS-32	HLS-12, HLS-23	HLS-20, HLS-23, HLS-27, HLS-29, HLS-30, HLS-31	HLS-5, HLS-23, HLS-27, HLS-28, HLS-29, HLS-30, HLS-31, HLS-32, HLS-34	HLS-3, HLS-5, HLS-14, HLS-21, HLS-23, HLS-27, HLS-28
<b>Tsunami</b>	HLS-2, HLS-3, HLS-13, HLS-15, HLS-23, HLS-25, HLS-26, HLS-27	HLS-2, HLS-6, HLS-15, HLS-23	HLS-13, HLS-14, HLS-21, HLS-23	HLS-2, HLS-15, HLS-23	HLS-6, HLS-12, HLS-23	HLS-20, HLS-23, HLS-27	HLS-23, HLS-27	HLS-3, HLS-14, HLS-21, HLS-23, HLS-27

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

## 11.9 PUBLIC OUTREACH

Table 11-17 lists public outreach activities for this jurisdiction.



Table 11-17. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
LHMP Survey #1 – advertised in weekly town e-announcements	March - April	~ 20
LHMP Survey #1 – advertised in weekly town e-announcements	June	~20
LHMP Public meeting	3/25/2021	Unknown
Neighborfest Annual Preparedness Event	9/22/2019, 9/12/2020	800, 82
Hillsborough neighborhood network	Ongoing	~500
CERT Program (monthly newsletter)	Ongoing	165
Assemblyman Kevin Mullins Events: (1) Are You Ready? (2) Wildfire Preparedness	10/29/2020, 5/26/2021	424, 433
Firewise USA Group	Ongoing	~14

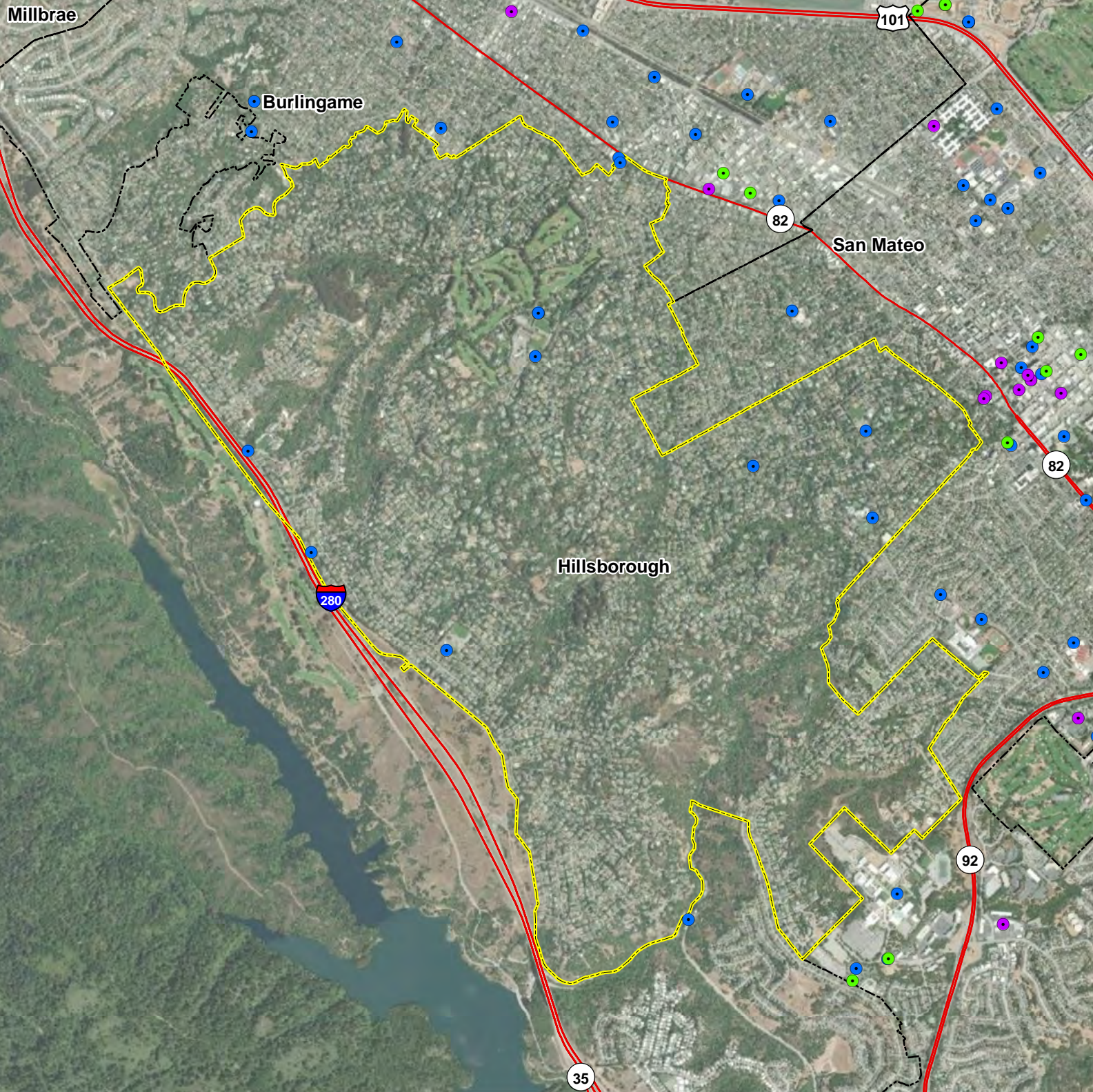
## 11.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **Town of Hillsborough Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Town of Hillsborough Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Town of Hillsborough General Plan (Housing Element)** – Existing General Plan was reviewed to identify opportunities for action plan integration.
- **Town of Hillsborough Climate Action Plan** – The Climate Action Plan was reviewed to identify opportunities for plan integration.
- **Bay Area Earthquake Plan** – The Bay Area Earthquake Plan is a component of the Concept of Operations for the joint state and federal response to a catastrophic incident in California.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.



# Hillsborough

Critical Facilities, 1 of 2

- Food, Water, Shelter
- Health and Medical
- Safety and Security
- Selected City
- Incorporated Cities
- County Boundary
- Highways

Data Sources: ESRI Basemap, San Mateo Co., DHS HIFLD



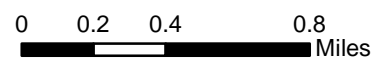


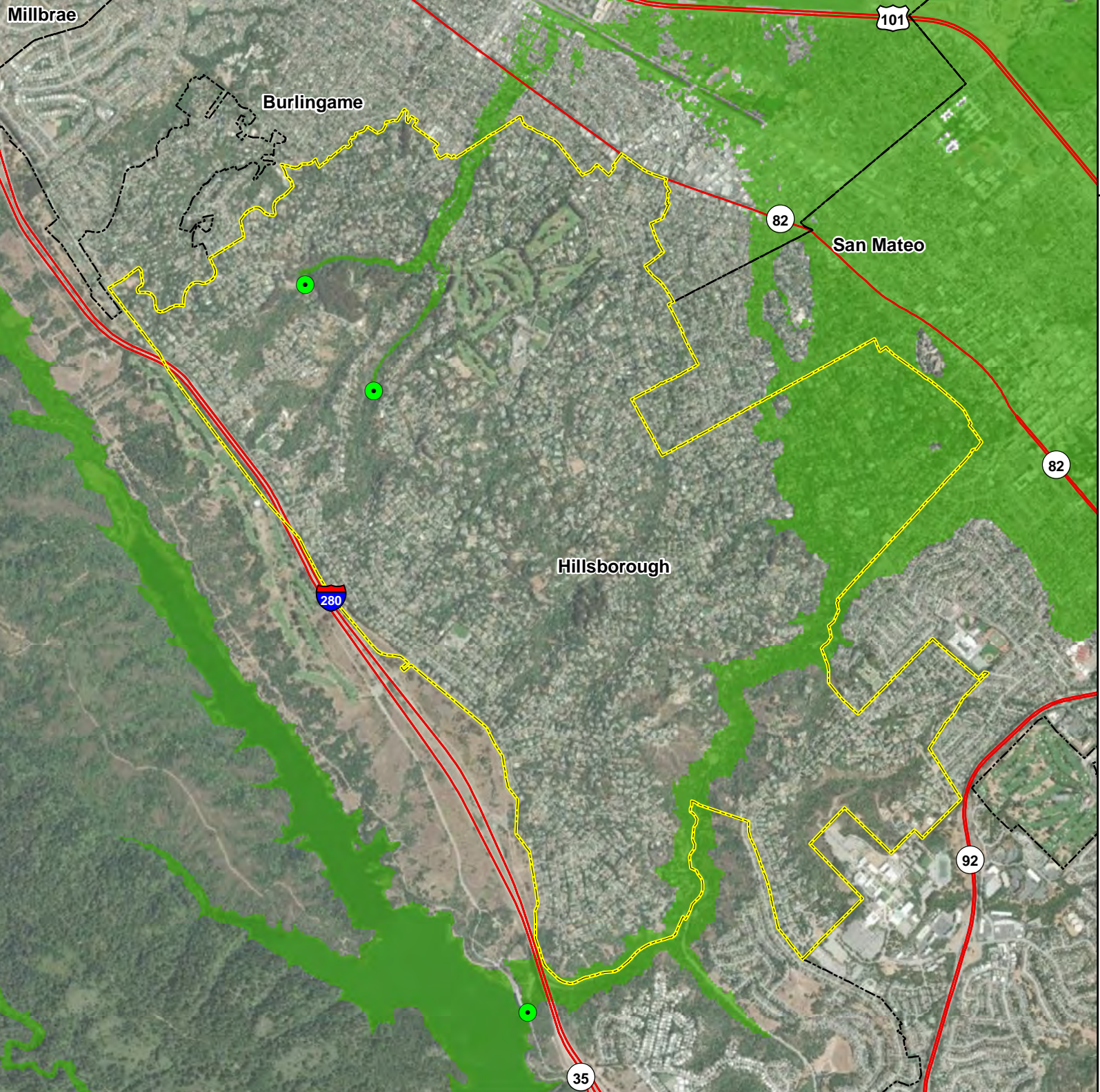
# Hillsborough

## Critical Facilities, 2 of 2

- Communications
- Energy
- Hazardous Materials
- Transportation
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary
- Highways

Data Sources: ESRI Basemap, San Mateo Co., DHS HIFLD





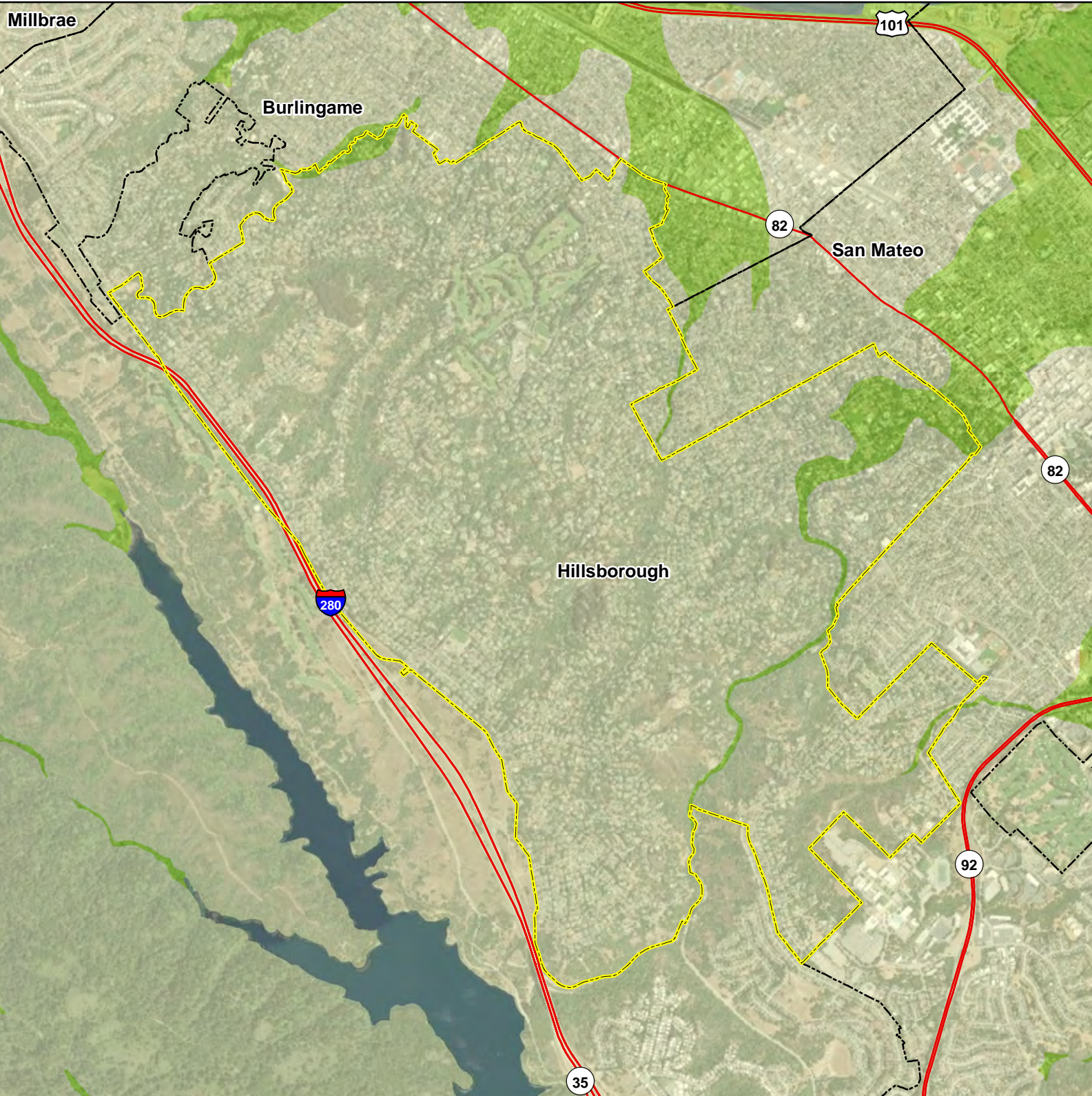
# Hillsborough

## Dam Failure Inundation Area Used for Risk Assessment

- Inundation Area
- Dam
- Selected City
- Incorporated Cities
- County Boundary
- Highways








Data Sources: ESRI Basemap, San Mateo Co., CA DWR



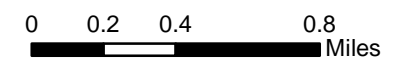


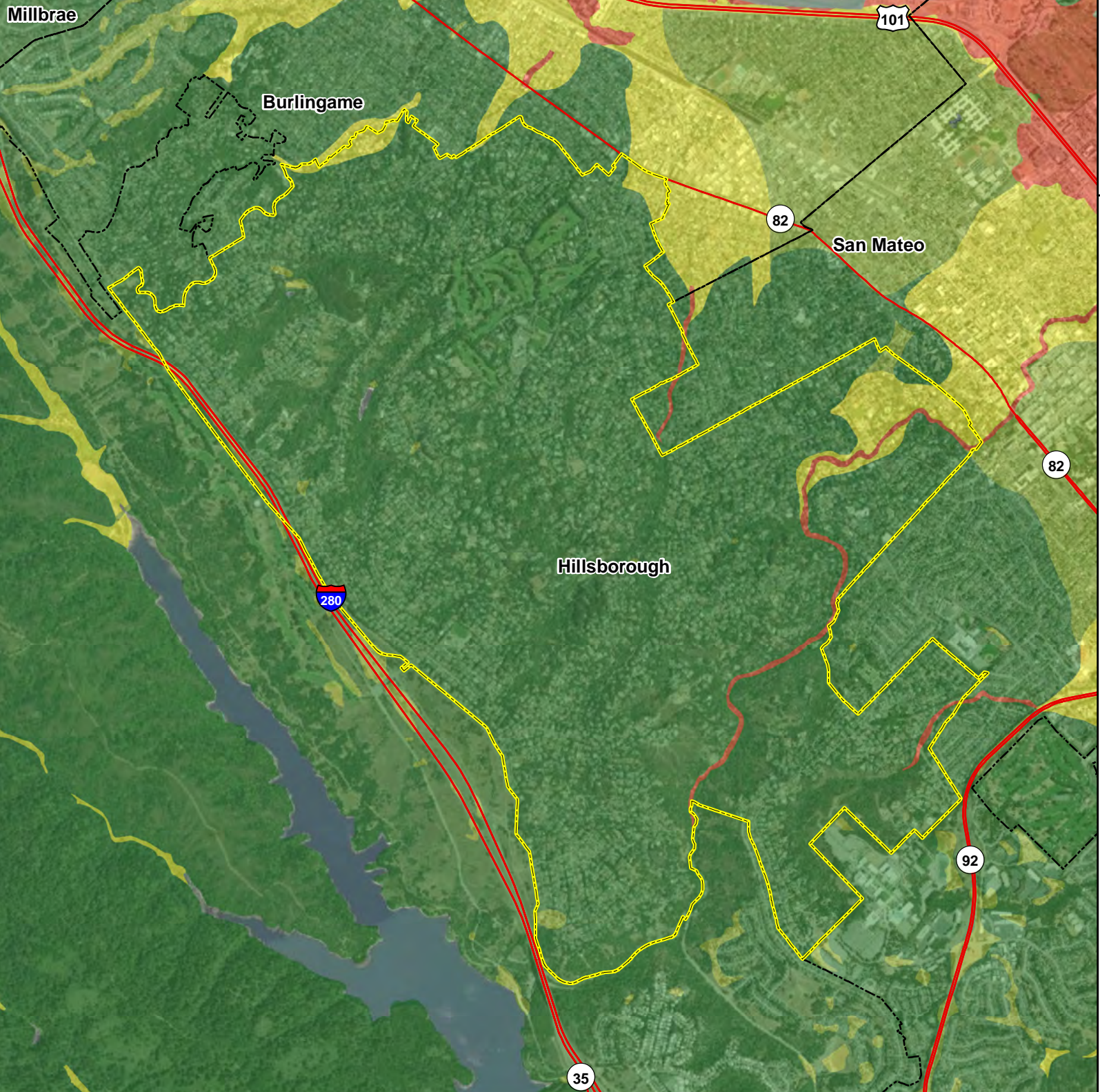
# Hillsborough

## NEHRP Soil Class

-  C (Dense soil/soft rock)
-  D (Stiff soil)
-  E (Soft clay)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap, San Mateo Co., CGS





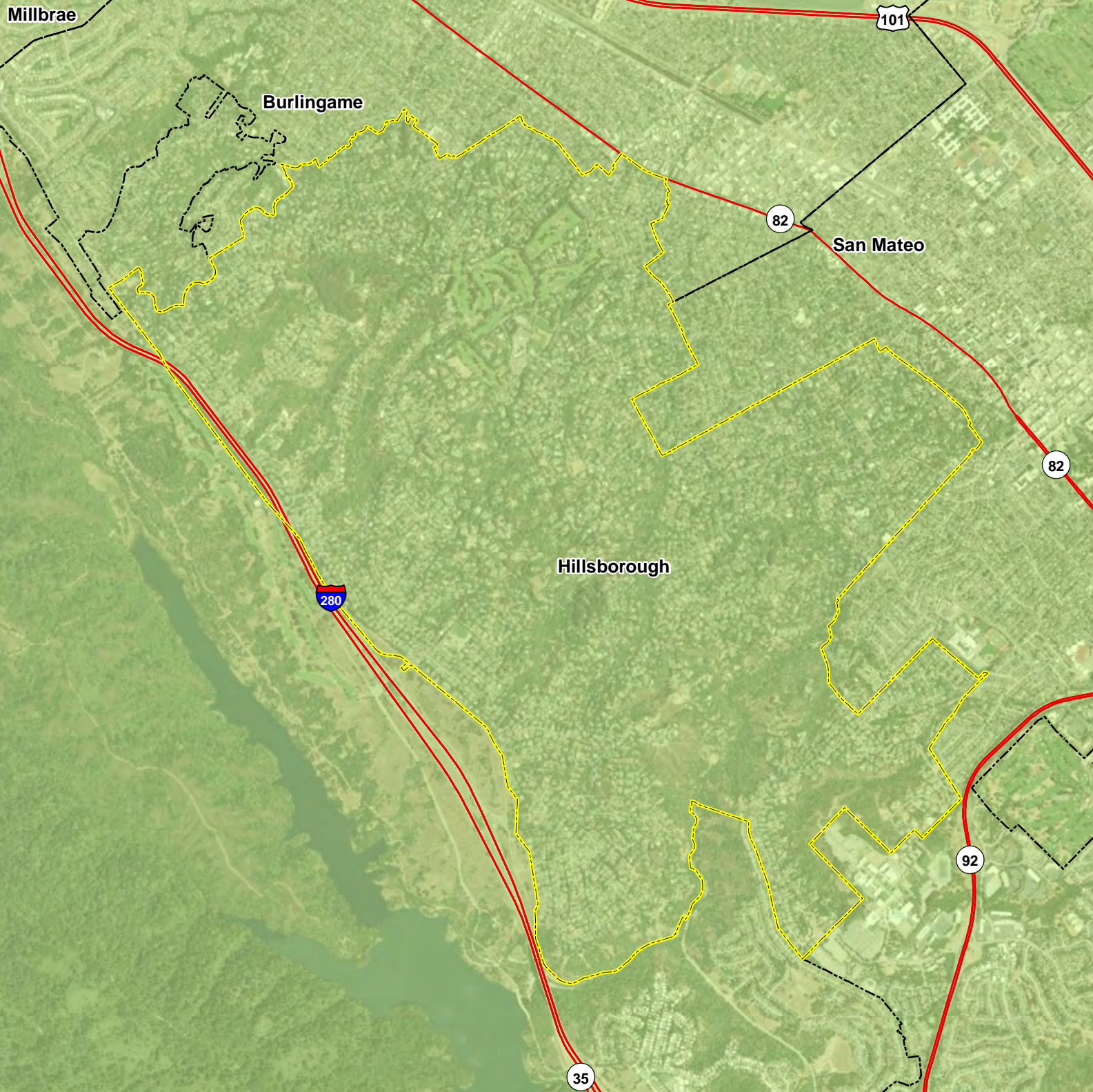
# Hillsborough

## Liquefaction Susceptibility

- Very Low
- Low
- Moderate
- High
- Very High
- Selected City
- Incorporated Cities
- County Boundary
- Highways

Data Sources: ESRI Basemap, San Mateo Co., ABAG (USGS)





# Hillsborough

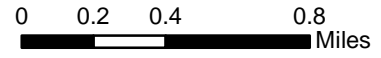
## Butano M6.93 Earthquake Scenario

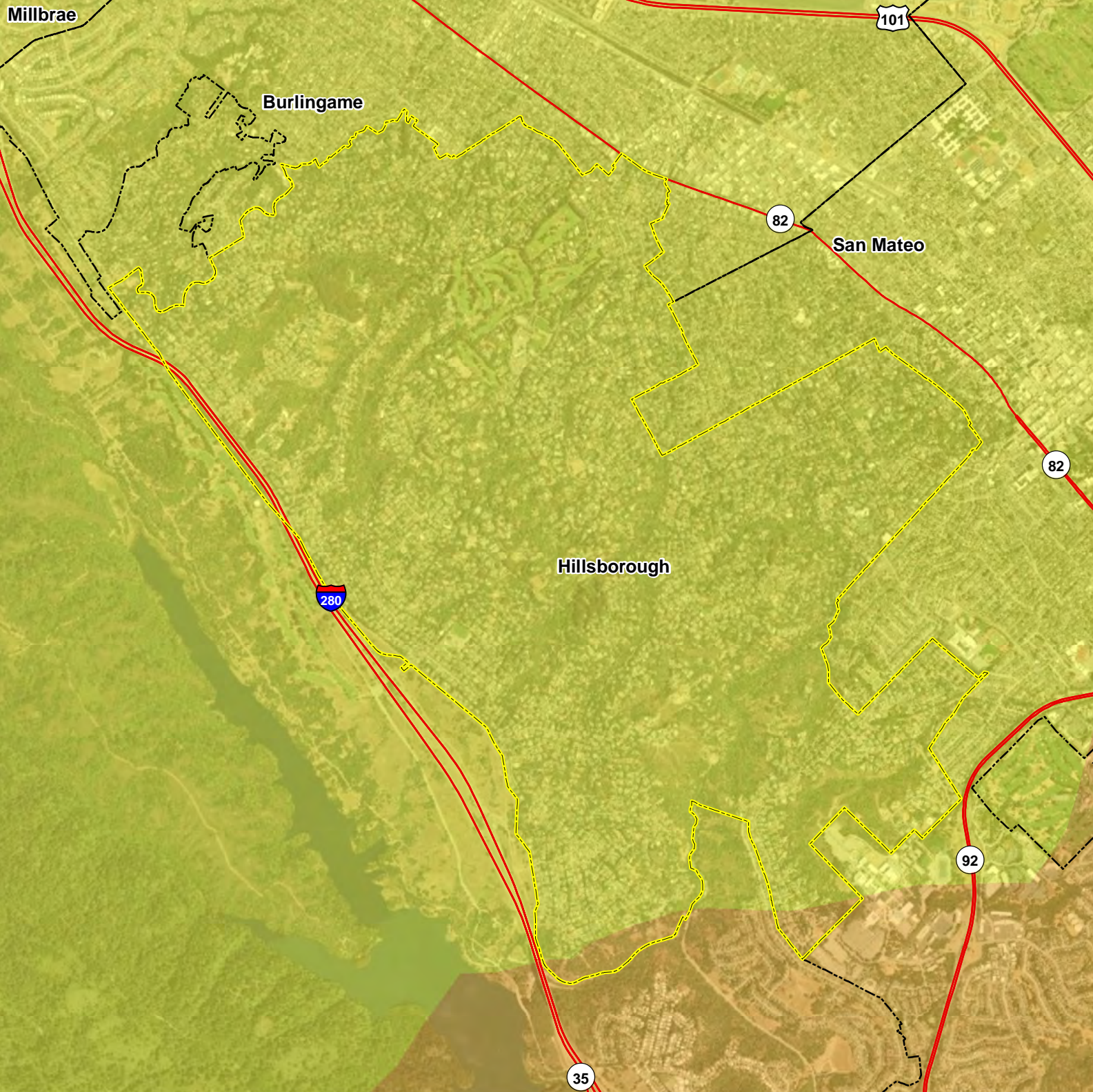
### Mercalli Intensity Scale

- VI (Strong/Light)
- Selected City
- Incorporated Cities
- County Boundary
- Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS





# Hillsborough

## Monte Vista Shannon M7.14 Earthquake Scenario

### Mercalli Intensity Scale

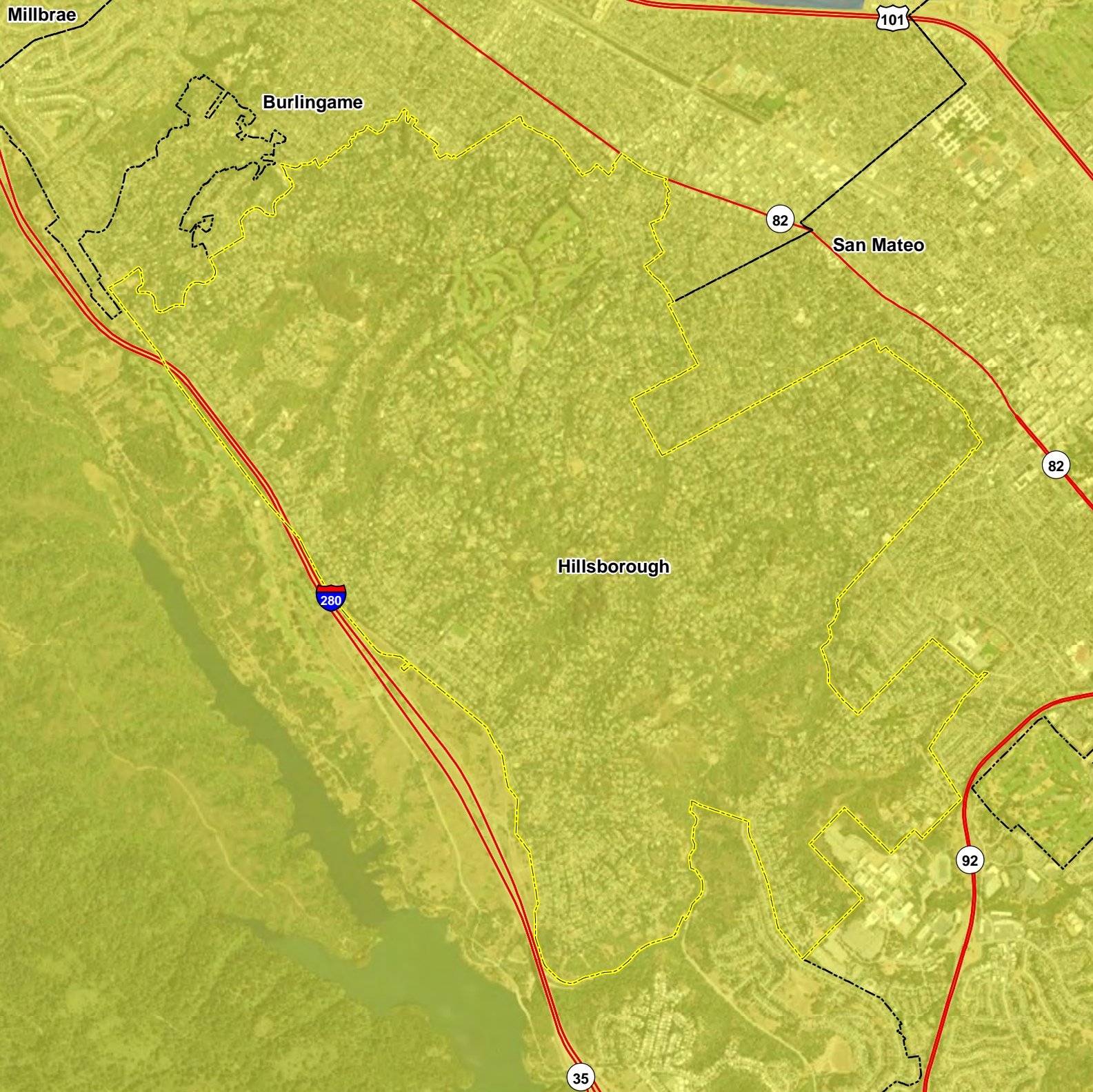
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- Selected City
- Incorporated Cities
- County Boundary
- Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS







# Hillsborough

## 100-Year Probabilistic Earthquake Scenario

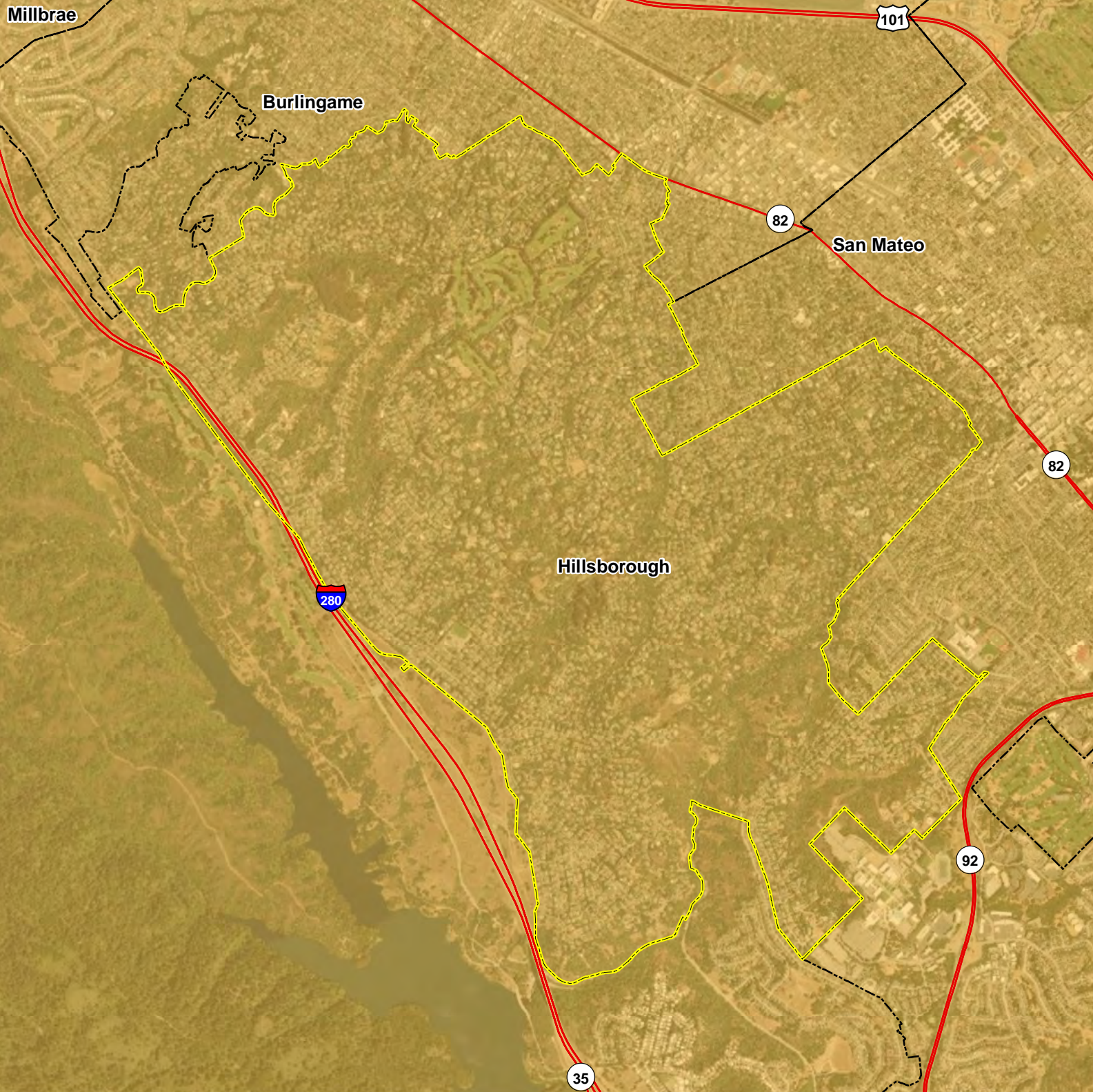
### Mercalli Intensity Scale

-  VII (Very Strong/Moderate)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS





# Hillsborough

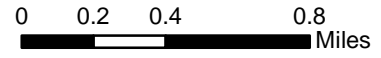
## San Andreas Peninsula M7.38 Earthquake Scenario

### Mercalli Intensity Scale

-  VIII (Severe/Moderate-Heavy)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS





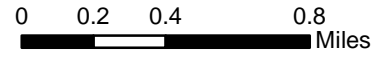
# Hillsborough

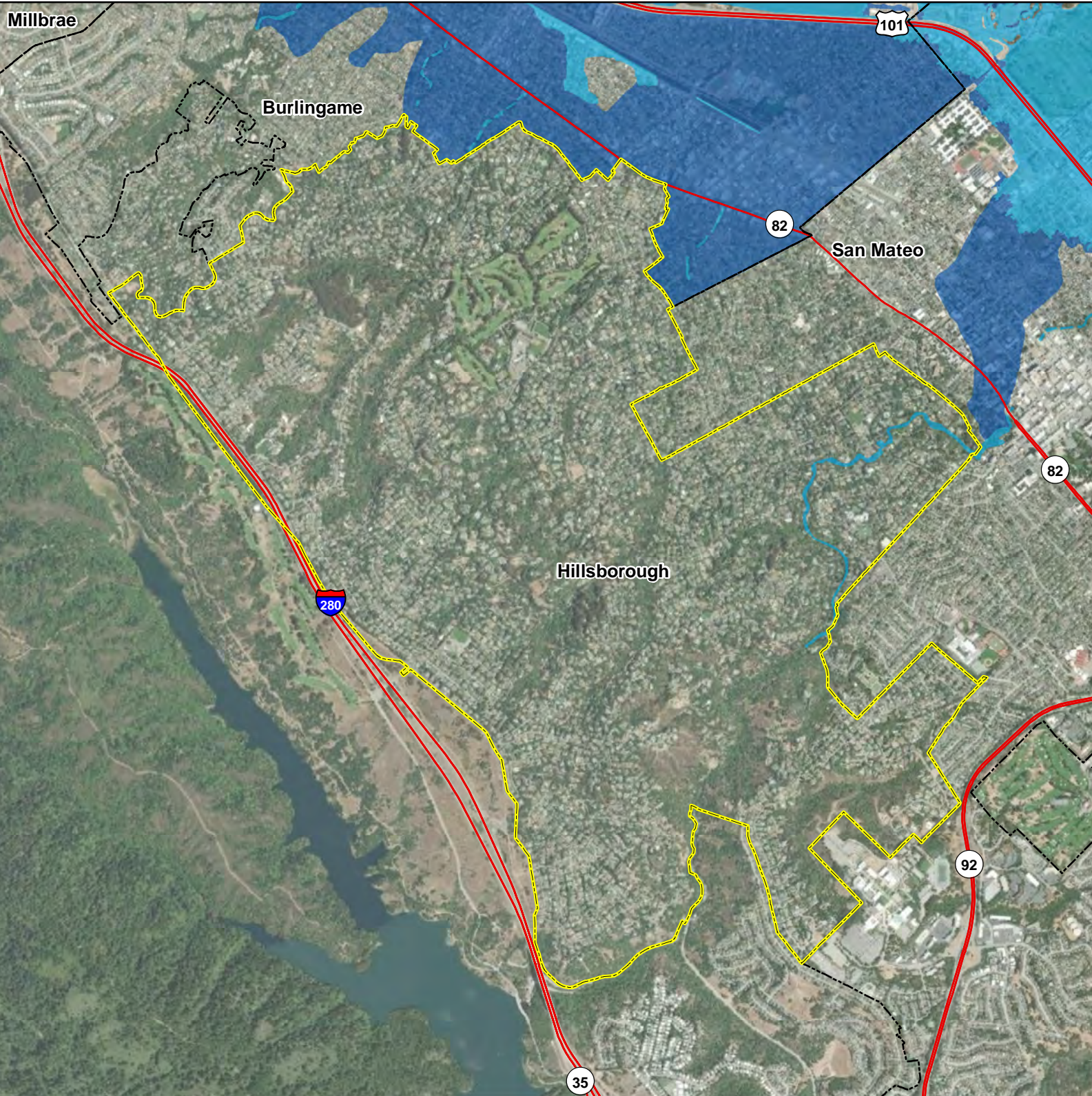
## San Gregorio North M7.44 Earthquake Scenario

- Mercalli Intensity Scale**
- VII (Very Strong/Moderate)
  - Selected City
  - Incorporated Cities
  - County Boundary
  - Highways

Intensity scale described as:  
(perceived shaking / potential damage)







Data Sources: ESRI Basemap,  
San Mateo Co., USGS



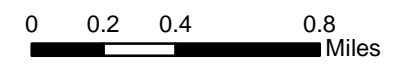


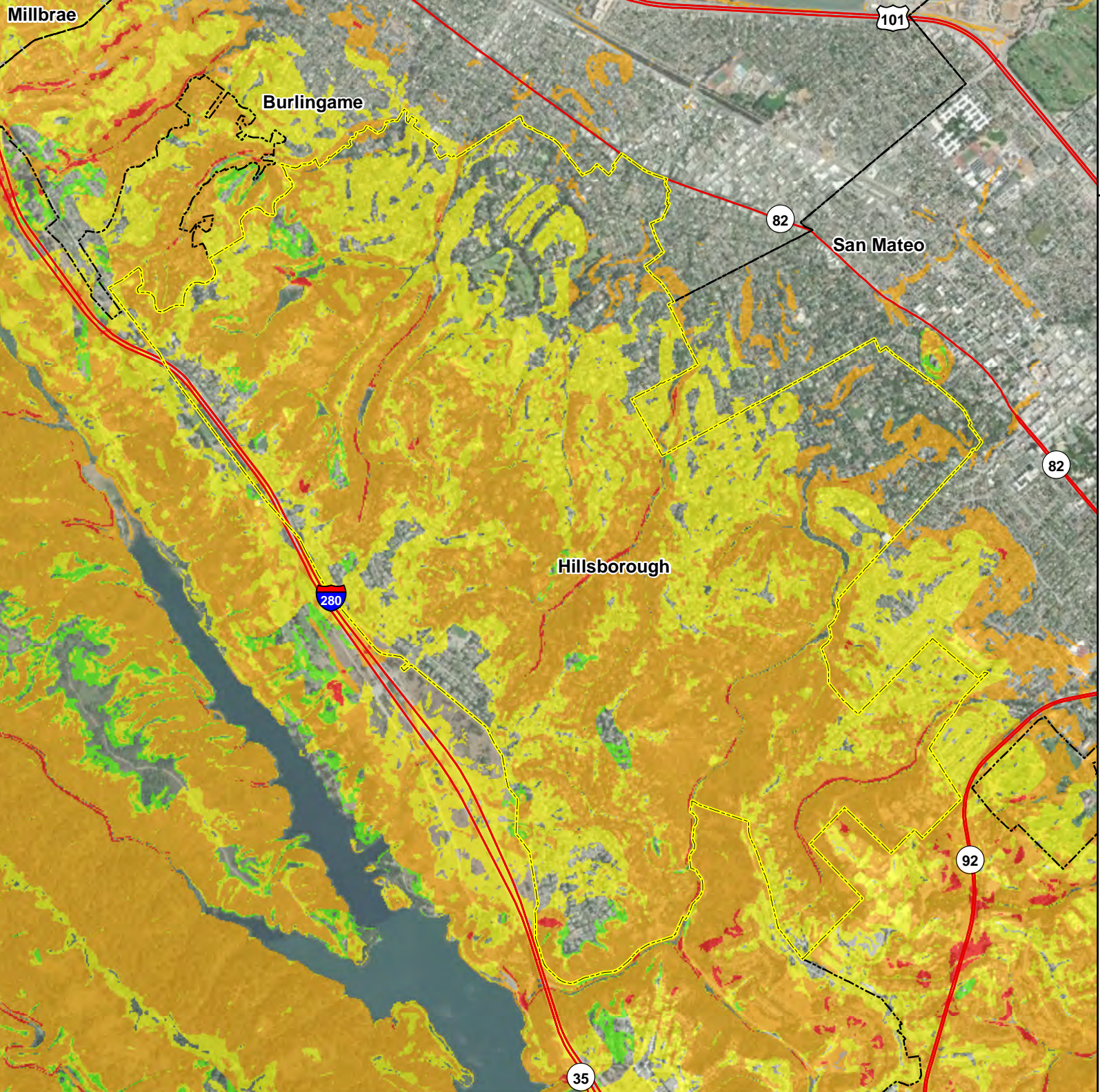
# Hillsborough

## FEMA Flood Hazard Areas

-  1% Annual Chance Flood (100-Year)
-  0.2% Annual Chance Flood (500-Year)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap, San Mateo Co., FEMA



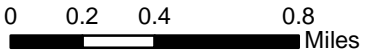


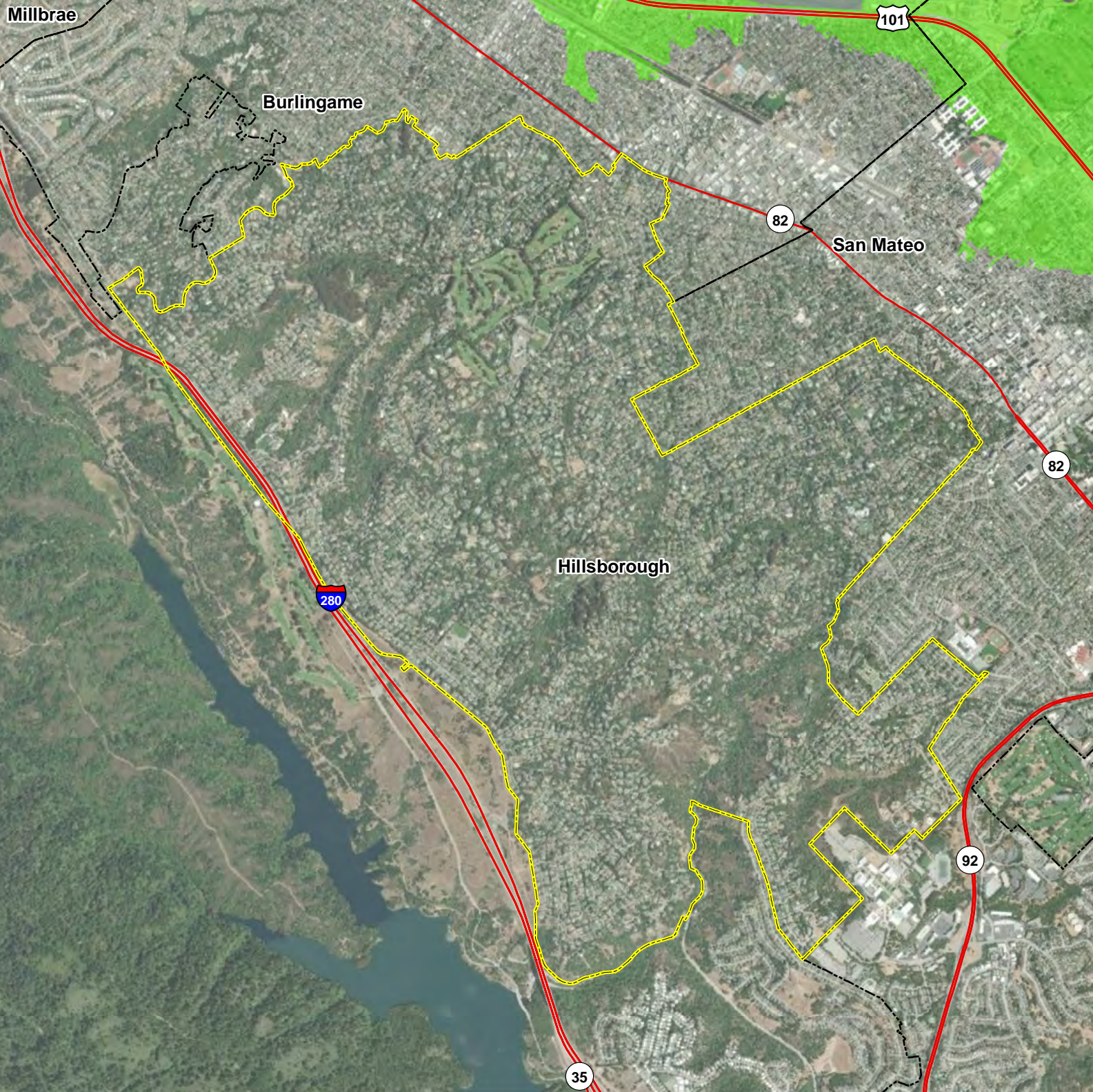
# Hillsborough

## Susceptibility to Deep-Seated Landslides

- Low
- Moderate
- High
- Very High
- Selected City
- Incorporated Cities
- County Boundary
- Highways






Data Sources: ESRI Basemap, San Mateo Co., CGS





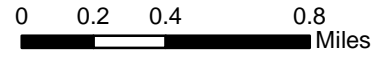
# Hillsborough

## Sea Level Rise

-  Inundation Area
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Inundation areas are a combination of Our Coast Our Future 200cm (6.6 feet) of SLR with 100-year storm for the Pacific Ocean coastline, and Adapting to Rising Tides 108 inches (9 feet) of SLR for the San Francisco Bay coastline.






