



San Mateo County

HAZARD MITIGATION PLAN

July 2016



VOLUME 2





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SECTION 1: ANNEX INTRODUCTION



Chapter 1.

Planning Partner Participation

1.1 Background

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

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

In the preparation of the San Mateo County Hazard Mitigation Plan, a Planning Partnership was formed to leverage resources and to meet requirements of the federal Disaster Mitigation Act of 2000 (DMA) for as many eligible local governments in San Mateo County as possible. The DMA defines a local government as follows: “Any county, municipality, city, town, township, public authority, school district, special district, intrastate district, council of governments (regardless of whether the council of governments is incorporated as a nonprofit corporation under State law), regional or interstate government entity, or agency or instrumentality of a local government; any Indian tribe or authorized tribal organization, or Alaska Native village or organization; and any rural community, unincorporated town or village, or other public entity.” There are two types of Planning Partners in this process, with distinct needs and capabilities:

- ❖ Incorporated municipalities (cities and the County)
- ❖ Special districts.

Figure 3-1 shows the special districts within San Mateo County.

1.2 The Planning Partnership

1.2.1 Initial Solicitation and Letters of Intent

The planning team solicited the participation of the County and all County-recognized special districts with junior taxing authority at the outset of this project. Two meetings were held on October 19, 2015 (via teleconference) and October 27, 2015 to identify potential stakeholders for this process.

A planning process kickoff meeting was held in Belmont on November 18, 2015 to solicit planning partners and inform potential partners of the benefits of participation in this effort. All eligible local governments within the planning area were invited to attend. Various agency and citizen stakeholders were also invited to this meeting. The goals of the meeting were as follows:

- ❖ Provide an overview of the Disaster Mitigation Act.



- ❖ Outline the San Mateo County plan update work plan.
- ❖ Describe the benefits of multi-jurisdictional planning.
- ❖ Solicit planning partners.
- ❖ Confirm a Steering Committee.

All interested local governments were provided with a list of planning partner expectations developed by the planning team and were informed of the obligations required for participation. Local governments wishing to join the planning effort were asked to provide the planning team with a “notice of intent to participate” that agreed to the planning partner expectations (see Volume 2, Appendix A) and designated a point of contact for their jurisdiction. In all, formal commitment was received from 29 planning partners by the planning team, and the San Mateo County Planning Partnership was formed. Figure 3-1 in Section 3 – Special Districts – shows the location of participating special districts. Maps for each participating city are provided in the individual annex for that city.

1.2.2 Planning Partner Expectations

The planning team developed the following list of planning partner expectations, which were confirmed at the kickoff meeting held on November 18, 2015:

- ❖ Each partner will provide a “Letter of Intent to Participate.”
- ❖ Each partner will support and participate in the selection and function of the Steering Committee overseeing the development of the update. Support includes allowing this body to make decisions regarding plan development and scope on behalf of the partnership.
- ❖ Each partner will provide support for the public involvement strategy developed by the Steering Committee in the form of mailing lists, possible meeting space, and media outreach such as newsletters, newspapers or direct-mailed brochures.
- ❖ Each partner will participate in plan update development activities such as:
 - Steering Committee meetings
 - Public meetings or open houses
 - Workshops and planning partner training sessions
 - Public review and comment periods prior to adoption.

Attendance will be tracked at such activities, and attendance records will be used to track and document participation for each planning partner. No minimum level of participation will be established, but each planning partner should attempt to attend all such activities.

- ❖ Each partner will be expected to perform a “consistency review” of all technical studies, plans, and ordinances specific to hazards identified within the planning area to determine the existence of plans, studies or ordinances not consistent with the equivalent documents reviewed in preparation of the County plan. For example: if a planning partner has a floodplain management plan that makes recommendations that are not consistent with any of the County’s basin plans, that plan will need to be reviewed for probable incorporation into the plan for the partner’s area.





- ❖ Each partner will be expected to review the risk assessment and identify hazards and vulnerabilities specific to its jurisdiction. Contract resources will provide jurisdiction-specific mapping and technical consultation to aid in this task, but the determination of risk and vulnerability will be up to each partner.
- ❖ Each partner will be expected to review the mitigation recommendations chosen for the overall county and determine if they will meet the needs of its jurisdiction. Projects within each jurisdiction consistent with the overall plan recommendations will need to be identified, prioritized and reviewed to determine their benefits and costs.
- ❖ Each partner will be required to create its own action plan that identifies each project, who will oversee the task, how it will be financed and when it is estimated to occur.
- ❖ Each partner will be required to formally adopt the plan.

It should be noted that by adopting this plan, each planning partner also agrees to the plan implementation and maintenance protocol established in Volume 1.

1.2.3 Linkage Procedures

Eligible local jurisdictions that did not participate in development of this hazard mitigation plan update may comply with DMA requirements by linking to this plan following the procedures outlined in Volume 2, Appendix D.

1.3 Annex Preparation Process

1.3.1 Templates

Templates were created to help the Planning Partners prepare their jurisdiction-specific annexes. Since special districts operate differently from incorporated municipalities, separate templates were created for the two types of jurisdictions. The templates were created so that all criteria of Section 201.6 of 44CFR would be met, based on the partners' capabilities and mode of operation. Each partner was asked to participate in a technical assistance workshop during which key elements of the template were completed by a designated point of contact for each partner and a member of the planning team. The templates were set up to lead each partner through a series of steps that would generate the DMA-required elements that are specific for each partner. The templates and their instructions can be found in Appendix E to this volume of the Hazard Mitigation Plan.

1.3.2 Workshop

A workshop was held on April 20th for Planning Partners to learn about the templates and the overall planning process. Topics included the following:

- ❖ DMA
- ❖ San Mateo County plan background
- ❖ The templates
- ❖ Risk ranking
- ❖ Developing your action plan
- ❖ Cost/benefit review



Separate sessions were held for special districts and municipalities, in order to better address each type of partner’s needs. The sessions provided technical assistance and an overview of the template completion process. In the risk-ranking exercise, planning partners were provided an overview of the methodology associated with establishing jurisdiction-specific risk rankings based on the impact on its population or facilities. Cities based this ranking on probability of occurrence and the potential impact on people, property and the economy. Special 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. The methodology followed that used for the county-wide risk ranking presented in Volume 1. A principal objective of this exercise was to familiarize the partnership with how to use the risk assessment as a tool to support other planning and hazard mitigation processes. Tools utilized during these sessions included the following:

- ❖ The San Mateo County risk assessment results
- ❖ Hazard mitigation catalogs
- ❖ Federal funding and technical assistance catalogs
- ❖ Hazard information for presidentially declared disasters for San Mateo County
- ❖ Aggregate county data for non-declared hazard events from the Spatial Hazard Events and Losses Database (SHELDUS)
- ❖ Copies of partners’ prior annexes (Association of Bay Area Governments (ABAG), if applicable)

Seven participating jurisdictions elected to hold an individual jurisdictional workshop that focused on the above bullets with stakeholders from various departments:

- ❖ Unincorporated San Mateo County
- ❖ Colma
- ❖ East Palo Alto
- ❖ Redwood City
- ❖ San Carlos
- ❖ Colma Fire Protection District
- ❖ San Mateo County Community College
- ❖ Woodside Fire Protection District

These jurisdictions elected to hold individual workshops because they established jurisdictional subcommittees comprised of planners, building officials, public works personnel, public information officers, and other stakeholders to fulfill the planning partner expectations. Table 1-1 illustrates the additional effort undertaken by these jurisdictions in fulfilling the planning partner expectations beyond minimum requirements.

TABLE 1-1. JURISDICTION SUBCOMMITTEE MEETING DATES

Jurisdiction	Jurisdictional Lead	Date	
Unincorporated San Mateo County	Roberto Bartoli	February 3, 2016	<ul style="list-style-type: none"> ▪ Jurisdictional overview review ▪ Capability assessment review
		March 2, 2016	<ul style="list-style-type: none"> ▪ Overview of Public Involvement Strategy ▪ County SWOO





TABLE 1-1. JURISDICTION SUBCOMMITTEE MEETING DATES

Jurisdiction	Jurisdictional Lead	Date	
		April 6, 2016	<ul style="list-style-type: none"> Review of Risk Assessment and Plan Maintenance
		May 3, 2016	<ul style="list-style-type: none"> Discussion of Action Plan Development
		June 8, 2016	<ul style="list-style-type: none"> Review of Draft Annex Plan approval process discussion
Colma	Michael Laughlin	March 18, 2016	<ul style="list-style-type: none"> Jurisdictional overview review Capability assessment review
		April 26, 2016	<ul style="list-style-type: none"> Workshop items
Redwood City	David Pucci	February 29, 2016	<ul style="list-style-type: none"> Jurisdictional overview review
		April 13, 2016	<ul style="list-style-type: none"> Capability assessment review
		May 18, 2016	<ul style="list-style-type: none"> Workshop items
San Carlos	Tara Peterson	March 18, 2016	<ul style="list-style-type: none"> Jurisdictional overview review Capability assessment review
		May 2, 2016	<ul style="list-style-type: none"> Workshop items
Colma Fire Protection District	Geoff Balton	May 2, 2016	<ul style="list-style-type: none"> Site walkthrough Jurisdictional overview review Capability assessment review Workshop items
San Mateo County Community College District	Joseph Fullerton	May 3, 2016	<ul style="list-style-type: none"> Jurisdictional overview review Capability assessment review Workshop items
Woodside Fire Protection District	Daniel Ghorso	May 2, 2016	<ul style="list-style-type: none"> Jurisdictional overview review Capability assessment review Workshop items

1.3.3 Prioritization

44CFR requires actions identified in the action plan to be prioritized (Section 201.c.3.iii). The planning team and steering committee developed a methodology for prioritizing the action plans that meets the needs of the partnership and the requirements of 44CFR. The actions were prioritized according to the following criteria:

- ❖ **High Priority**—Project meets multiple plan objectives, benefits exceed cost, funding is secured under existing programs, or is grant eligible, and project can be completed in 1 to 5 years (i.e., short term project) once funded.
- ❖ **Medium Priority**—Project meets at least 1 plan objective, benefits exceed costs, requires special funding authorization under existing programs, grant eligibility is questionable, and project can be completed in 1 to 5 years once funded.
- ❖ **Low Priority**—Project will mitigate the risk of a hazard, benefits exceed costs, funding has not been secured, project is not grant eligible, and time line for completion is long term (5 to 10 years).



These priority definitions are dynamic and can change from one category to another based on changes to a parameter such as availability of funding. For example, a project might be assigned a medium priority because of the uncertainty of a funding source, but be changed to high once a funding source has been identified. The prioritization schedule for this plan will be reviewed and updated as needed annually through the plan maintenance strategy.

1.3.4 Benefit/Cost Review

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

- ❖ Cost ratings:
 - **High**—Existing funding levels are not adequate to cover the costs of the proposed action; implementation would require an increase in 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 existing, ongoing program.
- ❖ Benefit ratings:
 - **High**—The action will have an immediate impact on the reduction of risk exposure to life and property.
 - **Medium**—The action will have a long-term impact on the reduction of risk exposure to life and property or will provide an immediate reduction in the risk exposure to property.
 - **Low**—Long-term benefits of the action are difficult to quantify in the short term.

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

It should be noted that for many of the strategies identified in this action plan, funding might be sought under FEMA’s HMGP or PDM programs. Both of these programs require detailed benefit/cost analysis as part of the application process. These analyses will be performed on projects at the time of application preparation. The FEMA benefit-cost model will be used to perform this review. For projects not seeking financial assistance from grant programs that require this sort of analysis, the Partners reserve the right to define “benefits” according to parameters that meet their needs and the goals and objectives of this plan.





1.4 Compatibility with Previous Regional Hazard Plan

The jurisdictions listed in Table 1-2 previously participated in the Association of Bay Area Governments (ABAG) regional hazard mitigation planning effort. The table lists the dates that each of these jurisdictions adopted its annex under the ABAG plan.

TABLE 1-2. ABAG PARTICIPANTS - 2010

Jurisdiction	Jurisdiction Adoption Date (2010 ABAG)
San Mateo County	March 19, 2012
Atherton	August 17, 2011
Brisbane	March 5, 2012
Burlingame	August 15, 2011
Daly City	March 12, 2011
East Palo Alto	February 21, 2012
Foster City*	November 21, 2011
Half Moon Bay	July 19, 2011
Hillsborough	July 11, 2011
Menlo Park	October 18, 2011
Millbrae	March 13, 2012
Pacifica	March 12, 2012
Portola Valley	May 11, 2011
San Bruno	March 13, 2012
San Mateo, City of*	November 21, 2011

**Did not participate in the 2016 San Mateo County Hazard Mitigation Plan.*

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

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

During the San Mateo County Hazard Mitigation Plan development process, the Steering Committee reviewed the ABAG strategies and concluded that the previous strategy did not adequately provide measurable actions for successful implementation. The Steering Committee reviewed the previous strategy to determine which are relevant to the intent and structure of the San Mateo County planning effort to be carried forwards into the 2016 plan. The results of this review are located in Volume 1, Appendix E. Each adopted ABAG strategy was identified with one of the following implementation status findings:

- ❖ ABAG strategy has been removed or is no longer feasible due to a lack of clarity, or non-mitigation related implementation of such action.
- ❖ ABAG strategy has been carried over to the current hazard mitigation plan as an alternative action identified in Volume I, Section 3, Chapter 2 (this applies to **bold** alternative actions).



- ❖ ABAG strategy is considered to be addressed by the goals and objectives of the current hazard mitigation plan.
- ❖ ABAG Strategy was eliminated due to duplication (this applies to all strategies that are not listed in the implementation status table of the current plan located in Volume 1, Appendix E).

1.4.1 The City of Redwood City 2010 Hazard Mitigation Plan

The City of Redwood City conducted a hazard mitigation planning process outside of the 2010 ABAG initiative. As such, their jurisdictional annex reflects the status of previous mitigation actions, including action status and carryover, where appropriate.

1.5 Final Coverage under this Plan

Of the 29 committed planning partners, all fully met the participation requirements specified by the Steering Committee. Overall, 28 partners attended the workshop or held their own jurisdictional workshop, 1 partner was individually counseled by members of the Planning Team and Steering Committee, and all subsequently submitted completed templates. Therefore, all participating jurisdictions are included in this volume and will seek DMA compliance under this plan. Each planning partner identified their mitigation strategy and general actions (G-#) were added to round out the action item plan. The remaining jurisdictions will need to follow the linkage procedures described in Appendix D of this volume. Table 1-3 lists the jurisdictions that submitted letters of intent and their ultimate status in this plan.

TABLE 1-3. JURISDICTIONAL PARTNER PARTICIPATION STATUS

Jurisdiction	Letter of Intent Date	Attended Workshop?	Completed Template?	Will be covered by this plan?
Unincorporated San Mateo County	December 21, 2015	Yes	Yes	Yes
Atherton	December 15, 2015	Yes	Yes	Yes
Belmont	December 2, 2015	Yes	Yes	Yes
Brisbane	November 5, 2015	Yes	Yes	Yes
Burlingame	December 1, 2015	Yes	Yes	Yes
Colma	November 20, 2015	Yes ^a	Yes	Yes
Daly City	December 2, 2015	Yes	Yes	Yes
East Palo Alto	November 18, 2015	Yes	Yes	Yes
Half Moon Bay	December 1, 2015	Yes	Yes	Yes
Hillsborough	November 3, 2015	Yes	Yes	Yes
Menlo Park	December 9, 2015	Yes	Yes	Yes
Millbrae	December 16, 2015	Yes	Yes	Yes
Pacifica	November 5, 2015	Yes	Yes	Yes
Portola Valley	November 25, 2015	No ^b	Yes	Yes
Redwood City	December 7, 2015	Yes ^a	Yes	Yes
San Bruno	December 1, 2015	Yes	Yes	Yes
San Carlos	December 2, 2015	Yes ^a	Yes	Yes



TABLE 1-3. JURISDICTIONAL PARTNER PARTICIPATION STATUS

Jurisdiction	Letter of Intent Date	Attended Workshop?	Completed Template?	Will be covered by this plan?
South San Francisco	January 4, 2016	Yes	Yes	Yes
Woodside	November 9, 2015	Yes	Yes	Yes
Belmont Fire Protection District	November 18, 2015	Yes	Yes	Yes
Colma Fire Protection District	December 7, 2015	Yes ^a	Yes	Yes
Highlands Recreation District	December 8, 2015	Yes	Yes	Yes
Jefferson Union High School District	November 20, 2015	Yes	Yes	Yes
Pacifica School District	December 7, 2015	Yes	Yes	Yes
San Mateo Community College District	January 13, 2016	Yes ^a	Yes	Yes
Westborough Water District	November 30, 2015	Yes	Yes	Yes
Woodside Fire Protection District	December 17, 2015	Yes ^a	Yes	Yes
North Coast County Water District	December 1, 2015	Yes	Yes	Yes
Mid-Peninsula Water District	December 4, 2015	Yes	Yes	Yes

^a Conducted jurisdiction-specific workshop

^b Counseled by members of the Steering Committee and Planning Team in lieu of workshop attendance

1.6 California Environmental Quality Act

The County and the unincorporated areas have sought exemption from CEQA for the Hazard Mitigation Plan based on four different sections of the CEQA Guidelines:

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

Planning partners may seek exemption at their discretion.



SECTION 2: ANNEXES FOR MUNICIPAL PARTNERS



Chapter 1.

County of San Mateo (Unincorporated Area)

1.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

Rob Bartoli, Planner II
455 County Center
Redwood City, CA 94063
Telephone: 650-363-1857
e-mail Address: rbartoli@smcgov.org

Alternate Point of Contact

Brian Molver, OES District Coordinator
555 County Center
Redwood City, CA 94063
Telephone: 650-363-4448
e-mail Address: bmolver@smcgov.org

1.2 Jurisdiction Profile

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

- ❖ **Date of Incorporation**—April 19, 1856
- ❖ **Current Population**—64,814 for unincorporated area. Unincorporated population comprises 8% of County population
- ❖ **Population Growth**—9.5 % growth in population from 2000 to 2010 for unincorporated area
- ❖ **Location and Description:**
 - **Whole County:** San Mateo County, situated along the Central California coastline, encompasses the major portion of the San Francisco Peninsula. The County covers approximately 554 square miles, with land accounting for approximately 448 square miles and inland waters, and San Francisco Bay tidal areas accounting for the remainder. The County is roughly 42 miles in length and varies from seven to twenty miles in width. Approximately 55 miles of the County's western border is Pacific shoreline, and roughly 34 miles of the eastern border is Bay shoreline. The County is bounded on the north by the City and County of San Francisco and on the south and southeast by Santa Cruz and Santa Clara Counties.
 - **Unincorporated Area:** The County's unincorporated area includes urban pockets east of Route 280 and most of the rural area south and west of Route 280.¹ The unincorporated County consists of approximately 309 square miles (68% of total County area), and there is wide variation in the size, location, and economic and social characteristics of the various unincorporated areas. General descriptions of the main unincorporated areas are provided below.

¹ San Mateo County General Plan, 1986



Urban Bayside Communities

North Fair Oaks: The largest unincorporated community is North Fair Oaks, which is located within Redwood City's sphere of influence. This area is fully urbanized, with moderate to high densities of development. North Fair Oaks has over 15,000 residents and more than 4,000 housing units. North Fair Oaks has a relatively high concentration of low and moderate-income households, as well as a wide variety of housing types and a variety of land uses, including significant commercial and industrial uses.

Colma: Unincorporated Colma is a small urbanized pocket in the northern part of the County, adjoining incorporated Colma and Daly City. Colma has seen significant amounts of relatively high-density residential development over the past decade, with several multifamily mixed-income apartment and condominium projects, a senior housing project, and several other projects, all located around the redeveloped Colma BART station.

Emerald Lake Hills: Emerald Lake Hills is a relatively low-density suburban area of the County, characterized primarily by single-family homes. While Emerald Lake Hills has a large amount of development, its primarily residential nature and lack of commercial and other uses distinguishes it from the more highly urbanized areas of the unincorporated County, such as North Fair Oaks.

Other unincorporated urban bayside communities include Burlingame Hills, Devonshire, Broadmoor, the San Mateo Highlands and Ladera. These communities are primarily small pockets of unincorporated jurisdiction, largely characterized by single-family residential development, although Devonshire and Broadmoor both have areas of higher development density and mixed uses.

Urban Coastal Communities

There are several unincorporated coastal communities north of Half Moon Bay, within the urban area of the County's urban/rural boundary. These communities include Montara, Moss Beach, El Granada, Princeton and Miramar. These communities are an exception to the primarily rural nature of the coastal unincorporated areas, and have housing and development issues, including infrastructure constraints and other issues unique to the coast.

Rural Areas and Communities

The vast majority of the unincorporated County consists of the Rural Midcoast, Rural Southcoast, and rural Skyline areas. In contrast to the urbanized communities, the rural areas tend to be sparsely developed, with very low housing densities on relatively large lots. These areas include La Honda, Pescadero, San Gregorio, Kings Mountain, and the remaining large, primarily undeveloped areas of the Midcoast and Southcoast. The rural South Coast has relatively few, widely dispersed households. These areas are mainly utilized for agricultural uses or open space. The rural portions



of the Midcoast area are mainly characterized by large, minimally developed areas with large lots and low housing densities, although there are a few small higher density areas.²

- The following is a list of the unincorporated communities in San Mateo County:

<ul style="list-style-type: none">▪ Broadmoor▪ Burlingame Hills▪ Clipper Ridge▪ Country Club▪ Dearborn Park▪ Devonshire▪ El Granada▪ Emerald Lake Hills▪ Harbor Industrial Area▪ Kensington Square▪ La Honda▪ Ladera▪ Loma Mar▪ Los Trancos Woods▪ Menlo Oaks▪ Miramar	<ul style="list-style-type: none">▪ Montara▪ Moss Beach▪ North Fair Oaks▪ Palomar Park▪ Pescadero▪ Princeton-by-the-Sea▪ San Gregorio▪ San Mateo Highlands▪ Seal Cove▪ Sequoia Tract▪ Sky Londa▪ South Skyline▪ Unincorporated Colma▪ Vista Verde▪ Weekend Acres▪ West Menlo Park³
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❖ **Brief History:**

- **Whole County:** San Mateo County was formed in 1856, after the establishment of San Francisco County. San Mateo County later annexed part of northern Santa Cruz County in 1868. Redwood City, the county seat, incorporated in 1867. The next to incorporate was the City of San Mateo in 1894. The outbreak of World War II fueled a new wave of growth along the Peninsula. After the war, thousands of new homes were built as the county's population swelled from 115,000 in 1940 to 235,000 in 1950. The county's population grew to 556,000 by 1970, a gain of 112,000 during the 1960s. The County continued to grow in the 1980s and 1990s due to the development of computer software, internet, gaming, and biotechnology companies.
- **Unincorporated Area:** The vast majority of unincorporated area within the County is located in rural areas. These areas developed slowly due to limited accessibility and difficult terrain. These areas never incorporated because most rural lands are located far from city boundaries, making the provision of urban services physically difficult and economically infeasible. For the few urban unincorporated areas, cities have sometimes chosen not to annex them because the type and standard of development within that area may have been below city standards or otherwise incompatible. Because of the costs associated with bringing urban unincorporated areas up to City requirements, many cities were and have

² San Mateo County Housing Element, December 2015

³ San Mateo County GIS



continued to remain hesitant about adding these lands. Some property owners also prefer to remain in unincorporated areas due to lower property taxes.⁴

- ❖ **Climate**—Dry, mild summers and moist, cool winters characterize San Mateo County's overall climate. Temperatures are strongly influenced by large saltwater bodies on the east and west and the Santa Cruz Mountains. This combination of features has resulted in a variety of microclimates throughout the County with hill and ridgetop areas, valley floors and coastal areas each experiencing different temperatures and precipitation patterns.
 - The Coastside area experiences a marine climate, characterized by cool, foggy summers and relatively wet winters. Fog, the result of condensation over the ocean near the coast, provides moisture and cool air for the coastal terraces. These elements are largely responsible for the emergence of the Coastside region as an agricultural area, featuring a number of specialty crops. Bayside climates are generally warm and sunny, particularly in the summer months when hot air from the valleys moving to the east warms the prevailing cool ocean breezes.
 - The majority of annual precipitation in San Mateo County occurs from December through March. During this wet season, precipitation levels average from 3.00 to 4.5 inches per month. One of the key influences upon precipitation is elevation. The Bayside generally receives less precipitation than the same elevation on the Coastside, because the Santa Cruz Mountain Range acts as a rain shield causing moisture-laden air moving in from the Coastside to condense and deposit much of its moisture in the form of rain or fog as it reaches the higher, colder mountains.
- ❖ **Governing Body Format**—San Mateo County is governed by a five member Board of Supervisors. Each member represents a geographic district covering both incorporated and unincorporated areas in the County. Board members represent one of five districts of roughly equal population within the county and are elected only by voters in their own district. Most of the County's unincorporated areas fall under District 3, which contains the majority of the western and southern lands in the County. San Mateo County established new boundaries for these districts in November 2013, and the boundaries took effect in December 2013. County boundary areas can be seen on the County's Board of Supervisor website (<http://bos.smcgov.org/supervisorial-districts>).⁵
- ❖ **Development Trends**—Housing production in the unincorporated area of the County has remained at relatively stable but very slow rates over the past few years, after declining from much higher levels in 2007 and 2008. The majority of development has occurred in the urbanized unincorporated areas on the Bayside, such as Emerald Lake Hills, West Menlo Park, and North Fair Oaks or the unincorporated mid-coast, consisting of El Granada, Montara, and Moss Beach. While there has

⁴ San Mateo County General Plan, 1986

⁵ <http://bos.smcgov.org/supervisorial-districts>





been an uptick in commercial development in the last few years, the majority of this development is occurring in the incorporated areas of the County.

1.3 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 1-1. An assessment of fiscal capabilities is presented in Table 1-2. An assessment of administrative and technical capabilities is presented in Table 1-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 1-4. Classifications under various community mitigation programs are presented in Table 1-5. An assessment of education and outreach capabilities is presented in Table 1-6.

TABLE 1-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code <i>Comment: San Mateo County provides uniform administration and enforcement of the International Building Code, Uniform Housing Code, Uniform Dwelling Construction Code, Uniform Code for Abatement of Dangerous Buildings, Uniform Building Security Code, Uniform Sign Code, Uniform Plumbing Code, Uniform Swimming Pool-Spa and Hot Tub Code, National Electrical Code, and supplements and appendices thereto. The San Mateo County Building Regulations were last updated in January 2014.</i>	Yes	No	Yes
Zoning Code <i>Comment: San Mateo County Zoning Regulations (Parts 1 and 5, Sections 6100 through 6980 and Sections 7800 through 7880) were last updated in January 2016.</i>	Yes	No	No
Subdivisions <i>Comment: San Mateo County Subdivision Regulations (Division VI, Part 2, Chapters 1-11) were last updated in January 1992.</i>	Yes	No	No
Stormwater Management <i>Comment: Stormwater Management and Discharge Regulations were last updated in September 2008, Chapter 4.100</i>	Yes	Yes	Yes
Post-Disaster Recovery <i>Comment: The County has authorities by way of battery of emergency ordinances for proclaimed events. The capability is Emergency Operations Center action planning to support the Area Command intelligence.</i>	Yes	No	No
Real Estate Disclosure <i>Comment: CA. State Civil Code 1102 requires full disclosure on natural hazard exposure of the sale/re-sale of any and all real property.</i>	No	No	No
Growth Management <i>Comment: Chapters 7 through 9 (on General Land Use, Urban Land Use, and Rural Land Use) of the San Mateo County General Plan contain information regarding growth management in San Mateo County. The General Plan was last updated and adopted in November 1986.</i>	Yes	No	Yes
Site Plan Review <i>Comment: The County's Development Review Criteria is part of the Zoning Regulations, last updated in January 2016 and found in Chapter 36A.2.</i>	Yes	No	No



TABLE 1-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Environmental Protection	Yes	No	Yes
Comment: County Planning Department reviews projects regarding their impact on the environment through the regulations of the California Environmental Quality Act. County Health System's Environmental Health Division handles a wide variety of services, including hazardous materials plans, toxic waste, well water quality, and septic systems.			
Flood Damage Prevention	Yes	No	No
Comment: The County's Flood Hazard Areas Code is part of the Zoning Regulations, last updated in January 2016 and found in Chapter 35.5.			
Emergency Management	Yes	Yes	Yes
Comment: The San Mateo Operational Area Emergency Services Council is comprised of all local governments within the geographic area of the County, special districts, unincorporated areas, and participating non-governmental entities. A Joint Powers Agreement was adopted on October 17, 2014.			
Climate Change	Yes	No	Yes
Comment: SB 97 requires that California Environmental Quality Act (CEQA) Guidelines address greenhouse gas emissions. Other state policies include AB 32 and SB 375 and regulations of the Climate Action Plan.			
Other	Yes (Partial)	No	Yes (Partial)
Comment: Chapter 8, Division VII (Regulations for Excavating, Grading, Filling, and Clearing on Lands in Unincorporated San Mateo County), 2005 San Mateo County Drainage Policy, n.d. Chapter 36 of Zoning Regulations (Resource Management-Coastal Zone), January 2016 The County references the Water Efficient Landscape Ordinance revisions in the California Code of Regulations.			
General or Comprehensive Plan	Yes	No	Yes
Is the plan equipped to provide linkage to this mitigation plan? Yes. The County General Plan Safety Element notes hazards of potential impact to the County, such as Geotechnical Hazards, Fire Hazards, and Flooding Hazards.			
Comment: The General Plan was last updated by San Mateo County in November 1986.			
Capital Improvement Plan	Yes	No	No
What types of capital facilities does the plan address? The CIP includes one-time outlay of funds for construction, structural improvements, and non-structural renovations to County-owned facilities. It also includes major construction, renovation or rehabilitation of county infrastructure assets such as roads, utilities, and airports, which are budgeted separately in the Department of Public Works budget. The County also utilizes a five-year Facilities Capital Plan, which serves as a planning tool to track all capital projects and their estimated costs, giving policy makers an instrument to schedule future projects and anticipate potential financial challenges			
How often is the plan updated? The plan is updated every two years.			
Comment:			
Floodplain or Watershed Plan	Yes	Yes	No
Comment: The Water Pollution Prevention Program maintains multiple watershed studies on their website. The studies are published by different entities, including the County, and all plans listed have been published within the past 15 years.			



TABLE 1-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
<i>San Gregorio Watershed Management Plan, June 2010; Solutions to Flooding on Pescadero Creek Road, October 2014; Midcoast Groundwater Study Phase III, June 2010; and other environmental plans are maintained on the San Mateo County Resource Conservation District Website.</i>			
Stormwater Plan	Yes	Yes	Yes
Comment: <i>The Stormwater Enforcement Response Plan for the Municipal Stormwater Program was last updated by the Planning and Building Department and Department of Public Works in April 2010.</i>			
Habitat Conservation Plan	Yes	No	No
Comment: <i>The San Bruno Mountain Habitat Conservation Plan was last updated by the Parks Department in 2015.</i>			
Economic Development Plan	Yes	Yes	No
Comment: <i>SAMCEDA developed a report on “Trends Affecting Workforce Development in San Mateo County and the San Francisco Peninsula” in May 2014.</i>			
Shoreline Management Plan	Yes	No	No
Comment: <i>San Mateo County updated its Local Coastal Program Policies (LCP) in 2013.</i>			
Community Wildfire Protection Plan	No	Yes	No
Comment: <i>CAL Fire administers both Vegetation Management Programs and Community Wildfire Protection Plans. This includes mapping Fire Hazards Severity Zones, enforcing defensible spaces laws, and enforcing building code requirements in areas with wildland-urban interface and in Fire Hazards Severity Zones,</i>			
Forest Management Plan	No	Yes	No
Comment: <i>CAL Fire administers the California Forest Improvement Program and the Forest Practice Act.</i>			
Climate Action Plan	Yes	No	Yes
Comment: <i>The San Mateo County Energy Efficient Climate Action Plan was developed in June 2013. SB 97 requires California Environmental Quality Act (CEQA) Guidelines to address greenhouse gas emissions. Other state policies include AB 32 and SB 375 and regulations of the Climate Action Plan.</i>			
Other	No	No	No
Comment:			
Comprehensive Emergency Management Plan	Yes	No	Yes
Comment: <i>The County Emergency Operations Plan was last updated in May 2015.</i>			
Threat & Hazard Identification & Risk Assessment	Yes	No	No
Comment: <i>The County Sheriff’s Office last updated the County of San Mateo Hazard Vulnerability Assessment in January 2015.</i>			
Post-Disaster Recovery Plan	Yes	No	No
Comment: <i>While the County does not have a standalone plan, within the San Mateo County Emergency Operations Plan from 2015, there is a section of the plan that discusses the post-disaster recovery for the County.</i>			
Continuity of Operations Plan	No	No	No
Comment: <i>While the County does not have a standalone plan, within the San Mateo County Emergency Operations Plan from 2015, there is a section of the plan that discusses the Continuity of Operations for the County. A Continuity of Operations Plan is currently being developed by the County.</i>			
Public Health Plan	Yes	No	No
Comment: <i>Healthy San Mateo 2010, 2010 Building Health into San Mateo County Cities, Winter 2010</i>			





TABLE 1-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
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Maintaining the Health of an Aging San Mateo County, Fall 2010

Strategies for Improving Food and Physical Activity Environments in San Mateo County, Spring 2010





TABLE 1-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes, Sewer
Incur Debt through General Obligation Bonds	No
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, State Homeland Security Grant, California Health Benefit Exchange—Covered California Navigator Grant, State Emergency Solutions Grant
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes, Special District Funds

TABLE 1-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	County Planning and Building
Engineers or professionals trained in building or infrastructure construction practices	Yes	County Planning and Building, County Public Works
Planners or engineers with an understanding of natural hazards	Yes	County Planning and Building, County Public Works
Staff with training in benefit/cost analysis	Yes	County Managers Office, County Controllers Office
Surveyors	Yes	Public Works Surveying Unit
Staff capable of making substantial damage estimates	Yes	County Planning and Building, County Public Works
Personnel skilled or trained in GIS applications	Yes	Information Services—GIS
Scientist familiar with natural hazards in local area	Yes	County Public Works has biologists on staff and if needed, may contract with consulting firms
Emergency manager	Yes	San Mateo County Sheriff's Office
Grant writers	Yes	San Mateo County Sheriff's Office

TABLE 1-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	07/05/1984
When did the Flood Insurance Rate maps become effective?	07/16/15
What local department is responsible for floodplain management?	County Planning and Building





TABLE 1-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
Who is your floodplain administrator? (department/position)	Director of Planning/Zoning Administrator
<ul style="list-style-type: none"> Is this a primary or auxiliary role? 	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	January 2016
<ul style="list-style-type: none"> Does your floodplain management program meet or exceed minimum requirements? 	The floodplain management program meets minimum requirements.
When was the most recent Community Assistance Visit or Community Assistance Contact?	7/10/2009
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes
<ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	Training in floodplain programs and policies.
Does your jurisdiction participate in the Community Rating System (CRS)?	Yes
<ul style="list-style-type: none"> If so, is your jurisdiction seeking to improve its CRS Classification? 	Yes
How many Flood Insurance policies are in force in your jurisdiction?	457
<ul style="list-style-type: none"> What is the insurance in force? What is the premium in force? 	\$133,178,200 \$575,964
How many total loss claims have been filed in your jurisdiction?	178
<ul style="list-style-type: none"> How many claims were closed without payment/are still open? What were the total payments for losses? 	55 \$2,293,176.01

TABLE 1-5. COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	Yes	9	10/1/10
Building Code Effectiveness Grading Schedule	Yes	2	7/9/15
Public Protection	Yes	4-10 ⁶	N/A
Storm Ready	Yes	N/A	2007
Tsunami Ready	Yes	N/A	2007
Firewise	No	N/A	N/A

⁶ Specific rating varies between locations in the unincorporated land of San Mateo County



TABLE 1-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes, San Mateo County Sheriff’s Office, County Managers Office
Do you have personnel skilled or trained in website development?	Yes, Information Services Department
Do you have hazard mitigation information available on your website?	Yes
<ul style="list-style-type: none"> ▪ If yes, please briefly describe. 	Flood Hazard Resources Page, County Sheriff’s Officer Disaster Preparedness Webpage, Water Pollution Prevention Program Website, County Health System Page
Do you utilize social media for hazard mitigation education and outreach?	Yes
<ul style="list-style-type: none"> ▪ If yes, please briefly describe. 	San Mateo County Main Facebook Page, San Mateo County Sheriff’s Office YouTube Page
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs already in place that could be used to communicate hazard-related information?	No
<ul style="list-style-type: none"> ▪ If yes, please briefly describe. 	
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> ▪ If yes, please briefly describe. 	SMCAAlert (San Mateo County Alert System)

1.4 Integration with Other Planning Initiatives

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

1.4.1 Existing Integration

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

- ❖ **County of San Mateo General Plan, Chapter 15**—Chapter 15 integrates hazard mitigation into the County General Plan through the consideration of hazards most likely to impact the County. Hazards are grouped broadly under Geotechnical, Fire, or Flooding Hazards, with subsections providing more details on the variety of each type of hazard that can occur.
- ❖ **Local Coastal Program Policies** – The Local Coastal Program (LCP) Policies document of 2013 contains a hazard component that discusses development as it relates to variety of potential hazards. These hazards include seismic related events including liquefaction and landslide, high risk fire, coastal erosion, and flooding. This document requires the County Geologist or an independent consulting certified engineering geologist to review all building and grading permits in designated hazard-prone areas.



- ❖ **San Mateo County Climate Action Plan**—The San Mateo County Climate Action Plan investigates climate change projections on the County and likely impacts from such changes, particularly as they relate to hazardous weather events. The Plan also includes adaption strategies for these climate change impacts. A Climate Change Vulnerability Assessment, released in December 2011, examines the County’s vulnerability to climate change for agriculture/silviculture, the coastal zone and coastal ecosystems, fire-threatened areas, public health, and water and wastewater infrastructure.
- ❖ **Stormwater Enforcement Response Plan (ERP)**—The ERP provides guidelines to San Mateo County Staff to ensure compliance with the National Pollutant Discharge Elimination System (NPDES) Municipal Regional Stormwater Permit (MRP) and the County’s stormwater ordinance and water quality regulations. This strengthens the County’s resiliency to flood and severe storm events by reducing the probability of stormwater runoff.
- ❖ **San Mateo County Resource Conservation District Plans**—The San Mateo County Resource Conservation District maintains numerous plans on its website, many of which tie to hazard mitigation through floodplain or watershed management. This provides the County a valuable resource to help it analyze its vulnerability in certain areas and identify necessary measures to increase resiliency.

1.4.2 Opportunities for Future Integration

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

- ❖ **General Plan**—San Mateo County last updated its General Plan in 1986. When the County next updates its General Plan to consider current trends, needs, and statistics, it will be able to enhance its integration with hazard mitigation. Such an update would provide a significant opportunity to incorporate the results of the hazard mitigation risk analysis and suggested projects into the Safety Element, as well as considering smart land use and development in the Housing and Open Space Elements.
- ❖ **San Mateo County Climate Action Plan** – The Climate Action Plan provides the County with an opportunity to directly integrate hazard mitigation with existing goals and objectives. Since the Climate Action Plan already provides a strategic guide for minimizing the impact of human activity on the environment, integration of hazard mitigation is a fitting and strategic next step. San Mateo County anticipates that future updates to the Climate Action Plan will include hazard mitigation as it relates to air quality, land use, and other factors.
- ❖ **Capital Improvement Plan**- The Capital Improvement Plan (CIP) includes one-time outlays of funds for construction, structural improvements, and non-structural renovations to County-owned facilities. It also includes major construction, renovation or rehabilitation of county infrastructure assets such as roads, utilities, and airports, which are budgeted separately in the Department of Public Works budget. The County also utilizes a five-year Facilities Capital Plan, which serves as a planning tool to track all capital projects and their estimated costs, giving policy makers an instrument to schedule future projects and anticipate potential financial challenges. Moving forward, the CIP should ensure that development does not encroach on known hazard areas and





that projects increase resilience to hazards for both the life of an asset, and for new and existing development.

- ❖ **County Codes, Ordinances, and Regulations**—San Mateo County will consider creating a clearly and easily accessible webpage that contains zoning regulations, building regulations, and other administrative regulations. Currently, these documents are accessible via appropriate department websites, with the majority of administrative codes on Municode.com (https://www.municode.com/library/ca/san_mateo_county/codes/code_of_ordinances) or on various pages within the Planning and Building Department. Compiling these regulations onto one webpage will not only facilitate ease of use, it will also promote hazard mitigation. Review of codes for internal consistency and identification of mitigation projects that comply with or strengthen local regulations can occur much more seamless and efficiently.
- ❖ **Public Outreach** – San Mateo County recognizes that there are currently public information opportunities available to facilitate public engagement regarding hazard mitigation. The County already maintains multiple webpages with detailed and user-friendly hazard mitigation and disaster preparation/prevention information. The County will look into developing a more robust and targeted program that involves using current capabilities to expand and enhance outreach to local residents.
- ❖ **Coordination With Other County Departments** – There are a number of efforts that are being undertaken by various County departments, including the Office of Sustainability, Environmental Health Department, Department of Public Works, Planning and Building Department, and San Mateo Sheriff’s Office of Emergency Services. The actions listed in the Local Hazard Mitigation Plan should be incorporated into these efforts when appropriate and conducive to reducing hazards and risk.

1.5 Jurisdiction-Specific Natural Hazard Event History

Table 1-7 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 1-7. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Wind Storm	N/A	February 2014	N/A
Wind Storm	N/A	October-November 2014	N/A
Wind Storm	N/A	April 2013	\$25,500
Flooding	N/A	December 2012	N/A
Severe Storm/Landslide	N/A	March 2012	\$64,000
Tsunami/Seiche	DR-1968 ¹	March 11, 2011	\$89,500
Wind Storm	N/A	March 2011	\$25,000
Wind Storm	N/A	February 2011	\$62,917
Wind Storm	N/A	November 2010	\$166,667
Explosion/Fire	FM-2856	September 10, 2010	N/A
Severe Storm/Flooding/Wind	N/A	January 2010	\$1,167,917
Severe Storm/Flooding/Wind	N/A	October 2009	\$1,131,333
Wind Storm	N/A	April 2009	\$43,714



TABLE 1-7. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Wind Storm	N/A	January 2009	\$20,883
Wind Storm	N/A	October 2008	\$50,000
Flooding	N/A	January 2008	\$200,000
Flooding	DR-1646	June 5, 2006	\$4,350,000
Flooding	DR-1628	February 3, 2006	\$10,000,000
Severe Storm(s)	DR-1203	February 9, 1998	N/A
Severe Storm(s)	DR-1155	January 4, 1997	N/A
Severe Storm(s)	DR-1046	March 12, 1995	N/A
Severe Storm(s)	DR-1044	January 10, 1995	N/A
Freezing	DR-894	February 11, 1991	N/A
Earthquake	DR-845	October 18, 1989	N/A
Flood	DR-758	February 21, 1986	N/A
Coastal Storm	DR-677	February 9, 1983	N/A
Flood	DR-651	January 7, 1982	N/A
Drought	EM-3023	January 20, 1977	N/A
Flood ²	DR-145	February 25, 1963	N/A
Severe Storm(s) ²	DR-138	October 24, 1962	N/A
Flood ²	DR-122	March 6, 1962	N/A
Flood ²	DR-82	April 4, 1958	N/A
Fire ²	DR-65	December 29, 1956	N/A
Flood ²	DR-47	December 23, 1955	N/A
Flood ²	DR-15	February 5, 1954	N/A

Notes:

¹ Disaster Declaration did not cover San Mateo County, but there was an impact on the property in the County.

² Prior to 1964, federal disaster declarations were not issued specific to counties; pre-1964 declarations listed in this table are for the entire state of California, not San Mateo County specifically.

1.6 Jurisdiction-Specific Vulnerabilities

Repetitive loss records are as follows:

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

Other noted vulnerabilities include:

- ❖ Potential for isolation of coastal communities during a large disaster (i.e. an earthquake, tsunami, wildfire, or major storm). There are limited means of access to both the mid-coast communities and



rural communities located in the unincorporated areas. These roads could be damaged, blocked, or made impassable during a disaster.

- ❖ Coastal erosion in the western portions of Moss Beach and Miramar.
- ❖ Localized flooding issues throughout North Fair Oaks.
- ❖ Localized flooding issues on Park Plaza Drive, 88th Street, and 89th Street in Broadmoor.

1.7 Hazard Risk Ranking

Table 1-8 presents the ranking of the hazards of concern.

TABLE 1-8. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Wildfire	54	High
2	Earthquake	48	High
3	Severe Weather	33	Medium
4	Landslides	21	Medium
5	Flood	18	Medium
6	Tsunami	18	Medium
7	Drought	9	Low
8	Dam Failure	6	Low

1.8 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 1-9 lists the actions that make up the County of San Mateo (Unincorporated Area) hazard mitigation action plan. Table 1-10 identifies the priority for each action. Table 1-11 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 1-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action SMC-1 —Continue the County’s effort to enhance hazards mitigation planning by updating plans such as Emergency Operations Plan, Continuity of Government Operations, Department Operation Center and Joint Information Center Plans.						
New and existing	All Hazards	1, 2, 3, 8	San Mateo County Sheriff’s Office Of Emergency Services* (County OES), all County Departments	Medium	HMGP, PDM, FMA, Staff Time, General Funds	On-going



TABLE 1-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
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Action SMC-2—Leverage the County’s existing communication channels and Board of Supervisor policies across the agencies to educate the public, schools, other jurisdictions, professional associations, and businesses and industry about reducing climate change pollution and how to prepare for inevitable climate changes.

Existing	All Hazards	1, 2, 3, 8, 10	Planning and Building Department, Department of Public Works, Office of Sustainability*, County Manager’s Office	Low	Staff Time, General Funds	On-going
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Action SMC-3—Identify, retrofit, upgrade, or replace deficient or vulnerable government facilities, such as the Pescadero Fire Station and the San Mateo County Sheriff’s Administrative Offices and the County’s Emergency Operation Center.

Existing	All Hazards	4, 5, 7, 11	Planning and Building Department, Department of Public Works*, County OES	High	HMGP, PDM, FMA, Staff Time, General Funds	Short-term
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Action SMC-4—Incorporate consideration of sea level rise into the development review and infrastructure planning processes including response strategies that increase resilience to projected sea level rise risks for both the life of an asset, and for new and existing development.

New and existing	Flood, Landslide, Severe weather, Tsunami	5, 6, 7	Planning and Building Department, Department of Public Works*, and Office of Sustainability	Medium	HMGP, PDM, FMA, Staff Time, General Funds	Long-term
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Action SMC-5—Support the ongoing preparedness and training of Community Emergency Responses Teams in the unincorporated areas of the County.

Existing	All Hazards	2, 6, 8	County OES	Medium	SHSP, UASI, EMPG, Staff Time, General Funds	On-going
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Action SMC-6—Incorporate the Local Hazard Mitigation Plan into the County’s General Plan and update the County’s General Plan Safety Element in response to evolving hazards and mitigation strategies.

New and existing	All Hazards	5, 6	Planning Department	Medium	Staff Time, General Funds	Short-term
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Action SMC-7—Continue to incorporate mitigation principles into local event management during Incident Command Post and Department Operations Center Action Planning.

Existing	All Hazards	5, 6	County OES	Low	Staff Time, General Funds	On-going
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TABLE 1-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
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Action SMC-8—Update and enhance the GIS data systems and mapping for all hazards in the unincorporated County.

New and existing	Dam Failure, Earthquake, Flood, Landslide, Tsunami, Wildfire	1, 3	County OES, Information Services Department*, Department of Public Works, and Planning Department	Medium	Staff Time, General Funds	Short-term
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Action SMC-9—Include an assessment and associated mapping of the County’s vulnerability to location specific hazards and make appropriate recommendations for the use of these hazard areas in future updates to the County’s General Plan.

New and existing	All Hazards	1, 3	County OES, Information Services Department*, and Planning Department	Medium	Staff Time, General Funds	Long-term
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Action SMC-10—Identify means to coordinate, collect and store damage assessment data in GIS format for each natural hazard event that causes death, injury and or property damage.

New	All Hazards	1, 3	County OES, Information Services Department*, and Planning Department	High	Staff Time, General Funds	Long-term
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Action SMC-11—Integrate the County’s mitigation plan into current capital improvement plans to ensure that development does not encroach on known hazard areas.

New and existing	All Hazards	1, 3, 5	Department of Public Works*, and Planning Department	Low	Staff Time, General Funds	Short-term
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Action SMC-12—Coordinate mitigation planning and project efforts within the planning area to leverage all resources available to the planning partnership, including working with existing joint power authorities (JPA) and exploring the possibility of creating new JPAs to facilitate mitigation strategies, policies, and actions.

New and existing	All Hazards	2, 6, 8, 10	Planning and Building Department, County OES*, and Department of Public Works	Medium	Staff Time, General Funds	Long-term
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Action SMC-13—To the extent possible based on available resources, provide coordination and technical assistance in applications for grant funding that include assistance in benefit versus cost analysis for grant eligible projects.

New and existing	All Hazards	2, 5, 8	Planning and Building Department, County OES*, Office of Sustainability, Department of Public Works, Information Services Department	Low	Staff Time, General Funds	On-going
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TABLE 1-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
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Action SMC-14—Coordinate preparedness efforts with San Mateo County Sheriff’s Office of Emergency Services, San Mateo County Emergency Management Association and its cities and agencies in the County/Operational Area and the 12 County San Francisco Bay Region.

New and existing	All Hazards	2, 6, 8, 10	County OES	Low	Staff Time, General Funds	On-going
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Action SMC-15—Coordinate with the private sector on prioritization of critical facilities before and during restoration of utility services.

New and existing	All Hazards	2, 6, 8, 10	County OES* and Department of Public Works	Low	Staff Time, General Funds	On-going
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Action SMC-16—Harden emergency response communications, including, for example, building redundant capacity into Public Safety Answering Points for community alert and warning, replacing or hardening microwave and simulcast systems, adding digital encryption for programmable radios, and ensuring a plug-and-play capability for amateur radio.

New and existing	All Hazards	5, 6, 9	Information Services Department* and County OES	High	HMGP, PDM, FMA, EMPG, UASI, Staff Time, General Funds	Long-term
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Action SMC-17—Support the San Mateo County Information Services Department in efforts to develop maintain, and enhance, the County’s information technology efforts, including supporting multi-jurisdictional fiber backbone redundancy projects, back-up data centers, and the hardening or relocation of critical communication infrastructure.

New and existing	All Hazards	5, 6, 9	Information Services Department	High	HMGP, PDM, FMA, EMPG, UASI, Staff Time, General Funds	Long-term
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Action SMC-18—Explore and analyze the potential development of community plans for the redevelopment of areas located in the unincorporated areas of the County after a disaster, with a focus on areas that have repetitive losses.

New	All Hazards	5, 6, 7	Planning and Building Department	High	Staff Time, General Funds	Long-term
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Action SMC-19—Better inform residents of comprehensive mitigation activities, for all hazards of concern including elevation of appliances above expected flood levels, use of fire-resistant roofing and defensible space in high wildfire threat and wildfire-urban-interface areas, structural retrofitting techniques for older homes, and use of intelligent grading practices through workshops, publications, and media announcements and events.

New and existing	All Hazards	1, 2, 5, 6, 8, 10	Planning and Building Department*, County Fire, and County OES	Medium	Staff Time, General Funds	On-going
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Action SMC-20—Support efforts of San Mateo County Department Operations Centers to develop specific mitigation actions management by objectives post disaster action planning that includes FEMA’s standard eligible funding categories for emergency protective measures including debris removal, hazardous materials spills/releases, emergency bridge and road repair, flood control, equipment purchase or rental and contractual services.





TABLE 1-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New and existing	All Hazards	5, 6, 7	Department of Public Works, Planning and Building Department, County Fire, and County OES*	Medium	HMGP, PDM, Staff Time, General Funds	On-going

Action SMC-21—Support the practice of Unified Command and Management and as applicable, the continued improvements, development and maintenance of interoperable communication systems for first responders from cities, counties, special districts, state, and federal agencies.

New and existing	All Hazards	2, 8, 9	County OES*, Information Service Department	Medium	HMGP, PDM, UASI, Staff Time, General Funds	On-going
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Action SMC-22—Develop and implement a methodology to systematically assess all hazards outlined in this Plan (including, but not limited to sea level rise, seismic risk, flood risk, protective design) and climate impacts in considering building acquisitions and sales, portfolio planning, major retrofits, capital improvement planning, and master planning for County owned and leased facilities.

New and existing	All Hazards	1, 3, 5, 6	Department of Public Works, Planning and Building Department*, Real Property Division	Medium	HMGP, PDM, FMA, Staff Time, General Funds	Long-term
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Action SMC-23—Look into potentially vulnerable public and private utility systems including sanitation/sewer, and fuel pumping stations.

New and existing	Dam Failure, Earthquake, Flood, Landslide, Severe Weather, Tsunami, Wildfire	4, 5, 6, 7	Department of Public Works	Medium	HMGP, PDM, FMA, Staff Time, General Funds	Long-term
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Action SMC-24—County staff in conjunction with State Agencies will continue to support vegetation management strategies and programs to address the potential vegetation management needs within the County.

New and existing	Landslides, Wildfire	4, 5, 6, 7	County Fire*, Department of Public Works, and Building Department	Low	Staff Time, General Funds	Short-term
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Action SMC-25—Identify and plan for the combined impacts of multiple hazards – for example extreme drought followed by flooding, and effects of these impacts on people, property, and the economy.

New and existing	All Hazards	1, 3, 5	County OES	Medium	Staff Time, General Funds	Long-term
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Action SMC-26—Explore installing additional monitoring equipment to track subsidence, erosion, and sea level change along San Mateo County shoreline. Complete a study on subsidence and erosion rates.