Data Sources: ESRI Basemap, San Mateo Co., ART, OCOF



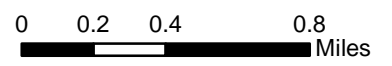


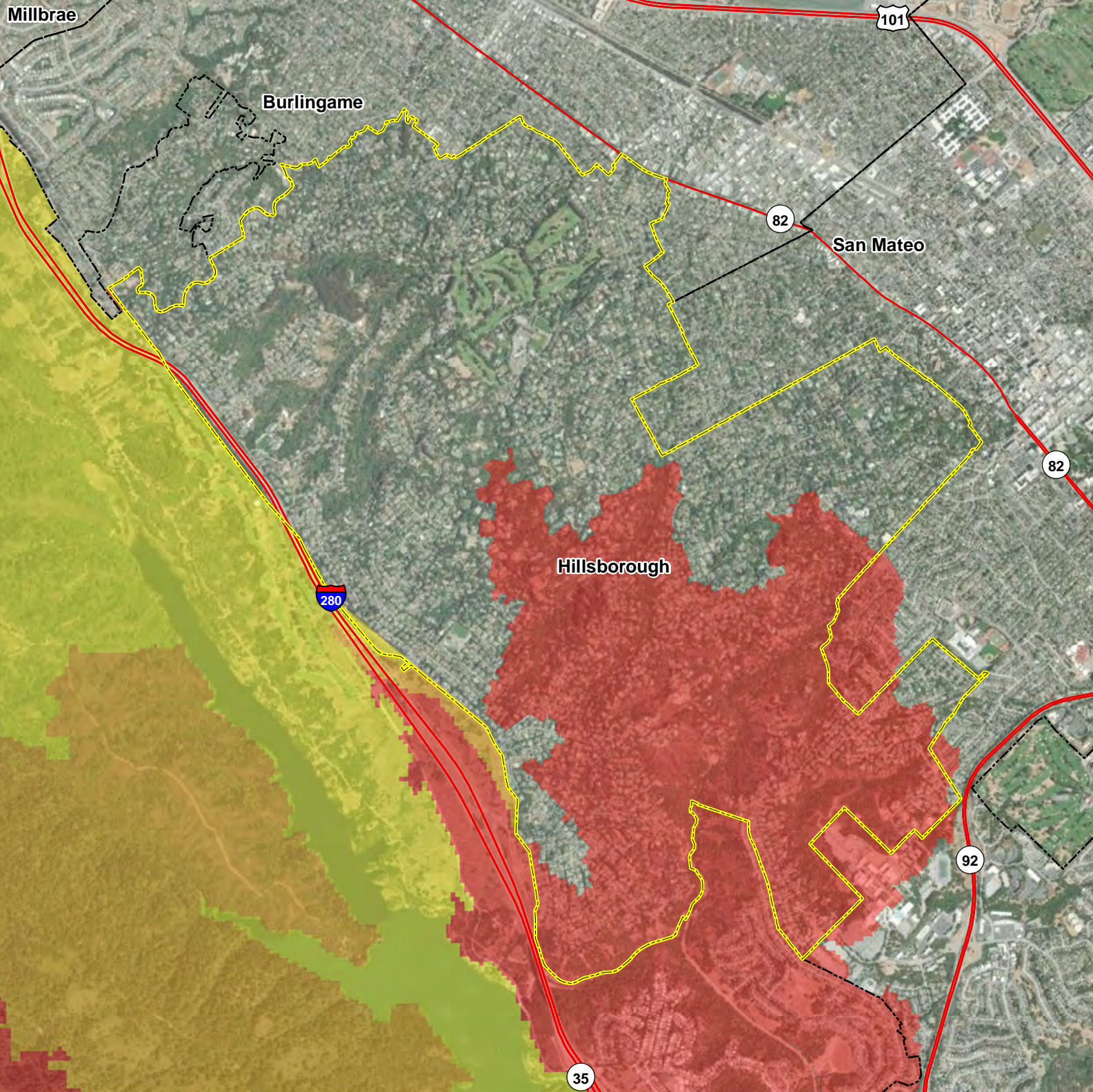
# Hillsborough

## Tsunami Hazard Areas

-  Hazard Areas
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CGS





# Hillsborough

## Wildfire Hazard Severity Zones

- Moderate
- High
- Very High
- Selected City
- Incorporated Cities
- County Boundary
- Highways

Data Sources: ESRI Basemap, San Mateo Co., CAL FIRE



0 0.2 0.4 0.8 Miles



# 12. CITY OF MENLO PARK

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## 12.1 LOCAL HAZARD MITIGATION PLANNING TEAM

### Primary Point of Contact

Brian Henry  
Assistant Public Works Director  
701 Laurel Avenue  
Menlo Park, CA 94025  
650-330-6799  
E-mail: bphenry@menlopark.org

### Alternate Point of Contact

Chuck Andrews  
Assistant Community Development Director  
701 Laurel Avenue  
Menlo Park, CA 94025  
650-330-6757  
E-mail: chandrews@menlopark.org

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 12-1.

**Table 12-1. Local Mitigation Planning Team Members**

Name	Title
Chuck Andrews	Assistant Community Development Director
Calvin Chan	Senior Planner
Joanna Chen	Management Analyst I
Brian Henry	Assistant Public Works Director
Chris Lamm	Assistant Public Works Director
Scott Mackdanz	Police Dept. Administrative Sergeant
Justin Murphy	Deputy City Manager
Nicole Nagaya	Public Works Director
Ryan Zollicoffer	Fire District Disaster Response Manager

## 12.2 JURISDICTION PROFILE

### 12.2.1 Location and Features

Menlo Park is a city of beautiful, tree-lined neighborhoods and active commercial districts. Located conveniently between the major metropolitan areas of San Francisco and San Jose, Menlo Park is home to over 35,000 residents in its approximately 19 square miles. The stunning natural surroundings of the city afford views of the San Francisco Bay to the east and the Pacific Coast Range to the west.

The city's proximity to Stanford University and Menlo College provide a multitude of academic, cultural, and athletic event opportunities. Located in the heart of Menlo Park is a downtown featuring unique and upscale shops and restaurants. Known worldwide as the "Capital of Venture Capital," Menlo Park is well situated to benefit

from and shape new technologies originating from Silicon Valley. The city is home to such notable employers as SRI, Facebook, and Pacific Biosciences.

The City of Menlo Park climate is mild during the summer when temperatures tend to be in the 60's and cool during the winter when temperatures tend to be in the 50's. The warmest month of the year is July with an average maximum temperature of 78 degrees Fahrenheit, while the coldest month of the year is December with an average minimum temperature of 39 degrees Fahrenheit. On average, there are 265 sunny days per year with 56 days of measurable precipitation.

## **1.2.2 History**

In 1854, Menlo Park received its official name when two Irishmen, Dennis J. Oliver and D. C. McGlynn, whose wives were sisters, purchased 1,700 acres (some sources say it was 640 acres) bordering County Road, now El Camino Real, and built two houses with a common entrance.

Across the drive, they erected a huge wooden gate with tall arches on which the name of their estate was printed in foot-high letters: "MENLO PARK," with the date, August 1854, underneath it. When the railroad came through in 1863, this station had no name, it was just the end of the line, but it needed a designation. During a discussion about the choice of a name, a railroad official looked over at the gates and decided that "MENLO PARK" would be appropriate, and so the name was officially adopted. This station is now California State Landmark No. 955, the oldest California station in continuous operation.

On March 23, 1874, Menlo Park became the second incorporated city in San Mateo County, although only for a short time. The purpose was to provide a quick way to raise money for road repairs.

This incorporation, which included Fair Oaks (later Atherton) and Ravenswood (later East Palo Alto) lasted only until 1876. Little occurred to change the rural flavor of the community until the first World War when, almost overnight, Menlo Park was populated by 43,000 soldiers in training at Camp Fremont, on land which extended from Valparaiso Avenue to San Francisquito Creek, and El Camino Real to the Alameda de las Pulgas, with the Base Hospital and other facilities on Willow Road where the Veterans Administration Medical Center now stands.

Following the war, enough service center activity remained to prompt an effort to reincorporate Menlo Park in 1923 with much the same boundaries as the earlier town. Incorporation planning involving Menlo Park and Atherton culminated in a dramatic race to the County Courthouse to file differing plans. Atherton representatives arrived only minutes before those from Menlo Park who had wished to include Atherton in their plans. Final incorporation of Menlo Park took place in November 1927.

## **12.2.2 Governing Body Format**

Menlo Park is a general law city under the State of California and operates under the Council-Manager form of government. The City Council is the city's governing body for the City of Menlo Park. In general, municipal elections, its members are elected from five districts to four-year overlapping terms. The Mayor and Mayor Pro Tempore each serve one-year terms and are selected annually by the City Council at its first regular meeting in December. The Mayor, who represents the City of Menlo Park at ceremonial and public functions, also serves as the presiding officer of the City Council.

The City Council appoints the City Manager and the City Attorney. The City is organized into operating departments including Administrative Services, City Manager’s Office, Community Development, Library and Community Services, Police, and Public Works. The City of Menlo Park assumes responsibility for the adoption of this plan; the Community Development, Public Works, and Police Departments will oversee its implementation.

## 12.3 CURRENT TRENDS

### 12.3.1 Population

According to the California Department of Finance, the population of Menlo Park as of January 2020 was 35,254 persons. Since 2016, the population has grown at an average annual rate of 0.99 percent.

### 12.3.2 Development

Table 12-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

**Table 12-2. Recent and Expected Future Development Trends**

Criterion	Response																														
<p>Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan? <i>If yes, give the estimated area annexed and estimated number of parcels or structures.</i></p>	No																														
<p>Is your jurisdiction expected to annex any areas during the performance period of this plan? <i>If yes, describe land areas and dominant uses. If yes, who currently has permitting authority over these areas?</i></p>	<p>None</p> <p>The City has had interest from the West Menlo Park triangle area to be annexed by the City. The area represents approximately 14 acres of residential property. The City does not believe the area has been identified as any type of hazard risk, but additional investigations would be required prior to annexation. Reference Staff Report 11/5/2019 (19-230-CC).</p>																														
<p>Are any areas targeted for development or major redevelopment in the next five years? <i>If yes, briefly describe, including whether any of the areas are in known hazard risk areas</i></p>	<p>Yes</p> <p>The City has ongoing development in both the Bayfront and Downtown Areas of Menlo Park. Projects in the Bayfront Area must comply with Special Hazard Flood Area construction requirements as required by City ordinance. Development Projects can be found at: <a href="https://www.menlopark.org/projects">https://www.menlopark.org/projects</a>.</p> <p>The City is in the process of updating the General Plan Housing Element for the planning period of 2023-2031, which is expected to identify additional areas for residential development.</p>																														
<p>How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?</p>	<table border="1"> <thead> <tr> <th></th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> </tr> </thead> <tbody> <tr> <td>Single-Family</td> <td>19</td> <td>32</td> <td>44</td> <td>54</td> <td>50</td> </tr> <tr> <td>Multi-Family</td> <td>1</td> <td>10</td> <td>1</td> <td>3</td> <td>3</td> </tr> <tr> <td>Other (commercial, mixed use, etc.)</td> <td>1</td> <td>5</td> <td>7</td> <td>8</td> <td>7</td> </tr> <tr> <td><b>Total</b></td> <td><b>21</b></td> <td><b>47</b></td> <td><b>52</b></td> <td><b>65</b></td> <td><b>60</b></td> </tr> </tbody> </table>		2016	2017	2018	2019	2020	Single-Family	19	32	44	54	50	Multi-Family	1	10	1	3	3	Other (commercial, mixed use, etc.)	1	5	7	8	7	<b>Total</b>	<b>21</b>	<b>47</b>	<b>52</b>	<b>65</b>	<b>60</b>
	2016	2017	2018	2019	2020																										
Single-Family	19	32	44	54	50																										
Multi-Family	1	10	1	3	3																										
Other (commercial, mixed use, etc.)	1	5	7	8	7																										
<b>Total</b>	<b>21</b>	<b>47</b>	<b>52</b>	<b>65</b>	<b>60</b>																										

Criterion	Response
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	<ul style="list-style-type: none"> <li>• Special Flood Hazard Areas: 74</li> <li>• Landslide: 0</li> <li>• High Liquefaction Areas: 162</li> <li>• Tsunami Inundation Area: 0</li> <li>• Wildfire Risk Areas: 0</li> </ul> Comments: There are 56 new-construction permits in both the Special Flood Hazard Area and High Liquefaction Area
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.	Not applicable – There is no more land to be developed in non-hazard areas.

## 12.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 12-3.
- Development and permitting capabilities are 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.
- An assessment of education and outreach capabilities is presented in Table 12-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 12-8.
- Classifications under various community mitigation programs are presented in Table 12-9.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 12-10.

Table 12-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Codes, Ordinances, &amp; Requirements</b>				
<b>Building Code</b>	Yes	No	Yes	No
<b>Comment:</b> Menlo Park Municipal Code, Title 12, CA Building Code 2019. The Community Development, Building and Planning Divisions, adopted the code on 12/17/2019 and it became effective on 1/1/2020.				
<b>Zoning Code</b>	Yes	No	No	Yes
<b>Comment:</b> Menlo Park Municipal Code, Title 16. The Community Development, Planning Division, implements this code. The Zoning Ordinance was adopted in November 2016.				
<b>Subdivisions</b>	Yes	No	No	No
<b>Comment:</b> Menlo Park Municipal Code, Title 15, adopted in 1977. The Community Development, Planning Division, and the Public Works, Engineering Division, implement this code.				
<b>Stormwater Management</b>	Yes	Yes	Yes	Yes
<b>Comment:</b> Menlo Park Municipal Code, Title 7.42, adopted in 1994. Stormwater Management Program complies with the California Regional Water Quality Control Board San Francisco Bay Region Municipal Regional Stormwater NPDES Permit. Updated permit requirements were last issued in November 2015, and further updates are currently being considered and are expected to be adopted in late 2021 or early 2022. The Public Works, Engineering & Maintenance Divisions, and the City Manager's Office, Sustainability Programs, implement this permit.				
<b>Post-Disaster Recovery</b>	Yes	No	No	Yes
<b>Comment:</b> The City does not have a specific Municipal Code or ordinance for Post Disaster Recovery. The City activates the emergency operations center for oversight and tasks related to recovery actions and activities working alongside partner agencies. The City Emergency Operation Plan addresses establishing a Recovery Task Force to commence planning for transition to long term recovery. The City is also working with the County on turning the Countywide Debris Management Plan into a stand-alone jurisdictional annex. The City will align its recovery actions with the National and State Disaster Recovery Framework Plan.				
Menlo Park Municipal Code Chapter 2.44, Emergency Services: <a href="https://www.codepublishing.com/CA/MenloPark#!/html/MenloPark02/MenloPark0244.html">https://www.codepublishing.com/CA/MenloPark#!/html/MenloPark02/MenloPark0244.html</a>				
<b>Real Estate Disclosure</b>	No	No	Yes	No
<b>Comment:</b> California Civil Code Section 1103 <a href="https://leginfo.ca.gov/faces/codes_displaySection.xhtml?sectionNum=1103.&amp;lawCode=CIV">https://leginfo.ca.gov/faces/codes_displaySection.xhtml?sectionNum=1103.&amp;lawCode=CIV</a>				
<b>Growth Management</b>	Yes	No	No	Yes
<b>Comment:</b> Between 2015 and 2020, Menlo Park saw a population increase of 5.4 percent, compared to a 1.5 percent increase countywide. During this time period, the number of households in Menlo Park increased by 5.6 percent, compared to a 1.5 percent increase countywide. Average persons per household remained relatively the same for both Menlo Park and countywide, with Menlo Park having 2.64 persons per household and 2.88 persons per household countywide in 2020 (CA Department of Finance, E-5 Report).				
According to the Association of Bay Area Governments' (ABAG) Plan Bay Area projections for the nine counties that comprise the Bay Area region, between 2015 and 2020, total population increased 4.3 percent and total households increased 4.4 percent. Average persons per household remained the same during this time period, with 2.69 persons per household (ABAG Projections 2040).				
The city's development pipeline includes approximately 3,878 residential units, 4.9 million square feet of office space, 317,000 square feet of retail space, 40,000 square feet of school space, and 642 hotel rooms (December 2020).				
<b>Site Plan Review</b>	Yes	No	No	No
<b>Comment:</b> The Building Division of Community Development reviews all site plans for conformance to the Menlo Park Municipal Code, Title 12. The Planning Division of Community Development reviews all site plans for conformance to the Menlo Park Municipal Code, Title 15, and Title 16. The Engineering Division of the Public Works Department reviews site plans for all projects for conformance to the Menlo Park Municipal Code, Title 7.				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Environmental Protection</b>	Yes	No	No	Yes
<p><b>Comment:</b> The City has several ordinances and policies related to environmental protection:</p> <ul style="list-style-type: none"> <li>• In 2015, the Integrated Pest Management Policy was updated. Currently, all City parks are herbicide- and pesticide-free.</li> <li>• In January 2020, the City adopted reach codes for new construction to reduce greenhouse gas emissions from the building sector and to encourage the use of renewable and clean energy. Menlo Park residents receive energy from Peninsula Clean Energy, which provides a minimum of 50% renewable energy and 90% greenhouse gas (carbon) free electricity at a cost slightly less than PG&amp;E. Electrifying buildings would maximize the community’s renewable power available and reduce GHG emissions by slowly phasing out the use of natural gas.</li> <li>• The City’s Climate Action Plan was adopted in July 2020 and several of its goals are related to environmental protection. Two of the goals are related to electric vehicles: to promote the purchase of electric vehicles and increase EV charging stations in multi-family and commercial buildings; and to reduce greenhouse gas emissions and improve air quality. The City adopted a Sustainable Vehicle Fleet Policy to increase the number of zero-emission City fleet vehicles. Another goal is to eliminate the use of natural gas from municipal operations. As a pilot program in 2021, Public Works maintenance staff is in the process of converting gas-powered maintenance equipment to electric to reduce noise pollution and greenhouse gas emissions.</li> </ul>				
<b>Flood Damage Prevention</b>	Yes	No	No	Yes
<p><b>Comment:</b> Menlo Park Municipal Code, Title 12.42, adopted in 1988 and amended in 2016. The Public Works Department, Engineering Division, implements this Code section.</p>				
<b>Emergency Management</b>	Yes	No	Yes	Yes
<p><b>Comment:</b> Menlo Park Municipal Code, Chapter 2.44 Emergency Services  <a href="https://www.codepublishing.com/CA/MenloPark/html/MenloPark02/MenloPark0244.html">https://www.codepublishing.com/CA/MenloPark/html/MenloPark02/MenloPark0244.html</a></p>				
<b>Climate Change</b>	Yes	Yes	Yes	Yes
<p><b>Comment:</b> The 2030 Climate Action Plan (CAP) was adopted in July 2020. One of the CAP goals and City Council 2021 work plan priority projects is to develop a climate adaption plan to address sea level rise and flooding. Staff plans to:</p> <ul style="list-style-type: none"> <li>• Update the Safety Element in Menlo Park’s General Plan to bring it into compliance with recent changes in General Plan law, including SB 379</li> <li>• Await notification on the SAFER Bay grant application from the FEMA Building Resilient Infrastructure and Communities program</li> <li>• Continue progress on identifying funding and partnership opportunities for implementing SAFER Bay; and</li> <li>• Continue to participate in and monitor with San Mateo County Flood and Sea Level Rise District.</li> </ul>				
<b>Planning Documents</b>				
<b>General Plan</b>	Yes	No	Yes	Yes
<p><b>Is the plan compliant with Assembly Bill 2140?</b> Yes</p> <p><b>Comment:</b> The City’s General Plan can be accessed at: <a href="https://www.menlopark.org/146/General-Plan">https://www.menlopark.org/146/General-Plan</a>. The Open Space/Conservation, Noise, and Safety Elements (adopted May 21, 2013) address safety and emergency preparedness, specifically Section IV (Safety Goals, Policies, and Implementing Programs) and Section VII (Safety Background). The Plan “provides policies and standards for the type, location, intensity and design of development in areas of potential hazards” (Safety Goal S1).</p> <p>Other General Plan Elements include: Land Use and Circulation Elements (adopted November 29, 2016) and the 2015-2023 Housing Element (adopted April 1, 2014). The City is in the process of updating the Housing Element for the period of 2023-2031 and will concurrently prepare updates to the Safety Element and the preparation of a new Environmental Justice Element.</p>				
<b>Capital Improvement Plan</b>	Yes	No	No	Yes
<p><b>How often is the plan updated?</b> Annually</p> <p><b>Comment:</b> The Capital Improvement Plan involves the implementation of infrastructure projects, such as the upgrade of storm water pumping facilities and the construction of emergency wells, to improve the City’s resiliency to hazards. Planning is made on a 5 year basis, with annual updates.</p>				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Disaster Debris Management Plan</b>	Yes	No	No	Yes
<b>Comment:</b> The City is also working with the County on turning their Countywide Debris Management Plan into a stand-alone debris management annex for Menlo Park. According to the City's franchise agreement, Recology may provide emergency services, such as assistance handling, salvaging, processing, composting, recycling materials, or disposing solid waste after a major accident, disruption, or natural calamity.				
<b>Floodplain or Watershed Plan</b>	No	Yes	No	No
<b>Comment:</b> The City maintains FEMA floodplain maps and provides information related to flood zones to the public when requested.				
<b>Stormwater Plan</b>	Yes	Yes	No	Yes
<b>Comment:</b> The engineering division is in the process of updating its 2003 stormwater master plan. The plan, when completed, will model the entire City storm drain network and identify areas vulnerable to localized flooding and identify capital projects to mitigate the flooding in these areas. The plan also identifies measures to comply with State mandated requirements under the NPDES permitting requirements.				
<b>Urban Water Management Plan</b>	Yes	Yes	Yes	No
<b>Comment:</b> The City will be updating its 2015 UWMP with a 2020 UWMP by July 1, 2021. The plan additionally identifies water conservation measures that will be taken in the event of a drought with 'stages' identified at 10%, 20%, 30%, 40%, 50%, and greater than 50% reduction.				
<b>Habitat Conservation Plan</b>	No	No	No	No
<b>Comment:</b> While the City does not have a Habitat Conservation Plan, the City amended its Heritage Tree Ordinance in 2019 and implemented it on July 1, 2020, to help preserve the Menlo Park's urban canopy. In 2021, Menlo Park has been recognized as a Tree City USA for 21 years and as a member of the Arbor Day Foundation's "Growth" group for 5 years. The City also partners with Canopy, a nonprofit organization, to help plant street trees around the neighborhoods to provide shade, habitat for the wildlife, and add beautification in the area.				
<p>As part of the South Bay Salt Pond Restoration project, the Ravenswood Ponds Levee Maintenance and Habitat Enhancement project is currently underway and will enhance the habitat environment at the Refuge's Ravenswood Ponds, on lands south of Bedwell Bayfront Park.</p> <p>The Open Space/Conservation Element of the General Plan combines the Open Space and Conservation Elements required by State law. Open Space issues include policies and programs to maintain, expand and improve Menlo Park's open space and recreation areas (including parks) while Conservation institutes policies and programs to conserve natural resources. Preservation of scenic, habitat, and recreational resources in Menlo Park is key to retaining the city's special sense of place. Among its many natural features, Menlo Park is known for its high-quality active and passive recreation areas, including Bedwell Bayfront Park, which is a regional draw. Menlo Park highly values ongoing restoration and conservation efforts in the Baylands, which provide habitat for a wide variety of plants and animals in the Don Edwards National Wildlife Refuge.</p> <p>The Zoning Code (Municipal Code Title 16) includes an Open Space and Conservation District (Chapter 16.48). The purpose and intent of this district is:</p> <ul style="list-style-type: none"> <li>• To protect the public health, safety and welfare <ul style="list-style-type: none"> <li>• To protect and preserve open space land as a limited and valuable resource</li> </ul> </li> <li>• To assure its continued availability for the following: As agricultural land, scenic land, recreation land, conservation, or natural resource land; for the containment of urban sprawl and the structuring of urban development, and for the retention of land in its natural or near natural state to protect life and property in the community from the hazards of fire, flood, and seismic activity; and</li> <li>• To coordinate with and carry out federal, state, regional, county and city open space plans.</li> </ul>				
<b>Economic Development Plan</b>	Yes	No	No	No
<b>Comment:</b> The City's Economic Development Plan (adopted July 2015) can be accessed at: <a href="https://www.menlopark.org/1123/Economic-development-plan-and-goals">https://www.menlopark.org/1123/Economic-development-plan-and-goals</a> . The Plan consists of three main elements: a Comparative Economic Advantages Study (CEAS), the Goals, and a series of Strategic Policy Recommendations towards implementing the Goals. The CEAS lays the foundation for the Economic Development Plan by outlining Menlo Park's economic advantages, opportunities, and challenges in relation to other similar cities in the Silicon Valley region and the broader San Francisco Bay Area.				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Shoreline Management Plan</b>	Yes	Yes	No	Yes
<b>Comment:</b> The City of Menlo Park shoreline is subject to San Francisco Bay Conservation & Development Commission regulations.				
<p>The City does not have a Shoreline Management Plan; however, the City has several ongoing projects to help manage the risks associated with the shoreline along the Bayfront Canal-Atherton Channel and the former salt ponds.</p> <ul style="list-style-type: none"> <li>The SAFER Bay project objective is to protect against 100-year flood, remove properties from FEMA floodplain, sustain marsh habitat, and facilitate marsh restoration. The plan identifies protection measures for 3-feet of sea level rise.</li> <li>The FEMA Building Resilience Infrastructure and Communities (BRIC) grant project would provide levee improvements along the majority of Menlo Park’s shoreline. The grant awards up to \$50 million, but the project cost estimate is \$66 million, including matching funds from private partners. This would help provide flood protection and sea level rise resiliency while preserving habitat restoration of over 550 acres of former salt ponds. If awarded, the estimated project timeline is five years, including design and construction.</li> <li>The Bayfront Canal and Atherton Channel Flood Management and Restoration project is anticipated to begin construction this year (2021) and involves installing underground pipes connecting Bayfront Canal to the Ravenswood Ponds to reduce the impact of flooding.</li> <li>One of City Council’s 2021 work plan project is to develop a climate adaption plan.</li> </ul>				
<b>Community Wildfire Protection Plan</b>	No	No	No	No
<b>Comment:</b> The Fire District provides fire suppression and fire protection services to the City of Menlo Park. The California Department of Forestry and Fire Protection does not acknowledge the City of Menlo Park as being in an area known to be considered as a “wildland urban interface” environment. The Fire District boundaries do not warrant a Community Wildfire Protection Plan.				
<b>Forest Management Plan</b>	No	No	No	No
<b>Comment:</b> The Menlo Park Fire District provides fire suppression and fire protection services to the City of Menlo Park. The California Department of Forestry and Fire Protection (Cal Fire) does not acknowledge the City of Menlo Park as being in an area known to be considered as a “wildland urban interface” environment. The Fire District boundaries do not warrant a Forest Management Plan.				
<b>Climate Action Plan</b>	Yes	No	Yes	Yes
<b>Comment:</b> The purpose of the Climate Action Plan (CAP) is to present researched strategies that will help reduce greenhouse gas emissions originating in Menlo Park, based on the findings of the City’s greenhouse gas emissions inventory analysis that is completed annually. The plan provides strategies that may be implemented over the next few years by the City, its residents, and its businesses. The CAP is updated every year as research continues to provide more emissions reduction data and as new technologies arise and economic conditions change.				
<p>The Menlo Park City Council adopted the 2030 Climate Action Plan (CAP) in July 2020 and approved amendments to it in April 2021. The CAP outlines six goals to reach zero carbon by 2030. For 2021, one of the City Council priorities is to explore policy/program options to convert 95 percent of existing buildings to all-electric by 2030. The remaining CAP goals are to:</p> <ul style="list-style-type: none"> <li>Increase electric vehicle ownership and decrease gasoline sales</li> <li>Increase access to EV charging infrastructure in multi-family and commercial properties</li> <li>Reduce vehicle miles traveled by 25 percent or an amount recommended by the Complete Streets Commission</li> <li>Eliminate the use of fossil fuels from municipal operations; and</li> <li>Develop a climate adaption plan.</li> </ul>				
<b>Emergency Operation Plan</b>	Yes	No	Yes	Yes
<b>Comment:</b> City adopted an Emergency Operation Plan in 2014. The plan still aligns with the National Incident Management System (NIMS) and the California Standardized Emergency Management System (SEMS). The Plan provides the City of Menlo Park Emergency Operations Center (EOC) responders with procedures, documentation, and user friendly checklists to effectively manage emergencies, and it also provides detailed information of supplemental requirements such as Public Information, Damage Assessment, and Recovery Operations.				
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	Yes	Yes	No	Yes
<b>Comment:</b> The City utilizes the Local Hazard Mitigation Plan and the Fire District’s Community Risk Assessment: Standards of Coverage report to support the THIRA process. A consultant has not been hired to conduct an independent THIRA for the City.				



	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Post-Disaster Recovery Plan</b>	No	Yes	No	Yes
<b>Comment:</b> The City Emergency Operation Plan addresses establishing a Recovery Task Force to commence planning for transition to long term recovery. The City is also working with the County on turning their Countywide Debris Management Plan into a stand-alone jurisdictional annex. The City will align its recovery actions with the National and State Disaster Recovery Framework Plan. The City is working toward developing a stand-alone Post Disaster Recovery Plan. City staff have been assigned training in G270 Disaster Recovery as part of their State EOC Credentialing Training Plan.				
<b>Continuity of Operations Plan</b>	No	No	No	Yes
<b>Comment:</b> Within the City of Menlo Park, the following offices: Human Resources, City Clerk, and City Manager's Office, are responsible for the preservation of vital records. The City will follow standard practices or policies according to the lines of succession in the absence of the City Manager based on organization hierarchy. Each department has a continuity plan for maintaining essential services during a significant event. COOP was exercised during the COVID-19 pandemic.				
<b>Public Health Plan</b>	No	Yes	No	No
<b>Comment:</b> <i>San Mateo County Public Health</i>				

Table 12-4. Development and Permitting Capability

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

Table 12-5. Fiscal Capability

Financial Resource	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 (Utility users' tax on all except sewer)
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 (City Council authorization required)
State-Sponsored Grant Programs	Yes Office of Traffic Safety Citizens Options for Public Safety Supplemental Law Enforcement Services Fund California Governor's Office of Emergency Services Alcoholic Beverage Control Funding for Belle Haven Child Development Center childcare
Development Impact Fees for Homebuyers or Developers	Yes
Flood Control / Sea Level Rise Hazard District	No

**Table 12-6. Administrative and Technical Capability**

Staff/Personnel Resource	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Public Works; Community Development (Planning & Building Divisions)
Engineers or professionals trained in building or infrastructure construction practices	Yes	Public Works; Community Development, (Planning & Building Divisions)
Planners or engineers with an understanding of natural hazards	Yes	Public Works; Community Development, (Planning & Building Divisions)
Staff with training in benefit/cost analysis	Yes	Public Works (Engineering Division), Community Development
Surveyors	Yes	Public Works and Consultants
Personnel skilled or trained in GIS applications	Yes	Public Works, Community Development, Information Technology Division
Scientist familiar with natural hazards in local area	No	N/A
Emergency manager	Yes	Police Department and Menlo Park Fire District
Grant writers	Yes	Police, Public Works, Community Development, Management Analysts (various departments) Menlo Park Fire District
Other		

**Table 12-7. Education and Outreach Capability**

Criterion	Response
Do you have a public information officer or communications office?	Yes  The City of Menlo Park has three designated Public Information Officers. These individuals train for and execute their PIO roles during EOC exercises and are aligned with meeting the PIO State EOC credentialing requirement.
Do you have personnel skilled or trained in website development?	Yes  The City Manager’s Office maintains the City website and is tasked with updating and coordinating public information. Personnel are trained and skilled in website use.
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe.</i>	Yes  The City of Menlo Park has hazard mitigation information available on its website. The City also has second party web links available (Menlo Park Fire, American Red Cross, Federal Emergency Management Agency, etc.) for more information. Hazard Mitigation information is posted based on relevance of the season (summer, fall, winter, and spring). *Summer: Extreme heat, wildland fire and water drought hazard mitigation information may be posted. *Winter: Storm/flooding hazard mitigation information may be posted. *Fall: National preparedness month may include hazard mitigation information on earthquake safety. *Spring: An all hazard mitigation campaign may be posted on “Get Ready” and “What to do in the next 72 hours” for citizens to take advantage of the FEMA Community Emergency Response Team training provided by the Menlo Park Fire District.
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe.</i>	Yes  The City of Menlo Park primarily uses Facebook, Nextdoor and Twitter accounts. The City posts relevant hazard mitigation educational information to the public through these social media and alert notification platforms.

Criterion	Response
<p>Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe.</i></p>	<p>Yes</p> <p>The Planning Commission serves as a recommending body to the City Council for major subdivisions, rezoning, conditional development permits, Zoning Ordinance amendments, General Plan amendments and the environmental reviews. The Environmental Quality Commission advises the City Council on matters involving environmental protection, sustainability, and sea level rise. The City of Menlo Park, in partnership with the Fire District, participates in volunteer forum meetings to discuss emergency preparedness and mitigation efforts within the City.</p>
<p>Do you have any other programs already in place that could be used to communicate hazard-related information? <i>If yes, briefly describe.</i></p>	<p>Nixle, programmable message boards</p>
<p>Do you have any established warning systems for hazard events? <i>If yes, briefly describe.</i></p>	<p>Yes</p> <p>In addition to social media and the City website, the City also participates in and uses the countywide SMC Alert system that provides emergency notifications via voice calls, SMS texts, and email.</p>

**Table 12-8. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Public Works, Engineering Division
Who is your floodplain administrator? (department/position)	Assistant Public Works Director
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	1988 (with amendments in 1993, 1999, 2002, 2005)
Does your floodplain management program meet or exceed minimum requirements? <i>If exceeds, in what ways?</i>	Meets minimum requirements of 44 CFR 60.3 (e)
When was the most recent Community Assistance Visit or Community Assistance Contact?	2/16/2011
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <i>If so, state what they are.</i>	No
Are any RiskMAP projects currently underway in your jurisdiction? <i>If so, state what they are.</i>	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <i>If no, state why.</i>	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? <i>If so, what type of assistance/training is needed?</i>	<p>Yes</p> <p>The City of Menlo Park would require another Certified Floodplain Manager in the Engineering Division to assist with additional floodplain improvement projects.</p>

Criterion	Response
Does your jurisdiction participate in the Community Rating System (CRS)? If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program?	Yes  The City of Menlo Park attained a CRS rating of 8 in October 2020.
How many flood insurance policies are in force in your jurisdiction? <sup>a</sup> What is the insurance in force? What is the premium in force?	640 \$181,612,000 \$887,969
How many total loss claims have been filed in your jurisdiction? <sup>a</sup> What were the total payments for losses?	29 \$219,273

a. According to FEMA statistics as of March 31, 2019

**Table 12-9. Community Classifications**

	Participating?	Classification	Date Classified
FIPS Code	Yes	0608146870	N/A
DUNS#	Yes	958191975	N/A
Community Rating System	Yes	8	10/2020
Building Code Effectiveness Grading Schedule	Yes	03	12/2/2020
Public Protection	Yes	2	2013
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

**Table 12-10. Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	

**Jurisdiction-level understanding of potential climate change impacts** Medium

**Comment:** Environmental Quality Commission (EQC) and sustainability staff update the Climate Action Plan annually based on the findings of the community’s greenhouse gas emissions inventory analysis. The Plan outlines strategies that may take several years to implement by the City, its residents, and businesses.

Building reach codes were implemented on January 1, 2020 to restrict all new construction to be all-electric with some exceptions. This ordinance would reduce greenhouse gas emissions from the building sector and encourage residents to use renewable energy. Staff is working on the next building cycle to update its reach codes, which may include, but not limited to, some restrictions for existing buildings or more stringent reach codes for new construction.

One of the primary anticipated impacts of climate change is sea level rise and more frequent and severe flooding. The City is pursuing the SAFER Bay project through a grant application to FEMA’s Building Resilient Infrastructure and Communities (BRIC) program to protect the community from sea level rise and flooding. This is consistent with the General Plan Land Use Element Goal LU-7: Promote the implementation and maintenance of sustainable development, facilities, and services to meet the needs of the Menlo Park community. This project application proposes to construct approximately 3.7 miles of nature-based flood control and sea level rise barriers along the San Francisco Bay shoreline. This would be a significant advancement toward the ultimate goal of providing full flood protection for the residents and business near the Bay. As of July 2021, FEMA has selected the SAFER Bay project for further evaluation. Staff has incorporated funding to support this work into the fiscal year 2021-22 capital improvement program. This project aligns with the City’s 2030 CAP goal to develop a climate action adaption plan. Because this is a large project, more staff capacity may be needed and is being assessed as the City awaits notification from FEMA regarding the grant award.