TABLE 1-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New and existing	Flood, Landslide, Severe Weather, Tsunami	1, 3, 5	Department of Public Works and Office of Sustainability*	Medium	HMGP, Staff Time, General Funds	Short-term
<p>Action SMC-27—Continue to develop, maintain, and potentially enhance the County’s classification under the Community Rating System, including use of monitoring equipment, radio base station with community alert and warning systems. This includes rain gages, flood level creek gages and safety signage for flood hazard areas on roadways.</p>						
New and existing	Flooding and Severe Weather	5, 6, 7	Building Department*, County OES	Medium	HMGP, Staff Time, General Funds	On-going
<p>Action SMC-28—Update and enhance existing flood hazard mapping to better reflect current conditions and potential sea level rise.</p>						
New and existing	Flooding and Severe Weather	1, 3, 5	Planning and Building Department*, Department of Public Works, and Office of Sustainability	Medium	HMGP, PDM, FMA, HMA, Staff Time, General Funds	Short-term
<p>Action SMC-29—Continue the County’s partnership with the San Francisco Creek Joint Powers Authority (JPA) to improve flooding, sea level rise and other environmental recreational concerns along its waterways that lead to the San Francisco Bay.</p>						
New and existing	Flooding , Dam Failure and Severe Weather	2, 4, 5, 8	Department of Public Works	High	HMGP, PDM, FMA, HMA, Staff Time, General Funds	On-going
<p>Action SMC-30—Continue the County’s partnership with neighboring jurisdictions to address flooding, sea level rise and other environmental recreational concerns along Colma and San Bruno Creek.</p>						
New and existing	Flooding and Severe Weather	2, 4, 5, 8	Department of Public Works	High	HMGP, PDM, FMA, HMA, Staff Time, General Funds	On-going
<p>Action SMC-31—The County will protect, preserve, and enhance natural features such as wetlands that serve as natural mitigation against the impacts of flooding, climate change and associated sea level rise.</p>						
New and existing	Flooding , Dam Failure, Severe Weather, Tsunami	1, 3, 4, 7	Planning and Building Department*, Department of Public Works, and Office of Sustainability	High	HMGP, PDM, FMA, EPA, NRCS, FSR, Staff Time, General Funds	On-going
<p>Action SMC-32—Conduct watershed analysis as necessary to address data needs that will be essential towards the development of drainage solutions in flood vulnerable areas.</p>						
New and existing	Flooding and Severe Weather	1, 3, 4, 7	Department of Public Works	Medium	HMGP, PDM, FMA, EPA, NRCS, Staff Time, General Funds	Long-term





TABLE 1-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<p>Action SMC-33—Determine whether or not wastewater treatment plants are protected from floods, and if not, investigate the use of flood-control berms to not only protect from stream or river flooding, but also increase plant security.</p>						
New and existing	Flooding , Dam Failure and Severe Weather	1, 3, 4, 7	Department of Public Works* and Office of Sustainability	High	HMGP, PDM, FMA, Staff Time, General Funds	Short-term
<p>Action SMC-34—Ensure that new subdivisions are designed to reduce or eliminate flood damage by requiring lots and rights-of-way are laid out for the provision of approved sewer and drainage facilities, providing on-site detention facilities whenever practicable.</p>						
New	Flooding and Severe Weather	4, 5, 6, 7	Planning and Building Department* and Department of Public Works	Low	Staff Time, General Funds	On-going
<p>Action SMC-35—As funding opportunities become available, encourage home and apartment owners to participate in acquisition and relocation programs for areas within floodways and study the potential to develop a revolving fund, issue bonds or other funding mechanisms to support acquisition and relocation from floodways.</p>						
New and existing	Flooding	4, 11	Planning and Building Department	Low	Staff Time, General Funds	On-going
<p>Action SMC-36—Develop a “Maintain-a-Drain” campaign encouraging businesses and residents to keep storm drains in their neighborhood free of debris.</p>						
Existing	Flooding and Severe Weather	4, 5, 11	Department of Public Works	Medium	Staff Time, General Funds	Short-term
<p>Action SMC-37—Encourage owners of properties in a floodplain to consider purchasing flood insurance. For example, point out that most homeowners’ insurance policies do not cover a property for flood damage.</p>						
New and existing	Flooding	2, 5, 7, 8, 11	Planning and Building Department* and County OES	Low	Staff Time, General Funds	On-going
<p>Action SMC-38—Conduct analysis and potential levee improvements and flood control projects for, Belmont Creek, Coyote Point area, Pescadero and Butano Creek, and other areas that are subject to repeat flooding events.</p>						
New and existing	Flooding and Severe Weather	1, 2, 3, 4, 5, 7, 10	Department of Public Works	High	HMGP, PDM, FMA, EPA, NRCS, Staff Time, General Funds	Short-term
<p>Action SMC-39—The County will work collaboratively with adjoining agencies towards the development of drainage and flooding solutions in the areas of the Bayfront Canal, the Vista Canal, and the Atherton Channel.</p>						
New and existing	Flooding and Severe Weather	1, 2, 3, 4, 5, 7, 10	Department of Public Works	High	HMGP, PDM, FMA, EPA, NRCS, Staff Time, General Funds	On-going





TABLE 1-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<p>Action SMC-40—Develop procedures for performing a watershed analysis to look at the impact of development on flooding potential downstream, including communities outside of the jurisdiction of proposed projects.</p>						
New and existing	Flooding, Dam Failure, and Severe Weather	1, 3	Department of Public Works* and Office of Sustainability	Medium	HMGP, PDM, FMA, EPA, NRCS, Staff Time, General Funds	Long-term
<p>Action SMC-41—Continue to enforce zoning and building codes to prevent and control construction within the floodplain.</p>						
New and existing	Flooding	4, 5, 7	Planning and Building Department	Low	Staff Time, General Funds	On-going
<p>Action SMC-42—Continue to maintain compliance and good standing under the National Flood Insurance Program (NFIP).</p>						
New and existing	Flooding	4, 5, 7	Planning and Building Department	Medium	Staff Time, General Funds	On-going
<p>Action SMC-43—Reinforce roads/bridges from flooding through protection activities, including elevating the roads/bridges and installing/widening culverts beneath the roads/bridges or upgrading storm drains.</p>						
New and existing	Flooding and Severe Weather	4, 5, 7, 11	Department of Public Works	High	HMGP, PDM, FMA, Staff Time, General Funds	Short-term
<p>Action SMC-44—Continue to repair and make structural improvements to storm drains, pipelines and/or channels to enable them to perform to their design capacity in handling water flows.</p>						
Existing	Flooding and Severe Weather	4, 5, 7, 11	Department of Public Works	Medium	HMGP, PDM, FMA, Staff Time, General Funds	On-going
<p>Action SMC-45—Support and encourage efforts of other agencies as they plan for and arrange financing for seismic retrofits and other disaster mitigation strategies.</p>						
New and existing	Earthquake	2, 6, 8, 10	Planning and Building Department* and Department of Public Works	Low	Staff Time, General Funds	On-going
<p>Action SMC-46—Require upgrade of infrastructure to withstand seismic shaking and differential settlement.</p>						
Existing	Earthquake	1, 3, 4, 5, 7, 11	Department of Public Works	High	HMGP, PDM, FMA, Staff Time, General Funds	Long-term

Action SMC-47—Seismically retrofit or replace County and local ramps and bridges that are categorized as structurally deficient by Caltrans, are located in high ground shaking areas, and/or are necessary for first responders to use during and/or immediately after a disaster or emergency.





TABLE 1-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	Earthquake	1, 3, 4, 5, 8, 11	Department of Public Works	High	HMGP, PDM, FMA, Staff Time, General Funds	Long-term

Action SMC-48—Develop and implement plans to increase the building owner’s general knowledge of and appreciation for the value of seismic upgrading of the building’s structural and nonstructural elements. <http://myhazards.caloes.ca.gov/> campaign.

New and existing	Earthquake	1, 3, 5, 8	Planning and Building Department	Low	Staff Time, General Funds	Short-term
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Action SMC-49—Study the feasibility of conducting an inventory of existing or suspected soft-story residential, commercial, and industrial structures.

Existing	Earthquake	1, 3, 5, 8	Planning and Building Department	Medium	HMGP, Staff Time, General Funds	Short-term
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Action SMC-50—Apply and make available updated mapping of seismic hazards from the California Geological Survey’s Seismic Hazards Mapping Program when it becomes available <http://myhazards.caloes.ca.gov/> campaign.

New and existing	Earthquake	1, 3, 8	Planning and Building Department	Low	Staff Time, General Funds	Short-term
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Action SMC-51—Protect and preserve coastline and existing infrastructure through permit review, emphasizing nature-based solutions for Bay and Coastside adaptation strategies, relying on the guidance in the recently updated Baylands Ecosystem Habitat Goals Report, and evolving science for coastal management options.

New and existing	Landslide, Severe Weather, Tsunami	1, 3, 5, 6, 7, 8	Planning and Building Department* and Department of Public Works	Medium	HMGP, PDM, FMA, EPA, NRCS, FSR, Staff Time, General Funds	Long-term
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Action SMC-52—Protect and preserve coastline and new infrastructure through coastal restoration efforts, emphasizing nature-based solutions for Bay and Coastside adaptation strategies, relying on the guidance in the recently updated Baylands Ecosystem Habitat Goals Report, and evolving science for coastal management options.

New and existing	Landslide, Severe Weather, Tsunami	1, 3, 5, 6, 7, 8	Planning and Building Department* and Department of Public Works	Medium	HMGP, PDM, FMA, EPA, NRCS, FSR, Staff Time, General Funds	Long-term
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Action SMC-53—Evaluate the feasibility of relocation, retrofit, or upgrade of existing County facilities to limit the impact of coastal erosion, including the Half Moon Bay Landfill, Mirada Road, and other facilities.

Existing	Landslide, Severe Weather, Tsunami	1, 3, 5, 6, 7	Planning and Building Department, Department of Public Works*, and Office of Sustainability	Medium	HMGP, PDM, FMA, EPA, NRCS, Staff Time, General Funds	Long-term
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TABLE 1-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<p>Action SMC-54—Increase efforts to reduce landslides, debris flows, slipouts and erosion in existing and future development by improving appropriate enforcement of codes and use of applicable standards.</p>						
New and existing	Earthquake, Landslide, Severe Weather, Tsunami	1, 3, 5, 6, 7	Planning and Building Department and Department of Public Works*	Medium	HMGP, PDM, FMA, Staff Time, General Funds	On-going
<p>Action SMC-55—Encourage public and private water conservation plans, including consideration of rainwater catchment system.</p>						
New and existing	Drought	4, 5	Planning and Building Department* and Environmental Health Department	Low	Staff Time, General Funds	On-going
<p>Action SMC-56—Develop and implement a comprehensive program for watershed maintenance, optimizing forest health with water yield to balance water supply, flooding, fire, and erosion concerns.</p>						
New and existing	Drought, Landslide, Severe Weather, and Wildfire	1, 2, 3, 6, 8, 10	Planning and Building Department* and Department of Environmental Health	High	EPA, NRCS, Staff Time, General Funds	Long-term
<p>Action SMC-57—Continue to support existing County policy regarding the waving of fees for replacement domestic wells for wells that have failed due to drought conditions.</p>						
New	Drought	3, 4, 8, 10	Agriculture, Weights, and Measures	Low	Staff Time, General Funds	On-going
<p>Action SMC-58—Maintain a variety of crops in rural areas of the region to increase agricultural diversity and crop resiliency.</p>						
New and existing	Drought	3, 4, 8, 10	Agriculture, Weights, and Measures	Low	Staff Time, General Funds	On-going
<p>Action SMC-59—Promote and maintain the public-private partnerships dedicated to preventing the introduction of agricultural pests into regionally-significant crops.</p>						
New and existing	Drought	3, 4, 8, 10	Agriculture, Weights, and Measures	Low	Staff Time, General Funds	On-going
<p>Action SMC-60—Encourage livestock operators to develop an early warning system to detect animals with communicable diseases.</p>						
New and existing	Health	4, 7	Agriculture, Weights, and Measures	Medium	USDA, Staff Time, General Funds	Long-term
<p>Action SMC-61—Support efforts to understand ground water use and groundwater basins in San Mateo County.</p>						





TABLE 1-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New and existing	Drought	4, 5, 7	Office of Sustainability* and Department of Environmental Health	Medium	Staff Time, General Funds	Short-term

Action SMC-62—Utilize the updated Fire Hazard Severity Zone map prepared by the California Division of Forestry and Fire Protection (Cal Fire) to target high priority areas for vegetation management, code inspections, and other fire mitigation activities.

New and existing	Wildfire	1, 2, 4, 7	Cal Fire and Planning and Building Department*	Medium	HMGP, PDA, FP&S, Staff Time, General Funds	On-going
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Action SMC-63—Carry out a public education program to increase awareness of fire risks and promote implementation of fire safe practices by the owners of new and existing residences in wildland fire areas, such as, but not limited to, vegetation management, fire resistant construction, onsite water storage, adequate access and other fire prevention measures.

Existing	Wildfire	1, 4, 5, 7, 8, 10, 11	Cal Fire and Planning and Building Department*	Medium	HMGP, PDA, FP&S, Staff Time, General Funds	On-going
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Action SMC-64—Adopt a landscape ordinance, utilize landscape plan review, and code to ensure defensible space for structure and infrastructure.

New and existing	Wildfire	1, 4, 7, 8, 11	Cal Fire and Planning and Building Department*	Medium	HMGP, PDA, FP&S, Staff Time, General Funds	On-going
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Action SMC-65—Locate structure or functions outside of tsunami hazard areas whenever possible.

New and existing	Tsunami	4, 5, 6, 7	Planning and Building Department* and Public Works	Medium	HMGP, PDM, FMA, Staff Time, General Funds	On-going
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Action SMC-66—Conduct a feasibility assessment for creation a probabilistic Tsunami map for the San Mateo County planning area.

New and existing	Tsunami	1, 3, 7	Planning and Building Department and County OES*	High	NTHMP, HMGP, PDM, FMA, Staff Time, General Funds	Long-term
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Action SMC-67—Support green infrastructure projects that enhance resiliency to natural disasters and incorporate green design elements into hazard mitigation projects where feasible.

New and Existing	All Hazards	4, 5, 6	Planning and Building Department and Public Works*	Medium	HMA, HMGP, PDM, FMA, Staff Time, General Funds	Short-term
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Action SMC-68—Establish an operational area, multi-jurisdiction standing committee for integrating individuals with disabilities, and others with access and functional needs into public information, planning, training, exercise, and response.

New	All Hazards	1,2,8,9,10	OES, Health and Human Services	Low	Staff Time, General Funds, PHEP	On-going
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TABLE 1-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<p>Action SMC-69— The Daly City Department of Water & Wastewater Resources is continuing work on a comprehensive plan to identify storm drainage solutions in the Vista Grande Drainage Basin and complete repairs estimated at nearly \$3 million made to strengthen the Fort Funston Sewer Outfall and Force Main. A joint NEPA/CEQA Draft EIR/EIS was publicly released 04/29/16 on the project options associated with the Vista Grande Drainage Basin Improvement Project with comments due 07/01/16. Funding for this anticipated \$100 million improvement project has yet to be secured, and some funding is anticipated to be derived from the North San Mateo County Sanitation District, a subsidiary district of Daly City. It is anticipated that this project will rectify the issues associated with identified severe repetitive loss property located in unincorporated San Mateo County.</p>						
New and existing	Flooding, Severe weather.	2, 5, 11	Daly City DWW, SMC DPW	High	HMGP, PDM, Local, federal and state funding partnerships.	Long term
<p>Action G-1—Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.</p>						
Existing	All	1, 3, 4, 5, 6, 7, 11	San Mateo County	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
<p>Action G-2—Consider participation in incentive-based programs such as the Tree City and StormReady.</p>						
New and existing	All	All	San Mateo County	Low	General Fund	Long-term
<p>Action G-3—Where feasible, implement a program to record high water marks following high-water events.</p>						
New and existing	Flooding, Severe Weather	1, 3, 4, 5, 6	San Mateo County	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
<p>Action G-4—Consider the development and implementation of a Capital Improvements Program (CIP) to increase regulatory, financial, and technical capability to implement mitigation actions.</p>						
New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	San Mateo County	High	CIP component of general fund (if implemented)	Long term
<p>Action G-5—Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.</p>						
New and existing	All	2, 3, 4, 5, 6, 7, 8, 10, 11	San Mateo County	Low	Operating Budgets	Ongoing
<p>Action G-6— Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.</p>						
New and existing	All	All	Jurisdictions	Low	General Fund	Short- and long-term
<p>Action G-7— Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.</p>						



TABLE 1-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New and Existing	All	1, 4	Jurisdictions	Low	Staff Time, General Funds	Short-term

*Note: Denotes lead department

TABLE 1-10. MITIGATION STRATEGY PRIORITY SCHEDULE

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





TABLE 1-10. MITIGATION STRATEGY PRIORITY SCHEDULE

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Priority ^a
Action SMC-16	3	High	High	Yes	Yes	Maybe	Medium	High
Action SMC-17	3	High	High	Yes	Yes	Maybe	Medium	High
Action SMC-18	3	Low	High	No	No	No	Low	Low
Action SMC-19	6	Medium	Medium	Yes	No	Yes	High	Low
Action SMC-20	3	Medium	Medium	Yes	Yes	Yes	High	High
Action SMC-21	3	Medium	Medium	Yes	Yes	Yes	High	High
Action SMC-22	4	Medium	Medium	Yes	Yes	No	Medium	High
Action SMC-23	4	Medium	Medium	Yes	Yes	Yes	High	High
Action SMC-24	4	Low	Low	Yes	No	Yes	Medium	Low
Action SMC-25	3	Low	Medium	No	No	No	Low	Low
Action SMC-26	3	Medium	Medium	Yes	Yes	Maybe	Medium	Medium
Action SMC-27	3	Medium	Medium	Yes	Yes	Maybe	Medium	Medium
Action SMC-28	3	Medium	Medium	Yes	Yes	No	Medium	Medium
Action SMC-29	4	High	High	Yes	Yes	No	Medium	High
Action SMC-30	4	High	High	Yes	Yes	No	Medium	High
Action SMC-31	4	Medium	High	No	Yes	No	Low	Low
Action SMC-32	4	Medium	Medium	Yes	Yes	No	Medium	Medium
Action SMC-33	4	Medium	High	No	Yes	No	Low	Medium
Action SMC-34	4	High	Low	Yes	No	Yes	High	Low



TABLE 1-10. MITIGATION STRATEGY PRIORITY SCHEDULE

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Priority ^a
Action SMC-35	2	Medium	Low	Yes	No	Yes	Medium	Low
Action SMC-36	3	Medium	Medium	Yes	No	Maybe	Medium	Medium
Action SMC-37	5	Medium	Low	Yes	No	Yes	Medium	Low
Action SMC-38	7	High	High	Yes	Yes	No	Medium	High
Action SMC-39	7	High	High	Yes	Yes	No	Medium	High
Action SMC-40	2	Medium	Medium	Yes	Yes	No	Medium	High
Action SMC-41	3	High	Low	Yes	No	Yes	High	Low
Action SMC-42	3	Medium	Medium	Yes	No	Yes	Medium	Low
Action SMC-43	4	High	High	Yes	Yes	No	Medium	High
Action SMC-44	4	High	Medium	Yes	Yes	No	Medium	High
Action SMC-45	4	Low	Low	Yes	No	No	Low	Low
Action SMC-46	6	High	High	Yes	Yes	Maybe	Medium	High
Action SMC-47	6	High	High	Yes	Yes	Maybe	Medium	High
Action SMC-48	4	Low	Low	Yes	No	Yes	Medium	Low
Action SMC-49	4	Medium	Medium	Yes	Yes	No	Medium	Medium
Action SMC-50	3	Low	Low	Yes	No	Yes	Medium	Low
Action SMC-51	6	Medium	Medium	Yes	Yes	Maybe	Medium	Medium
Action SMC-52	6	Medium	Medium	Yes	Yes	Maybe	Medium	Medium
Action SMC-53	5	Medium	Medium	Yes	Yes	No	Medium	Medium
Action SMC-54	5	Medium	Medium	Yes	Yes	Maybe	Medium	Medium





TABLE 1-10. MITIGATION STRATEGY PRIORITY SCHEDULE

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Priority ^a
Action SMC-55	2	Low	Low	Yes	No	Yes	Medium	Low
Action SMC-56	6	Low	High	No	Yes	No	Low	Low
Action SMC-57	4	Medium	Low	Yes	No	Yes	Medium	Low
Action SMC-58	4	Medium	Low	Yes	No	Yes	Medium	Low
Action SMC-59	4	Low	Low	Yes	No	Yes	Medium	Low
Action SMC-60	2	Medium	Medium	Yes	Yes	No	Medium	Medium
Action SMC-61	3	Medium	Medium	Yes	No	Maybe	Medium	Medium
Action SMC-62	4	High	Medium	Yes	Yes	Maybe	High	High
Action SMC-63	7	Medium	Medium	Yes	Yes	Maybe	Medium	Medium
Action SMC-64	5	High	Medium	Yes	Yes	Maybe	Medium	Medium
Action SMC-65	4	Medium	Medium	Yes	Yes	Maybe	Medium	Medium
Action SMC-66	3	Medium	High	No	No	No	Low	Low
Action SMC-67	3	Medium	Medium	Yes	Yes	Maybe	Medium	Medium
Action SMC-68	5	High	Low	Yes	Yes	Maybe	High	Medium
Action SMC-69	3	High	High	Yes	Yes	Maybe	Medium	High
Action G-1	7	High	High	Yes	Yes	No	High	High
Action G-2	11	High	Low	Yes	No	Yes	High	Low
Action G-3	5	Medium	Medium	Yes	Yes	Yes	Medium	Medium
Action G-4	9	High / Medium	High	Yes	No	Yes (if component of general fund)	High	Low





TABLE 1-10. MITIGATION STRATEGY PRIORITY SCHEDULE

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

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

TABLE 1-11. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	SMC-6, SMC-8, SMC-9, SMC-10, SMC-11, SMC-12, SMC-13, SMC-18, SMC-20, SMC-22, SMC-25, SMC-29, SMC-40, SMC-68	SMC-3, SMC-16, SMC-17, SMC-23, SMC-29	SMC-2, SMC-8, SMC-19, SMC-29, SMC-68	SMC-29, SMC-31	SMC-1, SMC-5, SMC-7, SMC-14, SMC-15, SMC-16, SMC-17, SMC-21, SMC-68	SMC-3, SMC-23, SMC-29, SMC-33
Drought	SMC-6, SMC-9, SMC-10, SMC-11, SMC-12, SMC-13, SMC-18, SMC-20, SMC-22, SMC-25, SMC-56, SMC-57, SMC-61		SMC-2, SMC-8, SMC-19, SMC-55, SMC-58, SMC-59	SMC-61	SMC-1, SMC-5, SMC-7, SMC-14, SMC-15	





TABLE 1-11. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Flood	SMC-4, SMC-6, SMC-8, SMC-9, SMC-10, SMC-11, SMC-12, SMC-13, SMC-18, SMC-20, SMC-22, SMC-25, SMC-26, SMC-27, SMC-28, SMC-29, SMC-30, SMC-32, SMC-34, SMC-38, SMC-39, SMC-40, SMC-41, SMC-42, SMC-68, SMC-69	SMC-3, SMC-4, SMC-16, SMC-17, SMC-23, SMC-30, SMC-35, SMC-36, SMC-37, SMC-38, SMC-39, SMC-43, SMC-44, SMC-54	SMC-2, SMC-8, SMC-19, SMC-29, SMC-30, SMC-36, SMC-37, SMC-38, SMC-39, SMC-68	SMC-26, SMC-29, SMC-30, SMC-31, SMC-32, SMC-38, SMC-39	SMC-1, SMC-5, SMC-7, SMC-14, SMC-15, SMC-16, SMC-17, SMC-21, SMC-27, SMC-39, SMC-68	SMC-3, SMC-23, SMC-29, SMC-30, SMC-33, SMC-38, SMC-39, SMC-43, SMC-44, SMC-54, SMC-69
Earthquake	SMC-8, SMC-9, SMC-10, SMC-11, SMC-12, SMC-13, SMC-18, SMC-20, SMC-22, SMC-25, SMC-45, SMC-49, SMC-50, SMC-68	SMC-3, SMC-16, SMC-17, SMC-23, SMC-46, SMC-47, SMC-54	SMC-2, SMC-8, SMC-19, SMC-48, SMC-68		SMC-1, SMC-5, SMC-7, SMC-14, SMC-15, SMC-16, SMC-17, SMC-21, SMC-68	SMC-3, SMC-23, SMC-46, SMC-47, SMC-54
Landslide	SMC-4, SMC-6, SMC-8, SMC-9, SMC-10, SMC-11, SMC-12, SMC-13, SMC-18, SMC-20, SMC-22, SMC-25, SMC-26, SMC-51, SMC-52, SMC-56, SMC-68	SMC-3, SMC-4, SMC-16, SMC-17, SMC-23, SMC-24, SMC-53, SMC-54	SMC-2, SMC-8, SMC-19, SMC-68	SMC-24, SMC-26, SMC-51, SMC-52, SMC-53	SMC-1, SMC-5, SMC-7, SMC-14, SMC-15, SMC-16, SMC-17, SMC-21, SMC-68	SMC-3, SMC-23, SMC-53, SMC-54





TABLE 1-11. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Severe Weather	SMC-4, SMC-6, SMC-9, SMC-10, SMC-11, SMC-12, SMC-13, SMC-18, SMC-20, SMC-22, SMC-25, SMC-26, SMC-27, SMC-28, SMC-29, SMC-30, SMC-32, SMC-34, SMC-38, SMC-39, SMC-40, SMC-51, SMC-52, SMC-56, SMC-68, SMC-69	SMC-3, SMC-4, SMC-16, SMC-17, SMC-23, SMC-29, SMC-30, SMC-38, SMC-39, SMC-43, SMC-44, SMC-53, SMC-54	SMC-2, SMC-8, SMC-19, SMC-29, SMC-30, SMC-38, SMC-39, SMC-68	SMC-26, SMC-29, SMC-30, SMC-31, SMC-32, SMC-38, SMC-39, SMC-51, SMC-52, SMC-53	SMC-1, SMC-5, SMC-7, SMC-14, SMC-15, SMC-16, SMC-17, SMC-21, SMC-27, SMC-68	SMC-3, SMC-23, SMC-29, SMC-30, SMC-33, SMC-38, SMC-39, SMC-43, SMC-44, SMC-53, SMC-54, SMC-69
Tsunami	SMC-4, SMC-6, SMC-8, SMC-9, SMC-10, SMC-11, SMC-12, SMC-13, SMC-18, SMC-20, SMC-22, SMC-25, SMC-26, SMC-51, SMC-52, SMC-65, SMC-66, SMC-68	SMC-3, SMC-4, SMC-16, SMC-17, SMC-23, SMC-53, SMC-54, SMC-65	SMC-2, SMC-8, SMC-19, SMC-66, SMC-68	SMC-26, SMC-31, SMC-51, SMC-52, SMC-53	SMC-1, SMC-5, SMC-7, SMC-14, SMC-15, SMC-16, SMC-17, SMC-21, SMC-66, SMC-68	SMC-3, SMC-23, SMC-53, SMC-54
Wildfire	SMC-8, SMC-9, SMC-10, SMC-11, SMC-12, SMC-13, SMC-18, SMC-20, SMC-22, SMC-25, SMC-56, SMC-62, SMC-63, SMC-64, SMC-68	SMC-3, SMC-16, SMC-17, SMC-23, SMC-24, SMC-62, SMC-64	SMC-2, SMC-8, SMC-19, SMC-23, SMC-63, SMC-64, SMC-68	SMC-24, SMC-62, SMC-64	SMC-1, SMC-5, SMC-7, SMC-14, SMC-15, SMC-16, SMC-17, SMC-21, SMC-68	



TABLE 1-11. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Human-Caused Hazards	SMC-1, SMC-6, SMC-7, SMC-12, SMC-13, SMC-14, SMC-18, SMC-25, SMC-68	SMC-3, SMC-9, SMC-10, SMC-11, SMC-13, SMC-15, SMC-17, SMC-18, SMC-20, SMC-22, SMC-	SMC-1, SMC-2, SMC-5, SMC-13, SMC-19, SMC-68	SMC-13, SMC-67	SMC-13, SMC-14, SMC-16, SMC-17, SMC-21, SMC-25, SMC-68	SMC-3, SMC-11, SMC-13, SMC-15, SMC-20, SMC-67

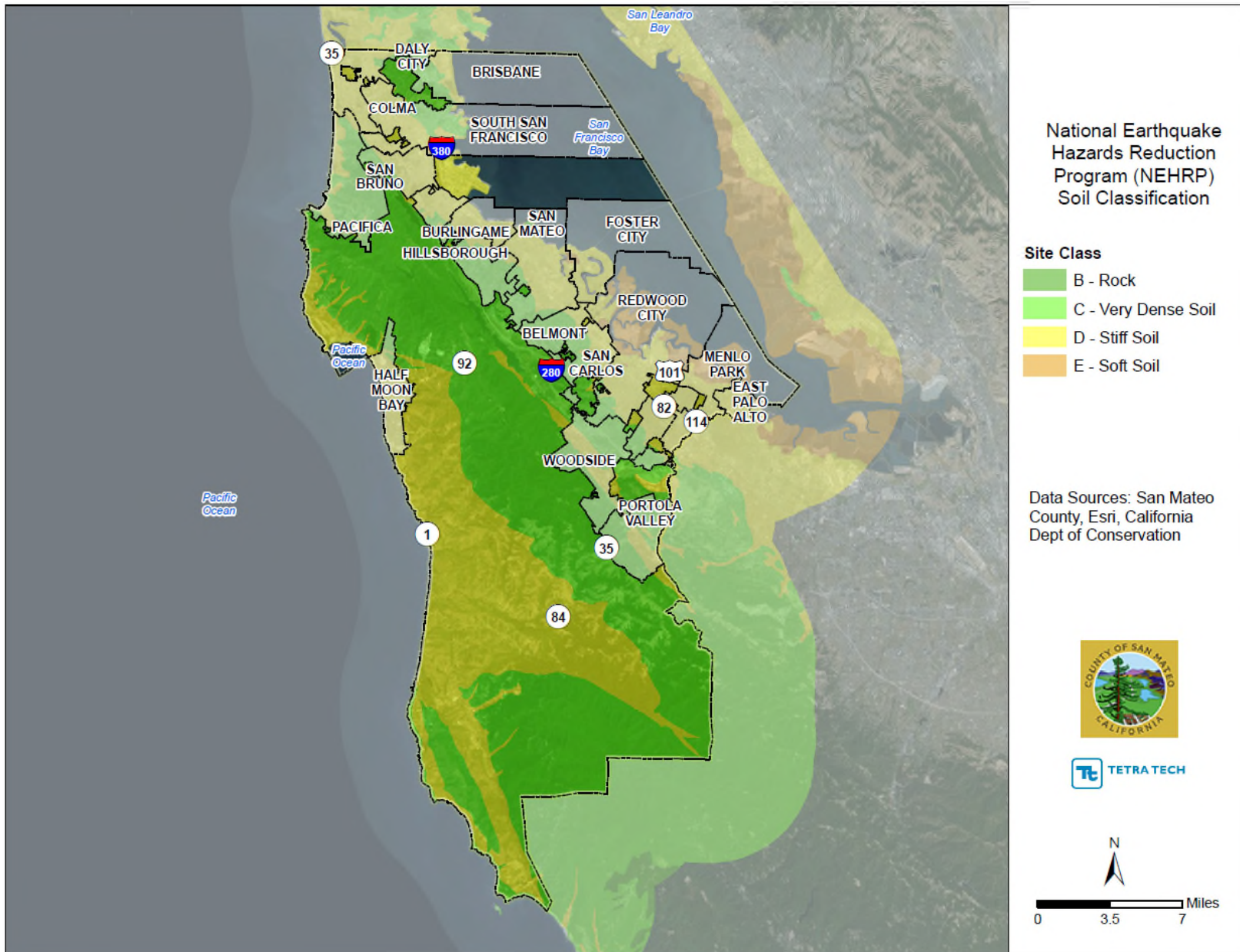
^a. See the introduction to this volume for explanation of mitigation types.

1.9 Future Needs to Better Understand Risk/Vulnerability

The following is a list of potential projects to help better understand the risk and vulnerabilities in the unincorporated portions of the County:

- ❖ Complete sea level analysis for both bayside and Coastside areas.
- ❖ Complete maps of the following:
 - FEMA flood zones for Coastside areas
 - Impact of sea level rise on critical facilities
 - Tsunami inundation zones
 - Fault lines in County GIS program
 - Repetitive urban flooding locations
- ❖ Conduct watershed analysis as necessary to address data needs that will be essential towards the development of drainage solutions in flood vulnerable areas.







Chapter 2. Town of Atherton

2.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact	Alternate Point of Contact
Brad S. Mills, Sergeant	Joe Wade, Lieutenant
83 Ashfield Road	83 Ashfield Road
Atherton, Ca 94027	Atherton, Ca 94027
Telephone: 650-688-6500 ext. 543	Telephone: 650-688-6500 ext. 506
e-mail Address: bmills@ci.atherton.ca.us	e-mail Address: jwade@ci.atherton.ca.us

2.2 Jurisdiction Profile

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

- ❖ **Date of Incorporation**—1923
- ❖ **Current Population**—7,150 (as of January 1, 2016 – CA DOF)
- ❖ **Population Growth**—Based on the data tracked by the California Department of Finance, the Town of Atherton has experienced a decrease in population of 1% (July 2010 to July 2015). The California Department of Finance projects 4% growth from 2010 to 2020 and 4% growth from 2020 to 2030.
- ❖ **Location and Description**—The Town of Atherton is a small city in San Mateo County, California. The Town of Atherton covers six (6) square miles and is situated on the San Francisco Peninsula midway between San Francisco and San Jose. The Town employs 37 full-time employees as well as a number of part-time and contract employees. While the Town provides local police services, the fire services are supplied by the Menlo Park Fire Protection District. The Town of Atherton is bordered on the North by Redwood City and the Town of Woodside, and is bordered on the south by Menlo Park and East Palo Alto.
- ❖ **Brief History**—In 1866, The Town of Atherton was known as Fair Oaks, and was a flag stop on the California Coast for the Southern Pacific Railroad between San Francisco and San Jose for the convenience of the owners of large estates living north of Menlo Park. The entire area was called Menlo Park. It was part of the Rancho de las Pulgas, which is now southern San Mateo County. In 1923, Menlo Park wanted to incorporate its lands to include Fair Oaks. During a meeting of the representatives of the two communities, the Fair Oaks property owners maintained their community as a strictly residential area and they would incorporate independently. Both groups rushed to Sacramento but the Fair Oaks committee arrived first. It was at that time they realized that they could not keep the name Fair Oaks, as it was already the name of a town near Sacramento. It was decided to honor Faxon Dean Atherton who had been one of the first property owners in the south peninsula and name the town for him. The Town of Atherton was incorporated on September 12, 1923.



- ❖ **Climate**—Atherton, along with most of the San Francisco Bay Area, enjoys a mild Mediterranean climate with warm, dry summers and cool, relatively wet winters. December is generally the coolest month and July is the warmest month. The annual average rainfall is just over 20 inches, with 90% of that falling November to March. The average year-round temperature is 58° F. Humidity averages 43 to 94 %. Prevailing winds are from the generally from the west or north/west and average 4 mph.
- ❖ **Governing Body Format**—The Town of Atherton is governed by a five-member Town Council. The eight (8) town departments: City Manager’s Office, Police, Finance, Public Works, Building, Planning, Library and Parks Department. The Town has nine (9) Committees and Commissions that report to the Town Council. The Town Council assumes responsibility for the adoption of this plan; the City Manager will oversee its implementation.
- ❖ **Development Trends**—Current building trends are low to moderate within the Town of Atherton, as many residential lots are occupied. There are no businesses within the Town of Atherton. The Town is in the planning process of a new Town Civic Center that will include a new Police Department, City Hall, Public Work Building, and Library.

2.3 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 2-1. An assessment of fiscal capabilities is presented in Table 2-2. An assessment of administrative and technical capabilities is presented in Table 2-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 2-4. Classifications under various community mitigation programs are presented in Table 2-5. An assessment of education and outreach capabilities is presented in Table 2-6.

TABLE 2-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code <i>Comment:</i> ATH Ord. 601 § 2, 2013; Ord. 590 § 2 (part), 2010 (Title 15)	Yes	No	Yes
Zoning Code <i>Comment:</i> ATH Ord. 582 § 1 (Exh. A) (part), 2009	Yes	No	No
Subdivisions <i>Comment:</i> ATH Ord. 441 § 1 (part), 1988	Yes	No	No
Stormwater Management <i>Comment:</i> ATH Ord. 481 (part), 1994/Chapter 8.5	Yes	No	Yes
Post-Disaster Recovery <i>Comment:</i> Emergency Operations Plan V.1 & V.2, 2000	Yes	No	No
Real Estate Disclosure <i>Comment:</i> CA. State Civil Code 1102 requires full disclosure on Natural hazard Exposure of the sale/re-sale of any and all real property.	No	No	Yes
Growth Management <i>Comment:</i> (Ord. 441 § 1 (part), 1988)	Yes	No	Yes





TABLE 2-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Site Plan Review Comment: Conducted by the Building Department, Public Works, Planning and Fire Department.	Yes	No	No
Environmental Protection Comment: ATH Ord. 317 Ch. 12(b) § 1, 1973	Yes	No	Yes
Flood Damage Prevention Comment: ATH Ord. 494 (part), 1996	Yes	No	No
Emergency Management Comment: ATH Ord. 318 § 1, 1973	Yes	No	No
Climate Change Comment:	No	No	No
Other Comment: Chapter 8.54 (Grading, Erosion, and Sediment Control)	Yes	No	No
General or Comprehensive Plan <i>Is the plan equipped to provide linkage to this mitigation plan? NO.</i> Comment: Town of Atherton General Plan, 2016 Housing Element Update Plan, 2014	Yes	No	Yes
Capital Improvement Plan <i>What types of capital facilities does the plan address? Traffic safety, street sign and street light program, El Camino Real and Almendral, ADA improvements, channel monitoring, bridge inspection program, facility repairs, Atherton Library, Atherton Civic Center, pavement management projects, bicycle/pedestrian plan program projects, drainage improvement projects, park improvement projects, etc.</i> <i>How often is the plan updated? Annually, in budget. Considered on a 5-year scale, per FY 2015/16 budget.</i> Comment:	Yes (In budget)	No	No
Floodplain or Watershed Plan Comment:	No	No	No
Stormwater Plan Comment: Stormwater Drainage Master Plan Updated in April 2015	Yes	No	No
Habitat Conservation Plan Comment:	No	No	No
Economic Development Plan Comment:	No	No	No
Shoreline Management Plan Comment: Town of Atherton has no shoreline	No	No	No
Community Wildfire Protection Plan Comment:	No	No	No
Forest Management Plan Comment: Menlo Park Fire Protection District	No	Yes	No



TABLE 2-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Climate Action Plan <i>Comment:</i> Climate Action Plan (2016)	Yes	No	No
Other <i>Comment:</i> Town-wide Drainage Master Plan, April 2015	Yes	No	No
Comprehensive Emergency Management Plan <i>Comment:</i> Emergency Operations Plan V.1 & V.2, 2000	Yes	No	Yes
Threat & Hazard Identification & Risk Assessment <i>Comment:</i>	No	No	No
Post-Disaster Recovery Plan <i>Comment:</i>	No	No	No
Continuity of Operations Plan <i>Comment:</i>	No	No	No
Public Health Plan <i>Comment:</i>	No	Yes	No
Other <i>Comment:</i> Bike Pedestrian Master Plan, Civic Center Project, Holbrook-Palmer Park Master Plan, Neighborhood Traffic Management Program	Yes	No	No

TABLE 2-2. FISCAL CAPABILITY

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



TABLE 2-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Public Works Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Building/Planning/Public Works
Planners or engineers with an understanding of natural hazards	Yes	Building/Public Works
Staff with training in benefit/cost analysis	Yes	Building/Planning/Public Works
Surveyors	Yes	Public Works
Staff capable of making substantial damage estimates	Yes	Building/Planning/Public Works
Personnel skilled or trained in GIS applications	Yes	Building/Planning/Public Works
Scientist familiar with natural hazards in local area	Yes	Building/Planning/Public Works
Emergency manager	Yes	City Manager
Grant writers	Yes	Consultants

TABLE 2-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	7-11-75
When did the Flood Insurance Rate maps become effective?	10-16-12
What local department is responsible for floodplain management?	Building Department
Who is your floodplain administrator? (department/position)	Chief Building Official
<ul style="list-style-type: none"> ▪ Is this a primary or auxiliary role? 	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	2013 (as part of IBC/CBC building code standards adoption)
<ul style="list-style-type: none"> ▪ Does your floodplain management program meet or exceed minimum requirements? 	Meets minimum NFIP standards for community with no mapped SFHA
When was the most recent Community Assistance Visit or Community Assistance Contact?	Unknown – No SFHA
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
<ul style="list-style-type: none"> ▪ If so, what type of assistance/training is needed? 	N/A
Does your jurisdiction participate in the Community Rating System (CRS)?	No
<ul style="list-style-type: none"> ▪ If so, is your jurisdiction seeking to improve its CRS Classification? 	No
<ul style="list-style-type: none"> ▪ If not, is your jurisdiction interested in joining the CRS program? 	No





TABLE 2-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
How many Flood Insurance policies are in force in your jurisdiction?	53
▪ What is the insurance in force?	\$17,206,000
▪ What is the premium in force?	\$21,439
How many total loss claims have been filed in your jurisdiction?	6
▪ How many claims were closed without payment/are still open?	1
▪ What were the total payments for losses?	\$235,254.45

TABLE 2-5. COMMUNITY CLASSIFICATIONS

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

TABLE 2-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Lieutenant for PD or Assistant to The City Manager for Town issues.
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website?	No
Do you utilize social media for hazard mitigation education and outreach?	Yes
▪ If yes, please briefly describe.	News Flash and SM Alerts
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	The Town participates as a member of the San Mateo County Emergency Managers Association which includes topics on hazard mitigation Countywide.
Do you have any other programs already in place that could be used to communicate hazard-related information?	No
Do you have any established warning systems for hazard events?	Yes
▪ If yes, please briefly describe.	Emergency Siren for local damn breach/fire within the area of Walsh Road (upper west side of Atherton). www.smcalert.info . SMC Alert is an opt-in countywide notification system that can alert mobile devices, landlines and send emails



2.4 Integration with Other Planning Initiatives

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

2.4.1 Existing Integration

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

- ❖ **General Plan**—The Town’s General Plan integrates hazard mitigation through the consideration of hazards most likely to impact the County. Seismic Hazards are considered in the Community Safety Element, and the importance of open space is described through the Open Space and Conservation Element.

2.4.2 Opportunities for Future Integration

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

- ❖ **Public Outreach**—The Town of Atherton 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.

2.5 Jurisdiction-Specific Natural Hazard Event History

Table 2-6 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 2-6. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Earthquake	DR-845	10-18-1989	Unknown
Severe Storm	N/A	12-23-2012	Unknown
Severe Storm	DR-1203	2-9-1998	Unknown
Freezing	DR-894	2-11-1991	Unknown

2.6 Jurisdiction-Specific Vulnerabilities

Repetitive loss records are as follows:

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



Other noted vulnerabilities include:

- ❖ The Town of Atherton has one main water channel, “The Atherton Channel.” This runs from the Bear Gulch Reservoir on the most western end of Town to the eastern border with the North Fair Oaks area, an unincorporated area of San Mateo County. This channel occasionally overflowed at Walsh Road and Broadachers Road. The over flow has caused a road closures at Walsh Road and Alameda de las Pulgas Avenue. During one overflow event it sent water into Los Lomas School causing damage to several classrooms. This channel has also overflowed along Marsh Road, between Middlefield Road and North Fair Oaks, causing road closures and hazardous driving conditions.
- ❖ Walsh Road is a cul-de-sac the runs west from Alameda de las Pulgas to Interstate 280 and to the Bear Gulch Reservoir. Walsh Road has multiple smaller cul-de-sacs along its route. Walsh Road is common referred to as the “Walsh Area.” The Walsh Area is a rural wooded area with moderate slopes and large scale homes. Due to its limited ingress and egress the Town and the Menlo Park Fire District have established a ‘memo of understanding’ with the owners of the Bear Gulch Reservoir (California Water Service Group) and a nearby private landowner to allow residents to evacuate through his property and exit onto Moore Road in the unincorporated area of San Mateo County. The Walsh Area residents are alerted to evacuate via and audible siren located at the Bear Gulch Reservoir.

2.7 Hazard Risk Ranking

Table 2-7 presents the ranking of the hazards of concern.

TABLE 2-7. HAZARD RISK RANKING

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

2.8 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 2-8 lists the actions that make up the Town of Atherton hazard mitigation action plan. Table 2-9 identifies the priority for each action. Table 2-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.



TABLE 2-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<p>AT-1 – Require preparation of site-specific geologic or geotechnical reports for development and redevelopment proposals in areas subject to earthquake-induced landslides or liquefaction as mandated by the State Seismic Hazard Mapping</p> <p>Act in selected portions of the Bay Area where these maps have been completed, and condition project approval on the incorporation of necessary mitigation measures related to site remediation, structure and foundation design, and/or avoidance.</p>						
Existing	Earthquake	1,2,4,6,7	Building	Low	Permit Fees	On-going
<p>AT-2 – Review new development proposals to ensure that they incorporate required and appropriate fire mitigation measures, including adequate provisions for occupant evacuation and access by emergency response personnel and equipment. Develop a clear regulatory framework at the local level to manage the wildland-urban-interface consistent with sustainable community principles.</p>						
Existing	Wildfire	1,2,4,5,6,7,8	Building	Low	Permit Fees	On-going
<p>AT-3 – Continue maintenance and testing of the Walsh Road Evacuation Siren for local dam breach and/or local fire within the west side of Alameda de las Pugals, in conjunction with the Fire Department and the California Water Service.</p>						
Existing	Wildfire, Dam Failure	1,9	Police Department	Low	General Funds	On-going
<p>AT-4 – Update the Heritage Tree Ordinance to allow/encourage the removal dangerous trees, such as Eucalyptus trees, along with an educational component.</p>						
New	Wildfire, Severe Weather	1,7,11	Building	Low	Staff Time, General Funds	Short-term
<p>AT-5 – Establish and enforce requirements for new development so that site-specific designs and source-control techniques are used to manage peak stormwater runoff flows and impacts from increased runoff volumes.</p>						
Existing	Flood, Severe Weather	4,6,7	Public Works	Low	Permit Fees	On-going
<p>AT-6 – Establish and enforce provisions (single family homes) that geotechnical and soil-hazard investigations be conducted and filed to prevent grading from creating unstable slopes, and that any necessary corrective actions be taken prior to development approval.</p>						
Existing	Earthquake, Severe Weather	6, 7	Public Works/Building	Low	Permit Fees	On-going
<p>AT-7 – Establish and enforce grading, erosion, and sedimentation ordinances by requiring, under certain conditions, grading permits and plans to control erosion and sedimentation prior to development approval.</p>						





TABLE 2-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	All Hazards	1,6	Public Works/Building	Low	Permit Fees	On-going

AT-8 – Establish and enforce provisions under the creek protection, storm water management, and discharge control ordinances designed to control erosion and sedimentation.

Existing	Flood	6	Public Works	Low	Permit Fees	Short-term
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AT-9 – Continual yearly clearing of the Atherton Channel, along with current structural integrity improvements along the section of Marsh Road from Middlefield Road to Atherton border beginning June 2016.

Existing	Flood	4,6	Public Works	High	CIP	Short-term
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AT-10 – Develop Continuity of Operations/Continuity of Government plans and ensure force protection measures are in place in relation to vulnerable critical facilities within the Town, such as The Town Civic Center.

Existing	All Hazards	4, 7	Community Development	High	General Funds/Actively Seeking Funds	Mid-term
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Action G-1—Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.

Existing	All	1, 3, 4, 5, 6, 7, 11	Jurisdictions	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
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Action G-2—Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.

New and existing	All	All	Jurisdictions	Low	General Fund	Long-term
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Action G-3—Continue to maintain the minimum National Flood Insurance Program participation requirement for communities with no mapped Special Flood Hazard Area.

New and existing	Flooding	2, 3, 5, 6, 8	Atherton	Low	General Fund	Short-term and ongoing
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Action G-4—Where feasible, implement a program to record high water marks following high-water events.

New and existing	Flooding, Severe Weather	1, 3, 4, 5, 6	Jurisdictions	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
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Action G-5—Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.

New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	Jurisdictions	Low	General Fund	Short-term
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TABLE 2-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action G-6 —Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.						
New and existing	All	2, 3, 4, 5, 6, 7, 8, 10, 11	Jurisdictions	Low	Operating Budgets	Ongoing
Action G-7 — Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and existing	All	All	Jurisdictions	Low	General Fund	Short- and long-term
Action G-8 — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All	1, 4	Jurisdictions	Low	Staff Time, General Funds	Short-term

TABLE 2-9. MITIGATION STRATEGY PRIORITY SCHEDULE

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

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





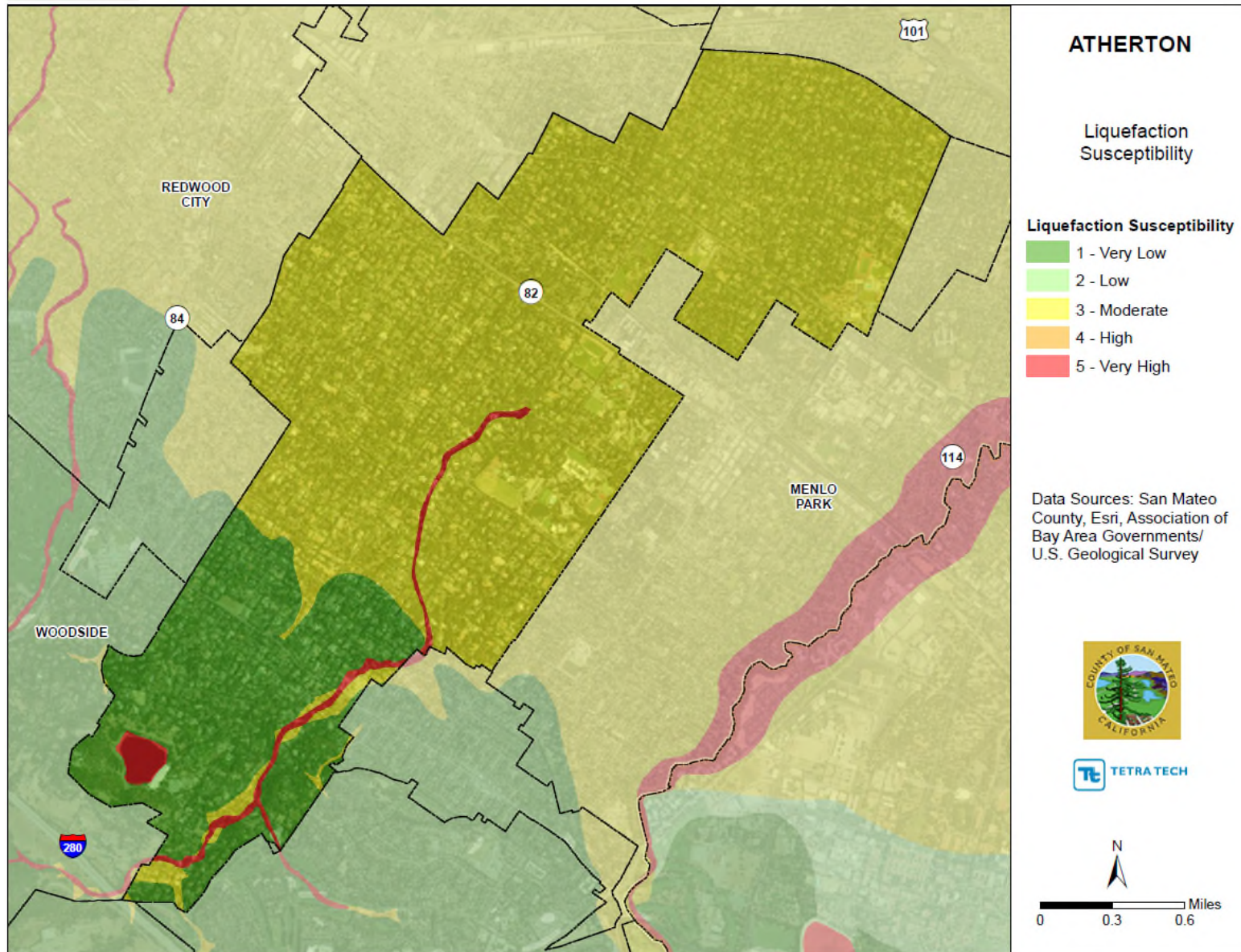
TABLE 2-10. ANALYSIS OF MITIGATION ACTIONS

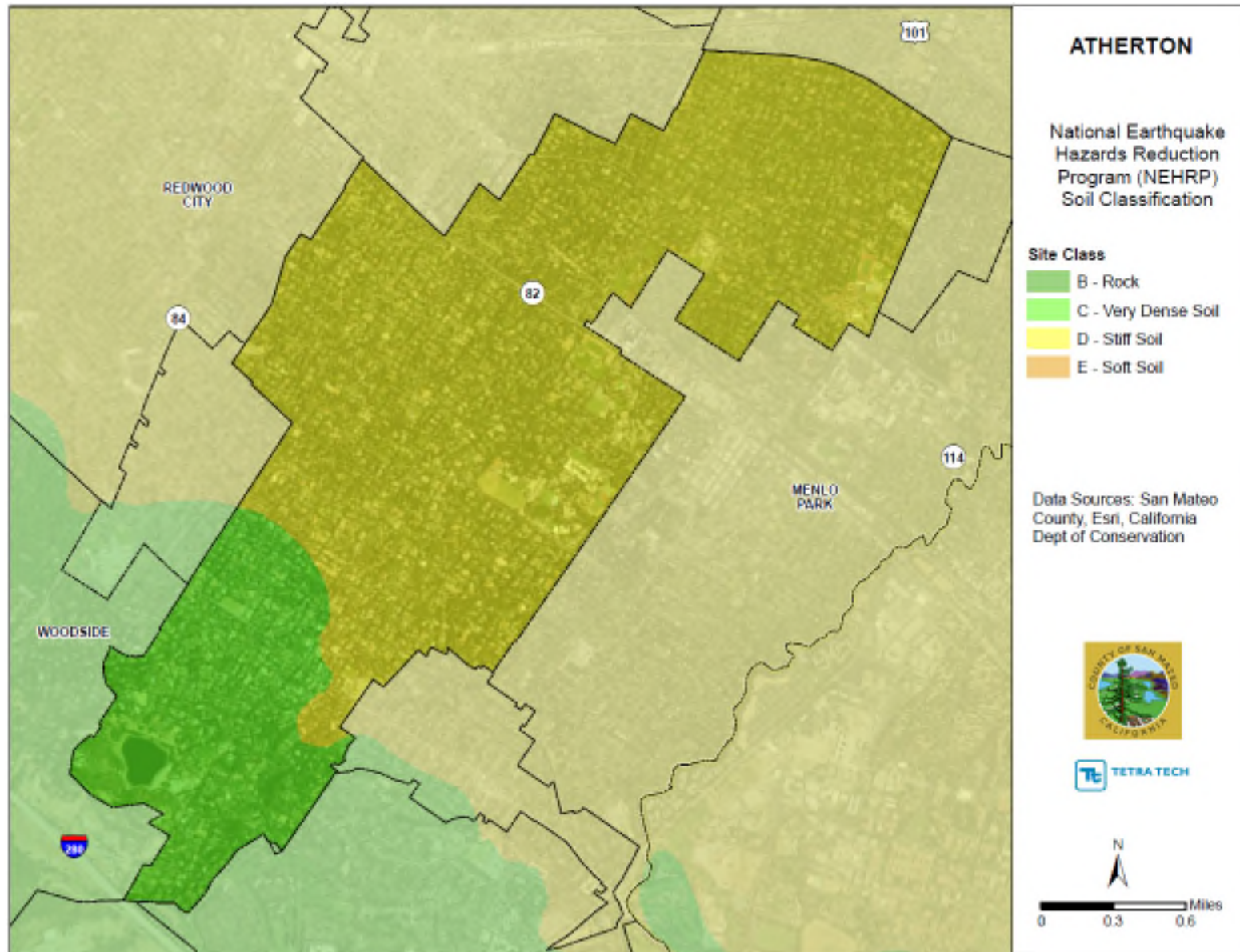
Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure					AT-3	
Drought	AT-12					
Earthquake	AT-1, AT-3, AT-2, AT-4, AT-9	AT-1, AT-3, AT-2, AT-4, AT-9			AT-6	AT-6
Stormwater	AT-3, AT-8, AT-9	AT-3, AT-8, AT-9			AT-6	AT-6
Landslide	AT-3, AT-8, AT-9	AT-3, AT-8, AT-9		AT-7		
Severe weather	AT-3, AT-8, AT-9			AT-7	AT-6	AT-6
Tsunami						
Wildfire	AT-4, AT-4	AT-2, AT-4	AT-4			

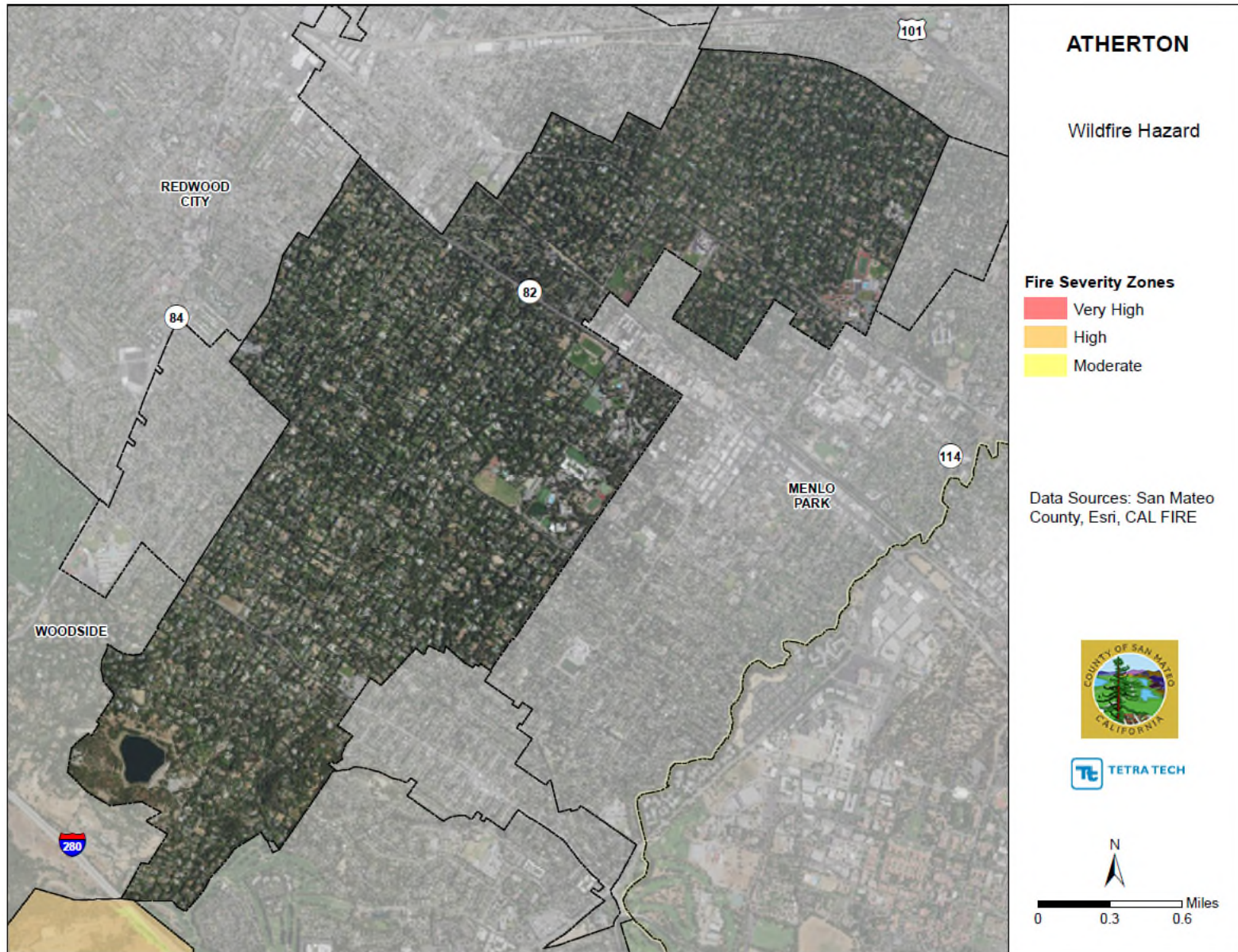
^a. See the introduction to this volume for explanation of mitigation types.