Criterion	Jurisdiction Rating <sup>a</sup>
<p><b>Jurisdiction-level monitoring of climate change impacts</b></p> <p><b>Comment:</b> The City implemented an online permitting system (Accela), which helps staff analyze the number of projects that trigger the all-electric reach code restrictions. The data collected in Accela would also help analyze and develop a policy/program to help convert 95% of existing buildings to all-electric by 2030.</p> <p>In partnership with the County, air quality monitors were installed for public health and safety and the data is available on publicly accessible portals. More capacity would be needed to increase monitoring the impacts of climate change.</p>	Medium
<p><b>Technical resources to assess proposed strategies for feasibility and externalities</b></p> <p><b>Comment:</b> The City could use more technical resources to assess the proposed strategies for feasibility and externalities.</p>	Low
<p><b>Jurisdiction-level capacity for development of greenhouse gas emissions inventory</b></p> <p><b>Comment:</b> The City could use some improvement in developing the community's greenhouse gas emissions inventory.</p>	Medium
<p><b>Capital planning and land use decisions informed by potential climate impacts</b></p> <p><b>Comment:</b> The City has a number of ordinances, plans, and projects to address climate impacts through capital planning and land use decisions:</p> <ul style="list-style-type: none"> <li>•Municipal Code Section 16.43.140 is a green and sustainable building ordinance, which requires developers to submit zero waste management plans to showcase how the project will reduce waste during the construction and occupancy phase. This ordinance will help the City meet its zero waste goal of 90% diversion by 2035.</li> <li>•The City is updating the Safety Element to comply with the new changes to SB 379.</li> <li>•Development projects, both commercial and residential, need to be assessed by the standards set by the California Environmental Quality Act, which may require preparation of environmental impact reports.</li> <li>•According to Municipal Code Section 12.16.010, new construction is required to be all-electric, with a few exceptions. For example, the Menlo Park Community Center will be an all-electric building to eliminate the use of natural gas.</li> <li>•The City adopted the sustainable fleet policy in 2020, a minimum 50 percent vehicles purchased will be zero-emission by 2025 and 75 percent by 2030.</li> <li>•The City has undertaken master planning efforts in most capital planning areas in the last five years. These efforts have helped identify funding and project needs (e.g., facilities, streets, transportation, parks, stormwater, etc.), but additional resources (funding and staff or consultants) will be needed to deliver the needed projects to address expected climate impacts. Funds to operate and maintain new infrastructure for adapting to climate change will also be needed.</li> <li>•Potentially more staff resources are needed to process building permits and more outreach is needed to educate the public about the reach codes.</li> </ul>	Medium

Criterion	Jurisdiction Rating <sup>a</sup>
<p><b>Participation in regional groups addressing climate risks</b></p> <p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>• A councilmember is a board member of Peninsula Clean Energy, which offers renewable energy to Menlo Park residents. Peninsula Clean Energy offers at minimum 50% renewable energy and 90% greenhouse gas free electricity. With renewable energy powering an all-electric building, the occupants and indoor air quality may significantly improve health and safety.</li> <li>• Both councilmember and staff participate in South Bay Waste Management Authority and Technical Advisory Committee monthly meets to discuss innovative waste reduction and recycling programs. For instance, the group is discussing the upcoming Senate Bill 1383, which is to enforce a more stringent organics program and surplus food recovery. When food waste decomposes in the landfill without air, it creates methane, which is harmful to the environment.</li> <li>• Staff and a councilmember liaison participate in with San Mateo Flood &amp; Sea Level Rise District to discuss climate change impacts of sea level rise and flooding across jurisdictional boundaries. Menlo Park City Council also supported pursuit of the SAFER Bay project for a FEMA BRIC grant application, which proposes to construct approximately 3.7 miles of nature-based flood control and sea level rise barriers along the San Francisco Bay shoreline. This would be a significant advancement toward the ultimate goal of providing full flood protection for the residents and business near the Bay. As of July 2021, FEMA has selected the SAFER Bay project for further evaluation. Staff has incorporated funding to support this work into the fiscal year 2021-22 capital improvement program.</li> <li>• The City partners with local organizations to help monitor and implement climate change goals. For instance, Joint Venture Silicon Valley will assist in reaching the goal to increase EV of new vehicle ownerships to 100% by 2025 and to reduce gasoline sales by 10% a year from the 2018 baseline.</li> <li>• City/County Association of Governments of San Mateo County (C/CAG) staff manage the County’s stormwater program and permitting requirements. City staff actively participate in C/CAGs stormwater committees, and a City Councilmember serves on the C/CAG board.</li> <li>• ICLEI is an international non-governmental organization that promotes sustainable development and provides technical consulting to help the City meet its sustainability initiatives.</li> <li>• BAWSCA and Flows to Bay offer various water conservation programs, such as rain barrel rebates and Lawn Be Gone programs.</li> </ul>	<p>Medium</p>
<p><b>Implementation Capacity</b></p> <p><b>Clear authority/mandate to consider climate change impacts during public decision-making processes</b></p> <p><b>Comment:</b> On December 10, 2019, the City Council adopted Resolution No. 6535 declaring a climate emergency. During public decision-making processes, internal and external stakeholders must comply with the City’s sustainability-related policies and ordinances. The City would need more capacity or to reduce other projects and priorities to adopt and implement programs, ordinances, or solutions to further advance in climate change adaptation.</p>	<p>Medium</p>
<p><b>Identified strategies for greenhouse gas mitigation efforts</b></p> <p><b>Comment:</b> Menlo Park City Council adopted the 2030 Climate Action Plan (CAP) in July 2020 and approved amendments to it in April 2021. The CAP outlines six goals to reach zero carbon by 2030. Five of these goals address mitigation, as listed below. The CAP goals are to:</p> <ul style="list-style-type: none"> <li>• Explore policy/program options to convert 95 percent of existing buildings to all-electric by 2030</li> <li>• Increase electric vehicle ownership and decrease gasoline sales</li> <li>• Increase access to EV charging infrastructure in multi-family and commercial properties</li> <li>• Reduce vehicle miles traveled by 25 percent or an amount recommended by the Complete Streets Commission</li> <li>• Eliminate the use of fossil fuels from municipal operations.</li> </ul> <p>The scope of work for 2021 implementation are the following:</p> <ul style="list-style-type: none"> <li>• Complete a cost effectiveness analysis on various policy/program pathways towards achieving 95% electrification by 2030.</li> <li>• Collaborate with Joint Venture Silicon Valley to increase the number of new vehicle purchase to be electric vehicles (EV) and decrease the gasoline sales by 10%.</li> <li>• Promote and market incentives to expand access to EV charging stations in multi-family and commercial properties.</li> <li>• Reduce vehicle miles traveled through SB2 Housing grant, completion of Transportation Management Association feasibility study, and implementation of vehicle miles traveled guidelines for new development.</li> <li>• Update the Safety Element of Menlo Park’s General Plan to respond to SB 379.</li> </ul>	<p>High</p>

Criterion	Jurisdiction Rating <sup>a</sup>
<p><b>Identified strategies for adaptation to impacts</b></p> <p><b>Comment:</b> The sixth goal from the City's Climate Action Plan is to develop a climate adaptation plan. The City has participated in past regional efforts to develop adaptation plans for sea level rise, including the SAFER Bay Feasibility Study, led by the San Francisquito Creek Joint Powers Authority; and the Metropolitan Transportation Commission's Dumbarton Bridge West Approach + Adjacent Communities Resilience Study. The City has applied for a FEMA BRIC grant to support implementation of the first phase of the SAFER Bay project and would continue to partner with other stakeholders to complete the project.</p>	High
<p><b>Champions for climate action in local government departments</b></p> <p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>• The City has a sustainability division to implement the climate action plan and collaborates with multiple departments to adopt climate-related policies and initiatives. More capacity is needed to adopt and implement new programs, ordinances, and implement the CAP goals.</li> <li>• As of fiscal year 2020-21, the City has 109 fleet vehicles, which include vehicles, motorcycles, and parking enforcement buggies. Out of the total fleet vehicles, twenty-one are hybrids and four are all-electric vehicles. The City is waiting for technology to advance for electric utility vehicles, which may be available within the next three years. Public Works is also transitioning its maintenance equipment to electric.</li> <li>• The Building Division implemented local energy code amendments to the building code (reach codes), which went above and beyond State and County recommendations.</li> <li>• The Community Development Department implemented a green and sustainable building ordinance.</li> <li>• In 2015, several solar photovoltaic panels were installed on various City facilities.</li> <li>• The City installed 4 electric vehicle charging stations (with 2 charging ports each) for public use.</li> <li>• The Police Department is currently transitioning their paper parking permits to paperless permits.</li> <li>• The Community Development and Public Works Departments transitioned from paper permitting applications to electronic submittals.</li> <li>• The City's transportation demand management coordinator provides support to local employers and City employees to provide information about non-single occupancy vehicle travel options, which can help reduce vehicle miles traveled and emissions from transportation mobile sources.</li> </ul>	Medium
<p><b>Political support for implementing climate change adaptation strategies</b></p> <p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>•Menlo Park City Council was one of the first cities to adopt reach code, which nearly eliminated natural gas from new buildings. City Council also adopted a resolution to declare climate emergency, which demands accelerated actions on the climate crisis and requests regional collaboration to address climate change. The former mayor also signed a resolution to reaffirm the City's commitment to tackle climate change at a local level.</li> <li>•All six Climate Action Plan goals are on City Council's 2021 priorities and work plan: two out of nine priority projects are related to CAP.</li> <li>•Menlo Park City Council also supported pursuit of the SAFER Bay project FEMA BRIC grant application.</li> <li>•The Environmental Quality Commission continues to advise City Council on implementing the CAP goals.</li> </ul>	High
<p><b>Financial resources devoted to climate change adaptation</b></p> <p><b>Comment:</b> The City filed the FEMA BRIC grant application, which would help develop a climate action adaptation plan to protect the community from sea level rise and flooding. More capacity is likely to be needed in this effort and other climate change adaption.</p>	Medium
<p><b>Local authority over sectors likely to be negative impacted</b></p> <p><b>Comment:</b></p> <ul style="list-style-type: none"> <li>•Code Enforcement officers may be impacted if new building requirement ordinances are adopted that require enforcement resources, but not enough information is known at this time to assign a rating.</li> <li>•Some business industries (such as restaurants, research and development or life-science) may be negatively impacted by the reach codes; however, those business may be exempted from the reach codes as outlined in the Municipal Code Section 12.16.010.</li> <li>•Gas and oil manufacturing sectors may be negatively impacted if the City reduces its gasoline consumption (either for vehicles or for building appliances). This impact would be related to the 2030 CAP goals and the reach codes, but not enough information is known at this time to assign a rating.</li> </ul>	Unsure

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Public Capacity</b>	
<b>Local residents knowledge of and understanding of climate risk</b>	Medium
<i>Comment:</i> •The Environmental Quality Commission (EQC), a commission body made up of seven Menlo Park residents, created the 2030 CAP. The Complete Streets Commission, another resident-based commission body of nine members, is anticipated to develop a vehicle miles traveled reduction goal by 2023. •Strong advocacy occurs when climate policies are considered by City Council. Several residents expressed interest to ban gas leaf blowers by adopting an ordinance. •More outreach needs to be done to understand the community’s knowledge and understanding of climate risk. A resolution was approved in April 2021 that approved the scope of work for 2021 implementation of the CAP and to educate residents about climate emergency and to include health, socio-economic, and racial equity in policymaking and climate solutions.	
<b>Local residents support of adaptation efforts</b>	Unsure
<i>Comment:</i> Not enough information is known to assign a rating. More outreach is needed.	
<b>Local residents’ capacity to adapt to climate impacts</b>	Unsure
<i>Comment:</i> Not enough information is known to assign a rating. More outreach is needed.	
<b>Local economy current capacity to adapt to climate impacts</b>	Unsure
<i>Comment:</i> Not enough information is known to assign a rating. More outreach is needed.	
<b>Local ecosystems capacity to adapt to climate impacts</b>	Unsure
<i>Comment:</i> Not enough information is known to assign a rating. More outreach is needed.	

a. High = Capacity exists and is in use; Medium = Capacity may exist but is not used or could use some improvement;  
Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

## 12.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

### 12.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **General Plan**—The Safety Element of the General Plan (adopted May 21, 2013) complies with Assembly Bill No. 2140 and is aimed at reducing potential risk of death, injuries, damage to property, and the economic and social dislocation resulting from fire, flood, geologic and other hazards. The General Plan provides policies and standards for the type, location, intensity, and design of development in areas of potential hazards. The intent is not to remove all risks associated with each specific type of hazard, but to reduce risks to life and property and to make informed decisions about land use and development near these hazards.
- **Climate Action Plan/Climate Change**—The City’s 2030 Climate Action Plan outlines strategies to reduce greenhouse gas emissions and fight climate change. These goals were reviewed to identify cross-planning initiatives that serve both adaptation and mitigation objectives.



- **Zoning Code**—The Zoning Code (Municipal Code Title 16) includes an Open Space and Conservation District (Chapter 16.48). The purpose and intent of this district is:
  - To protect the public health, safety, and welfare
  - To protect and preserve open space land as a limited and valuable resource
  - To assure its continued availability for the following: As agricultural land, scenic land, recreation land, conservation, or natural resource land; for the containment of urban sprawl and the structuring of urban development, and for the retention of land in its natural or near natural state to protect life and property in the community from the hazards of fire, flood, and seismic activity; and
  - To coordinate with and carry out federal, state, regional, county and city open space plans.
- **Stormwater Management**—New and redevelopment projects are required to reduce the quantity and improve the quality of stormwater that flows into the City’s collection system from private property, local creeks, the San Francisco Bay, and the Pacific Ocean. Depending on the size of the project, the City may require special features that minimize pollutants at their source, infiltrate more rain into the soil and treat stormwater before it leaves the site. For larger projects, an agreement to maintain the stormwater treatment measure is also required.
- **Growth Management**—For each new project, developers are required to conduct an environmental impact report and comply with the California Environmental Quality Act.
- **Environmental Protection**—The City has ordinances and policies related to environmental protection:
  - In January 2020, the City adopted reach codes for new construction to reduce greenhouse gas emissions from the building sector and encourage the use of renewable and clean energy. The reach codes are local modifications to account for the climatic, topographic, and geographic conditions that exist in Menlo Park.
  - The City’s Climate Action Plan was adopted in July 2020 and several of its goals are related to environmental protection. Two of the goals are related to electric vehicles: to promote the purchase of electric vehicles and increase EV charging stations in multi-family and commercial buildings, and to reduce greenhouse gas emissions and improve air quality.
  - The City adopted a Sustainable Vehicle Fleet Policy to increase the number of zero-emission City fleet vehicles.
  - The City has tree pruning program to ensure dead trees and limbs are removed to reduce wildfire risk. The City is transitioning to plant low-water tolerant replacement trees to adapt to the drought season while maintaining the urban canopy.
- **Flood Damage Prevention**—The ordinance (Municipal Code Section 12.42.13) minimizes public and private losses due to flood conditions in specific areas by provisions designed:
  - To protect human life and health
  - To minimize expenditure of public money for costly flood control projects
  - To minimize the need for rescue and relief efforts associated with flooding and generally undertaken at the expense of the general public
  - To minimize prolonged business interruptions
  - To minimize damage to public facilities and utilities such as water and gas mains, electric, telephone and sewer lines, streets and bridges located in areas of special flood hazard
  - To help maintain a stable tax base by providing for the second use and development of areas of special flood hazard so as to minimize future flood blight areas
  - To ensure that potential buyers are notified that property is in an area of special flood hazard; and
  - To ensure that those who occupy special flood hazard areas assume responsibility for their actions.

- **Capital Improvement Plan**—The capital improvement plan includes projects that can help mitigate potential hazards. The City will act to ensure consistency between the hazard mitigation plan and the current and future capital improvement plans following this update. The hazard mitigation plan may identify new possible funding sources for capital improvement projects and may result in modifications to proposed projects based on results of the risk assessment.
- **Urban Water Management Plan**—The Urban Water Management Plan assesses the reliability of water sources over a 20-year planning time frame and describes demand management measures and water shortage contingency plans.
- **Water Shortage Contingency Plan**—The Water Shortage Contingency Plan serves as a standalone document to be engaged in the case of a water shortage event, such as a drought or supply interruption, and defines specific policies and actions that will be implemented at various shortage level scenarios. The primary objective of the Water Shortage Contingency Plan is to ensure that Menlo Park Municipal Water has in place the necessary resources and management responses needed to protect health and human safety, minimize economic disruption, and preserve environmental and community assets during water supply shortages and interruptions. Consistent with California Water Code §10632, the Water Shortage Contingency Plan includes six levels to address shortage conditions ranging from up to 10% to greater than 50% shortage, identifies a suite of demand mitigation measures for Menlo Park Municipal Water to implement at each level, and identifies procedures for Menlo Park Municipal Water to annually assess whether or not a water shortage is likely to occur in the coming year.

## 12.5.2 Opportunities for Future Integration

The capability assessment presented in this annex identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Water System Emergency Action Plan**—Required by the State Department of Environmental Health back in 2004. This Plan was written on 12/29/2004 and was updated in 2005, 2011 and 2013, 2016, 2019 and is currently being updated for 2021. The plan can be integrated with the hazard mitigation plan by re-writing it to confirm to the National Incident Management System (NIMS) and attaching it as an appendix.
- **Climate adaptation plan**—The City will develop a climate adaptation plan that would focus on resiliency planning and updating the General Plan Safety Element to comply with recent changes to Senate Bill 379.
- **General Plan Update; Housing, Safety, and Environmental Justice Elements**—The City is currently working on updating/creating the General Plan Housing, Safety, and Environmental Justice Elements. As part of the sustainable and environmental planning guiding principle, the updates will establish goals, policies, and programs that incorporate mitigation strategies to natural hazards, as appropriate. The Safety Element will be updated to comply with Senate Bill 379.
- **Post-Disaster Recovery Plan**—The City does not have a recovery plan and intends to develop one as a mitigation planning action during the next five years. The plan will build on the goals and objectives identified in the hazard mitigation plan. The City is also working with the County on turning the Countywide Debris Management Plan into a stand-alone jurisdictional annex. The City will align its recovery actions with the National and State Disaster Recovery Framework Plan.
- **Stormwater Plan**—The Engineering Division is in the process of updating the stormwater master plan. The plan, when completed, will model the entire City storm drain network and identify areas vulnerable to localized flooding and identify capital projects to mitigate the flooding in these areas. The plan also

identifies measures to comply with state mandated requirements under the NPDES permitting requirements.

- **Shoreline Management Plan**—The City does not have a Shoreline Management Plan; however, the City has a few ongoing projects to help manage the risks associated with the shoreline along the Bayfront Canal-Atherton Channel and the former salt ponds.

## 12.6 RISK ASSESSMENT

### 12.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 12-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

**Table 12-11. Past Natural Hazard Events**

Type of Event	FEMA Disaster #	Date	Damage Assessment
Wildfires: poor air quality (CZU Fire)	DR-4558	August 14-September 26, 2020	Unknown
Covid-19 Pandemic	DR-4482	January 20, 2020 - present	Unknown
Severe Winter Storms	DR-4308	February 1-23, 2017	Unknown
Severe Storm (El Niño)	N/A	December 23, 2012	\$3 million creek bank erosion private property \$820,000 residential and businesses
Severe Storm (El Niño)	DR-1203	February 9, 1998	Unknown
Loma Prieta Earthquake	DR-845	October 18, 1989	Unknown

### 12.6.2 Hazard Risk Ranking

Table 12-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy. Mitigation actions target hazards with high and medium rankings.

**Table 12-12. Hazard Risk Ranking**

Rank	Hazard	Risk Ranking Score	Risk Category
1	Flood	87	High
2	Earthquake	84	High
3	Sea Level Rise / Climate Change	72	High
4	Severe Weather/Extreme Weather	24	Medium
5	Dam Failure	72	Low*
6	Landslide/Mass Movements	72	Low**
7	Drought	9	Low
8	Tsunami	2	Low

\* After reviewing the Dam Failure map provided by Tetra Tech, City of Menlo Park is not in the Inundation Area.

\*\* The City of Menlo Park does not experience a significant amount of landslides/mass movements, which is why the risk ranking changed from High to Low.

### **12.6.3 Jurisdiction-Specific Vulnerabilities**

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

#### **Repetitive Loss Properties**

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**

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

These public facilities are located in either flood hazard areas, along the fault lines, high liquefaction areas, and/or sea level rise areas:

- Menlo Park Community Center (formerly site of the Menlo Park Senior Center, Onetta Harris Community Center, Youth Center, and Belle Haven Pool)
- Belle Haven Child Development Center
- Menlo Park Police Neighborhood Services Center
- Belle Haven Library
- Bedwell Bayfront Park Landfill and Gas Flare
- Chrysler Pump Station
- U.S. Veteran Administration Medical Center
- Nealon Park Little House and Nursery School

Not all structures are listed above because it is assumed the hazards with “High” ranking from Table 12-12 would affect all the structures in the city. Therefore, a comprehensive list of all structures is not needed.

These local street intersections have experienced flooding during heavy rain events:

- Middlefield Rd and Ravenswood Ave.
- Atherton Channel and Haven Ave.
- Pope St. and Elm St. intersection
- Corner of Scott Dr. and Bohannon Dr.
- Campbell Ave. and Scott Dr.
- University Dr. and Middle Ave.
- Menalto Ave. near the Highway 101 sound wall

- Emma Ln.
- O’Brien Dr. and Kavanaugh Dr.
- O’Brien Dr. and Casey Ct.
- Bay Rd. and Menlo Oaks Dr.
- Bay Rd. and Berkeley Ave.
- Laurel St. and Ravenswood Ave.
- El Camino Real and Cambridge Ave.

These are the results from the public survey from residents who live within the 94025 ZIP code:

- Out of 25 natural hazards listed, residents expressed:
  - Extremely concerned for climate change, poor air quality, public health, and wildfire; and
  - Very concerned about earthquake, drought, power failure, flooding, and extreme heat
- Residents most commonly experienced these hazard events within the past five years:
  - Poor air quality due to nearby wildfire
  - Public health – epidemic or pandemic
  - Extreme heat
  - Drought; and
  - Climate change

According to the National Climatic Data Center, the City of Menlo Park and its neighboring cities (Atherton, East Palo Alto, Unincorporated West Menlo Park, North Fair Oaks, and Woodside) reported 12 flood hazard events (out of 16 total events) due to heavy rain within the past six years.

Mitigation actions addressing these issues were prioritized for consideration in the action plan for this annex.

## 12.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 12-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 12-13. Status of Previous Plan Actions**

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<b>MP-1</b> —Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.			✓	MPK-1
<p><b>Comment:</b> Menlo Park has a Planning Commission that oversees future building development which takes into consideration high risk hazards. Homeowners in high risk areas are required to take out home insurance associated with potential risks that expose their properties.</p> <p>No city facilities have been vulnerable to recurring losses, so relocation is no longer feasible. On the other hand, the City will continue to support retro-fitting of other structures, but the city’s role in this for private property is limited.</p>				

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p><b>MP-2</b>—Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community.</p> <p><b>Comment:</b> The City has incorporated the LHMP in their General Plan Safety Element pertaining to any associated risks or hazards; and takes into consideration these risks during building development or future land-use planning (adopted May 2013). The City is in the process of updating the General Plan Safety Element and will continue to integrate and implement the LHMP (tentative completion in 2022).</p>			✓	MPK-2
<p><b>MP-3</b>—Integrate the hazard mitigation plan into other plans and programs that support infrastructure investments, such as the five-year capital improvement program</p> <p><b>Comment:</b> The City has integrated its hazard mitigation planning as part of the capital improvement program by using prioritization criteria such as public health and safety risks, protecting infrastructure, ability to reduce greenhouse gas emissions and support the City’s 2030 climate action plan, and relationship to adopted plans (including the LHMP). Projects that have therefore been prioritized include funding for the Bayfront Canal and Atherton Channel flood protection project, the San Francisquito Creek upstream flood protection project, the reconstruction of the Chrysler stormwater pump station, and the SAFER Bay sea level rise protection project.</p>			✓	MPK-2
<p><b>MP-4</b>—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.</p> <p><b>Comment:</b> The City developed an application for conducting damage assessment following the guidelines of ATC-20 that has the ability to record preliminary damage estimates and photos. The program is called the Damage Assessment Reporting System. The City uses several project management tools, including Dropbox, ArcGIS and Monday.com for archiving information. Per County of San Mateo guidance, the City also adheres to filling out the “SMC Initial Damage Estimate” sheet.</p>				
<p><b>MP-5</b>—Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.</p> <p><b>Comment:</b> The City continues to partner with the County on all related hazard reduction, emergency preparedness, and disaster response efforts. Elected Officials serve as part of the San Mateo County Emergency Services Council in accordance with the Joint Powers Agreement. Participation in the Authority is to ensure cooperative emergency planning and response. All participating members and partners are expected to attend all regular and special meetings of the Area Emergency Services Council, agree to active participation by their jurisdictions in the development of plans and training programs, drills, exercises, and training opportunities, and otherwise assist in supporting the implementation of this agreement.</p>				MPK-3
<p><b>MP-6</b>—Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.</p> <p><b>Comment:</b> The Menlo Park Fire Protection District, in partnership with the City of Menlo Park, supports the facilitation of the maintenance protocols of the Hazard Mitigation Plan. Each department has taken ownership of their hazard mitigation projects and provides updates to the Point of Contact related to the completion of projects annually. GIS mapping tools are being developed to engage the public.</p>				MPK-4

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p><b>MP-7</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:</p> <p>Enforcement of the flood damage prevention ordinance Participate in floodplain identification and mapping updates; and Provide public assistance/information on floodplain requirements and impacts.</p> <p><b>Comment:</b> The City of Menlo Park has been recognized for performing floodplain management activities above and beyond the minimum requirements for the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP). As a result of the City's continuing efforts in floodplain management activities, Menlo Park has been certified to participate in the Community Rating System (CRS) program and received Class 8 effective of October 1, 2020 (expiration date on October 31, 2023). The City is compliant with NFIP requirements and flood-plain management programs including coordination on mapping updates and providing information and assistance to residents included in the program. The next annual recertification is due by August 1, 2021. The process involves certifying that the City have been performing the agreed upon activities and updating data.</p>				MPK-5
<p><b>MP-8</b>—Work with building officials to identify ways to improve the jurisdiction's BCEGS classification</p> <p><b>Comment:</b> The concept behind the Building Code Effectiveness Grading Schedule (BCEGS) is that municipalities with well-enforced building code requirements designed to mitigate losses from natural hazards, demonstrate better loss experience, and can ultimately lower citizens' insurance costs. Effectiveness Classification ranges from Class 1 to Class 10, with Class 1 being the highest/top score. In May 2021, the City of Menlo Park received BCEGS Class 3 for single- and two-family residential property and Class 3 for commercial and industrial property. This is a significant achievement that reflects the City's ongoing dedication for community development that is safe and supportive of Menlo Park's outstanding quality of life.</p>				
<p><b>MP-9</b>—Develop a post-disaster recovery plan and debris management plan.</p> <p><b>Comment:</b> The County developed a Debris Management plan in August 2020. Menlo Park does not have a stand-alone Debris Management Plan. The Public Works Department is reviewing the County plan with the goal of doing an independent plan aligned with the County Plan.</p>				MPK-6
<p><b>MP-10</b>—Develop mitigation controls (continuity of government plans) and ensure force protection measures are in place in relation to vulnerable critical facilities within the City (police stations, fire stations, emergency operation center, City Hall, emergency shelters, etc.)</p> <p><b>Comment:</b> The City is working with the County to support the development of a Continuity Operation Plan in order to align with countywide plans. The Menlo Park Fire Protection District, in partnership with the City, is working toward development.</p>				MPK-7
<p><b>MP-11</b>—Develop a plan for expediting the repair and restoration of the water systems through stockpiling of shoring materials, temporary pumps, surface pipelines, portable hydrants, and other supplies, such as those available through the Water Agency Response Network (WARN).</p> <p><b>Comment:</b> The City's 2016 Water System Emergency Response Plan will be updated with a 2021 Water System Emergency Response Plan by 12/31/2021. The City has cooperative agreements in place with emergency service/disaster service contractors. The Public Works Department and Menlo Park Municipal Water has on-call personnel 24/7 which coordinate timely repairs and restoration of water systems in the city. The City has interconnect agreements in place with adjacent water providers. The City coordinates with West Bay Sanitary Sewer District with repair and restoration of the wastewater systems.</p>				
<p><b>MP-12</b>—Continue to participate in the Public Works Mutual Aid Agreement—San Mateo County in accordance with resource sharing and resource coordination.</p> <p><b>Comment:</b> The City continues to participate in the Public Works Mutual Aid Agreement and has also piloted a system called the Field Emergency Resource Management System, an interactive web-based emergency resources sharing application. The City also uses the ICS-213RR Resource Request Form.</p>				

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p><b>MP-13</b>—Continue to ensure that critical intersection traffic lights function following loss of power by testing battery back-ups, emergency generators, or lights powered by alternative energy sources such as solar.</p> <p><b>Comment:</b> The City has an on-call contract with CalWest for emergency response to traffic signal outages and has two portable generators on hand in case of power outages. Monthly maintenance on all generators is completed by the fleet section of the Public Works Department. In addition, the City has secured a set of solar panels and 12-volt batteries. This solar charging station will be installed at the Corporation Yard to provide fully charged batteries on stand-by for lighted crosswalks.</p>				
<p><b>MP-14</b>—Develop emergency plans or MOU agreements with neighboring mutual aid providers.</p> <p><b>Comment:</b> The City continues to promote Field Emergency Resource Management System, Field Emergency Resource Management System, which facilitates our emergency resources sharing capabilities and MOU agreements among neighboring mutual aid providers countywide. The system has been tested and exercised. The City also participates in the Disaster Service Committee that is a multi-jurisdictional emergency planning work group. The City has a Public Works Mutual Aid Agreement in place by Resolution No. 6547 adopted in March 2020. Through a standardized Emergency Operation Plan between East Palo Alto, Atherton, Menlo Park, and the Fire District the City maintains a system of neighboring unity and structure.</p>				
<p><b>MP-15</b>—Implement maintenance and storm preparedness plans that include the annual clearing of storm water drains and culverts, drainage ditches, and other waterways, such as the Atherton Channel and San Francisquito Creek, to maintain flood protection.</p> <p><b>Comment:</b> The City has a Flood Response Annex which includes the annual clearing of storm water drains and culverts, drainage ditches, and other waterways, such as the Atherton Channel and San Francisquito Creek, to maintain flood protection. The City also participates in the San Francisquito Creek Joint Powers Authority annual Flood Preparedness Workshops. The City conducts an annual inspection of the storm drain system before the rainy season. As part of the City's in-house inspection and cleaning program on a five-year routine basis, the contractor focuses on root cleaning, line clearing, and CCTV line inspection.</p>			✓	MPK-8
<p><b>MP-16</b>—Continue to coordinate with the City of Redwood City on the Bayfront Canal flood control improvements.</p> <p><b>Comment:</b> The City has been working with San Mateo Flood and Sea Level Rise Resiliency District, San Mateo County, Redwood City and the Town of Atherton on the design and construction of the Bayfront Canal Bypass Project. An MOU was approved by all partner agencies in November 2020 and construction commenced in 2021.</p>				
<p><b>MP-17</b>—Continue to coordinate with the San Francisquito Creek Joint Powers Authority on San Francisquito Creek and SAFER Bay flood control projects.</p> <p><b>Comment:</b> The City continues to coordinate with the San Francisquito Creek JPA on the Downstream of 101 and Upstream of 101 flood control projects, as well as the development of the SAFER Bay project. In 2021, the City applied for a FEMA Building Resilient Infrastructure and Communities (BRIC) grant for several reaches of the SAFER Bay Project, in partnership with the JPA, PG&amp;E, and Facebook.</p>				MPK-9
<p><b>MP-18</b>—Continue to coordinate with the California Coastal Conservancy and the U.S. Fish &amp; Wildlife Service on the South Bay Salt Pond Restoration Project.</p> <p><b>Comment:</b> The coordination work with the California Coastal Conservancy is ongoing. The City is working on a levee project currently with members.</p>				MPK-10
<p><b>MP-19</b>—Upgrade the Chrysler Pump Station to improve flood protection in the Bayfront area.</p> <p><b>Comment:</b> The design of the Chrysler Pump Station is currently underway, and funding was secured in 2020 with a \$5 million FEMA Hazard Mitigation Grant program award. Construction is anticipated to begin in 2021 and completed by 2023.</p>				MPK-11
<p><b>MP-20</b>—Develop and implement a Green Infrastructure Plan to improve storm water quality and flood protection.</p> <p><b>Comment:</b> The City Council adopted the Green Stormwater Infrastructure Plan in 2019. The City has also hired a consultant to develop a storm water master plan.</p>				



Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p><b>MP-21</b>—Produce hazards maps that take into account the impacts of flooding due to climate change.</p> <p><b>Comment:</b> San Mateo County’s Office of Sustainability published the draft Sea Level Rise Vulnerability Assessment for San Mateo County in 2018. The study includes maps for a number of sea level rise scenarios, which includes areas that would be impacted in Menlo Park. The City also has GIS staff that references flood inundation maps to incorporate data into other City planning documents and analyses.</p>				MPK-12
<p><b>MP-22</b>—Develop an Adaptation to Climate Change Plan and integrate into the Local Hazard Mitigation Plan.</p> <p><b>Comment:</b> In early 2020, the San Mateo County Flood and Sea Level Rise District was formed to represent all cities and the County of San Mateo. The City of Menlo Park is an active member of this agency that is developing plans and projects to protect areas of the city vulnerable to sea level rise and climate change. In July 2020, the City adopted, and in April 2021 updated, the Climate Action Plan that identifies climate change resiliency as a priority for Menlo Park.</p>				MPK-13
<p><b>MP-23</b>—Continue to participate with the San Mateo County Flood and Sea level Rise Resiliency District on key flood control projects.</p> <p><b>Comment:</b> The Sea Level Rise Vulnerability Assessment was completed in 2018 with substantial input from the City of Menlo Park. Following completion of the assessment and the passage of AB825, the San Mateo County Flood and Sea level Rise Resiliency District was formed as noted in MP-17 and MP-22. The City participates in FSLRRD meetings and is a stakeholder/partner on key flood control projects.</p>				MPK-14
<p><b>MP-24</b>—Develop a recycled water feasibility study and adopt a recycled water ordinance for the use of recycled water in the Menlo Park Municipal Water District service area.</p> <p><b>Comment:</b> West Bay Sanitary District completed preparation of its recycled water feasibility study of the Bayfront area of Menlo Park in May 2019. West Bay also completed construction of the Sharon Heights recycled water project with operations commencing in October 2020 to provide recycled water to the Sharon Heights Golf and Country Club.</p>				
<p><b>MP-25</b>—Plan, design and build emergency water supply wells to serve residents during times of emergencies that result in a loss of water supply.</p> <p><b>Comment:</b> The City began construction of its first emergency water supply well in 2018 and the project was completed in 2020, awaiting issuance of permits from the State Department Water Resources, expected in 2021. The City is exploring considerations for a second emergency well and/or reservoir in partnership with Ravenswood City School District at the Willow Oaks School and park sites.</p>				
<p><b>MP-26</b>—Update the Seismic Vulnerability Assessment of the City’s water distribution system.</p> <p><b>Comment:</b> In June 2021, the City used EPA’s Vulnerability Self-Assessment Tool (VSAT) to complete a Risk and Resiliency Assessment to evaluate all risks including seismic assessment of the City’s water distribution system.</p>				
<p><b>MP-27</b>—Plan, design, and build for the undergrounding of utilities in the downtown parking areas.</p> <p><b>Comment:</b> The City Council established three underground utility districts in February 2020, one of which is located downtown. The California Public Utilities Commission recently adopted major changes to the Rule 20A program (which funded undergrounding utilities), requiring the City to reassess the viability of this (or any) undergrounding project in 2021. The undergrounding of utilities in the downtown parking areas was identified as a lower priority area than other corridors in the City by the City Council in mid-2021.</p>		✓		

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update		
			Check if Yes	Action # in Update	
<p><b>MP-28</b>—Develop a program for the installation and replacement of emergency generators at critical facilities.</p> <p><b>Comment:</b> The City installed an emergency generator at City Hall in 2018. The City continues to assess the installation of emergency generators at critical facilities with a focus on the delivery of a new community center which would provide emergency shelter capabilities in the Belle Haven neighborhood. This new facility would provide back-up power options using solar and battery backups in addition to an emergency generator. All emergency generators are serviced monthly by the Public Works fleet section and a list of the age and condition of all generators has been developed.</p> <p>The City will carry over and modify the Action Item to maintain and replace emergency generators at critical facilities.</p>					MPK-15
<p><b>MP-29</b>—Continue to enforce and or comply with the State-mandated requirement that site-specific geologic reports be prepared for development proposals within Alquist-Priolo Earthquake Fault Zones and restrict the placement of structures for human occupancy.</p> <p><b>Comment:</b> The City complies with and enforces State mandated requirements. No properties within the City limits are within active fault zones.</p>	✓				
<p><b>MP-30</b>—Update as needed and enforce regulations concerning new construction (and major improvements to existing structures) within flood zones in order to be compliant with federal requirements and the National Flood Insurance Program.</p> <p><b>Comment:</b> The City continues to enforce regulations concerning new construction within flood zones complying with federal requirements. The City enforces stricter regulations with Ordinance 12.42.</p>	✓				
<p><b>G-1</b>—Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.</p> <p><b>Comment:</b> The City of Menlo Park was certified to participate in the Community Rating System program and received Class 8 effective of October 1, 2020. The Arbor Day Foundation recognized the City of Menlo Park as a Tree City for 22 consecutive years and as a Tree Growth City for six years as of June 2021.</p> <p>This Action Item will be carried over and consolidated with MPK-5.</p>					MPK-5
<p><b>G-2</b>—Where feasible, implement a program to record high water marks following high-water events.</p> <p><b>Comment:</b> The City has an emergency flood response annex that has identified the appropriate response triggers. The City also monitors the San Francisquito Creek flood monitors which provide early warning when limits have been reached.</p>					
<p><b>G-3</b>—Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.</p> <p><b>Comment:</b> The City of Menlo Park has been recognized for performing floodplain management activities above and beyond the minimum requirements for the Federal Emergency Management Agency (FEMA) National Flood Insurance Program. Beginning this fall, Menlo Park residents and businesses located in the following flood zones could be eligible for a discount on their flood insurance premium: Flood zone A and AE: 10 percent discount; and Flood zone X: 5 percent discount.</p> <p>Menlo Park is an active member of the federal flood insurance program that provides flood insurance to residential and commercial structures in areas prone to inundation. The program also sets minimum standards for floodplain management which cities must follow to retain their membership status. Municipalities exceeding these standards may be eligible for flood insurance discounts through the Community Rating System (CRS). The City of Menlo Park has earned certification with a Class 8 rating. City's flood insurance webpage: <a href="https://www.menlopark.org/901/Flood-insurance">https://www.menlopark.org/901/Flood-insurance</a></p>					MPK-16

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p><b>G-4</b>—Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.</p> <p><b>Comment:</b> The City continues to partner with the County on all related hazard reduction, preparedness, and response efforts (CERT, County Disaster Preparedness Fair, Emergency Managers Association, JPA Emergency Service Council, etc.). These efforts will continue in the future through the efforts of the emergency management program. The City also participates as a member in the Disaster Service Committee, a local all hazard emergency management committee that deals with multi-jurisdictional hazards collectively. The City adopted Resolution No. 6339 on August 30, 2016, to approve an update to the Menlo Park Local Hazard Mitigation Plan Annex to the San Mateo County Hazard Mitigation Plan. This Action Item is repetitive. See Action Item MP-5.</p>				MPK-3
<p><b>G-5</b>—Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.</p> <p><b>Comment:</b> The City continues to review the Local Hazard Mitigation Plan maintenance protocols and strives to assess its capabilities in achieving many of the tasks outlined in the plan; based on staffing and budget capabilities. Through department meetings, the local hazard mitigation projects are reviewed, and where budget allows, funds are directed toward such projects. This Action Item is repetitive. See Action Item MP-6.</p>				MPK-3

## 12.8 HAZARD MITIGATION ACTION PLAN

Table 12-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 12-15 identifies the priority for each action. Table 12-16 summarizes the mitigation actions by hazard of concern and mitigation type.