2.9 Additional Comments

- ❖ The Town of Atherton is a residential only community, with several schools.
- ❖ The Town of Atherton has no listed flood plains as depicted in the FEMA Flood Insurance Rate Map.
- ❖ The Town of Atherton has no coastal lands and is not subject to Tsunami activity.
- ❖ The Town of Atherton is currently working towards building a new Town Civic Center incorporating a new Police Department, Town Hall, Council Chambers, EOC and Library. The building phase is planned to begin in May of 2017. More information can be found at <http://ca-atherton.civicplus.com/index.aspx?NID=290>.
- ❖ The Bear Gulch Reservoir Dam is privately owned by the California Water Service Group. They are responsible for the care, maintenance and all infrastructure upgrades, as well as hazard mitigations with regard to the dam and California Water Service property.









Chapter 3. City of Belmont

3.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

Captain Pat Halleran, Emergency Coordinator
One Twin Pines Lane, Suite 230
Belmont, CA 94002
Telephone: 650-595-7430
e-mail Address: phalleran@belmont.gov

Alternate Point of Contact

Matt Lucett, Management Analyst
One Twin Pines Lane, Suite 230
Belmont, CA 94002
Telephone: 650-595-7437
e-mail Address: mlucett@belmont.gov

3.2 Jurisdiction Profile

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

- ❖ **Date of Incorporation**— 1926
- ❖ **Current Population**— 27,834 (as of January 1, 2016 – CA DOF)
- ❖ **Population Growth**—According to the state Department of Finance, it is estimated that Belmont experienced a 0.7% increase in population between 2014 (26,573) & 2015 (26,748). Although 2020 & 2030 projections are not available for Belmont, the Department of Finance projects a 3.2% increase in population within San Mateo County between 2015 & 2020 and a 5.9% increase between 2020 & 2030.
- ❖ **Location and Description**— Known for its wooded hills, views of the San Francisco Bay and stretches of open space, Belmont is a quiet residential community in the midst of the culturally and technologically rich Bay Area. Belmont is located in San Mateo County, half-way between San Francisco and San Jose. The city is within easy driving distance of the Pacific Ocean, three major airports, and major employment centers including San Francisco, Silicon Valley and the East Bay. Belmont borders the cities of San Mateo, San Carlos and Redwood City as well as unincorporated San Mateo County.
- ❖ **Brief History**— Since its incorporation in 1926, Belmont has grown from a small town of less than 1,000 residents to a community of over 26,000. Much of the city’s population and housing growth occurred during the 1950s and 1960s during the post-war periods.
- ❖ **Climate**— The City of Belmont enjoys the San Francisco Bay Area’s Mediterranean-style climate with mild temperatures during the summer months and cool temperatures during the winter months. The warmest month of the year is July with an average maximum temperature of 80.80 degrees Fahrenheit while to coldest month is in December with an average minimum temperature of 38.60 degrees Fahrenheit. The annual average precipitation is 20.16 inches, with the wettest month of the year being January with an average rainfall of 4.20 inches.
- ❖ **Governing Body Format**—The City of Belmont is governed by a five-member city council elected to four-year terms. The council also serves as the governing body of the Belmont Fire Protection



District, a subsidiary district providing fire services to Belmont and the Harbor Industrial Area (HIA) located in unincorporated San Mateo County. Other departments within the city include Administrative Services, Community Development, Police and Public Works. The city has two commissions: Planning and Parks & Recreation, both of which make recommendations to the council in their respective areas. The City Council assumes responsibility for the adoption of this plan; and the city’s designated Emergency Management Coordinator will oversee its implementation.

- ❖ **Development Trends**— Since its incorporation in 1926, Belmont has grown from a small town of less than 1,000 to a community of 26,748 (2015 Department of Finance estimate). Much of the City’s population and housing growth occurred during the 1950s and 1960s during the post-war periods. Most of the residential neighborhoods are found on the hillsides with many open spaces and parks.

With much of the city currently “built out”, or developed, and with the preservation of open space a priority, undeveloped land available for development is limited. Most of the development over the next 20 years is likely to take place on sites that are currently vacant and/or on sites that are currently underutilized. Additionally, future development may come from expanded development of sites with existing structures or redevelopment of sites and structures that come to the end of their useful life over the next 20 years. Most of the vacant and underutilized sites in the Belmont Planning Area tend to be clustered in the eastern half of the city, especially in the Belmont Village Priority Development Area (PDA), along the El Camino Real transportation corridor and east of Highway 101. It is likely that much of the growth and change in Belmont over the next 20 years will occur in these areas. In August 2014, the city initiated a multi-year process of updating their General Plan and further details on develop trends are addressed in the Land Use Element of the draft plan.

3.3 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 3-1. An assessment of fiscal capabilities is presented in Table 3-2. An assessment of administrative and technical capabilities is presented in Table 3-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 3-4. Classifications under various community mitigation programs are presented in Table 3-5. An assessment of education and outreach capabilities is presented in Table 3-6.

TABLE 3-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code	Yes	Yes	Yes

Comment: Adopted City Ordinance #1073 on 12-12-13/Other Jurisdiction includes the California Building Standards Commission





TABLE 3-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Zoning Code <i>Comment: Adopted City Ordinance #360 on 11-30-93/ City required to update zoning code to maintain General Plan consistency. Upon adoption of 2035 Belmont Comprehensive GP Update in first quarter 2017, the Belmont Zoning Code will be comprehensively updated accordingly. Various State Assembly bills or Federal Legislation enacted require local compliance (exp. Secondary Dwelling Units, Wireless Communications Facilities); Belmont complies as appropriate with these mandates.</i>	Yes	No	Yes
Subdivisions <i>Comment: City's Subdivision Ordinance Adopted 1985; amended periodically. Subject to on-going compliance and consistency with State of California Subdivision Map Act.</i>	Yes	No	Yes
Stormwater Management <i>Comment: Referenced in City Municipal Code Chapter 9(Grading) & Chapter 21 (Sewers and Sewage Disposal). City is also part of the San Mateo County Pollution Prevention Program(STOPPP). Other jurisdiction includes the State and Regional Water Quality Control Board.</i>	Yes	Yes	Yes
Post-Disaster Recovery <i>Comment:</i>	No	No	No
Real Estate Disclosure <i>Comment:</i>	No	No	Yes
Growth Management <i>Comment: Addressed in 2035 Belmont Comprehensive GP Update – see below.</i>	Yes	No	No
Site Plan Review <i>Comment: Site Plan Reviews facilitated primarily through Community Development and Public Works. California Building Code Section 107.2.1 Information on construction documents. Construction document shall be of sufficient clarity to indicate the location, nature and extent of the work proposed and show in detail that it will conform to the provisions of this code and relevant laws, ordinances, rules and regulations, as determined by the building official.</i>	Yes	No	Yes
Environmental Protection <i>Comment: City Municipal Code, Municipal Regional Permit (MRP) with Bay area Regional Water Quality Control Board, CEQA documentation, mitigations and Conditions of Approval</i>	Yes	Yes	Yes
Flood Damage Prevention <i>Comment: FEMA policy adopted in Belmont Municipal Code Sec. 7-208 on 11/27/01</i>	Yes	Yes	Yes
Emergency Management <i>Comment: Belmont Emergency Operations Plan</i>	Yes	Yes	Yes
Climate Change <i>Comment: To be addressed in Belmont Climate Action Plan; adoption first quarter 2017. See below.</i>	Yes	Yes	Yes
Other <i>Comment:</i>			
General or Comprehensive Plan <i>Is the plan equipped to provide linkage to this mitigation plan? Yes</i>	Yes	No	Yes





TABLE 3-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Comment: 2035 Belmont Comprehensive General Plan Update under preparation; adoption in first quarter 2017.			
Capital Improvement Plan	Yes	No	No
<i>What types of capital facilities does the plan address? The CIP addresses Streets, Technology, Facilities, Sewer/Storm and Parks/Open Space.</i>			
<i>How often is the plan updated? Annually</i>			
Comment:			
Floodplain or Watershed Plan	Yes	Yes	Yes
Comment: Flood Insurance Rate Map (FIRM) adopted by FEMA			
Stormwater Plan	Yes	Yes	Yes
Comment: Stormwater Master Plan adopted by Council in 2009			
Habitat Conservation Plan	No	No	No
Comment:			
Economic Development Plan	Yes	No	No
Comment: Addressed in 2035 Belmont Comprehensive GP Update – see above.			
Shoreline Management Plan	No	No	No
Comment:			
Community Wildfire Protection Plan	No	No	No
Comment:			
Forest Management Plan	No	No	No
Comment:			
Climate Action Plan	Yes	No	Yes
Comment: Draft Belmont CAP prepared; adoption will occur in conjunction with 2035 Belmont Comprehensive GP Update – see above.			
Other: Belmont Village Specific Plan	Yes	No	No
Comment: Belmont Village has been designated a “Priority Development Area (PDA)” by the Bay Area’s regional planning agency.			
Comprehensive Emergency Management Plan	Yes	No	No
Comment: Last revision June, 2000			
Threat & Hazard Identification & Risk Assessment	No	No	No
Comment: Was part of initial Hazard Mitigation Plan Annex with ABAG in 2005.			
Post-Disaster Recovery Plan	No	No	No
Comment:			
Continuity of Operations Plan	No	No	No
Comment:			
Public Health Plan	No	Yes	No
Comment: Public Health Department part of San Mateo County Health System			



TABLE 3-2. FISCAL CAPABILITY

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

TABLE 3-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Department of Public Works/City Engineer, PW Director, Sr. Civil Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Department of Public Works/All Engineering and Inspection personnel
Planners or engineers with an understanding of natural hazards	Yes	Department of Public Works/City Engineer, Sr. Civil Engineer
Staff with training in benefit/cost an analysis	Yes	Department of Finance/Deputy Finance Director and Controller (Add Note)
Surveyors	Yes	Department of Public Works/Sr. Civil Engineer
Staff capable of making substantial damage estimates	Yes	Permit Center & Department of Public Works, Chief Building Official and Sr. Civil Engineer
Personnel skilled or trained in GIS applications	Yes	Department of Information Technology/GIS Coordinator, Department of Public Works/Engineering Technician/Associate Civil Engineer
Scientist familiar with natural hazards in local area	No	Insert appropriate information
Emergency manager	Yes	Police Department/Captain
Grant writers	No	Insert appropriate information

TABLE 3-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	March 9, 1982
When did the Flood Insurance Rate maps become effective?	July 16, 2015 (Latest Maps)





TABLE 3-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
What local department is responsible for floodplain management?	Department of Public Works
Who is your floodplain administrator? (department/position)	Public Works Director
<ul style="list-style-type: none"> Is this a primary or auxiliary role? 	Primary
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	11/27/01
<ul style="list-style-type: none"> Does your floodplain management program meet or exceed minimum requirements? 	Exceeds
<ul style="list-style-type: none"> If so, in what ways? 	Belmont Ordinance adopted exceeds the minimum requirements. For example, building in Zone A shall be elevated 2 feet higher than adjacent grade. This is more than the 1 foot required by FEMA.
When was the most recent Community Assistance Visit or Community Assistance Contact?	September 9, 2010
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
<ul style="list-style-type: none"> If so, please state what they are. 	Insert appropriate information
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
<ul style="list-style-type: none"> If no, please state why. 	Insert appropriate information
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes
<ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	Staff may need continuous training to update their knowledge about most current requirements.
Does your jurisdiction participate in the Community Rating System (CRS)?	No
<ul style="list-style-type: none"> If so, is your jurisdiction seeking to improve its CRS Classification? 	N/A
<ul style="list-style-type: none"> If not, is your jurisdiction interested in joining the CRS program? 	Yes
How many Flood Insurance policies are in force in your jurisdiction?	110
<ul style="list-style-type: none"> What is the insurance in force? 	\$39,753,300
<ul style="list-style-type: none"> What is the premium in force? 	\$196,193
How many total loss claims have been filed in your jurisdiction?	12
<ul style="list-style-type: none"> How many claims were closed without payment/are still open? 	0
<ul style="list-style-type: none"> What were the total payments for losses? 	\$170,678





TABLE 3-5. COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	No		
Building Code Effectiveness Grading Schedule	No		
Public Protection	No		
Storm Ready	No		
Firewise	No		

TABLE 3-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes, PIO through Belmont Police Department
Do you have personnel skilled or trained in website development?	Yes, personnel within each city department as well as support through Information Technology Department
Do you have hazard mitigation information available on your website?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Dedicated web page linked under “About Belmont”
Do you utilize social media for hazard mitigation education and outreach?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Outreach/Education provided primarily through Nextdoor, Twitter, City Website and City Manager’s Weekly Update
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
<ul style="list-style-type: none"> If yes, please briefly specify. 	City of Belmont Planning Commission, Parks & Recreation Commission
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes, Limited
<ul style="list-style-type: none"> If yes, please briefly describe. 	Vegetation Management Program providing information on wildfire threat within community
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	SMC Alert in partnership with San Mateo County OES

3.4 Integration with Other Planning Initiatives

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



3.4.1 Existing Integration

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

- ❖ **Belmont General Plan**- Belmont’s 2035 General Plan Update which is currently under preparation with anticipated adoption expected in first quarter 2017, integrates the local hazard mitigation plan through the development of goals, policies and actions within the following elements:
 - **Safety**- is AB2140 compliant by referencing the city’s hazard mitigation plan and associated planning efforts and plan development, and addresses vulnerabilities including seismic and geologic, flooding (including dam inundation & sea level rise), hazardous materials, utilities, fires (urban & wildland) hazards.
 - **Land Use**- references updating area plans with creating design standards for the interface between open spaces and neighborhoods within the wildland urban interface zone, as well as the combination of geologic, flood, steep slope and wildland fire hazards within both the San Juan and Western Hills Area Plans.
 - **Parks, Recreation and Open Space**- addresses the continuation of programs to reduce the fire danger in open space areas and evaluating the necessity of a stream buffer overlay zone around Belmont Creek to facilitate management and protection of the waterway and developed areas
 - **Conservation**- addresses the reduction of wildland fire and pathogen threats (such as Sudden Oak Death) throughout the open space areas, restoration of Belmont Creek to enhance flood control, preservation/conservation of water resources in partnership with Mid-Peninsula Water District, maintaining and improving the reliability of the city’s storm drainage system to reduce flooding, and the development of a Climate Action Plan.
- ❖ **San Juan Hills Area Plan**- plan addresses unique conditions within the San Juan Hills area, including geologic (seismic, landslides, steep slope) and flooding as well as goals, objectives and policies addressing such conditions including adoption of geologic maps, requiring geologic investigations as part of applications for development and adherence to land use policies.
- ❖ **Western Hills Area Plan**- plan addresses unique conditions within the San Juan Hills area, including geologic (seismic, landslides, steep slope) and flooding as well as goals, objectives and policies addressing such conditions including adoption of geologic maps, requiring geologic investigations as part of applications for development and adherence to land use policies.
- ❖ **City of Belmont Emergency Operations Plan**—EOP includes a Threat Summary and Assessments chapter addressing earthquake, hazardous materials, flooding, dam failure, transportation accident, landslides, wildfire, oil spill, tsunami, civil unrest and national security emergency.

3.4.2 Opportunities for Future Integration

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

- ❖ **Notre Dame Dam Emergency Action Plan**- plan needs to be updated to better incorporate hazard mitigation goals, risk assessment and/or recommendations of the hazard mitigation plan.



- ❖ **San Juan Hills Plan**— update of plan is an implementation priority addressed in the Land Use Element of the General Plan and needs to better incorporate hazard mitigation goals, risk assessment and/or recommendations of this hazard mitigation plan, including the incorporation of the wildland-urban interface (WUI) threat.
- ❖ **Western Hills Area Plan**— update of plan is an implementation priority addressed in the Land Use Element of the General Plan and needs to better incorporate hazard mitigation goals, risk assessment and/or recommendations of this hazard mitigation plan, including the incorporation of the wildland-urban interface (WUI) threat.
- ❖ **City of Belmont Climate Action Plan**—Draft Climate Action Plan prepared and adoption will occur in conjunction with 2035 Belmont Comprehensive GP Update.
- ❖ **City of Belmont Emergency Operations Plan**—EOP needs to be updated to better incorporate goals, risk assessment and recommendations of this newly revised mitigation plan.

3.5 Jurisdiction-Specific Natural Hazard Event History

Table 3-6 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 3-6. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Storm	N/A	December 11, 2014	Unknown
Severe Storm	N/A	December 17-19, 2010	Unknown
Severe Storm	N/A	January 18-22, 2010	Unknown
Severe Storm	N/A	October 13, 2009	Unknown
Severe Storm	N/A	January 25-28, 2008	Unknown
Severe Storm	N/A	January 3-7, 2008	Unknown
Severe Storm	N/A	April 3-5, 2006	Unknown
Severe Storm	N/A	March 27, 2006	Unknown
Landslides (Courtland & Vine)	N/A	February, 2005	Unknown
Severe Storm	DR-1203	December 1997- February 1998	Unknown
Loma Prieta Earthquake	DR-845	October 17, 1989	\$37,662

3.6 Jurisdiction-Specific Vulnerabilities

Repetitive loss records are as follows:

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

Other noted vulnerabilities include:



- ❖ Drainage issue associated with creek which results in consistent flooding during heavy rains at Harbor Blvd. & Old County Road.
- ❖ Downed trees and landslides which occur during severe weather along the Ralston Avenue corridor which is the primary transportation thoroughfare through the city.

3.7 Hazard Risk Ranking

Table 3-7 presents the ranking of the hazards of concern.

TABLE 3-7. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	48	High
2	Wildfire	36	High
3	Severe Weather	33	High
4	Landslide	18	Medium
5	Flood	18	Medium
6	Dam Failure	6	Low
7	Drought	3	Low
8	Tsunami	0	Low

3.8 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 3-8 lists the actions that make up the City of Belmont hazard mitigation action plan. Table 3-9 identifies the priority for each action. Table 3-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 3-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
BM-1 —Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.						
Existing	All Hazards	4, 5, 7, 9, 10	Community Development	High	HMGP, PDM, FMA, CDBG-DR	Short-term
BM-2 —Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within Belmont.						
New and Existing	All Hazards	2, 4,	Community Development	Low	Staff Time, General Funds	On-going
BM-3 —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.						





TABLE 3-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	All Hazards	1, 2, 4, 11	Emergency Management (PD & FD)	Medium	Staff Time, General Funds	Short-term
BM-4 —Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and existing	All	All	Emergency Management	Low	General Fund	Short- and long-term
BM-5 —Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All	1, 4	Emergency Management	Low	Staff Time, General Funds	Short-term
BM-6 — Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP). This will be accomplished through the implementation of floodplain management programs that will, at a minimum, meet the requirements of the NFIP:						
<ul style="list-style-type: none"> • Enforcement of the flood damage prevention ordinance • Participate in floodplain identification and mapping updates 						
Provide public assistance/information on floodplain requirements and impacts.						
New and Existing	Flood	1, 4, 5, 9	Public Works	Low	Staff Time, General Funds	On-going
BM-7 —Work with building officials to identify ways to improve the jurisdictions’ BCEGS classification.						
New	Earthquake, Flood, Landslide, Severe weather, Tsunami, Wildfire	5, 6, 7, 10, 11	Community Development	Low	Staff Time, General Funds	Short-term
BM-8 —Develop a post-disaster recovery plan and a debris management plan.						
Existing	All Hazards	1, 2, 4, 9	Emergency Management	Medium	EMPG	Long-term
BM-9 —Participate in programs such as Firewise, StormReady and the Community Rating System.						
New	Dam Failure, Flood, Severe weather, Wildfire	1, 7	Emergency Management* and Public Works	Low	Staff Time, General Funds	Short-term
BM-10 —Develop a Soft Story Retrofit Program requiring property owners to seismically strengthen vulnerable residential buildings in Belmont modeled after City & County of San Francisco’s Program.						
Existing	Earthquake	1,2,3,4,7,10	Community Development*, Emergency Management (PD & Fire)	High	HMGP, PDM, FMA	Long-Term
BM-11 —Develop a Continuity of Operations Plan (COOP) to ensure the continuation of government functions following a significant event.						
New and Existing	All Hazards	1,2,10	Emergency Management	Low	Staff Time, General Funds	Short-Term





TABLE 3-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
BM-12 — Develop inventory of vulnerable populations (i.e. school children, elderly) within Belmont as well as a communications and resource allocation plan specific to target population.						
Existing	All Hazards	1,2,6,9	Emergency Management*, IT	Low	Staff Time, General Funds	Short-Term
BM-13 —Develop emergency preparedness outreach program targeting vulnerable populations (i.e. school children, elderly) within community.						
Existing	All Hazards	2,3,6,7,9,10	Emergency Management	Low	Staff Time, General Funds	Short-Term
BM-14 —Coordinate the dredging of Water Dog Lake to regain lost water storage capacity.						
Existing	Flooding, Dam Failure	1,4,5,7	Public Works*, Parks	High	HMGP, PDM, FMA	Long-Term
BM-15 —Develop mapping of geologically active areas within Belmont for the purpose of adopting plans similar to the city’s San Juan Area Plan, which serves as a means to develop focused policies designed to address unique problems and assets in the area.						
Existing	Landslide, Flood	1,3,7	Public Works*, Community Development	High	Staff Time, General Funds	Long-Term
BM-16 —Identify needs associated with a permanent drainage solution for the areas east of Highway 101 in Belmont.						
Existing	Flooding,	1,3,5,7	Public Works*, Emergency Management	High	HMGP, PDM, FMA	Long-Term
BM-17 —Coordinate with the California Department of Forestry and Fire Protection’s Fire and Resource Assessment Program (FRAP) on expanding the Very High Fire Hazard Severity Zone (VHFHSZ) to the San Juan Canyon area of Belmont.						
Existing	Wildfire	1,2,3,7,	Emergency Management*, Community Development	Low	Staff Time, General Funds	Short-Term
BM-18 — Facilitate improvements to Water Dog Lake Road for public safety access to open space areas in Belmont.						
Existing	Dam Failure, Landslide, Severe Weather, Wildfire	1,4,7	Public Works*, Parks	High	HMGP, PDM, FMA	Long-Term
BM-19 —Partner with Mid-Peninsula Water District on providing water conservation outreach & education to community.						
Existing	Drought	1,2,3,10	Emergency Management	Low	Staff Time, General Funds	Short-Term
BM-20 —Coordinate inventory and assessment of drought stressed and/or diseased trees within Belmont.						



TABLE 3-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	Drought, Wildfire, Severe Weather, Landslide	1,3	Parks	High	HMGP, PDM	Long-Term
BM-21 —Develop long-term strategy for replacement of distressed roadways throughout Belmont						
Existing	Flooding, Severe Weather	1,7	Public Works	High	State Gas Tax & Measure A Funds	Long-Term
BM-22 —Work with Mid-Peninsula Water District on incorporating procedures into city’s Emergency Operations Plan (EOP) addressing potential failure of non-seismic retrofitted water tanks.						
Existing	Flooding	1, 2,3,7	Emergency Management	Low	Staff Time, General Funds	Short-Term
BM-23 —Map inundation areas associated with Water Dog Lake Dam failure.						
Existing	Dam Failure, Flooding	1,3,5	Public Works, Emergency Management*, IT	High	HMGP, PDM	Short-term
BM-24 —Expand public outreach/education and emergency notification to include Water Dog Lake Dam failure threat.						
Existing	Dam Failure, Flooding	2,3,6,7,9,10	Emergency Management	Low	Staff Time, General Funds	Short-Term
BM-25 —Continue to work with local electric utility on the city’s Utilities Undergrounding Program						
Existing	Earthquake, Wildfire, Severe Weather, Flood, Landslide	1,2,4,6	Public Works	High	PG&E, Rule 20A Allocations	Long-Term
Action G-1 —Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.						
New and existing	All	2, 3, 4, 5, 6, 7, 8, 10, 11	Jurisdictions	Low	Operating Budgets	Ongoing

TABLE 3-9. MITIGATION STRATEGY PRIORITY SCHEDULE

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





TABLE 3-9. MITIGATION STRATEGY PRIORITY SCHEDULE

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

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

TABLE 3-10. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Earthquake	BM-2, BM-3, BM-4, BM-5, BM-7, BM-8, BM-10	BM-1, BM-7, BM-10, BM-25	BM-4, BM-10, BM-12, BM-13		BM-8, BM-11, BM-12	
Wildfire	BM-2, BM-3, BM-4, BM-5, BM-7, BM-17	BM-1, BM-7, BM-9, BM-25	BM-4, BM-9, BM-12, BM-13	BM-9, BM-20	BM-11, BM-12, BM-18	BM-18

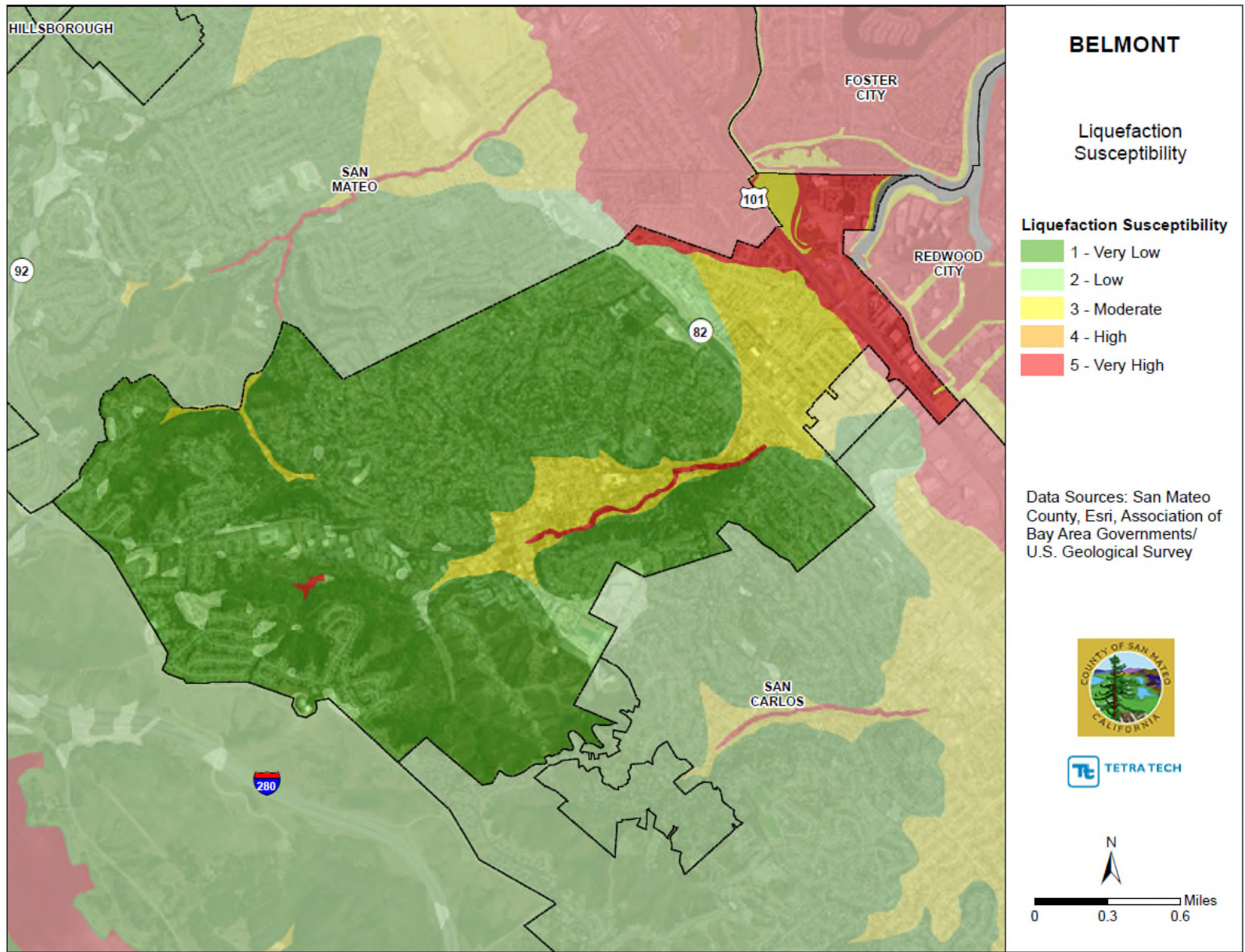


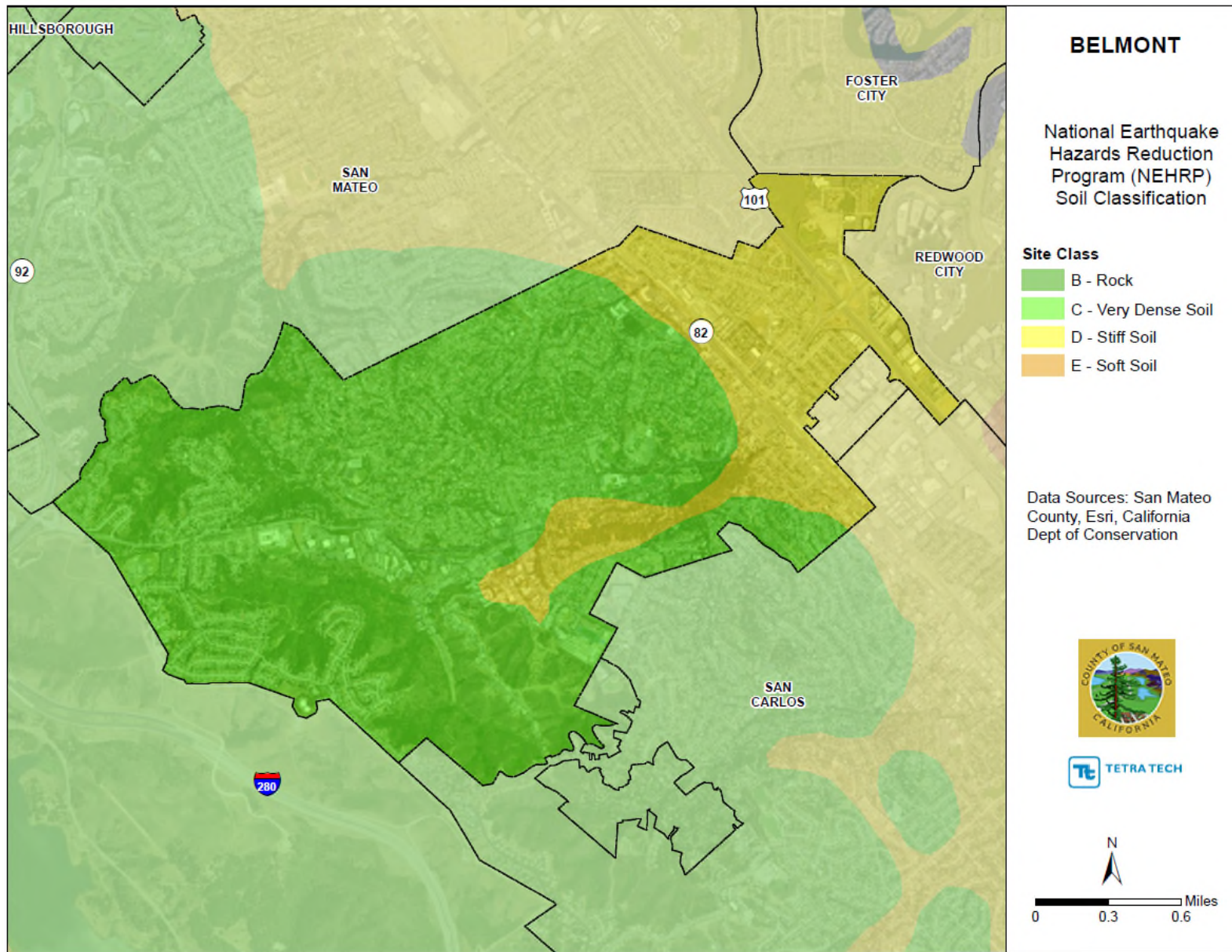


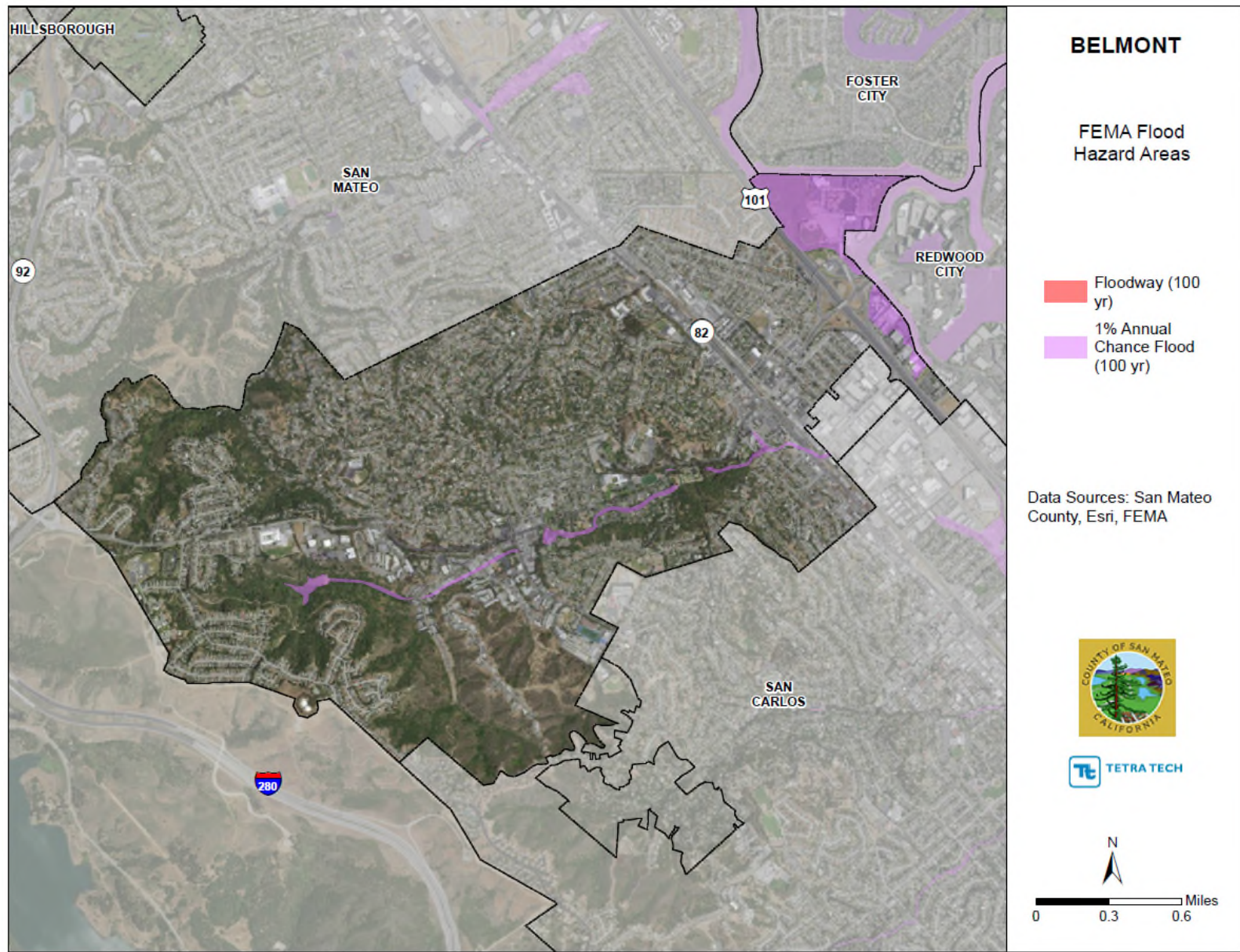
TABLE 3-10. ANALYSIS OF MITIGATION ACTIONS

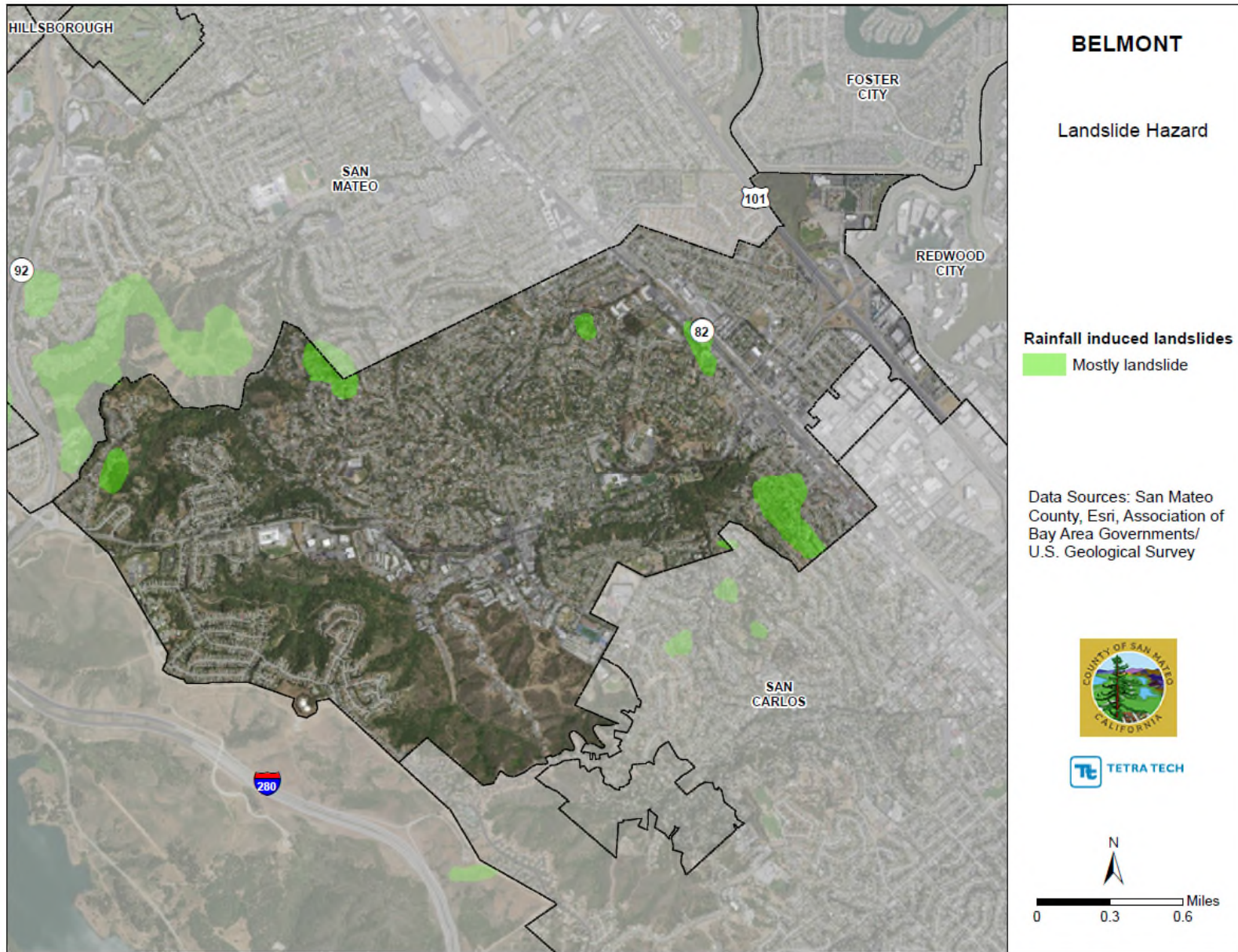
Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Severe Weather	BM-2, BM-3, BM-4, BM-5, BM-7, BM-8	BM-1, BM-7, BM-9, BM-25	BM-4, BM-12, BM-13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

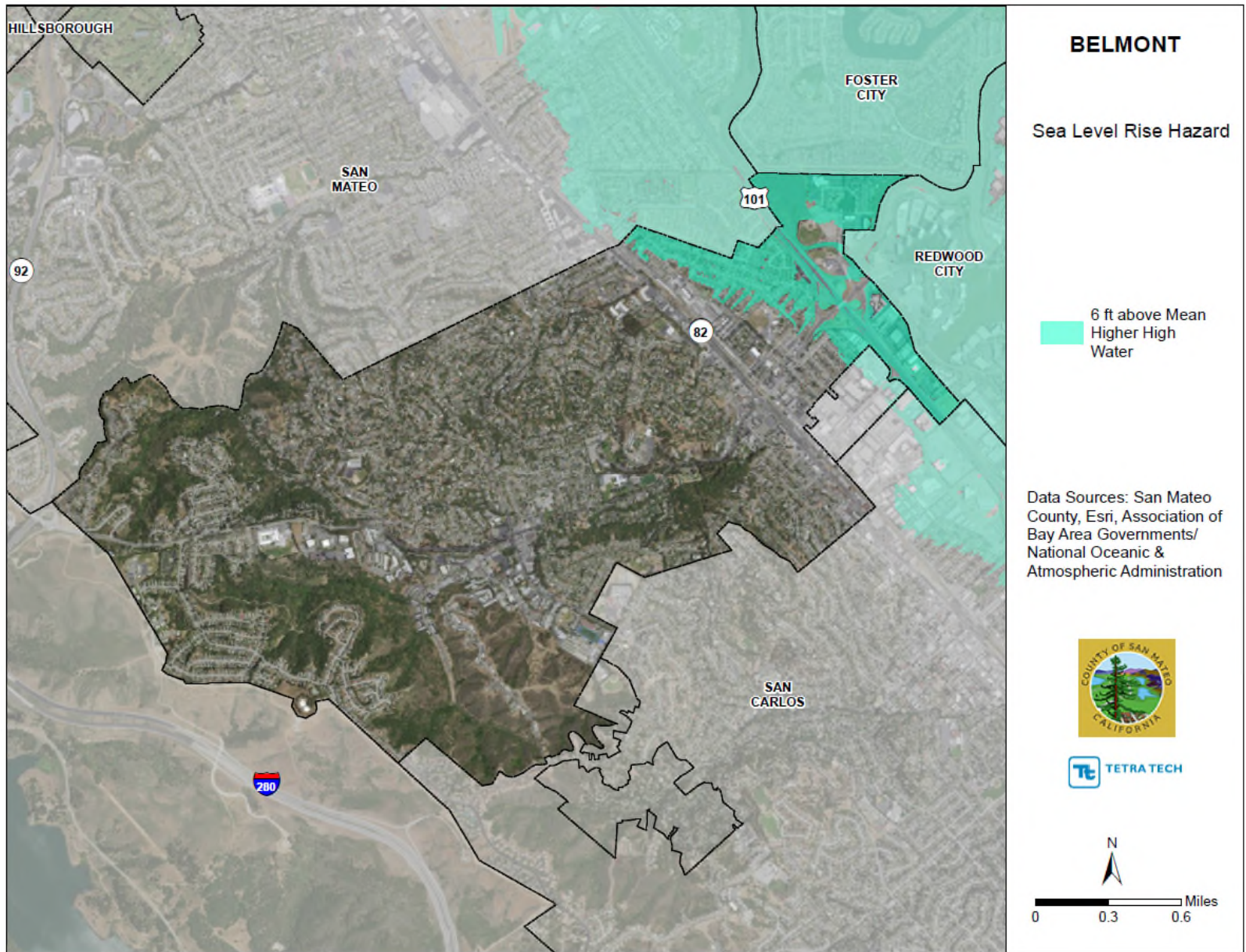
^a. See the introduction to this volume for explanation of mitigation types.













Chapter 4. City of Brisbane

4.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact	Alternate Point of Contact
Randy Breault, Director - Public Works & OES	Ken Johnson, Senior Planner
50 Park Place	50 Park Place
Brisbane, CA 94005	Brisbane, CA 94005
Telephone: 415-508-2131	Telephone 415-508-2123
e-mail address: rbreault@ci.brisbane.ca.us	e-mail address: kjohnson@ci.brisbane.ca.us

4.2 Jurisdiction Profile

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

- ❖ **Date of Incorporation**—November 27, 1961.
- ❖ **Current Population**— 4,699 (as of January 1, 2016 – CA DOF)
- ❖ **Population Growth**—The population of Brisbane grew 8.9-percent between the 2010 U.S. Census population of 4,282 and the estimated projection from the California Department of Finance for January 1, 2016. The Association of Bay Area Governments (ABAG)’s Projections 2009 predicts that Brisbane’s population will grow to 5,300 in 2020, and to 7,700 in 2035.
- ❖ **Location and Description**—The city is located on the western edge of San Francisco Bay, with a western boundary generally delineated by San Bruno Mountain. Neighboring agencies to the north include Daly City and the City & County of San Francisco. South San Francisco is at the city’s southern limit. Although the city’s total land base is listed as 20.44 sq. miles, 17 sq. miles of this amount is covered by the San Francisco Bay; the city’s eastern boundary with Contra Costa County is located in the Bay. The city is commonly identified as being located at latitude 37.69°N longitude 122.39°W.
- ❖ **Brief History**— Brisbane was originally part of the Rancho Canada de Guadalupe la Visitacion y Rodeo Viejo, a large tract of land that included Guadalupe Valley, the Bayshore District of Daly City, the Visitacion Valley District of San Francisco and San Bruno Mountain. Visitacion City, as Brisbane was originally known, was surveyed in 1908, adjacent to a new Southern Pacific Railroad line that offered a faster and more direct route to San Francisco. The town site remained largely undeveloped for many years, largely due to the “Panic of 1907,” a nationwide financial banking crisis/economic recession. During the 1920s, the area’s name was changed to Brisbane. Growth occurred slowly – by 1940, the town had grown to a population of just 2,500. The subject of home rule and city formation was a controversial subject among Brisbane residents during the 1940s and 1950s with some residents desiring a stronger voice in local politics, while others were concerned about losing their town’s close-knit charm to another layer of government. Finally, an incorporation committee was formed in 1960, and after six months of study, recommended that the town vote to incorporate





a 2.5 square mile area. On September 12, 1961, the residents of Brisbane supported the incorporation committee's recommendations, with 710 residents voting in favor of incorporation and 296 opposed.

- ❖ **Climate**— Brisbane's climate is mild during summer when temperatures tend to be in the 60's and cool during winter when temperatures tend to be in the 50's. The warmest month of the year is September with an average maximum temperature of 72.70 degrees Fahrenheit, while the coldest month of the year is January with an average minimum temperature of 42.90 degrees Fahrenheit. Temperature variations between night and day tend to be limited during summer with a difference that can reach 16 degrees Fahrenheit, and fairly limited during winter with an average difference of 13 degrees Fahrenheit.

The annual average precipitation at Brisbane is 20.11 inches. Winter months tend to be wetter than summer months. The wettest month of the year is January with an average rainfall of 4.45 Inches. Brisbane's relative location to San Bruno Mountain tends to deflect seasonal fog to the north and south away from the city.

- ❖ **Governing Body Format**—Council/Manager (five member City Council elected at large; Mayor is chosen every year by the Council). The City Manager is appointed by the City Council as Chief Administrator. The City has two standing commissions and three committees whose members are appointed by the City council. A full description of the Council, Commissions, and Departments can be found under the "City Government" tab at www.brisbaneca.org. The City Council will by Resolution adopt the final approved version of the Brisbane Annex to the San Mateo County LHMP. The City's Office of Emergency Services will oversee the implementation and regular update of the plan.
- ❖ **Development Trends**— Anticipated development levels are low to moderate for the 5-year plan period, and that development would primarily occur as infill. A total of 389 potential infill housing sites were identified through either current zoning or rezoning in the City's 2015-2022 Housing Element. The primary opportunity for new housing has been identified at the City's center. The City is currently undertaking efforts to develop a precise plan and establish zoning at the City's center, adjacent to the Community Park and the existing downtown neighborhood commercial districts, to allow for redevelopment of warehouse sites to residential and mixed use (i.e. Parkside at Brisbane Precise Plan). That would include 228 of the 389 units identified in the Housing Element. Similarly, there are a limited number of commercial sites that remain vacant and may potentially be developed as infill over the next 5 years. These primarily consist of three large, vacant sites within the Sierra Point subarea, east of U.S. Highway 101, two of which received planning entitlements several years ago but have not yet applied for building permits. These two sites combined would include approximately 1 million square feet of research and development and commercial office. In addition, along Bayshore Boulevard, there are a number of smaller sites that could potentially accommodate commercial development, but due to site constraints, interest in development of these sites has been low. Finally, the City is currently processing a programmatic Environmental Impact Report for the Brisbane Baylands, a roughly 600-acre former railyard and landfill site located between U.S. 101 and Bayshore Boulevard, comprising most of the northern part of the City. The applicant's proposal would include approximately 7 million square feet of in commercial, retail, office, institutional, R & D and entertainment uses and 4,434 housing units. The study of alternatives to the applicant's proposal are also part of that EIR and these would have either similar or less





development intensity. However, the EIR has not yet been certified and entitlements have not been granted by the City. Given the scale of the development and the stage in the entitlement process, it is not anticipated that development of the Baylands would begin within this plan period.

4.3 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 4-1. An assessment of fiscal capabilities is presented in Table 4-2. An assessment of administrative and technical capabilities is presented in Table 4-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 4-4. Classifications under various community mitigation programs are presented in Table 4-5. An assessment of education and outreach capabilities is presented in Table 4-6.

TABLE 4-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code <i>Comment: Title 15 of Brisbane Municipal Code (BMC), first adopted 1989 with regular revisions thereafter (latest 4/7/16)</i>	Yes	No	Yes
Zoning Code <i>Comment: Title 17 BMC first adopted 1998 with regular revisions thereafter (latest revision 4/21/16)</i>	Yes	No	Yes
Subdivisions <i>Comment: Title 16 BMC first adopted 1982 with regular revisions thereafter (latest revision 10/7/13)</i>	Yes	No	Yes
Stormwater Management <i>Comment: Chapter 13.06 BMC first adopted 1998 with regular revisions thereafter 1994 (latest revision 3/19/02)</i>	Yes	No	Yes
Post-Disaster Recovery <i>Comment: Chapter 2.28 BMC first adopted 1975 with regular revisions thereafter (latest revision 1/18/11)</i>	Yes	No	Yes
Real Estate Disclosure <i>Comment: CA. State Civil Code 1102 requires full disclosure on Natural hazard Exposure of the sale/re-sale of all real property.</i>	No	No	Yes
Growth Management <i>Comment: General Plan, 1994</i>	Yes	No	Yes
Site Plan Review <i>Comment: multiple chapters in Title 15 BMC provide site plan review requirements</i>	Yes	No	Yes
Environmental Protection <i>Comment: the city complies with state (CEQA) and federal requirements (NEPA)</i>	Yes	No	Yes
Flood Damage Prevention <i>Comment: Chapter 15.56 BMC first adopted 1988 with regular revisions thereafter (latest revision 2/23/15)</i>	Yes	No	Yes
Emergency Management <i>Comment: Chapter 2.28 BMC first adopted 1975 with regular revisions thereafter (latest revision 1/18/11)</i>	Yes	No	Yes
Climate Change <i>Comment: Climate Action Plan adopted 2015</i>	Yes	No	No



TABLE 4-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Other	No	Yes	No
Comment: currently participating in county-led Sea Level Rise Vulnerability study			
General or Comprehensive Plan	Yes	No	Yes
<i>Is the plan equipped to provide linkage to this mitigation plan?</i>			
Comment: The Conservation Element, Housing Element, and the Safety Element of the General Plan provide appropriate linkage to the LHMP			
Capital Improvement Plan	Yes	No	No
<i>What types of capital facilities does the plan address?</i>			
<i>How often is the plan updated?</i>			
Comment: The CIP covers all public facilities under the city's jurisdiction. The CIP is updated annually.			
Floodplain or Watershed Plan	Yes	No	No
Comment: 2003 Storm Drainage Master Plan			
Stormwater Plan	Yes	No	No
Comment: 2003 Storm Drainage Master Plan			
Habitat Conservation Plan	No	Yes	No
Comment: Significant portions of Brisbane fall within the San Bruno Mountain HCP established in 1982			
Economic Development Plan	Yes	No	Yes
Comment: Chapter 4 "Local Economic Development" of the 1994 General Plan			
Shoreline Management Plan	No	Yes	No
Comment: managed by the San Francisco Bay Conservation and Development Commission, created in 1965			
Community Wildfire Protection Plan	No	Yes	No
Comment: North County Fire Authority 2004 Wildland Pre-Fire Attack Plan			
Forest Management Plan	Yes	No	No
Comment: 2007 Vegetation Management Strategic Plan and Street Tree Inventory Summary Report			
Climate Action Plan	Yes	No	No
Comment: Climate Action Plan adopted 2015			
Other	No	No	No
Comment:			
Comprehensive Emergency Management Plan	Yes	No	No
Comment: 2015 Emergency Operations Plan (EOP)			
Threat & Hazard Identification & Risk Assessment	No	Yes	No
Comment: Appendix to 2015 EOP - completed by San Mateo County OES			
Post-Disaster Recovery Plan	Yes	No	No
Comment: 2015 Emergency Operations Plan (EOP)			
Continuity of Operations Plan	Yes	No	No
Comment: 2015 Emergency Operations Plan (EOP)			
Public Health Plan	No	Yes	No
Comment: San Mateo County Environmental Health has countywide responsibility for development of this plan			



TABLE 4-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes - per requirements of CA Prop 218
User Fees for Water, Sewer, Gas or Electric Service	Yes - various fees across the utilities
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes, but no withholdings enacted
State-Sponsored Grant Programs	Yes (e.g., CalOES HMGP)
Development Impact Fees for Homebuyers or Developers	Yes
Other	No

TABLE 4-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Public Works - Director Community Development - Director
Engineers or professionals trained in building or infrastructure construction practices	Yes	Public Works Director Community Development - Building Official
Planners or engineers with an understanding of natural hazards	Yes	Public Works - Director Community Development - Director
Staff with training in benefit/cost analysis	Yes	Public Works - Senior Civil Engineer
Surveyors	Yes	All surveying provided under contract
Staff capable of making substantial damage estimates	Yes	Public Works - Director Public Works - Senior Civil Engineer
Personnel skilled or trained in GIS applications	Yes	Public Works - Engineering Technician
Scientist familiar with natural hazards in local area	Yes	Utilize resources of local USGS staff
Emergency manager	Yes	Office of Emergency Services
Grant writers	Yes	Administrative Services - Management Analyst

TABLE 4-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	3/9/83
When did the Flood Insurance Rate maps become effective?	3/29/83
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	Community Development/Building Official



TABLE 4-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
<ul style="list-style-type: none"> Is this a primary or auxiliary role? 	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	Latest revision 2/23/15
<ul style="list-style-type: none"> Does your floodplain management program meet or exceed minimum requirements? 	Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	4/25/14
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
Does your jurisdiction participate in the Community Rating System (CRS)?	No
<ul style="list-style-type: none"> If not, is your jurisdiction interested in joining the CRS program? 	No
How many Flood Insurance policies are in force in your jurisdiction?	26
<ul style="list-style-type: none"> What is the insurance in force? 	\$12,650,000
<ul style="list-style-type: none"> What is the premium in force? 	\$86,400
How many total loss claims have been filed in your jurisdiction?	3
<ul style="list-style-type: none"> How many claims were closed without payment/are still open? 	2
<ul style="list-style-type: none"> What were the total payments for losses? 	\$5,216.07

TABLE 4-5. COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	No	N/A	N/A
Storm Ready	No	N/A	N/A
NWS Weather Ready Nation Ambassador	Yes	N/A	N/A

TABLE 4-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes - Senior Management Analyst in Administrative Services
Do you have personnel skilled or trained in website development?	Yes - Senior Management Analyst in Administrative Services
Do you have hazard mitigation information available on your website?	Yes



TABLE 4-6. EDUCATION AND OUTREACH

Criteria	Response
<ul style="list-style-type: none"> If yes, please briefly describe. 	On OES department site
Do you utilize social media for hazard mitigation education and outreach?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Regular updates are provided in our weekly blog with links to the main website. The city’s website hosted the community survey for this LHMP update.
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
<ul style="list-style-type: none"> If yes, please briefly specify. 	Emergency Services Council
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Weekly blog and website
Do you have any established warning systems for hazard events?	No
<ul style="list-style-type: none"> If yes, please briefly describe. 	N/A

4.4 Integration with Other Planning Initiatives

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

4.4.1 Existing Integration

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

- ❖ **General Plan, Chapter X, “Community Health And Safety”** - State law requires a General Plan address the protection of a community from the risks of natural hazards. Brisbane’s plan exceeds this requirement by also speaking to the man-made hazards that are a part of urban life. The introduction to the safety element notes, “The underlying assumption of preparing the safety policy is that the City can reduce hazards if the probability of hazardous conditions is known in advance and plans for dealing with such conditions have been prepared.” The requirements of this section are directly in alignment with the LHMP’s goal of identifying natural hazards and of identifying strategies to mitigate them. The city’s Safety Element in its General Plan has not been updated since 1994, but is scheduled for update in 2017. During that review, staff expects to adopt the LHMP within said element pursuant to AB 2140 (Hancock, 2006).
- ❖ **Brisbane Municipal Code - Chapter 2.28, “Disaster Services Council”** - This section of the municipal code creates a disaster services council and the positions of Director and Assistant Director of Emergency Services. The legislated purposes of this chapter are to “. . . provide for the preparation and carrying out of plans for the protection of persons and property within the city in the event of an emergency; the direction of the emergency organization; and the coordination of the emergency functions of the city with all other public agencies, corporations, organizations, and affected private





persons. Given that the local Office of Emergency Services has overall responsibility for implementing the LHMP, the creation of the Disaster Services Council and Office of Emergency Services is directly in alignment with the LHMP's goal of establishing a coordinated approach to implementing the plan.

- ❖ **California Environmental Quality Act, "Brisbane Baylands Draft Environmental Impact Report"** - The city is closely following these requirements as it reviews a planning application for an approximately 640-acre parcel that is directly connected to the San Francisco Bay by way of two primary drainage facilities. CEQA review is clearly in line with the LHMP's goal of identify natural hazards and identifying mitigation for it. For instance, there are specific chapters of the EIR that delve deeply into associated impacts of the project based on air quality, seismology, surface water hydrology, greenhouse gas emissions, etc.
- ❖ **North County Fire Authority 2004 Wildland Pre-Fire Attack Plan** - the cities of Daly City, Pacifica and Brisbane have entered into a JPA where administrative oversight and training of fire departments is provided by Daly City to the other cities. Two of the signatory cities are located in a potential urban wildland fire boundary on San Bruno Mountain. In response to this, NCFCA developed and conducts an annual exercise plan that encompasses familiarization training with the boundary, integration of multiple fire responders (including Cal FIRE land and air crews), and citizen evacuation awareness. Extensive pre-planning to mitigate the effects of a fire on San Bruno Mountain is clearly consistent with the goals of the LHMP.

4.4.2 Opportunities for Future Integration

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

- ❖ **2015 Climate Action Plan** - Brisbane's holistic approach to addressing climate change was recognized when we became the first California city to win a Gold Beacon Award from the Institute for Local Government. The continuing implementation of the CAP is consistent with the LHMP's goal of mitigating natural hazards, in that it works to slow the impacts of climate change, and the associated risks of increased sea levels, higher summer temperatures, prevalence, and strength of storms, etc.
- ❖ **Sea Change San Mateo County** - the city is an active participant in a multi-stakeholder broad coalition of governments that is completing a sea level rise vulnerability assessment to test and plan for the future resilience of our community. The results of this study will provide information on the hazard and potential mitigations for multiple sea level rise scenarios.
- ❖ **2003 Storm Drainage Master Plan** - the largest dollar amount of structural projects identified in this plan are located in the planning application area known as the Baylands (see third bulleted item above in "Existing Integration"). If and when that project successfully completes the myriad planning processes and results in a development, the majority of the SD improvements necessary to mitigate flooding in this area have already been pre-studied. Pre-identification of natural hazards (i.e., flooding) and requiring mitigation of same while a land area is being developed from its current status as a brownfield is clearly consistent with the LHMP.



4.5 Jurisdiction-Specific Natural Hazard Event History

Table 4-6 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 4-6. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Storm	N/A	2/6/15	none submitted
Severe Storm	N/A	Dec 2015	none submitted
Drought	N/A	1/17/14 - ?	none submitted
Drought	N/A	2/27/09	none submitted
Severe Storms	DR 1646	Spring 2006	\$340,000
Severe Storms	DR 1628	Dec 05/Jan 06	\$350,000 (includes Emergency Relief Funds from FHWA)
El Nino (Severe Storms)	DR 1203	2/2/98	not available
Loma Prieta Earthquake	845-DR-CA	10/17/89	not available
Severe Storms	651-DR-CA	January 1982	not available
Landslide	N/A	Winter 1980	not available - 12 homes damaged
Flood and Storms	not available	Fall 1962	not available

In addition to the Natural Hazards listed above, the city's emergency services organization also responded to the following major events:

TABLE 4-7. HEALTH AND HUMAN CAUSED HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Ebola Threat Preparedness	N/A	Fall 2014	none submitted
SFO Air Crash (Asiana 214) mutual aid response	N/A	7/6/13	none submitted
Swine Flu	N/A	4/28/09	none submitted
Oil Spill (COSCO BUSAN)	N/A	11/9/07	none submitted - minimal
Gasoline Shortage	N/A	1979	none submitted
Gasoline Shortage	N/A	March 1974	none submitted

4.6 Jurisdiction-Specific Vulnerabilities

Repetitive loss records are as follows:

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



Other noted vulnerabilities include:

Due to the city limits being contiguous with the State & County Park of San Bruno Mountain, most of our southern and western city limit is a wildland urban interface potential fire area. The adjacent State parkland has been designated a State Responsibility Area, where the State of California is financially responsible for the prevention and suppression of wildfires. Fires have periodically occurred in this area since recorded time prior to the city's incorporation in 1961, with the most recent major event occurring in 2006. Although these events have fortunately not expanded to require a state proclamation or federal declaration of disaster, the potential impact of fires originating in the wildland and impacting the urban area of Brisbane is an ongoing focus of concern.

The city's mountainous topography and older roadway network has created at least one location that is exceptionally difficult to access by emergency equipment (specifically, fire engines & ladder trucks are unable to utilize this roadway). This roadway also adjoins an area that experienced a significant mudslide in 1980. A reconfiguration of Glen Park Way at its intersection with Humboldt Road is necessary to ensure ingress for emergency responders and egress for evacuees, particularly in the event of an urban wildland interface fire.

The scientific community is in a majority consensus that Sea Level Rise (SLR) is an upcoming vulnerability that will have to be addressed. The largest question as we prepare for SLR is to determine the timeframe and a most probable upper boundary of SLR that needs to be accommodated. Brisbane is participating in a San Mateo County led effort, "Sea Change San Mateo County", which has produced preliminary model results indicating that portions of our land mass known as "Sierra Point" (housing an office park and the city's 580-slip marina) could be overtopped under certain scenarios. One, and possibly two, pump stations are in potential SLR induced flooding zones.

Two facilities within the city need new or upgraded standby generators, Fire Station 81 and City Hall. The fire station's generator needs replacement due to age. City Hall's generator needs to be upsized to accommodate the relocation of the city's primary Emergency Operations Center to this location, especially in light of FEMA's pending NIMS update that proposes to create "Center Management Systems" that are expected to be supported primarily by day-to-day staff working from their traditional assigned workspace (i.e., City Hall).

4.7 Hazard Risk Ranking

Table 4-8 presents the ranking of the hazards of concern.

TABLE 4-8. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	48	High
2	Wildfire	36	High
3	Severe Weather	33	Medium
4	Flood	30	Medium
5	Landslide	9	Low
6	Drought	3	Low



Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
7	Tsunami	0	Low
8	Dam Failure	0	Low

4.8 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 4-9 lists the actions that make up the City of Brisbane’s hazard mitigation action plan. Table 4-10 identifies the priority for each action. Table 4-11 summarizes the mitigation actions by hazard of concern and the six mitigation types.

Table 4-9. Hazard Mitigation Action Plan Matrix						
Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
BB-1 —Where appropriate, support retrofitting structures against earthquake.						
Existing	Earthquake	1, 2, 11	Planning and Community Development (PCD)	High	HMGP, PDM, FMA	On-going
BB-2 —Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community.						
New and Existing	All Hazards	2, 4	PCD* and Office of Emergency Services (OES)	Low	Staff Time, General Funds	On-going
BB-3 —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. Additionally, develop a cost tracking system that will ensure maximum FEMA/CDAA reimbursement from recovery through response phases of disasters.						
Existing	All Hazards	1, 2, 4, 5	OES	Medium	Staff Time, General Funds	Short-term
BB-4 —Support the Countywide initiatives identified in Volume I of the hazard mitigation plan.						
New and Existing	All Hazards	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	OES	Low	Staff Time, General Funds	Short-term
BB-5 —Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All Hazards	1, 2, 3, 5, 6	OES	Low	Staff Time, General Funds	On-going
BB-6 — Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP). This will be accomplished through the implementation of floodplain management programs that will, at a minimum, meet the requirements of the NFIP:						
<ul style="list-style-type: none"> • Enforcement of the flood damage prevention ordinance • Participate in floodplain identification and mapping updates • Provide public assistance/information on floodplain requirements and impacts. 						



Table 4-9. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New and Existing	Flood	1, 4, 5, 8	Public Works (PW)	Low	Staff Time, General Funds	On-going
BB-7 —Continue to update local building codes with ICB and state building code revisions, and apply these standards to public and private renovation, replacement, and development.						
New	Earthquake, Flood, Landslide, Severe Weather, Wildfire	2, 3, 4, 7	PCD* and OES	Low	Staff Time, General Funds	Short-term
BB-8 —Continue to refine a post-disaster recovery plan and a debris management plan.						
Existing	All Hazards	1, 2, 5, 6	OES	Low	EMPG	Long-term
BB-9 —Critical Facility Upgrade. Provide new standby generator for Fire Station 81, and provide upgraded standby generator at City Hall to accommodate relocation of EOC to that facility.						
Existing	All Hazards	1, 4, 9	OES* and PW	Low	HMA Grant, General Fund	Short-term
BB-10 —Critical Fuel Supply. Provide local fuel supply (none presently exists in the community) capable of supporting 3-5 days of fuel needs for emergency responders and standby generators (including those at water & sewer pump stations).						
Existing	Earthquake, Severe Weather	1, 4, 6	OES* and PW	Medium	HMA Grant, General Fund	Long-term
BB-11 —Emergency responder ingress/egress. Design and construct a new intersection at Glen Park Way/Humboldt Road that will allow emergency responders access from the southern portion of the community, which is adjacent to an urban wildland interface.						
Existing	Earthquake, Landslide, Wildfire	1, 4, 7	OES and PW*	High	HMA Grant, General Fund	Long-term
BB-12 —Mutual Aid. Continue to participate in the San Mateo County Operational Area Emergency Services Organization, the San Mateo County Emergency Managers Association, and the San Mateo County Public Works Mutual Aid Agreement to leverage the city’s ability to respond to emergencies.						
Existing	All Hazards	1, 2, 3, 5, 6, 8	OES*, PW, Brisbane Police Department, and Brisbane Fire Department	Low	Staff Time, General Fund	On-going
BB-13 —Disaster Response Staff Training. Continue to identify and provide training for response personnel.						
Existing	All Hazards	1, 2, 3, 5, 6	OES	Low	Staff Time, General Fund	On-going
BB-14 —Sea Level Rise Vulnerability Assessment. Continue participation in the San Mateo County led effort, “Sea Change San Mateo County”, to develop an understanding of future vulnerability.						
Existing	Flood	1, 2, 3, 5, 6	OES, PW*, and PCD	Low	For current study, the project is fully funded via San Mateo County and external grants	Long-term



Table 4-9. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	All	1, 3, 4, 5, 6, 7, 11	Jurisdictions	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)

* Identified Lead Agency

TABLE 4-10. MITIGATION STRATEGY PRIORITY SCHEDULE

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

TABLE 4-11. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Earthquake	BB-2, BB-3, BB-4, BB-5, BB-7, BB-8	BB-1, BB-7	BB-4		BB-8, BB-9, BB-10, BB-11, BB-12, BB-13	
Wildfire	BB-2, BB-3, BB-4, BB-5, BB-7	BB-1, BB-7	BB-4		BB-8, BB-11, BB-12, BB-13	

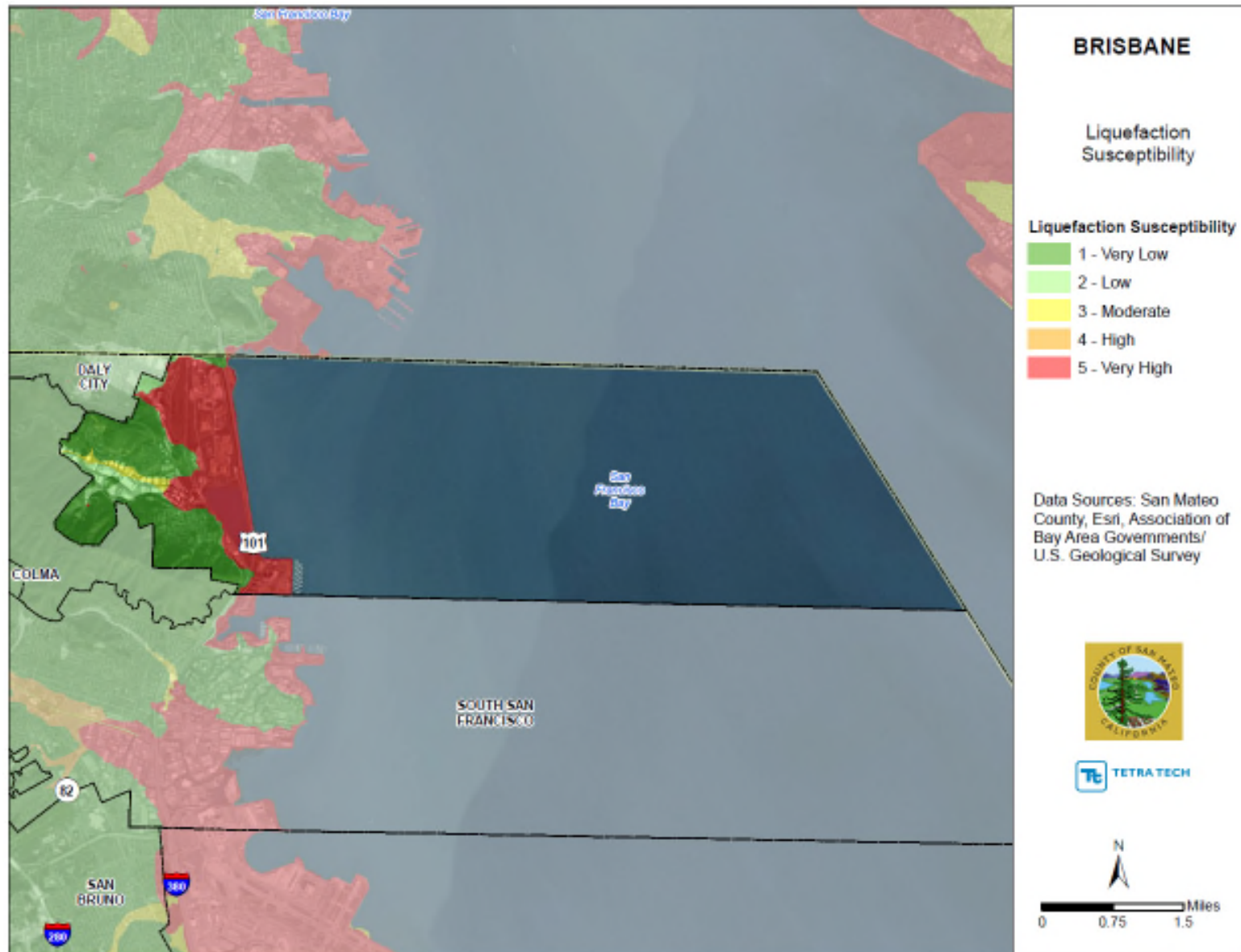


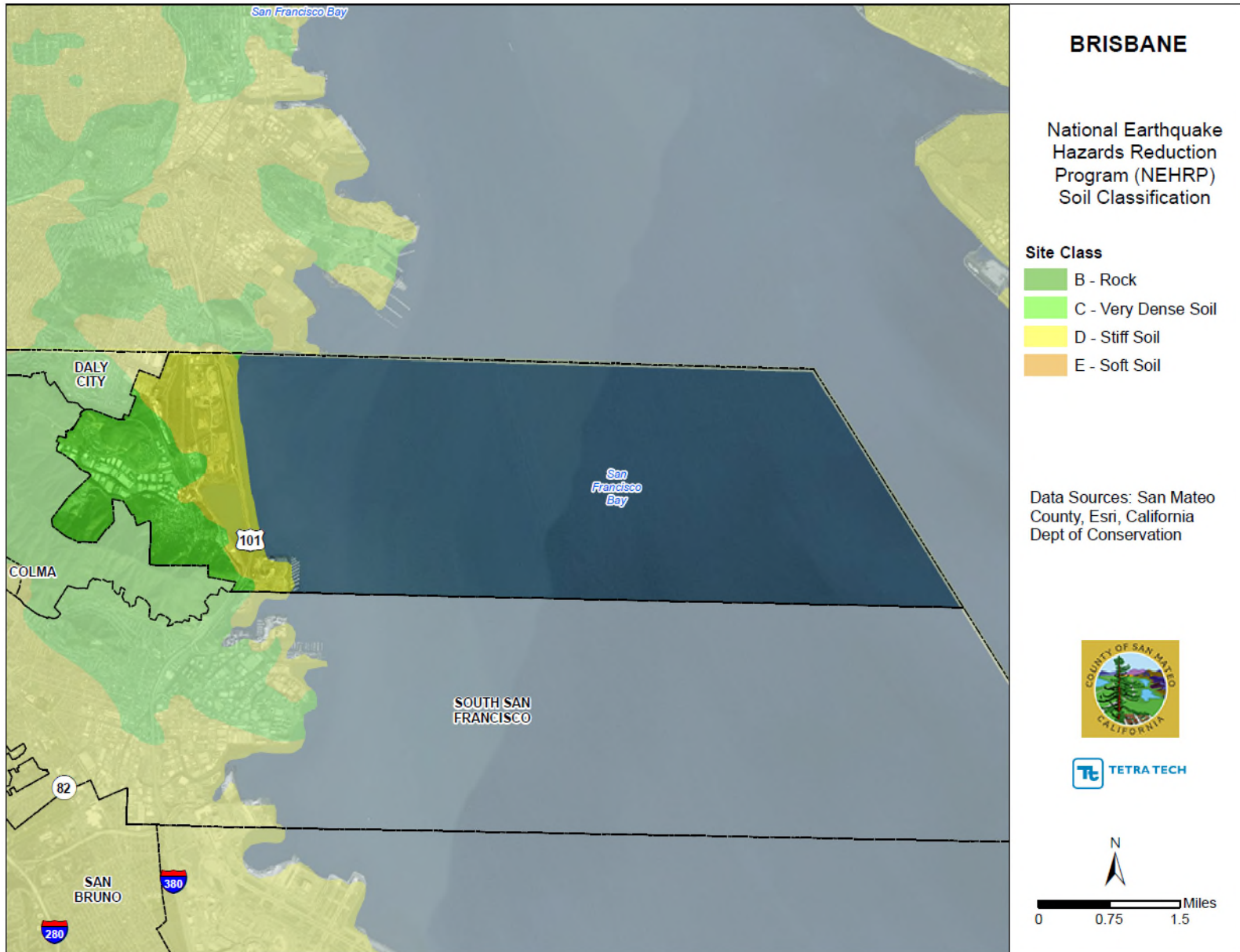


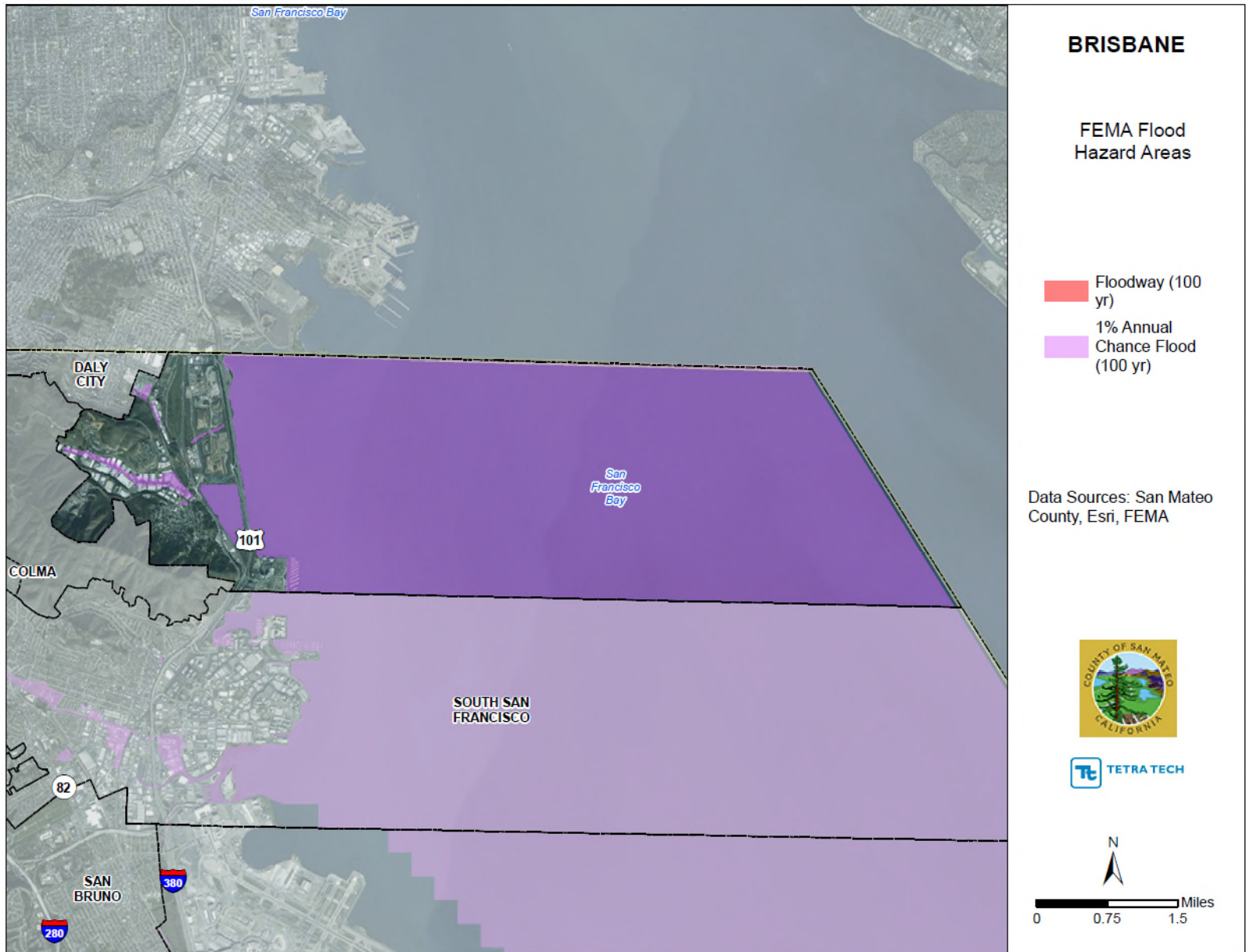
Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Severe Weather	BB-2, BB-3, BB-4, BB-5, BB-7, BB-8	BB-1, BB-7	BB-4		BB-8, BB-9, BB-11, BB-12, BB-13	*
Flood	BB-2, BB-3, BB-4, BB-5, BB-6, BB-7, BB-8	BB-1, BB-6, BB-7	BB-4, BB-6		BB-8, BB-12, BB-13, BB-14	*
Landslide	BB-3, BB-4, BB-5, BB-7, BB-8	BB-1, BB-7	BB-4	BB-2	BB-8, BB-11, BB-12, BB-13	
Drought	BB-2, BB-3, BB-4, BB-5, BB-8	BB-1	BB-4		BB-8	
Tsunami	N/A - 0 Risk	N/A - 0 Risk	N/A - 0 Risk	N/A - 0 Risk	N/A - 0 Risk	N/A - 0 Risk
Dam Failure	N/A - 0 Risk	N/A - 0 Risk	N/A - 0 Risk	N/A - 0 Risk	N/A - 0 Risk	N/A - 0 Risk

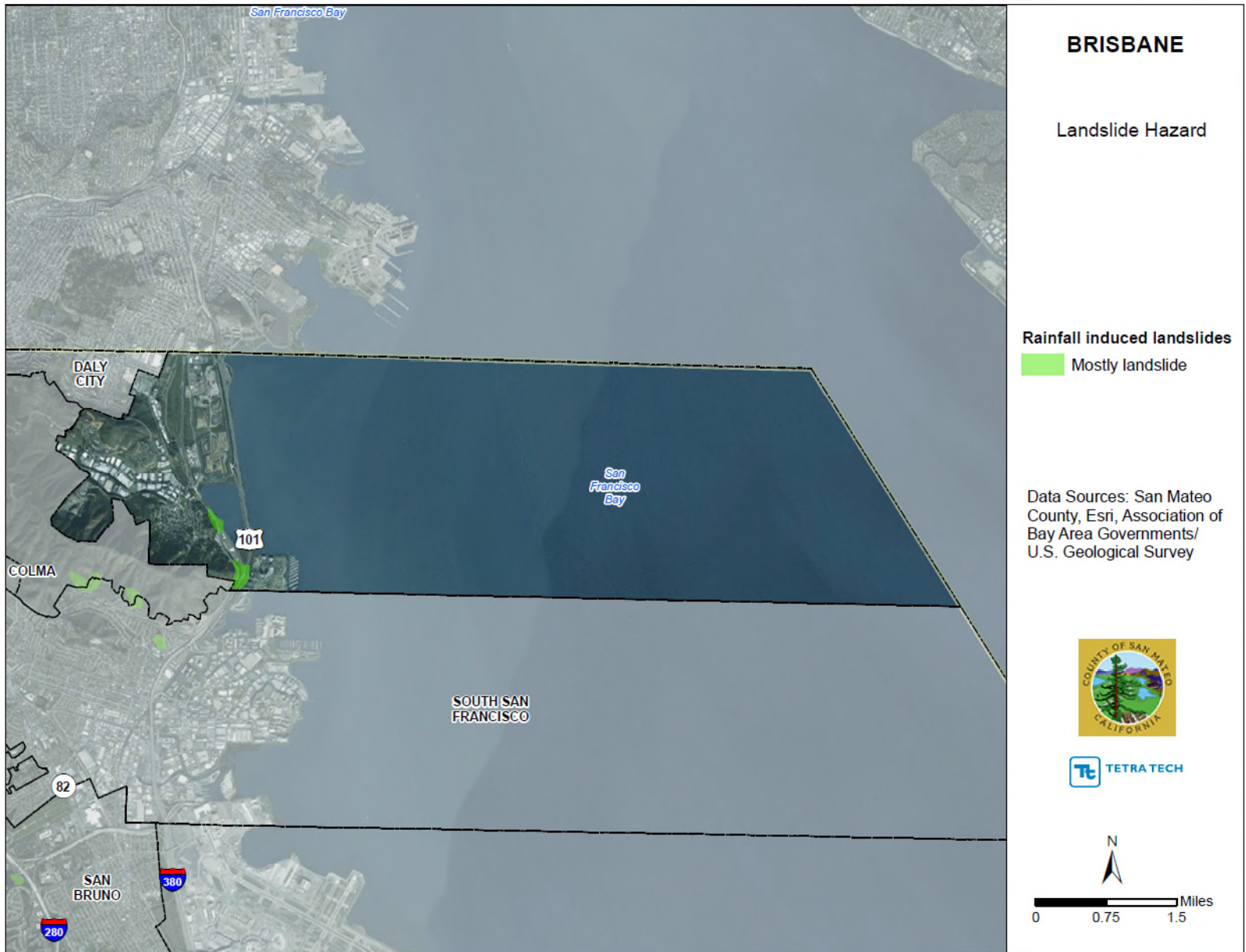
Note: see third bullet point under “Opportunities for Future Integration” regarding discussion on storm drain structural projects that will address flooding issues.

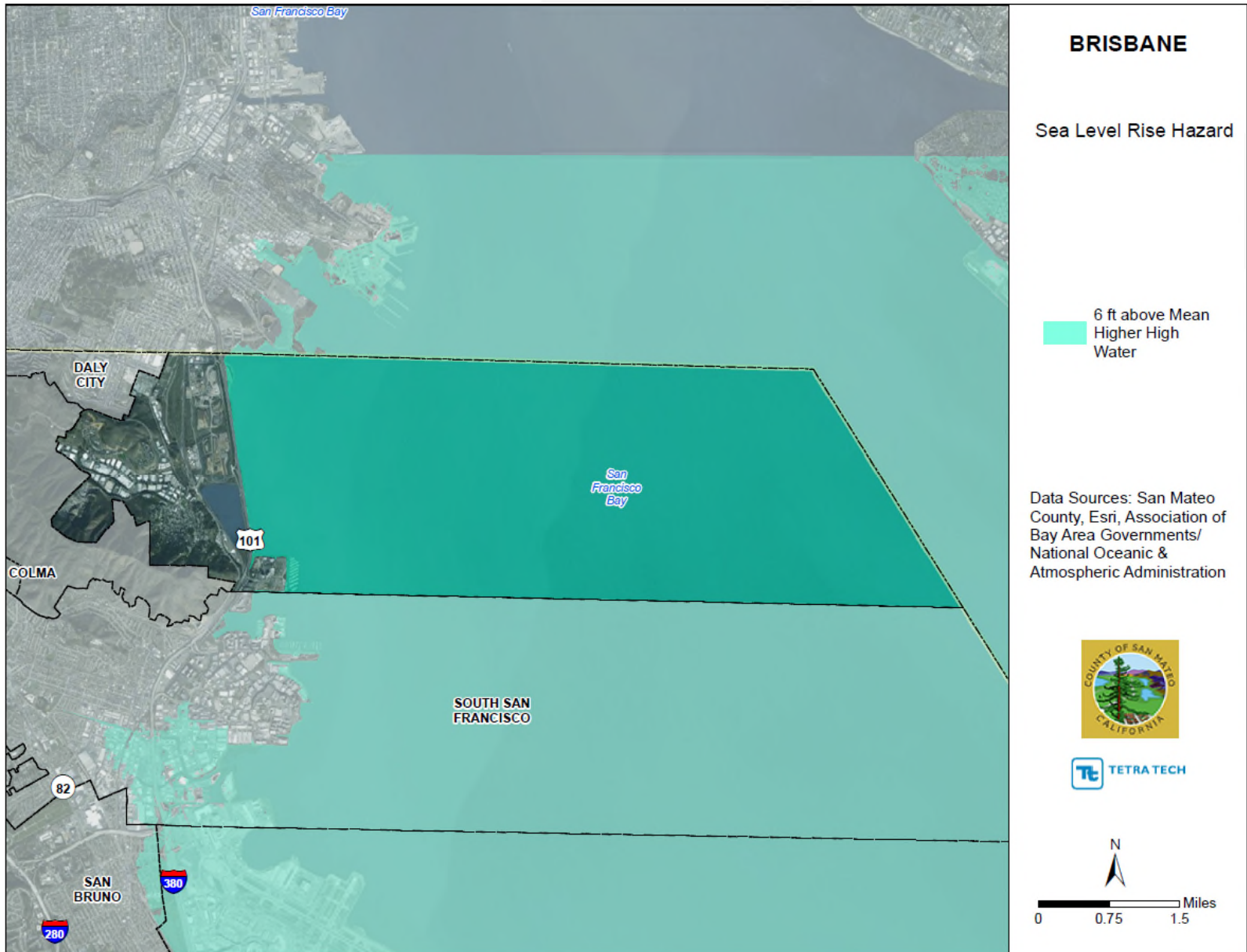


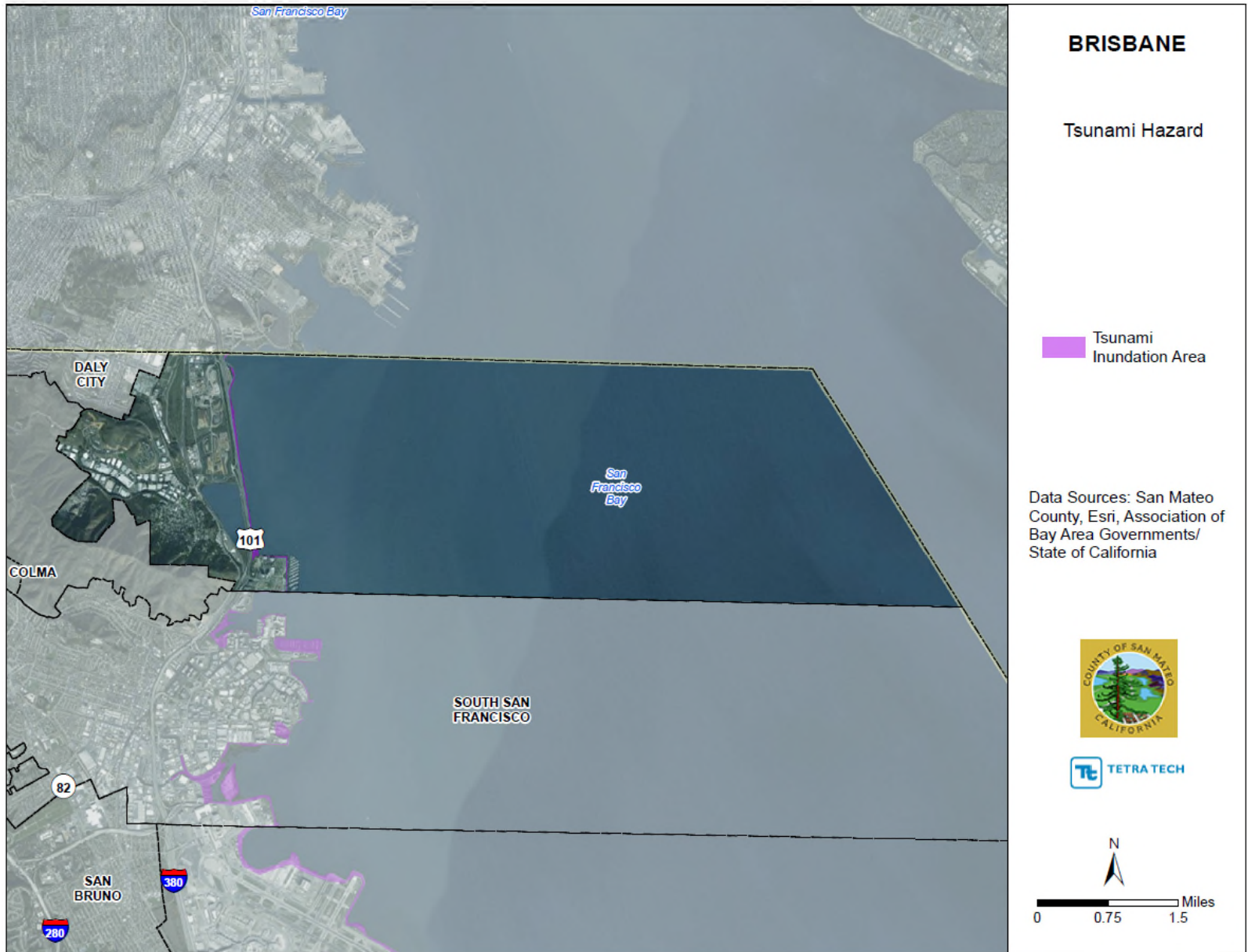


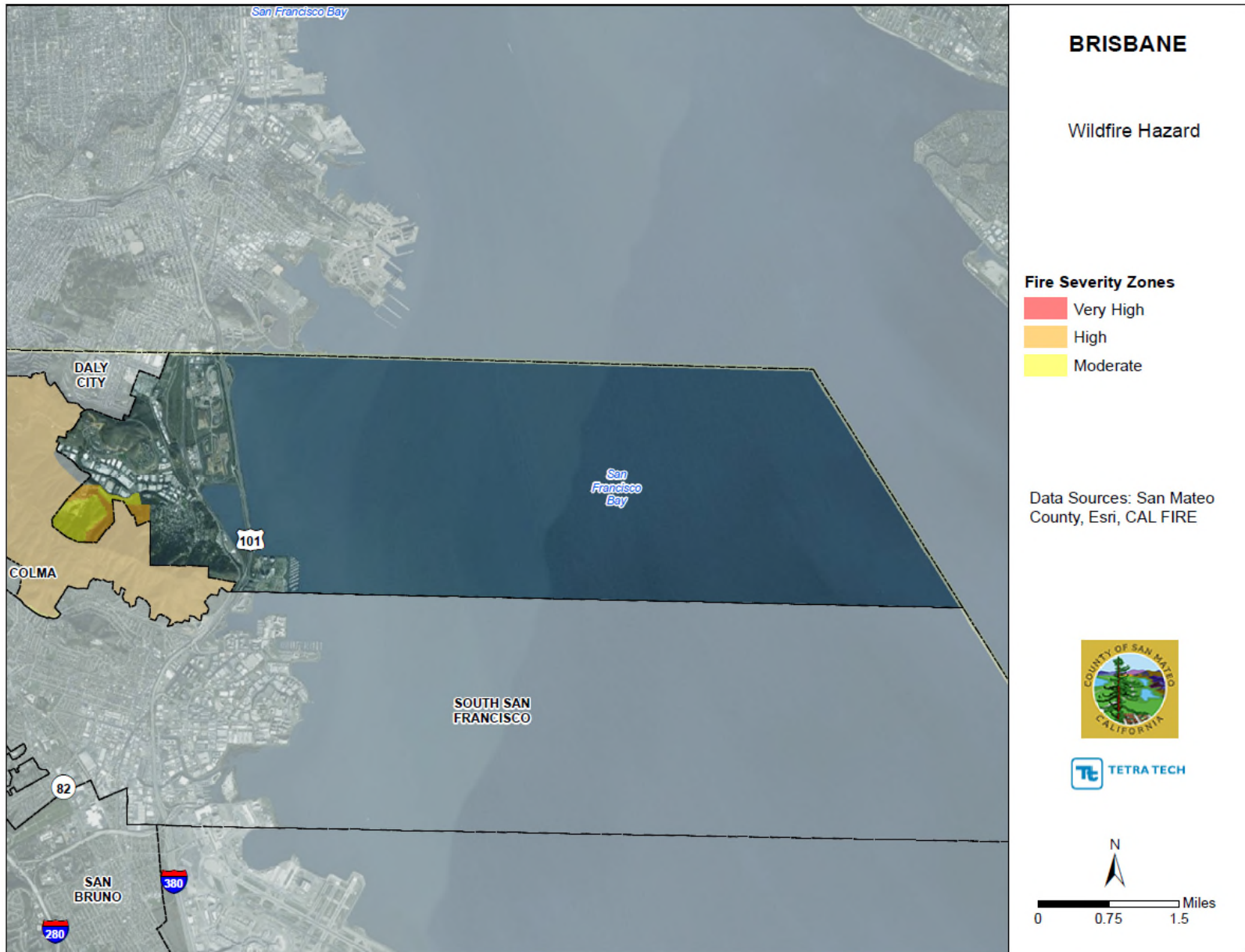














Chapter 5. City of Burlingame

5.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

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Alternate Point of Contact

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5.2 Jurisdiction Profile

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

- ❖ Date of Incorporation— 1908
- ❖ Current Population— 29,724 (as of January 1, 2016 – CA DOF)
- ❖ Population Growth— Based on the data tracked by the state Department of Finance, Burlingame has experienced a relatively flat rate of growth. The overall population has increased only 0.6% since 2014 and experienced a 2.3% growth rate from 2000-2010. The current projections anticipate that the City will reach a population of 30,700 by 2030.
- ❖ Location and Description— The City of Burlingame is on the San Francisco Peninsula, located 16 miles south of San Francisco. The City covers approximately 5.8 square miles and three-quarters of the land is developable and the remaining consist of the San Francisco Bay and Mills Canyon Preserve. The City is mature and largely built-out community with well-established residential neighborhoods. The City borders the City of Millbrae to the North, the Town of Hillsborough to the West, and the City of San Mateo to the South.
- ❖ Brief History— Burlingame is on the Mexican land grant Rancho San Mateo. The City was named after Anson Burlingame, a US Minister to China that was a friend of William C. Ralston, the owner of the land. After the 1906 San Francisco Earthquake, many people looking to escape the hardships of a city in ruins flocked south. Hundreds of lots in Burlingame were sold in 1906 and 1907. The town of Burlingame was incorporated June 6, 1908. Burlingame is known as the “City of Trees” due to the 18,000 public trees that were planted along El Camino Real, parks, and groves that were once part of larger estates.
- ❖ Climate— The City of Burlingame is sheltered by hills from strong winds and heavy fog. The city temperatures range from a low 54 degrees to a high of 82 degrees in the July and a low of 39 degrees and a high of 57 degrees in January. The average annual precipitation is 20 inches.



- ❖ **Governing Body Format**— The City of Burlingame is governed by a five-member city council. The City consists of twelve departments: Administration, City Clerk, City Council, Community Development, Engineering, Finance/Utility Billing, Fire, Human Resources, Library, Parks and Recreation, Police, and Public Works. The City has five committees and commissions, which report to the City Council. The City Council assumes responsibility for the adoption of this plan; the City Manager will oversee its implementation.
- ❖ **Development Trends**— The City of Burlingame has experienced a strong regional economy, with tight housing market, and limited available development sites. Demand for housing has generated greater interest in multi-family and office spaces near transit-oriented areas.

5.3 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 5-1. An assessment of fiscal capabilities is presented in Table 5-2. An assessment of administrative and technical capabilities is presented in Table 5-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 5-4. Classifications under various community mitigation programs are presented in Table 5-5. An assessment of education and outreach capabilities is presented in Table 5-6.

TABLE 5-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code <i>Comment: Municipal Code Title 18, adopted 1996 with amendments</i>	Yes	No	Yes
Zoning Code <i>Comment: Municipal Code Title 25, adopted 1941 with amendments</i>	Yes	No	Yes
Subdivisions <i>Comment: Municipal Code Title 26, adopted 1941 with amendments</i>	Yes	No	Yes
Stormwater Management <i>Comment: Municipal Code Title 15, adopted 1994 (Ordinance 1503)</i>	Yes	No	Yes
Post-Disaster Recovery <i>Comment: Managed by Central Fire Department</i>	No	Yes	No
Real Estate Disclosure <i>Comment: CA. State Civil Code 1102 requires full disclosure on Natural hazard Exposure of the sale/re-sale of any and all real property.</i>	No	No	Yes
Growth Management <i>Comment: General Plan, adopted 1969 with amendments</i>	Yes	No	Yes
Site Plan Review <i>Comment: Municipal Code Title 25.57, adopted 1998 (single family) and 2011 (multifamily)</i>	Yes	No	Yes
Environmental Protection <i>Comment: California Environmental Quality Act (CEQA)</i>	Yes	No	Yes



TABLE 5-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Flood Damage Prevention Comment: <i>Municipal Code Title 18, adopted 1981 with amendments</i>	Yes	No	Yes
Emergency Management Comment: <i>Managed by Central County Fire Department</i>	Ch. 3.36, BMC	Yes	§2407, Title 19, CCR
Climate Change Comment: <i>Climate Action Plan, adopted 2009. Coordination with Bay Area Air Quality Management District (BAAQMD)</i>	Yes	Yes	Yes
Other Comment: <i>Title 17.04 (Fire Code), Chapter 8.08 (Environmental Health), Chapter 8.16 (Solid Waste)</i>	Yes	No	No
General or Comprehensive Plan <i>Is the plan equipped to provide linkage to this mitigation plan?</i> Comment: <i>Plan is in the process of being comprehensively updated and will be equipped to provide linkage to this mitigation plan. Estimated completion Spring 2017.</i>	Yes	No	Yes
Capital Improvement Plan <i>CIP covers Facilities, Parking/Garages, Parks/Trees, Sewer, Streets, Storm, and Water Plan is updated yearly.</i> Comment: <i>CIP is outlined in the annual adopted budget</i>	Yes	No	No
Floodplain or Watershed Plan Comment:	No	No	No
Stormwater Plan Comment: <i>Stormwater Management and Discharge Control Program 2011</i>	Yes	No	No
Habitat Conservation Plan Comment: <i>General Plan Conservation Element, adopted 1973</i>	Yes	No	Yes
Economic Development Plan Comment:	No	No	No
Shoreline Management Plan Comment: <i>Bayfront Specific Plan, adopted 2014 with amendments. Coordination with Bay Conservation Development Commission (BCDC)</i>	Yes	Yes	Yes
Community Wildfire Protection Plan Comment: <i>Managed by Central County Fire Department</i>	No	Yes	No
Forest Management Plan Comment: <i>Municipal Code Title 11, adopted 1971 with amendments</i>	Yes	No	No
Climate Action Plan Comment: <i>Climate Action Plan, adopted 2009. Coordination with Bay Area Air Quality Management District (BAAQMD)</i>	Yes	No	Yes
Other Comment: <i>Downtown, Bayfront, and North Burlingame/Rollins Road Specific Plans (2010, 2004/2012, 2004/2007), Bicycle Transportation Plan (2004)</i>	Yes	No	No



TABLE 5-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Comprehensive Emergency Management Plan <i>Comment: Managed by Central County Fire Department</i>	No	Yes	No
Threat & Hazard Identification & Risk Assessment <i>Comment: Managed by Central County Fire Department</i>	No	Yes	No
Post-Disaster Recovery Plan <i>Comment: Managed by Central County Fire Department</i>	No	Yes	No
Continuity of Operations Plan <i>Comment: Managed by Central County Fire Department</i>	No	Yes	No
Public Health Plan <i>Comment: Managed by County Health Agency</i>	No	Yes	No

TABLE 5-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
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	Yes
State-Sponsored Grant Programs	No
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes – Storm Drainage Fees for Capital Improvements in the Storm Drainage System

TABLE 5-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Planning Division has three Senior Planners, a Manager and a Director Fire Prevention Division for Wildland Urban Interface issues
Engineers or professionals trained in building or infrastructure construction practices	Yes	Building Division and Fire Prevention Division
Planners or engineers with an understanding of natural hazards	Yes	Engineering Division





TABLE 5-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Staff with training in benefit/cost analysis	No	City uses consultants
Surveyors	No	Public Works Engineering/Outsource
Staff capable of making substantial damage estimates	Yes	Building Division and Fire Prevention Division
Personnel skilled or trained in GIS applications	Yes	Public Works Corporation Yard/Management Analyst
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Fire Department – Emergency Preparedness Coordinator
Grant writers	No	

TABLE 5-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	9/16/1981
When did the Flood Insurance Rate maps become effective?	9/16/1981 (original map), 7/16/2015 (current map)
What local department is responsible for floodplain management?	Public Works Engineering
Who is your floodplain administrator? (department/position)	Public Works Engineering/Senior Engineer
<ul style="list-style-type: none"> ▪ Is this a primary or auxiliary role? 	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	1981 (updated 2015)
<ul style="list-style-type: none"> ▪ Does your floodplain management program meet or exceed minimum requirements? 	Meet
<ul style="list-style-type: none"> ▪ If so, in what ways? 	City ordinance and municipal codes requirements
When was the most recent Community Assistance Visit or Community Assistance Contact?	8/6/2009
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
Does your jurisdiction participate in the Community Rating System (CRS)?	Yes
<ul style="list-style-type: none"> ▪ If so, is your jurisdiction seeking to improve its CRS Classification? 	No
How many Flood Insurance policies are in force in your jurisdiction?	313
<ul style="list-style-type: none"> ▪ What is the insurance in force? ▪ What is the premium in force? 	\$87,420,600 \$30,371
How many total loss claims have been filed in your jurisdiction?	70
<ul style="list-style-type: none"> ▪ How many claims were closed without payment/are still open? 	29



TABLE 5-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
<ul style="list-style-type: none"> What were the total payments for losses? 	\$285,343.40

TABLE 5-5. COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	Yes	9	5/1/2012
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	No	N/A	N/A
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A

TABLE 5-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes, Assistant City Manager
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Information available on City’s website (Police, Fire, and Public Works/El Niño Pages)
Do you utilize social media for hazard mitigation education and outreach?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	City website through the use of “e-news,” Burlingame PD social media accounts
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Community Advisory Committee (CAC)
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	SMC Alert, Social media sites, e-news, twitter, Facebook

5.4 Integration with Other Planning Initiatives

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



5.4.1 Existing Integration

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

- ❖ Burlingame General Plan – The existing Conservation, Seismic Safety, Safety and Noise Elements of the General Plan offer some integration with the hazard mitigation plan.
- ❖ Retroactive Fire Sprinkler Program – This plan has a retroactive requirement for commercial and residential occupancies to be retroactively equipped with fire sprinklers.
- ❖ 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.
- ❖ Storm Drainage Capital Improvements Program — This citizen approved storm measure plan in 2009 accelerates projects that reduce local street flooding caused by natural storm runoff that can impede traffic and emergency access.

5.4.2 Opportunities for Future Integration

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

- ❖ Burlingame General Plan Update — This plan is being comprehensively updated, so offers the opportunity to fully integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan. The updated General Plan will be drafted in Summer 2016, reviewed in Fall 2016, and scheduled to be adopted in Spring 2017.
- ❖ Zoning Ordinance Update — There may be opportunities to integrate goals, risk assessment and/or recommendations of the hazard mitigation plan into development regulations contained in the Zoning Ordinance. The ordinance will be comprehensively updated subsequent to the General Plan Update, with a draft in Spring 2017 and adoption scheduled for Fall 2017.

5.5 Jurisdiction-Specific Natural Hazard Event History

Table 5-6 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 5-6. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Storms	N/A	01/01/2011	Not enough information to ascertain
Severe Storms	NA	01/04/2008	Not enough information to ascertain
Severe Storms	N/A	02/27/2006	Not enough information to ascertain
Severe Storms	N/A	12/30/2005	Not enough information to ascertain
Severe Storms	N/A	01/01/2004	Not enough information to ascertain



TABLE 5-6. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Storms	N/A	12/16/2002	Not enough information to ascertain
Severe Storms	N/A	11/07/2002	Not enough information to ascertain
Loma Prieta Earthquake	DR-845	10/17/1989	Not enough information to ascertain

5.6 Jurisdiction-Specific Vulnerabilities

Repetitive loss records are as follows:

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

Other noted vulnerabilities include:

- ❖ Local drainage issues in the Rollins Road residential area during high tide, wind storm rain events.

5.7 Hazard Risk Ranking

Table 5-7 presents the ranking of the hazards of concern.

TABLE 5-7. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe Weather	33	Medium
3	Landslide	18	Medium
4	Flood	18	Medium
5	Tsunami	15	Medium
6	Dam Failure	6	Low
7	Drought	3	Low
8	Wildfire	0	Low

5.8 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 5-8 lists the actions that make up the City of Burlingame hazard mitigation action plan. Table 5-9 identifies the priority for each action. Table 5-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.



TABLE 5-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
BG-1 – Continue to educate and provide resources for property owners and developers to retrofit and construct structures that are earthquake resilient.						
New and Existing	Earthquake	1, 2, 3, 4, 6, 7, 8, 9, 10	Building Public Works	Low	Staff Time, General Funds	On-going
BG-2 – Complete all projects outlined in the Storm Drainage Capital Improvement Program						
Existing	Flooding	1-10	Public Works	High	Storm Drainage Fee and Bond	On-going
BG-3 – Develop a map that identifies at-risk areas and properties based on Topography and Geotech Information from new developments.						
New and existing	Landslide	1, 2, 3, 4, 6, 7, 10, 11	Planning Building	Low	Development Fees, Staff Time	On-going
BG-4 – Participate in programs such as Firewise, and StormReady						
Existing	Severe Weather	1, 2, 3, 5, 6, 7, 8, 9, 10	Public Works	Low	Staff Time	On-going
BG-5 – Insure early warning system for evacuation of areas susceptible to natural flooding, and tsunami inundation.						
Existing	Flood &Tsunami	1, 2, 3, 5, 6, 7, 8, 9, 10	Emergency Operations, Police, Fire, Public Works	Low	Staff Time	On-going
BG-6 – Create a Citywide asset management database to better assess our risk/vulnerabilities.						
Existing	Multi-hazard	1-8	Department-wide	High	General Fund	On-going
BG-7 – Provide a reliable fire and domestic water supply that meets long term needs while insuring protection of public health and safety with the implementation of the water shortage contingency plan.						
New	Drought	1, 5, 6, 8	Public Works	Medium	Capital Improvement Projects	On-going
BG-8 – Educate and inform the community about emergency preparedness options in the event of a hazard event						
New and Existing	Multi-hazard	1-10	Emergency Operations, Public Information Officer(s)	Low	General Fund	On-going
BG-9 – Periodically inspect and assess the structural integrity of bridges and culvert crossings connecting the City’s transportation routes. Based on assessment, develop plan to rehabilitate critical deficient structures.						
Existing	Multi-hazard	1-10	Public Works and Caltrans	High	General Funds	On-going
BG-10 – Encourage property owners, potential buyers, and residents living in floodplains to participate in the Federal Flood Insurance Program.						
New and existing	Flooding, Tsunami	1, 2, 3, 4, 5, 6 7, 10	Public Works	Low	Staff Time	On-going

Action G-1—Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.