**Table 12-14. Hazard Mitigation Action Plan Matrix**

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<p><b>Action MPK-1</b>— Where appropriate, support retro-fitting in high hazard areas and prioritize those structures that have experienced repetitive losses. This may include, but not limited to, an inventory of city structures known to be at seismic risk.</p> <p><u>Hazards Mitigated:</u> Earthquake, Flood</p>						
Existing	6, 7, 9, 11, 13	Public Works	Community Development	High	Grant funding	Ongoing
<p><b>Action MPK-2</b>—Integrate the hazard mitigation plan into other plans, ordinances, and programs that dictate land use decisions within the community, including the General Plan Safety Element.</p> <p><u>Hazards Mitigated:</u> Flood, Earthquake, Climate Change, Sea Level Rise</p>						
New and Existing	2, 4, 6, 7	Community Development		Low	Staff time, General Fund	Ongoing
<p><b>Action MPK-3</b>—Integrate the hazard mitigation plan into other plans and programs that support infrastructure investments, such as the capital improvement program.</p> <p><u>Hazards Mitigated:</u> Flood, Earthquake, Climate Change, Drought, Sea Level Rise</p>						
New and Existing	1, 2, 4, 6, 7, 8, 13	Public Works		Medium	Staff time, General Funds, Grant funding	Ongoing
<p><b>Action MPK-4</b>—Support the County-wide initiatives and actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.</p> <p><u>Hazards Mitigated:</u> Flood, Earthquake, Drought, Climate Change, Sea Level Rise</p>						
New and Existing	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	Public Works	Community Development	Low	Staff time, General Funds	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action MPK-5</b> —Continue to participate in Tree City USA, CRS, BCEGS, and 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; and</li> <li>• Provide public assistance/information on floodplain requirements and impacts.</li> </ul> The City will also work towards obtaining a StormReady certification.						
<i>Hazards Mitigated:</i> Flood, Climate Change						
New and Existing	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 13, 14	Public Works		Low	Grant funding, General Fund	Ongoing
<b>Action MPK-6</b> —Develop a post-disaster recovery plan, post-earthquake operation plan, and debris management plan.						
<i>Hazards Mitigated:</i> Flood, Earthquake						
New and Existing	1, 2, 6, 8, 9, 11	City of Menlo Park and Menlo Park Fire Protection District		Medium	Staff Time, General Funds, Emergency Management Performance Grants	Ongoing
<b>Action MPK-7</b> —Develop mitigation controls (continuity of government plans) and ensure force protection measures are in place in relation to vulnerable critical facilities within the city (e.g., police stations, fire stations, emergency operation center, City Hall, emergency shelters, etc.)						
<i>Hazards Mitigated:</i> Earthquake, Flood, Climate Change, Sea Level Rise						
New and Existing	6, 9, 13	City of Menlo Park	Menlo Park Fire Protection District	Medium	Grant funding	Short-term
<b>Action MPK-8</b> —Implement maintenance and storm preparedness plans that include the annual clearing of storm water drains and culverts, drainage ditches, and other waterways, such as the Atherton Channel and San Francisquito Creek, to maintain flood protection.						
<i>Hazards Mitigated:</i> Flood, Climate Change						
New and Existing	8,9	Public Works		Medium	Grant funding	Ongoing
<b>Action MPK-9</b> — Continue to coordinate with the San Francisquito Creek Joint Powers Authority on San Francisquito Creek and SAFER Bay flood control projects.						
<i>Hazards Mitigated:</i> Dam Failure, Flood, Landslide, Severe Weather, Climate Change, Sea Level Rise						
Existing	1, 4, 7, 8, 9, 10, 14	Public Works	San Francisquito Creek Joint Powers Authority	Medium	Staff Time, General Fund, Grant funding	Ongoing
<b>Action MPK-10</b> —Continue to coordinate with the California Coastal Conservancy and the U.S. Fish & Wildlife Service on the South Bay Salt Pond Restoration Project.						
<i>Hazards Mitigated:</i> Flood, Climate Change, Sea Level Rise						
Existing	1, 4, 7, 8, 9, 10, 14	California State Coastal Conservancy	Public Works	Low	Staff Time, General Fund	Ongoing
<b>Action MPK-11</b> —Upgrade the Chrysler Pump Station to improve flood protection in the Bayfront Area.						
<i>Hazards Mitigated:</i> Flood, Severe Weather, Climate Change, Sea Level Rise						
Existing	1, 6, 8,9	Public Works		Medium	Grant funding	Short-term
<b>Action MPK-12</b> —Produce hazards maps that take into account the impacts of flooding due to climate change.						
<i>Hazards Mitigated:</i> Flood, Climate Change, Severe Weather, Sea Level Rise						
New and Existing	1, 3, 4, 5, 8, 10, 11	Public Works	Information Technology	Low	Grant funding	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action MPK-13</b> —Prepare a climate adaption and resiliency plan including, but not limited to, the following strategies:						
<ul style="list-style-type: none"> <li>Identify local risks of climate change (e.g., sea level rise, air quality, water supply, energy outages, vector control, extreme heat, increased social unrest)</li> <li>Identify what the City can do in the short-term while long-term planning is underway</li> <li>Identify in the long-term plan to include strategies that address further increases in global temperatures beyond 2040</li> <li>Conduct general engagement and education to develop the plan (city staff and the community)</li> <li>Address existing and future equity issues through research and engagement with low to moderate income community members that are likely to be most impacted and vulnerable to climate change</li> <li>Address mitigation and resiliency through capital improvement projects, city operations, and development projects</li> <li>Evaluate whether federal, state, and regional sea level rise district and San Francisquito Creek agencies holistically address Menlo Park’s local needs for climate adaptation/resiliency with a focus on equity</li> <li>Provide a roadmap for the City to follow over the next 10 years and/or beyond; and</li> <li>Revise policies and/or create programs to improve climate resilience.</li> </ul>						
<u>Hazards Mitigated:</u> Flood, Climate Change, Drought, Severe Weather, Sea Level Rise						
New and Existing	1, 2, 3, 4, 5, 8, 10, 14	City Manager’s Office	Public Works, Community Development	Low	Staff time, General Fund, Grant funding	Short-term
<b>Action MPK-14</b> —Continue to participate with the San Mateo County Flood and Sea Level Rise Resiliency District on flood control projects.						
<u>Hazards Mitigated:</u> Flood, Sea Level R						
Existing	1, 2, 3, 4, 5, 8, 10, 14	County of San Mateo	Public Works	Low	Staff Time, General Fund	Short-term
<b>Action MPK-15</b> —Develop a program for maintaining and replacing the emergency generators at critical facilities.						
<u>Hazards Mitigated:</u> Flood, Climate Change, Earthquake, Severe Weather						
New and Existing	6, 7, 8	Public Works		Medium	Grant funding	Ongoing
<b>Action MPK-16</b> —Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.						
<u>Hazards Mitigated:</u> Flood, Climate Change, Severe Weather, Earthquake, Dam Failure						
Existing	2, 3, 4, 5, 6, 7, 8, 9, 10, 13	City of Menlo Park		High	Grant funding	Ongoing
<b>Action MPK-17</b> —Update the City’s stormwater master plan to identify areas vulnerable to localized flooding and identify capital projects to mitigate those areas.						
<u>Hazards Mitigated:</u> Flood, Climate Change, Severe Weather						
Existing	1, 4, 6, 7, 8, 9, 13	Public Works		\$330,000	General Fund	Short-term
<b>Action MPK-18</b> —Develop a shoreline management plan to protect coastline from soil erosion and enhance the coastline with trails, parks, and wildlife refuge.						
<u>Hazards Mitigated:</u> Flood, Climate Change						
New	1, 4, 7, 8, 9, 13, 14	Public Works		Low/Medium	Staff time, General Fund, Grant funding	Medium-term
<b>Action MPK-19</b> —Review and update the City’s 2014 Emergency Operation Plan. Incorporate outreach, which may include, but not limited to, the City’s bi-annual resident survey and establish an annual report on LHMP.						
<u>Hazards Mitigated:</u> Flood, Earthquake, Climate Change, Dam Failure, Landslide/Mass Movements, Severe Weather, Drought, Tsunami, Sea Level Rise						
Existing	1, 2, 3, 4, 8, 9, 10, 11, 12	City of Menlo Park	Menlo Park Fire Protection District		Staff time	Short-term
<b>Action MPK-20</b> —Provide training opportunities for City staff to be certified floodplain managers.						
<u>Hazards Mitigated:</u> Flood						
New	1, 5, 7, 8, 9, 13	City of Menlo Park		Low	Staff time, General Fund	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action MPK-21</b> —Provide education to community members and City staff about the City’s 2030 Climate Action Plan goals and present strategies to achieve those goals.						
<u>Hazards Mitigated</u>	Climate Change, Sea Level Rise					
New and Existing	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14	City of Menlo Park		Low	Staff time, General Fund	Short-term
<b>Action MPK-22</b> —Develop an emergency water storage and supply project which may include, but is not limited to, a new underground reservoir to provide emergency water supply to residents during times of emergencies.						
<u>Hazards Mitigated</u>	Flood, Earthquake, Climate Change, Severe Weather, Drought					
New	1, 2, 4, 5, 6, 8, 9	Menlo Park Municipal Water		\$27M	Staff time, Water Fund, Loans	Medium-term (5-10 years)
<b>Action MPK-23</b> —Replace the roof on Reservoir 2, which is deteriorating and at the end of its life expectancy. The replacement would ensure continued public health protection, system reliability, and ensure the functionality of the existing emergency water storage.						
<u>Hazards Mitigated</u>	Earthquake, Climate Change, Severe Weather, Drought					
Existing	1, 4, 6, 8, 9, 13	Menlo Park Municipal Water		\$4.6M	Water Fund	Short-term
<b>Action MPK-24</b> —Plan, design, and implement the water infrastructure improvements recommended in the Water System Master Plan to upgrade infrastructure in the Menlo Park Municipal Water service area to meet fire flow demands.						
<u>Hazards Mitigated</u>	Severe Weather					
Existing	1, 4, 6, 8, 9, 13	Menlo Park Municipal Water		\$1.6M	Water Fund	Short-term
<b>Action MPK-25</b> —As part of the Water System Master Plan capital improvement projects, two water interconnection projects would provide alternative emergency water supply sources.						
<u>Hazards Mitigated</u>	Earthquake, Drought, Severe Weather					
New	1, 2, 4, 6, 8, 9, 13	Menlo Park Municipal Water		\$2M	Water Fund	Short-term
<b>Action MPK-26</b> —Incorporate consideration of the FEMA 100-year tide and sea level rise data and climate change-driven extreme storms into land use planning and shoreline development. This includes new policies by local jurisdictions, and County and City actions regarding their General Plans, Climate-related Plans, and the development applications.						
<u>Hazards Mitigated</u>	Flood, Climate Change, Sea Level Rise					
New and Existing	1, 2, 5, 6, 7, 8, 9, 13, 14	SMC Flood & Sea Level Rise Resiliency District	County and Menlo Park	Low	General Fund, Private Developers, City Capital Project Funding	Ongoing
<b>Action MPK-27</b> —Continue to identify and plan upgrades of utility systems, equipment, and critical facilities, including pump stations, generators, tide gates, stream gages, open channel, and culvert/pipeline infrastructure.						
<u>Hazards Mitigated</u>	Climate Change, Flood, Severe Weather					
New and Existing	2, 6, 7, 8	SMC Flood & Sea Level Rise Resiliency District	Menlo Park, County and San Mateo Resource Conservation District	Medium	Tax-Funded Flood Zones, Grant funding	Ongoing
<b>Action MPK-28</b> —Support green infrastructure projects that enhance resiliency to natural disasters and incorporate green design elements into hazard mitigation projects where feasible.						
<u>Hazards Mitigated</u>	Climate Change/Sea Level Rise, Landslide, Flood, Severe Weather, Drought, Sea Level Rise					
New and Existing	2, 6, 7, 8, 14	Menlo Park	SMC Flood & Sea Level Rise Resiliency District, and San Mateo Resource Conservation District	Medium	Tax-Funded Flood Zones, Property/Vehicle Fees, Stormwater Fees, Grant funding	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action MPK-29</b> —Identify and pursue strategies to enhance recycled water infrastructure planning/implementation in the vicinity of FSLRRD projects.						
<u>Hazards Mitigated</u> New and Existing	Drought 1, 6, 7,8	Menlo Park, SMC Flood & Sea Level Rise Resiliency District	County of San Mateo, San Mateo Resource Conservation District, and West Bay Sanitary Sewer District	Medium	Grant funding	Ongoing
<b>Action MPK-30</b> —Improve community response to flood emergencies in various ways, including but not limited to: - Upgrade and expand the countywide flood early warning system - Conduct community flood preparation, education, and recovery outreach.						
<u>Hazards Mitigated</u> New and Existing	Climate Change, Flood, Severe Weather 2, 3, 7, 8, 9, 10, 11	SMC Flood & Sea Level Rise Resiliency District	County and Menlo Park	Low	Grant funding	Short-term
<b>Action MPK-31</b> —Develop Emergency Action Plans for Bayfront Canal and Atherton Channel.						
<u>Hazards Mitigated</u> Existing	Climate Change, Flood, Severe Weather, Sea Level Rise 3, 4, 7, 8, 9,11	SMC Flood & Sea Level Rise Resiliency District	Redwood City, County of San Mateo, Menlo Park, and Atherton	Low	Grant funding	Long-term
<b>Action MPK-32</b> —Advance long-term resilience to sea level rise and extreme storms for the communities and critical assets along the San Francisco Bay shoreline south of Whipple Avenue to Marsh Road, as well as provide environmental, recreation, community/connectivity enhancements where possible.						
<u>Hazards Mitigated</u> New and Existing	Climate Change, Flood, Severe Weather, Sea Level Rise 6, 7, 8,14	SMC Flood & Sea Level Rise Resiliency District	Redwood City, County, and Menlo Park	High	Private Developers, Grant funding	Long-term
<b>Action MPK-33</b> —Complete construction and oversee ongoing operation, maintenance, and mitigation efforts for the Bayfront Canal and Atherton Channel Flood Protection and Ecosystem Restoration Project.						
<u>Hazards Mitigated</u> Existing	Flood, Severe Weather, Sea Level Rise 4, 7, 8	SMC Flood & Sea Level Rise Resiliency District	Redwood City, Menlo Park, Atherton, and County	Low	Grant funding, City Capital Project Funding	Short-term
<b>Action MPK-34</b> —Advance long-term resilience to sea level rise and extreme storms for the communities and critical assets adjacent to the San Francisquito Creek and nearby areas of the shoreline with the Cities of Menlo Park and East Palo Alto, as well as provide environmental, recreation, community/connectivity enhancements where possible.						
<u>Hazards Mitigated</u> New and Existing	Climate Change, Flood, Severe Weather, Sea Level Rise 4, 6, 7, 8, 10, 14	Menlo Park	Caltrans, and San Francisquito Creek Joint Powers Authority, San Mateo Resource Conservation District	Medium	Grant funding, Federal Grants (FEMA BRIC/HMGP), City Capital Project Funding	Long-term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

Table 12-15. Mitigation Action Priority

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

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 <sup>a</sup>							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
<b>High-Risk Hazards</b>								
<b>Flood</b>	MPK-2, 3, 4, 5, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, 22, 26, 27, 28, 32, 33, 34	MPK-1, 2, 3, 7, 9, 11, 15, 16, 18, 26, 27, 28, 32, 34	MPK-5, 7, 12, 13, 16, 19, 30, 31	MPK-9, 10, 18, 26, 28, 32, 33, 34	MPK-4, 6, 7, 8, 11, 15, 19, 22, 27, 30, 31	MPK-2, 3, 5, 7, 9, 10, 11, 16, 17, 22, 27, 28, 33	MPK-2, 3, 5, 7, 8, 9, 10, 11, 12, 13, 14, 18, 26, 27, 28, 32, 33, 34	MPK-1, 2, 5, 7, 16, 20
<b>Earthquake</b>	MPK-2, 3, 4, 7, 15, 16, 19, 22	MPK-1, 2, 3, 7, 15, 16, 23	MPK-7, 16, 19		MPK-4, 6, 7, 15, 19, 22, 23, 25	MPK-2, 3, 7, 16, 22, 23, 25	MPK-1, 2, 3, 7	MPK-1, 2, 7, 16
<b>Sea Level Rise / Climate Change</b>	MPK-2, 3, 4, 5, 7, 8, 9, 10, 12, 13, 15, 16, 17, 18, 19, 22, 26, 27, 28, 32, 34	MPK-2, 3, 7, 9, 11, 15, 16, 18, 23, 26, 27, 28, 32, 33	MPK-5, 7, 12, 13, 16, 19, 21, 30, 31	MPK-9, 10, 18, 21, 26, 28, 32, 34	MPK-4, 7, 8, 11, 15, 19, 22, 23, 27, 28, 30, 31	MPK-2, 3, 5, 7, 9, 10, 11, 16, 17, 22, 23, 27, 28	MPK-2, 3, 5, 7, 8, 9, 10, 11, 12, 13, 18, 26, 27, 28, 32, 34	MPK-2, 3, 5, 7, 16
<b>Medium-Risk Hazards</b>								
<b>Severe Weather/ Extreme Weather</b>	MPK-9, 12, 13, 15, 16, 18, 19, 22, 24, 27, 28, 32, 33, 34	MPK-9, 11, 15, 18, 23, 24, 27, 28, 32, 34	MPK-12, 13, 19, 30, 33	MPK-9, 28, 32, 33, 34	MPK-11, 15, 19, 22, 23, 24, 25, 27, 28, 30, 31	MPK-9, 11, 16, 17, 22, 23, 24, 25, 27, 28, 33	MPK-9, 11, 12, 13, 27, 28, 32, 33, 34	MPK-16
<b>Low-Risk Hazards</b>								
<b>Landslide/ Mass Movements</b>	MPK-9, 19, 28	MPK-9, 28	MPK-19	MPK-9, 28	MPK-20, 28	MPK-9, 28	MPK-9, 28	
<b>Dam Failure</b>	MPK-9, 16, 19	MPK-9, 16	MPK-16, 19	MPK-9	MPK-19	MPK-9, 16	MPK-9	MPK-16
<b>Drought</b>	MPK-3, 4, 13, 19, 22, 28, 29	MPK-3, 23, 28, 29	MPK-13, 19	MPK-28	MPK-4, 19, 22, 23, 25, 28, 29	MPK-3, 22, 23, 25, 28, 29	MPK-3, 13, 28, 29	MPK-3
<b>Tsunami</b>			MPK-19		MPK-19			

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

## 12.9 PUBLIC OUTREACH

Table 12-17 lists public outreach activities for this jurisdiction.

**Table 12-17. Local Public Outreach**

Local Outreach Activity	Date	Number of People Involved
City Council study session	Tentative August 2021	5 Councilmembers + Public
City of Menlo Park Weekly Digest E-Newsletter Article <a href="https://www.menlopark.org/Blog.aspx?IID=1747">https://www.menlopark.org/Blog.aspx?IID=1747</a>	5/24/2021	N/A
City of Menlo Park Weekly Digest E-Newsletter Article <a href="https://www.menlopark.org/Blog.aspx?IID=1706">https://www.menlopark.org/Blog.aspx?IID=1706</a>	4/5/2021	N/A
City of Menlo Park Weekly Digest E-Newsletter Article	Week of July 26	N/A

## 12.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.








- **City of Menlo Park Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **City of Menlo Park Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
- **City of Menlo Park 2030 Climate Action Plan**—The CAP outlines goals and strategies related to environmental protection and climate change.
- **City of Menlo Park General Plan**—This comprehensive planning document contains many components related to local hazard mitigation planning.
  - Open Space/Conservation, Noise and Safety Elements (Adopted May 21, 2013)
- **Association of Bay Area Governments**—Data used for growth management summary (Plan Bay Area 2040)
- **California Department of Finance**—Data used for growth management summary (Table E-5, Population and Housing Estimates).
- **Accela**—City of Menlo Park online permitting software used for collecting development records.
- **City of Menlo Park Emergency Operation Plan**—The Plan was reviewed to identify the need to update it.
- **Climate Emergency Resolution No. 6535**—The resolution shows political support on addressing climate change.
- **Climate and Sustainability Resolution No. 6493**—The resolution shows political support to support the implementation of climate change adaptation strategies.
- **Amend the 2030 Climate Action Plan Resolution No. 6621**—The resolution includes the scope of work for 2021 implementation of the climate action plan.
- **Public Works Mutual Aid Agreement Resolution No. 6547**—The resolution enters the City into San Mateo County operational area building safety inspection program mutual aid program.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- **San Mateo County Flood and Sea Level Rise Resiliency District Hazard Mitigation Table**—Email correspondence with the District throughout Phase 3.

# Menlo Park

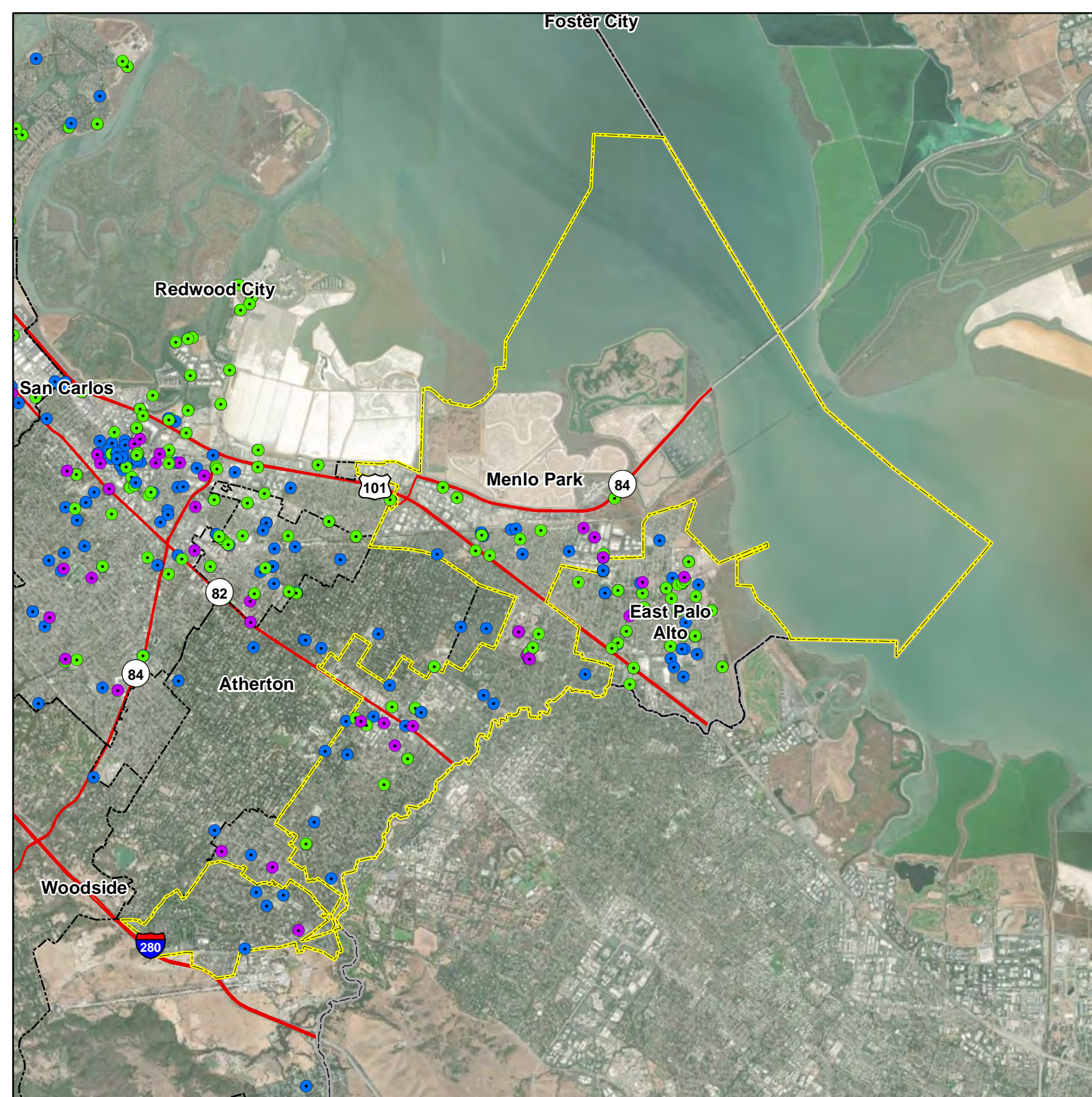
## Critical Facilities, 1 of 2

-  Food, Water, Shelter
-  Health and Medical
-  Safety and Security
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., DHS HIFLD











0 0.5 1 2 Miles



# Menlo Park

## Critical Facilities, 2 of 2

-  Communications
-  Energy
-  Hazardous Materials
-  Transportation
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., DHS HIFLD









0 0.5 1 2 Miles



# Menlo Park

## Dam Failure Inundation Area Used for Risk Assessment

-  Inundation Area
-  Dam
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CA DWR










0 0.5 1 2 Miles



# Menlo Park

## NEHRP Soil Class

-  C (Dense soil/soft rock)
-  D (Stiff soil)
-  E (Soft clay)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CGS

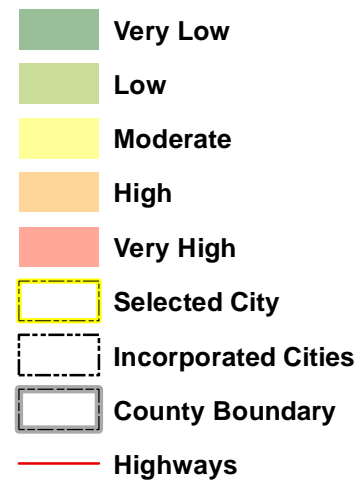


0 0.5 1 2 Miles

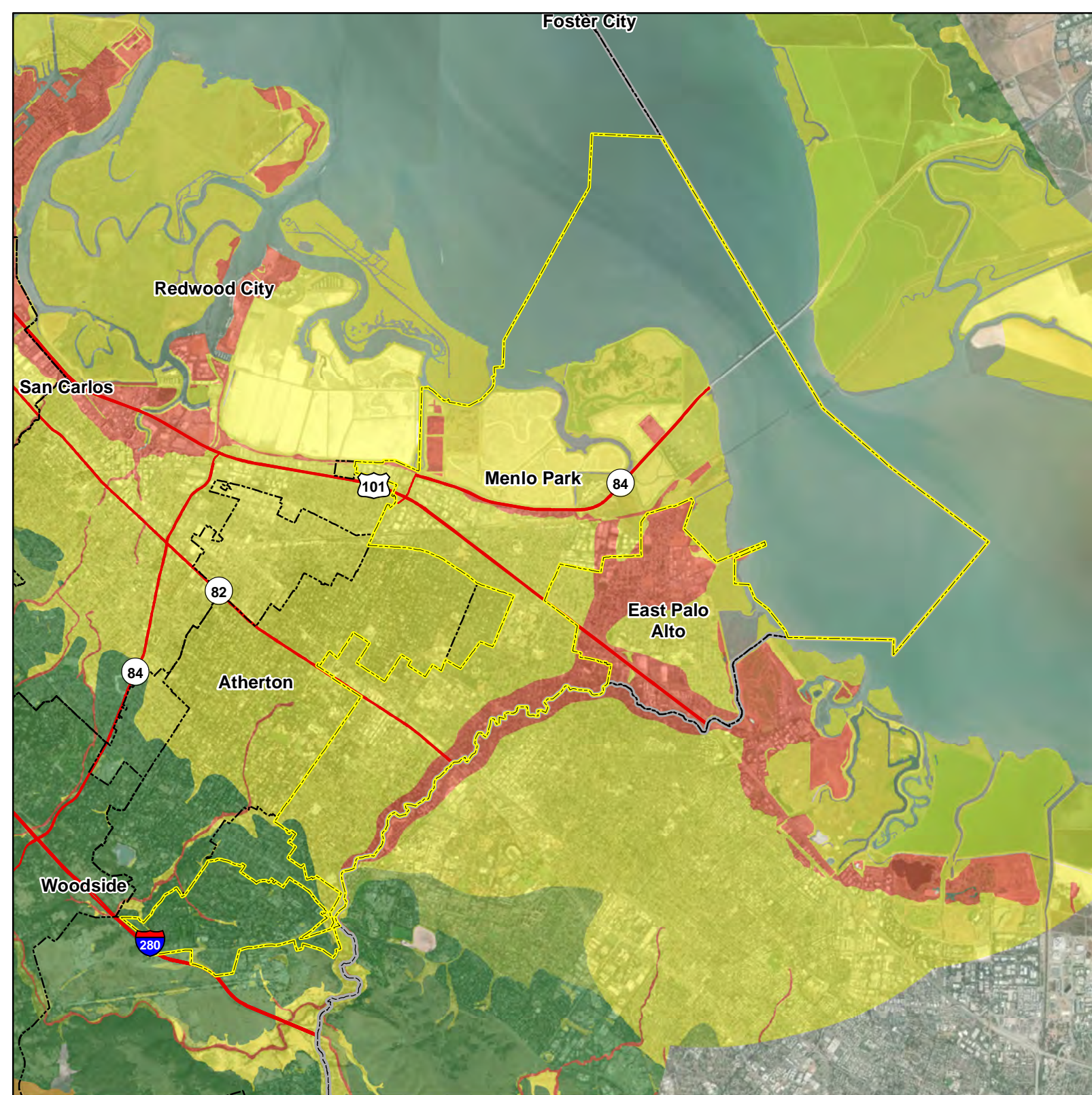
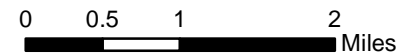


# Menlo Park

## Liquefaction Susceptibility



Data Sources: ESRI Basemap, San Mateo Co., ABAG (USGS)



# Menlo Park

## Butano M6.93 Earthquake Scenario

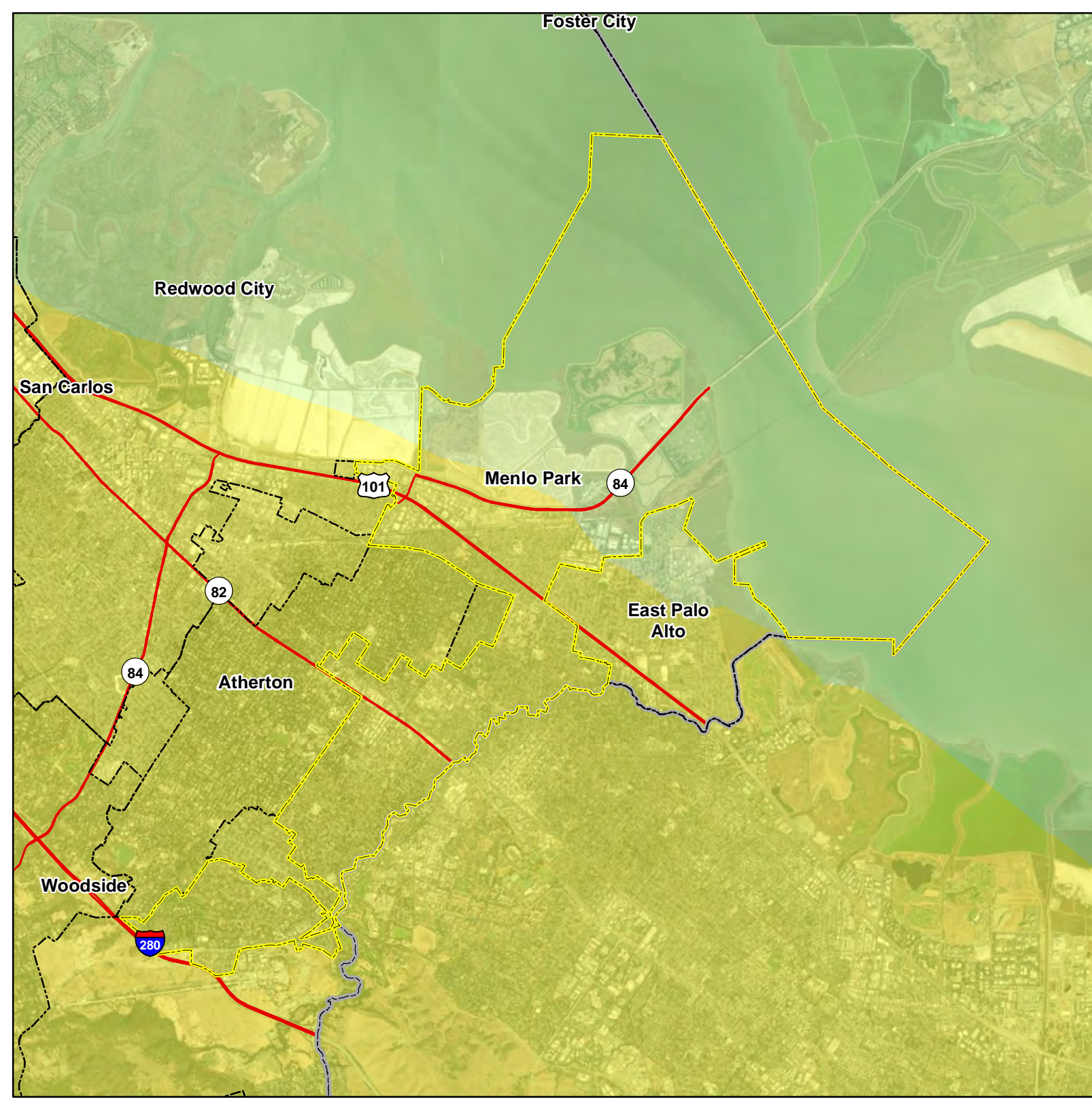
### Mercalli Intensity Scale

- VI (Strong/Light)
- VII (Very Strong/Moderate)

- Selected City
- Incorporated Cities
- County Boundary
- Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS











# Menlo Park

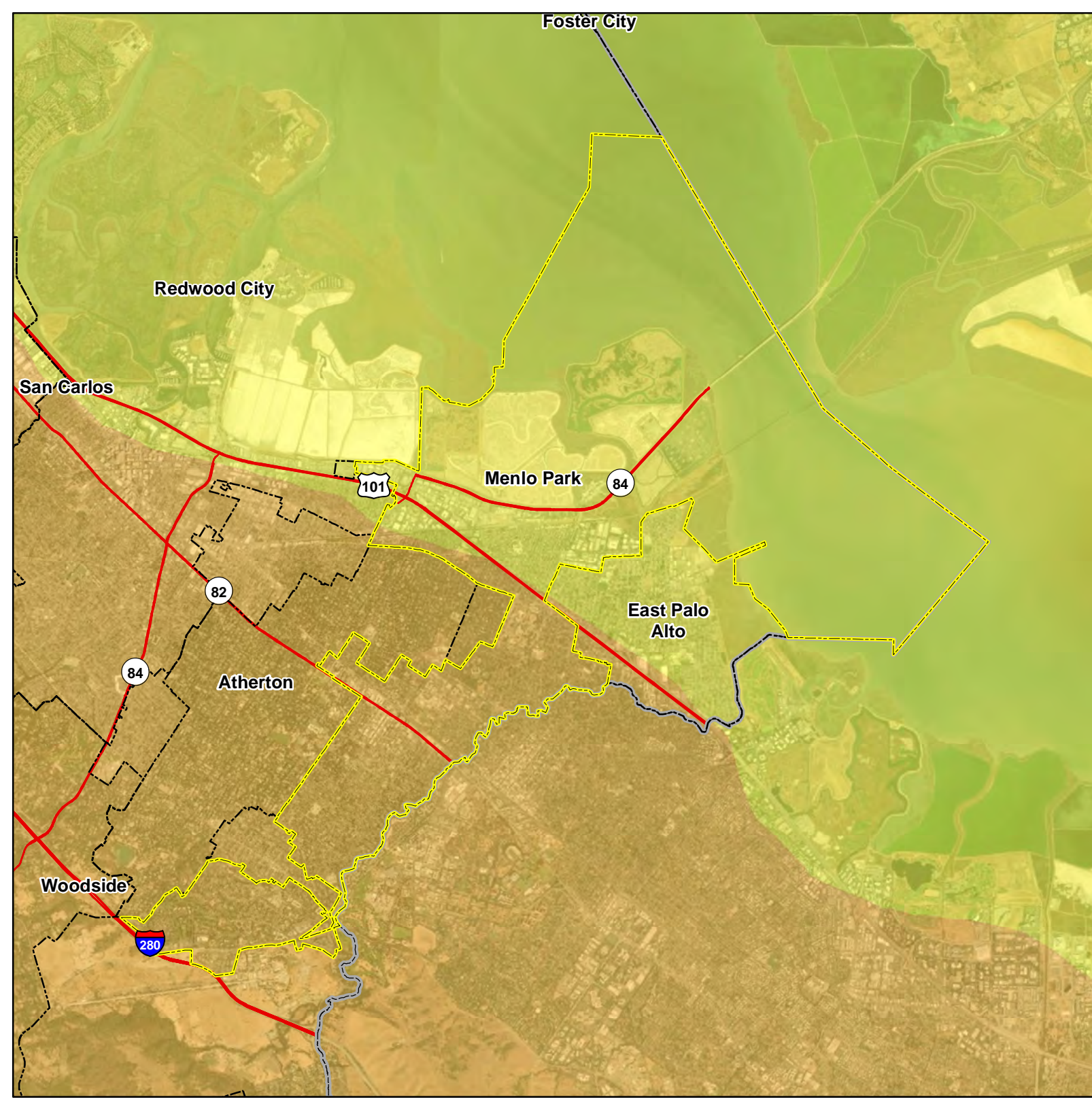
## Monte Vista Shannon M7.14 Earthquake Scenario

### Mercalli Intensity Scale

-  VII (Very Strong/Moderate)
-  VIII (Severe/Moderate-Heavy)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Intensity scale described as:  
(perceived shaking / potential damage)


Data Sources: ESRI Basemap,  
San Mateo Co., USGS



# Menlo Park

## 100-Year Probabilistic Earthquake Scenario

### Mercalli Intensity Scale

-  VII (Very Strong/Moderate)
-  VIII (Severe/Moderate-Heavy)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



0 0.5 1 2 Miles



# Menlo Park

## San Andreas Peninsula M7.38 Earthquake Scenario

### Mercalli Intensity Scale

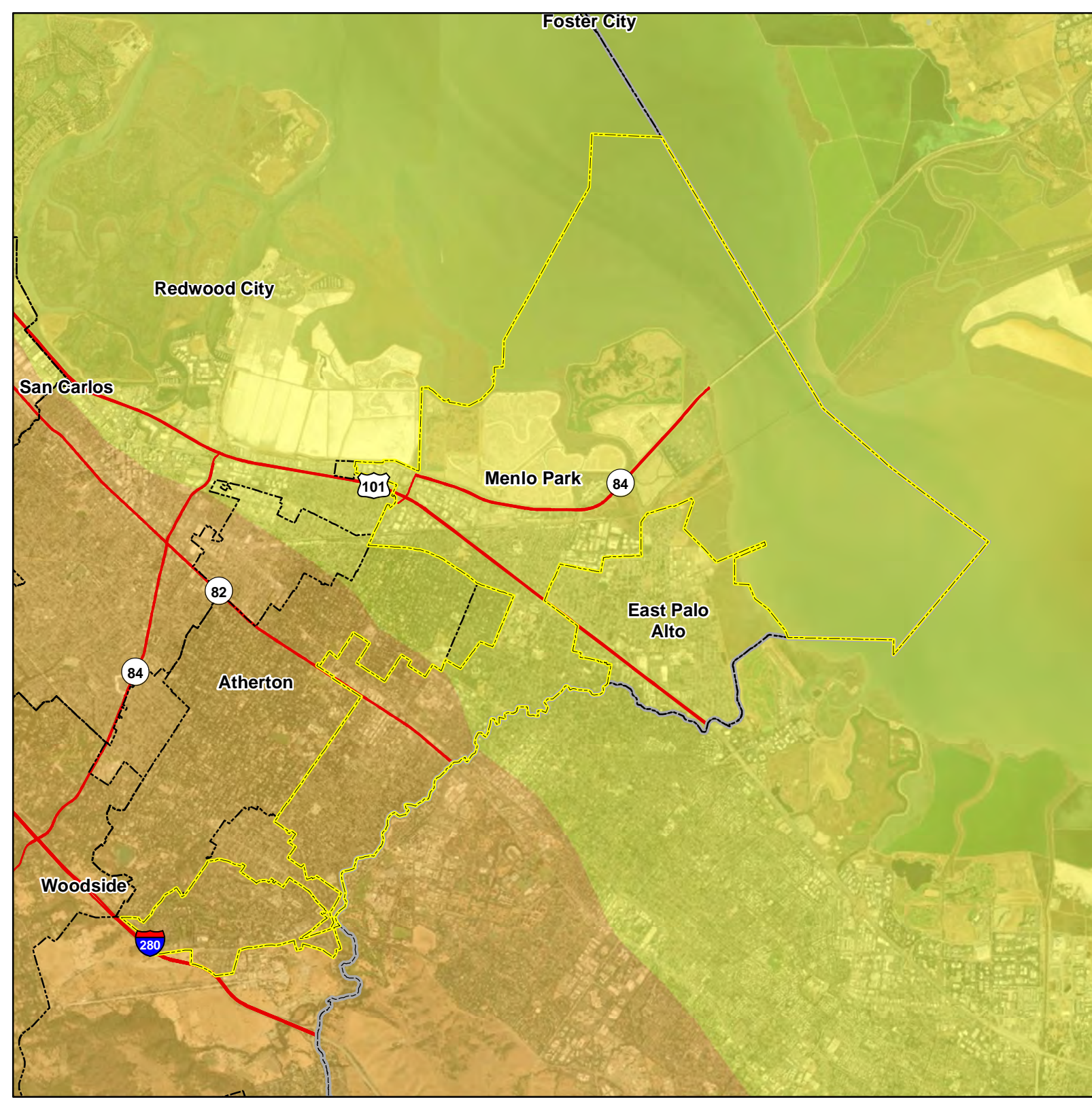
- VI (Strong/Light)
- VII (Very Strong/Moderate)
- VIII (Severe/Moderate-Heavy)
- Selected City
- Incorporated Cities
- County Boundary
- Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



0 0.5 1 2 Miles



# Menlo Park

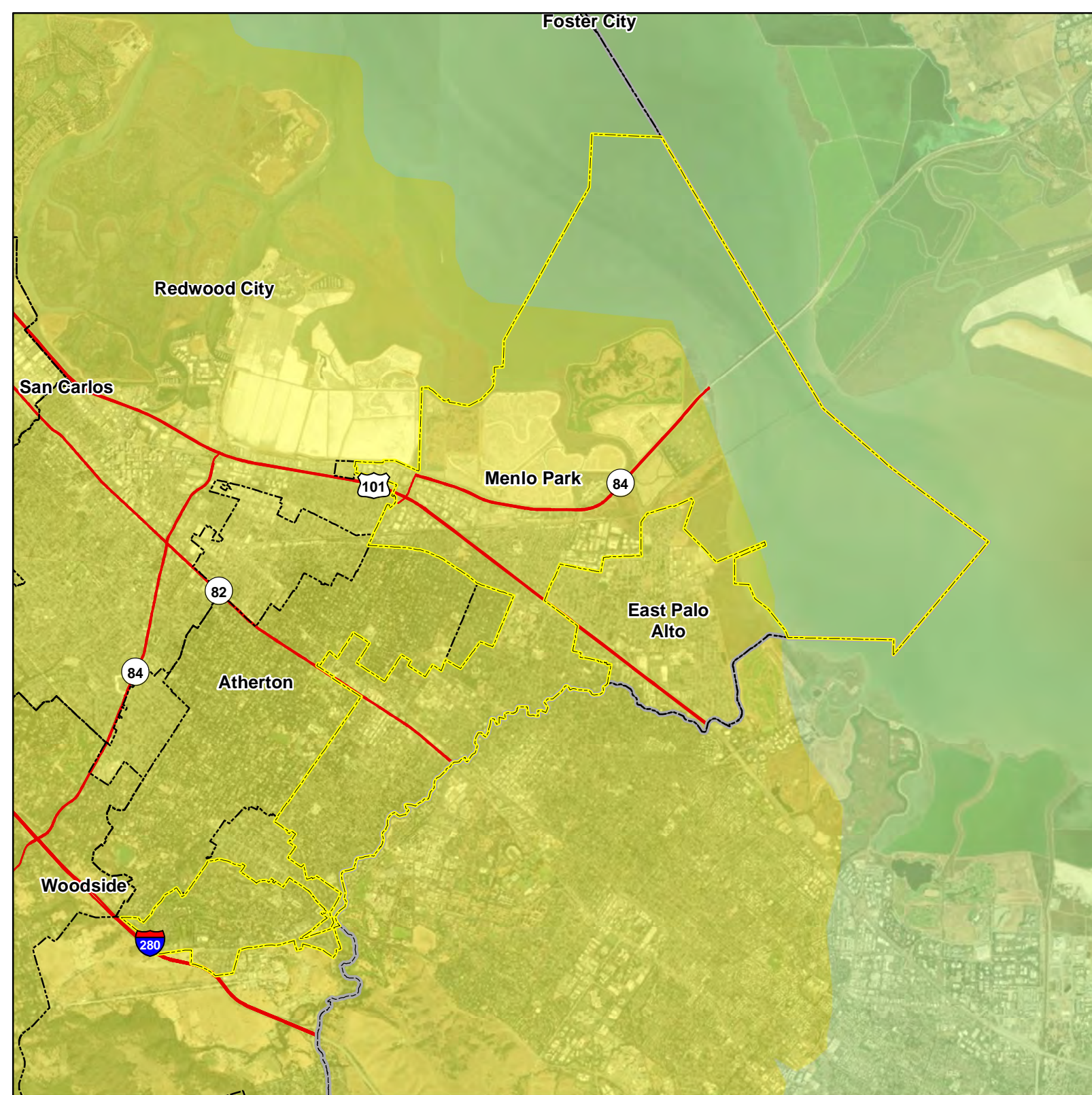
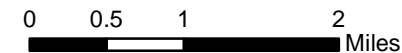
## San Gregorio North M7.44 Earthquake Scenario

### Mercalli Intensity Scale

- VI (Strong/Light)
- VII (Very Strong/Moderate)
- Selected City
- Incorporated Cities
- County Boundary
- Highways







Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



# Menlo Park

## FEMA Flood Hazard Areas

-  1% Annual Chance Flood (100-Year)
-  0.2% Annual Chance Flood (500-Year)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap, San Mateo Co., FEMA

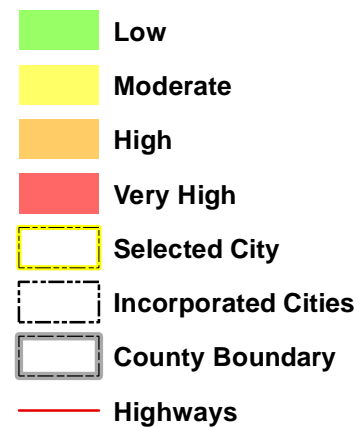


0 0.5 1 2 Miles

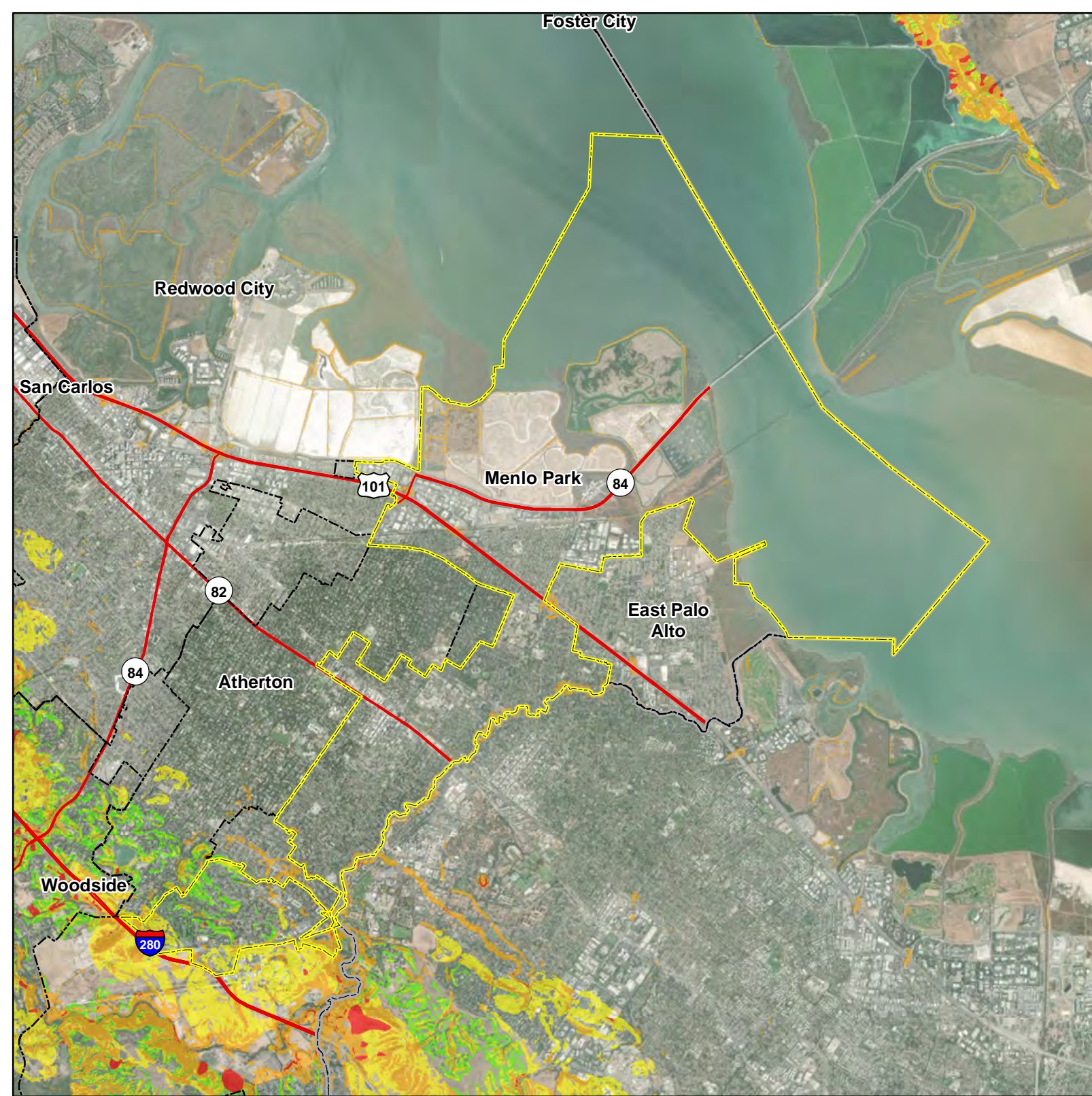
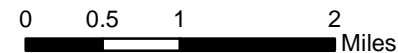


# Menlo Park

## Susceptibility to Deep-Seated Landslides








Data Sources: ESRI Basemap, San Mateo Co., CGS



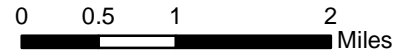
# Menlo Park

## Sea Level Rise

-  Inundation Area
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways






Inundation areas are a combination of Our Coast Our Future 200cm (6.6 feet) of SLR with 100-year storm for the Pacific Ocean coastline, and Adapting to Rising Tides 108 inches (9 feet) of SLR for the San Francisco Bay coastline.