TABLE 5-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	All	1, 3, 4, 5, 6, 7, 11	Jurisdictions	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
<p>Action G-2—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>						
New and existing	Flooding	2, 3, 5, 6, 8	San Mateo County Unincorporated and Municipalities with SFHAs	Low	General Fund	Short-term and ongoing
<p>Action G-3—Where feasible, implement a program to record high water marks following high-water events.</p>						
New and existing	Flooding, Severe Weather	1, 3, 4, 5, 6	Jurisdictions	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
<p>Action G-4—Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.</p>						
New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	Jurisdictions	Low	General Fund	Short-term
<p>Action G-5—Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.</p>						
New and existing	All	2, 3, 4, 5, 6, 7, 8, 10, 11	Jurisdictions	Low	Operating Budgets	Ongoing
<p>Action G-6— Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.</p>						
New and Existing	All	1, 4	Jurisdictions	Low	Staff Time, General Funds	Short-term
<p>Action G-7—Consider the development and implementation of a Capital Improvements Program (CIP) to increase regulatory, financial, and technical capability to implement mitigation actions.</p>						
New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	Jurisdictions	High	CIP component of general fund (if implemented)	Long term

TABLE 5-9. MITIGATION STRATEGY PRIORITY SCHEDULE

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Priority ^a
BG-1	9	High	Low	No	No	Yes	High	Low





TABLE 5-9. MITIGATION STRATEGY PRIORITY SCHEDULE

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

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

TABLE 5-10. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Earthquake	BG-1, BG-3, BG-5, BG-7, BG-8, BG-9	BG-1, BG-2, BG-6, BG-8, BG-10	BG-1, BG-6, BG-8, BG-10	BG-3, BG-6	BG-5, BG-8	BG-1, BG-2
Severe Weather	BG-4, BG-5, BG-8	BG-2, BG-5, BG-8, BG-10	BG-4, BG-5, BG-8, BG-10	BG-2, BG-3, BG-6, BG-8	BG-5, BG-8	BG-1, BG-2
Landslide	BG-3, BG-6, BG-8	BG-1, BG-3	BG-3, BG-6	BG-3	BG-3	BG-1, BG-3

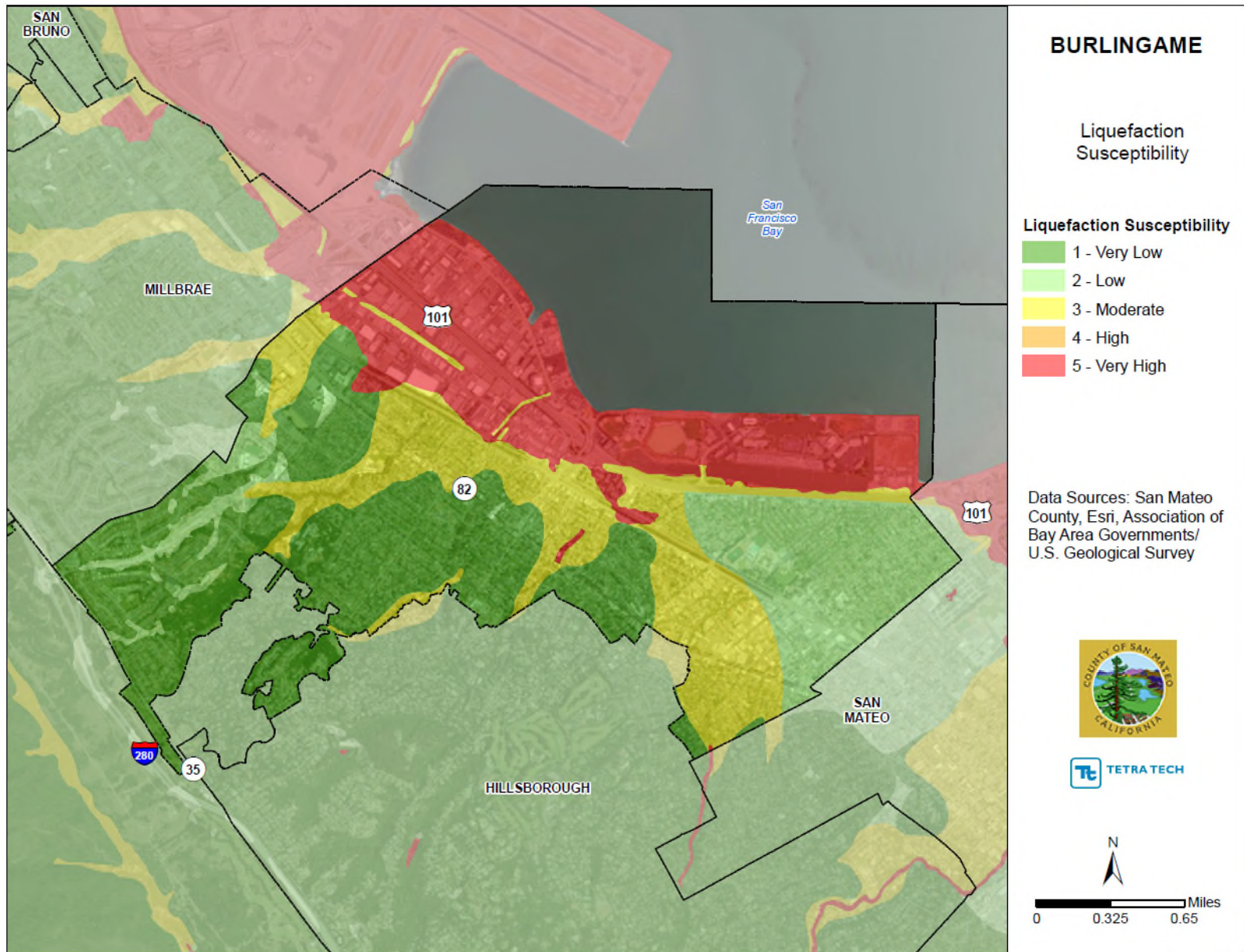


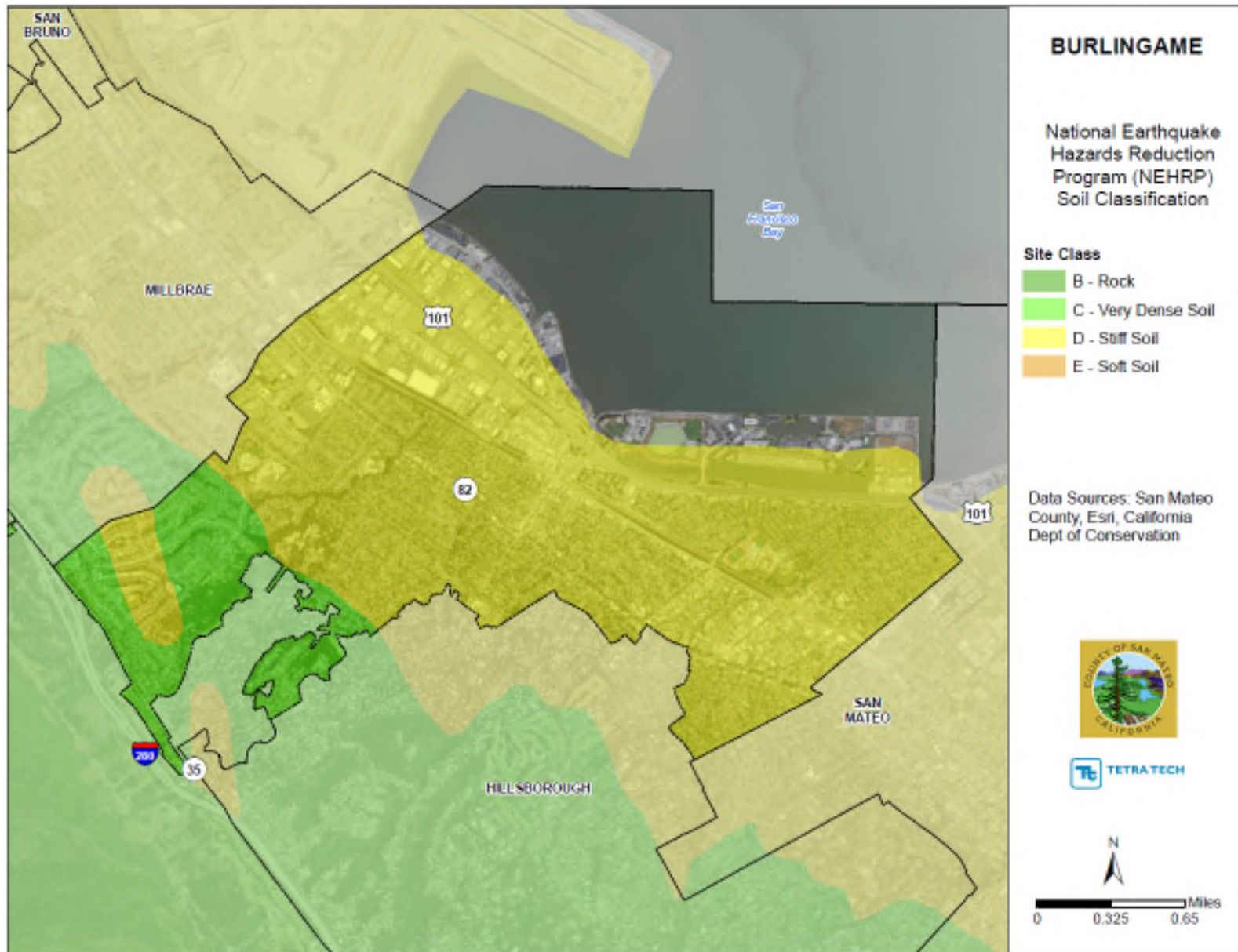


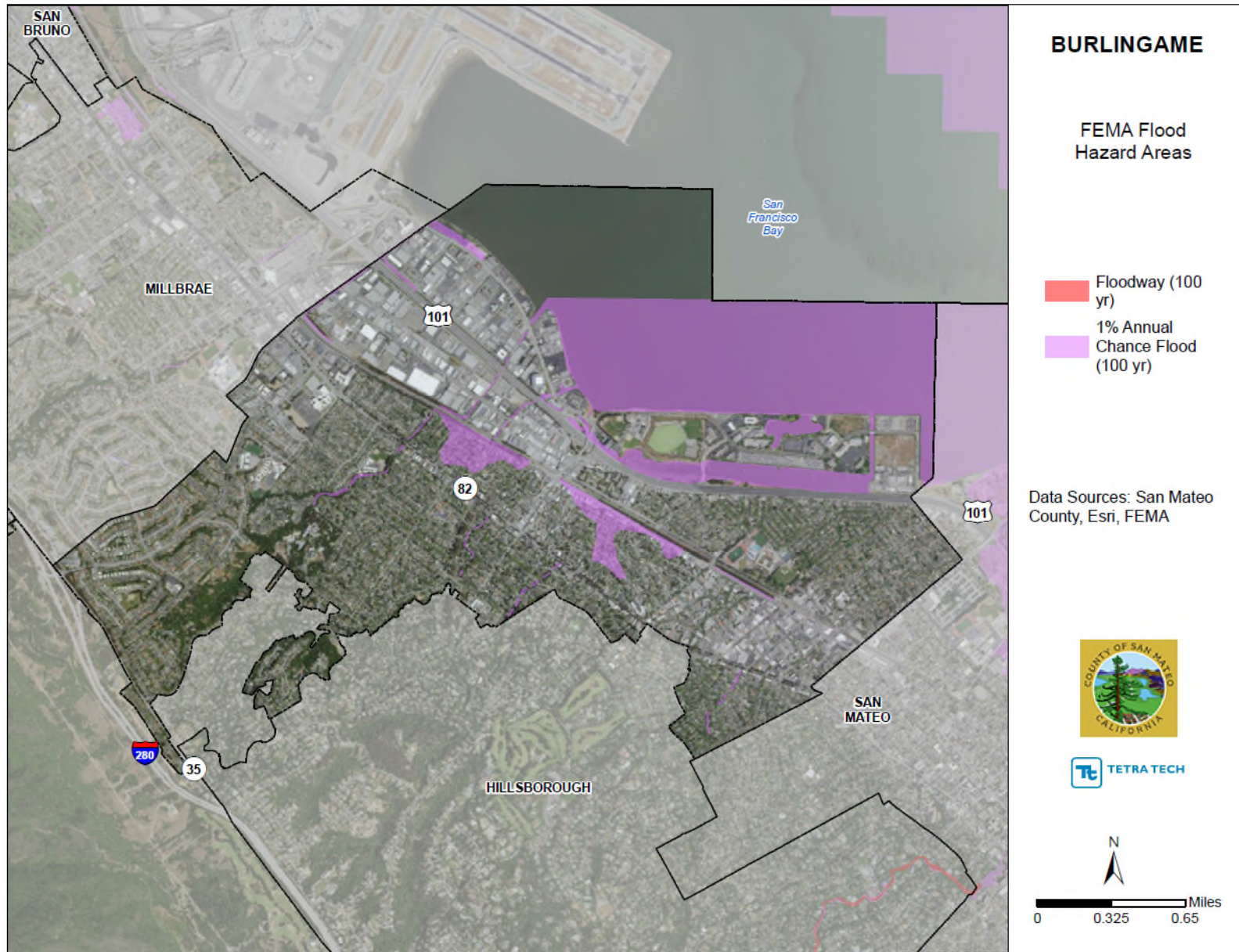
TABLE 5-10. ANALYSIS OF MITIGATION ACTIONS

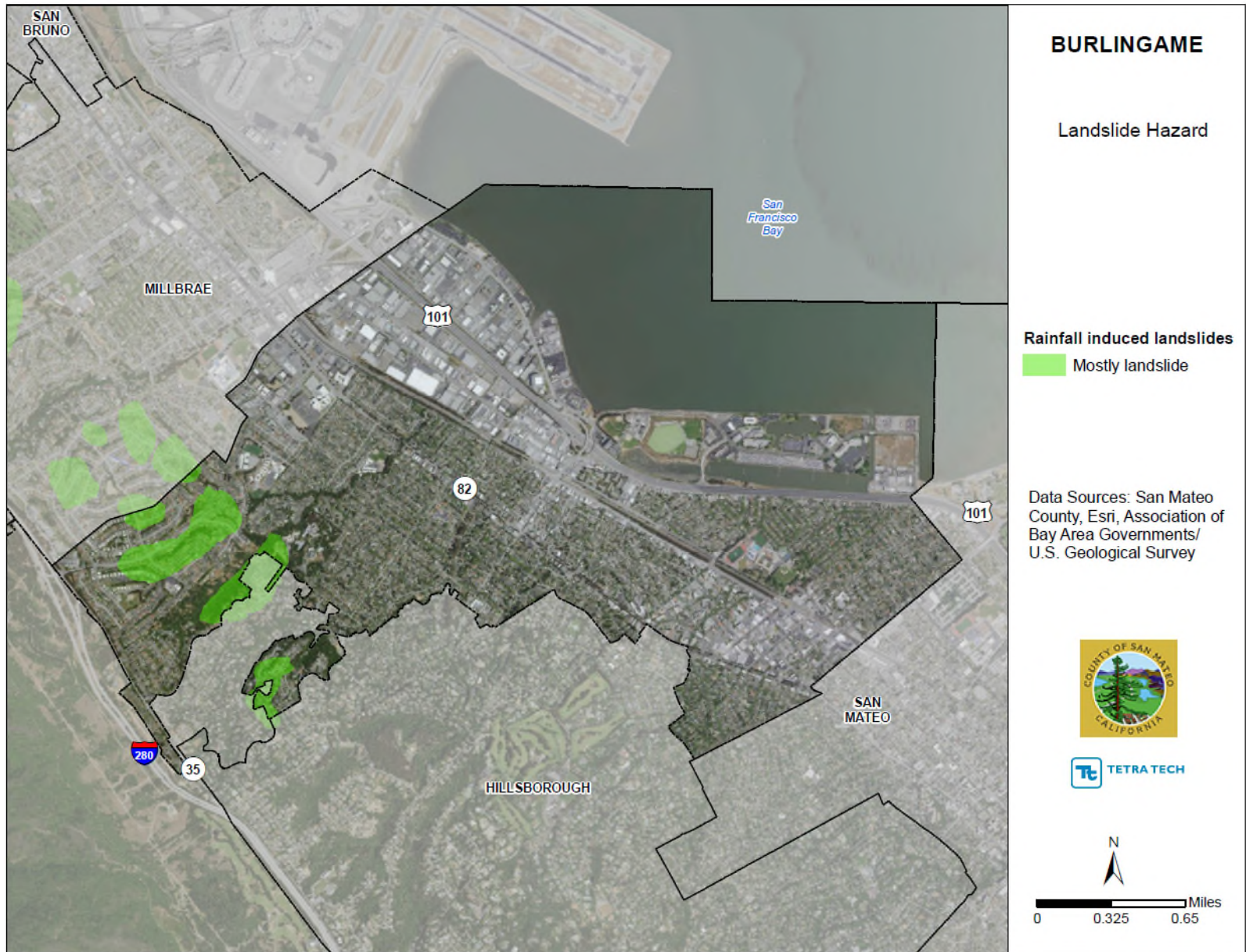
Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Flood	BG-2, BG-4, BG-5, BG-8, BG-10	BG-2, BG-5, BG-10	BG-2, BG-4, BG-5, BG-6, BG-10	BG-6	BG-5, BG-8	BG-10
Tsunami	BG-5, BG-8	BG-5, BG-10	BG-5	BG-8	BG-5	BG-10
Dam Failure	BG-8	BG-8	BG-8	BG-8	BG-8	BG-8
Drought	BG-7	BG-8	BG-7, BG-8	BG-8	BG-8	BG-7
Wildfire	BG-4	BG-6	BG-4, BG-6	BG-6	BG-4	BG-6

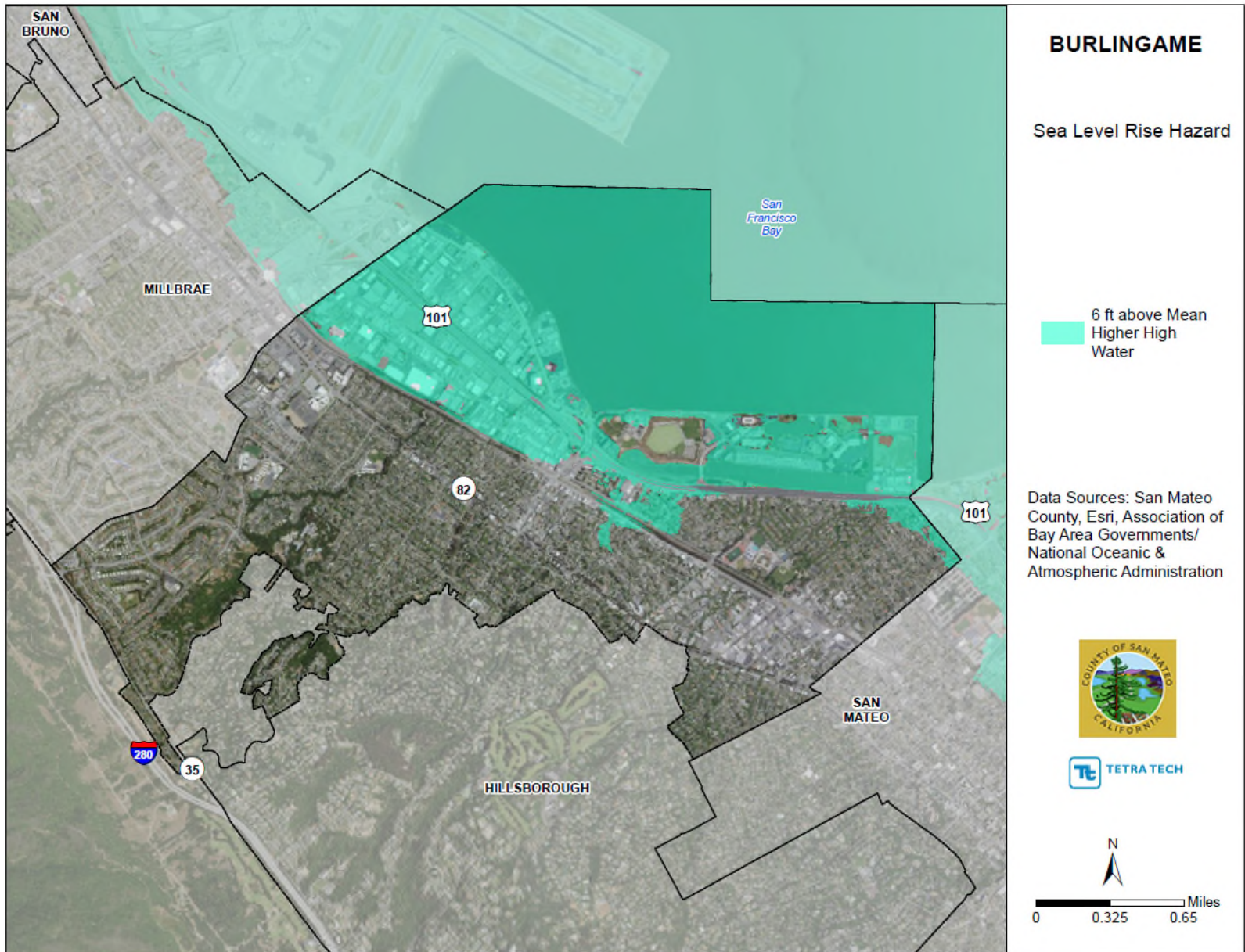
a. See the introduction to this volume for explanation of mitigation types.

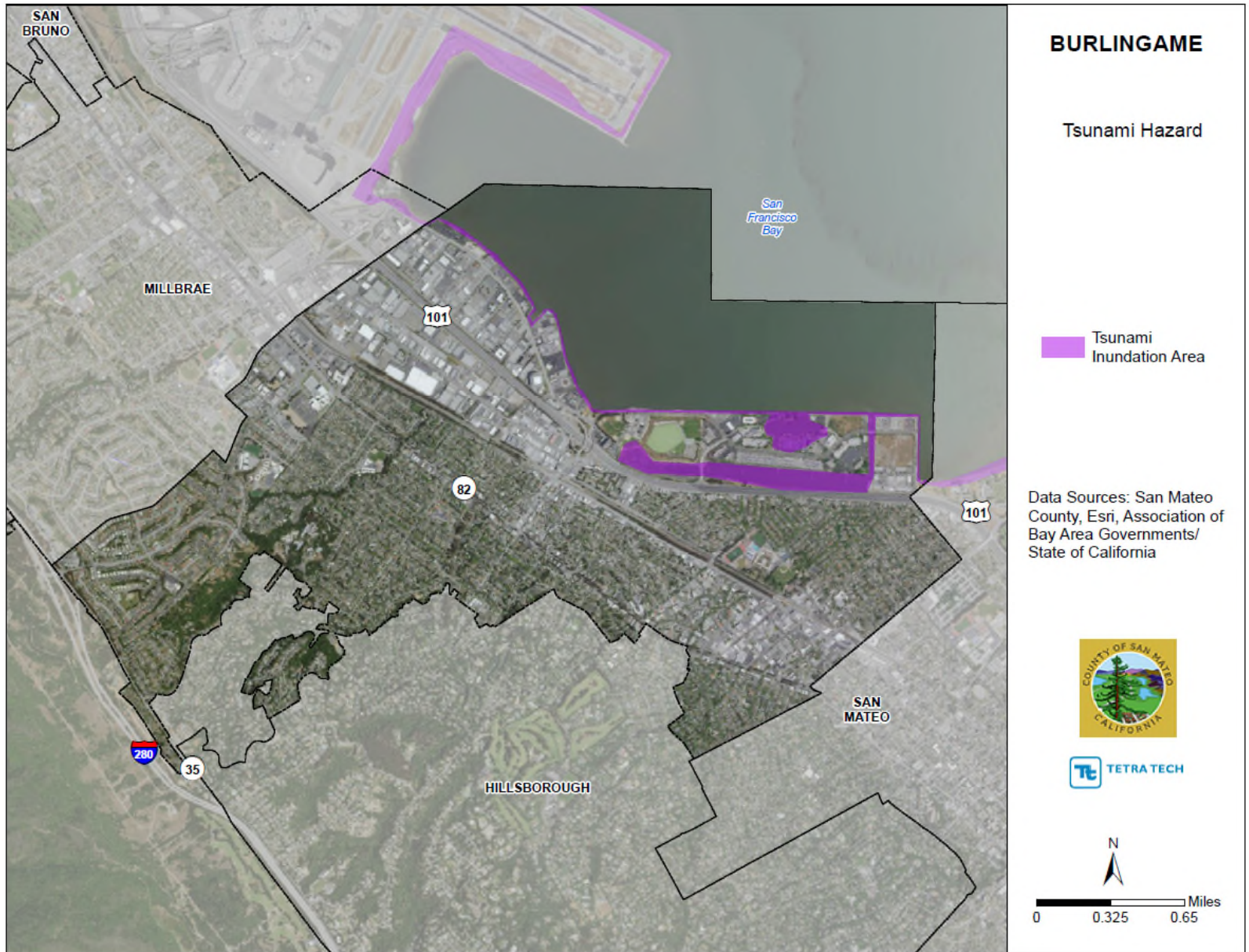


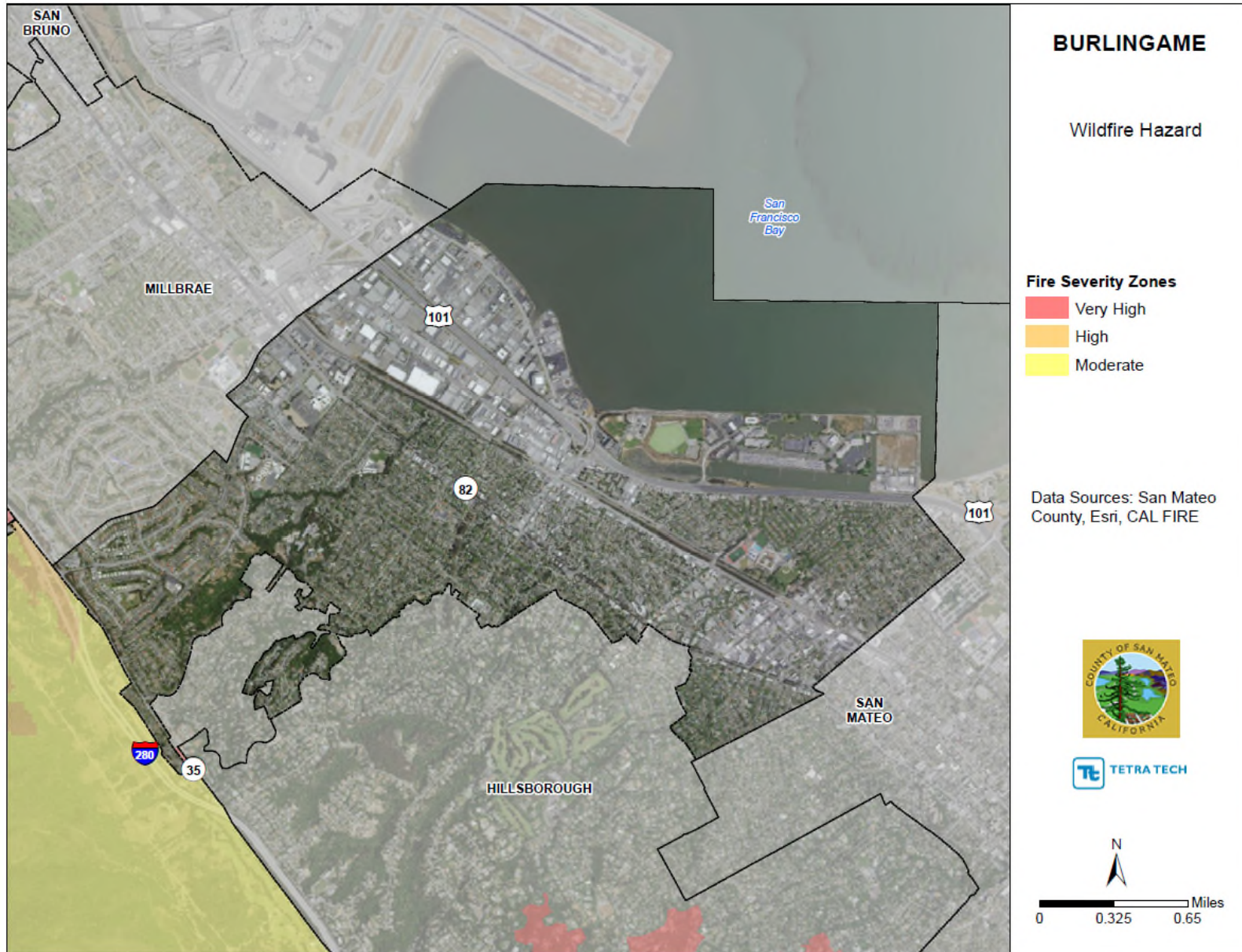














Chapter 6. Town of Colma

6.1 Hazard Mitigation Plan Point of Contact

<p>Primary Point of Contact Michael P. Laughlin, AICP, City Planner 1190 El Camino Real Colma, CA 94014 Telephone: 650-757-8896 e-mail Address: michael.laughlin@colma.ca.gov</p>	<p>Alternate Point of Contact Sherwin Lum, Police Commander 1199 El Camino Real Colma, CA 94014 Telephone: 650-997-8336 e-mail Address: sherwin.lum@colma.ca.gov</p>
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6.2 Jurisdiction Profile

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

- ❖ Date of Incorporation — 1924
- ❖ Current Population — 1,509 (as of January 1, 2016 – CA DOF)
- ❖ Population Growth, Commuting Trends, and Town Visitors — Colma’s small population grew between the years 2000 to 2010 from 1,187 to 1,454: increasing by 267 residents or 22 percent. The Association of Bay Area Governments (ABAG) predicts Colma will continue to grow over the next 20 years, albeit not as rapidly, to reach a population of approximately 1,874 in 2030.

TABLE 6-1. POPULATION (ACTUAL AND PROJECTIONS)

Year	Population	Percentage Increase from Previous Decade	Source
2000	1,187 (actual)		U.S. Census 2000
2010	1,454 (actual)	22.4%	U.S. Census 2010
2020	1,700 (projection)	14.5%	Colma Housing Element, 2015
2030	1,874 (projection)	9.3%	Colma Housing Element, 2015
Total projected percentage increase (2000-2030)		46.2%	

In addition to the anticipated growth through 2030 of the Town’s living residents, the Town of Colma serves as the primary burial ground for the City and County of San Francisco. Currently, the Town is home to approximately 1.5 million “underground residents” within the Town’s cemeteries, with an





estimated 75 individuals interred or processed each day within town limits. These constant additions to the Town's cemeteries make Colma a daily destination for visiting families.

Finally, the strong retail presence within the Town is exemplified by the approximately 3,000 daily commuters who work within town limits and the estimated 5,000 to 10,000 visitors who come to Colma to shop each day. This influx of daily visitors and commuters showcases a need for a strong public information presence in order to ensure individuals from outside of the Town are aware of local resources in case of a disaster or emergency event.

- ❖ **Location and Description** —The Town of Colma is a small town located in the northern portion of San Mateo County, approximately 5 miles south of San Francisco. Colma is 1.98 square miles in size, and is bordered by Daly City to the north and west; San Bruno Mountain to the east; and South San Francisco to the south. Highway 280 is the western boundary for the town and provides primary north/south access to and from the town. Highway 82, the El Camino Real, another north/south route, extends through the center of the town. The Town of Colma serves a regional need for cemeteries along the San Francisco peninsula, with 16 active cemeteries and 2 closed cemeteries that occupy 76 percent of the land area. Much of the remaining land in Colma not in cemetery use is commercial (including two shopping centers, an auto row and cardroom). The small amount of remaining land is in residential use.
- ❖ **Brief History**— Prior to incorporation, the Town of Colma was primarily agricultural in nature, with north/south access along the historic El Camino Real. In the late 1800s, the City of San Francisco began passing a series of laws to prevent new cemeteries and requiring that existing cemeteries be removed from within city limits. Religious, ethnic, and secular groups began purchasing land in Colma to establish cemeteries. Railroad lines extended through the town and brought grieving families with their loved ones to Colma for burial. The town was incorporated in 1924 to protect cemetery land use. As a result, the Town of Colma has a significant number of historic structures and resources. Commercial and residential development followed, and has continued until the present time. In the late 1980s, the Town annexed several residential blocks in the Sterling Park residential neighborhood.
- ❖ **Climate**—Colma's climate is highly influenced by its proximity to the Northern California coast. As a result, temperatures remain moderate throughout the year, with periods of fog and wind during spring and summer months. The warmest time of the year is in the fall, with the average high temperature of 73° occurring in September. December and January tend to be the coldest months, with average low temperatures in the mid-40s. A majority of the seasonal rains occur between November and March, with annual precipitation of approximately 20 inches. (Sources: holidayweather.com and intellicast.com)
- ❖ **Governing Body Format**— The Town of Colma is governed by a five member City Council. Due to the Town's small size, the City Council makes all policy and land use decisions in the Town. The Town employs approximately 51 people in administrative, recreation and police services. The Town has traditionally contracted its public works, building and planning services. Fire services are supplied by a Joint Powers Authority, the Colma Fire Protection District. The major government facilities include a newly expanded town hall, a police station, Sterling Park recreation center, a community center.





The Town owns but does not operate the Historical Association Museum (operation is by the Colma Historical Association). The City Council assumes responsibility for the adoption and implementation of this plan.

- ❖ **Development Trends**— Since Colma has no land area for expansion, any new development will be in-fill development. Colma is anticipating the addition of approximately 89 new residential units within the next 5 years. Colma is also anticipating some commercial property redevelopment on existing sites. The town has completed an urban design study and is in the process of updating its General Plan. These plans anticipate an intensification of land use in the center of the town in the further distant future.

TABLE 6-2. PAST AND ANTICIPATED DEVELOPMENT

Property or Development Name	Type (e.g. Res., Comm.)	# of Units / Structures	Location (address and/or Block & Lot)	Known Hazard Zone(s)	Description/Status of Development
Recent Development from 2011 to present					
No recent development since 2011					
Known or Anticipated Development in the Next Five (5) Years					
Tealdi Subdivision	Single Family Res.	9	446 B Street (Southside)	None	Anticipated to be completed within the next 5 years
7733 El Camino Real	Res. Townhouses	13	7733 El Camino Real	None	Anticipated to start within next 5 years
Mercy Housing Veteran’s Housing project	Affordable apartments	66	1670-1692 Mission Road	None	Anticipated to be completed within the next 5 years
CarMax	Commercial	One new auto dealership structure	455 Serramonte Boulevard	None	Anticipated to open in fall 2017

6.3 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 6-3. An assessment of fiscal capabilities is presented in Table 6-4. An assessment of administrative and technical capabilities is presented in Table 6-5. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 6-6. Classifications under various community mitigation programs are presented in Table 6-7. An assessment of education and outreach capabilities is presented in Table 6-8.



TABLE 6-3. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code	Yes	No	Yes
Comment: The 2013 California Building Residential, Electrical, Mechanical, Plumbing, Energy, Historical Building, Existing Building, and Green Building Standards Codes, as adopted by the California Building Standards Commission, were adopted by reference by the Town of Colma in January 2015. Town Municipal Code Subchapter 5.04			
Zoning Code	Yes	No	No
Comment: Town of Colma Zoning Codes were most recently updated January 2015, Subchapter 5.03			
Subdivisions	Yes	No	No
Comment: Town of Colma Subdivision Codes were most recently updated October 2014, Subchapter 5.03			
Stormwater Management	Yes	No	Yes
Comment: Town of Colma Stormwater Management Codes were most recently updated June 2011, Subchapter 5.11, and January 2006, Subchapter 3.10. Town complies with latest Regional Water Quality Control Board permit requirements and uses countywide resources found on flowstobay.org			
Post-Disaster Recovery	No	No	No
Comment:			
Real Estate Disclosure	No	No	No
Comment: CA. State Civil Code 1102 requires full disclosure on Natural hazard Exposure of the sale/re-sale of any and all real property.			
Growth Management	Yes	No	Yes
Comment: The Housing Element of the Town of Colma General Plan contains information regarding growth management in Colma. The Housing Element was last updated and adopted in January 2015.			
Site Plan Review	Yes	No	No
Comment: Town of Colma Design Review Procedures were most recently updated January 2015, Subchapter 5.3.300.(d).			
Environmental Protection	Yes	No	Yes
Comment: Town of Colma Environmental Protection Codes were most recently updated May 2012, Chapter 3			
Flood Damage Prevention	Yes	No	No
Comment: Town of Colma Flood Management Regulations were most recently updated January 2015, Subchapter 5.03.320 (F Zone regulations under the Zoning Subchapter)			
Emergency Management	Yes	No	Yes
Comment: Town of Colma Emergency Management Codes were most recently updated June 2007, Subchapter 1.17			
Climate Change	Yes	No	Yes
Comment: SB 97 directs California Environmental Quality Act (CEQA) Guidelines to address greenhouse gas emissions. Other state policies include AB 32 and SB 375 and regulations of the Climate Action Plan.			
Other	Yes	No	Yes (Some)
Comment: Subchapter 3.04 (Sewers and Water/Wastewater Discharge), September 2011 Subchapter 1.16 (Police Training), January 2006			
General or Comprehensive Plan	Yes	No	Yes
Is the plan equipped to provide linkage to this mitigation plan? Yes			



TABLE 6-3. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
<p>Comment: The Town of Colma is in the midst of updating its General Plan to develop a 2035 Vision. To date, the Housing Element (2015) and Circulation Element (2014) have been updated and adopted, a Historic Resources Element (2015) has been drafted, and the Land Use and Urban Design Strategy (2014) has been developed. Until other elements are updated, the Town will refer to its 1999 Land Use Element, Noise Element, Open Space/Conservation Element, Safety Element and Historical Resources Element.</p>			
Capital Improvement Plan	Yes	Yes	No
<p><i>What types of capital facilities does the plan address?</i> Utility undergrounding, storm drainage and flood control, public facilities and parks, sanitary sewer systems, information technology, and strategies and mandates (i.e., planning). One project listed was begun in coordination with two other jurisdictions.</p> <p><i>How often is the plan updated?</i> The most recent Capital Improvement Plan (CIP) covers Town goals from 2014/15 through 2018/19. Although prior versions of the CIP aren't available, the annual budgets review five years of CIP funding.</p> <p>Comment:</p>			
Floodplain or Watershed Plan	No	Yes	No
<p>Comment: Participates in the San Mateo County Flood Control District – Colma Creek Flood Control. As part of this initiative, Colma has participated in the development of multiple plans dedicated to various aspects of flood control and preservation of Colma Creek.</p>			
Stormwater Plan	No	No	No
<p>Comment: The Town is subject to the Countywide NPDES Permit and Countywide storm water requirements, which can be found on flowstobay.org.</p>			
Habitat Conservation Plan	No	No	No
<p>Comment: There are no sensitive habitats in the Town limits.</p>			
Economic Development Plan	Yes	No	No
<p>Comment: The Town has a three phase plan. Phase 3, the final phase of the Town's three-part Strategic Economic Development Plan, was completed in December 2012.</p>			
Shoreline Management Plan	No	No	No
<p>Comment: The Town of Colma does not have any shoreline</p>			
Community Wildfire Protection Plan	No	Yes	No
<p>Comment: The Town of Colma is covered under the San Mateo County CWPP developed by CalFire.</p>			
Forest Management Plan	No	No	No
<p>Comment: The Town of Colma does not have any forests.</p>			
Climate Action Plan	Yes	Yes	No
<p>Comment: Adopted on May 8, 2013. Developed in collaboration with Regionally Integrated Climate Action Planning Suite (RICAPS).</p>			
Other – Disaster Preparedness Guide	Yes	No	No
<p>Comment: A 2-page disaster preparedness guide was prepared in 2011 for Colma residents and businesses.</p>			
Comprehensive Emergency Management Plan	Yes	No	Yes
<p>Comment: Emergency Operations Plan</p>			
Threat & Hazard Identification & Risk Assessment	Yes	No	No
<p>Comment:</p>			





TABLE 6-3. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Post-Disaster Recovery Plan	Yes	No	No
Comment:			
Continuity of Operations Plan	Yes (Partial)	No	No
Comment: An Executive Order on Succession of Powers was adopted in September 2012; however the Town does not have a full Continuity of Operations Plan. Public Works maintains a MAA for assistance and continuity of public works related operations.			
Public Health Plan	No	Yes	No
Comment: The Town would defer to San Mateo County Health Dept.			

TABLE 6-4. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes, Sewer Fees, Cal Water, PG&E
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes, Special Gas Tax Fund
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes, Police Grants
Development Impact Fees for Homebuyers or Developers	No; however, this is being considered as a possible future source of funding
Other	No

TABLE 6-5. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Colma Public Works and Planning Department
Engineers or professionals trained in building or infrastructure construction practices	Yes	Colma Building Department and Public Works Departments
Planners or engineers with an understanding of natural hazards	Yes	Colma Planning Department, Building Department and Public Works Department
Staff with training in benefit/cost analysis	Yes	Available through municipal consulting firm
Surveyors	Yes	Available through municipal consulting firm



TABLE 6-5. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Staff capable of making substantial damage estimates	Yes	Available through municipal consulting firm
Personnel skilled or trained in GIS applications	Yes	Available through municipal consulting firm
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Police Department
Grant writers	Yes	Available through municipal consulting firm

TABLE 6-6. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	11/1/1979
When did the Flood Insurance Rate maps become effective?	10/16/2012
What local department is responsible for floodplain management?	Colma Public Works Department
Who is your floodplain administrator? (department/position)	Public Works Director
<ul style="list-style-type: none"> ▪ Is this a primary or auxiliary role? 	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	January 2015 (as part of Zoning Ordinance – upholds current IBC standards)
<ul style="list-style-type: none"> ▪ Does your floodplain management program meet or exceed minimum requirements? 	Meet for no SFHA
When was the most recent Community Assistance Visit or Community Assistance Contact?	No SFHA
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
Does your jurisdiction participate in the Community Rating System (CRS)?	No
How many Flood Insurance policies are in force in your jurisdiction?	4
<ul style="list-style-type: none"> ▪ What is the insurance in force? ▪ What is the premium in force? 	\$3,600,00 \$12,840
How many total loss claims have been filed in your jurisdiction?	2
<ul style="list-style-type: none"> ▪ How many claims were closed without payment(CWOP)/are still open? ▪ What were the total payments for losses? 	1 CWOP \$1,795.76



TABLE 6-7. COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	Yes	4/9	N/A
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A

TABLE 6-8. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes/City Manager
Do you have personnel skilled or trained in website development?	Yes/Administrative Assistant
Do you have hazard mitigation information available on your website?	Yes
<ul style="list-style-type: none"> ▪ If yes, please briefly describe. 	Link to Local Hazard Mitigation Plan Annex and Strategies Master Spreadsheet
Do you utilize social media for hazard mitigation education and outreach?	No, but may do so in the future
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No. City Council would address hazard mitigation.
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
<ul style="list-style-type: none"> ▪ If yes, please briefly describe. 	Monthly newsletter to residents, quarterly newsletter to businesses or email blast to businesses. Reverse 911 capabilities for emerging threats.
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> ▪ If yes, please briefly describe. 	San Mateo County Emergency Alert System, Reverse 911 calling.

6.4 Integration with Other Planning Initiatives

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

6.4.1 Existing Integration

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

- ❖ Town of Colma City General Plan, Housing Element—The Town of Colma has integrated environmental conditions, including geotechnical hazards (geologic and seismic safety), noise level



incompatibility, and flooding, into the General Plan Housing Element. Programs in this Element also tie back to hazard mitigation and safety, with relevant actions consisting of inclusive housing, emergency shelters, and utility undergrounding in the Mission Road Corridor.

- ❖ Town of Colma Climate Action Plan—The Town of Colma notes one of the benefits of its Climate Action Plan as increased public health. By building greener buildings, Colma residents will have improved air quality, which will benefit all residents, but especially children and those over 65. Additionally, the Climate Action Plan considers adaption strategies for climate change impacts, including more frequent severe weather events, regional droughts, extreme heat events, and flooding from sea level rise.

6.4.2 Opportunities for Future Integration

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

- ❖ General Plan, Safety Element—The Town of Colma is currently in the process of updating the 1999 General Plan to account for current trends, statistics, and goals. Only a few sections have been updated, to date. The pending update of the Safety Element provides Colma a significant opportunity to incorporate the results of the hazard mitigation risk analysis and mitigation projects into their Safety Element in compliance with Assembly Bill 2140. Additionally, the update of the Safety Element in conjunction with this Hazard Mitigation Plan will position the Town of Colma for future compliance with SB 379 upon the next LHMP update planning period.
- ❖ Town of Colma Climate Action Plan – The Climate Action Plan provides the Town with an opportunity to directly integrate hazard mitigation with existing goals and objectives. Since the Climate Action Plan already provides a strategic guide for minimizing the impact of human activity on the environment, integration of hazard mitigation is a fitting and strategic next step. Colma anticipates that future assessments to the Climate Action Plan will include hazard mitigation as it relates to air quality, land use, and other factors.
- ❖ Capital Improvement Planning—The Town of Colma maintains a comprehensive CIP, which guides capital improvement projects over a five-year period. Many projects included in the current CIP relate, directly and indirectly, to hazard mitigation. The update of the Hazard Mitigation Plan and selection of necessary mitigation actions enable the Town to ensure consistency between the HMP, the current CIP, and future versions of the CIP. The HMP update may also identify new possible funding sources for capital improvement projects.
- ❖ Public Outreach – Colma 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 program that involves using these current capabilities to expand outreach specific to hazard mitigation.

6.5 Jurisdiction-Specific Natural Hazard Event History

Table 6-9 lists all past occurrences of natural hazards within the jurisdiction.



TABLE 6-9. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Storm	N/A	3/13/2016	\$0.0 (Trees on private property lost)
Fire (San Bruno)	FM-2856	9/10/2010	\$6,200.00 (Police Mutual Aid)
Severe Storm(s)	DR-1646	6/5/2006	\$0.0
Severe Storm(s)	DR-1628	2/3/2006	\$0.0
Severe Storm(s)	DR-1203	2/9/1998	\$20,000 (Approx.) (30-40 Street trees lost and additional damage)
Severe Storm(s)	DR-1155	1/4/1997	Unknown
Severe Storm(s)	DR-1046	3/12/1995	Unknown
Severe Storm(s)	DR-1044	1/10/1995	Unknown
Freezing	DR-894	2/11/1991	Unknown
Earthquake	DR-845	10/18/1989	Unknown
Coastal Storm	DR-677	2/9/1983	Unknown
Drought	EM-3023	1/20/1977	Unknown
Severe Storm(s)	DR-138	10/24/1962	Unknown
Fire	DR-65	12/29/1956	Unknown

6.6 Jurisdiction-Specific Vulnerabilities

Repetitive loss records are as follows:

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

Other noted vulnerabilities include:

- ❖ El Camino Real – The land around El Camino Real largely consists of Colma sand – loose soil that has the potential to experience extreme liquefaction due to consistency and proximity to the San Andreas Fault. Multiple critical facilities are located in proximity to this area, including Town Hall, the Police Station, and economically critical private facilities.
- ❖ San Bruno Mountain – The eastern border of the Town lays flush against the San Bruno Mountain State Park. The San Bruno Mountain State Park is noted as a moderate wildfire severity state responsibility area for fire suppression and prevention. Though considered a moderate zone, the potential for wildfire on the mountain has the potential to affect eastern Colma with cascading effects on mutual aid and response capabilities.
- ❖ The Colma Community Center is not currently equipped with a facility generator. This Community Center serves as a shelter facility, demonstrating the need for backup power generation in cases of power outages.



- ❖ The Town Emergency Operations Center (EOC) requires updated equipment to adequately coordinate emergency services during a disaster. Additionally, the EOC is located in a known liquefaction zone for the Town along El Camino Real.
- ❖ BART tunnels run through a section of high liquefaction susceptible soils along Mission Road.

6.7 Hazard Risk Ranking

Table 6-10 presents the ranking of the hazards of concern.

TABLE 6-10. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe Weather	33	High
3	Drought	3	Medium
-	Wildfire	0	No Exposure/Impact
-	Landslide	0	No Exposure/Impact
-	Dam and Reservoir Failure	0	No Exposure/Impact
-	Flood	0	No Exposure/Impact
-	Tsunami	0	No Exposure/Impact

6.8 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 6-11 lists the actions that make up the Town of Colma hazard mitigation action plan. Table 6-10 identifies the priority for each action. Anticipated timelines are typically dependent on funding availability. Table 6-11 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 6-11. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action C-1 —Develop a full Continuity of Operations (COOP) Plan for Town government.						
Existing	All Hazards	1, 2, 3, 5, 6, 9, 10	Colma Planning	Low / Medium	General Fund, FEMA Hazard Mitigation Grants	Short-term
Action C-2 —Coordinate and assist in the development of COOP plans for the Town’s cemeteries.						
N/A	All Hazards	1, 2, 3, 5, 6, 9, 10	Colma Planning	Low / Medium	General Fund, FEMA Hazard Mitigation Grants	Short-term





TABLE 6-11. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action C-3 — Establish a Public Private Partnership program between the Town and the private owners of identified critical facilities, including the Town’s cemeteries and large retailers.						
Existing	All Hazards	2, 3, 7, 8, 10	Colma Planning	Low	General Fund	Short term and ongoing
Action C-4 — Develop a Debris Management Plan in coordination with jurisdictional partners.						
N/A	All Hazards	1, 2, 3, 4, 5, 6, 8, 10	Colma Public Works	Low / Medium	General Fund, FEMA Hazard Mitigation Grants	Long term
Action C-5 — Construct sewer bypass piping to provide redundancy and to prevent sewer siphon backup and overflow in emergency.						
Existing	Earthquake	1, 6, 7, 11	Colma Public Works	Medium	General Fund, FEMA Hazard Mitigation Grants	Short-Term
Action C-6 — Identify and equip an alternate EOC location in case of primary EOC disruption or destruction.						
New and Existing	All Hazards	1, 2, 3, 4, 6, 7, 8	Colma PD	High	General Fund, FEMA Hazard Mitigation Grants	Medium
Action C-7 — Develop an outreach campaign for encouraging Colma residents and daily commuters to sign up for reverse 911 notifications on their cell phones.						
N/A	All Hazards	2, 3, 7, 9	Colma PD	Low	General Fund	Short and Ongoing
Action C-8 — Construct a bypass or overflow siphon to maintain culvert functionality along El Camino Real.						
Existing	Severe Weather, Earthquake	1, 6, 7, 11	Colma Public Works	Medium / High	General Fund, FEMA Hazard Mitigation Grants	Short-term
Action C-9 — Purchase portable generators and coordinate connection upgrades with Cemetery groundwater pumps to acquire groundwater resources in case of emergency.						
New	Drought, Earthquake	1, 4, 5, 6, 7	Colma Public Works	Medium / High	General Fund, FEMA Hazard Mitigation Grants	Medium
Action C-10 — Assist North San Mateo County Sanitation District on a plan to possibly bring a reclaimed water system to Colma (currently in process).						
Existing	Drought	1, 2, 3, 5, 6, 8, 10	Colma Public Works	Medium	General Fund, Partner Funding, FEMA Hazard Mitigation Grants, EPA Grants	Medium
Action C-11 — Purchase equipment for use during emergency events, including light towers, smart boards, message boards, loudspeakers, and chainsaws.						



TABLE 6-11. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New	All Hazards	1, 4, 5, 6, 7	Colma PD	Medium	General Fund, FEMA Hazard Mitigation Grants	Short-term
Action C-12 —Develop a dangerous tree inventory by purchasing a mobile GPS unit for collecting tree coordinates.						
Existing	Severe Weather	1, 2, 5, 6	Colma Public Works	Medium	General Fund, FEMA Hazard Mitigation Grants	Short-term
Action C-13 —Replace existing landscaping in Lawndale with drought-resistant landscaping.						
Existing	Drought	1, 4, 5, 6, 7	Colma Public Works	Medium / High	General Fund, State Funds, FEMA Hazard Mitigation Grants, EPA Grants	Short-term
Action C-14 —Develop a standing Master Services Agreement with the Colma Fire Protection District to formalize existing administrative and technical services relationships.						
N/A	All Hazards	2, 3, 5, 8, 10	Colma Fire District, Town of Colma	Low	General Fund	Short
Action C-15 —Continue to maintain the minimum National Flood Insurance Program participation requirement for communities with no mapped Special Flood Hazard Area.						
New and existing	Flood	2, 3, 5, 6, 8	Colma Public Works	Low	General Fund	Short-term and ongoing
Action C-16 —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.						
Existing	All	1, 3, 4, 5, 6, 7, 11	Colma Public Works	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
Action C-17 —Continue to support the countywide actions identified in this plan.						
New and existing	All	All	Town of Colma	Low	General Fund	Short- and long-term
Action C-18 —Actively participate in the plan maintenance strategy identified in this plan.						
New and existing	All	All	Town of Colma	Low	General Fund	Short-term
Action C-19 —Consider participation in incentive-based programs such as Tree City and StormReady.						
New and existing	All	All	Town of Colma	Low	General Fund	Long-term
Action C-20 —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	Colma Planning and Colma Public Works	Low	General Fund	Short-term





TABLE 6-10. MITIGATION STRATEGY PRIORITY SCHEDULE

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





TABLE 6-10. MITIGATION STRATEGY PRIORITY SCHEDULE

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Priority ^a
Action C-20	9	Medium	Low	Yes	No	Yes	High	Low

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

TABLE 6-11. ANALYSIS OF MITIGATION ACTIONS

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

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

6.9 Future Needs to Better Understand Risk/Vulnerability

Though not identified through this planning process as a hazard of concern, additional information and studies regarding the landslide hazard along the San Bruno Mountain should be collected and conducted as it relates to landslide. Local knowledge indicates that landslide is a possible secondary impact for a large magnitude earthquake. The Town has heard of a potential landslide event as a result of the 1906 earthquake that crossed Hillside Boulevard, however, no historical record has been found verifying the occurrence.

Though wildfires on San Bruno Mountain do not threaten the Town in regards to property impacts, Colma has experienced secondary air-quality effects of such an event. Additional information is needed regarding the public health impact of ash and smoke from wildfires on the Town.

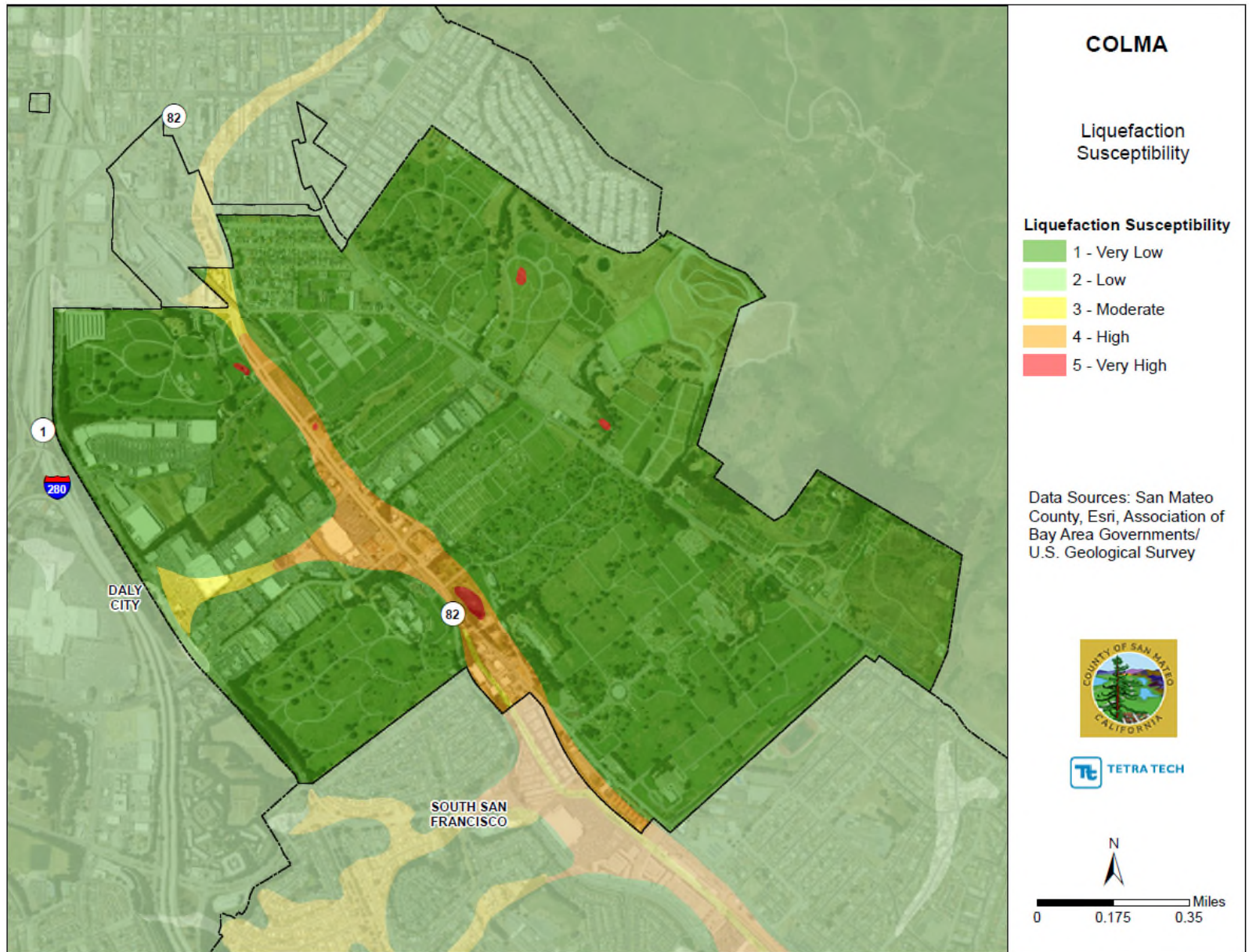
6.10 Additional Comments

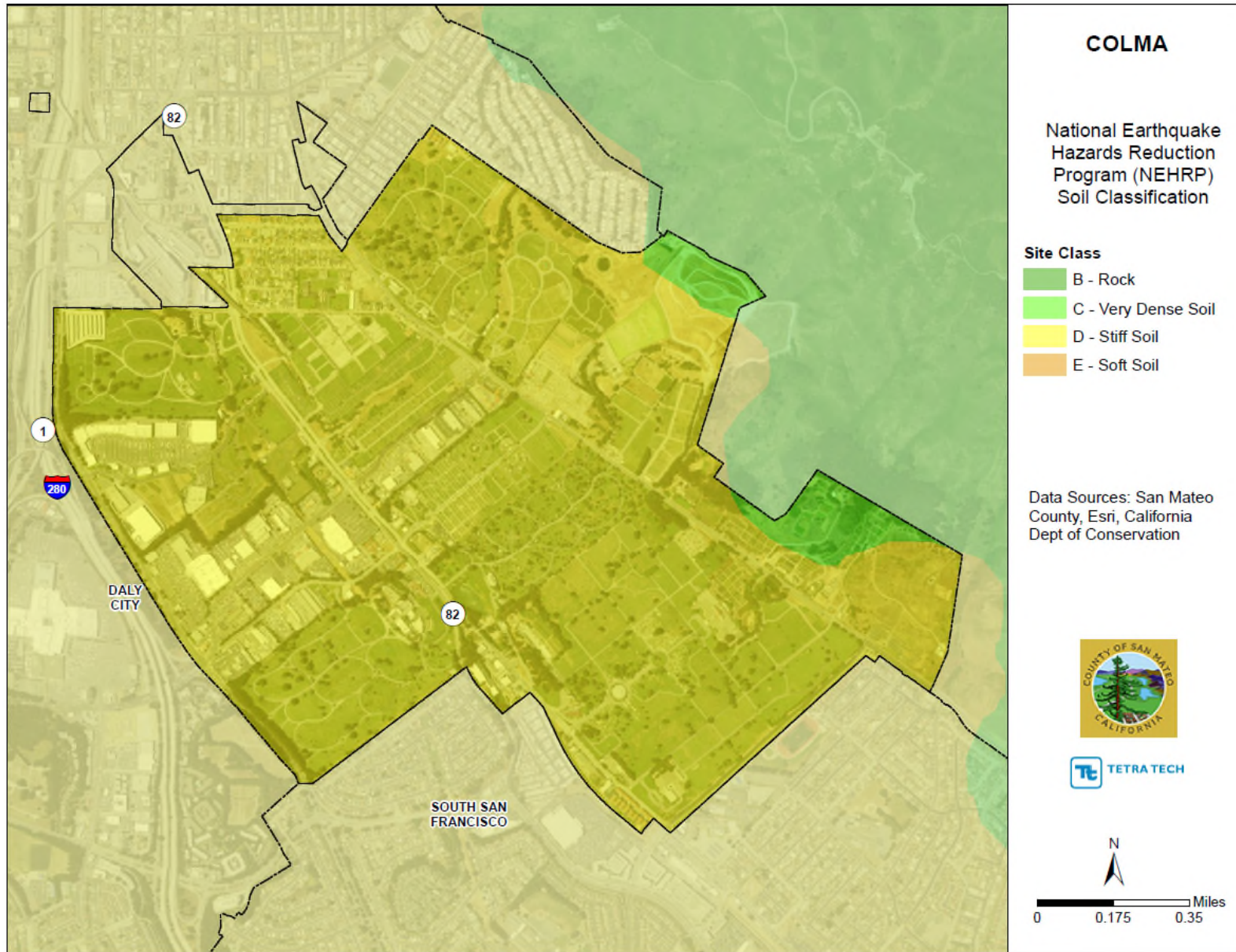
- ❖ The small size of the Town of Colma poses considerable obstacles. Colma participates in several mutual aid agreements, including public works and with the Colma Fire Protection District, however



during a regional event, larger jurisdictions are likely to receive the bulk of mutual aid resources. During such an event, the Town would essentially be left to its own limited resource pool in responding to resident and business needs.

- ❖ The Town relies heavily on private economic revenue for the yearly operating budget. Any disruption to the economic system would essentially cripple the recovery of the Town until economic operations regain full functionality. Based on the size and location of the event, economic functionality could take years to reestablish.
- ❖ The landmass dedicated to graveyards poses a public health risk during potential hazard events where graves may become exposed. In planning for any response and immediate recovery operations, public health capabilities, resource requirements, and training must be incorporated.
- ❖ A major catastrophic events that results in mass fatalities could inundate Colma as the primary depository for decedents for San Francisco. The graveyards would be working at or beyond capacity, requiring additional support and land for processing and interring bodies.
- ❖ Colma’s vast open space provides a potential opportunity for providing northern jurisdictions with evacuation support and resource distribution. The Kohl’s Department Store parking lot is currently identified as a Point of Distribution area for state resources.







Chapter 7. City of Daly City

HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact

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Alternate Point of Contact

Richard Johnson, Deputy Fire Chief/Fire Marshal
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JURISDICTION PROFILE

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

- ❖ Date of Incorporation—1911
- ❖ Current Population—109,139 (as of January 1, 2016 – CA DOF)
- ❖ Population Growth—Daly City has had a growth of 2.11% from 2000 to 2015.
- ❖ Location and Description—Known as the “Gateway to the Peninsula,” Daly City is located at the northernmost edge of San Mateo County adjacent to San Francisco. Daly City borders the cities of San Francisco, Colma, Broadmoor, South San Francisco, Pacifica and Brisbane and extends from the Pacific Ocean on the west to nearly San Francisco Bay on the east. Daly City, central to two of the Bay Area’s major job growth zones of San Francisco and San Mateo counties, has become a regional hub for retail, healthcare and small business.
- ❖ Brief History—Much of Daly City began as farm and dairy lands. After the great 1906 earthquake and fires, which destroyed many San Franciscans’ homes, residents left to temporary housing on the ranches of the area to the south, including a large one owned by John Daly. Daly later subdivided his property, which resulted in several housing tracts being built. A community was emerging and with fear of annexation from San Francisco, residents voted to incorporate their own community which became Daly City. The community remained relatively small until the late 1940’s when developer Henry Doelger purchased land and created Westlake, a major district of homes and businesses including the Westlake Shopping Center. As the years went on, Daly City became home to several other suburban neighborhoods, a major indoor shopping mall and Seton Hospital.
- ❖ Climate— A mild climate, with wet, mild winters and dry summers. Most months the maximum temperatures will be in the 50s, 60s, or 70s degrees Fahrenheit range. Evenings are usually in the 50s or 60s. Cool humid weather, even in the summer (except September) when persistent fog often envelops the city. Annual average precipitation is 19.77”.



- ❖ Governing Body Format - Daly City is a General Law City (authority is set forth in the California Government Code) governed by a council-manager form of government in which the five-member City Council appoints the City Manager. The City Manager oversees an Executive Leadership Team in the operation of eight (8) departments employing approximately 475 staff with an annual estimated budget of \$156 million. The North County Fire Authority assumes responsibility for the adoption of this plan; the North County Fire Authority will oversee its implementation.
- ❖ Development Trends—Anticipated development levels for the City of Daly City are moderate, consisting primarily of residential development. The majority of recent development has been infill. Residentially, there has been a focus on affordable housing and higher density housing near urban corridors. The City of Daly City adopted its general plan in July 2013. City actions, such as those relating to land use allocations, annexations, zoning, subdivision and design review, redevelopment, and capital improvements, must be consistent with the plan. Future growth and development in the City will be managed as identified in the general plan.

7.1 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 7-1. An assessment of fiscal capabilities is presented in Table 7-2. An assessment of administrative and technical capabilities is presented in Table 7-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 7-4. Classifications under various community mitigation programs are presented in Table 7-5. An assessment of education and outreach capabilities is presented in Table 7-6.

TABLE 7-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code <i>Comment: Economic and Community Development Dept. DCMC Chap. 15.08(Ord. No. 1373, § 2(Exh. B), 12-9-2013)</i>	Yes	No	No
Zoning Code <i>Comment: Economic and Community Development Dept. DCMC Chapter 17.02 (Ord. 635 § 1, 1965)</i>	Yes	No	No
Subdivisions <i>Comment: Public Works/ Economic and Community Development Dept. DCMC Chap. 16.04 - (Ord. 1049 § 1, 1985; Ord. 798 § 1A, 1975; Ord. 795 § 1 (part), 1974: prior code § 26-1)</i>	Yes	No	Yes
Stormwater Management <i>Comment: Public Works/Dept. of Water and Wastewater Resources. Governed under recently adopted municipal region permit by RWQCB. DCMC Chap. 14.04 (Ord. 1194 § 1 (part), 1994)</i>	Yes	No	Yes
Post-Disaster Recovery <i>Comment: DCMC 2.28.010 – 2.28.090. 1978</i>	Yes	No	No



TABLE 7-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Real Estate Disclosure Comment: 3R report issued by Building Division. DCMC 15.44 Residential Requirements Report.	Yes	No	Yes
Growth Management Comment DCMC 17.02.020 (Ord. 635 § 2, 1965)	Yes	No	No
Site Plan Review Comment DCMC Title 16 Subdivisions DCMC Title 17 Zoning. Chapter DCMC 17.45	Yes	No	No
Environmental Protection Comment:	No	No	Yes
Flood Damage Prevention Comment: Meets NFIP compliance for community with no SFHA through adoption of 2013 IBC/CBC standards	No	No	Yes
Emergency Management Comment: DCMC 2.28.010 – 2.28.090. 1978	Yes	No	Yes
Climate Change Comment:	No	No	Yes
Other Comment:	No	No	No
General or Comprehensive Plan General Plan 2013. <i>Is the plan equipped to provide linkage to this mitigation plan?</i> <i>Yes, Policy SE – 5.7 of the General Plan</i> Comment:	Yes	No	No
Capital Improvement Plan <i>What types of capital facilities does the plan address? Public Works, covers roads, utilities and facilities.</i> <i>How often is the plan updated? Updated every two years.</i> Comment: <i>Vista Grande Drainage Basin Improvements to provide 25 year/4 hr. storm protection.</i>	Yes	No	No
Floodplain or Watershed Plan Comment:	No	No	No
Stormwater Plan Comment: General Plan Resource Management Element Policy RME-8, Municipal Regional Permit authorized by the San Francisco Bay Regional Water Quality Control Board. The MRP adopted by the Regional Board on November 19, 2015 with a five year implementation schedule beginning January 1, 2016.	Yes	No	No





TABLE 7-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Habitat Conservation Plan Comment: <i>The San Bruno Mountain Habitat Conservation Plan is administered through the County of San Mateo and was adopted in 1982.</i>	No	Yes	No
Economic Development Plan Comment:	No	No	No
Shoreline Management Plan Comment: <i>General Plan Resource Management Element DCMC 17.27 Resource Protection Combining District (Requires Coastal Development Permit). Daly City has participated in a working group for the San Francisco Littoral Cell Coastal Regional Sediment Management Plan, but the document has not been adopted or implemented. The City did adopt its Coastal Element in 1984.</i>	Yes,(partial)	No	No
Community Wildfire Protection Plan Comment:	No	No	No
Forest Management Plan Comment:	No	No	No
Climate Action Plan Comment: <i>City Manager, Daly City “Green Vision” Climate Action Plan, 2011-2020</i>	Yes	No	No
Other Comment:	No	No	No
Comprehensive Emergency Management Plan Comment: <i>City of Daly City & North County Regional Area Emergency Operations Plan, June 2012.</i>	Yes	No	No
Threat & Hazard Identification & Risk Assessment Comment:	No	No	No
Post-Disaster Recovery Plan Comment: <i>City of Daly City & North County Regional Area Emergency Operations Plan, June 2012. Vol. 2, Chapter 4. –Recovery.</i>	Yes (partial)	No	No
Continuity of Operations Plan Comment: <i>City of Daly City & North County Regional Area Emergency Operations Plan, June 2012. Vol. 2, Chapter 1</i>	Yes (Partial)	No	No
Public Health Plan Comment:	No	Yes	No

TABLE 7-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes





TABLE 7-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes – DWR - as identified in capital planning.
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes - Voter approval required – water rates and sewer service lines.
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	Yes
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	No

TABLE 7-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Public Works and Economic and Community Development Dept.
Engineers or professionals trained in building or infrastructure construction practices	Yes	Public Works and Economic and Community Development Dept.
Planners or engineers with an understanding of natural hazards	Yes	Economic Community Development Dept., Public Works Director, City Engineer, Senior and Associate Engineers with P.E. In house and contractual services with engineering and plan check services firms.
Staff with training in benefit/cost analysis	Yes	Public Works Engineers
Surveyors	No	
Staff capable of making substantial damage estimates	Yes	Economic and Community Development Dept. Building Inspectors/Public Works Engineers
Personnel skilled or trained in GIS applications	Yes	Public Works - GIS Analyst.
Scientist familiar with natural hazards in local area	No	Insert appropriate information
Emergency manager	Yes	North County Fire Authority
Grant writers	Yes	Public Works and Economic and Community Development Dept.

TABLE 7-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	Date: 1975
When did the Flood Insurance Rate maps become effective?	Date: 9-10-12 current maps.





TABLE 7-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	Public Works, Public Works Director
<ul style="list-style-type: none"> Is this a primary or auxiliary role? 	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	2013 (as part of IBC/CBC building code standards adoption)
<ul style="list-style-type: none"> Does your floodplain management program meet or exceed minimum requirements? 	Meets
<ul style="list-style-type: none"> If so, in what ways? 	Meets NFIP requirements for community with no SFHA.
When was the most recent Community Assistance Visit or Community Assistance Contact?	1/1/1972 (CAC) - No SFHA
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes
<ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	Basic education on NFIP requirements.
Does your jurisdiction participate in the Community Rating System (CRS)?	No
<ul style="list-style-type: none"> If not, is your jurisdiction interested in joining the CRS program? 	No
How many Flood Insurance policies are in force in your jurisdiction?	71
<ul style="list-style-type: none"> What is the insurance in force? 	\$ 12,190,000.00
<ul style="list-style-type: none"> What is the premium in force? 	\$ 17,614.00
How many total loss claims have been filed in your jurisdiction?	30
<ul style="list-style-type: none"> How many claims were closed without payment/are still open? 	8
<ul style="list-style-type: none"> What were the total payments for losses? 	\$ 193,521.77

TABLE 7-5. COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	No		
Building Code Effectiveness Grading Schedule	Yes	3	2014
Public Protection	Yes	ISO: 2	02/01/09
Storm Ready	No		
Firewise	No		





TABLE 7-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes, Deputy City Manager
Do you have personnel skilled or trained in website development?	Yes, Deputy City Manager.
Do you have hazard mitigation information available on your website?	No
▪ If yes, please briefly describe.	Insert appropriate information
Do you utilize social media for hazard mitigation education and outreach?	Yes
▪ If yes, please briefly describe.	We have posted announcements about public forums for LHMP on our web site.
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
▪ If yes, please briefly specify.	
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes, City of Daly City has its own web site, Nextdoor and Facebook
▪ If yes, please briefly describe.	Insert appropriate information
Do you have any established warning systems for hazard events?	Yes
▪ If yes, please briefly describe.	SMC Alert

7.2 Integration with Other Planning Initiatives

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

7.2.1 Existing Integration

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

- ❖ Our city’s General Plan integrates our mitigation plan through the Safety Element portion as required by law, Government Code section 65300-65303.4

7.2.2 Opportunities for Future Integration

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

- ❖ Water and sewer master plans, Capital Improvement Program (CIP). Water and sewer master plans identify projects needed to make the utility system more resilient and capable of withstanding natural disasters such as an earthquake, These projects and prioritized and funded through the city’s CIP.



7.3 Jurisdiction-Specific Natural Hazard Event History

Table 7-6 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 7-6. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Flood – Vista Grande Watershed	N/A	02/25/04	Unknown
Landslide – Northridge Bluff	N/A	12/22/03	Unknown
Landslide – Westline Dr.	N/A	1997-1998	Unknown
Storm – El Nino	DR-1155/1203	1997-1998	Unknown
Earthquake – Loma Prieta	DR-845	10/1989	Unknown

7.4 Jurisdiction-Specific Vulnerabilities

Repetitive loss records are as follows:

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

Other noted vulnerabilities include:

- ❖ No specific vulnerabilities currently identified.

7.5 Hazard Risk Ranking

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

TABLE 7-7. HAZARD RISK RANKING

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

*Despite no identified flood risk within Daly City, Daly City will work with neighboring jurisdictions to mitigate the effect of flooding across jurisdictional borders.



7.6 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 7-8 lists the actions that make up the City of Daly City hazard mitigation action plan. Table 7-9 identifies the priority for each action. Table 7-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 7-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<p>Action #DC-1, Replace or retrofit water retention structures. <i>Following the completion of a seismic study of the City's water system in 2008, the Department of Water & Wastewater Resources completed seismic upgrades to Reservoir 3 and continues to work on a long range seismic improvement program, including completion of other identified seismic upgrades to city reservoirs scheduled over the next five years.</i></p>						
New and existing	Earthquake	1	DWWR – Department of Water & Wastewater Resources	Medium	Local water rates.	Short
<p>Action #DC -2, Funding for design/construction of storm drainage projects. <i>The Department of Water & Wastewater Resources is continuing work on a comprehensive plan to identify storm drainage solutions in the Vista Grande Drainage Basin and completed repairs estimated at nearly \$3 million made to strengthen the Fort Funston Sewer Outfall and Force Main. A joint NEPA/CEQA Draft EIR/EIS was publicly released 04/29/16 on the project options associated with the Vista Grande Drainage Basin Improvement Project with comments due 07/01/16. Funding for this anticipated \$100 million improvement project has yet to be secured, and some funding is anticipated to be derived from the North San Mateo County Sanitation District, a subsidiary district of Daly City. It is anticipated that this project will rectify the issues associated with identified severe repetitive loss property located in unincorporated San Mateo County.</i></p>						
New and existing	Flooding, Severe weather	2, 5, 11	DWWR, SMC DPW	100 Million	HMGP, PDM, Local, federal and state funding partnerships.	Long term
<p>Action #DC-3, Adoption of retrofit standards for single-family homes. <i>Whenever a new living space is created at the garage area or basement of an existing "Single Family Residential Building," wall bracing is required to strengthen the basement walls to resist horizontal loads.</i></p>						
Existing	Earthquake, landslide	1	ECD – Economic and Community Development Department	Low	HMGP, PDM	Ongoing



Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action #DC-4, Plan development for short-term sheltering of residents. <i>Work with Red Cross on the sheltering of residents in the community. Shelter training for P & R staff and CERT members. Develop a formal shelter plan document identifying facilities that can be used, accessibility, showers, number of people that can be housed there, etc.</i>						
Existing	All Hazards	1, 2, 3, 5, 6, 7, 8	Fire	Low	Staff time, general fund	Short term
Action #DC-5, Designate a back-up Emergency Operations Center. <i>The current back up EOC requires additional equipment/supplies, including redundant communications to ensure operational readiness if needed.</i>						
Existing	All Hazards	1, 2, 3, 4, 5, 6, 7, 8	Fire	Medium	Staff time, general funds	Short term
Action #DC-6, Water distribution coordination between agencies. <i>One specific issue that will be addressed is the future coordination with the Department of Water & Wastewater Resources (DWWR) in training and exercising of alternative water distribution methods including (but not limited to) the use of portable pumps, Hose Tenders, etc.</i>						
Existing	Earthquake, drought	1, 7	DWWR	Low	HMGP, PDM	On going
Action G-1 —Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.						
Existing	All	1, 3, 4, 5, 6, 7, 11	Jurisdictions	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
Action G-2 —Consider participation in incentive-based programs such as Tree City and StormReady.						
New and existing	All	All	Jurisdictions	Low	General Fund	Long-term
Action G-3 —Continue to maintain the minimum National Flood Insurance Program participation requirement for communities with no mapped Special Flood Hazard Area.						
New and existing	Flooding	2, 3, 5, 6, 8	Daly City	Low	General Fund	Short-term and ongoing
Action G-5 —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	Jurisdictions	Low	General Fund	Short-term
Action G-6 —Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.						
New and existing	All	2, 3, 4, 5, 6, 7, 8, 10, 11	Jurisdictions	Low	Operating Budgets	Ongoing
Action G-7 — Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
All	All	1,4	Jurisdictions	Low	General Fund	Short- and long-term
Action G-8 — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
All	1, 4		Jurisdictions	Low	Staff Time, General Funds	Short-term

TABLE 7-9. MITIGATION STRATEGY PRIORITY SCHEDULE

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

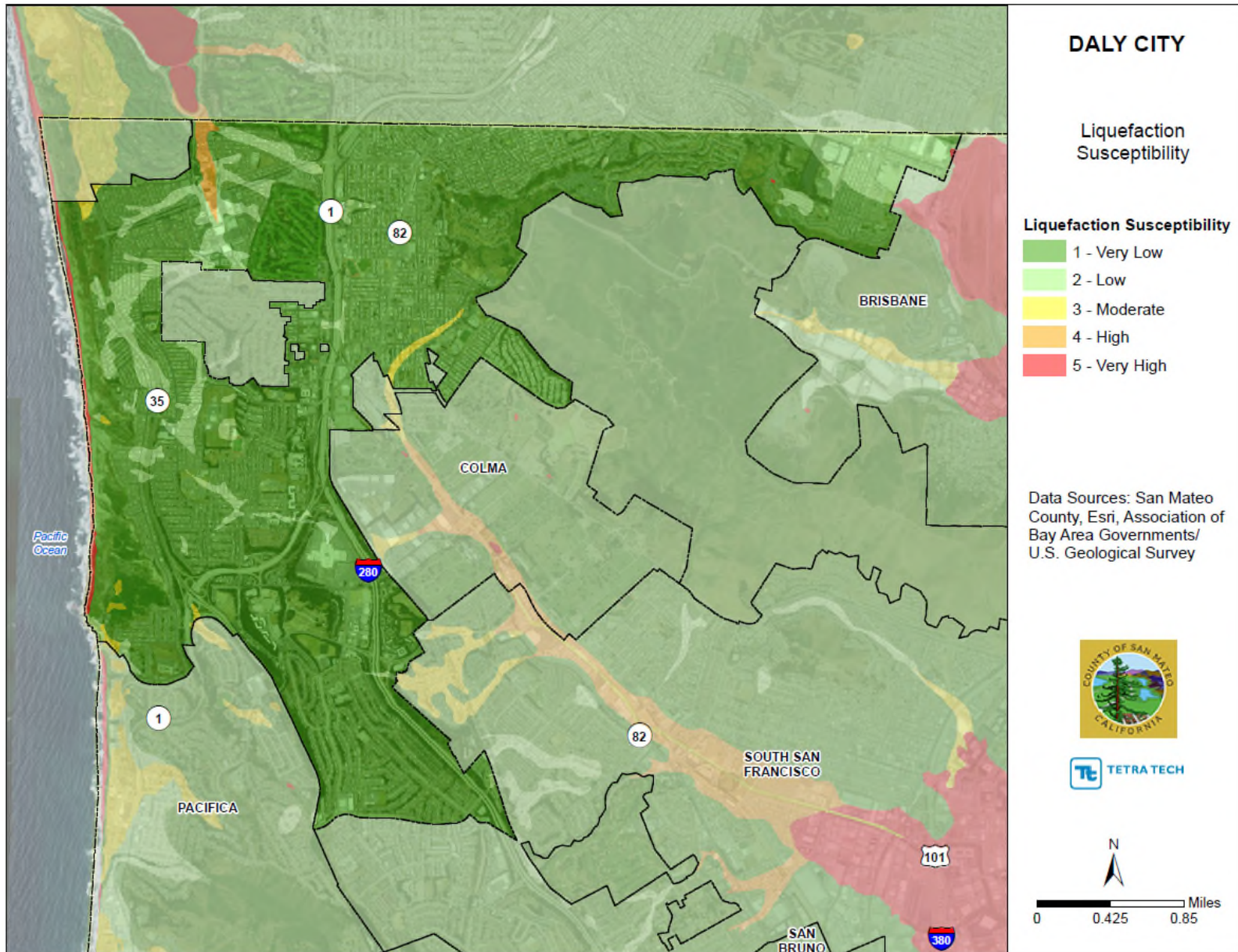
a. See the introduction to this volume for explanation of priorities.

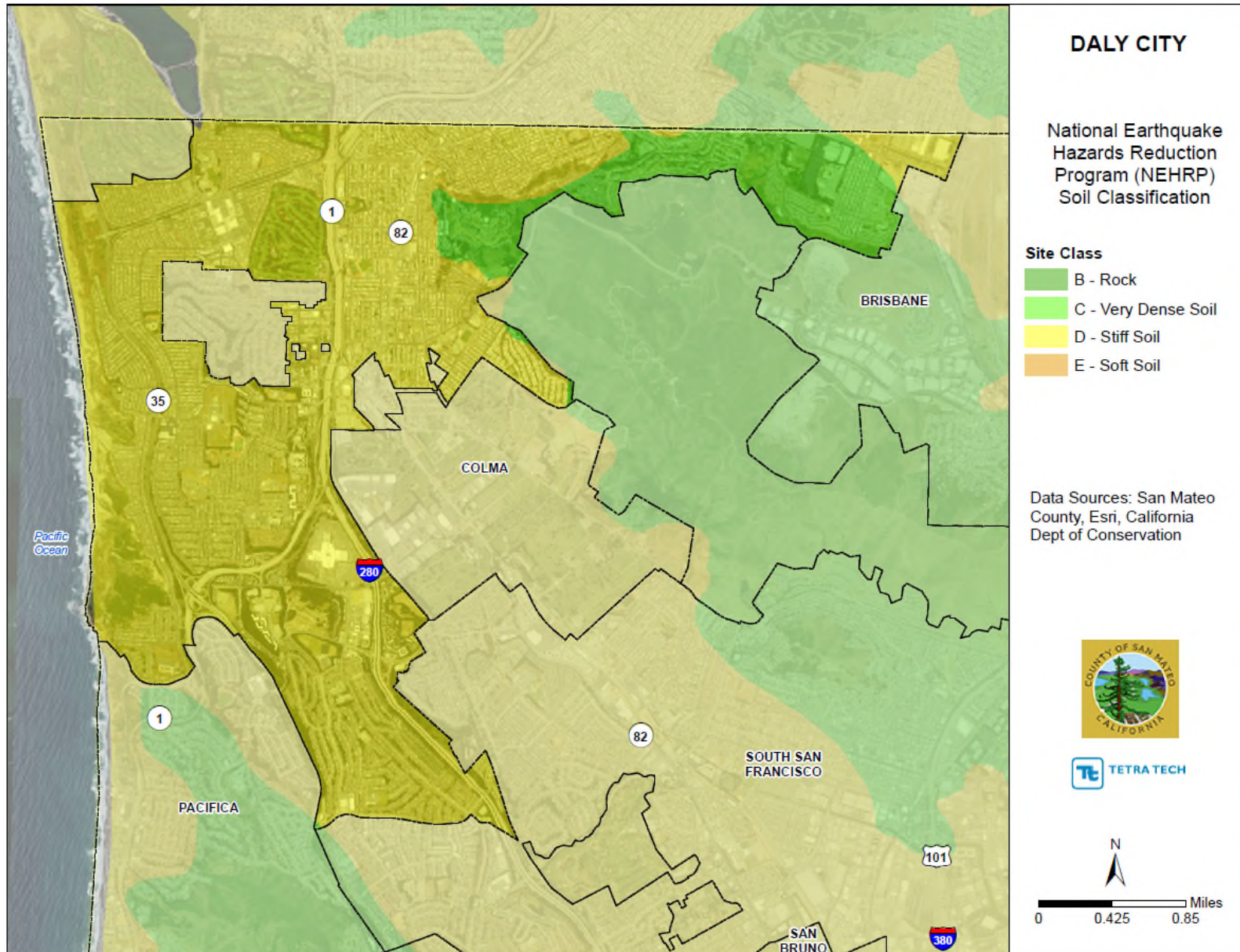
TABLE 7-10. ANALYSIS OF MITIGATION ACTIONS

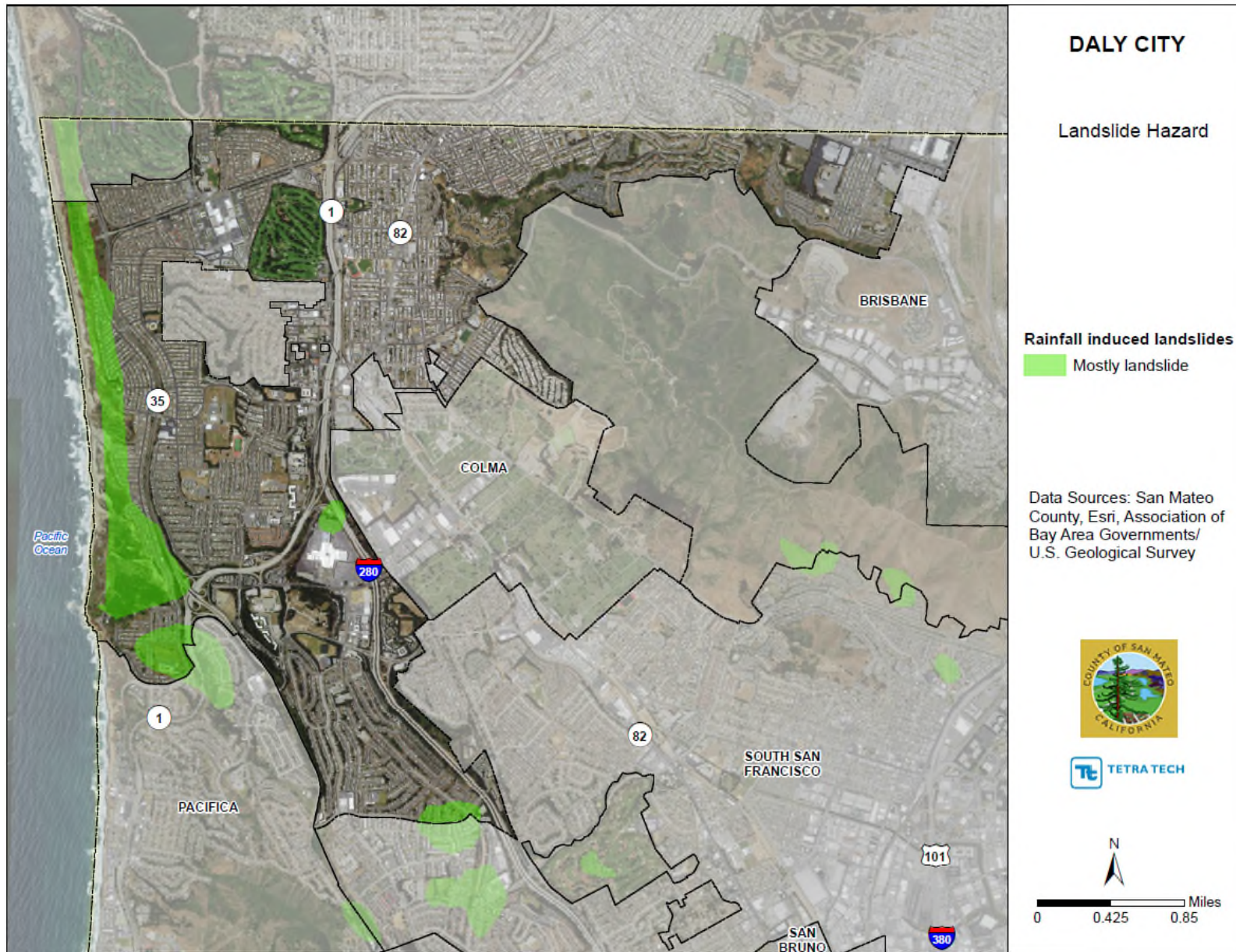
Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Earthquake	DC-1				DC-5, DC-4	DC-1
Severe Weather	DC-2				DC-5, DC-4	DC-2
Landslide					DC-5, DC-4	DC-3
Drought	DC-6				DC-6	
Flood	DC-2				DC-5, DC-4	DC-2

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











Chapter 8. City of East Palo Alto

8.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

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8.2 Jurisdiction Profile

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.

The City of East Palo Alto is a community located in Silicon Valley at the southernmost edge of San Mateo County. The city was incorporated on July 1, 1983. The city is approximately 2.6 square miles in size and has a total population of 30,545 as of January 1, 2016, according to the Department of Finance. The city currently employs 103 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 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.

As the new millennium approached, significant development occurred adjacent to both sides of Highway 101 (US 101) accelerated by a technology bubble. To the east of US 101, the City witnessed cranes rise on 146 acres to construct the Ravenswood 101 Shopping Center, which included stores like Home Depot, a Best Buy, a Circuit City, and IKEA. Immediately behind it rose the University Square housing community with 217 new single family homes built on 36 acres along with multifamily housing serving moderate and low income households. This development faced opposition from some residents, who charged that it priced locals out of one of the regions only affordable communities while providing only low-paying retail jobs and consuming disproportionate land area. Supporters pointed to an increased tax base. At the same new development to the west, including University Circle, the 460,000-square-foot office development and the 230-room luxury Four Seasons Silicon Valley Hotel, replaced Whiskey Gulch.

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. 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.

As the recession of 2007-2009 ended, and a resurgent economy centered around technology flourished, the City began experiencing a second wave of development with the Mi Pueblo Food Center grocery store opening in the Ravenswood 101 shopping center's former Circuit City store. Mi Pueblo was the city's first full-service supermarket in 23 years. Although there are several other smaller local grocery stores in East Palo Alto, the establishment of Mi Pueblo Food Center in East Palo Alto marked a milestone in city's history, as residents no longer had to drive to other cities to buy their groceries from a full-service supermarket. Subsequently, Sobrato Organization's University Square development began in 2014 – 2016, which transformed several blighted parcels into the City's newest gateway with a 200,000 square foot Class-A office project located at University Avenue and Donohoe Street, adjacent to the US 101 northbound off ramp. Additionally, a 51-unit market rate housing development known as Montage Homes located on Pulgas Avenue near Bay Road was completed in 2016, at the same time that a new 41-unit senior housing project located on University Avenue broke ground.

8.3 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 8-1. An assessment of fiscal capabilities is presented in Table 8-2. An assessment of administrative and technical capabilities is presented in Table 8-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 8-4. Classifications under various community mitigation programs are presented in Table 8-5. An assessment of education and outreach capabilities is presented in Table 8-6.





TABLE 8-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code	Yes	No	Yes
Comment: Title 15, adopted in November 19, 2013			
Zoning Code	Yes	No	No
Comment: Zoning Ordinance, Appendix A, adopted 2003			
Subdivisions	Yes	No	Yes
Comment:			
Stormwater Management	Yes	No	Yes
Comment: Chapter 13.12 adopted in November 19, 2013			
Post-Disaster Recovery	Yes	No	Yes
Comment: Emergency Management Plan adopted in April 2011			
Real Estate Disclosure	Yes	No	Yes
Comment: CA. State Civil Code 1102 requires full disclosure on Natural hazard Exposure of the sale/re-sale of any and all real property.			
Growth Management	Yes	No	No
Comment: Ravenswood/ 4 Corners TOD Specific Plan adopted in 2012.			
Site Plan Review	Yes	No	Yes
Comment: Chapter 26, adopted in November 19, 2013			
Environmental Protection	Yes	No	Yes
Comment: Title 17, adopted in November 19, 2013			
Flood Damage Prevention	Yes	No	Yes
Comment: Chapter 15.52, adopted in November 19, 2013			
Emergency Management	Yes	No	Yes
Comment: Chapter 2.76, adopted in November 19, 2013			
Climate Change	Yes	No	Yes
Comment: adopted 1999, updating General Plan to be adopted in November 2016			
Other	Yes	No	No
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)			
General or Comprehensive Plan	Yes	No	Yes
Is the plan equipped to provide linkage to this mitigation plan? Yes, especially flood hazard mitigation (Housing Element) and Safety Element. Safety Element considers both natural and human hazards.			
Comment: Last updated in 1999 and amended in 2011 (Housing Element updated in 2015)			
Capital Improvement Plan	Yes	No	Yes
What types of capital facilities does the plan address? Streets and Transportation Projects, Community Facilities Projects, Park and Open Space Projects, Storm Drain Projects, Water Supply Projects, Water Distribution Projects, Other Special Projects			
Comment: Capital Improvement Plan updated every 2 years			



TABLE 8-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Floodplain or Watershed Plan Comment: San Francisquito Creek Joint Powers Authority, City of East Palo Alto Storm Drain Master Plan (City of East Palo Alto website)	Yes	Yes	Yes
Stormwater Plan Comment: Storm Drain Master Plan (City of East Palo Alto website), adopted October 23, 2012	Yes	No	Yes
Habitat Conservation Plan Comment: General Plan EIR to be adopted in 2016	No	Yes	Yes
Economic Development Plan Comment: Ravenswood 4/ Corners TOD Specific Plan, adopted in 2012.	Yes	No	Yes
Shoreline Management Plan Comment:	No	No	Yes
Community Wildfire Protection Plan Comment: Chapter 7a of the Building Code (Wildland Urban Interface) adopted in January 2011	Yes	No	Yes
Forest Management Plan Comment:	No	No	Yes
Climate Action Plan Comment: Climate Action Plan, adopted in 2014.	Yes	No	No
Other Comment: Ravenswood/4 Corners Transit-oriented Development Specific Plan (2012), Bicycle Transportation Plan (2011), Gateway 101 Specific Plan (1993), Water System Master Plan (2010), Amended 2010 Urban Water Management Plan (2013), Gloria Way Well Feasibility and Water Security Study (2012)	Yes	Yes	No
Comprehensive Emergency Management Plan 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.	Yes	No	Yes
Threat & Hazard Identification & Risk Assessment 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	Yes	No	Yes
Post-Disaster Recovery Plan Comment: Emergency Operations Plan, Volume 1; Chapter 4: Recovery adopted in 2011.	Yes	No	Yes
Continuity of Operations Plan Comment: Emergency Operations Plan, Volume 2; page 28, adopted in 2011.	Yes	No	Yes
Public Health Plan Comment: Section in 1999 General Plan, MOU with clinic, part of Emergency Plan, COAD of South San Mateo County	Yes	No	No



TABLE 8-2. FISCAL CAPABILITY

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

TABLE 8-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Community and Economic Development Department/ Planning and Housing 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
Staff capable of making substantial damage estimates	Yes	Building staff are SAP certified
Personnel skilled or trained in GIS applications	Yes	Contract IT
Scientist familiar with natural hazards in local area	Yes	USGS, Cal-Conservation, UC Berkley
Emergency manager	Yes	Administrative Services Director
Grant writers	Yes	Assistant City Manager



TABLE 8-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	10/20/2011
When did the Flood Insurance Rate maps become effective?	10/16/2012
What local department is responsible for floodplain management?	Community and Economic Development/ Planning and Housing
Who is your floodplain administrator? (department/position)	Public Works Director
<ul style="list-style-type: none"> Is this a primary or auxiliary role? 	Primary
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date of adoption of your flood damage prevention ordinance?	2005
<ul style="list-style-type: none"> Does your floodplain management program meet or exceed minimum requirements? 	Exceed
<ul style="list-style-type: none"> If so, in what ways? 	18" minimum freeboard requirement
When was the most recent Community Assistance Visit or Community Assistance Contact?	Fall of 2015
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes
Does your jurisdiction participate in the Community Rating System (CRS)?	Yes
<ul style="list-style-type: none"> If so, is your jurisdiction seeking to improve its CRS Classification? 	Yes
How many Flood Insurance policies are in force in your jurisdiction?	941
<ul style="list-style-type: none"> What is the insurance in force? 	\$223,175,000
<ul style="list-style-type: none"> What is the premium in force? 	\$1,148,233
How many total loss claims have been filed in your jurisdiction?	33
<ul style="list-style-type: none"> How many claims were closed without payment/are still open? 	11
<ul style="list-style-type: none"> What were the total payments for losses? 	\$197,483.82

TABLE 8-5. COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	Yes	8	May 1, 2016
Building Code Effectiveness Grading Schedule	Yes	3	2013
Public Protection	Yes	2	2012
Storm Ready (Flood Warning) –	Yes	7	1/27/2012



TABLE 8-5. COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Firewise (fire protection) – The Fire Suppression Rating Schedule (FSRS) is a manual containing the criteria ISO uses in reviewing the fire prevention and fire suppression capabilities of individual communities or fire protection areas.	Yes	2	2012

TABLE 8-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Cityofepa.org (Flood Preparedness Webpage, Hazard Mitigation Plan link, etc.)
Do you utilize social media for hazard mitigation education and outreach?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	East Palo Alto Next Door
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
<ul style="list-style-type: none"> If yes, please briefly specify. 	Program for Public Information (PPI) Group
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	COAD of South San Mateo County
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	SMC Alert

8.4 Integration with Other Planning Initiatives

The following describe the jurisdiction’s process for integrating the hazard mitigation plan into local planning and adopted flood plain and earthquake safety requirements as per the state and national standards.

- ❖ 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 CC&R titles 8,19, 24, and 25. We adopted flood plain and earthquake safety requirements as per the state and national standards.





8.4.1 Opportunities for Future Integration

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

The city 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.

8.5 Jurisdiction-Specific Natural Hazard Event History

Table 8-7 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 8-7. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Storm/ Flooding	N/A	12/23/2012	\$2,627,000
Severe Storm/ Flooding	DR-1203	2/9/1998	\$12,000,000
Severe Storm(s)	DR-1155	1/4/1997	Unknown
Severe Storm(s)	DR-1046	3/12/1995	Unknown
Severe Storm(s)	DR-1044	1/10/1995	Unknown
Earthquake	DR-845	10/18/1989	Unknown

8.6 Jurisdiction-Specific Vulnerabilities

Repetitive loss records are as follows:

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

Other noted vulnerabilities include:

- ❖ Several critical facilities in East Palo Alto are located in the special flood hazard area.
- ❖ Several neighborhoods (Westside area) have the potential to have ingress and egress cut off as the result of a hazard event, such as a flood or earthquake (e.g. bridge only access).
- ❖ Substantial number of buildings in one area of the community are unreinforced masonry.

8.7 Hazard Risk Ranking

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





TABLE 8-8. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Flood	42	High
3	Severe Weather	33	Medium
4	Tsunami	6	Low
5	Dam Failure	6	Low
6	Drought	3	Low
7	Landslide	0	None
8	Wildfire	0	None

8.8 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 8-9 lists the actions that make up the City of East Palo Alto hazard mitigation action plan. Table 8-9 identifies the priority for each action. Table 8-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 8-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action #EPA-1 Partner on the new levee project from San Francisquito Joint Powers Authority						
New and Existing	Dam Failure, Flood, Tsunami	1, 4, 5, 7, 9, 10	Public Works, San Francisquito Creek Joint Powers Authority	High	JPA funds, FEMA funds, CA state funding	Short-term
Action # EPA -2 Conduct Water main upgrades and improvements						
Existing	Earthquake	2, 4, 7	Public Works (Lead) and Engineering	High	Water capital improvement surcharge (water customers)	Long-term
Action #EPA-3 Ensure Potable water access via Pad D and Gloria Way Wells						
New and Existing	Drought	1, 2, 4, 7	Engineering and Public Works (Lead)	High	Water Capital Improvement Surcharge	Short-term
Action #EPA-4 Establish New Water Storage Tanks for Commercial Projects						
New	Drought	1, 2, 6, 7	Public Works	High	Water Capital Improvement Surcharge	Long-term

Action #EPA-5 Conduct Storm Drain Improvements





TABLE 8-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	Flooding and Severe Storm	1, 4, 6, 11	Public Works	High	Seeking funding source	Long-term
Action # EPA-6 Develop a Soft Story Retrofit Ordinance						
New and Existing	Earthquake	1, 2, 3, 4, 5	Building	Low	No fiscal impact	Short-term
Action #EPA-7 Develop database for Unreinforced Masonry -URM						
Existing	Earthquake	1, 2, 3, 4, 5	Building	Low	No fiscal impact	Short-term
Action #EPA-8 Develop a Concrete Tilt-up Building Seismic Retrofit Ordinance						
Existing	Earthquake	1, 2, 3, 4, 5	Building	Low	No fiscal impact	Short-term
Action #EPA-9 Participate in programs such as Firewise and StormReady.						
New and Existing	Flood, Dam Failure, Severe Storm	1, 3, 5, 7, 8, 9, 10	Planning	Low	Staff time, General Planning funds	Ongoing
Action G-1 —Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.						
Existing	All	1, 3, 4, 5, 6, 7, 11	Jurisdictions	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
Action G-2 —Maintain good standing under the National Flood Insurance Program and continue participation in CRS by exceeding the minimum NFIP requirements.						
New and existing	Flooding	2, 3, 5, 6, 8	Planning Department	Low	General Fund	Short-term and ongoing
Action G-3 —Where feasible, implement a program to record high water marks following high-water events.						
New and existing	Flooding, Severe Weather	1, 3, 4, 5, 6	Jurisdictions	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
Action G-4 —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	Jurisdictions	Low	General Fund	Short-term
Action G-5 —Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.						
New and existing	All	2, 3, 4, 5, 6, 7, 8, 10, 11	Jurisdictions	Low	Operating Budgets	Ongoing
Action G-6 — Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						



TABLE 8-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New and existing	All	All	Jurisdictions	Low	General Fund	Short- and long-term
Action G-7 — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All	1, 4	Jurisdictions	Low	Staff Time, General Funds	Short-term

TABLE 8-10. MITIGATION STRATEGY PRIORITY SCHEDULE

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

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

TABLE 8-11. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Earthquake	EPA-6, EPA-7, EPA-8	EPA-6, EPA-7, EPA-8	EPA-6, EPA-7, EPA-8			EPA-6, EPA-7, EPA-8
Flood	EPA-1, EPA-9	EPA-1	EPA-9	EPA-9	EPA-9	EPA-1



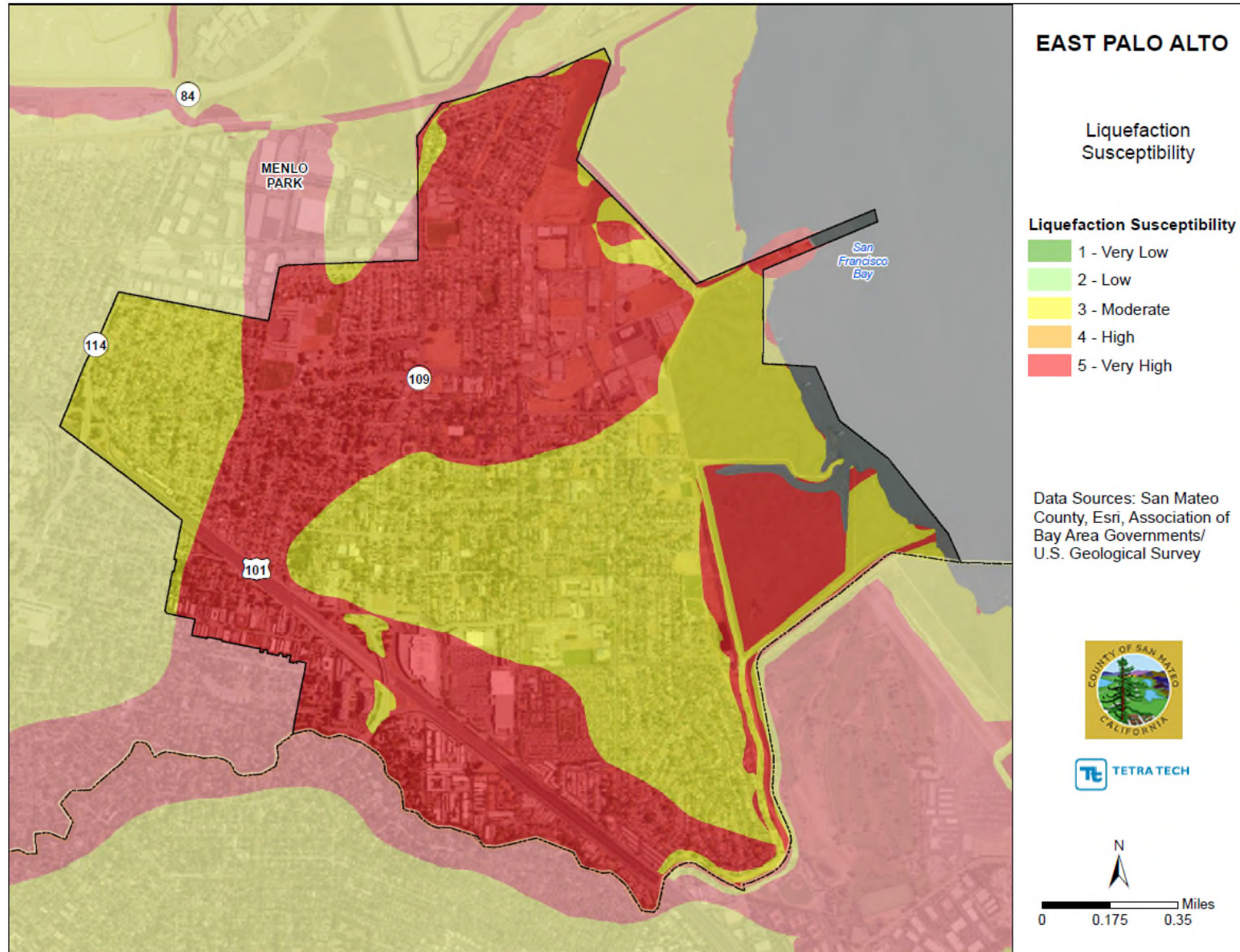


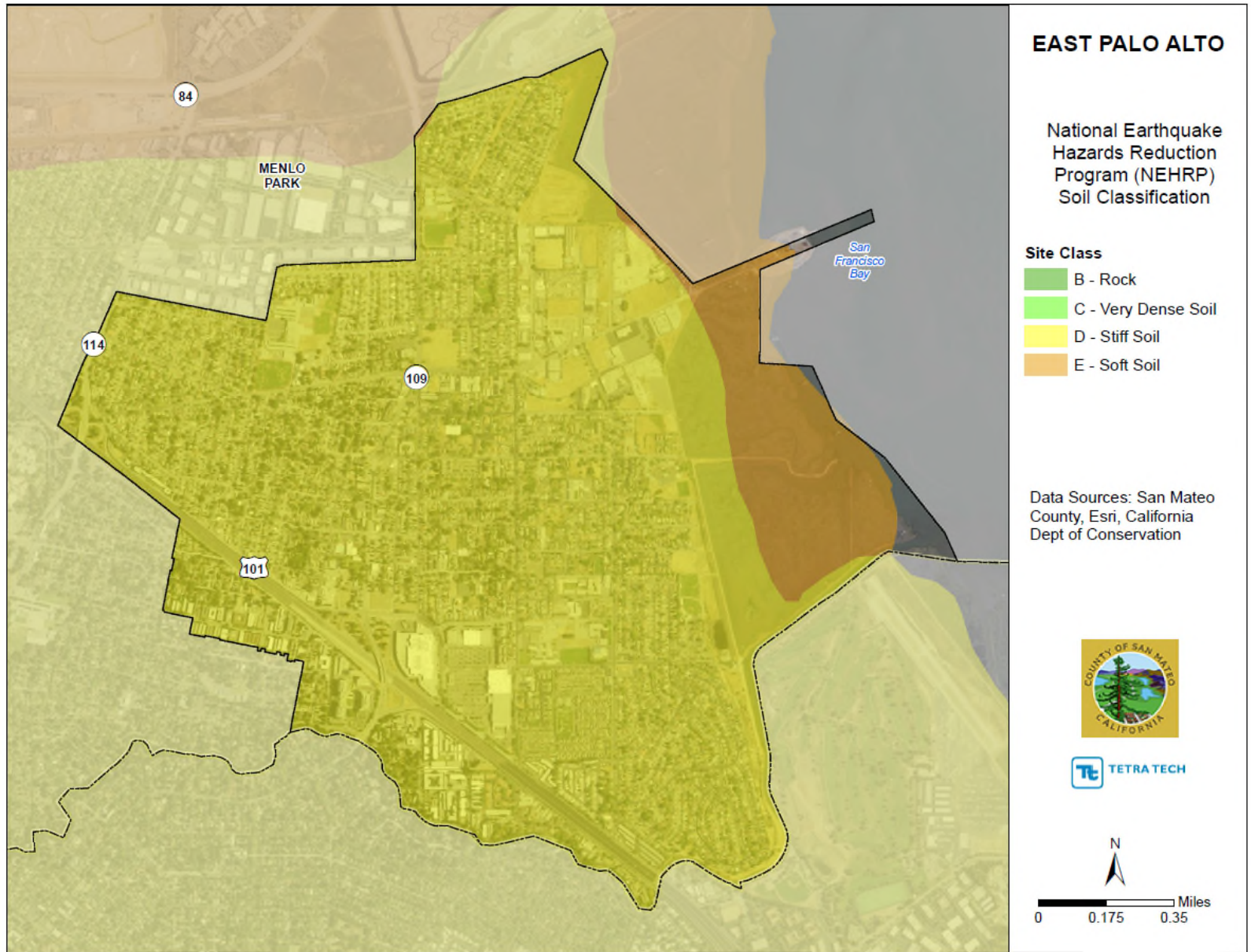
TABLE 8-11. ANALYSIS OF MITIGATION ACTIONS

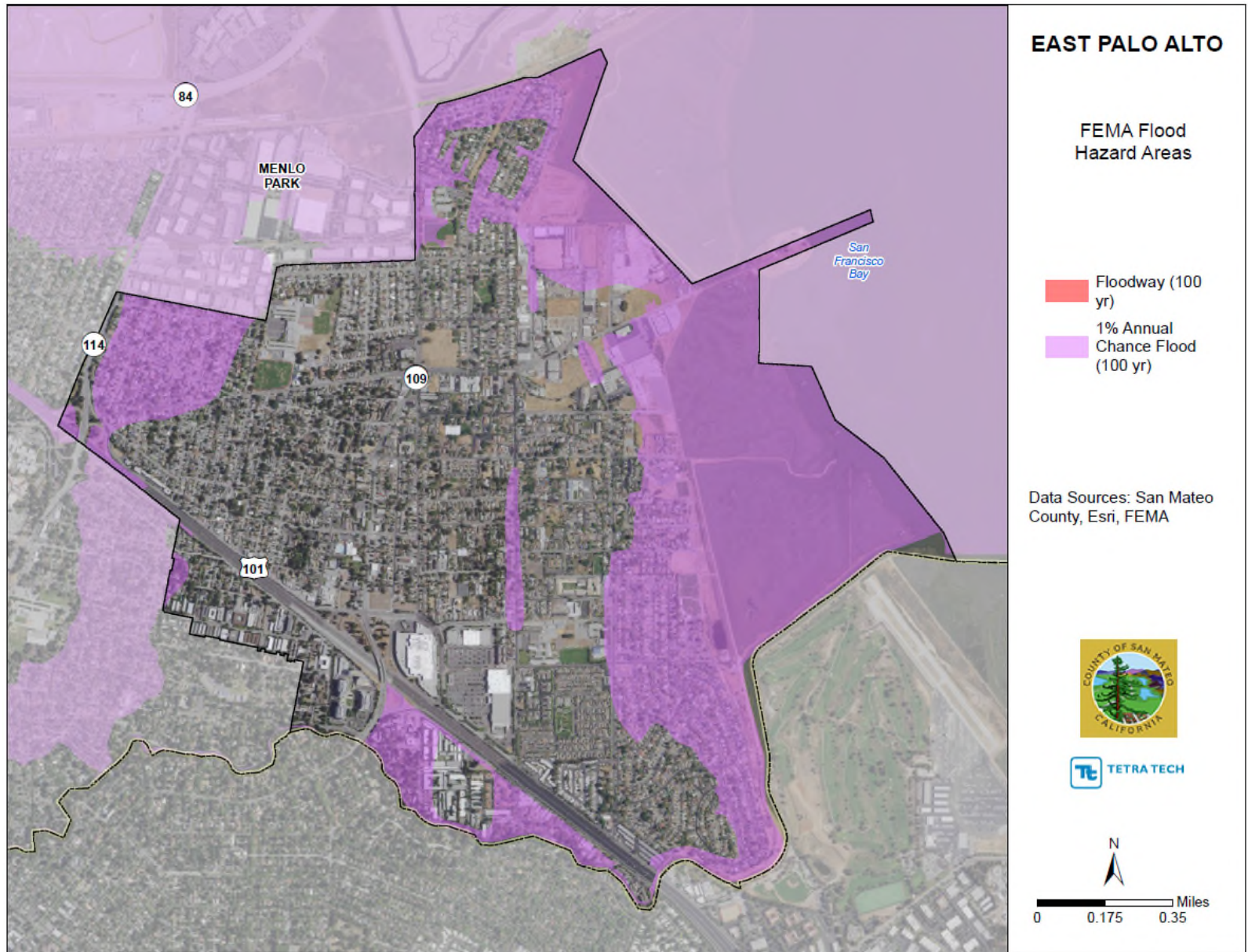
Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Severe Storm	EPA-1, EPA-9	EPA-5	EPA-9			
Tsunami	EPA-1		EPA-9			
Drought	EPA-3, EPA-4		EPA-9			EPA-3, EPA-4
Dam Failure	EPA-1, EPA-5	EPA-1				EPA-1

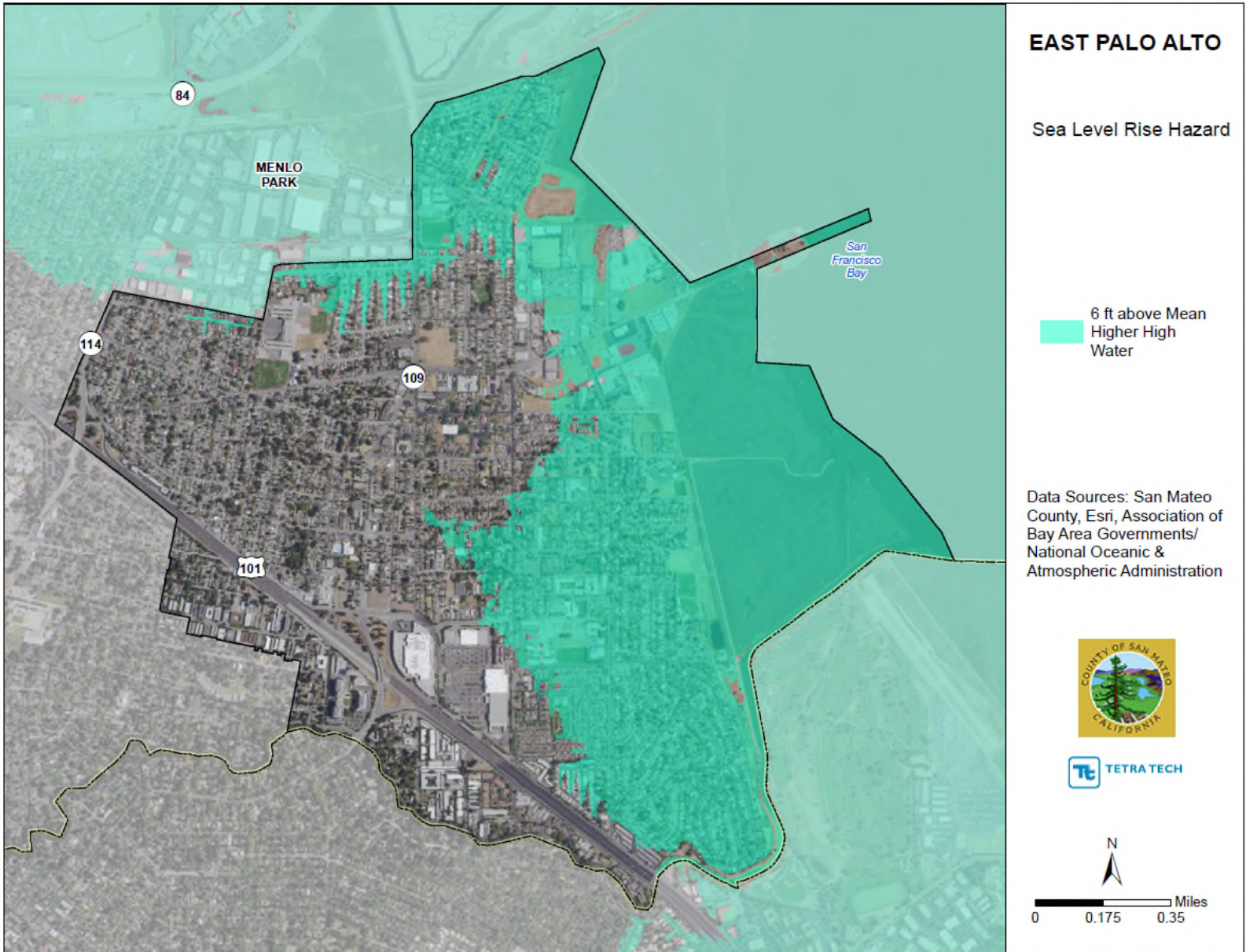
a. See the introduction to this volume for explanation of mitigation types.