Data Sources: ESRI Basemap, San Mateo Co., ART, OCOF



# Menlo Park

## Tsunami Hazard Areas

-  Hazard Areas
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CGS










0 0.5 1 2 Miles





# Menlo Park

## Wildfire Hazard Severity Zones

-  Moderate
-  High
-  Very High
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap, San Mateo Co., CAL FIRE



0 0.5 1 2 Miles





# 13. CITY OF MILLBRAE

## 13.1 LOCAL HAZARD MITIGATION PLANNING TEAM

### Primary Point of Contact

Bill Reilly, Emergency Services Coordinator  
621 Magnolia Avenue  
Millbrae, CA 94030  
650-259-2315  
[wreilly@smcgov.org](mailto:wreilly@smcgov.org)

### Alternate Point of Contact

Khee Lim, Public Works Director  
621 Magnolia Avenue  
Millbrae, CA 94030  
650-259-2347  
[klim@ci.millbrae.ca.us](mailto:klim@ci.millbrae.ca.us)

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 13-1.

**Table 13-1. Local Mitigation Planning Team Members**

Name	Title
Bill Reilly	Emergency Services Coordinator
Khee Lim	Director of Public Works
Val Mandapat	Deputy Chief Building Official
Roscoe Mata	Planning Manager
Christine Reed	Fire Marshal
Craig Centis	Deputy Public Works Director

## 13.2 JURISDICTION PROFILE

### 13.2.1 Location and Features

The City of Millbrae is located on the Peninsula, 15 miles south of San Francisco. The boundaries of this city extend roughly from the Bayshore Freeway on the east to Skyline Boulevard on the west. This distance is approximately 1.7 miles. The distance between the north and south city limit line is approximately 2.05 miles. The City of Millbrae has approximately 100 employees with an operating budget of \$52 million. The City of Millbrae borders the following San Mateo County jurisdictions: Burlingame to the south, Pacifica to the West, San Bruno and South San Francisco to the North.

According to the National Weather Service, Millbrae enjoys a typical Mediterranean climate featuring cool, wet winters and dry, mild summers. Night and morning fog are common during the summer months. Frequent, westerly sea breezes keep temperatures relatively mild throughout the year with highs in the middle fifties and lows in the lower forties during the winter and highs in the lower seventies and lows in the lower fifties during the summer. Annual precipitation ranges from 20 inches in the lowlands to 32 inches in the hills near Skyline Boulevard and I-280; most of the rain falls from November through April. Snow is very rare; the last measurable

occurrence was on February 5, 1976. The nearest National Weather Service station is at the nearby San Francisco International Airport, where records go back to early 1927.

### **13.2.2 History**

The City of Millbrae, incorporated in 1948, was a small settlement largely dependent on market farming, the Mills Estate and Dairy, West Coast Porcelain Works (later the Royal Container Company), and vegetable and flower farming until World War 2. Southern Pacific Railroad, the 40-line streetcar line, El Camino Real and Skyline Road (in the approximate location of I-280) linked the settlement to nearby towns and San Francisco. Millbrae in the period 1920-1950 was beginning its transformation from its roots as a farming village supplying the produce markets of San Francisco to a small town. Development of the town was largely governed by transportation features: the railway, streetcar line, highways, and airport.

### **13.2.3 Governing Body Format**

Millbrae operates as a General Law City, providing for a Council/Manager form of government that clearly distinguishes the legislative power of the City Council from the administrative powers of the City Manager.

The five-member City Council is elected directly by the residents of Millbrae. As the legislative branch of the government, the City Council makes final decisions on all major City matters. The Council adopts ordinances and resolutions necessary for efficient governmental operations, approves the budget, and acts as a board of appeals. The Council appoints the City Manager and City Attorney, as well as the members of the City's boards and commissions.

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

## **13.3 CURRENT TRENDS**

### **13.3.1 Population**

According to the California Department of Finance, the population of Millbrae as of January 2020 was 22,832. Since 2016, the population has decreased at an average annual rate of 0.33 percent.

### **13.3.2 Development**

The City of Millbrae recently amended its Millbrae Station Area Specific Plan to allow Level 2 Biotechnology use south of Millbrae Avenue. Since the last Plan update, the Gateway at Millbrae Station mixed use development has begun construction. The project includes 400 residential housing units, 217,000 square feet of Class A office and a 162-room hotel.

The City of Millbrae will be updating its General Plan shortly as well as introducing a Downtown Plan and El Camino Real Specific Plan. These plans are intended to up-zone the commercial core area by allowing high density mixed use developments along El Camino Real Corridor.

The City of Millbrae has also received numerous applications for mixed use developments and commercial non-residential developments.

The City of Millbrae envisions high density mixed use development in the near to mid-term with very few infill single family residential developments.

Identifying previous and future development trends is achieved through a comprehensive review of permitting since completion of the previous plan and in anticipation of future development. Tracking previous and future growth in potential hazard areas provides an overview of increased exposure to a hazard within a community. Table 13-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

**Table 13-2. Recent and Expected Future Development Trends**

Criterion	Response																														
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan? <i>If yes, give the estimated area annexed and estimated number of parcels or structures.</i>	No																														
Is your jurisdiction expected to annex any areas during the performance period of this plan? <i>If yes, describe land areas and dominant uses. If yes, who currently has permitting authority over these areas?</i>	No																														
Are any areas targeted for development or major redevelopment in the next five years? <i>If yes, briefly describe, including whether any of the areas are in known hazard risk areas</i>	Yes  Development in the El Camino, downtown area, and Millbrae Station Area Specific Plan. None of which are in known hazard risk areas.																														
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?	<table border="1"> <thead> <tr> <th></th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> </tr> </thead> <tbody> <tr> <td>Single Family</td> <td>1</td> <td>3</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Multi-Family</td> <td>1</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Other (commercial, mixed use, etc.)</td> <td>1</td> <td>1</td> <td>3</td> <td>0</td> <td>2</td> </tr> <tr> <td><b>Total</b></td> <td><b>3</b></td> <td><b>4</b></td> <td><b>3</b></td> <td><b>0</b></td> <td><b>2</b></td> </tr> </tbody> </table>		2016	2017	2018	2019	2020	Single Family	1	3	0	0	0	Multi-Family	1	0	0	0	0	Other (commercial, mixed use, etc.)	1	1	3	0	2	<b>Total</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>2</b>
	2016	2017	2018	2019	2020																										
Single Family	1	3	0	0	0																										
Multi-Family	1	0	0	0	0																										
Other (commercial, mixed use, etc.)	1	1	3	0	2																										
<b>Total</b>	<b>3</b>	<b>4</b>	<b>3</b>	<b>0</b>	<b>2</b>																										
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	<ul style="list-style-type: none"> <li>• Special Flood Hazard Areas: 1</li> <li>• Landslide: 0</li> <li>• High Liquefaction Areas: 0</li> <li>• Tsunami Inundation Area: 0</li> <li>• Wildfire Risk Areas: 0</li> </ul>																														
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 at least: 5 vacant lots for single family 3 vacant lots for multi-family 3 vacant lots for commercial																														

## 13.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The "Analysis of Mitigation Actions" table in this

annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 13-3.
- Development and permitting capabilities are presented in Table 13-4.
- An assessment of fiscal capabilities is presented in Table 13-5.
- An assessment of administrative and technical capabilities is presented in Table 13-6.
- An assessment of education and outreach capabilities is presented in Table 13-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 13-8.
- Classifications under various community mitigation programs are presented in Table 13-9.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 13-10.

**Table 13-3. Planning and Regulatory Capability**

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Codes, Ordinances, &amp; Requirements</b>				
<b>Building Code</b>	Yes	No	Yes	Yes
<i>Comment: Local Building Official and Fire Marshal for Standards Codes – Muni Code 9.05.010 – Adopted California Building Code, 2019 Edition, 11/16/2020, Ordinance 783</i>				
<b>Zoning Code</b>	Yes	No	No	No
<i>Comment: Community Development MMC 10.05, Adoption of Zoning Plan, Adopted 10/13/09, Ordinance 726MMC 10.05</i>				
<b>Subdivisions</b>	Yes	No	No	No
<i>Comment: Public Works &amp; Community Development MMC 10.15, Adopted 6/17/51, Ordinance 69,</i>				
<b>Stormwater Management</b>	Yes	Yes	Yes	Yes
<i>Comment: Public Works MMC 8.70 &amp; MRP 2.0 Order No. R2-2015-0049 NPDES Permit No. CAS612008</i>				
<b>Post-Disaster Recovery</b>	Yes	No	No	Yes
<i>Comment: Community Development with Public Works. San Mateo County Public Works Mutual Aid Resolution 074124 adopted 10/20/05 Community Development with Building Dept. San Mateo County Operational Area Building Safety Inspection Program Mutual Aid Agreement Resolution 21-13 adopted 2/09/21</i>				
<b>Real Estate Disclosure</b>	No	Yes	Yes	No
<i>Comment: County Assessor’s Office. CA. State Civil Code 1102 requires full disclosure on Natural Hazard Exposure of the sale/re-sale of any and all real property.</i>				
<b>Growth Management</b>	Yes	No	Yes	Yes
<i>Comment: Community Development. The City of Millbrae General Plan (1998-2015) addresses growth management through the following land use goals: Preserve the Quality of Residential Neighborhoods, Promote Property Site Planning, Architectural Design and Property Maintenance, maintain a Variety of Land Uses, Support Economic Development and revitalize and Enhance Commercial Areas, and Provide Adequate Services and Facilities. The Housing and Circulation Elements provide guidance on managing future growth. The Chapter 4 Circulation Element identifies current traffic, circulation, and parking issues, presents current traffic counts for City arterials and adjoining freeways, and discusses relevant regional transportation plans. Recommended policies and implementing actions address current and anticipated needs. The Chapter 5 Housing Element provides goals and objectives to guide housing requirements, needs, policies, programs and address future trends and projections.</i>				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Site Plan Review</b>	Yes	No	No	Yes
<b>Comment:</b> <i>Community Development. The City of Millbrae addresses Site Plan Review in the General Plan (1998-2015) Land Use Goal 2 (LU2): Promote Proper Site Planning, Architectural Design and Property Maintenance. The City of Millbrae Planning and Zoning Code (effective November 13, 2009) establishes the requirements for the project site plan design review and entitlement process. In addition to Planning, all proposed projects are reviewed by the Building, Public Works, and Fire Departments to ensure they meet all local, state, and federal requirements and obtain all the necessary permits and entitlements, including Planning Commission and/or City Council approval before construction.</i>				
<b>Environmental Protection</b>	Yes	No	Yes	No
<b>Comment:</b> <i>Community Development with Public Works. The Community Development Department evaluates all proposed development projects for environmental impacts under the California Environmental Quality Act/National Environmental Protection Act (CEQA/NEPA)</i>				
<b>Flood Damage Prevention</b>	Yes	No	Yes	Yes
<b>Comment:</b> <i>Public Works. MMC 8.50, Flood Damage Prevention, Adopted 9/23/03, Ordinance 688MMC 8.50</i>				
<b>Emergency Management</b>	Yes	No	Yes	Yes
<b>Comment:</b> <i>Contract with San Mateo County Office of Emergency Services to provide Emergency Management Services. Renewed Annually (Municipal Code with Title 19, Division 2)</i>				
<b>Climate Change</b>	Yes	No	No	Yes
<b>Comment:</b> <i>Community Development with Public Works</i> <i>The City has not formally adopted a Climate Action Plan. However, the City has adopted and implemented a number of policies, programs, and projects to address the reduction of GHG emissions and related efforts to improve sustainability. The following are the City's Goals and Policies:</i> <i>Climate Protection and Sustainability Goals and Policies:</i> <ul style="list-style-type: none"> <li>• <i>U.S. Mayor's Climate Protection Agreement, Adopted 6/12/07, Resolution 07-31.</i></li> <li>• <i>Participated in ICLEI- Cities for Climate Protection Campaign, Adopted 6/12/07, Resolution 07-32.</i></li> <li>• <i>Resolution 09-68 adopted 9/22/09: Establishes specific Green House Gas (GHG) emissions reduction goals for municipal operations and communitywide GHG emissions sources in the City of Millbrae.</i></li> <li>• <i>Currently participating in the countywide RICAPS program for regionally-integrated climate action planning, GHG inventories and CAP development.</i></li> <li>• <i>Currently preparing a draft CAP pursuant to adopted targets and in coordination with RICAPS.</i></li> </ul> <i>The Safety Element of the City of Millbrae General Plan (1998) contains policies related to climate change effects and adaptation:</i> <i>Policy S1.1 Location of A Future Development; Policy S1.8 Reforestation</i> <ul style="list-style-type: none"> <li>• <i>Policy S1.12 Ordinances and Codes</i></li> <li>• <i>Policy S1.17 Drainage Channels, Hydraulic Pumps and Conduits</i></li> <li>• <i>Policy S1.18 Hazards</i></li> <li>• <i>Policy S1.19 Rise in Sea level</i></li> <li>• <i>Policy S2.2 Emergency Services Facilities</i></li> <li>• <i>Policy S2.3 Hazardous Awareness</i></li> </ul> <i>The San Mateo County Sea-Level Rise Vulnerability Assessment: The City of Millbrae participated in this regional assessment to inventory of all assets vulnerable to sea-level rise, identify specific vulnerabilities of 30 representative assets, issue initial recommendations on adaption measures, and improve flooding and sea-level rise mapping. The assessment was completed 2016. High Line Canal and Millbrae Water Pollution Control Plant as well as the Millbrae Intermodal Station were included as critical assets.</i>				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Planning Documents</b>				
<b>General Plan</b>	Yes	No	Yes	Yes
<i>Is the plan compliant with Assembly Bill 2140? No</i>				
<i>Comment: The City of Millbrae has begun a two-year process to update the General Plan, which was last adopted in 1998. The General Plan will guide decision making for land use, transportation, infrastructure, community design, environmental issues, and other important topics that impact the community. The General Plan is a long-range planning document that will look ahead to 2040. The General Plan Update will include a specific plan for the Downtown Priority Development Area and an Active Transportation Plan. The City contracted the consultant, Mintier Harnish to prepare the General Plan. The project is estimated to be completed in the fall of 2022. The Updated General Plan will include linkages to the Local Hazard Mitigation Plan</i>				
<b>Capital Improvement Plan</b>	Yes	No	No	Yes
<i>How often is the plan updated? Annually</i>				
<i>Comment: Public Works with Finance</i>				
<b>Disaster Debris Management Plan</b>	Yes	No	No	Yes
<i>Comment: Currently developing Disaster Debris Management Plan in cooperation with San Mateo County.</i>				
<b>Floodplain or Watershed Plan</b>	No	No	No	Yes
<i>Comment: Public Works. MMC 8.50, Flood Damage Prevention, Adopted 9/23/03, Ordinance 688. Includes subsections such as 8.50.040 Basis for establishing the areas of special flood hazard, 8.50.080 Warning and disclaimer of liability, and 8.50.110 Designation of the floodplain administrator. The City Engineer or Director of Public Works are appointed to administer and enforce policies outlined in this chapter. Section 8.50.050 Compliance required ensures public safety by prohibiting construction in floodplains without proper permitting and code compliance. MMC 8.50</i>				
<b>Stormwater Plan</b>	Yes	No	No	Yes
<i>Comment: Public Works with Community Development. MMC 8.70, Adopted in 6/14/94. Ordinance 607, The purpose of this chapter is to ensure the future health, safety, and general welfare of city citizens: Eliminating non-storm water discharges to the municipal separate storm sewer; Controlling the discharge to municipal separate storm sewers from spills, dumping or disposal of materials other than storm water; Reducing pollutants in storm water discharges to the maximum extent practicable. The intent of this chapter is to protect and enhance the water quality of our watercourses, water bodies and wetlands in a manner pursuant to and consistent with the Clean Water Act. (Ord. 607, § 1; 1976 Code § 8-14.02).MMC 8.70</i>				
<b>Urban Water Management Plan</b>	Yes	No	Yes	Yes
<i>Comment: City of Millbrae Resolution 21-32 adopted the 2020 Urban Water Management Plan on May 25, 2021</i>				
<b>Habitat Conservation Plan</b>	No	No	No	No
<i>Comment: N/A – if one developed would be defined by Community Development</i>				
<b>Economic Development Plan</b>	Yes	No	No	Yes
<i>Comment: Community Development, Comprehensive Annual Financial Report 2013 Millbrae Economic Development Plan. Adopted 2/12/13. (By William R. Kelly, Kelly Associates Management Group). There was an update to the 2013 Millbrae Economic Development Plan completed Feb. 2015 by William R. Kelly.</i>				
<i>The 2013 Economic Development Plan provides an analysis of City’s current economic profile, identifies certain financial issues facing the City that are interrelated with economic development, assesses the relative strengths, weakness, opportunities, and threats that are perceived by community stakeholders, and offers short-term and long-term strategies for addressing economic needs.</i>				
<b>Shoreline Management Plan</b>	No	Yes	No	No
<i>Comment: Managed by Bay Area Conservation Development District with U.S. Fish and Wildlife Service</i>				



	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Community Wildfire Protection Plan</b>	Yes	No	No	Yes
<b>Comment:</b> Fire Marshal and Building Official				
<b>Annex to 2010 Association of Bay Area Governments Local Hazard Mitigation Plan, Millbrae</b>				
The Annexation to the MJ-LHMP outlines mitigation measures that Millbrae is required to implement to decrease the loss or risk to life and property in event of a hazard, including fire. Exhibit C to the annex lists mitigation actions and priorities adopted by Millbrae to address fire hazards. The Plan identifies the Fire Chief as a liaison between the Millbrae Fire Department and the City in terms of emergency response issues, and the City's Emergency Response Operating Center.				
<b>Community Wildfire Protection Plan</b>				
In 2010, a collaborative group consisting of CAL FIRE, Resource Conservation District of Santa Cruz County, San Mateo Resource Conservation District, and the US Fish and Wildlife Service worked together to create a draft Community Wildfire Protection Plan (CWPP) which includes the city of Millbrae in the planning area. The Plan identifies fire protection agencies with jurisdiction, volunteer organizations, large landowners, communities, neighborhoods, open spaces, and other environmental resources in the planning area that may be at risk of fire hazards.				
<b>Municipal Code Chapter 9.30 (Fire Code)</b>				
Chapter 9.30 of the Millbrae Municipal Code (Fire Code) was last updated as a result of Ordinance 774 passed October 22, 2019. The code identifies safety information, restricted use of flammable materials, and other detailed rules for handling combustible or flammable goods. The code also identifies climate conditions, geographical conditions, and topographical conditions that may exacerbate fire hazards in the city of Millbrae. Some of these conditions include prolonged periods of drought in combination with warm western winds and increasing temperatures due to climate change and increasing response times for fire equipment and other emergency services due to urban sprawl and physical locations of residential dwellings.				
<b>Community Risk Assessment</b>				
In August 2018, the Central County Fire Department (CCFD) contracted with Anchor Point Group to perform a wildfire risk assessment for the three cities in its jurisdiction. As a result, a small number of properties located along the southern border of Millbrae were found to be in a high interface risk level. CCFD currently addresses vegetation management through a complaint-based enforcement program to reduce vegetative fire risks throughout the City.				
<b>Forest Management Plan</b>	No	No	Yes	No
<b>Comment:</b> National Forest Service				
<b>Climate Action Plan</b>	Yes	No	No	Yes
<b>Comment:</b> Public Works with Community Development. The City adopted a Climate Action Plan in 2020. The City has implemented a number of policies, programs, and projects to address the reduction of GHG emissions and related efforts to improve sustainability. Please Climate Change Section for more details.				
<b>Emergency Operations Plan</b>	Yes	No	No	Yes
<b>Comment:</b> Emergency Management Services provided through contract with San Mateo County Office of Emergency Services. Millbrae is a member of the San Mateo County Emergency Services Joint Powers Agreement. Resolution 14.09 adopted 0/28/14				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>	Yes	No	No	Yes
<p><b>Comment:</b> Community Development to align with General Plan. Update, which is currently underway. The City of Millbrae addresses the following hazard and safety issues as required by federal, state, regional and local agencies: Emergency Preparedness, Seismic and Geologic Hazards, Flood Hazards, Fire Hazards, Aviation Hazards, Hazardous Materials and Noise (Ground Transportation, Aircraft, Non-Transportation).</p> <p>MMC 4.65, Adopted 12/27/83, Ordinance 476. Chapter 4.65 addresses the storage of hazardous materials to ensure the protection of health, life, resources, and property through prevention and control of unauthorized discharges of hazardous materials. Chapter 4.65 requires a permit for the storage of any hazardous material as well as regulates the manner in which materials are stored.</p> <p>In 2010 Millbrae officials, in cooperation with the San Mateo County Fire Department and the San Mateo County Sheriff's Office of Homeland Security and Emergency Services, drafted the Millbrae Local Hazard Mitigation Plan Annex (LHMP) to ensure the most effective and economical allocation of resources for protection of human health, property and the environment in the event of an emergency or disaster.</p> <p>2015 Multijurisdictional Local Hazard Mitigation Plan and Millbrae Annex: In September of 2015, the San Mateo County Emergency Manager's Associate selected a consultant to update the 2010 Multijurisdictional Plan. The consultant has been working on the update and it is anticipated that the update will be completed in the summer of 2016. In addition to the Multijurisdictional Annex, individual jurisdictions and districts within the County will be preparing their own specific Annex which will tier off of the County-wide plan. The City of Millbrae will be preparing an updated Annex as part of this process.</p> <p>Geologic and Seismic Hazards: MMC Chapter 9.05 adopts the 2013 City Building Code (CBC). The CBC contains requirements for seismic safety. All new development in the city is required to adhere to the standards and regulations in the code. Chapter 9.65 of the municipal code addresses the seismic identification program for unreinforced masonry buildings.</p>				
<b>Post-Disaster Recovery Plan</b>	Yes	No	No	Yes
<b>Comment:</b> Included in the Emergency Operations Plan which will be updated within the next few years.				
<b>Continuity of Operations Plan</b>	Yes	No	No	Yes
<b>Comment:</b> Included in the Emergency Operations Plan.				
<b>Public Health Plan</b>	No	Yes	No	No
<b>Comment:</b> San Mateo County Health System				
<b>Other</b>	Yes	No	No	Yes
<b>Comment:</b> Urban Water Management Plan (2010, 2015), Millbrae Station Area Specific Plan (2016)				

**Table 13-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? <i>If no, who does? If yes, which department?</i>	Yes Community Development Dept – Building Division
Does your jurisdiction have the ability to track permits by hazard area?	No
Does your jurisdiction have a buildable lands inventory?	No

**Table 13-5. Fiscal Capability**

<b>Financial Resource</b>	<b>Accessible or Eligible to Use?</b>
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	Yes, Water and Sanitation
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	Yes
Other	No

**Table 13-6. Administrative and Technical Capability**

<b>Staff/Personnel Resource</b>	<b>Available?</b>	<b>Department/Agency/Position</b>
Planners or engineers with knowledge of land development and land management practices	Yes	Community Development / Municipal / Contract Support/Public Works
Engineers or professionals trained in building or infrastructure construction practices	Yes	Community Development / Municipal / Contract Support/Public Works
Planners or engineers with an understanding of natural hazards	Yes	Local/ Contract Support/Public Works
Staff with training in benefit/cost analysis	Yes	Local/ Contract Support
Surveyors	Yes	Contract Support (San Mateo County Public Works)
Personnel skilled or trained in GIS applications	Yes	Community Development/Local/ Contract Support/Public Works
Scientist familiar with natural hazards in local area	Yes	Local/ Contract Support
Emergency manager	Yes	Contract Support through San Mateo County Office of Emergency Services
Grant writers	Yes	Local/ Contract Support/Public Works

**Table 13-7. Education and Outreach Capability**

<b>Criterion</b>	<b>Response</b>
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? <i>If yes, briefly describe.</i>	Yes Link to the last Hazard Mitigation Annex and Emergency Preparedness information
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe.</i>	Yes We use Nextdoor, Facebook, Instagram, and Twitter
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe.</i>	Yes Muni Code - Emergency Services Disaster Board

Criterion	Response
Do you have any other programs already in place that could be used to communicate hazard-related information? <i>If yes, briefly describe.</i>	Yes  SMC Alert and Millbrae CERT program
Do you have any established warning systems for hazard events? <i>If yes, briefly describe.</i>	Yes SMC Alert, AWS, and Telephone Emergency Warning System (TENS)

**Table 13-8. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Public Works & Community Development
Who is your floodplain administrator? (department/position)	Public Works Director
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	Ordinance 688, 1976
Does your floodplain management program meet or exceed minimum requirements? <i>If exceeds, in what ways?</i>	Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	11/20/2007
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <i>If so, state what they are.</i>	No
Are any RiskMAP projects currently underway in your jurisdiction? <i>If so, state what they are.</i>	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <i>If no, state why.</i>	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? <i>If so, what type of assistance/training is needed?</i>	Yes  Staff participated in DWR and FEMA training. <a href="#">Asfpm Beyond Local Boundaries.mp4</a> Click on link above to view staff presentation at the May 2021 Association of State Floodplain Managers Annual Conference
Does your jurisdiction participate in the Community Rating System (CRS)? <i>If yes, is your jurisdiction interested in improving its CRS Classification?</i> <i>If no, is your jurisdiction interested in joining the CRS program?</i>	No  No. The City studied the cost to participate in the CRS and decided against participating at this time due to insufficient staff and resources.
How many flood insurance policies are in force in your jurisdiction? <sup>a</sup> <i>What is the insurance in force?</i> <i>What is the premium in force?</i>	128 \$43,384,500 \$107,767
How many total loss claims have been filed in your jurisdiction? <sup>a</sup> <i>What were the total payments for losses?</i>	41 \$178,561

a. According to FEMA statistics as of March 31, 2021

**Table 13-9. Community Classifications**

	Participating?	Classification	Date Classified
FIPS Code	Yes	0608147486	N/A
DUNS #	Yes	091847517	N/A
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule – Currently participating in the process to receive a rating.	Yes	TBD	TBD
Public Protection	No	N/A	N/A
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A
Tsunami Ready	No	N/A	N/A

**Table 13-10. Adaptive Capacity for Climate Change**

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
<b>Jurisdiction-level understanding of potential climate change impacts</b> <i>Comment: Medium – performed high level assessment of Sea Level Rise on Bayfront and creeks</i>	Medium
<b>Jurisdiction-level monitoring of climate change impacts</b> <i>Comment: Medium – continuing to work with County for further studies on Sea Level Rise</i>	Medium
<b>Technical resources to assess proposed strategies for feasibility and externalities</b> <i>Comment: Medium – Would need to work with consultant who performed assessment for Sea Level Rise</i>	Medium
<b>Jurisdiction-level capacity for development of greenhouse gas emissions inventory</b> <i>Comment: High – Completed GHG emission Inventory as part of Millbrae Climate Action Plan adopted Oct. 2020</i>	High
<b>Capital planning and land use decisions informed by potential climate impacts</b> <i>Comment: Low: Need to plan and develop policies building codes for future urban uses</i>	Low
<b>Participation in regional groups addressing climate risks</b> <i>Comment: High: Participating in the County's Climate Ready SMC</i>	High
<b>Implementation Capacity</b>	
<b>Clear authority/mandate to consider climate change impacts during public decision-making processes</b> <i>Comment: N/A</i>	Unsure
<b>Identified strategies for greenhouse gas mitigation efforts</b> <i>Comment: High – Adopted Climate Action Plan with GHG mitigation measures</i>	High
<b>Identified strategies for adaptation to impacts</b> <i>Comment:</i>	Unsure
<b>Champions for climate action in local government departments</b> <i>Comment: Medium – one FTE to fulfill climate action, GHG reduction, community outreach and engagement, reporting and other duties</i>	Medium
<b>Political support for implementing climate change adaptation strategies</b> <i>Comment:</i>	High
<b>Financial resources devoted to climate change adaptation</b> <i>Comment: Low – City limited financial resources. Need to add to budget for each project/program</i>	Low
<b>Local authority over sectors likely to be negative impacted</b> <i>Comment:</i>	Medium

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Public Capacity</b>	
Local residents’ knowledge of and understanding of climate risk <i>Comment: Medium – continual education throughout CAP development, sea level rise assessment and for all environmental programs</i>	Medium
Local residents support of adaptation efforts <i>Comment:</i>	Low
Local residents’ capacity to adapt to climate impacts <i>Comment:</i>	Low
Local economy current capacity to adapt to climate impacts <i>Comment:</i>	Low
Local ecosystems capacity to adapt to climate impacts <i>Comment:</i>	Low

a. High = Capacity exists and is in use; Medium = Capacity may exist but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

### 13.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

#### 13.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **General Plan** – The general plan includes a “Safety” element to protect the community from unreasonable risk by establishing policies and actions to avoid or minimize the following hazards:
  - Geologic and seismic hazards
  - Fire hazards
  - Hazardous materials
  - Impacts from climate change
- **General Plan** – Community Development & Public Works: The City is in the process of updating its General Plan and Downtown & El Camino Real Specific Plan. These plans will have local hazard mitigation components. The Master Plan Update, in the Hazards & Safety Element will link with LHMP.
- **Climate Action Plan** – The Millbrae City Council adopted the Climate Action Plan in 2020. The CAP contains many of the climate change and sea level rise measures to combat rising sea level and mitigate climate change.
- **Flood and Sea Level Rise Resiliency District (One Shoreline)** – The City is a member and is working with the District to secure federal funding to implement sea level rise and resiliency projects.

- **New FEMA maps** – The City of Millbrae has received the FEMA Flood Map Update in 2018 and Public Works will update flood insurance information as needed based on the updated maps
- **Environmental Protection** – The California Environmental Quality Act (CEQA) analyzes hazards and hazardous materials as part of the CEQA checklist. Specific questions being analyzed include: whether a project is a significant hazard to the public or environment, emits hazardous emissions, is located on a site that is included on a list of hazardous material sites, expose people or structures to a significant risk of loss, injury, or death.

### 13.5.2 Opportunities for Future Integration

The capability assessment presented in this annex identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- Grant participation opportunities (FEMA) which the city will collaboratively work on, with the Fire and Sheriff's departments
- Participation in more rating programs and will work collaboratively with the Fire and Sheriff's departments
- **Mutual Aide Agreements** – San Mateo County Public Works Mutual Aid Agreement has been established in 2015. Protocols and Standard Operating Procedures have also been established. Building Safety Inspection Program Mutual Aid.
- Update Flood Damage Prevention Ordinance to 2004 standards
- Increased integration with public outreach initiatives
- **General Plan**—The city is updating its General Plan to plan for future growth through 2040. Included in the update, the City will update its Safety Element to address hazard risks. The General Plan update is expected to be complete at the end of 2022 or beginning of 2023.
- **Threat & Hazard Identification & Risk** – this could be potentially integrated under the Safety Element of the General Plan Update.
- **Growth Management**—As part of the General Plan update, the City will consider addressing growth management and how it addresses risk from hazards as the city continues to increase its population.
- **Zoning Code**—After the General Plan update, the zoning code may be amended to address and integrate hazard in further detail although funding for an overhaul of the zoning code has yet to be identified.
- **Subdivisions**—After the General Plan update, the subdivision section of the municipal code may be amended although funding for this work has yet to be identified.

## 13.6 RISK ASSESSMENT

### 13.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 13-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

**Table 13-11. Past Natural Hazard Events**

Type of Event	FEMA Disaster #	Date	Damage Assessment
COVID-19 Pandemic	DR-4482	January 20, 2020 -present	Not available
Severe Winter Storm, Flooding, and Mudslides	DR-4308	February 1-23, 2017	Not available
Severe Winter Storms, Flooding and Mudslides	DR-4305	January 18-23, 2017	Not available
Severe Winter Storms, Flooding and Mudslides	DR-1646	March 29-April 16, 2006	Not available
Crestview Landslide & Pinehurst Court		February 2000	\$11,000,000
Sleepy Hollow, Clearfield & Morningside Landslide	DR-1203	February 1998	Not available
1989 Loma Prieta Earthquake	DR-845	October 1989	Not available
Landslide @ 21 & 25 & 29 Via Canon	DR-677	February 1983	Not available

### 13.6.2 Hazard Risk Ranking

Table 13-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property, and the economy. Mitigation actions target hazards with high and medium rankings.

**Table 13-12. Hazard Risk Ranking**

Rank	Hazard	Risk Ranking Score	Risk Category
1	Landslide/Mass Movements	51	High
2	Earthquake	36	High
3	Sea level Rise / Climate Change	27	Medium
4	Severe Weather/Extreme Weather	24	Medium
5	Flood	18	Medium
6	Drought	9	Low
7	Tsunami	6	Low
8	Dam Failure	0	Low
9	Wildfire	0	Low

### 13.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

#### **Repetitive Loss Properties**

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 1
- 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**

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Landslides
- Earthquake
- Climate Change
- Severe Weather/Extreme Weather
- Flood.

Mitigation actions addressing these issues were prioritized for consideration in the action plan for this annex.

## **13.7 STATUS OF PREVIOUS PLAN ACTIONS**

Table 13-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 13-13. Status of Previous Plan Actions**

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<b>Action #MB-1:</b> Water System Inter-Tie with San Francisco Airport <b>Comment:</b> The SFO inter-tie project was completed in 2019	✓			
<b>Action #MB-2:</b> Water Storage Tanks Seismic Upgrade/Retrofit/Replacement <b>Comment:</b> Project to be completed by winter 2022			✓	MIL-9
<b>Action #MB-3:</b> Tree Trimming Program <b>Comment:</b> This is an ongoing activity			✓	MIL-18
<b>Action #MB-4:</b> Emergency Evacuation Warning System & Shelter <b>Comment:</b> Zonehaven Evacuation plan complete -SMCAAlert & TENS warning systems	✓			
<b>Action #MB-5:</b> Construct New Public Works Corporation Yard West of US101 <b>Comment:</b> Project is no longer financially feasible due to high land cost		✓		
<b>Action #MB-6:</b> Inspect and Retrofit Millbrae Avenue Overpass <b>Comment:</b> This is programmed for FY2023			✓	MIL-8
<b>Action #MB-7:</b> Retrofit, acquire, or relocate the identified severe repetitive loss property within Millbrae. <b>Comment:</b> Not financially feasible		✓		
<b>Action G-1</b> —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. <b>Comment:</b> Conducted community meeting in summer of 2019 to share Shoreline Protection Plan/Sea Level Rise Plan with residents			✓	MIL-1
<b>Action G-2</b> —Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady. <b>Comment:</b> Millbrae is certified as a Tree City, Storm Ready. CRS is not feasible due to insufficient staff and resources.				

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p><b>Action G-3</b>—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 adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.</p> <p><b>Comment:</b> Millbrae Municipal Code is current and up to date per NFIP.</p>			✓	MIL-4
<p><b>Action G-4</b>—Where feasible, implement a program to record high water marks following high-water events.</p> <p><b>Comment:</b> Millbrae is considering re-activating this project in the near future when the City re-vamp its SCADA</p>			✓	MIL-10
<p><b>Action G-5</b>—Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.</p> <p><b>Comment:</b> This is ongoing. Millbrae recently adopted the Climate Action Plan and the measures in the CAP are complimentary to those of the Hazard Mitigation Plan</p>			✓	MIL-2
<p><b>Action G-6</b>—Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.</p> <p><b>Comment:</b> This is currently financially not feasible.</p>				
<p><b>Action G-7</b>— Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.</p> <p><b>Comment:</b> Ongoing</p>			✓	MIL-3
<p><b>Action G-8</b>— Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.</p> <p><b>Comment:</b> Ongoing</p>			✓	MIL-3

### 13.8 HAZARD MITIGATION ACTION PLAN

Table 13-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction. Table 13-15 identifies the priority for each action. Table 13-16 summarizes the mitigation actions by hazard of concern and mitigation type.