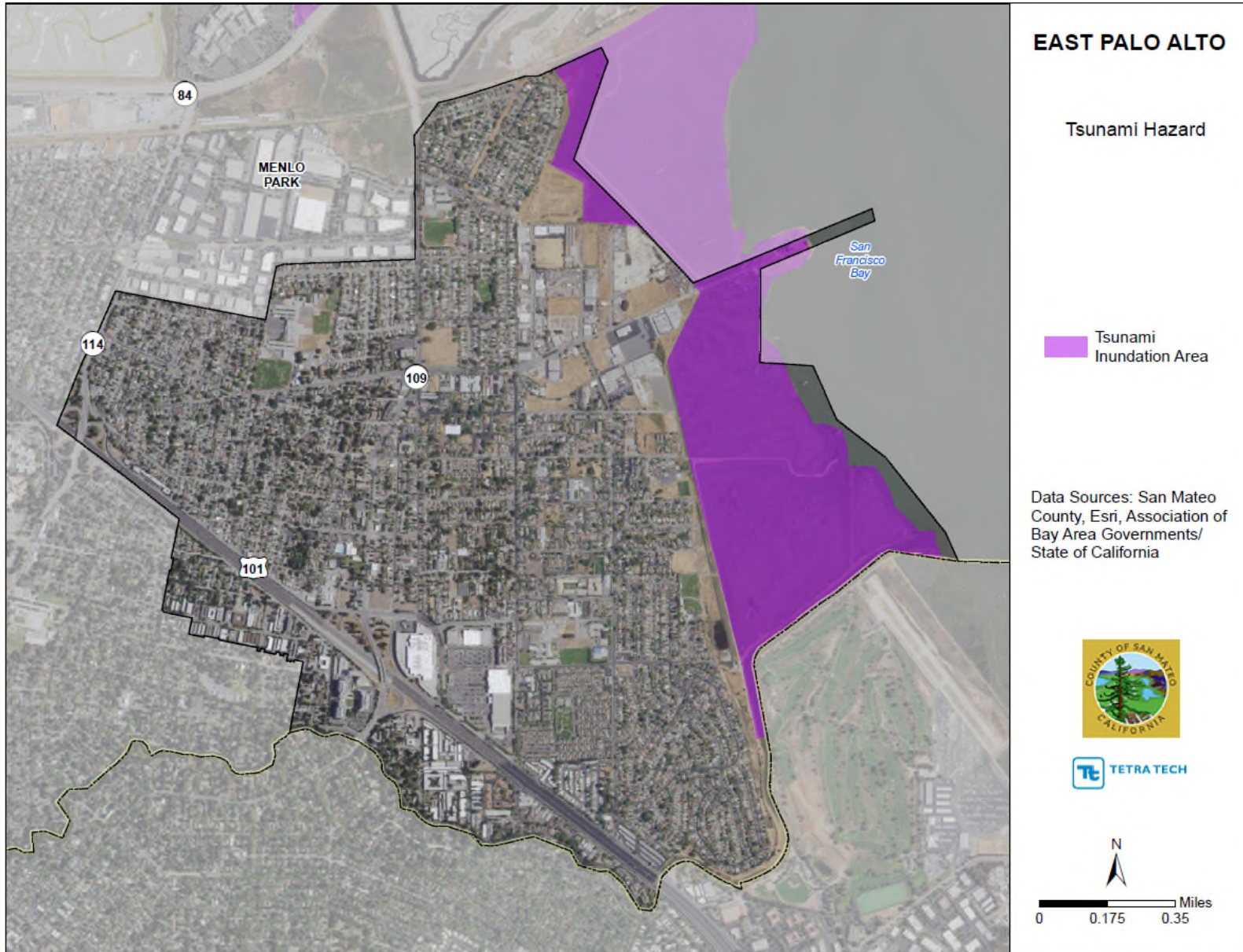














Chapter 9.

City of Half Moon Bay

9.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact	Alternate Point of Contact
<p>Carlo Wei, Management Analyst 501st Main Street Half Moon Bay, California 94014 Telephone: 650-726-8256 e-mail Address: CWei@hmbcity.com</p>	<p>Jill Ekas, Senior Management Analyst 501st Main Street Half Moon Bay, California 94014 Telephone: 650-726-8264 e-mail Address: JEkas@hmbcity.com</p>

9.2 Jurisdiction Profile

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

- ❖ Date of Incorporation— 1959
- ❖ Current Population— 12,528 (as of January 1, 2016 – CA DOF)
- ❖ Population Growth— Over the 1990s, Half Moon Bay’s population growth rate was relatively high (3.2% whereas San Mateo County’s was 0.9% over the same decade). In 1999, the City passed a residential growth control measure (“Measure D”) limiting growth citywide to 1% annually (with a .5% additional within downtown). The City’s population actually declined from 2000 to 2010, decreasing from 11,559 to 11,324, in part due to the recession and also because of young adults leaving the community during this period. Population has recovered since 2010 and the City’s growth rate from 2010 to 2014 has been about 1% annually. Retention of growth control requirements are anticipated to allow for continued modestly paced growth. Based upon the 2013 Bay Area plans projections, the City projects a modest growth of approximately a thousand people from 2015 to 2030. The year 2020 is projected to have 11,700 people, while 2030 is projected to have 12,300 people.
- ❖ Location and Description— The City of Half Moon Bay is a small city in San Mateo County, California. The City is 6.3 square miles in area and is approximately 7 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.
- ❖ Brief History—Half Moon Bay’s origins come from perhaps the oldest settlement in San Mateo County, dating back to the 1840s. In the 1840s, land grants were given to early Mexican settlers. With the gold rush, Americans and others of many cultures soon followed. 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.

- ❖ **Climate**— 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).
- ❖ **Governing Body Format**— The City of Half Moon Bay has a council-manager form of governance. The five-member City Council establishes policy and provides direction for all City operations; while the City Manager serves as the executive director for implementation and the day-to-day provision of services. The City has a Planning Commission and a Parks and Recreation Committee which report to the City Council. From time to time, the City Council establishes task forces and advisory committees that focus on plans and projects; e.g. the General Plan Advisory Committee and the Main Street Bridge Advisory Committee are currently active. The City Council is responsible for the adoption of the plan, the City Manager will oversee its implementation.

The City consists of five departments: the City Manager’s Office, the City Clerk’s Office, Finance, Administrative Services, and Community Development. The City contracts with San Mateo County Sherriff’s Department for police services. The City is served by the Coastside Fire Protection District. Services such as library and recreation are supported by the City in agreements with other agencies and non-profits. The City Council assumes responsibility for the adoption of this plan; the City Manager will oversee its implementation.

- ❖ **Development Trends**— Anticipated development levels for Half Moon Bay are low to moderate, consisting primarily of residential development. The majority of recent development has been infill. Residentially, there has been a focus on affordable housing and a push for more accessory living units (e.g. mother-in-law dwellings) on residential properties. In 2010, the City of Half Moon Bay adopted an ordinance amending Chapter 17.06 of the Half Moon Bay Municipal Code entitled “Residential Dwelling Unit Allocation System.” Measure D mandates that, “the City shall allocate permissible dwelling units among applications on the basis of the existing allocation system or a subsequently modified system.” Since the adoption of the Measure D allocation system in 2010, new residential development has been consistent at around 10 to 20 units per year. Future growth and development in the City will be managed as identified in the General Plan. The plan focuses on issues of the greatest concern to the community. City actions, such as those relating to land use allocations, annexations, zoning, subdivision and design review, redevelopment, and capital improvements, must be consistent with the plan. It is further noted that the entire City is located within the California Coastal Zone and therefore, the City implements its Local Coastal Program (LCP) pursuant to the California Coastal Act. Planning and development activities must conform to the LCP and are subject to review by the California Coastal Commission after approval by the Half Moon Bay City Council.

9.3 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 9-1. An assessment of fiscal capabilities is presented in Table 9-2. An assessment of administrative and technical capabilities is presented in Table 9-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 9-4. Classifications



under various community mitigation programs are presented in Table 9-5. An assessment of education and outreach capabilities is presented in Table 9-6.

TABLE 9-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code Comment: Muni Code 14.04.020 , 2010	Yes	No	Yes
Zoning Code Comment: Muni Code 18, 1996	Yes	Yes	Yes
Subdivisions Comment: Muni Code 17, 1994	Yes	Yes	Yes
Storm water Management Comment: Muni Code 13.15.110, 1994	Yes	Yes	Yes
Post-Disaster Recovery Comment: Emergency Operations Plan, 2014; Muni Code 2.25, 2007	Yes	Yes	Yes
Real Estate Disclosure Comment: CA. State Civil Code 1102 requires full disclosure on Natural hazard Exposure of the sale/re-sale of any and all real property.	No	No	Yes
Growth Management Comment: Muni Code 14.38, 1989	Yes	No	No
Site Plan Review Comment: Muni Code 18, 1996	Yes	No	No
Environmental Protection Comment: CEQA	Yes	Yes	Yes
Flood Damage Prevention Comment: Muni Code 14.34, 2002	Yes	No	Yes
Emergency Management Comment: Emergency Operations Plan, 2014; Muni Code 2.25, 2007	Yes	No	Yes
Climate Change Comment:	No	Yes	Yes
Other Comment:	N/A	N/A	N/A
General or Comprehensive Plan	Yes Pending	Yes	Yes

Is the plan equipped to provide linkage to this mitigation plan? Conservation and Open Space Elements, which are the two most directly related to hazard mitigation, are currently in *expected in 2017* status.

Comment:

Capital Improvement Plan	Yes	No	No
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What types of capital facilities does the plan address Streets, Flood control drainage
How often is the plan updated? Annually





TABLE 9-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Comment:			
Floodplain or Watershed Plan	Yes	No	Yes
Comment: Storm Drain Master Plan pending adoption June 2016			
Storm water Plan	Yes	No	No
Comment: Storm Drain Master Plan pending adoption June 2016			
Habitat Conservation Plan	No	No	No
Comment:			
Economic Development Plan	Yes	No	No
Comment: Economic Development Plan 2013			
Shoreline Management Plan	No	No	No
Comment:			
Community Wildfire Protection Plan	No	No	No
Comment:			
Forest Management Plan	No	No	No
Comment:			
Climate Action Plan	Yes	No	No
Comment: Pending 2017			
Other	N/A	N/A	N/A
Comment:			
Comprehensive Emergency Management Plan	Yes	No	No
Comment: Emergency Operations Plan, 2014			
Threat & Hazard Identification & Risk Assessment	Yes	No	No
Comment: Emergency Operations Plan, 2014			
Post-Disaster Recovery Plan	No	No	No
Comment:			
Continuity of Operations Plan	No	No	No
Comment:			
Public Health Plan	No	No	No
Comment:			

TABLE 9-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes (through council)
User Fees for Water, Sewer, Gas or Electric Service	Yes (only Sewers)





TABLE 9-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
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 9-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	CDD/ Director, Plan Manager, City Engineer, Senior Planner, other
Engineers or professionals trained in building or infrastructure construction practices	Yes	CDD / Building Inspector, City Engineer
Planners or engineers with an understanding of natural hazards	Yes	CDD / CD Director, Senior Planner, City Engineer
Staff with training in benefit / cost analysis	Yes	With contractors
Surveyors	Yes	With contractors
Staff capable of making substantial damage estimates	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	Administrative Services / Emergency Management Coordinator, Emergency Management liaison
Grant writers	Yes	All departments / Management Analyst

TABLE 9-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	2002
When did the Flood Insurance Rate maps become effective?	2002
What local department is responsible for floodplain management?	CDD / City Engineer
Who is your floodplain administrator? (department/position)	CDD
<ul style="list-style-type: none"> ▪ Is this a primary or auxiliary role? 	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	2002
<ul style="list-style-type: none"> ▪ Does your floodplain management program meet or exceed minimum requirements? 	Meet
<ul style="list-style-type: none"> ▪ If so, in what ways? 	N/A





TABLE 9-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When was the most recent Community Assistance Visit or Community Assistance Contact?	8/10/2010
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <ul style="list-style-type: none"> If so, please state what they are. 	No N/A
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <ul style="list-style-type: none"> If no, please state why. 	No Coastal flood plain isn't up to date. Other drainages not studied
Does your floodplain management staff need any assistance or training to support its floodplain management program? <ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	Yes FEMA Training, ASFPM Training
Does your jurisdiction participate in the Community Rating System (CRS)? <ul style="list-style-type: none"> If so, is your jurisdiction seeking to improve its CRS Classification? If not, is your jurisdiction interested in joining the CRS program? 	No N/A Not sure
How many Flood Insurance policies are in force in your jurisdiction? <ul style="list-style-type: none"> What is the insurance in force? What is the premium in force? 	110 \$36,375,200 \$60,690
How many total loss claims have been filed in your jurisdiction? <ul style="list-style-type: none"> How many claims were closed without payment/are still open? What were the total payments for losses? 	7 1 \$56,296.63

TABLE 9-5. COMMUNITY CLASSIFICATIONS

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

TABLE 9-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes (Deputy City Manager)
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website?	Yes



TABLE 9-6. EDUCATION AND OUTREACH

Criteria	Response
<ul style="list-style-type: none"> ▪ If yes, please briefly describe. 	2010 Multi-Jurisdictional Local Hazard Mitigation Plan, Storm and Tsunami readiness
Do you utilize social media for hazard mitigation education and outreach?	Yes
<ul style="list-style-type: none"> ▪ If yes, please briefly describe. 	We do use Email newsletters for Storm and Tsunami readiness
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
<ul style="list-style-type: none"> ▪ If yes, please briefly specify. 	Coastside Emergency Action Program
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
<ul style="list-style-type: none"> ▪ If yes, please briefly describe. 	Coastside Emergency Action Program
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> ▪ If yes, please briefly describe. 	San Mateo County Alert System / Tsunami Alerts Horns

9.4 Integration with Other Planning Initiatives

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

9.4.1 Existing Integration

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

- Emergency Operations Plan — The City integrates hazard mitigation for storm and tsunami readiness.

9.4.2 Opportunities for Future Integration

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

- ❖ General Plan — The City is currently planning to integrate hazard mitigation for all pertinent hazards in the Safety Element.
- ❖ Local Coastal Land Use Plan — The City is currently planning to integrate hazard mitigation relative to Sea Level Rise coastal hazards.
- ❖ Emergency Operations Plan — The City is currently planning to integrate hazard mitigation.
- ❖ Public Outreach – The City recognizes that there are currently public information opportunities available to facilitate public engagement regarding hazard mitigation. The City will look into developing a more robust and targeted program that involves using current capabilities to expand and enhance outreach to local residents.





9.5 Jurisdiction-Specific Natural Hazard Event History

Table 9-6 lists all past occurrences of natural hazards within the jurisdiction

TABLE 9-6. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Storm / Flooding	Not Available	12/10/2014	Not Available
Earthquake Tsunami	Not Available	2/27/2010	Not Available
Severe Storm	Not Available	4/1/2006	Not Available
Severe Storm / Flooding	DR-1203	2/9/1998	Not Available
Severe Storm / Flooding	DR-1155	1/4/1997	Not Available
Severe Storm / Flooding	DR-1046	3/12/1995	Not Available
Severe Storm / Flooding	DR-1044	1/10/1995	Not Available
Earthquake	DR-845	10/18/1989	Not Available
Flood	DR-758	2/21/1986	Not Available
Flood	Not Available	1984	Not Available
Severe Storm	DR-677	2/9/1983	Not Available
Flood	DR-651	1/7/1982	Not Available
Drought	EM-3023	1/20/1977	Not Available

9.6 Jurisdiction-Specific Vulnerabilities

Repetitive loss records are as follows:

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

Other noted vulnerabilities include:

- ❖ Isolation issues due to only two ingress and egress routes (Highway 1 and Highway 92)
- ❖ Isolation and lack of redundancy in communication infrastructure (Phone and Internet)

9.7 Hazard Risk Ranking

Table 9-7 presents the ranking of the hazards of concern.

TABLE 9-7. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	48	High
2	Severe Storm	33	Medium
3	Tsunami	27	Medium



TABLE 9-7. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
4	Flooding	18	Medium
5	Landslide	9	Low
6	Drought	9	Low

9.8 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 9-8 lists the actions that make up the City of Half Moon Bay hazard mitigation action plan. Table 9-9 identifies the priority for each action. Table 9-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 9-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
HMB 1 – Rehabilitate the Main Street Bridge over Pilarcitos Creek.						
Existing	All Hazards	4, 5, 6, 7, 11	Community Development Department	High	Staff Time, HBR	Short Term
HMB 2 - 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.						
Existing	All Hazards	1, 2, 3, 4, 5, 6, 7, 8, 10	Community Development Department	Low	Staff Time	Short Term
HMB 3 - Create sea level rise vulnerability assessments of City’s facilities and infrastructure.						
Existing	Storm, Flood, Tsunami	1, 2, 3, 4, 5, 6, 7, 8, 10	Community Development Department	Medium	Staff Time, General Funds	Short Term
HMB 4 - Continue to participate in developing and maintaining communications for first responders from cities, counties, special districts, state, and federal agencies.						
Existing	All Hazards	1, 2, 3, 4, 5, 6, 7, 8, 10	Emergency Management	Low	Staff Time	Short Term
HMB 5 - Maintain and participate in the San Mateo County’s Standardized Emergency Management System Plan						
Existing	All Hazards	1, 2, 3, 4, 5, 6, 7, 8, 10	Emergency Management	Low	Staff Time	Short Term
HMB 6 - Participate in general mutual-aid agreements with adjoining jurisdictions for cooperative responses to fires, floods, earthquakes, and other disasters.						
Existing	All Hazards	1, 2, 3, 4, 5, 6, 7, 8, 10	Emergency Management	Low	Staff Time	Short Term

HMB 7 - Continue to sponsor the training and maintenance of the Community Emergency Response Team (CERT) through partnership with local businesses.





TABLE 9-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	All Hazards	1, 2, 3, 4, 5, 6, 7, 8, 10	Coastside Emergency Corp* / Emergency Management	Low	Staff Time	Short Term
HMB 8 –Maintain regulations to limit development in areas prone to landslide and erosion. Monitor slopes and hillsides during and after major storms.						
Existing	Landslide	1, 2, 3, 4, 5, 6, 7, 8, 10	Community Development Department* / Public Works/ Planning	Low	Staff Time	Short Term
HMB 9 - 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.						
Existing	All Hazards	4, 5, 6, 7, 11	Community Development Department* / Public Works	High	Staff Time, General Funds, Impact fees	Short Term
HMB 10 – Develop a better understanding of the earthquake hazard through data collection.						
Existing	Earthquakes	1, 2, 3, 4, 5, 6, 7, 8, 10	Community Development Department/ Planning	Low	Staff Time	Short Term
Action G-1 —Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.						
Existing	All	1, 3, 4, 5, 6, 7, 11	Jurisdictions	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
Action G-2 —Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.						
New and existing	All	All	Jurisdictions	Low	General Fund	Long-term
Action G-3 —Where feasible, implement a program to record high water marks following high-water events.						
New and existing	Flooding, Severe Weather	1, 3, 4, 5, 6	Jurisdictions	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
Action G-4 —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	Jurisdictions	Low	General Fund	Short-term
Action G-5 —Consider the development and implementation of a Capital Improvements Program (CIP) to increase regulatory, financial, and technical capability to implement mitigation actions.						



TABLE 9-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	Jurisdictions	High	CIP component of general fund (if implemented)	Long term
Action G-6 —Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.						
New and existing	All	2, 3, 4, 5, 6, 7, 8, 10, 11	Jurisdictions	Low	Operating Budgets	Ongoing
Action G-7 — Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and existing	All	All	Jurisdictions	Low	General Fund	Short- and long-term
Action G-8 — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All	1, 4	Jurisdictions	Low	Staff Time, General Funds	Short-term

TABLE 9-9. MITIGATION STRATEGY PRIORITY SCHEDULE

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





TABLE 9-9. MITIGATION STRATEGY PRIORITY SCHEDULE

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority	Grant Priority
Action G-4	9	Medium	Low	Yes	No	No	Medium	Low
Action G-5	9	High / Medium	High	Yes	No	Yes (if component of general fund)	High	Low
Action G-6	9	Low	Low	Yes	No	Yes	Low	Low
Action G-7	11	Low	Low	Yes	No	Yes	High	Low
Action G-8	2	Low	Low	Yes	No	Yes	High	Low

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

TABLE 9-10. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Earthquake	HMB 4, HMB 5, HMB 6, HMB 7, HMB 8, HMB 10	HMB 1, HMB 9, HMB 10	HMB 5, HMB 6, HMB 7, HMB 8, HMB 10		HMB 4, HMB 10	HMB 1
Severe Storm	HMB 2, HMB 3, HMB 4, HMB 5, HMB 6, HMB 7, HMB 8	HMB 9	HMB 5, HMB 6, HMB 7, HMB 8		HMB 4	HMB 9
Tsunami	HMB 2, HMB 3, HMB 4, HMB 5, HMB 6, HMB 7, HMB 8	HMB 9	HMB 5, HMB 6, HMB 7, HMB 8		HMB 4	HMB 9
Flooding	HMB 2, HMB 3, HMB 4, HMB 5, HMB 6, HMB 7, HMB 8	HMB 9	HMB 5, HMB 6, HMB 7, HMB 8		HMB 4	HMB 9
Landslide	HMB 2, HMB 3, HMB 4, HMB 5, HMB 6, HMB 7, HMB 8	HMB 9	HMB 5, HMB 6, HMB 7, HMB 8		HMB 4	HMB 9



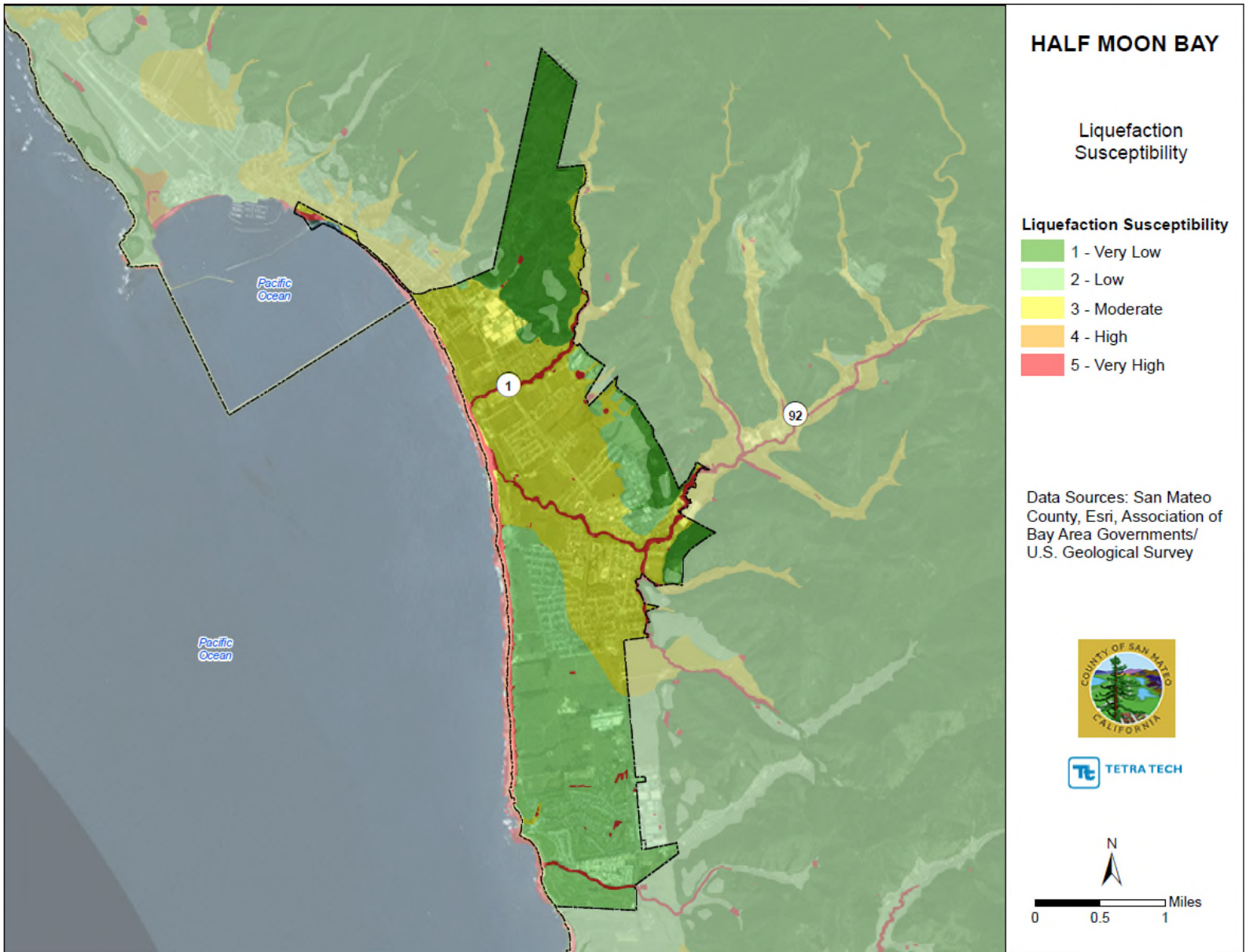


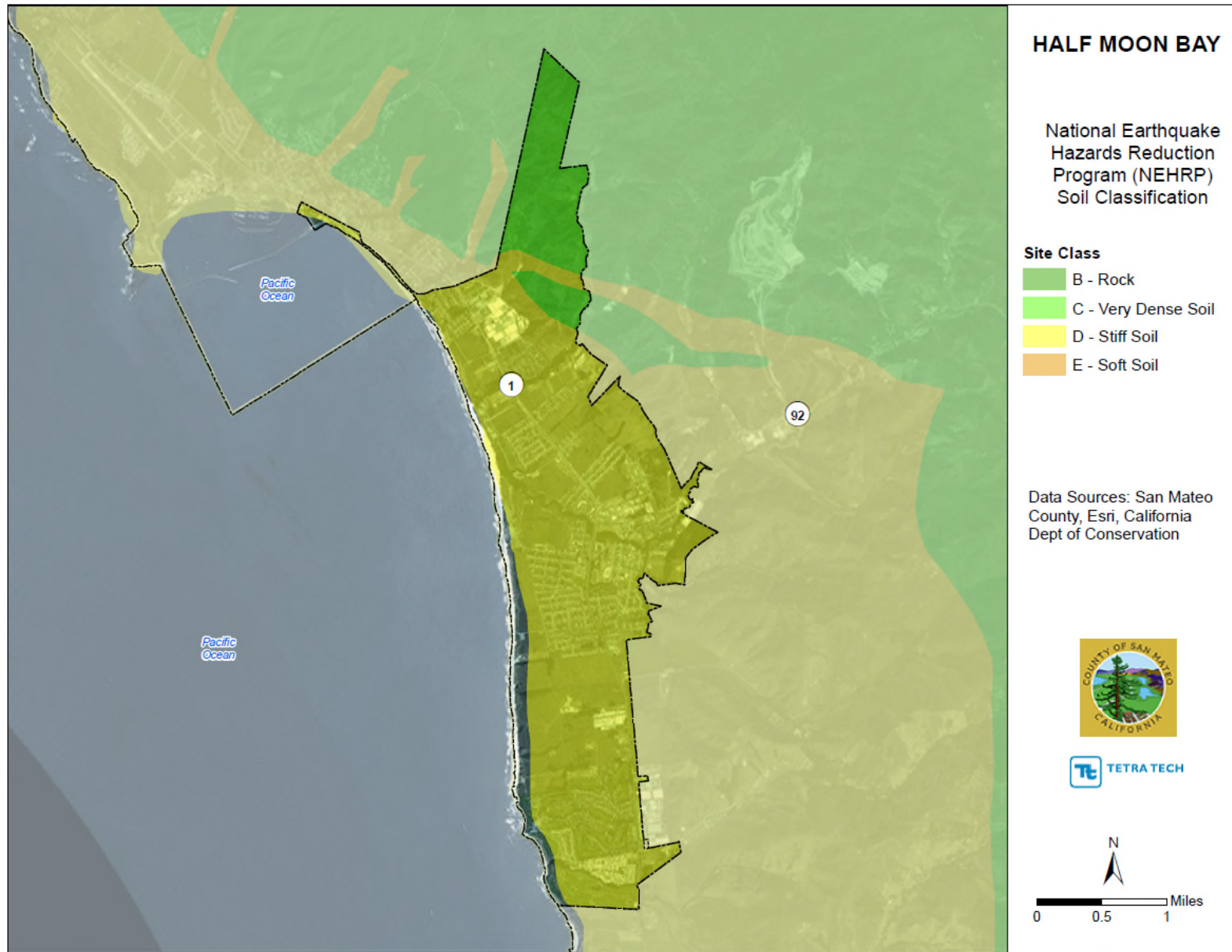
TABLE 9-10. ANALYSIS OF MITIGATION ACTIONS

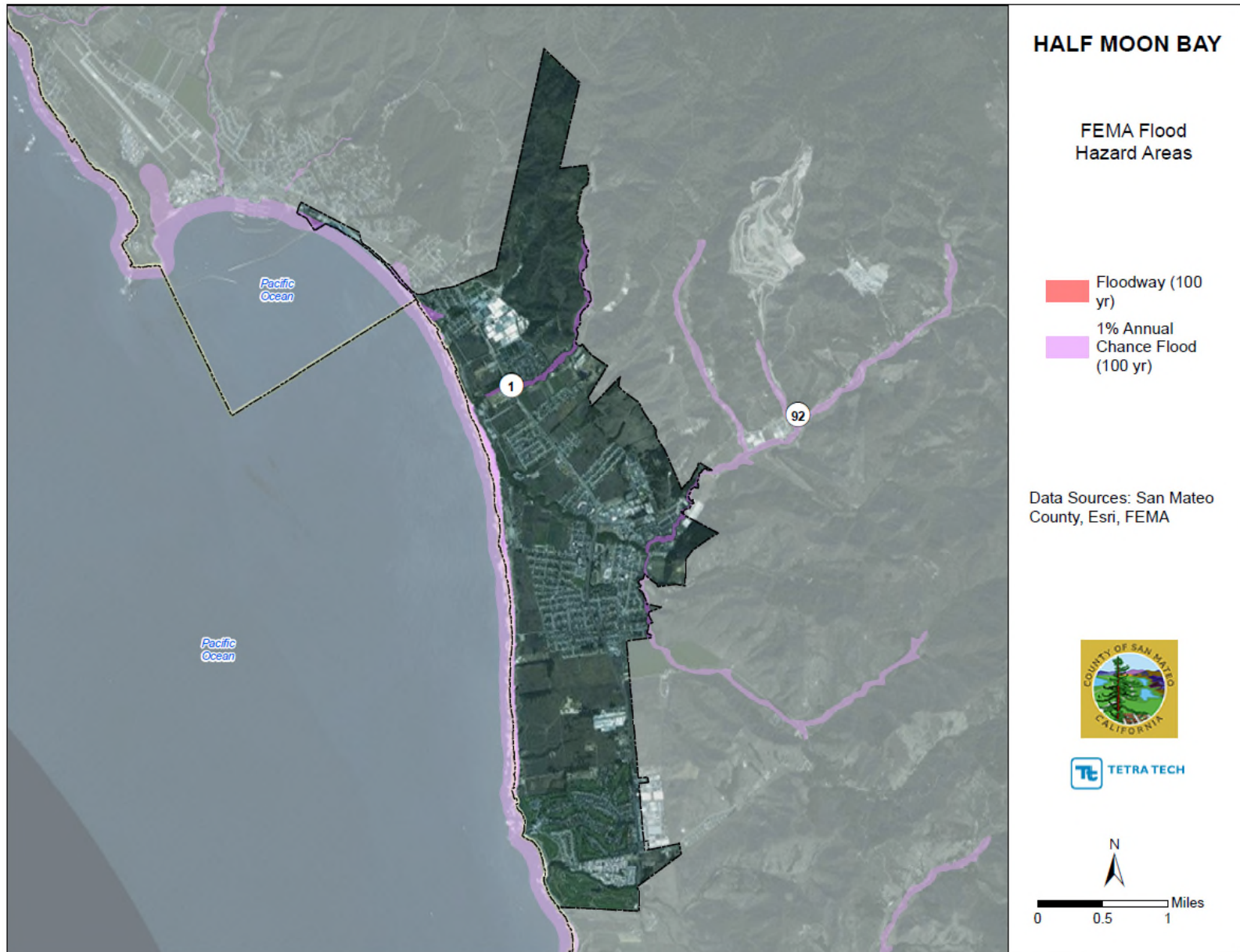
Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Drought	HMB 2, HMB 3, HMB 4, HMB 5, HMB 6, HMB 7, HMB 8	HMB 9	HMB 5, HMB 6, HMB 7, HMB 8		HMB 4	HMB 9

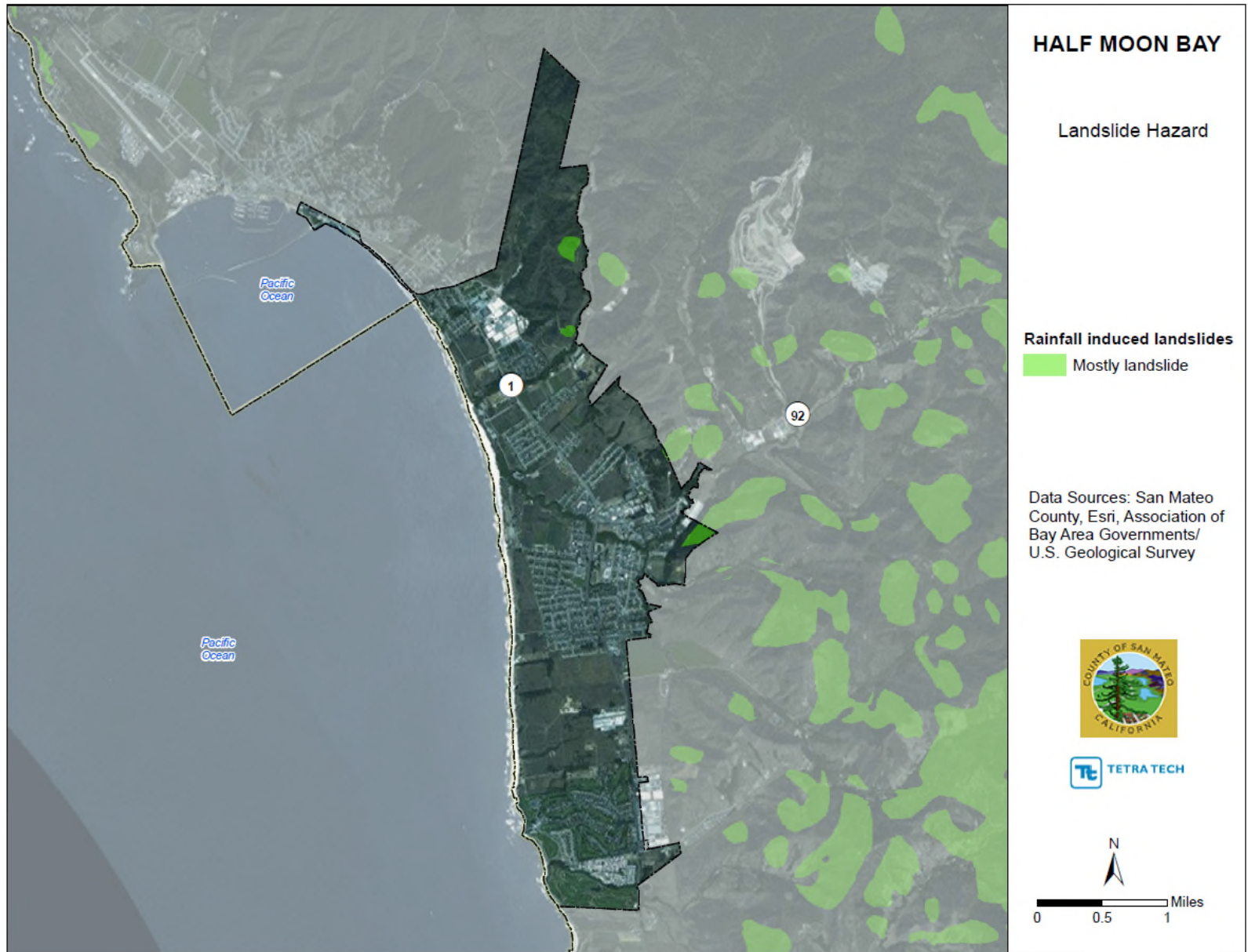
a. See the introduction to this volume for explanation of mitigation types.

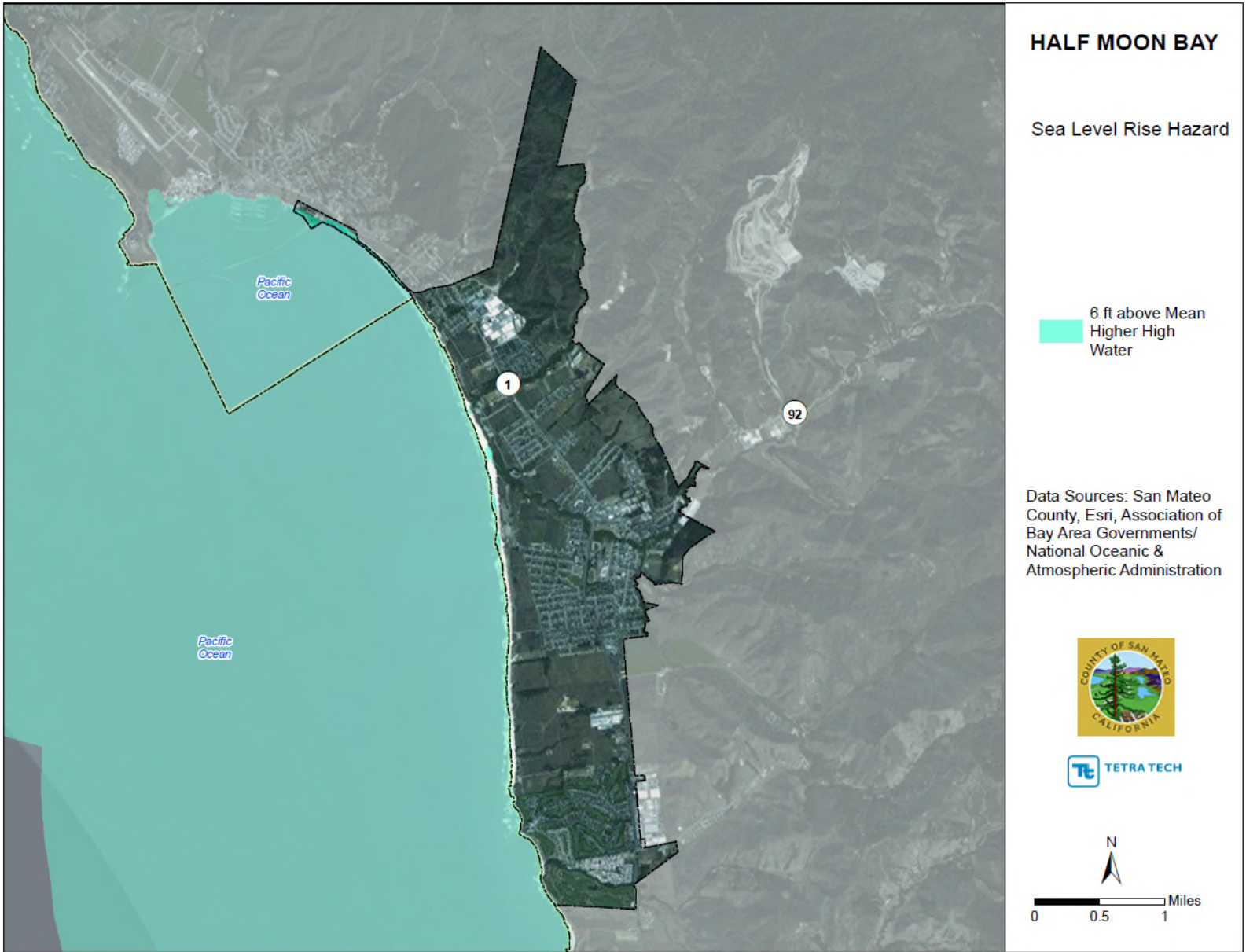


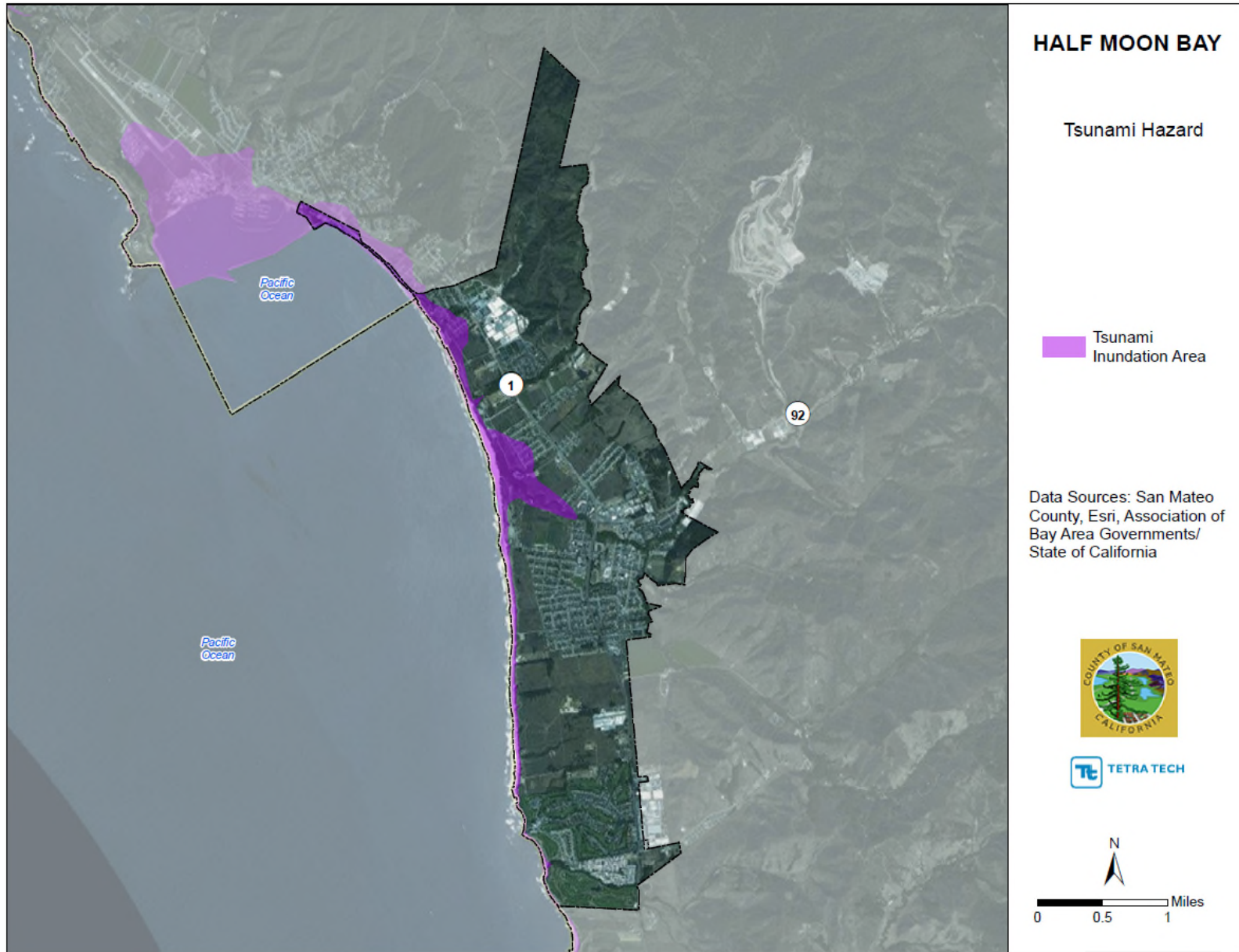














Chapter 10. Town Of Hillsborough

10.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact	Alternate Point of Contact
Bart Spencer	John Mullins
Emergency Services Coordinator	Public Works Superintendent
Central County Fire Department	Town of Hillsborough
1399 Rollins Rd	1600 Floribunda Ave.
Burlingame, CA 94010	Hillsborough, CA 94010
650-558-7600	650-375-7444
bspencer@ccfd.org	jmullins@hillsborough.net

10.2 Jurisdiction Profile

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

- ❖ Date of Incorporation — May 5, 1910
- ❖ Current Population — 11,687 (as of January 1, 2016 – CA DOF)
- ❖ Population Growth — Since the 1980 census (10,451) there has been minimal growth in population. 2010 census list the population at 10,825 (US census).
- ❖ Location and Description — 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.
- ❖ Brief 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.

- ❖ Climate — 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.
- ❖ 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.
- ❖ Development Trends — There are no plans for development since the Town has no commercial zoning and no businesses within the town limits. The only non-residential properties are area schools, town and county government facilities, a golf course, a country club, and a small park. With the Town having only non-business structures, any future development would be the renovations to existing structures.



10.3 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 10-1. An assessment of fiscal capabilities is presented in Table 10-2. An assessment of administrative and technical capabilities is presented in Table 10-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 10-4. Classifications under various community mitigation programs are presented in Table 10-5. An assessment of education and outreach capabilities is presented in Table 10-6.

TABLE 10-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code – last updated 2013 Comment: Municipal code Title 15	Yes	No	Yes
Zoning Code – last updated 2016 Comment: Municipal code Title 17	Yes	No	No
Subdivisions – last updated 2011 Comment: Municipal code Title 16; State gov’t code section 66410 <i>et seq</i>	Yes	No	Yes
Stormwater Management – annual program NPDS Comment: Municipal code Title 13; state gov’t	Yes	No	Yes
Post-Disaster Recovery – EOP currently being revised Comment: managed by Central County Fire Department	No	Yes	No
Real Estate Disclosure Comment: CA. State Civil Code 1102 requires full disclosure on Natural hazard Exposure of the sale/re-sale of any and all real property.	No	No	Yes
Growth Management - (Last Building Code update 2013) Comment: local zoning code & general plan	Yes	No	No
Site Plan Review – (Last Building Code update 2013) Comment: local municipal code and state codes	Yes	No	Yes
Environmental Protection – (Title 14 last updated in 2004; Title 17 in 2008) General Plan scheduled for update in 2017 Comment: local municipal code (Titles 14, 17) General Plan and state laws	Yes	No	Yes
Flood Damage Prevention – last updated 2014 Comment: municipal code title 15	Yes	No	No
Emergency Management (municipal code Title 2; chapter 2 – updated in 2005) Comment: managed by Central County Fire Department	Yes	Yes	No
Climate Change Comment: local climate plan and general plan; state laws	Yes	No	Yes
General or Comprehensive Plan <i>Is the plan equipped to provide linkage to this mitigation plan?</i>	Yes	No	No





TABLE 10-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Comment: referenced to general plan			
Capital Improvement Plan <i>What types of capital facilities does the plan address?</i> <i>How often is the plan updated?</i>	Yes	No	No
Comment: referenced to general plan; 20 year master plan includes water, sewer, infrastructure – reviewed annually			
Floodplain or Watershed Plan	Yes	No	No
Comment: ongoing program/plan (updated every 2 - 3 years)			
Stormwater Plan - annual review	Yes	No	No
Comment: 2 year master department plan – Stormwater Master Plan			
Habitat Conservation Plan	Yes	No	No
Comment: Habitat conservation policy			
Economic Development Plan	No	No	No
Comment: Does not have a plan			
Shoreline Management Plan	No	Yes	No
Comment: N/A – Town has no shoreline			
Community Wildfire Protection Plan – annual review	No	Yes*	No
Comment: *managed by Central County Fire Department (CCFD)			
Forest Management Plan	No	Yes	No
Comment: none			
Climate Action Plan	Yes	No	No
Comment: Climate Action Plan 2010			
Comprehensive Emergency Management Plan	No	Yes	No
Comment: managed by Central County Fire Department; current being updated; last revision 2007			
Threat & Hazard Identification & Risk Assessment	Yes	No	No
Comment: CCFD, Public Works, and Building Departments			
Post-Disaster Recovery Plan – included with the EOP	No	Yes	No
Comment: managed by Central County Fire Department; current being updated; last revision 2007			
Continuity of Operations Plan – included with EOP	No	Yes	No
Comment: managed by Central County Fire Department; current being updated; last revision 2007			
Public Health Plan	No	Yes	No
Comment: managed by County Health agency			

TABLE 10-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes





TABLE 10-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
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	No
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	No
Development Impact Fees for Homebuyers or Developers	No

TABLE 10-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Planning & 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
Staff capable of making substantial damage estimates	Yes	Building Division / Public Works & Fire Prevention Division
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. – Emergency Services Coordinator
Grant writers	Yes	Public Works

TABLE 10-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	September 1, 1981
When did the Flood Insurance Rate maps become effective?	July 16, 2015
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	Public Works Director
• Is this a primary or auxiliary role?	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date of adoption of your flood damage prevention ordinance?	2010
• Does your floodplain management program meet or exceed minimum requirements?	Meets





TABLE 10-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When was the most recent Community Assistance Visit or Community Assistance Contact?	Unknown
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
Does your jurisdiction participate in the Community Rating System (CRS)?	No
• If not, is your jurisdiction interested in joining the CRS program?	No – flood plain area is too small
How many Flood Insurance policies are in force in your jurisdiction?	67
• What is the insurance in force?	\$21,920,100
• What is the premium in force?	\$33,282
How many total loss claims have been filed in your jurisdiction?	10
• How many claims were closed without payment/are still open?	7
• What were the total payments for losses?	\$24,962.63

TABLE 10-5. COMMUNITY CLASSIFICATIONS

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

TABLE 10-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes – Hillsborough Police Captain
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website?	Yes
• If yes, please briefly describe.	Link under Current Town Projects
Do you utilize social media for hazard mitigation education and outreach?	Yes
• If yes, please briefly describe.	Through neighbor network program and the emergency and disaster information webpage.
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes





TABLE 10-6. EDUCATION AND OUTREACH

Criteria	Response
<ul style="list-style-type: none"> If yes, please briefly specify. 	Neighborhood network program; drought advisory board
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Neighborhood network program
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	<p>www.smcalert.info. SMC Alert is an opt-in countywide notification system that can alert mobile devices, landlines and send emails</p> <p>http://www.hillsborough.net/AlertCenter.aspx. Alert Center 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.</p>

10.4 Integration with Other Planning Initiatives

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

10.4.1 Existing Integration

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

- ❖ 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

10.4.2 Opportunities for Future Integration

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



- ❖ 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 2017/2018 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 2017 to include any updates from hazard mitigation plan and climate adaptations.
- ❖ Building Code review proposed

10.5 Jurisdiction-Specific Natural Hazard Event History

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

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
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

10.6 Jurisdiction-Specific Vulnerabilities

Repetitive loss records are as follows:

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





10.7 Hazard Risk Ranking

Table 10-7 presents the ranking of the hazards of concern.

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Wildfire	54	High
2	Earthquake	48	High
3	Severe Weather	33	Medium
4	Landslide	18	Medium
5	Flood	15	Medium
6	Dam Failure	13	Low
7	Drought	3	Low

10.8 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 10-8 lists the actions that make up the Town Of Hillsborough hazard mitigation action plan. Table 10-9 identifies the priority for each action. Table 10-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
HLS 1- Establish open space fire fuels management – fire zones						
potential	Wildland fire	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Public Works, CCFD	Medium	Grants	Medium term
HLS 2 – Develop a Storm Water Improvement Plan						
Existing, potential	Flood, severe weather & landslide	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Public Works	High	Grants & staff time	Short to medium term
HLS 3 - Retrofit of historic buildings (old fire and police station) – wood and stucco construction						
new	Earthquake, severe storms	4, 11	Public Works	High	Grants & Staff time	Long term
HLS 4 – Develop Water Conservation Plan Outreach & Education						
existing	Drought, Flood (stormwater), severe weather	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Public Works	Medium	Staff time and Enterprise Fund	Ongoing
HLS 5 – Develop Urban Forest Maintenance and Management Plan						





TABLE 10-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
existing	Severe Weather, drought	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Public Works	Medium	Staff time	Ongoing
HLS 5 – Continue to participate in developing and maintaining communications for first responders from cities and counties, special districts, state and federal agencies.						
Existing	All hazards	1, 2, 6, 9, 10	CCFD	Low	Staff Time	Ongoing
HLS 6 – Continue to sponsor the training and maintenance of CERT Program with residents						
Existing	All Hazards	1, 2, 6, 10	CCFD		Staff Time	Ongoing
HLS 7 – Update GIS Mapping Storage and Accessibility						
new	All Hazards	1, 3, 6, 7	Planning	Medium	Staff Time	Short term
HLS 8 – Conduct sod removal / turf replacement plan through BASCWA						
Existing	Drought, flood, Severe weather	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Public Works	Low	Staff Time	Ongoing
HLS 9 – Integrate updated hazard mitigation plan into plans, ordinances, and codes						
new	All Hazards	1, 2, 3, 4, 5, 6, 7, 8, 10	Planning, CCFD (Fire)	High	Staff Time	Short term
HLS 10 – Maintain and monitor Wildland Urban Fire Interface						
Existing	Drought, fire, severe weather	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	CCFD (Fire)	Medium	Staff Time	Long Term
HLS 11 – Conduct Street improvements and mitigation measures from flood waters and landslides						
existing	flood, landslide, earthquake	1, 3, 6, 7	Public Works	High	General Fund	Short term
HLS 12 – Develop a Water Supply Improvement Plan						
Existing	Drought, fire	1, 2, 3, 4, 5, 6, 7, 8, 9, 10	Public Works, CCFD	High	General fund	Long Term
HLS 13 – Strengthen Fire Hydrant Distribution System						
new	Drought, fire	1, 2, 3, 4, 5, 6, 7, 8, 10	Public Works, CCFD (Fire)	High	General Fund	Long term
Action G-1 —Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.						
Existing	All	1, 3, 4, 5, 6, 7, 11	Jurisdictions	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
Action G-2 —Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.						
New and existing	All	All	Jurisdictions	Low	General Fund	Long-term





TABLE 10-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action G-3 —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.						
New and existing	Flooding	2, 3, 5, 6, 8	San Mateo County Unincorporated and Municipalities with SFHAS	Low	General Fund	Short-term and ongoing
Action G-4 —Where feasible, implement a program to record high water marks following high-water events.						
New and existing	Flooding, Severe Weather	1, 3, 4, 5, 6	Jurisdictions	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
Action G-5 —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	Jurisdictions	Low	General Fund	Short-term
Action G-6 —Consider the development and implementation of a Capital Improvements Program (CIP) to increase regulatory, financial, and technical capability to implement mitigation actions.						
New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	Jurisdictions	High	CIP component of general fund (if implemented)	Long term
Action G-7 —Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.						
New and existing	All	2, 3, 4, 5, 6, 7, 8, 10, 11	Jurisdictions	Low	Operating Budgets	Ongoing
Action G-8 — Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and existing	All	All	Jurisdictions	Low	General Fund	Short- and long-term
Action G-9 — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All	1, 4	Jurisdictions	Low	Staff Time, General Funds	Short-term

TABLE 10-9. MITIGATION STRATEGY PRIORITY SCHEDULE

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority	Grant Priority
HLS – 1	10	High	High	Yes	Yes	No	Medium	High





TABLE 10-9. MITIGATION STRATEGY PRIORITY SCHEDULE

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority	Grant Priority
HLS – 2	10	High	High	Yes	Yes	Yes	Medium	High
HLS – 3	2	Low	High	No	Yes	No	Low	Low
HLS – 4	10	Medium	Medium	Yes	No	Yes	Medium	Medium
HLS – 5	5	High	Low	Yes	No	Yes	High	Low
HLS – 6	4	High	Low	Yes	No	Yes	High	Low
HLS - 7	4	Medium	Medium	Yes	No	Yes	High	Low
HLS - 8	10	Low	Low	Yes	Yes	Yes	High	Medium
HLS – 9	9	High	Low	Yes	No	Yes	High	Low
HLS-10	10	High	High	Yes	No	No	High	Low
HLS-11	4	Medium	High	No	Yes	No	Medium	Low
HLS-12	10	Medium	High	No	Yes	No	Medium	Low
HLS-13	10	Medium	High	No	Yes	No	Medium	Low
Action G-1	7	High	High	Yes	Yes	No	High	High
Action G-2	11	High	Low	Yes	No	Yes	High	Low
Action G-3	5	Medium	Low	Yes	No	Yes	High	Low
Action G-4	5	Medium	Medium	Yes	Yes	Yes	Medium	Medium
Action G-5	9	Medium	Low	Yes	No	No	Medium	Low
Action G-6	9	High / Medium	High	Yes	No	Yes (if component of general fund)	High	Low
Action G-7	9	Low	Low	Yes	No	Yes	Low	Low
Action G-8	11	Low	Low	Yes	No	Yes	High	Low
Action G-9	2	Low	Low	Yes	No	Yes	High	Low





TABLE 10-10. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Wildland Fire	HLS 1, HLS 4, HLS 9	HLS, 1,	HLS 1, HLS 9	HLS 1	HLS 1	
Earthquake	HLS 5, HLS 7, HLS 9	HLS 3	HLS 9	HLS 7	HLS 5	HLS 3
Severe Weather	HLS 1, HLS 2, HLS 9	HLS 7	HLS 2, HLS 9	HLS 2	HLS 5	
Landslide	HLS 2, HLS 7, HLS 9	HLS 2	HLS 2, HLS 9	HLS 2		
Flood	HLS 2, HLS 7, HLS 9	HLS 2	HLS 2, HLS 9	HLS 2	HLS 5	
Dam Failure	HLS 2		HLS 2			
Drought	HLS 1, HLS 4, HLS 5, HLS 9		HLS 2, HLS 9			
Wildland Urban Fire Interface	HLS 1, HLS 4, HLS 9	HLS 1	HLS 1, HLS9	HLS1	HLS 1	HLS 3

10.9 ADDITIONAL COMMENTS

- ❖ In 2008, Cal Fire posted recommended maps for all Local Responsibility Areas (LRA) in the State. Maps contain areas with a Very High Fire Hazard Severity Zone (VHFHSZ) and gave the Town of Hillsborough the opportunity to contest, amend, or increase the VHFHSZ identified.
 - Development of Cal Fire maps of LRA includes a comprehensive model which assessed available fuels, topography, weather, and ember production and movement. The maps did not fully assess the Town, only identified areas where a fire was most likely to spread to State Responsibility Areas (SRA)
 - The Town of Hillsborough has never been assessed with similar criteria to Cal Fire’s model for fire hazard.
 - Rather than increase areas to Cal Fire’s recommendation, the Town established “Wildland Urban Interface (WUI) Areas” with intent of avoiding further VHFHSZ designation.
 - Most of the Town that borders SRA is mapped as VHFHSZ by Cal Fire
 - Areas within 100 feet of Open Space was designated Wildland Urban Interface Areas consistent with the practice utilized to address the WUI issue in 1994.
 - The map for Hillsborough was reviewed and adopted by the Town in 2007.
- ❖ Current CCFD (Fire) WUI Program consists a pro-active public education program and enforcement through:
 - Complaints – Prevention staff investigate every complaint; and,

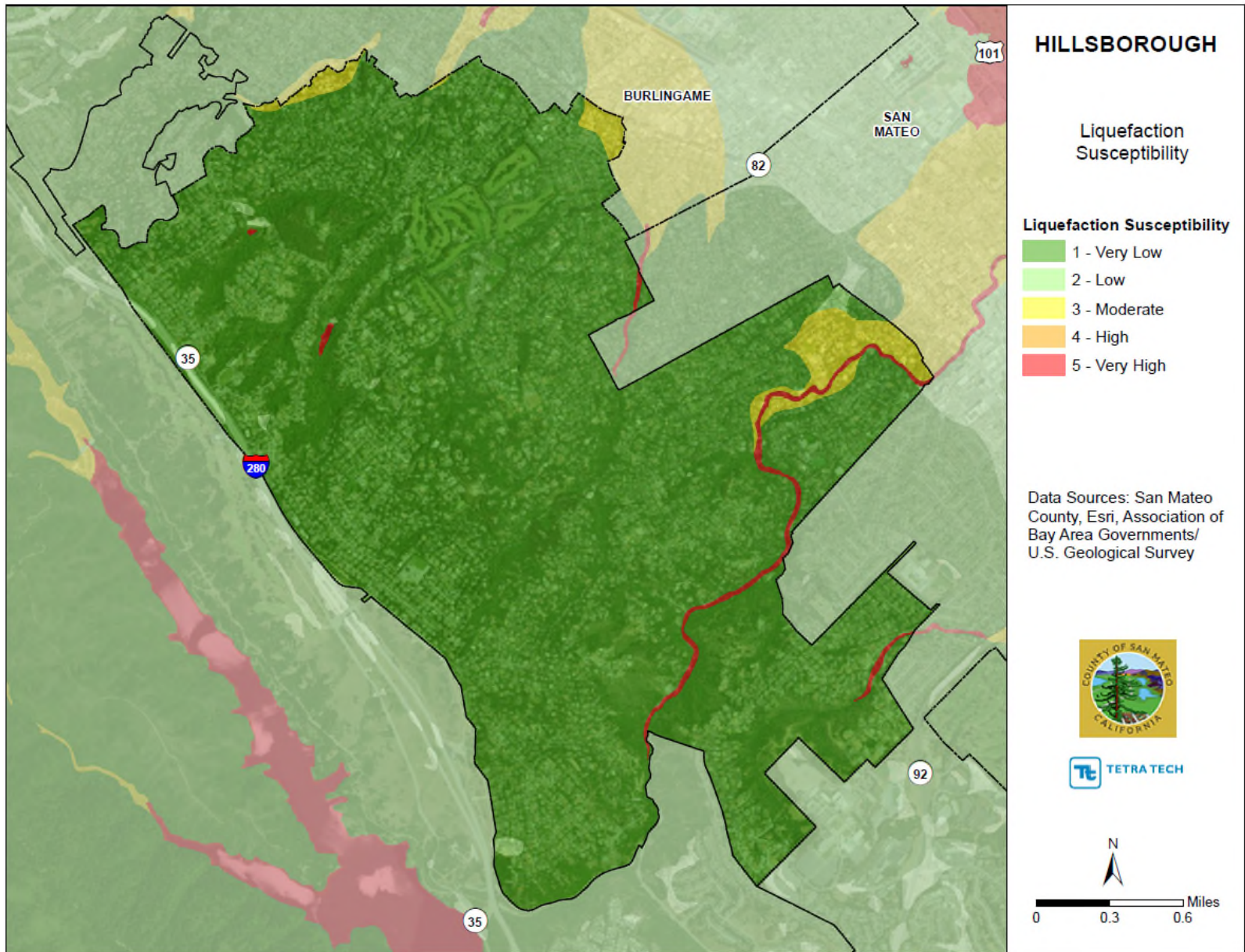


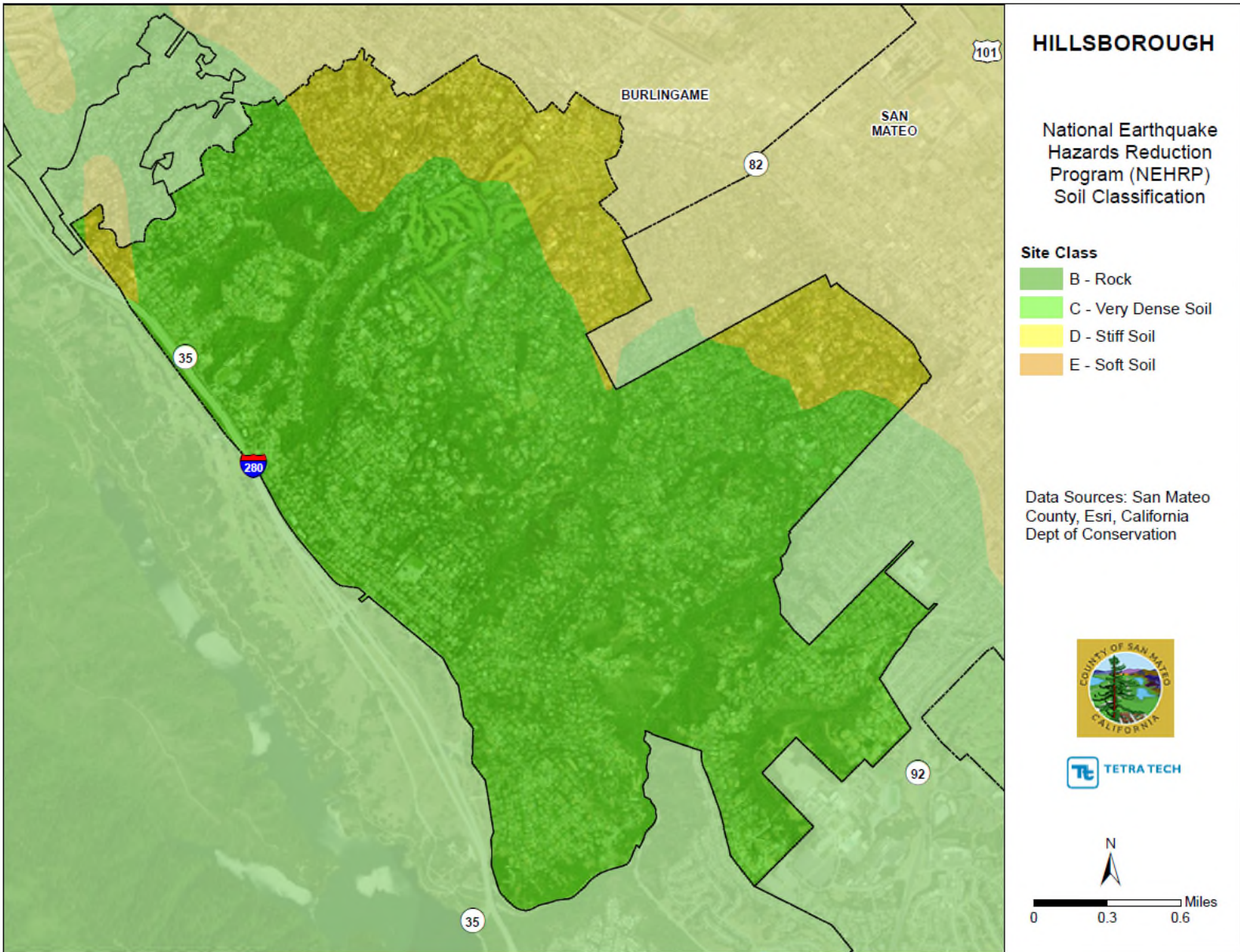
- Vacant lot abatement program – owners are contacted each spring and required to clear the entire property; and,
- Selective enforcement
 - referrals from the Hillsborough Code Enforcement Task Force
 - referrals from Executive Management
- ❖ Additional WUI Program is conducted through Town Public Works focused on a fuel reduction project within open space lands (3 year, grant-funded project)
- ❖ Cal Fire’s current WUI Program consists of proactive public education and individual property inspections with an associated fee of \$153 per habitable property.
 - Most Cal Fire Ranger Units that perform these types of inspections do not do a comparable amount of commercial property response/inspections and advance life support emergency medical aide.
- ❖ CCFD does not conduct a proactive property inspection consistent with Cal Fire.
 - Many parcels include heavy vegetation in natural state; not landscaped. Historically, many properties would match the appearance of Town Open Space. Enforcement for clearing/cleaning of these properties would impact a significant number of residents.
- ❖ While CCFD identifies the standard for compliance throughout the Town via publications, public education, and our webpage, the department has not conducted or been staffed or funded to support a WUI property inspection program throughout the Town.
- ❖ Currently the threshold for improving private property vegetation landscape and vegetation management occurs when 50% of the exterior of the home has been modified. While this is consistent with another jurisdiction in San Mateo County, the threshold was initially determined to not negatively impact construction costs in the Town and only affect 2-4 homes a year. As such, the program was never intended to improve the overall Very High Fire Hazard Severity Zone.
- ❖ Some of the historically hardest hit areas affected by wildfire in the State of California utilize compliance thresholds as low as 10% in the hopes of improving the communities liabilities towards vegetation management striving to become disaster resistant.
- ❖ The Town of Hillsborough is listed as a “community at risk” in the Cal Fire San Mateo-Santa Cruz Ranger Unit strategic fire plan. The plan was completed and published in 2014. The list is comprised of communities threatened by the possibility of wildfire.
- ❖ Some property owners throughout the State have experienced homeowner insurance rate increases or cancelations in policy due to their locations within the WUI or VHFHSZ, despite the fact that the CalFire maps are not intended for insurance evaluation purposes.
 - California Department of Insurance requires insurance companies to provide substantial reasons for cancelation of a policy or raising rates.
 - After a residential policy has been in effect for sixty days it can be canceled for limited reasons: nonpayment of premium, fraud, material misrepresentation, or physical changes in the insured property that increase any hazard insured against (not to include properties designated in VHFHSZ). A cancelation may only occur during a change in policy or during transfer of ownership.
 - Department of Insurance has a consumer complaint center and mediation services for homeowners who experience unfair insurance practices.

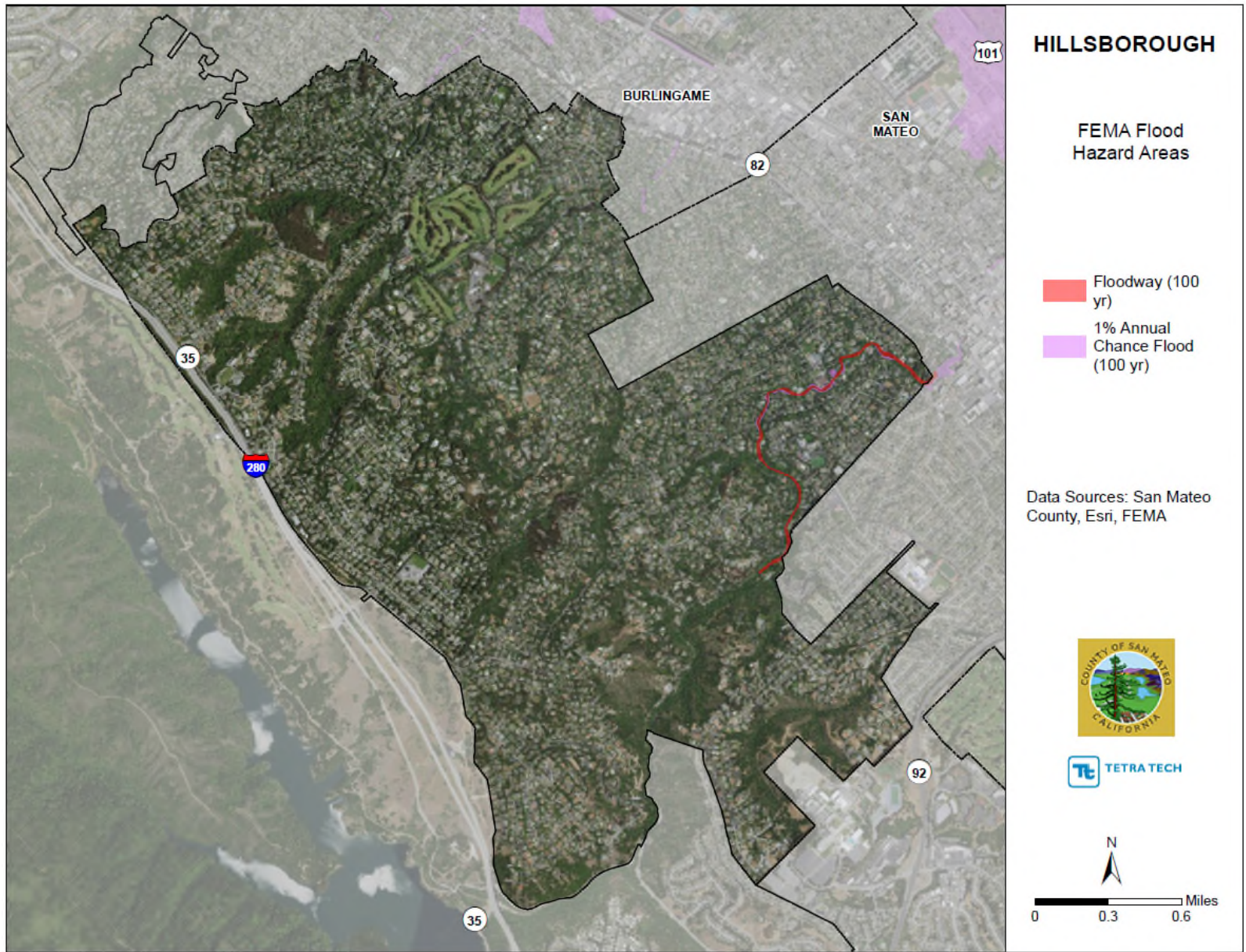


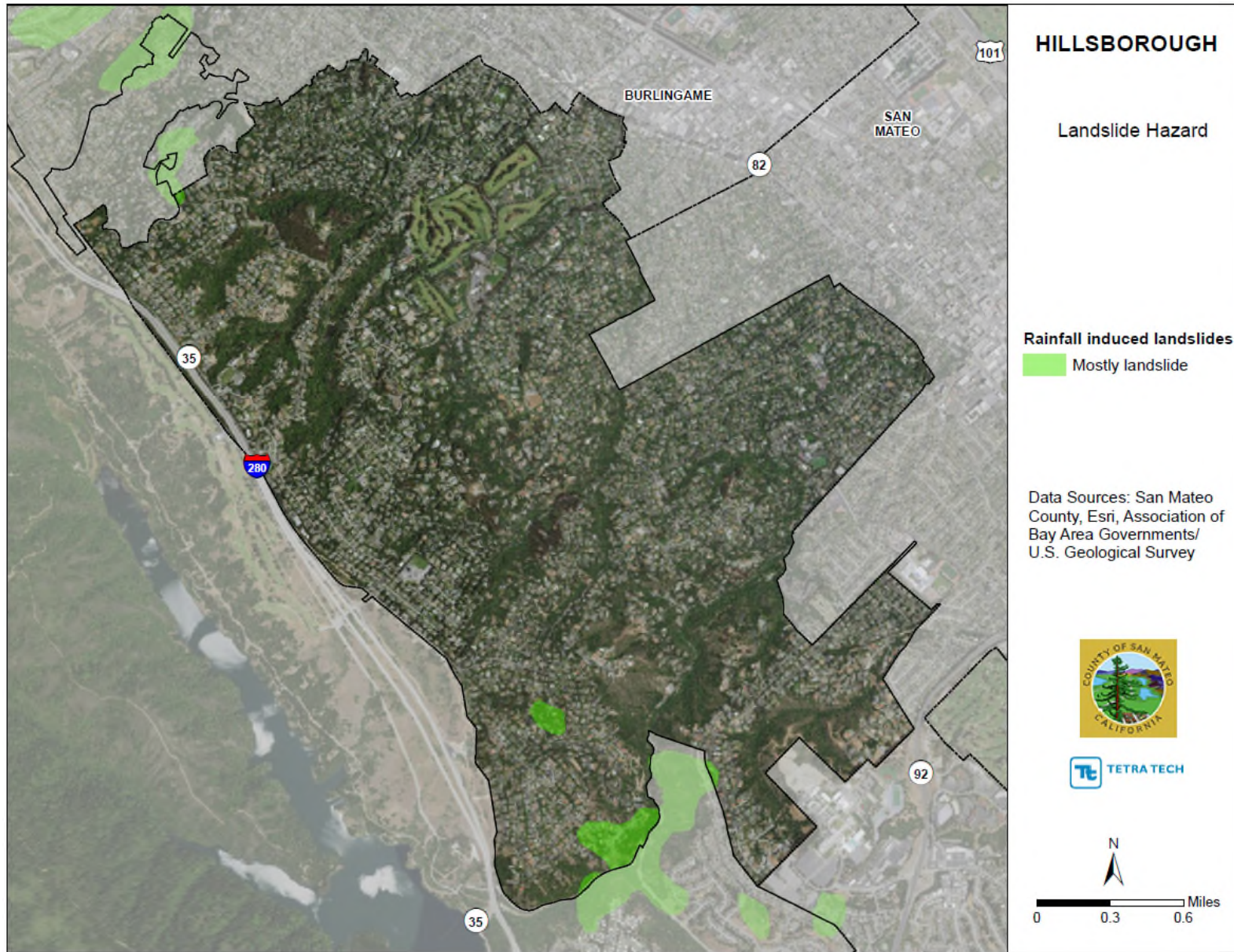


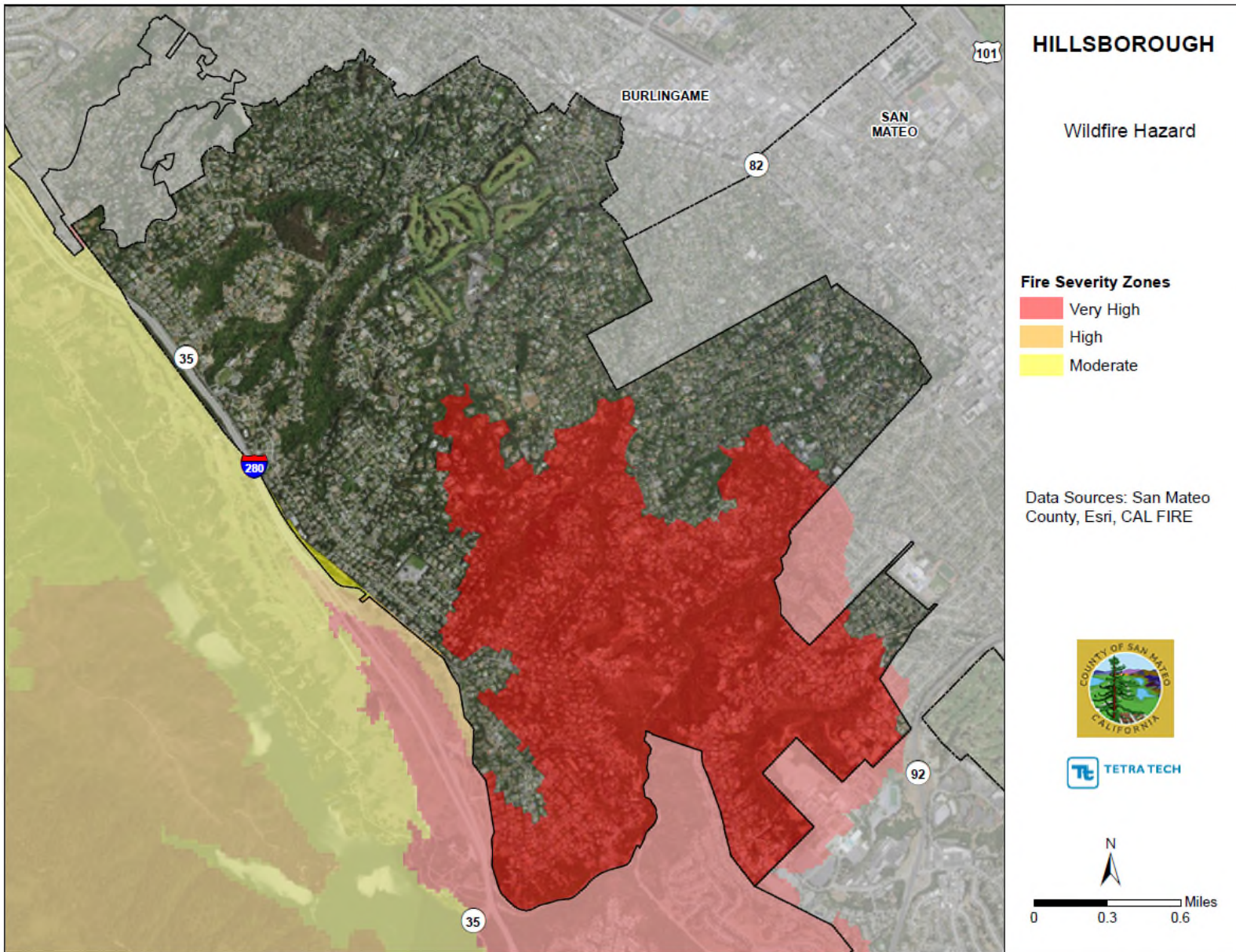
- ❖ One insurance carrier (USAA) provides a discount on rates to properties involved in the Firewise Community Program, however there is not data that verifies any insurance carrier has refrained from cancellations or rate increases for properties within a Firewise Community.
- ❖ Firewise is a neighborhood-based program which empowers residents to work together to create and implement their own risk-reduction solutions. Currently, the only Firewise Community within San Mateo County is Portola Valley Ranch. The only other one in the Bay Area is Mill Valley.
- ❖ CCFD is a current member of San Mateo County FireSafe. This is a non-profit organization comprised of public safety employees, utility companies, and private agencies. Mission and goals include:
 - Maintain quality of life and property for citizens within wildland urban zones
 - Educating the public on preparedness and fire behavior
 - Fuel reduction and defensible space where needed
 - Sharing of resources (CDC fuel reduction crews, grant opportunities and assistance, San Mateo County wood chipper program, vegetation assessment).
- ❖ Because of current staffing and budget constraints CCFD is not able to complete Action Item #10 at this time.













Chapter 11. City of Menlo Park

11.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

Brian Henry- Public Works Department
701 Laurel Street
Menlo Park, CA 94025
Telephone: 650-330-6799
e-mail: bphenry@menlopark.org

Alternate Point of Contact

Arlinda Heineck- Planning Department
701 Laurel Street
Menlo Park, CA 94025
Telephone: 650-330-6715
e-mail: aaheineck@menlopark.org

11.2 Jurisdiction Profile

- ❖ Date of Incorporation— The City of Menlo Park was incorporated in 1927
- ❖ Current Population – 33,863 (as of January 1, 2016 – CA DOF)
- ❖ Population Growth – The City of Menlo Park is home to 33,273 residents with an average of 2.6 persons per household, according to current California Department of Finance estimates. Between 2000 and 2014, Menlo Park saw a population increase of 7 percent, compared to a 9 percent increase in the Combined Counties and the larger Bay Area. Unlike growth in the region, Menlo Park’s growth is marked by an increase in household size rather than an increase in the total number of households.

Between 2000 and 2014, the average household size increased from 2.4 to 2.6 persons per household, or nearly 8 percent. Counter to these citywide trends, Belle Haven experienced a decrease in population in recent years, from 6,095 residents in 2000 to 5,605 residents during the 2008-2012 ACS survey period.

During the same time period, the number of households in Belle Haven (1,336 in 2008-2012) remained relatively constant. These changes are reflected in a smaller average household size in Belle Haven during the 2008-2012 ACS survey period (3.2 persons per household) compared to 2000 (4.6 persons per household), although the average household size in Belle Haven remains above the citywide average

- ❖ Location and Description – Menlo Park, covering 19 square miles, lies in the Mid- Peninsula region between San Francisco and San Jose. Located in the southern part of the San Mateo County it is bounded on the south by Palo Alto, Stanford University, and East Palo Alto, on the east by San Francisco Bay, on the north by Atherton and Redwood City, and on the west by Ladera, Portola Valley, and Woodside.

Together with Palo Alto and Stanford, Menlo Park forms a subregional center for commerce, employment, education, and cultural activities. Many of the business operations in the this subregion are regional, national or international centers for a company. Research and development and specialized technical manufacturing processes are the focus at these centers.



The largest employers in Menlo Park span a number of industries, including high tech, government, biotechnology, financial services, and retail. The ten largest employers in Menlo Park represent nearly one-third of wage and salary employment in Menlo Park. The largest employer by far is Facebook followed by SRI International, which is located near the Caltrain station. The professional, scientific, and technical services industry is the largest employment industry in Menlo Park, accounting for 35 percent of jobs located in the City. The second largest industry that employs workers in Menlo Park is manufacturing, followed by financial activities, leisure and hospitality, and education and health care.

Some of the largest employers in the area are (Facebook, Stanford Research Institute, TE Connectivity, Rosewood, and E Trade); the city also has Federally owned asset which reside within the jurisdiction such as Veterans Health System and United States Geological Survey.

- ❖ Brief 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, under 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 23 March 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.

After 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.

- ❖ Climate— The City of Menlo Park climate is mild during summer when temperatures tend to be in the 60's and cool during 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 255 sunny days per year with 56 days of measurable precipitation.
- ❖ Governing Body Format— The City Council is the city's governing body for the City of Menlo Park. In general municipal elect , its members are elected at-large to four-year overlapping terms. The Mayor and Mayor Pro Tem 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 of Menlo Park assumes responsibility for the adoption of this plan; the Planning, Public Works and Police Department will oversee its implementation.

- ❖ **Development Trends**— Economic development is essential to the city’s future, and involves the attraction, retention, and growth of companies in Menlo Park and the jobs they create. This requires providing companies with the facilities they need. All residents in Menlo Park have a stake in successful economic development because the fiscal revenues that it creates are key to the long-term sustainability of the City’s budget. Economic development also creates job opportunities for local residents, which can reduce congestion impacts from cross commuting.

Additionally, economic development supports expanded choices in housing, retail, and services that enhance the city and can fund community benefits and improvements via new projects. Menlo Park has a significant number of projects that are pending, approved, or under construction.

The city’s development pipeline includes 1,347 residential units, approximately 1.9 million square feet of office space, approximately 113,000 square feet of retail, and 373 hotel rooms. Of this total, a significant share is located in the M-2 Area, including 540 residential units, 1.3 million square feet of office space, approximately 94,000 square feet of retail, and 235 hotel rooms (with most of the remaining development that is pending, approved, or under construction in or near the El Camino Real / Downtown area).

11.3 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 11-1. An assessment of fiscal capabilities is presented in Table 11-2. An assessment of administrative and technical capabilities is presented in Table 11-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 11-4. Classifications under various community mitigation programs are presented in Table 11-5. An assessment of education and outreach capabilities is presented in Table 11-6.

TABLE 11-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code	Yes	No	Yes
<i>Comment: Menlo Park Municipal Code, Title 12, CA Bldg Code 2013. The Community Development, Building and Planning Divisions, adopted the code on 12/17/2013 and it became effective on 1/1/2014 .</i>			
Zoning Code	Yes	No	No
<i>Comment: Menlo Park Municipal Code, Title 16. The Community Development, Planning Division, implements this code. The Zoning Ordinance was adopted in 2014.</i>			
Subdivisions	Yes	No	No
<i>Comment: Menlo Park Municipal Code, Title 15, adopted in 1977. The Community Development, Planning Division, and the Public Works, Engineering Division implement this code.</i>			





TABLE 11-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Stormwater Management	Yes	Yes	Yes
Comment: 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. New permit requirements were issued in November 2015. The Public Works, Engineering & Maintenance Divisions, and the City Manager, Environmental Programs, implement this permit.			
Post-Disaster Recovery	No	No	No
Comment: The City does not have a municipal code or ordinance with Post Disaster Recovery. The City has a Post Disaster Recovery Plan. The City's Emergency Operation Plan addresses Post Disaster Recovery Operations. Chapter Four Recovery section of the City Emergency Operation Plan which was adopted in 2011 outlines Post Disaster Recovery Operations.			
Growth Management	Yes	No	No
Comment: Economics Existing Condition Report 2015/ General Plan update to the Land Use and Circulation Elements (will be adopted in October 2016). Between 2000 and 2014, Menlo Park saw a population increase of 7 percent, compared to a 9 percent increase in the Combined Counties and the larger Bay Area. Unlike growth in the region, Menlo Park's growth is marked by an increase in household size rather than an increase in the total number of households. The city's development pipeline includes 1,347 residential units, approximately 1.9 million square feet of office space, approximately 113,000 square feet of retail, and 373 hotel rooms. Of this total, a significant share is located in the M-2 Area, including 540 residential units, 1.3 million square feet of office space, approximately 94,000 square feet of retail, and 235 hotel rooms (with most of the remaining development that is pending, approved, or under construction in or near the El Camino Real / Downtown area)			
Site Plan Review	Yes	No	No
Comment: The Engineering Division of the Public Works Department reviews site plans for all projects. The Building Division of Community Development reviews all site plans for conformance to Menlo Park Municipal Code, Title 12, adopted 1981. The Planning Division of Community Development reviews all site plans for conformance to Menlo Park Municipal Code, Title 16.			
Flood Damage Prevention	Yes	No	No
Comment: Menlo Park Municipal Code, Title 12.42, adopted in 1988. The Public Works, Engineering Division, implements this code.			
General or Comprehensive Plan	Yes	No	No
Comment: The land use goals, policy and programs include hazards and the adaption plan. The City's General Plan can be found here: http://www.menlopark.org/146/General-Plan . Sections IV and VII address safety and emergency preparedness. The Plan "provides policies and standards for the type, location, intensity and design of development in areas of potential hazards." Land Use and Circulation Elements (adopted December 1, 1994 plus amendments through May 21, 2013), Housing Element (2015-2023) (adopted April 1, 2014), Open Space and Conservation, Noise and Safety Elements (adopted May 21, 2013).			
Capital Improvement Plan	Yes	No	No
Comment: 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.			
Floodplain or Watershed Plan	Yes	No	No
Comment: Local Hazard Mitigation Plan expired on 3/24/2016.			



TABLE 11-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Habitat Conservation Plan	No	No	No
<p>Comment: While the City does not have a Habitat Conservation Plan, the City has an annual partnership with Acterra, a non-profit that serves Silicon Valley, on the San Francisquito Watershed project. This project aims to restore the creek habitat and reduce storm water pollution by gathering volunteers to plant native species along the creek bed and organize creek clean up events. Between FY 12 – 15 Acterra organized 403 volunteers to plant 860 native species and remove 15,000 pounds of recycling and trash.</p>			
Economic Development Plan	Yes	No	No
<p>Comment: July 2015 adopted. 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.</p>			
Shoreline Management Plan	No	No	No
<p>Comment: The City of Menlo Park shoreline is subject to the San Francisco Bay Conservation & Development Commission (BCDC), at http://www.bcdc.ca.gov/.</p>			
Community Wildfire Protection Plan	No	No	No
<p>Comment: 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.</p>			
Forest Management Plan	No	No	No
<p>Comment: 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 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.</p>			
Climate Action Plan	Yes	No	Yes
<p>Comment: The City first adopted a Climate Action Plan (CAP) in 2009, and in 2013 the City set a greenhouse gas (GHG) reduction target of 27% from 2005 levels by 2020. The purpose of the 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 yearly as research continues to provide more emissions reduction data and as new technologies arise and economic conditions change.</p>			
Comprehensive Emergency Management Plan	Yes	No	No
<p>Comment: City adopted a Comprehensive Emergency Management Plan back in 2010. The plan conforms to the National Incident Management System (NIMS) and the California Standardized Emergency Management System (SEMS). It 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.</p>			
Threat & Hazard Identification & Risk Assessment	Yes	No	No
<p>Comment: The City Emergency Operation Plan addresses the threats, hazards and risks within the San Mateo County and City of Menlo Park. Chapter three of the EOP discusses the threats and follows the THIRA CPG 201 process. The EOP was adopted in 2011.</p>			





TABLE 11-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Post-Disaster Recovery Plan	Yes	No	No
<p>Comment: The City Emergency Operation Plan addresses Post Disaster Recovery Operations. Chapter Four Recovery section of the City Emergency Operation Plan which was adopted in 2011 outlines Post Disaster Recovery Operations. This EOP also aligns with Debris Removal Guidelines for State and Local Officials (FEMA DAP-15); A Guide to Federal Aid and Disasters (DAP-19); Digest of Federal Disaster Assistance (DAP-21.)</p>			
Continuity of Operations Plan	Yes	No	No
<p>Comment: The City Emergency Operation Plan adopted in 2011, addresses Continuity of Operations. At the City of Menlo Park, the following offices (Human Resources, City Clerk, City Manager’s Office, etc.) are responsible for the preservation of vital records. The EOP also discusses Line of Succession and restoration of governmental services following a large scale disaster impact. The City also has a contract with Agility Recovery to assist with mobilization of essential resource necessary to sustain governmental services which may/ or will allow personnel to operate remotely if necessary.</p>			

TABLE 11-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes (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 (Highway users tax)
Development Impact Fees for Homebuyers or Developers	Yes
Flood Control / Seal Level Rise Hazard District	Yes

TABLE 11-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Public Works, Community Development, Planning & Building Department
Engineers or professionals trained in building or infrastructure construction practices	Yes	Public Works, Community Development, Planning & Building Department





TABLE 11-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with an understanding of natural hazards	Yes	Public Works, Community Development, Planning & Building Department
Staff with training in benefit/cost analysis	Yes	Public Works (Engineering Division)
Surveyors	Yes	Public Works and Consultants
Staff capable of making substantial damage estimates	Yes	Public Works and Building Department
Personnel skilled or trained in GIS applications	Yes	Public Works and Community Development Department
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 Department, Public Works Department, and Menlo Park Fire District

TABLE 11-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	6/14/1974 (First Flood Hazard Boundary Map)
When did the Flood Insurance Rate maps become effective?	10/16/2012
What local department is responsible for floodplain management?	Public Works, Engineering Division
Who is your floodplain administrator? (department/position)	Assistant Public Works Director
<ul style="list-style-type: none"> Is this a primary or auxiliary role? 	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	Yes (1)
What is the date of adoption of your flood damage prevention ordinance?	1988 (with amendments in 1993, 1999, 2002, 2005)
<ul style="list-style-type: none"> Does your floodplain management program meet or exceed minimum requirements? 	Meets minimum requirements of 44 CFR 60.3 (e)
<ul style="list-style-type: none"> If so, in what ways? 	N/A
When was the most recent Community Assistance Visit or Community Assistance Contact?	2/16/11
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
<ul style="list-style-type: none"> If so, please state what they are. 	N/A
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
<ul style="list-style-type: none"> If no, please state why. 	N/A
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes



TABLE 11-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
<ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	<p><i>The City of Menlo Park would require another Certified Floodplain Manager in the Engineering Division to assist with additional assignments and to re-evaluate the work required in participating in the Community Rating System.</i></p>
<p>Does your jurisdiction participate in the Community Rating System (CRS)?</p> <ul style="list-style-type: none"> If so, is your jurisdiction seeking to improve its CRS Classification? If not, is your jurisdiction interested in joining the CRS program? 	<p>No</p> <p>N/A</p> <p><i>No. The City of Menlo Park conducted a cost-benefit analysis associated with the rate of return, in comparison to the staff hours needed to manage the CRS program. Limited funding sources have made the program unsupportable.</i></p>
<p>How many Flood Insurance policies are in force in your jurisdiction?</p>	890
<ul style="list-style-type: none"> What is the insurance in force? 	\$242,122,200.00
<ul style="list-style-type: none"> What is the premium in force? 	\$1,071,228.00
<p>How many total loss claims have been filed in your jurisdiction?</p>	31
<ul style="list-style-type: none"> How many claims were closed without payment/are still open? 	16
<ul style="list-style-type: none"> What were the total payments for losses? 	\$241,351.37

TABLE 11-5. COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	No		
Building Code Effectiveness Grading Schedule	Yes	99	
Public Protection	Yes	2	2013
Storm Ready	No		
Firewise	No		





TABLE 11-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	<i>Yes- The City of Menlo Park has three designated Public Information Officers. These individuals have played the PIO role during trained EOC exercises and are aligned with meeting the PIO State EOC credentialing requirement.</i>
Do you have personnel skilled or trained in website development?	<i>Yes- The City Manager’s Office is tasked with updating and coordinating any updated website information. The City has website templates which help to assist with managing any informational updates. Trained and skilled personnel in website development for the City of Menlo Park are on hand.</i>
Do you have hazard mitigation information available on your website?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	<p><i>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.) in which the general public can access for more information. Hazard Mitigation information is posted based on relevance of the season(summer, fall, winter, and spring).</i></p> <p><i>*Summer-wildland fire and water drought hazard mitigation information may be posted.</i></p> <p><i>*Winter- flooding hazard mitigation information may be posted.</i></p> <p><i>*Fall- national preparedness month may include hazard mitigation information on earthquakes safety.</i></p> <p><i>*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.</i></p>
Do you utilize social media for hazard mitigation education and outreach?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	<p><i>The City of Menlo Park has a Facebook, Nextdoor, Twitter, and Nixle account. The City posts relevant hazard mitigation educational information to the public through these social media and alert notification platforms. The City also has their own alert notification system(Blackboard Connect) which serves as a conduit for pushing out applicable hazard mitigation information.</i></p>
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes





TABLE 11-6. EDUCATION AND OUTREACH

Criteria	Response
<ul style="list-style-type: none"> If yes, please briefly specify. 	<p><i>The City of Menlo Park in partnership with the Fire District has a Community Emergency Response Team Committee. The committee meets quarterly to discuss issues related to hazard mitigation and emergency preparedness. The City also kicked off a new emergency preparedness forum called “Menlo Ready”. Menlo Ready embeds a whole- community preparedness outreach approach campaign based on the guidelines set forth in (FDOC 104-008-1) of the Federal Emergency Management Agency. The City also participates as a member of the San Mateo County Emergency Managers Association which includes topics on hazard mitigation Countywide.</i></p>
Do you have any other programs already in place that could be used to communicate hazard-related information?	No
<ul style="list-style-type: none"> If yes, please briefly describe. 	N/A
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	<p><i>The City of Menlo Park has a Facebook, Twitter, Nextdoor and Nixle account. The City posts relevant hazard event information to the public through these social media alert notification platforms. The City also utilizes its website for providing public information in advanced for hazard events.</i></p>

11.4 Integration with Other Planning Initiatives

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

11.4.1 Existing Integration

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

- ❖ City of Menlo Park General Safety Plan –Adopted May 2013 and complies with Assembly Bill No. 2140 General plans: safety element.
 - (S1.7) Continue to require new development to reduce the seismic vulnerability of buildings and susceptibility to other hazards through enforcement of the California Building Standards Code and other programs.
 - (S1.8) Review and comprehensively revise the Safety Element whenever substantial new scientific data or evidence related to prevention of natural and human hazards becomes available, and coordinate with other General Plan elements and City emergency plans.





- (S1.15) Support State and Federal financial assistance or tax incentive programs to encourage repair, demolition or abatement of earthquake hazardous structures.
- (S1.17) Minimize risk associated with hazardous materials by assessing exposure to hazardous materials of new residential development and sensitive populations near existing industrial and manufacturing areas. Minimize risk associated with hazardous materials.
- (S1.22) Continue to apply standards for any construction projects (new structures and existing structures proposed for substantial improvement) in areas of special flood hazard in accordance with FEMA and the Flood Damage Prevention Ordinance, including the use of flood-resistant construction materials and construction methods that minimize flood damage.
- (S1.32-33) Locate critical facilities, e.g., hospitals, schools, Emergency Operations Center (E.O.C.), etc., to minimize impacts from hazards. Encourage local public utilities and service providers to locate and design facilities and systems to ensure continued service in emergency conditions.
- (S1.34) Ensure disaster preparedness in cooperation with other public agencies and appropriate public-interest organizations. Expand abilities of residents to assist in local responses to disasters. Ensure adequate resources, facilities, and other support for emergency response equitably throughout the City.
- (S1.35) Encourage improved safety programs for schools, institutions and industries to promote greater public awareness of all types of hazards and appropriate responses and support the City's program on emergency preparedness.
- (S1.36) Continue to support and improve on the Emergency Notification System for disaster information release in emergencies.
- (S1-37-39) Maintain a system of emergency connectors and evacuation routes as part of the City's disaster planning. Require that all private roads be designed to allow access for emergency vehicles as a prerequisite to the granting of permits and approvals for construction. Review and improve disaster response capabilities, recovery operations and evacuation planning or sensitive populations in the event of earthquake or other disasters.

11.4.2 Opportunities for Future Integration

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

- ❖ 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 partially updated in 2005, 2011 and 2013. 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.
- ❖ Water Emergency Annex Plan— Required by the San Mateo County Sheriff's office in 2004. This Plan was written on 11/15/2004 and can be integrated with the hazard mitigation plan by attaching it as



an appendix. Both plans will be used to prepare the City for hazards that may interrupt the water distribution system. For example, if water supply is interrupted due to hazard, such as an earthquake, the City will implement the actions identified in the emergency plan to provide residents with drinking water. The information provided in the Local Hazard Mitigation Plan will enable the City to coordinate the emergency response effort with respect to water supply with other agencies as well as identify projects that would improve the resiliency of the City’s water system.

- ❖ Adaptation to Climate Change Plan – The City will develop an Adaptation to Climate Change Plan (ACCP) that will focus on resiliency planning. The ACCP will assess the impacts to existing hazards from future risks posed by climate change, use existing data to develop a vulnerability assessment of existing assets, and develop policies and strategies to mitigate the impacts. The ACCP is expected to be completed in 2018 and will be integrated with the Local Hazard Mitigation Plan. This will be done by identifying actions that address the increased vulnerability associated climate change and including them in the Local Hazard Mitigation Plan.
- ❖ General Plan Update, Land Use and Circulation Elements – The City is currently working on updating the General Plan Land Use and Circulation Elements. As part of the sustainable and environmental planning guiding principle, the update will establish goals, policies, and programs that incorporate mitigation strategies to natural hazards.

11.5 Jurisdiction-Specific Natural Hazard Event History

Table 11-6 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 11-6. NATURAL HAZARD EVENT

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Storm(El Nino)	N/A	12/23/2012	\$3 million Creek Bank Erosion Private Property \$820,000 Residential and Businesses
Severe Storm(El Nino)	DR-1203	2/9/1998	Unknown
Earthquake	DR-845	10/18/1989	Unknown

11.6 Jurisdiction-Specific Vulnerabilities

The City will ensure hazard mitigation or control measures are taken in efforts to protect vulnerable, essential and critical facilities during an emergency, thus reducing further structural damage. The Building Department has identified the following facilities as critical or essential buildings which require a safety assessment inspection within the allotted time. These are as follows:

<ul style="list-style-type: none"> ❖ City Hall ❖ Menlo Fire Station 1 ❖ Menlo Fire Station 6 	<ul style="list-style-type: none"> ❖ Beechwood School ❖ Mid-Peninsula High School ❖ Saint Raymond Catholic Church ❖ Saint Raymond Elementary School
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<ul style="list-style-type: none"> ❖ Onetta Harris Community Center ❖ Arillaga Building and Gymnasium ❖ Hillview Middle School ❖ Oak Knoll School ❖ La Entrada School ❖ Philip Brook School ❖ Bellehaven Child Development Center 	<ul style="list-style-type: none"> ❖ Trinity School ❖ Nativity Elementary School ❖ Church of Nativity ❖ Menlo Park Presbyterian Church- ❖ Trinity Church ❖ Church of Christ Scientist
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11.7 Hazard Risk Ranking

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

TABLE 11-7. HAZARD RISK RANKING

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

11.8 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 11-8 lists the actions that make up the City of Menlo Park hazard mitigation action plan. Table 11-9 identifies the priority for each action. Table 11-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 11-8.

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
MP-1 — Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.						
Existing	Earthquake, Flood	4,5,7,9,11	Public Works	High	HMGP, PDM, FMA, CDBG-DR	Short-term
MP-2 — Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community.						





TABLE 11-8.

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New and Existing	Earthquake, Flood	2,4	Community Development	Low	Staff time, General funds	On-going
MP-3 – Integrate the hazard mitigation plan into other plans and programs that support infrastructure investments, such as the capital improvement program						
New and Existing	Earthquake, Flood, Drought,	2,4	Public Works	Medium	Staff Time, General Funds	On-going
MP-4 – 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.						
Existing	Flood, Earthquake, Drought	1,2,4,10	Public Works	Low	Staff Time, General Funds	On-going
MP-5 – Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and Existing	Flood, Earthquake, Drought	1,2,3,4,5,6,7,8,9,10,11	Public Works and Community Development	Low	Staff Time, General Funds	On-going
MP-6 - Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	Flood, Earthquake, Drought	1,4	Police Department	Low	Staff Time, General Funds	On-going
MP-7 —Continue to maintain good standing and compliance under the National Flood Insurance Program (NFIP). This will be accomplished through the implementation of floodplain management programs that will, at a minimum meet the requirements of the NFIP:						
<ul style="list-style-type: none"> • Enforcement of the flood damage prevention ordinance • Participate in floodplain identification and mapping updates • Provide public assistance/information on floodplain requirements and impacts 						
New and Existing	Flood	1,4,5,9	Public Works	Low	Staff Time, General Funds	On-going
MP-8 – Work with building officials to identify ways to improve the jurisdiction’s BCEGS classification						
New and Existing	Earthquake, Flood, Landslide, Severe Weather Wild Fire	5,6,7,10,11	Community Development	Low	Staff Time, General Funds	Short-term
MP-9 – Develop a post-disaster recovery plan and debris management plan.						
New and Existing	Earthquake, Flood	1,2,4,9	Police Department and Public Works	Medium	EMPG	On-going
MP-10 – 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.)						
New and Existing	Earthquake, Flood	4,6,7,11	Police Department	Medium	HMGP, PDM, FMA	On-going
MP-11 - Develop a plan for expediting the repair and restoration of water and wastewater 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).						





TABLE 11-8.

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	Earthquake, Flood	6, 8	Public Works	Low	HMGP, PDM, FMA	On-going
MP-12 - Continue to participate in the Public Works Mutual Aid Agreement –San Mateo County in accordance with resource sharing and resource coordination.						
Existing	Earthquake, Flood	6	Public Works	Low	HMGP, PDM, FMA	On-going
MP-13 -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						
New and Existing	Earthquake, Flood	6	Public Works	Low	HMGP, PDM, FMA	On-going
MP-14 – Develop emergency plans or MOU agreements with neighboring mutual aid providers.						
Existing	Earthquake, Flood	8	Police Department	Low	Staff Time, General Funds	On-going
MP-15 – 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.						
Existing	Flood	6, 7	Public Works	Medium	Staff Time, General Funds	On-going
MP-16 – Continue to coordinate with the City of Redwood City on the Bayfront Canal flood control improvements.						
Existing	Flood	1,5,6,7,8	Public Works	Low	Staff Time, General Funds	On-going
MP-17 – Continue to coordinate with the San Francisquito Creek Joint Powers Authority on San Francisquito Creek and SAFER Bay flood control projects.						
Existing	Flood, Dam Failure	1,5,6,7,8	Public Works	Low	Staff Time, General Funds	On-going
MP-18 – Continue to coordinate with the California Coastal Conservancy and the U.S. Fish & Wildlife Service on the South Bay Salt Pond Restoration Project.						
Existing	Flood	1,5,6,7,8	Public Works	Low	Staff Time, General Funds	On-going
MP-19 – Upgrade the Chrysler Pump Station to improve flood protection in the M-2 Zoning Area.						
Existing	Flood	6	Public Works	High	HMGP, FMA	Short-term
MP-20 – Develop and implement a Green Infrastructure Plan to improve storm water quality and flood protection.						
New	Flood	6	Public Works	High	FMA, Prop 1	Short-term
MP-21 – Produce hazards maps that take into account the impacts of flooding due to climate change.						
New and Existing	Flood, Severe Weather	1,3,6,8,9,10	Public Works	Low	HMGP, PDM, FMA	Short-term
MP-22 – Develop an Adaptation to Climate Change Plan and integrate into the Local Hazard Mitigation Plan.						
New and Existing	Flood, Drought, Severe Weather	1,2,3,6,8,9,10	City Manager’s Office and Public Works	Low	HMGP, PDM, FMA	Short-term





TABLE 11-8.

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
MP-23 – Continue to work with San Mateo County on the development of a Sea Level Rise Vulnerability Study and integrate the findings in the Local Hazard Mitigation Plan.						
Existing	Flood	1,2,3,6,8,9,10	Public Works	Low	Staff Time, General Funds	Short-term
MP-24 - 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.						
Existing	Drought	4,5,6	Public Works	Low	Staff Time, Water Enterprise	Short-term
MP-25 – Plan, design and build emergency water supply wells to serve residents during times of emergencies that result in a loss of water supply.						
New	Earthquake	5,6	Public Works	High	Staff Time, Water Enterprise	Long-term
MP-26 – Update the Seismic Vulnerability Assessment of the City’s water distribution system.						
Existing	Earthquake	5,6	Public Works	Low	Staff Time, Water Enterprise	Short-term
MP-27 – Plan, design, and build for the undergrounding of utilities in the downtown parking areas.						
Existing	Earthquake, Severe Weather	1,2,3,4,5,6,8,10,11	Public Works	High	Staff Time, General Funds, Rule 20A	Long-term
MP-28 – Develop a program for the installation and replacement of emergency generators at critical facilities.						
New and Existing	Earthquake, Flood	4,5,6	Public Works	Medium	HMGP, PDM, FMA	On-going
MP 29 - 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.						
Existing	Earthquake	4, 7,	Community Development	High	Staff Time, General Funds	
MPK 30 – Update as needed and enforce regulations concerning new construction(and major improvements to existing structures) within flood zones in order to be in compliance with the federal requirements and, thus, be a participant in the National Flood Insurance Program.						
Existing	Flood	4, 7	Community Development, Public Works	High	Staff Time, General Funds	On-going
Action G-1 —Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.						
New and existing	All	All	Jurisdictions	Low	General Fund	Long-term
Action G-2 —Where feasible, implement a program to record high water marks following high-water events.						
New and existing	Flooding, Severe Weather	1, 3, 4, 5, 6	Jurisdictions	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term





TABLE 11-8.

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action G-3 —Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.						
New and existing	All	2, 3, 4, 5, 6, 7, 8, 10, 11	Jurisdictions	Low	Operating Budgets	Ongoing
Action G-4 — Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and existing	All	All	Jurisdictions	Low	General Fund	Short- and long-term
Action G-5 — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All	1, 4	Jurisdictions	Low	Staff Time, General Funds	Short-term

TABLE 11-9. MITIGATION STRATEGY PRIORITY SCHEDULE

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





TABLE 11-9. MITIGATION STRATEGY PRIORITY SCHEDULE

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Priority ^a
21.	6	Medium	Low	Yes	Yes	Yes	High	Low
22.	7	Medium	Low	Yes	Yes	Yes	High	Medium
23.	6	Medium	Low	Yes	No	Yes	High	Low
24.	3	Medium	Low	Yes	No	Yes	High	Low
25.	2	High	High	Yes	No	Yes	High	Low
26.	2	Medium	Low	Yes	No	Yes	High	Low
27.	9	Medium	High	