**Table 13-14. Hazard Mitigation Action Plan Matrix**

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<p><b>Action MIL-1</b>—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.</p> <p><i>Hazards Mitigated:</i> Earthquake, Flooding, Landslide, Extreme Weather, Sea Level Rise</p>						
Existing	1, 6, 7, 10, 13	Millbrae Community Development	Millbrae Public Works	High	HMGP, BRIC, FMA	Short-term
<p><b>Action MIL-2</b>— Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including General Plan, Climate Action Plan</p> <p><i>Hazards Mitigated:</i> Earthquake, Flooding, Landslide, Sea Level Rise</p>						
New & Existing	1, 2, 6, 7, 8,13	Millbrae Community Development	Millbrae Public Works	Low	Staff Time, General Funds	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action MIL-3</b> —Actively participate in the plan maintenance protocols and support County initiatives outlined in Volume 1 of this hazard mitigation plan.						
<i>Hazards Mitigated:</i> Earthquake, Flooding, Landslide & Extreme Weather, Sea Level Rise						
New & Existing	1, 2, 3, 5, 6, 7, 10, 12	Millbrae Community Development	Millbrae Public Works	Low	Staff Time, General Funds	Short-term
<b>Action MIL-4</b> —Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:						
<ul style="list-style-type: none"> <li>Enforce 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>						
<i>Hazards Mitigated:</i> Flooding						
New & Existing	1, 3, 4, 5, 6, 7, 8, 10	Millbrae Public Works	Millbrae Community Development	Low	Staff Time, General Funds	Ongoing
<b>Action MIL-5</b> —Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following:						
<ul style="list-style-type: none"> <li>Sea Level Rise, Climate Change, Urban Heat Island</li> </ul>						
<i>Hazards Mitigated:</i> Severe Weather, Wildfire, Sea Level Rise						
Existing	1, 2, 3, 5, 6, 7, 10, 14	Millbrae Public Works	Millbrae Community Development	Low	Staff Time, General Funds	Short-term
<b>Action MIL-6</b> —Purchase generators for critical facilities and infrastructure that lack adequate backup power, including Fuel Supplies, Evacuation Centers						
<i>Hazards Mitigated:</i> Dam failure, earthquake, flooding, landslide, severe weather, tsunami, wildfire						
Existing	6, 9, 11,	Public Works	Finance	Medium	General Fund Grant Funding	Short-term
<b>Action MIL-7</b> —Reconstruct failed underground Millbrae Creek culvert						
<i>Hazards Mitigated:</i> Flood Control & Property Damage, Sea Level Rise						
Existing	6, 9, 11	Millbrae Public Works	Millbrae Community Development	High	General Funds Staff Time	Long-Term
<b>Action MIL-8</b> —Inspect and Retrofit Millbrae Avenue Overpass						
<i>Hazards Mitigated:</i> Earthquake, Landslide & Severe Weather						
New & Existing	6, 9, 11	Millbrae Public Works	Millbrae Community Development	High	General Funds & Transportation Funds	Long-Term
<b>Action MIL-9</b> —Water Storage Tanks Seismic Upgrade/Retrofit/Replacement						
<i>Hazards Mitigated:</i> Earthquake, Wildfire, Flooding						
New & Existing	6, 9, 11	Millbrae Public Works	Millbrae Finance	High	Water Enterprise Fund	Short-Term
<b>Action MIL-10</b> - 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.						
<i>Hazards Mitigated:</i> Climate Change/Sea Level Rise, Flood, Severe Weather, Tsunami, Sea Level Rise						
New & Existing	1, 5, 6, 7, 8	SM Flood & Sea Level Rise Dist. (FSLRRD)	Millbrae Public Works	Medium	General Fund	Short-Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<p><b>Action MIL -11</b> - Incorporate consideration of the FEMA 100-year tide and sea level rise, and climate change-driven extreme storms, into land use planning and shoreline development. This includes new policies by local jurisdictions, and County and City actions regarding their General Plans, Climate-related Plans, and the development applications.</p> <p><u>Hazards Mitigated:</u> Climate Change/Sea Level Rise, Flood, Severe Weather, Sea Level Rise</p>						
New & Existing	1, 2, 5, 6, 7, 8, 9, 13, 14	FSLRRD	Millbrae Public Works	Low	General Fund, Private Developers, City Capital Project Funding	Ongoing
<p><b>Action MIL-12</b> - Continue to identify and plan upgrades of utility systems, equipment, and critical facilities, including pump stations, generators, tide gates, stream gages, open channel and culvert/pipeline infrastructure.</p> <p><u>Hazards Mitigated:</u> Climate Change/Sea Level Rise, Flood, Severe Weather, Sea Level Rise</p>						
New & Existing	2, 6, 7,8	FSLRRD	Millbrae Public Works	Medium	Tax-Funded Flood Zones, State Grants, Federal Grants (FEMA BRIC/HMGP)	Ongoing
<p><b>Action MIL-13</b> - Support green infrastructure projects that enhance resiliency to natural disasters and incorporate green design elements into hazard mitigation projects where feasible.</p> <p><u>Hazards Mitigated:</u> Climate Change/Sea Level Rise, Landslide, Flood, Severe Weather, Drought, Sea Level Rise</p>						
New & Existing	2, 6, 7, 8, 14	FSLRRD	Millbrae Public Works	Medium	Tax-Funded Flood Zones, Property/Vehicle Fees, Stormwater Fees, State Grants (Caltrans, CA DWR), Federal Grants (EPA), City Capital Project Funding	Ongoing
<p><b>Action MIL14</b> - Improve stormwater drainage to alleviate repeated localized flooding, especially storm drain systems connected to the Flood &amp; Sea Level Rise Resiliency District Flood Zone channels and infrastructure.</p> <p><u>Hazards Mitigated:</u> Climate Change/Sea Level Rise, Flood, Severe Weather, Sea Level Rise</p>						
New & Existing	1, 2, 4, 6, 7,8	FSLRRD	Millbrae Public Works	Medium	Tax-Funded Flood Zones, Property/Vehicle Fees, Stormwater Fees, State Grants (Caltrans, CA DWR), Federal Grants (EPA), City Capital Project Funding	Ongoing
<p><b>Action MIL-15</b> - Plan, design, and implement long-term resilience to sea level rise, extreme storms, and coastal erosion for culverts, roadways, and bridges in the vicinity of other flood protection projects, including assets identified in the Caltrans District 4 Adaptation Priorities Report.</p> <p><u>Hazards Mitigated:</u> Climate Change/Sea Level Rise, Landslide, Flood, Severe Weather, Sea Level Rise</p>						
New & Existing	2, 4, 6, 7, 8,13	FSLRRD	Millbrae Public Works	Medium	State Grants (Caltrans), Federal Grants (FEMA BRIC/HMGP)	Ongoing
<p><b>Action MIL-16</b> - Identify and pursue strategies to enhance recycled water infrastructure planning/implementation in the vicinity of the Flood &amp; Sea Level Rise Resiliency District projects.</p> <p><u>Hazards Mitigated:</u> Drought, Sea Level Rise</p>						
New & Existing	1, 6, 7,8	FSLRRD	Millbrae Public Works	Medium	State Grants (CA Resilience Challenge, CA DWR, Prop 68), Federal Grants (EPA, FEMA BRIC/HMGP)	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
<b>Action MIL-17</b> - Improve community response to flood emergencies in various ways, including but not limited to: - Upgrade and expand the countywide flood early warning system; - Conduct community flood preparation, education, and recovery outreach.						
New & Existing	2, 3, 7, 8, 9, 10, 11	FSLRRD	County	Low	State Grant (CA DWR SWERG)	Short-Term
<b>Action MIL-18</b> - Tree Trimming Program						
Existing	1, 6, 7,8	Millbrae Public Works	Millbrae Recreation	Medium	General Fund	Ongoing

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

**Table 13-15. Mitigation Action Priority**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Eligible for Outside Funding?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority <sup>a</sup>	Outside Funding Source Pursuit Priority <sup>a</sup>
MIL-1	3	High	High	Yes	Yes	No	Medium	High
MIL-2	7	Medium	Low	Yes	No	Yes	High	Low
MIL-3	3	Low	Low	Yes	No	Yes	High	Low
MIL-4	6	Medium	Low	Yes	No	Yes	High	Low
MIL-5	7	Medium	Low	Yes	No	Yes	High	Low
MIL-6	3	High	Medium	Yes	Yes	No	Medium	High
MIL-7	1	Low	High	No	No	No	Medium	Low
MIL-8	4	High	High	Yes	Yes	No	Medium	High
MIL-9	2	High	High	Yes	Yes	Yes	High	High
MIL-10	5	Medium	Medium	Yes	No	Yes	High	Low
MIL-11	9	High	Low	Yes	Yes	Yes	High	High
MIL-12	4	High	Medium	Yes	Yes	Yes	High	High
MIL-13	5	Medium	Medium	Yes	Yes	Yes	High	Medium
MIL-14	6	High	Medium	Yes	Yes	Yes	High	High
MIL-15	6	High	Medium	Yes	Yes	Yes	High	High
MIL-16	4	Medium	Medium	Yes	Yes	Yes	High	Medium
MIL-17	7	High	Low	Yes	Yes	Yes	High	Low
MIL-18	4	High	Medium	Yes	No	Yes	High	Low

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

**Table 13-16. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
<b>High-Risk Hazards</b>								
Landslide	4, 5, 12, 13	1, 6, 8, 13	5	13	6		5, 6, 13	1, 2, 15
Earthquake	1, 2, 3, 8	1, 3, 6, 9				8, 9	6	1, 2
<b>Medium-Risk Hazards</b>								
Sea level Rise / Climate Change	3, 5, 12, 15	3, 5, 6	5	3, 5, 13			5, 13, 14, 15	15
Severe Weather	3, 5, 10, 12, 14, 15	1, 3, 6, 15	5	3, 5, 13, 18	6	8	5, 6, 11, 14, 15	1, 15
Flood	1, 3, 4, 5, 7, 11, 12, 14, 15, 17	1, 3, 4, 6, 7, 11, 12	4, 5, 17	3, 4, 5, 13, 17			4, 5, 6, 10, 11, 14, 15, 17	1, 2, 15
<b>Low-Risk Hazards</b>								
Drought	16	9		13, 16			13, 16	
Tsunami	4, 10, 15	11, 12, 15		10, 11			10, 11	
Wildfire		9, 13		13, 18			13	

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

### 13.9 PUBLIC OUTREACH

Table 13-17 lists public outreach activities for this jurisdiction.

**Table 13-17. Local Public Outreach**

Local Outreach Activity	Date	Number of People Involved
Social Media Survey Blast	6/8/2021	Unknown
CERT Outreach for Survey	6/5/2021	129
Social Media Blast for Workshop	3/16/2021	Unknown

### 13.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed for this annex.

- **Millbrae Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Millbrae Flood Damage Prevention Ordinance MMC Title 8 Chapter 50**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Millbrae Climate Action Plan** Adopted January 24, 2020

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

# Millbrae

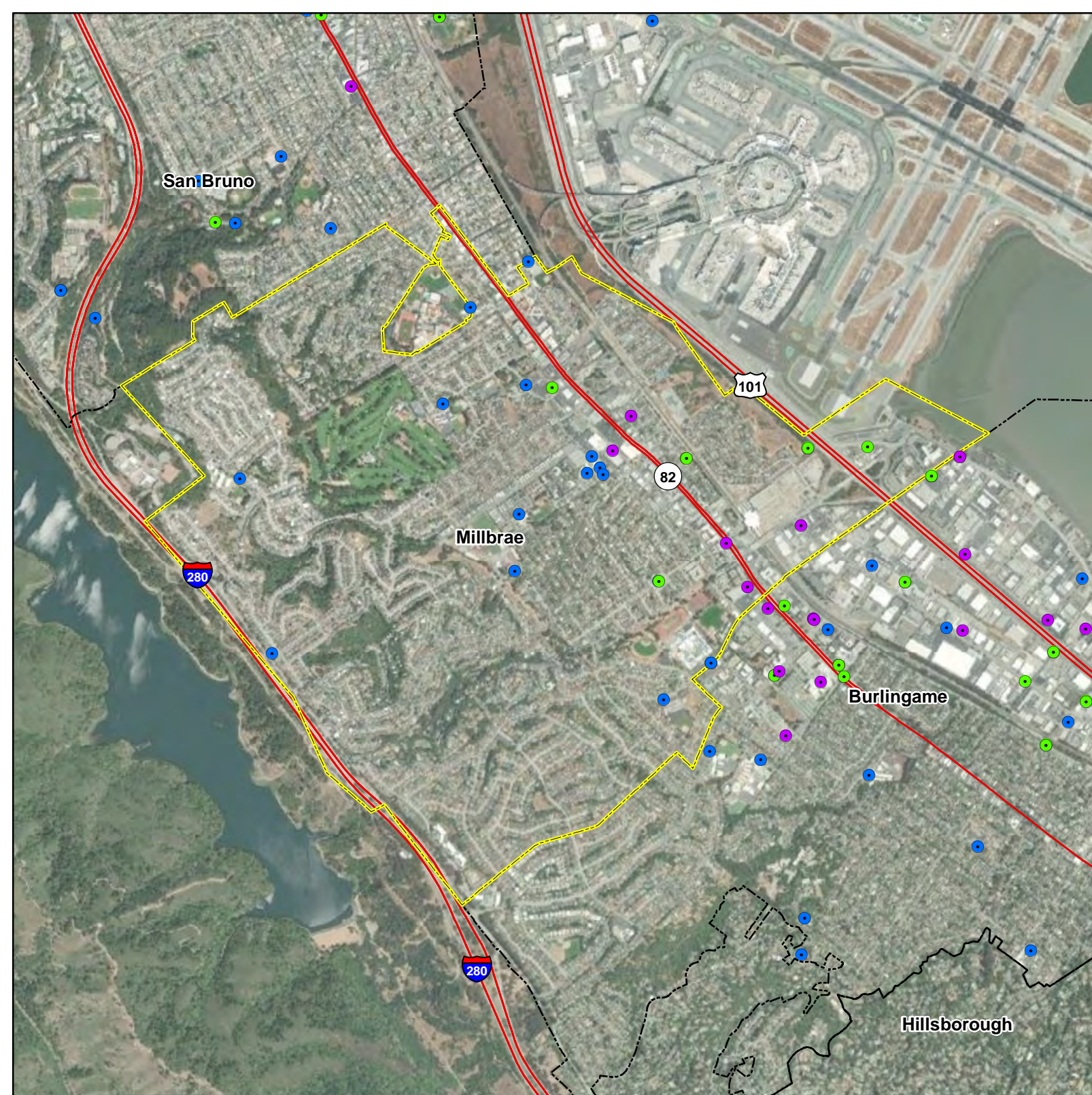
## Critical Facilities, 1 of 2

- Food, Water, Shelter
- Health and Medical
- Safety and Security
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary
- Highways

Data Sources: ESRI Basemap, San Mateo Co., DHS HIFLD



0 0.15 0.3 0.6 Miles



# Millbrae

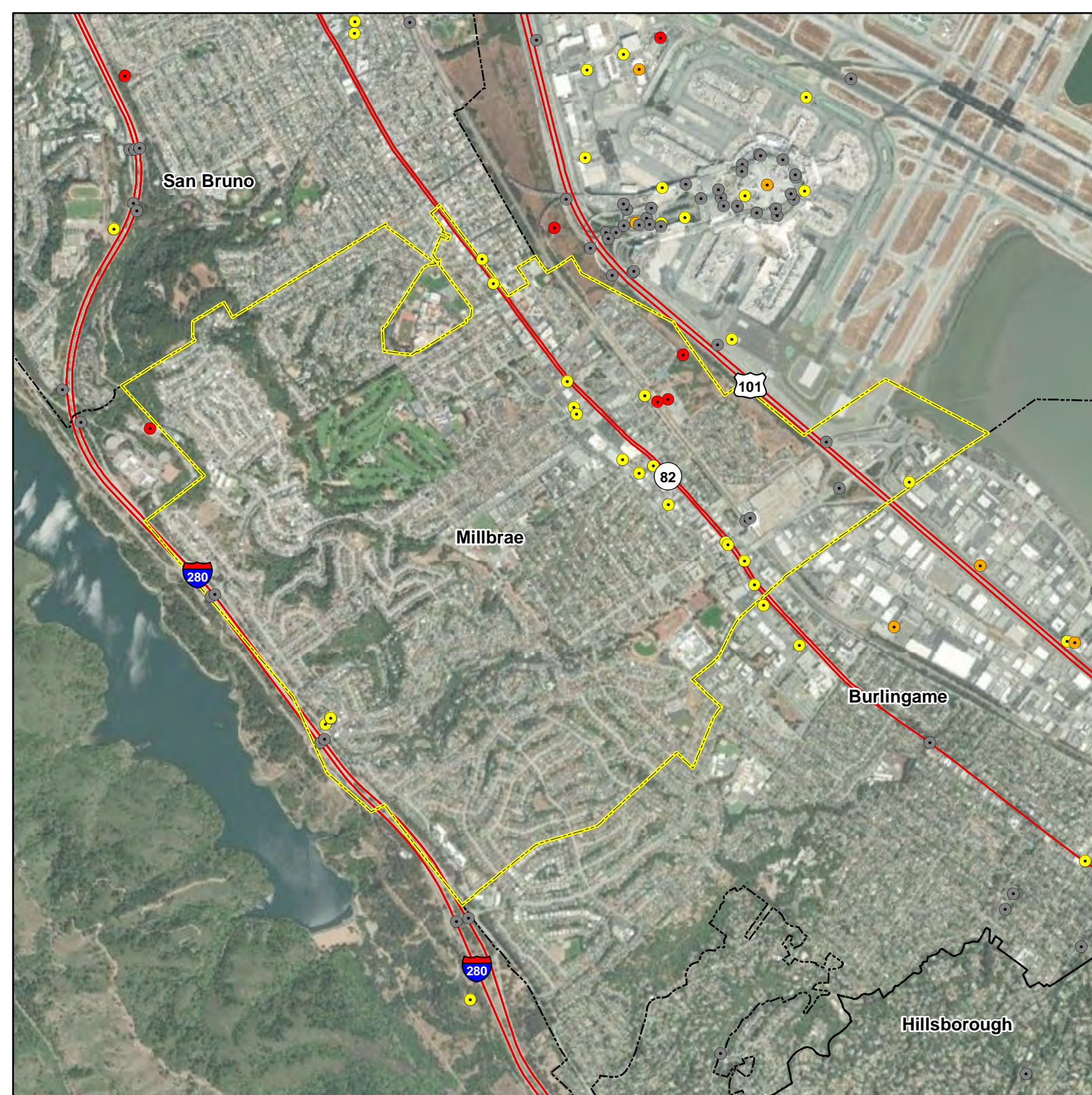
## Critical Facilities, 2 of 2

- Communications
- Energy
- Hazardous Materials
- Transportation
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary
- Highways

Data Sources: ESRI Basemap, San Mateo Co., DHS HIFLD









0 0.15 0.3 0.6 Miles





# Millbrae

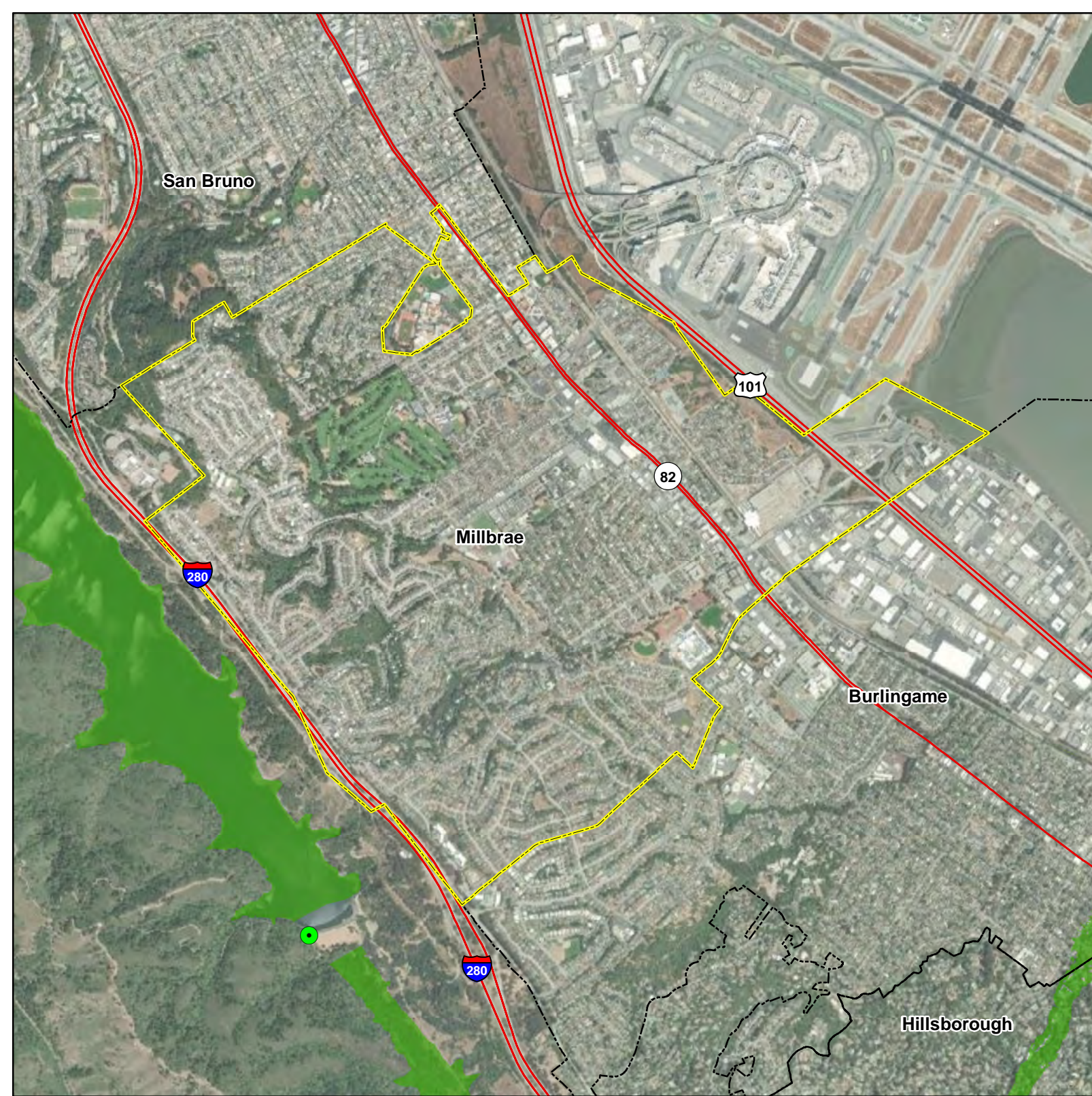
## Dam Failure Inundation Area Used for Risk Assessment

-  Inundation Area
-  Dam
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CA DWR










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Miles

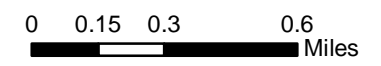


# Millbrae

## NEHRP Soil Class










-  C (Dense soil/soft rock)
-  D (Stiff soil)
-  E (Soft clay)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CGS



# Millbrae

## Liquefaction Susceptibility

-  Very Low
-  Low
-  Moderate
-  High
-  Very High
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., ABAG (USGS)



0 0.15 0.3 0.6  
Miles

San Bruno

Millbrae

Burlingame

Hillsborough

101

82

280

280

# Millbrae

## Butano M6.93 Earthquake Scenario

### Mercalli Intensity Scale

 VI (Strong/Light)

 Selected City

 Incorporated Cities


 County Boundary

 Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



0 0.15 0.3 0.6  
 Miles

San Bruno

Millbrae

Burlingame

Hillsborough

280

82

101

280

# Millbrae

## Monte Vista Shannon M7.14 Earthquake Scenario


### Mercalli Intensity Scale

-  VII (Very Strong/Moderate)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



0 0.15 0.3 0.6  
 Miles

San Bruno

Millbrae

Burlingame

Hillsborough

280

82

101

# Millbrae

## 100-Year Probabilistic Earthquake Scenario

### Mercalli Intensity Scale

 VII (Very Strong/Moderate)

 Selected City

 Incorporated Cities


 County Boundary

 Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



0 0.15 0.3 0.6  
 Miles

San Bruno

Millbrae

Burlingame

Hillsborough

280

82

101

# Millbrae

## San Andreas Peninsula M7.38 Earthquake Scenario


### Mercalli Intensity Scale

-  VII (Very Strong/Moderate)
-  VIII (Severe/Moderate-Heavy)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



0 0.15 0.3 0.6  
 Miles

San Bruno

Millbrae

Burlingame

Hillsborough

280

82

101

# Millbrae

## San Gregorio North M7.44 Earthquake Scenario

### Mercalli Intensity Scale

 VII (Very Strong/Moderate)

 Selected City

 Incorporated Cities


 County Boundary

 Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



0 0.15 0.3 0.6  
 Miles

San Bruno

Millbrae

Burlingame

Hillsborough

280







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101



# Millbrae

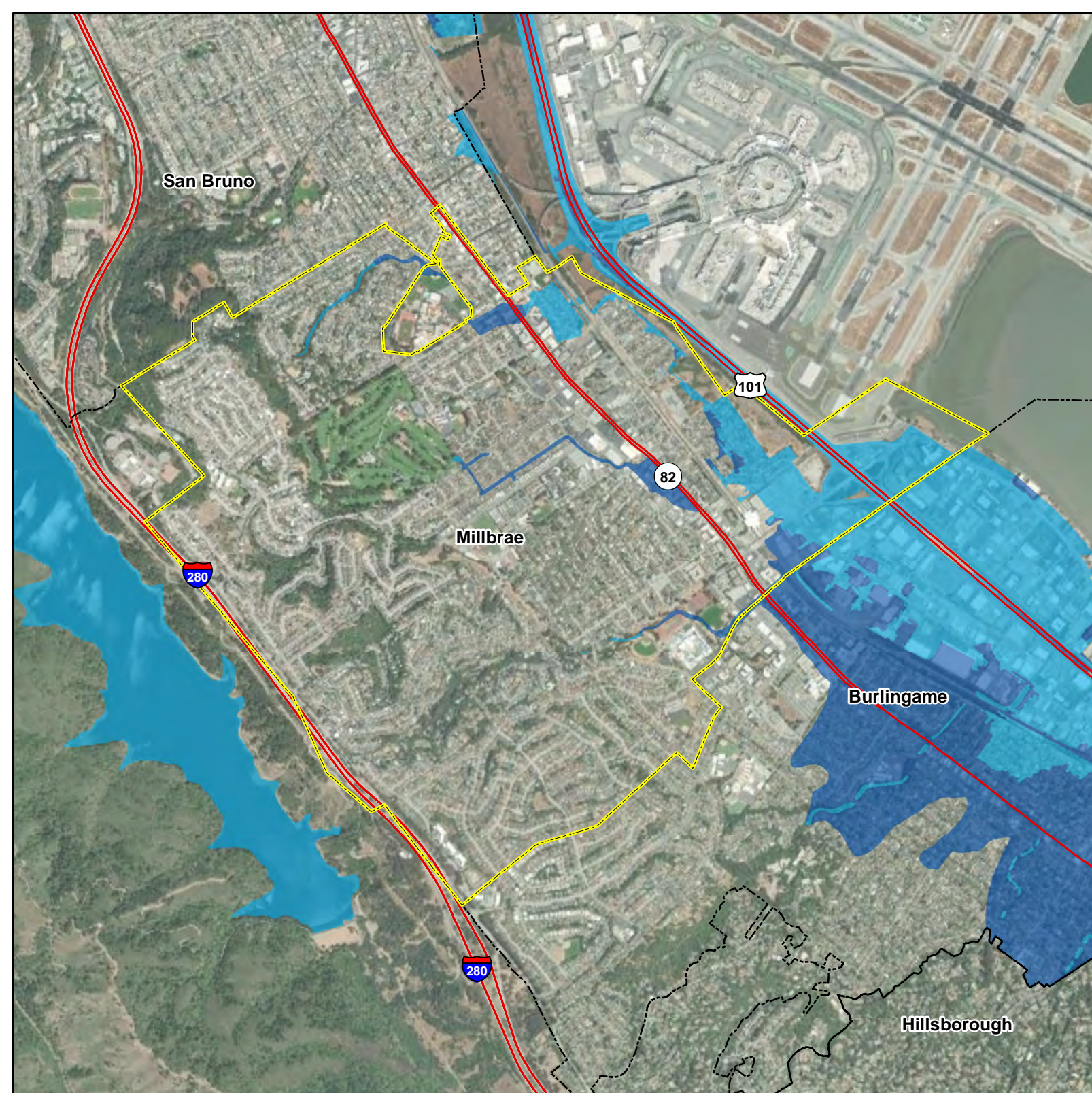
## FEMA Flood Hazard Areas

-  1% Annual Chance Flood (100-Year)
-  0.2% Annual Chance Flood (500-Year)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap, San Mateo Co., FEMA











0 0.15 0.3 0.6 Miles



# Millbrae

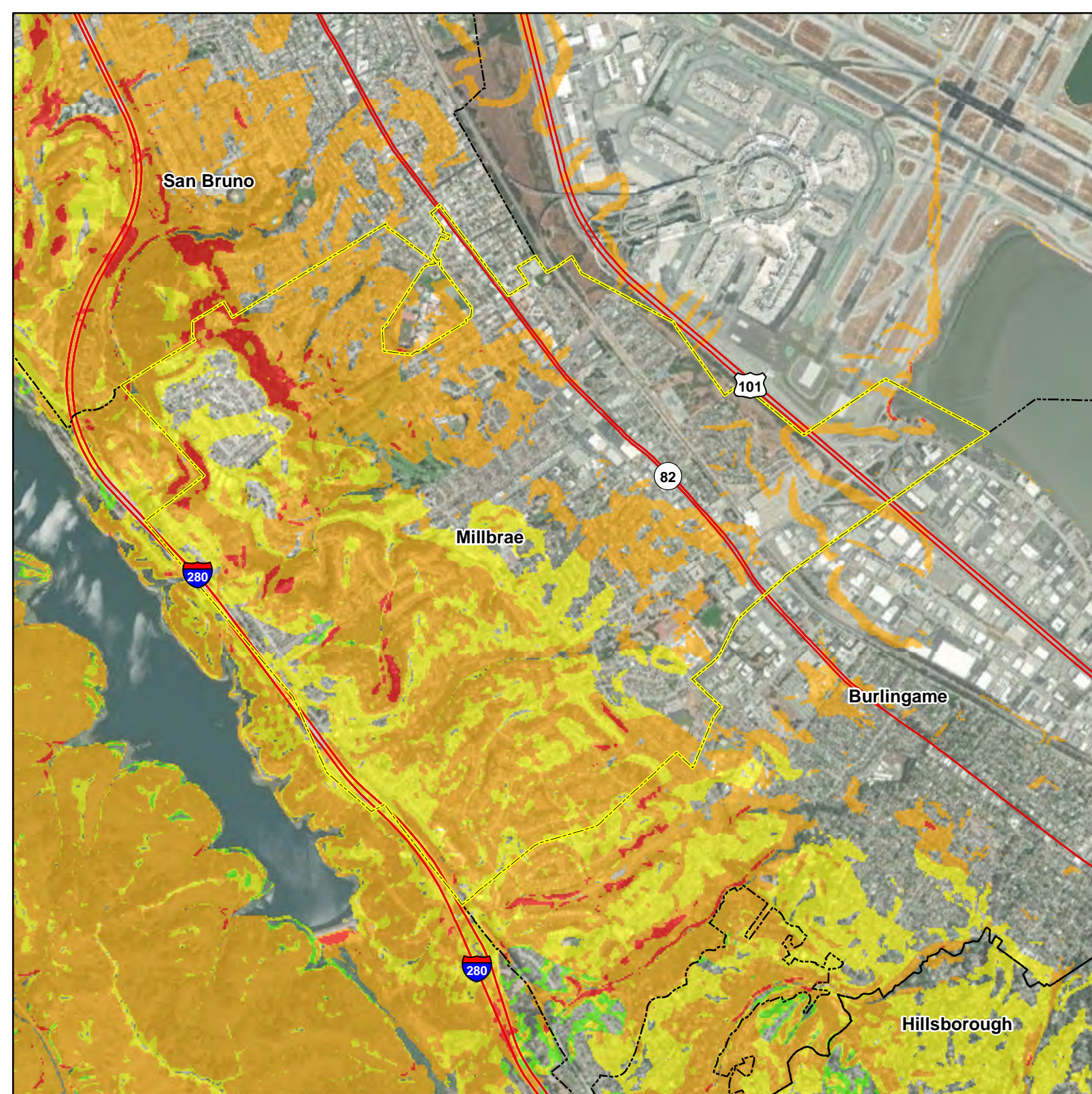
## Susceptibility to Deep-Seated Landslides

-  Low
-  Moderate
-  High
-  Very High
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CGS








0 0.15 0.3 0.6  
Miles



# Millbrae

## Sea Level Rise

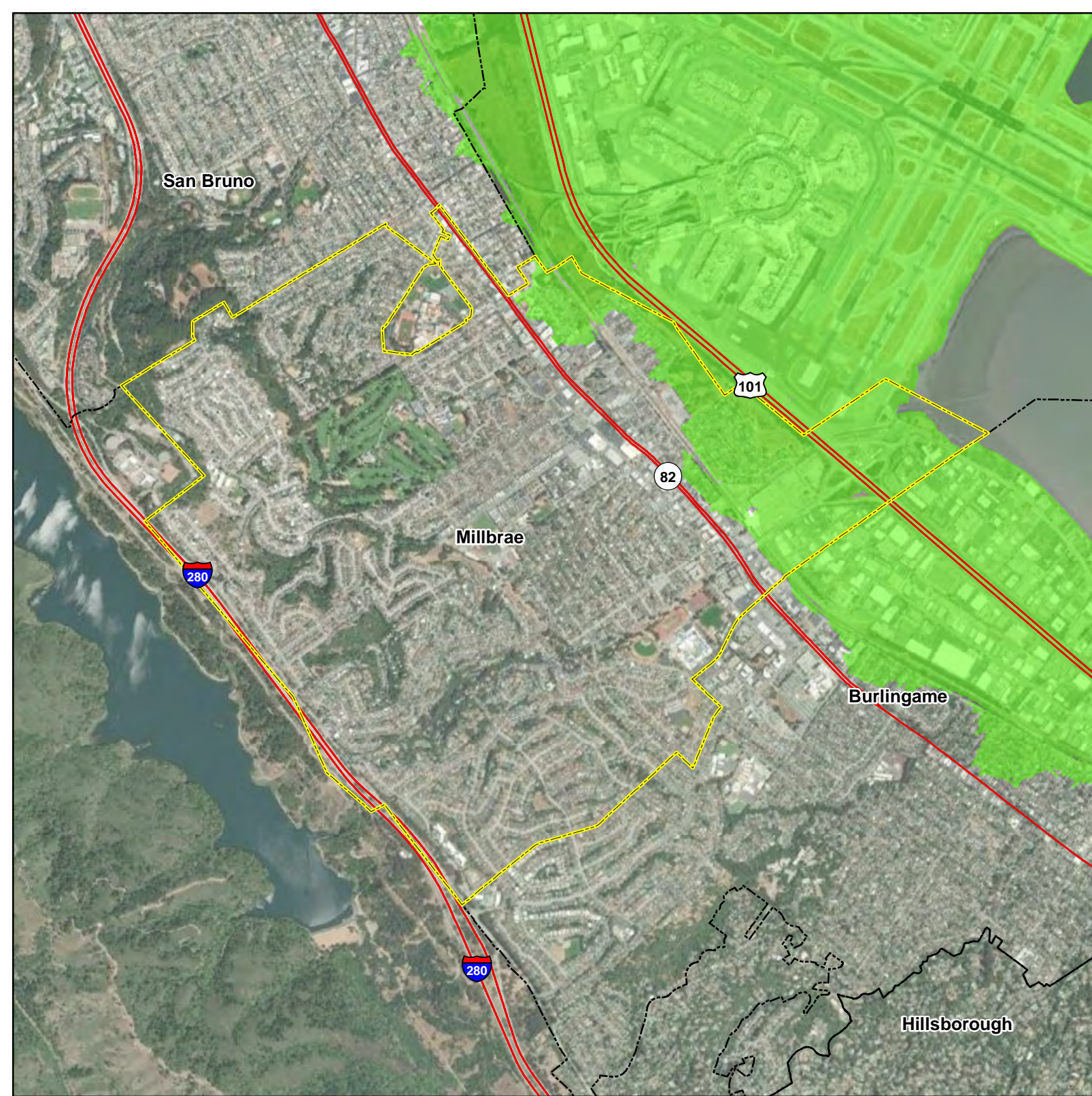
-  Inundation Area
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Inundation areas are a combination of Our Coast Our Future 200cm (6.6 feet) of SLR with 100-year storm for the Pacific Ocean coastline, and Adapting to Rising Tides 108 inches (9 feet) of SLR for the San Francisco Bay coastline.

Data Sources: ESRI Basemap, San Mateo Co., ART, OCOF








0 0.15 0.3 0.6 Miles



# Millbrae

## Tsunami Hazard Areas

-  Hazard Areas
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CGS



0 0.15 0.3 0.6  
Miles

San Bruno

Millbrae

Burlingame

Hillsborough








280

82

101

# Millbrae

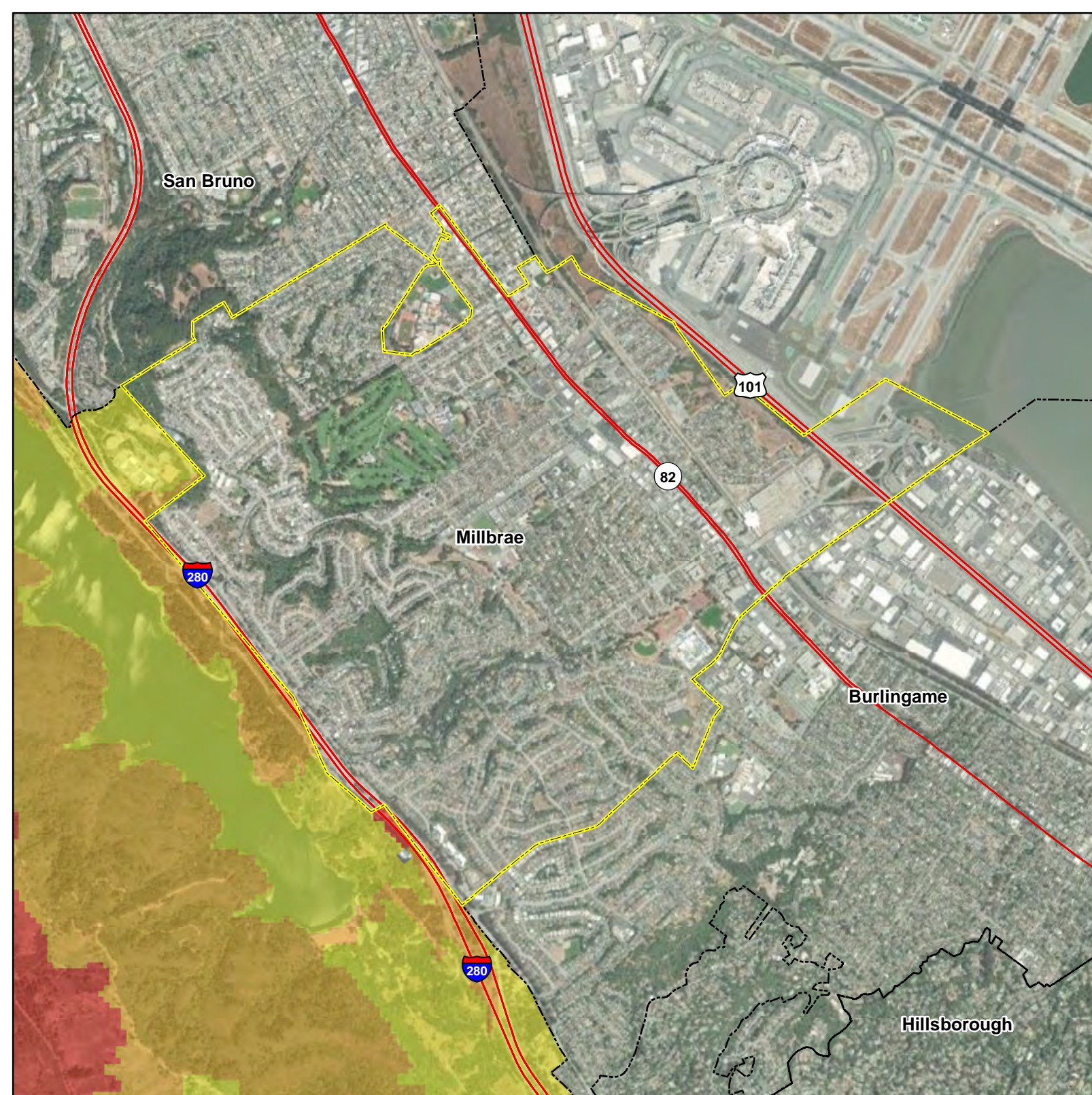
## Wildfire Hazard Severity Zones

-  Moderate
-  High
-  Very High
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap, San Mateo Co., CAL FIRE



0 0.15 0.3 0.6 Miles





# 14. CITY OF PACIFICA

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## 14.1 LOCAL HAZARD MITIGATION PLANNING TEAM

### Primary Point of Contact

Chris Clements, Police Captain  
2075 Coast Highway  
Pacifica, CA 94044  
650-738-7314  
clementsc@pacificapolice.org

### Alternate Point of Contact

Christian Murdock, Deputy Director of Planning  
1800 Francisco Boulevard  
Pacifica, CA 94044  
650-738-7341  
cmurdock@pacificagov

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 14-1.

**Table 14-1. Local Mitigation Planning Team Members**

Name	Title
Chris Clements	Police Captain
Christian Murdock	Deputy Director of Planning
Ryan Marquez	Associate Civil Engineer

## 14.2 JURISDICTION PROFILE

### 14.2.1 Location and Features

The City of Pacifica is located along a six mile length of coastal beaches and hills in northern central California. The city comprises several small valleys spread between Sweeney Ridge in the east, Montara Mountain to the south, and the Pacific Ocean’s rocky bluffs to the west. The city’s eastern border follows State Route 35. Pacifica is bordered to the north by Daly City, to the east by the cities of South San Francisco and San Bruno, as well as several miles of the Golden Gate National Recreation Area. To the south, Pacifica is bordered by unincorporated San Mateo County.

Pacifica has a cool summer Mediterranean climate typical of coastal areas of California. Based on National Weather Service records, average January temperatures range from 47.6 °F to 56.9 °F and average September temperatures range from 56.2 °F to 72.4 °F. Annual precipitation averages 30.04 inches. There are an average of 69 days annually with measurable precipitation, most of which falls from October through May. Summer fog regularly produces light drizzle overnight into the early morning hours. Condensation from the fog also produces fog drip from trees overnight. No measurable snowfall has been recorded since records began. The southeastern areas of the city are known to be much sunnier than the rest of the city.

## 14.2.2 History

Before the arrival of European settlers, what is now Pacifica was home to two significant Ohlone Indian villages: Pruristac located at San Pedro Creek near present day Adobe Drive, and Timigtac on Calera Creek in the Rockaway Beach neighborhood. Pacifica is the location of the oldest European discovery of the San Francisco Bay. An expedition led by Gaspar de Portolà sighted the bay by climbing the hills of Sweeney Ridge in Pacifica on October 31, 1769. Before then, earlier Spanish maritime explorers of the California coast (such as Juan Cabrillo and Sebastian Vizcaino) had missed the San Francisco Bay because heavy fog so frequently shrouded the entrance of the San Francisco Bay into the Pacific Ocean (the Golden Gate). Pacifica is also the site of the still extant Mexican-era Sánchez Adobe built in 1846. The city is located on a part of the Mexican land grant Rancho San Pedro given to Francisco Sanchez in 1839.

Pacifica remained a mainly agricultural and undeveloped area until land speculators, stimulated by construction of the Ocean Shore Railroad in 1905, subdivided and developed a series of small coastside communities including Edgemar, Vallemar, Sharp Park, Pedro Point, and Rockaway Beach. These communities, together with Pacific Manor, Westview, Fairway Park, and Linda Mar, incorporated in 1957 as the City of Pacifica. The City grew rapidly in the 1950s and 1960s, and most of its current housing – 54 percent as of 2010 – was built during those decades. Growth slowed in the 1970s, and then slowed further in the following decades, owing to the scarcity of developable land and infrastructure constraints.

## 14.2.3 Governing Body Format

The City of Pacifica is governed by a city council of five elected members. The mayor is selected from among members of the city council by majority vote of the council, serving as mayor for a one-year term. A City Manager, City Attorney and City Clerk are appointed and serve in support of the Council to enact the ordinances passed by the Council, which meets biweekly on the second and fourth Mondays of the month.

The Pacifica City Council assumes responsibility for the adoption of this plan; the Planning Department in conjunction with the Emergency Manager will oversee its implementation.

## 14.3 CURRENT TRENDS

### 14.3.1 Population

According to the California Department of Finance, the population of Pacifica as of January 2020 was 38,331. Since 2016, the population has grown at an average annual rate of 0.34 percent.

### 14.3.2 Development

Development in Pacifica has continued at a slow pace. The notable trend in development has been an increase in accessory dwelling unit development within existing developed areas. The City has received a limited number of development projects in hazard areas (wildland-urban interface, historic landslide, and coastal erosion areas) and is carefully reviewing those projects in light of the applicable hazards.

Table 14-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.



**Table 14-2. Recent and Expected Future Development Trends**

Criterion	Response																														
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan? <i>If yes, give the estimated area annexed and estimated number of parcels or structures.</i>	No																														
Is your jurisdiction expected to annex any areas during the performance period of this plan? <i>If yes, describe land areas and dominant uses. If yes, who currently has permitting authority over these areas?</i>	No																														
Are any areas targeted for development or major redevelopment in the next five years? <i>If yes, briefly describe, including whether any of the areas are in known hazard risk areas</i>	Yes  930 Oddstad Blvd.: Redevelop former elementary school into 70 workforce housing units (adjacent to flood zone). Hillside Meadows at Adobe Drive and Higgins Way: New development of 36 housing units (adjacent to very high Fire Hazard Severity Zone).																														
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?	<table border="1"> <thead> <tr> <th></th> <th>2016</th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> </tr> </thead> <tbody> <tr> <td>Single Family</td> <td>8</td> <td>4</td> <td>7</td> <td>9</td> <td>26</td> </tr> <tr> <td>Multi-Family</td> <td>5</td> <td>2</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Other (commercial, mixed use, etc.)</td> <td>0</td> <td>3</td> <td>4</td> <td>0</td> <td>0</td> </tr> <tr> <td><b>Total</b></td> <td><b>13</b></td> <td><b>9</b></td> <td><b>11</b></td> <td><b>9</b></td> <td><b>26</b></td> </tr> </tbody> </table>		2016	2017	2018	2019	2020	Single Family	8	4	7	9	26	Multi-Family	5	2	0	0	0	Other (commercial, mixed use, etc.)	0	3	4	0	0	<b>Total</b>	<b>13</b>	<b>9</b>	<b>11</b>	<b>9</b>	<b>26</b>
	2016	2017	2018	2019	2020																										
Single Family	8	4	7	9	26																										
Multi-Family	5	2	0	0	0																										
Other (commercial, mixed use, etc.)	0	3	4	0	0																										
<b>Total</b>	<b>13</b>	<b>9</b>	<b>11</b>	<b>9</b>	<b>26</b>																										
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	<ul style="list-style-type: none"> <li>• Special Flood Hazard Areas: Monitored at time of building permit application to ensure base flood elevation certificate. No large-scale development in SFHA areas has been proposed.</li> <li>• Landslide: Monitored at time of building permit application through preliminary geotechnical investigation to mitigate hazards. No large-scale development in landslide areas has been proposed.</li> <li>• High Liquefaction Areas: Monitored at time of building permit application through preliminary geotechnical investigation to mitigate hazards. No large-scale development in high liquefaction areas has been proposed.</li> <li>• Tsunami Inundation Area: Monitored at time of coastal development permit application through tsunami hazard analysis to mitigate hazards. No large-scale development in tsunami inundation areas has been proposed.</li> <li>• Wildfire Risk Areas: Monitored at time of building permit or discretionary permit application through evaluation of applicability of CBC Chapter 7A WUI requirements to mitigate hazards. The City has received some discretionary permit applications for larger developments in these areas.</li> </ul>																														
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.	Pacifica is mostly built-out on privately owned lands. Sporadic in-fill development and small-scale projects are the most common types of development.																														

## 14.4 CAPABILITY ASSESSMENT

This section describes an assessment of existing capabilities for implementing hazard mitigation strategies. The introduction at the beginning of this volume of the hazard mitigation plan describes the components included in the capability assessment and their significance for hazard mitigation planning.

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

- An assessment of planning and regulatory capabilities is presented in Table 14-3.
- Development and permitting capabilities are presented in Table 14-4.
- An assessment of fiscal capabilities is presented in Table 14-5.
- An assessment of administrative and technical capabilities is presented in Table 14-6.
- An assessment of education and outreach capabilities is presented in Table 14-7.
- Information on National Flood Insurance Program (NFIP) compliance is presented in Table 14-8.
- Classifications under various community mitigation programs are presented in Table 14-9.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 14-10.

**Table 14-3. Legal and Regulatory Capability**

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Codes, Ordinances, &amp; Requirements</b>				
<b>Building Code</b>	Yes	No	Yes	Yes
<i>Comment: Pacifica Municipal Code (PMC) Title 8; Ord. 852-C.S., eff. 1/1/2020</i>				
<b>Zoning Code</b>	Yes	Yes	Yes	Yes
<i>Comment: PMC Title 9, Chapter 4; Last updated by Ord. 862-C.S., eff. 5/26/2021</i>				
<b>Subdivisions</b>	Yes	No	Yes	Yes
<i>Comment: PMC Title 10; Ord. 456-85, eff. 12/25/1985</i>				
<b>Stormwater Management</b>	Yes	No	Yes	Yes
<i>Comment: PMC Title 6, Chapter 12; Ord. 812-C.S., eff. 1/12/2017</i>				
<b>Post-Disaster Recovery</b>	No	No	No	No
<i>Comment:</i>				
<b>Real Estate Disclosure</b>	Yes	No	Yes	Yes
<i>Comment: Sewer Laterals: PMC Title 6, Chapter 13, Article 6; Ord. 784 C.S., eff. 12/28/2011</i> <i>Active Faults: Alquist-Priolo Earthquake Fault Zoning Act, CA.</i> <i>CA. State Civil Code 1102 requires full disclosure on Natural hazard Exposure of the sale/re-sale of any and all real property.</i>				
<b>Growth Management</b>	Yes	No	No	No
<i>Comment: PMC Title 9, Chapter 5; Ord. 604-C.S., eff. 7/8/1993</i>				
<b>Site Plan Review</b>	Yes	Yes	No	Yes
<i>Comment: PMC Title 9, Chapter 4, including but not limited to specific plans (Article 22), site development permits (Article 32), and coastal development permits (Article 43)</i>				
<b>Environmental Protection</b>	Yes	No	Yes	Yes
<i>Comment: California Environmental Quality Act (CEQA), required for all discretionary actions by City</i> <i>General Plan Conservation Element; 1980</i> <i>Preservation of Heritage Trees: PMC Title 4, Chapter 12; Ord. 542-C.S., eff. 1/10/1990</i> <i>Clearing and Grubbing Permits: PMC Title 8, Chapter 20, Ord. 518-C.S., eff. 12/28/1988</i>				
<b>Flood Damage Prevention</b>	Yes	No	No	Yes
<i>Comment: PMC Title 7, Chapter 5; Ord. 822-C.S., eff. 10/11/2017</i>				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Emergency Management</b> <i>Comment: PMC Title 4, Chapter 2 §4-2.06</i>	Yes	No	No	Yes
<b>Climate Change</b> <i>Comment: Climate Action Plan, adopted 7/2014.</i>	Yes	No	No	Yes
<b>Other</b> <i>Comment: Title 6, Chapters 6-11, 13 (Sewer System and Wastewater)</i>	Yes	No	Yes	Yes
<b>Planning Documents</b>				
<b>General Plan</b> <i>Is the plan compliant with Assembly Bill 2140? No</i> <i>Comment: The City's 1980 General Plan preceded the Disaster Mitigation Act of 2000 and has not been amended to specifically link to the Local Hazard Mitigation Plan (LHMP). However, the General Plan contains a Seismic Safety and Safety Element that addresses various potential hazards facing the City and policies and action programs to address them. The Draft General Plan, anticipated to be adopted in 2021, does contain direct references to the LHMP and hazards of concern.</i>	Yes	No	Yes	Yes
<b>Capital Improvement Plan</b> <i>How often is the plan updated? Annually</i> <i>Comment: The City of Pacifica's Capital Improvement Plan (CIP) is a planning tool used to prioritize capital projects for the next 5 years. The plan is updated every year identifying new projects and update the status of existing projects. These projects include various infrastructure maintenance, storm drain improvements, parks and play field upgrades, and sewer facility improvements.</i>	Yes	No	Yes	Yes
<b>Disaster Debris Management Plan</b> <i>Comment: Countywide plan under development in 2021 would be considered for local adoption.</i>	No	No	No	No
<b>Floodplain or Watershed Plan</b> <i>Comment:</i>	No	No	No	No
<b>Stormwater Plan</b> <i>Comment: Municipal Regional Permit (MRP) for Stormwater Discharges (Final Order No. R2-2009-0074). Regulates stormwater discharges in new development designs and during construction by requiring Best Management Practices (BMPs). City enforcement supplemented by San Francisco Bay Regional Water Quality Control Board. Local Storm Drain Master Plan scheduled for update in 2022.</i>	Yes	No	No	Yes
<b>Urban Water Management Plan</b> <i>Comment: The North Coast County Water District (NCCWD) and Westborough Water District (WWD) are the potable water providers for the City of Pacifica and are responsible for preparing the UWMP for their service areas.</i>	No	Yes	No	No
<b>Habitat Conservation Plan</b> <i>Comment:</i>	No	No	No	No
<b>Economic Development Plan</b> <i>Comment: Plan accepted by City Council in 2013</i>	Yes	No	No	Yes
<b>Shoreline Management Plan</b> <i>Comment: The City of Pacifica has a Local Coastal Program (LCP) certified by the California Coastal Commission (CCC) to allow local control of development landward of the shoreline. The CCC retains original jurisdiction for areas seaward of mean high tide line and certain other areas in Pacifica. The City has approved an update to its LCP that is pending CCC certification. The updated LCP contains expanded policies for management of the shoreline.</i>	Yes	Yes	No	Yes
<b>Community Wildfire Protection Plan</b> <i>Comment: San Mateo Co. Community Wildfire Protection Plan, 2018</i>	No	No	No	Yes
<b>Forest Management Plan</b> <i>Comment: A local urban forest management plan is beginning development in summer of 2021 Also explore removal of flammable and non-native species of vegetation which may increase hazard risk .</i>	No	No	No	Yes
<b>Climate Action Plan</b> <i>Comment: Climate Action Plan; 7/14/2014</i>	Yes	No	Yes	Yes

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
<b>Emergency Operations Plan</b> <i>Comment: City of Pacifica Emergency Operations Plan 2019, San Mateo County Emergency Operations Plan w/ Annexes, fall 2015</i>	Yes	Yes	No	Yes
<b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b> <i>Comment: San Mateo County Hazard Vulnerability Assessment, Jan 2015</i>	No	Yes	No	Yes
<b>Post-Disaster Recovery Plan</b> <i>Comment: No stand-alone plan, but considered in: City of Pacifica Emergency Operations Plan 2019, San Mateo County Emergency Operations Plan, May 2015, w/ Continuity of Operations Plan Annex</i>	Yes	No	No	Yes
<b>Continuity of Operations Plan</b> <i>Comment: Completed in 2019</i>	Yes	No	No	Yes
<b>Public Health Plan</b> <i>Comment: San Mateo County Health Department</i>	No	Yes	No	No

**Table 14-4. Development and Permitting Capability**

Criterion	Response
Does your jurisdiction issue development permits? <i>If no, who does? If yes, which department?</i>	Yes 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 14-5. Fiscal Capability**

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes, public required
User Fees for Water, Sewer, Gas or Electric Service	Yes, Sewer
Incur Debt through General Obligation Bonds	Yes, public vote required
Incur Debt through Special Tax Bonds	Yes, If a bond revenue – Needs revenue stream
Incur Debt through Private Activity Bonds	Unknown
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes, in accordance with restrictions applicable to use of the fee
Other	Yes, Other General Fund Revenue

**Table 14-6. Administrative and Technical Capability**

<b>Staff/Personnel Resource</b>	<b>Available?</b>	<b>Department/Agency/Position</b>
<b>Planners or engineers with knowledge of land development and land management practices</b>	Yes	Planning Dept: Director, Deputy Planning Director, Assoc. Planner, Asst. Planner.
<b>Engineers or professionals trained in building or infrastructure construction practices</b>	Yes	Public Works Dept.: Director of Public Works, Deputy Director of Public Works/ Waste Water, City Engineer, Senior Engineer, Assoc. Engineer (x2),
<b>Planners or engineers with an understanding of natural hazards</b>	Yes	Planning Dept: Director, Deputy Planning Director, Assoc. Planner, Asst. Planner. Public Works Dept.: Director of Public Works, Deputy Director of Public Works/ Waste Water, City Engineer, Assoc. Engineer (x2)
<b>Staff with training in benefit/cost analysis</b>	No	N/A
<b>Surveyors</b>	Yes	Contract support- CSG Consultants
<b>Personnel skilled or trained in GIS applications</b>	Yes	Planning Dept.: Deputy Planning Director
<b>Scientist familiar with natural hazards in local area</b>	Yes	Contract support- CSG Consultants
<b>Emergency manager</b>	Yes	Pacifica Police Department Captain
<b>Grant writers</b>	Yes	No position in the city is wholly dedicated to grant writing. Available personnel have written grants in the past from the following departments and divisions: Planning, Police and Public Works
<b>Other</b>	No	N/A

**Table 14-7. Education and Outreach Capability**

<b>Criterion</b>	<b>Response</b>
<b>Do you have a public information officer or communications office?</b>	Yes, Police Administrative Captain
<b>Do you have personnel skilled or trained in website development?</b>	Yes, Pacifica IT Division
<b>Do you have hazard mitigation information available on your website? <i>If yes, briefly describe.</i></b>	Yes A winter storm preparedness page, tsunami preparedness page, wildfire preparedness page, and Emergency Preparedness and Safety Commission links to relevant outside sites
<b>Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe.</i></b>	Yes Facebook, Next Door, Twitter, and the countywide SMC Alert system refer people to information on the city's website
<b>Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe.</i></b>	Yes The Emergency Preparedness and Safety Commission meets once a month and has a page on the City's website
<b>Do you have any other programs already in place that could be used to communicate hazard-related information? <i>If yes, briefly describe.</i></b>	Yes SMC Alert (by Everbridge) is a mass notification system using text and phone.
<b>Do you have any established warning systems for hazard events? <i>If yes, briefly describe.</i></b>	Yes The city has three tsunami warning sirens along the coast. The sirens also have voice capability. Zonehaven Evacuation Platform.

**Table 14-8. National Flood Insurance Program Compliance**

Criterion	Response
What local department is responsible for floodplain management?	Planning Department
Who is your floodplain administrator? (department/position)	Planning Dept.: Building Official (Contracted)
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	10/11/2017
Does your floodplain management program meet or exceed minimum requirements? <i>If exceeds, in what ways?</i>	Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	8/15/2016
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <i>If so, state what they are.</i>	No
Are any RiskMAP projects currently underway in your jurisdiction? <i>If so, state what they are.</i>	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <i>If no, state why.</i>	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? <i>If so, what type of assistance/training is needed?</i>	No
Does your jurisdiction participate in the Community Rating System (CRS)? <i>If yes, is your jurisdiction interested in improving its CRS Classification? If no, is your jurisdiction interested in joining the CRS program?</i>	Yes No
How many flood insurance policies are in force in your jurisdiction? <sup>a</sup>	384
<i>What is the insurance in force?</i>	\$84,970,800
<i>What is the premium in force?</i>	\$276,647
How many total loss claims have been filed in your jurisdiction? <sup>a</sup> <i>What were the total payments for losses?</i>	\$782,751

a. According to FEMA statistics as of March 31, 2021

**Table 14-9. Community Classifications**

	Participating?	Classification	Date Classified
FIPS Code	Yes	0608154806	N/A
DUNS#	Yes	091847459	N/A
Community Rating System	Yes	7	8/4/2020
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	No	N/A	N/A
Storm Ready	Yes	Storm Ready	In progress
Firewise	No	N/A	N/A
Tsunami Ready	Yes	Tsunami Ready	In progress

Table 14-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Technical Capacity</b>	
<b>Jurisdiction-level understanding of potential climate change impacts</b> <i>Comment: Skilled City staff and active and engaged community aware of climate change impacts including fire danger, flood risk, and coastal erosion from sea level rise.</i>	High
<b>Jurisdiction-level monitoring of climate change impacts</b> <i>Comment: Primary City monitoring involves coastline surveillance related to public infrastructure and the effects of sea level rise/coastal erosion and flooding.</i>	Medium
<b>Technical resources to assess proposed strategies for feasibility and externalities</b> <i>Comment:</i>	Low
<b>Jurisdiction-level capacity for development of greenhouse gas emissions inventory</b> <i>Comment: The City participates in the RICAPS regional consortium which has engaged a consultant, DNVGL, to prepare a GHG emissions inventory.</i>	Medium
<b>Capital planning and land use decisions informed by potential climate impacts</b> <i>Comment: The City's Local Coastal Program update, pending California Coastal Commission Certification, requires assessments related to sea level rise and its effects on the coastline.</i>	High
<b>Participation in regional groups addressing climate risks</b> <i>Comment: The City participates in the RICAPS regional consortium to plan for climate risks.</i>	High
<b>Implementation Capacity</b>	
<b>Clear authority/mandate to consider climate change impacts during public decision-making processes</b> <i>Comment: General Plan and Local Coastal Program include policies to consider climate change risks/hazards. These must be balanced with other policies in those documents such as economic development, provision of housing, etc.</i>	Medium
<b>Identified strategies for greenhouse gas mitigation efforts</b> <i>Comment: City development policies prioritize in-fill development which can result in reductions to GHG emissions.</i>	Medium
<b>Identified strategies for adaptation to impacts</b> <i>Comment: The Local Coastal Plan update pending California Coastal Commission certification contains adaptation strategies for sea level rise.</i>	Medium
<b>Champions for climate action in local government departments</b> <i>Comment: The City does not have dedicate climate action/sustainability personnel.</i>	Low
<b>Political support for implementing climate change adaptation strategies</b> <i>Comment: The Pacifica City Council recognizes the challenges presented by climate change and supported adaptation strategies in the Local Coastal Program update pending certification by the California Coastal Commission.</i>	High
<b>Financial resources devoted to climate change adaptation</b> <i>Comment: The City lacks sufficient identified funding sources for this purpose and pursues grants whenever possible.</i>	Low
<b>Local authority over sectors likely to be negative impacted</b> <i>Comment: The City can exercise its police power over all inland areas. Certain locations within the Coastal Zone are subject to appeal jurisdiction or direct permit authority by the California Coastal Commission, which limits local authority over certain decisions affecting land subject to sea level rise and coastal erosion.</i>	Medium
<b>Public Capacity</b>	
<b>Local residents knowledge of and understanding of climate risk</b> <i>Comment: Pacifica has an engaged community aware of climate change impacts including fire danger, flood risk, and coastal erosion from sea level rise.</i>	High
<b>Local residents support of adaptation efforts</b> <i>Comment: Climate change adaptation, particularly sea level rise adaptation, has proven to be a divisive issue in Pacifica. There are strong organized elements on various sides of the issue that seek to advance quite different adaptation approaches.</i>	Medium

Criterion	Jurisdiction Rating <sup>a</sup>
<b>Local residents’ capacity to adapt to climate impacts</b> <i>Comment: Individual residents’ resources to adapt to climate impacts varies widely. Additionally, climate change adaptation planning, particularly sea level rise adaptation planning, has not resulted in a consensus approach to the appropriate adaptation strategy.</i>	Medium
<b>Local economy current capacity to adapt to climate impacts</b> <i>Comment: Pacifica’s local economy consists mostly of small and medium size businesses with little large-scale commercial development/large corporations. The existing small and medium businesses lack sufficient resources to undertake climate adaptation on their own and have not widely organized for this purpose.</i>	Low
<b>Local ecosystems capacity to adapt to climate impacts</b> <i>Comment: Variable. Some parts of Pacifica are undeveloped and are readily adaptable, such as undeveloped lands along the coastline. However, other areas are highly developed and in some cases are protected by existing shoreline protection devices that limit the ability for natural adaptive processes to sea level rise.</i>	Medium

- a. High = Capacity exists and is in use; Medium = Capacity may exist, but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.

## 14.5 INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. This section identifies where such integration is already in place, and where there are opportunities for further integration in the future. Resources listed at the end of this annex were used to provide information on integration. The progress reporting process described in Volume 1 of the hazard mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

### 14.5.1 Existing Integration

Some level of integration has already been established between local hazard mitigation planning and the following other local plans and programs:

- **Public Outreach:** The City’s public outreach on disaster preparedness incorporates prevention, preparedness, and mitigation recommendations, especially on the Natural Disasters section of the website. The Natural Disasters section of the website includes information on earthquakes, flooding, winter storms, landslides, wildfire and tsunamis, all of which are profiled in the LHMP.
- **General Plan:** The Safety and Seismic Safety Element of the General Plan incorporates information on pertinent local natural hazards, especially seismic hazards, landslide risks and coastal erosion risks. The General Plan also requires geotechnical hazard studies prior to new development.
- **Local Coastal Program:** The LCP requires consideration of coastal flooding and erosion.

### 14.5.2 Opportunities for Future Integration

The capability assessment presented in this annex identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **General Plan:** The City is undertaking an overall General Plan Update process that will incorporate references to the Local Hazard Mitigation Plan in the Safety Element .



- Local Coastal Program: The LCP requires consideration of coastal flooding and erosion. Similar, but more expansive policies, are contained in the LCP update pending certification by the California Coastal Commission.
- Building Code, Zoning Code, Subdivision Code, Site Plan Review: The City’s development review codes, policies, and procedures could be revised to provide a greater emphasis on consideration of hazards when reviewing development.
- Capital Improvement Plan: The CIP could consider more directly whether a project would increase or decrease a known hazard.

## 14.6 RISK ASSESSMENT

### 14.6.1 Jurisdiction-Specific Natural Hazard Event History

Table 14-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

**Table 14-11. Past Natural Hazard Events**

Type of Event	FEMA Disaster #	Date	Damage Assessment
Severe Weather/ Erosion	N/A	January 2021	\$250k - increased tidal action caused failure along Beach Blvd. seawall
Severe Weather	N/A	January 2020	\$40k – increased tidal action caused failure along Beach Blvd. seawall
Severe Weather/ Erosion	4308	January 2017	\$1.6mil – erosion on Esplanade, debris cleanup, and pump station failure
Severe Weather/Erosion	CDAA 2016-01	January 2016	\$3.4mil - Moderate flooding, coastal erosion due to increased tidal action, power outages and debris from trees and sand along the coastline
Wildfire	N/A	January 2015	Approx. 2.5 acres of trees and brush burned
Severe Weather/Erosion	N/A	December 14, 2014	\$280,000 - Major flooding, power outages and debris from trees and sand along the coastline
Tsunami	N/A	March 11, 2011	Warning – no subsequent event, 8.9 earthquake in Japan caused Tsunami warning to West Coast of California
Severe Weather /Erosion	CDAA-2010-04	March 2009	Severe coastal erosion prompting red-tagging of adjacent homes and apartments
Severe Weather/ Erosion	1646	March 29, 2005-April 16, 2006	Moderate flooding, coastal erosion due to increased tidal action, power outages and debris from trees and sand along the coastline
Severe Weather/ Erosion	1628	December 17, 2005-January 3, 2006	Moderate flooding, coastal erosion due to increased tidal action, power outages and debris from trees and sand along the coastline
Landslide	N/A	1997	Mudslide in the Pedro Point area of Pacifica washed out a road
Severe Weather (coastal erosion)	N/A	1997-1998	Seven homes on Esplanade Avenue lost the last 10 feet of their back yards and residents had to evacuate.
Severe Weather, Flood	N/A	January 4, 1983	On Jan. 4, 1983, more than 5 inches of rain fell in one day. Residents in canoes paddled out of flooded homes in the San Pedro Valley. A mudslide at the top of the valley plowed into three homes, killing three children sleeping in their beds.

## 14.6.2 Hazard Risk Ranking

Table 14-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property and the economy. Mitigation actions target hazards with high and medium rankings.

**Table 14-12. Hazard Risk Ranking**

Rank	Hazard	Risk Ranking Score	Risk Category
1	Landslide/Mass Movements	54	High
2	Earthquake	36	High
3	Severe Weather/Extreme Weather	24	Medium
4	Sea Level Rise / Climate Change	18	Medium
5	Flood	18	Medium
6	Tsunami	12	Low
7	Drought	9	Low
8	Wildfire	0	Low
9	Dam Failure	0	Low

## 14.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. This section provides information on a few key vulnerabilities for this jurisdiction. Available jurisdiction-specific risk maps of the hazards are provided at the end of this annex.

### Repetitive Loss Properties

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

The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- The key hazard encountered in the City of Pacifica during the past five years has been coastal erosion at the central and northern extents of the Pacifica coastline.
- Transportation/ Accessibility (arterial highway, bridges over highway, single entry neighborhoods). California State Route 1 (SR-1) is the major roadway that connects City neighborhoods and allows for traffic flow in and out of the City. At the southern city limits, Pacifica is connected to the next community by a bridge and tunnel. At the northern city limits, Pacifica is connected to the City of San Francisco by Interstate 280. Other access in or out of parts of Pacifica is Sharp Park Road, which connects to California State Route 35. Some areas of SR-1 may be susceptible to landslides due to steep grades. There have been minor rock slides in some areas. If areas of SR-1 were blocked due to a landslide or other hazard, the City may be severely limited in access to equipment, parts, and materials to repair damaged infrastructure.

Mitigation actions addressing these issues were prioritized for consideration in the action plan for this annex.

## 14.7 STATUS OF PREVIOUS PLAN ACTIONS

Table 14-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

**Table 14-13. Status of Previous Plan Actions**

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p><b>PA-1</b>— Pacifica will build infrastructure to accommodate increases in low impact flooding to mitigate impacts from expected increases in incidents of shallow flooding</p> <p><b>Comment:</b> 2021 Stormwater Master Plan will assess flooding issues and prioritize projects.</p>			✓	PAC-7
<p><b>PA-2</b>— Pacifica will be conducting an update of its Emergency Operations Plan to ensure an effective and coordinated response to disasters within the city</p> <p><b>Comment:</b> The Emergency Operations Plan was last updated in 2017 and plans for an update are underway.</p>			✓	PAC-8
<p><b>PA-3</b>— Pacifica will update its flood damage prevention ordinance to mitigate against damage of residential and commercial property in flood prone areas</p> <p><b>Comment:</b> City Council adopted Ordinance No. 822-C.S. to amend the Pacifica Municipal Code to incorporate flood damage prevention measures. This ordinance went into effect October 11, 2017.</p>	✓			
<p><b>PA-4</b>— Pacifica will seek to encourage and assist in the acquisition of grants for the purchase or relocation of property and structures in high hazard areas to mitigate against damage to vulnerable structures and infrastructure</p> <p><b>Comment:</b> Homes at 532 &amp; 528 Esplanade on an eroding bluff Acquisition &amp; Demolition in 2018.</p>			✓	PAC-1
<p><b>PA-5</b>— Pacifica will pursue opportunities to preserve and protect critical transportation infrastructure to mitigate against isolation, economic loss and ensure public safety.</p> <p><b>Comment:</b> Two Esplanade infrastructure projects along with Beach Blvd. Infrastructure Resiliency project are underway.</p>			✓	PAC-9
<p><b>PA-6</b>— Pacifica will seek to replace/upgrade its seismically-vulnerable facilities to ensure provision of vital services following a hazard event.</p> <p><b>Comment:</b> City is currently exploring plans to replace the current Civic Center located in a structure originally built as a school house in 1914.</p>			✓	PAC-10
<p><b>PA-7</b>— Pacifica will preserve, protect, or relocate hazard prone infrastructure to maintain critical services and maintain the environment.</p> <p><b>Comment:</b> Two esplanade infrastructure projects, Beach Blvd. Infrastructure Resiliency project, &amp; Milagra Outfall Repair Project.</p>			✓	PAC-11
<p><b>PA-8</b>— Pacifica will develop and deliver business outreach programs to mitigate against the functional loss of community businesses and promote business resiliency.</p> <p><b>Comment:</b> City of Pacifica Emergency Preparedness &amp; Safety Commission produce information materials ( tsunami awareness, earthquake preparedness) to distribute to businesses to promote resilience. Community event on wildfire preparedness is scheduled for this June. Ongoing social media campaign to promote wildfire preparedness and evacuation planning, and alert notification systems as fire season approaches.</p>			✓	PAC-12
<p><b>PA-9</b>— Pacifica will work with contiguous and neighboring utility districts to develop its use of recycled water for irrigation and non-potable uses to reduce reliance on potable water during periods of drought.</p> <p><b>Comment:</b> The City of Pacifica wastewater treatment plant produces tertiary recycled water to the North Coast County Water District (NCCWD). The NCCWD continues to promote use of recycled water for irrigation to customers. This is an ongoing project.</p>			✓	PAC-13

Action Item	Completed	Removed; No longer Feasible	Carried Over to Plan Update	
			Check if Yes	Action # in Update
<p><b>PA-10</b>—Pacifica will continue to do public education outreach to our neighborhoods using the “Map Your Neighborhood” tool to ensure communities can take care of themselves and those who live around them during a disaster event.</p> <p>Work with the Neighborhood Associations Utilize CERT members to assist in this outreach Identify those homes within the neighborhoods that have vulnerable or isolated populations living in them Utilize Social Media and Emergency Alert Systems to communicate preparedness and emergency messaging</p> <p><b>Comment:</b> Pacifica continues to present CERT courses and other preparedness programs to promote personal preparedness, and utilizes social media to promote general disaster preparedness in our community.</p>			✓	PAC-14
<p><b>Action G-1</b>—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.</p> <p><b>Comment:</b> City of Pacifica acquired and demolished two homes at 532 &amp; 528 Esplanade atop an eroding bluff to prevent further damage.</p>			✓	PAC-1
<p><b>Action G-2</b>—Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.</p> <p><b>Comment:</b> Achieved Tree City USA designation starting in 2019. Community Rating System recertification every two years, last done in 2020.</p>			✓	PAC-15
<p><b>Action G-3</b>—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 adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.</p> <p><b>Comment:</b> Recertified as Class 7 in 2020. Continued to provide public assistance for floodplain information and requirements.</p>			✓	PAC-4
<p><b>Action G-4</b>—Where feasible, implement a program to record high water marks following high-water events.</p> <p><b>Comment:</b> City considered training CERT members for future recording of high water marks.</p>			✓	PAC-16
<p><b>Action G-5</b>—Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.</p> <p><b>Comment:</b> City’s draft General Plan (adoption expected summer 2021) references LHMP.</p>			✓	PAC-2
<p><b>Action G-6</b>—Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.</p> <p><b>Comment:</b> City has not identified funding sources to implement this item.</p>			✓	PAC-17
<p><b>Action G-7</b>— Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.</p> <p><b>Comment:</b> City is an active member of the San Mateo County Emergency Managers Association, participates in countywide warning and notification systems, attends various work groups related to disaster response, conducts classes on disaster preparedness for community members, and has an active CERT program.</p>			✓	PAC-3
<p><b>Action G-8</b>— Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.</p> <p><b>Comment:</b> City is an active member of San Mateo County Emergency Mangers Association, integrated LHMP into other City plans, promotes community preparedness through social media campaigns, maintains an active CERT program promotion personal preparedness.</p>			✓	PAC-3

## 14.8 HAZARD MITIGATION ACTION PLAN

Table 14-14 lists the identified actions, which make up the hazard mitigation action plan for this jurisdiction.

Table 14-15 identifies the priority for each action. Table 14-16 summarizes the mitigation actions by hazard of concern and mitigation type.

**Table 14-14. Hazard Mitigation Action Plan Matrix**

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
Action PAC-1—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
<u>Hazards Mitigated:</u> Landslide/Mass Movements, Earthquake, Severe Weather/Extreme Weather, Climate Change, Flood, Tsunami, Wildfire, Sea Level Rise						
Existing	6, 8, 13	Pacifica		High	Grant Funding	Short term
Action PAC-2— Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including the General Plan and the Local Coastal Land Use Plan.						
<u>Hazards Mitigated:</u> Landslide/Mass Movements, Earthquake, Severe Weather/Extreme Weather, Climate Change, Flood, Tsunami, Drought, Sea Level Rise						
New and Existing	1, 2, 3, 4, 6, 9, 10	Pacifica	California Coastal Commission	Low	Staff Time, General Funds	Short Term
Action PAC-3—Actively participate in the plan maintenance protocols and support the County-wide initiatives outlined in Volume 1 of this hazard mitigation plan.						
<u>Hazards Mitigated:</u> Landslide/Mass Movements, Earthquake, Severe Weather/Extreme Weather, Climate Change, Flood, Tsunami, Drought, Wildfire, Sea Level Rise						
New and Existing	2, 6, 12	Pacifica	San Mateo County	Low	Staff Time, General Funds	Short term
Action PAC-4—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:						
<ul style="list-style-type: none"> <li>• Enforce 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>						
<u>Hazards Mitigated:</u> Flood						
New and Existing	1, 2, 7, 8, 10, 13	Pacifica		Low	Staff Time, General Funds	Short Term
Action PAC-5—Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following:						
<ul style="list-style-type: none"> <li>• Sea Level Rise Vulnerability Assessment</li> <li>• Pursue strategies outlined in Local Coastal Program</li> <li>• Inclusion of climate change within infrastructure planning (Wastewater, water, stormwater, etc.)</li> </ul>						
<u>Hazards Mitigated:</u> Flood, Wildfire, Sea Level Rise						
New and Existing	1, 6, 7, 8, 9, 12, 14	Pacifica	FSLRRD	Low	Staff Time, General Funds	Long Term
Action PAC-6— Purchase generators for critical facilities and infrastructure that lack adequate backup power, including Skyridge pump station generator (replacement), EQ Basin backup generator (new), CCWRP (replacement), communications antennas/ repeaters for public safety communications, and multiple tow behind generators (new) to be used as needed.						
<u>Hazards Mitigated:</u> Earthquake, Flood, Landslide/Mass Movements, Severe Weather/Extreme Weather, Tsunami, Wildfire						
Existing	7, 8, 9	Pacifica		Medium	Staff time, general funds, Grant Funding	Short term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
Action PAC-7—Pacifica will build infrastructure to accommodate increases in low impact flooding to mitigate impacts from expected increases in incidents of shallow flooding.						
<u>Hazards Mitigated:</u> Flood						
Existing	1, 3, 6, 8, 14	Pacifica		Medium	Grant Funding, General fund	Medium Term
Action PAC-8—Pacifica will be conducting an update of its Emergency Operations Plan to ensure an effective and coordinated response to disasters within the city.						
<u>Hazards Mitigated:</u> Landslide/Mass Movements, Earthquake, Severe Weather/Extreme Weather, Climate Change, Flood, Tsunami, Drought, Wildfire, Sea Level Rise						
New and Existing	1, 2, 7, 11, 12	Pacifica		Low	Staff time, General Fund	Short Term
Action PAC-9—Pacifica will pursue opportunities to preserve and protect critical transportation infrastructure (including Beach Blvd.) to mitigate against isolation, economic loss and ensure public safety.						
<u>Hazards Mitigated:</u> Landslide/Mass Movements, Earthquake, Severe Weather/Extreme Weather, Climate Change, Flood, Tsunami, Wildfire, Sea Level Rise						
New and Existing	1, 2, 3, 4, 5, 6, 8, 10, 13	Pacifica	FSLRRD	High	Grant Funding	Short Term
Action PAC-10—Pacifica will seek to replace/upgrade its seismically-vulnerable facilities to ensure provision of vital services following a hazard event.						
<u>Hazards Mitigated:</u> Earthquake						
Existing	1, 4, 6, 8, 9, 13	Pacifica		High	Grant Funding, bonds, General fund	Medium Term
Action PAC-11—Pacifica will preserve, protect, or relocate hazard prone infrastructure to maintain critical services and maintain the environment.						
<u>Hazards Mitigated:</u> Landslide/Mass Movements, Earthquake, Severe Weather/Extreme Weather, Climate Change, Flood, Tsunami, Wildfire, Sea Level Rise						
Existing	1, 2, 3, 6, 7, 8, 13, 14	Pacifica		High	Grant Funding, bonds, General fund	Long Term
Action PAC-12—Pacifica will develop and deliver business outreach programs to mitigate against the functional loss of community businesses and promote business resiliency.						
<u>Hazards Mitigated:</u> Landslide/Mass Movements, Earthquake, Severe Weather/Extreme Weather, Climate Change, Flood, Tsunami, Drought, Wildfire						
New and Existing	1, 2, 3, 5, 7, 8	Pacifica		Low	Staff time	Short Term
Action PAC-13—Pacifica will work with contiguous and neighboring utility districts to develop its use of recycled water for irrigation and non-potable uses to reduce reliance on potable water during periods of drought.						
<u>Hazards Mitigated:</u> .Drought						
Existing	1, 2, 6, 7, 8, 10	Pacifica		Medium	General fund, Staff time	Short Term
Action PAC-14—Pacifica will continue to do public education outreach to our neighborhoods using the “Map Your Neighborhood” tool to ensure communities can take care of themselves and those who live around them during a disaster event.						
Work with the Neighborhood Associations						
Utilize CERT members to assist in this outreach						
Identify those homes within the neighborhoods that have vulnerable or isolated populations living in them						
Utilize Social Media and Emergency Alert Systems to communicate preparedness and emergency messaging						
<u>Hazards Mitigated:</u> Landslide/Mass Movements, Earthquake, Severe Weather/Extreme Weather, Climate Change, Flood, Tsunami, Wildfire						
Existing	1, 2, 3, 5, 7, 8, 9, 10	Pacifica		Low	Staff time, General fund	Long Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline <sup>a</sup>
Action PAC-15—Maintain status or consider participation in incentive-based programs such as the Community Rating System and StormReady.						
<u>Hazards Mitigated:</u> Flood, Severe Weather/Extreme Weather, Wildfire						
Existing	1, 2, 4, 8, 9, 14	Pacifica		Medium	Staff Time	Long Term
Action PAC-16—Where feasible, implement a program to record high water marks following high-water events.						
<u>Hazards Mitigated:</u> Flood, Climate Change						
Existing	1, 2, 5, 6, 8	Pacifica		Low	Staff Time	Long Term
Action PAC-17—Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.						
<u>Hazards Mitigated:</u> Landslide/Mass Movements, Earthquake, Severe Weather/Extreme Weather, Climate Change, Flood, Tsunami, Wildfire						
New	1, 2, 3, 4, 5, 6, 8, 9, 13	Pacifica		Low	Grant Funding	Short Term
Action PAC-18— Evaluate potential wildfire risk and mitigation strategies.						
<u>Hazards Mitigated:</u> Wildfire						
New	1, 2, 5, 7, 8, 9, 11	Pacifica	North County Fire	High	Grant Funding	Long Term

a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

Acronyms used here are defined at the beginning of this volume.

**Table 14-15. Mitigation Action Priority**

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Eligible for Outside Funding?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority <sup>a</sup>	Outside Funding Source Pursuit Priority <sup>a</sup>
1	3	High	High	Yes	Yes	No	Medium	High
2	7	Medium	Low	Yes	No	Yes	High	Low
3	3	Low	Low	Yes	No	Yes	High	Low
4	6	Medium	Low	Yes	No	Yes	High	Low
5	7	Medium	Low	Yes	No	Yes	Low	Low
6	3	High	Medium	Yes	Yes	No	Medium	High
7	5	High	Medium	Yes	Yes	No	Medium	High
8	5	Medium	Low	Yes	No	Yes	High	Low
9	9	Medium	High	No	Yes	No	Low	High
10	6	Medium	High	No	Yes	No	Low	Medium
11	8	Medium	Medium	Yes	Yes	No	Low	Medium
12	6	Medium	Low	Yes	No	Yes	High	Low
13	6	Medium	Medium	Yes	No	Yes	High	Low
14	8	Medium	Low	Yes	No	Yes	Low	Low
15	6	Medium	Low	Yes	No	Yes	Low	Low
16	5	Low	Medium	No	No	Yes	Low	Low
17	9	Medium	High	No	Yes	No	Low	Low
18	7	Medium	High	No	Yes	No	Low	High

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

**Table 14-16. Analysis of Mitigation Actions**

Hazard Type	Action Addressing Hazard, by Mitigation Type <sup>a</sup>							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
<b>High-Risk Hazards</b>								
Land Slide/ Mass Movement	PAC-1,3	PAC-1, 2, 4	PAC-12, 14	PAC-1, 2, 4, 5, 7	PAC-6, 8	PAC-1, 9, 11, 17	PAC-5, 7	PAC-14
Sea Level Rise / Climate Change	PAC-3	PAC-2, 4	PAC-12, 13, 14	PAC-1, 4, 5, 7, 13	PAC-6, 8	PAC-1, 9, 11, 17	PAC-5, 7	PAC-14, 15
Flood	PAC-1,3	PAC-2, 4, 16	PAC-12, 14, 16	PAC-1, 2, 4, 5, 7	PAC-6, 8, 16	PAC-1, 9, 11, 17	PAC-5, 7, 16	PAC-14, 15, 16
Earthquake	PAC-1, 3, 10	PAC-10	PAC-10, 12, 14	PAC-10	PAC-6, 8, 10	PAC-1, 9, 10, 11, 17	PAC-10	PAC-10, 14, 15
<b>Medium-Risk Hazards</b>								
Severe Weather/ Extreme Weather	PAC-1, 3	PAC-4	PAC-12, 14	PAC-5, 7	PAC-6, 8	PAC-1, 9, 11, 17	PAC-5, 7	PAC-14, 15
Tsunami	PAC-1, 3	PAC-4	PAC-12, 14	PAC-1, 7	PAC-6, 8	PAC-1, 9, 11, 17	PAC-7, 16	PAC-14, 15
<b>Low-Risk Hazards</b>								
Drought	PAC-3	PAC-13	PAC-12, 13, 14	PAC-4, 13	PAC-6, 8	PAC-11, 17	PAC-5	PAC-13, 14
Wildfire	PAC-1, 3, 18	PAC-18	PAC-12, 14, 18	PAC-18	PAC-6, 8, 18	PAC-1, 9, 11, 17	PAC-5, 18	PAC-14, 15, 18
Dam Failure	-	-	-	-	-	-	-	-

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

## 14.9 PUBLIC OUTREACH

Table 1417 lists public outreach activities for this jurisdiction.

**Table 14-17. Local Public Outreach**

Local Outreach Activity	Date	Number of People Involved
General Plan and Local Coastal Program Update Outreach To Emergency Preparedness & Safety Commission Regarding Safety Element and Natural Hazards Chapter	8/21/2019	12
Survey For LHMP Update Distributed Using Nextdoor, Facebook, CERT Email Distribution List	7/7/2021	90

## 14.10 INFORMATION SOURCES USED FOR THIS ANNEX

The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

- **City of Pacifica Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.



- 
- **City of Pacifica Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
  - **1980 General Plan, Safety & Seismic Safety Element** referenced for hazard information.
  - **1980 Local Coastal Land Use Plan**, referenced for hazard information.
  - **Draft General Plan**, referenced for hazard information.
  - **Certification Draft Local Coastal Land Use Plan**, referenced for hazard information

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

## 14.11 ADDITIONAL COMMENTS



In the Hazard Risk Ranking, the risk of Wildfire for the City of Pacifica was determined to be “Low Risk.” Devastating wildfires across the state in recent years, including the CZU Complex Fire on the southern San Mateo County coastside in 2020, has generated interest in the community about the wildfire risk in Pacifica. This has resulted in an action item being created for this hazard, despite the risk ranking.

The Hazard Risk Ranking also lists Dam Failure as one of the hazards assessed. This hazard is not applicable to the City of Pacifica and is not addressed in this annex. There is significant distance between the City of Pacifica and the closest dam. Although dam failure elsewhere in the County may have substantial impact on the bay side of San Mateo County, it is improbable there would be any impact to the City.

The City of Pacifica will actively participate in the plan maintenance strategy identified in this plan.

# Pacifica

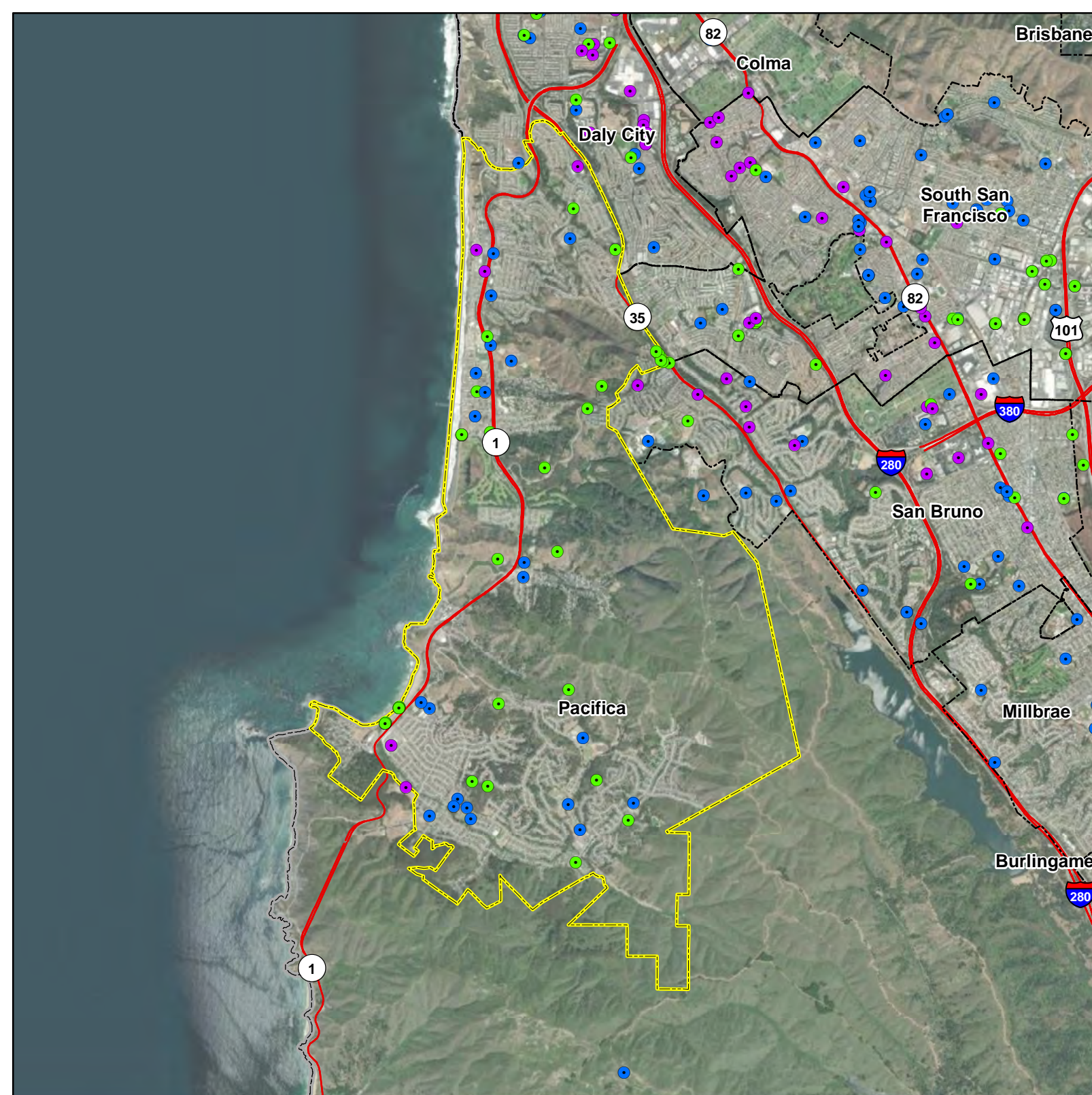
## Critical Facilities, 1 of 2

-  Food, Water, Shelter
-  Health and Medical
-  Safety and Security
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., DHS HIFLD



0 0.4 0.8 1.6  
Miles

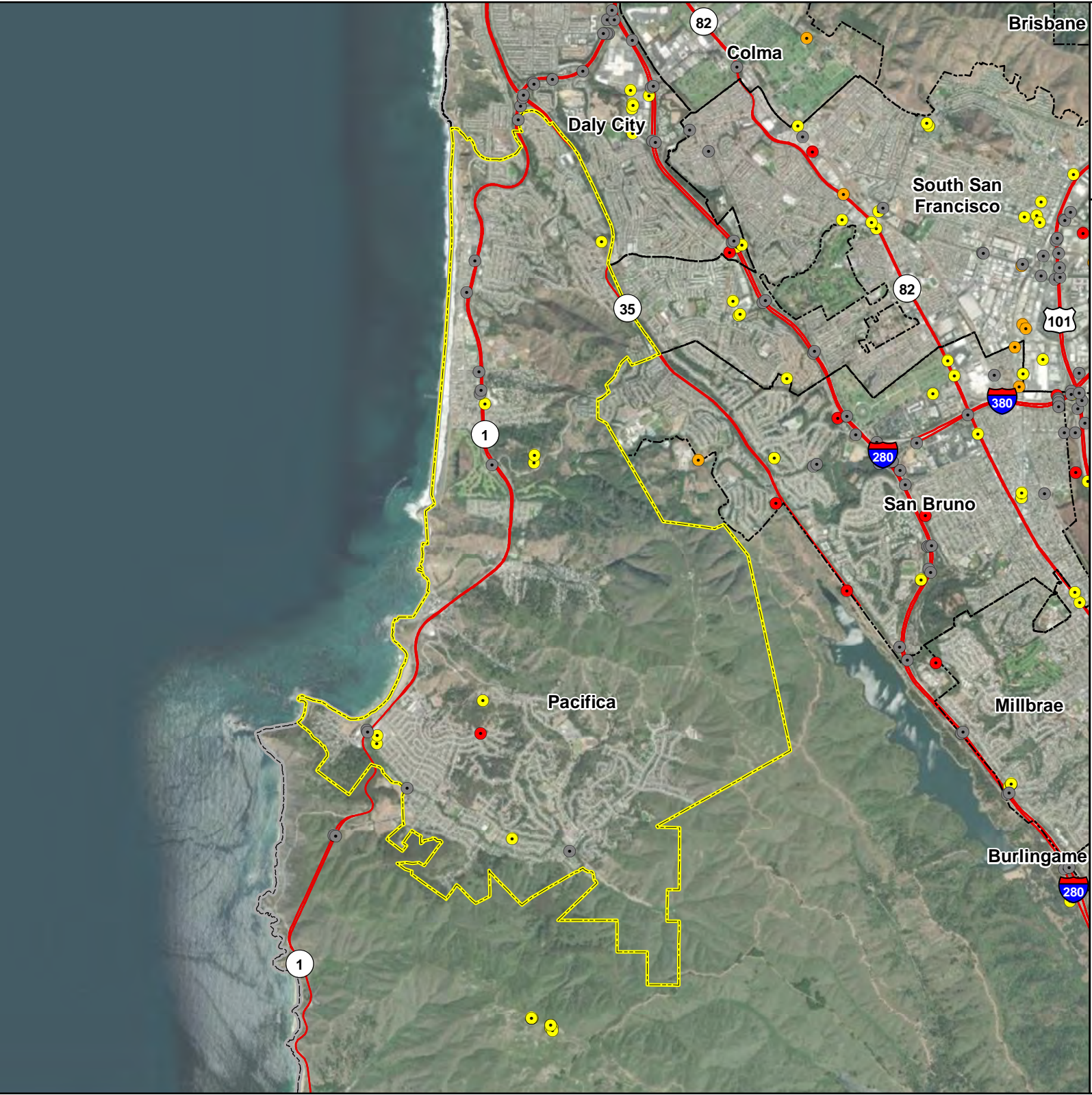
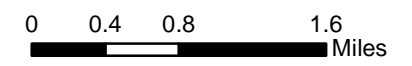


# Pacifica

## Critical Facilities, 2 of 2







- Communications
- Energy
- Hazardous Materials
- Transportation
- ▭ Selected City
- ▭ Incorporated Cities
- ▭ County Boundary
- Highways

Data Sources: ESRI Basemap, San Mateo Co., DHS HIFLD



# Pacifica

## Dam Failure Inundation Area Used for Risk Assessment

-  Inundation Area
-  Dam
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CA DWR










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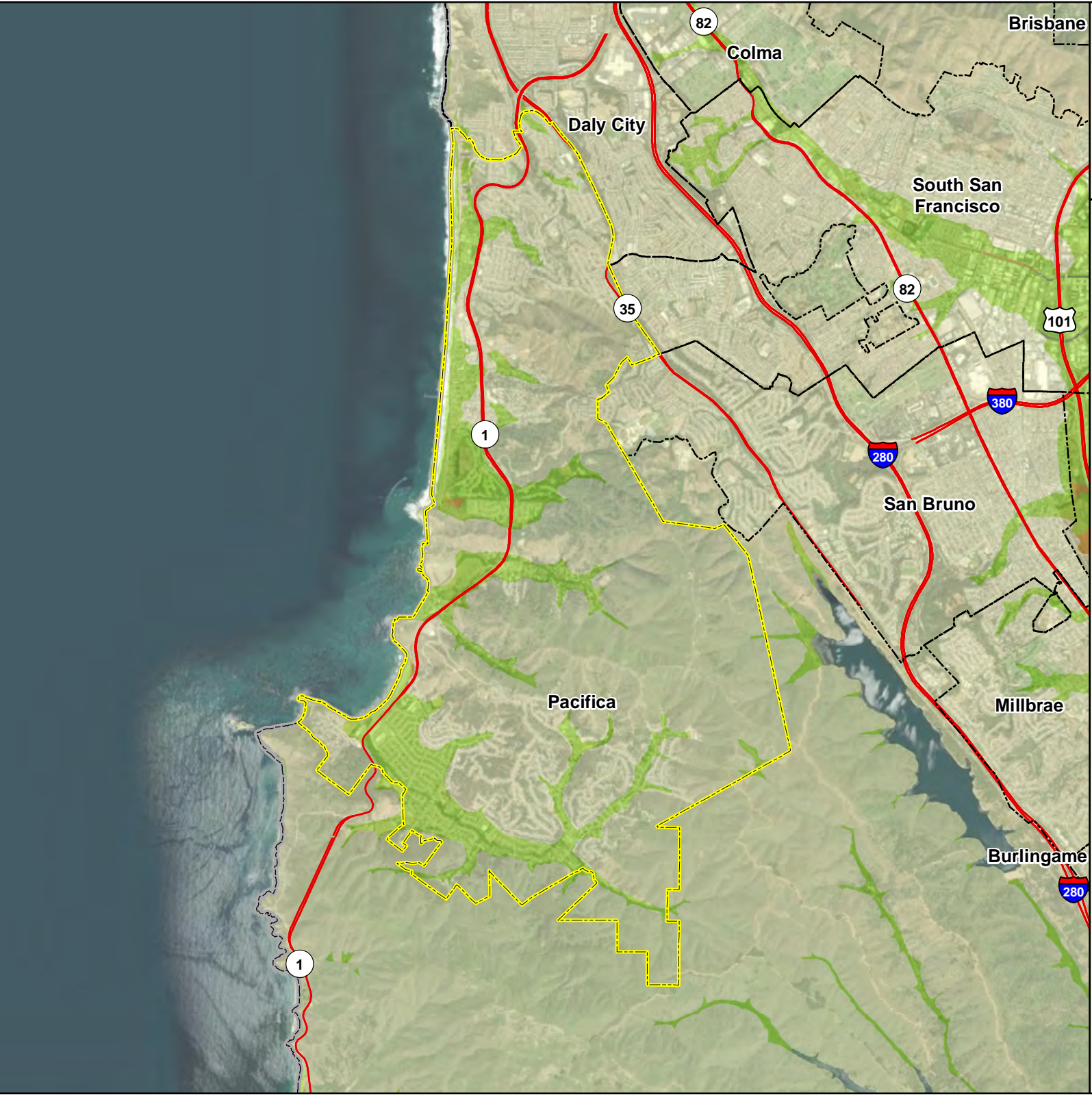
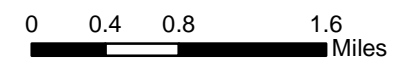


# Pacifica

## NEHRP Soil Class

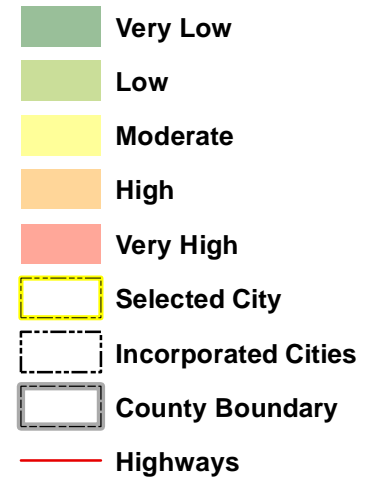
-  C (Dense soil/soft rock)
-  D (Stiff soil)
-  E (Soft clay)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CGS

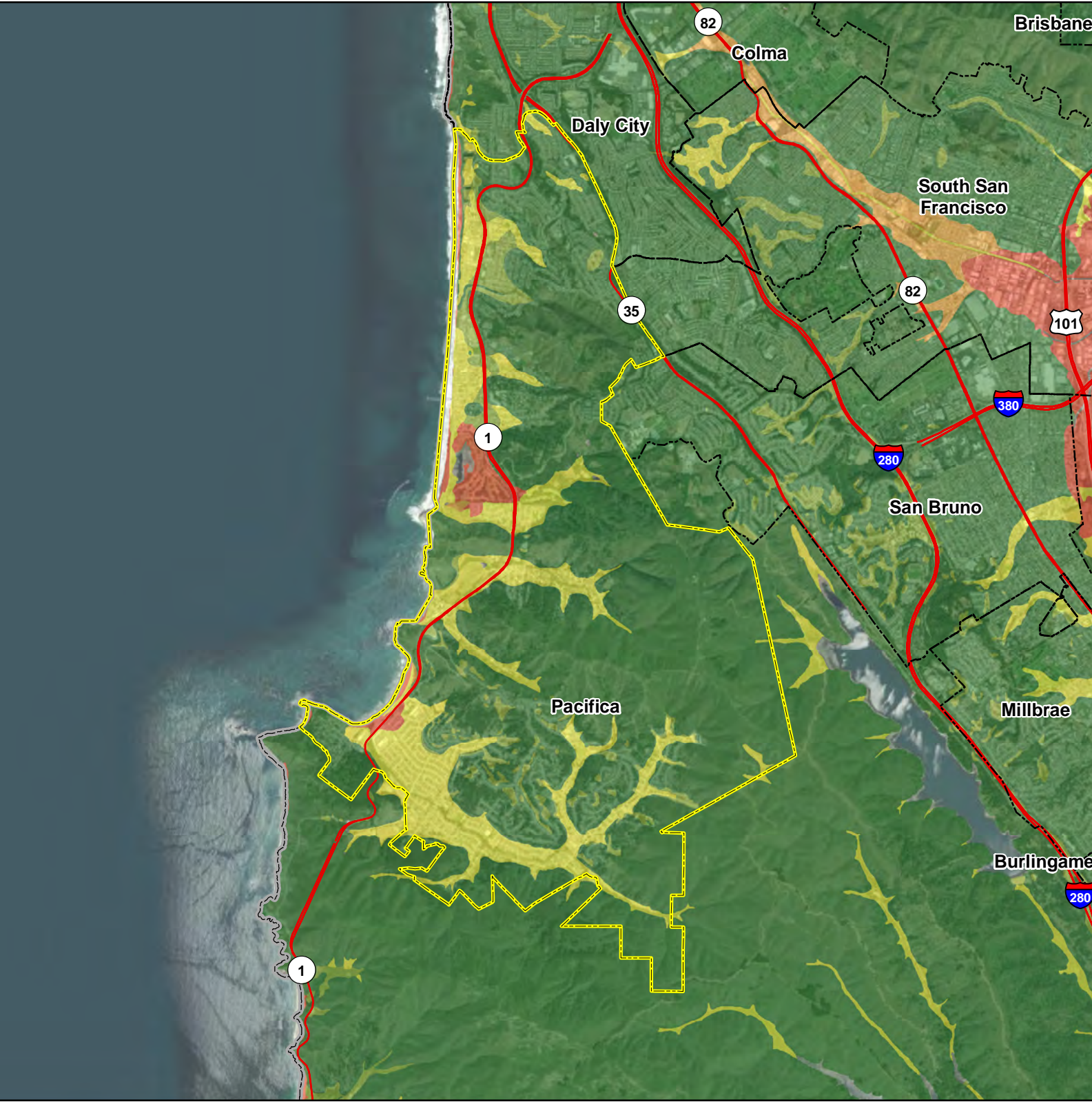
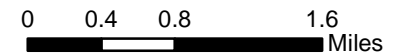


# Pacifica

## Liquefaction Susceptibility



Data Sources: ESRI Basemap, San Mateo Co., ABAG (USGS)



# Pacifica

## Butano M6.93 Earthquake Scenario

### Mercalli Intensity Scale

 V (Moderate/Very Light)

 VI (Strong/Light)

 Selected City

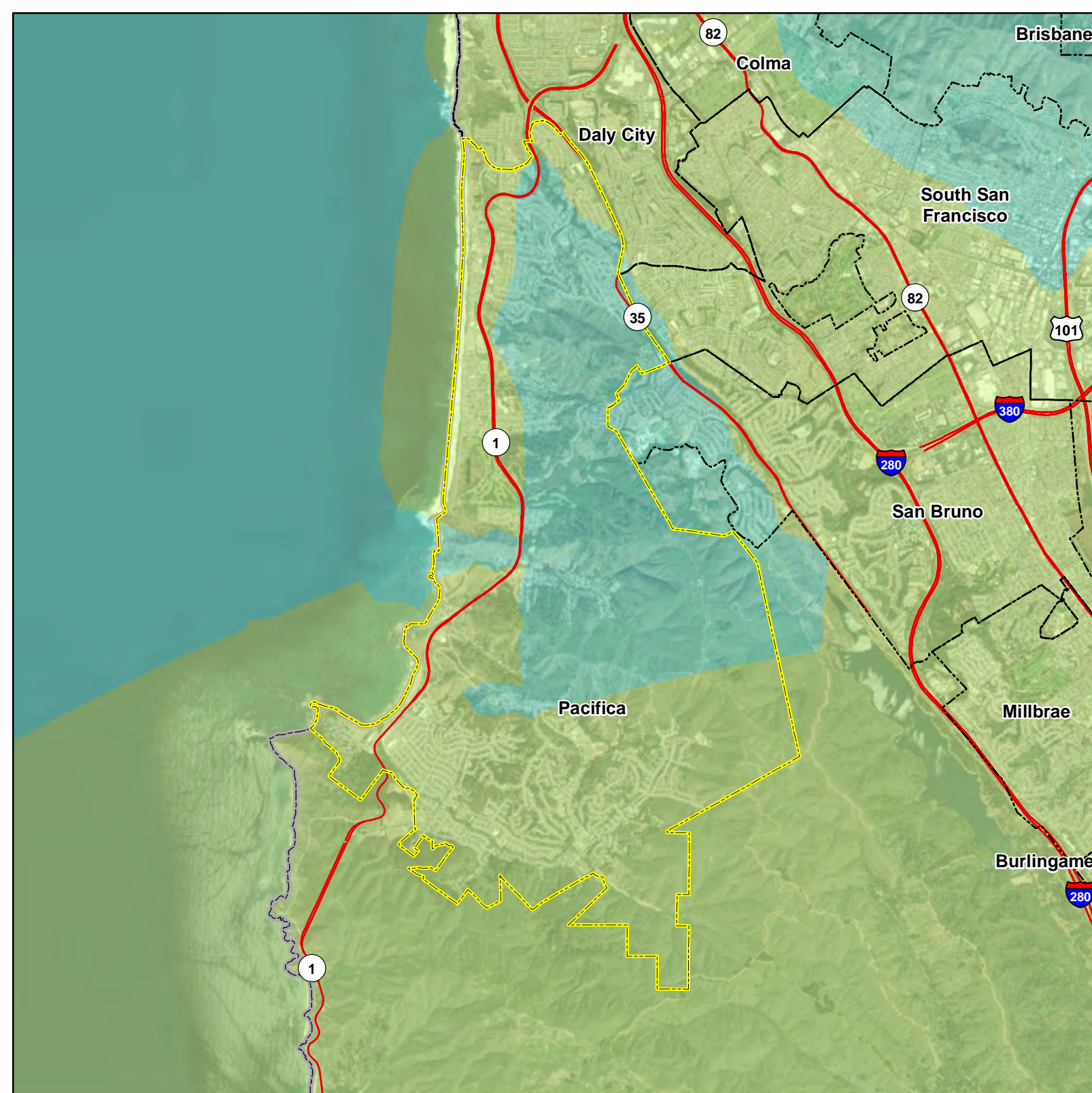
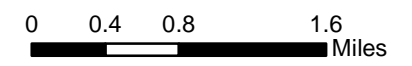
 Incorporated Cities

 County Boundary

 Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



# Pacifica

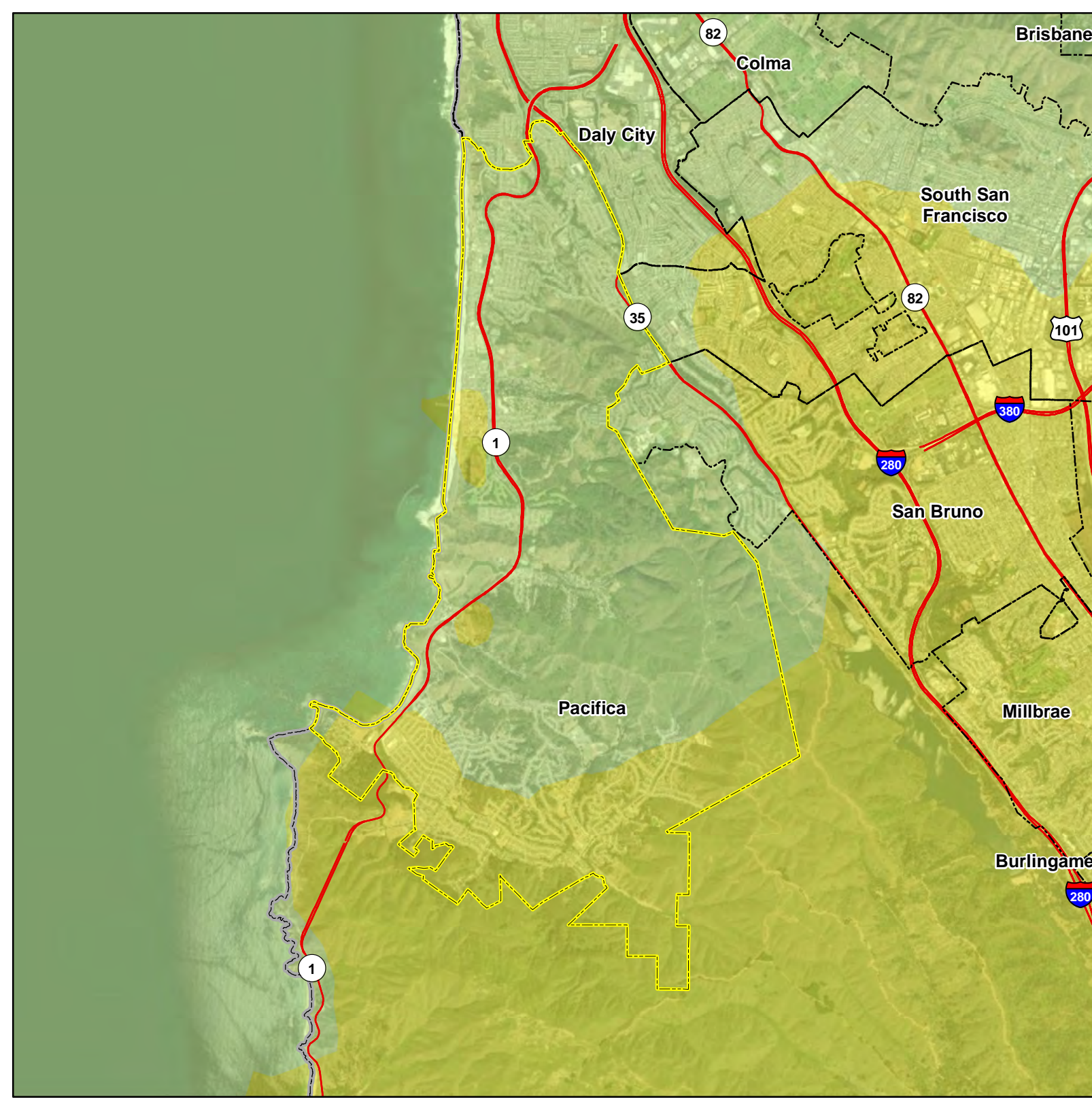
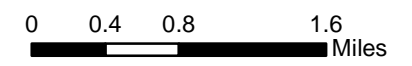
## Monte Vista Shannon M7.14 Earthquake Scenario

### Mercalli Intensity Scale

- VI (Strong/Light)
- VII (Very Strong/Moderate)
- Selected City
- Incorporated Cities
- County Boundary
- Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS





# Pacifica

## 100-Year Probabilistic Earthquake Scenario

### Mercalli Intensity Scale

 VII (Very Strong/Moderate)

 Selected City

 Incorporated Cities


 County Boundary

 Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS




0 0.4 0.8 1.6  
 Miles



# Pacifica

## San Andreas Peninsula M7.38 Earthquake Scenario

### Mercalli Intensity Scale

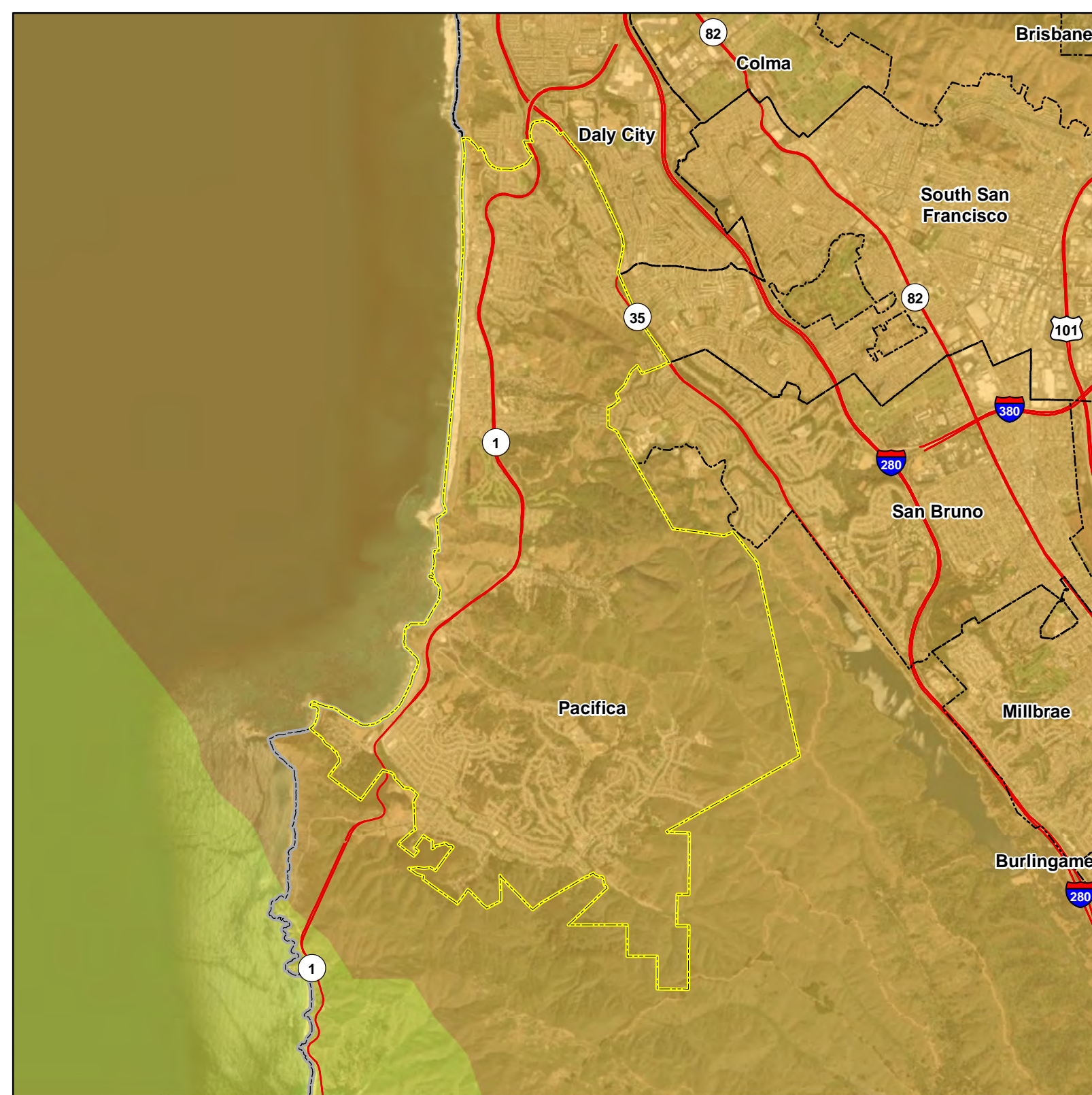
-  VII (Very Strong/Moderate)
-  VIII (Severe/Moderate-Heavy)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS



0 0.4 0.8 1.6  
Miles



# Pacifica

## San Gregorio North M7.44 Earthquake Scenario

### Mercalli Intensity Scale

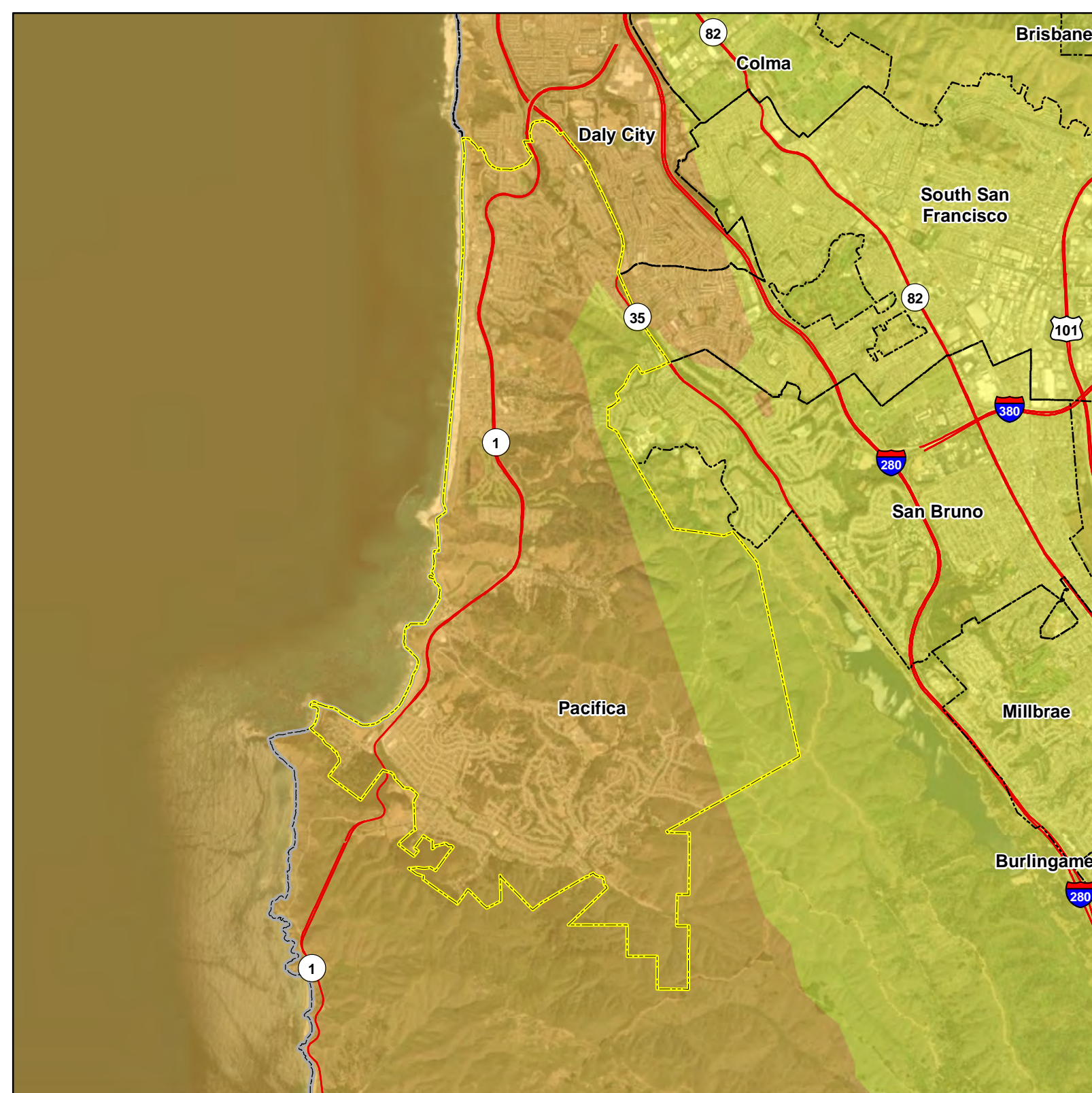
-  VII (Very Strong/Moderate)
-  VIII (Severe/Moderate-Heavy)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Intensity scale described as:  
(perceived shaking / potential damage)

Data Sources: ESRI Basemap,  
San Mateo Co., USGS









0 0.4 0.8 1.6  
Miles



# Pacifica

## FEMA Flood Hazard Areas

-  1% Annual Chance Flood (100-Year)
-  0.2% Annual Chance Flood (500-Year)
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap, San Mateo Co., FEMA

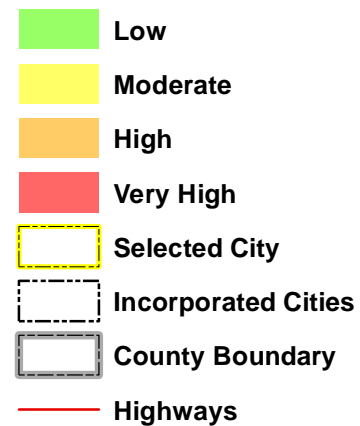


0 0.4 0.8 1.6 Miles

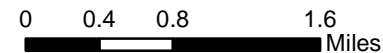


# Pacifica

## Susceptibility to Deep-Seated Landslides








Data Sources: ESRI Basemap, San Mateo Co., CGS



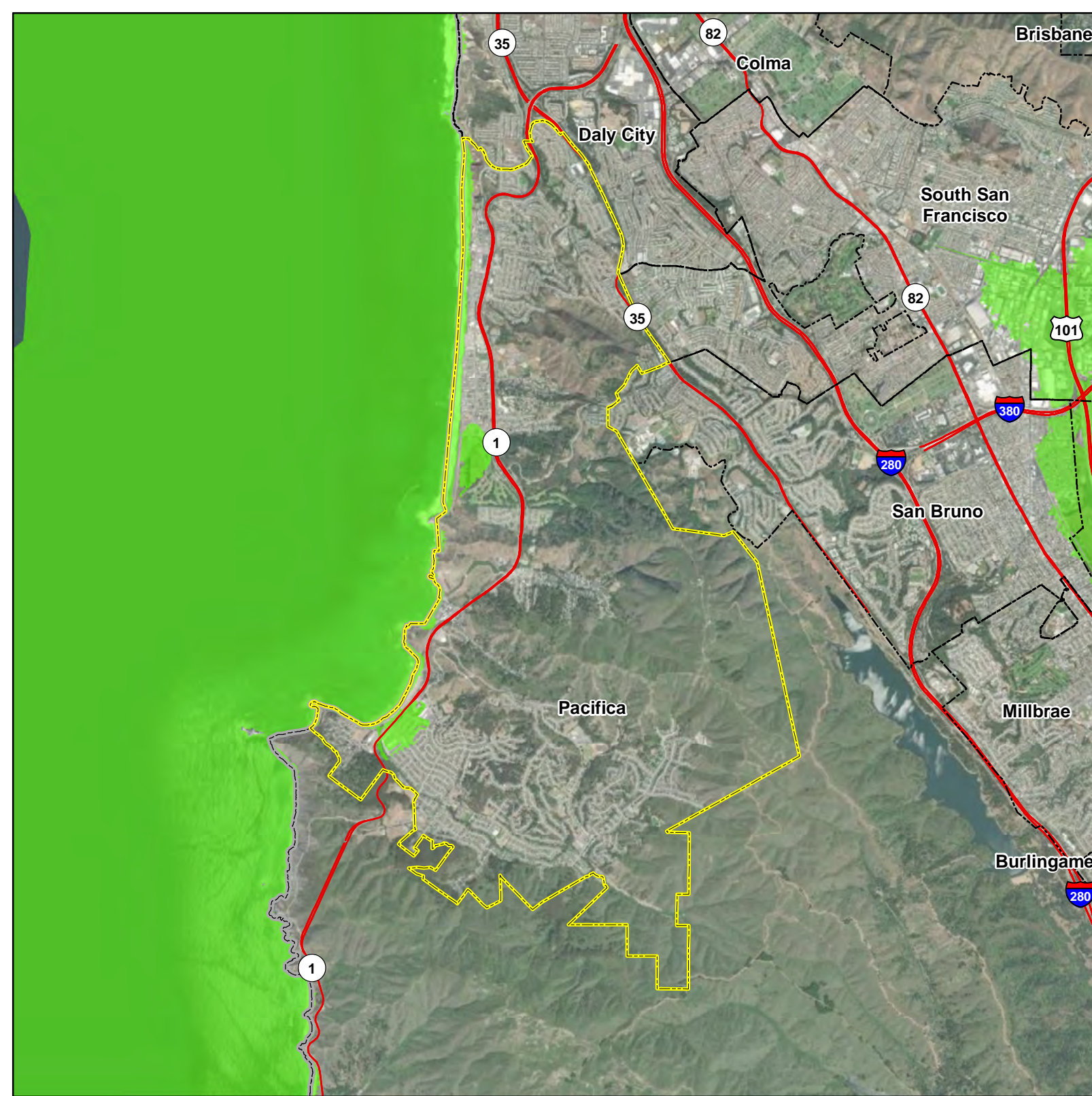
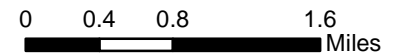
# Pacifica

## Sea Level Rise

-  Inundation Area
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways






Inundation areas are a combination of Our Coast Our Future 200cm (6.6 feet) of SLR with 100-year storm for the Pacific Ocean coastline, and Adapting to Rising Tides 108 inches (9 feet) of SLR for the San Francisco Bay coastline.

Data Sources: ESRI Basemap, San Mateo Co., ART, OCOF



# Pacifica

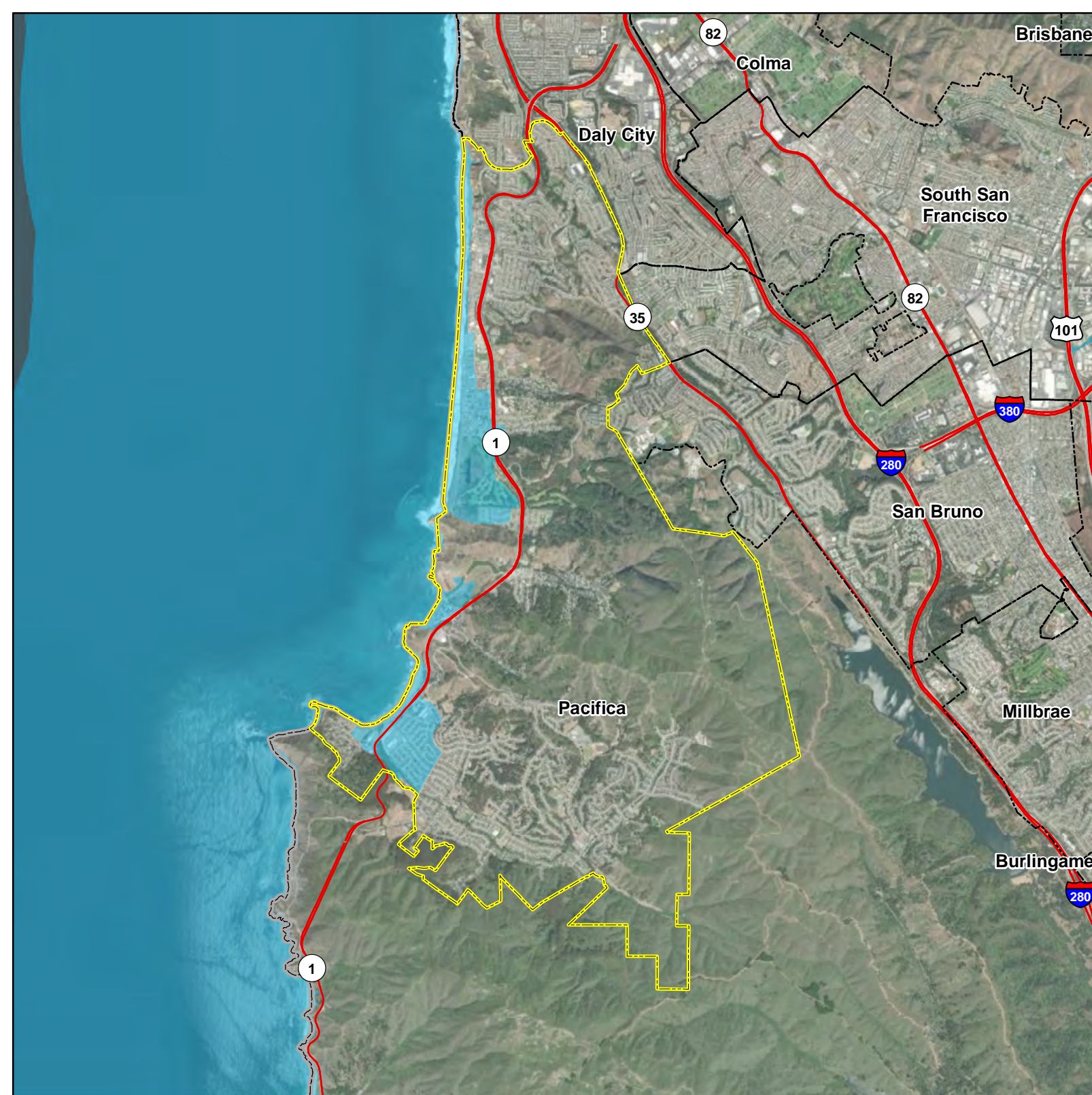
## Tsunami Hazard Areas

-  Hazard Areas
-  Selected City
-  Incorporated Cities
-  County Boundary
-  Highways

Data Sources: ESRI Basemap,  
San Mateo Co., CGS



0 0.4 0.8 1.6  
Miles



# Pacifica

## Wildfire Hazard Severity Zones

- Moderate
- High
- Very High
- Selected City
- Incorporated Cities
- County Boundary
- Highways

Data Sources: ESRI Basemap, San Mateo Co., CAL FIRE



0 0.4 0.8 1.6 Miles

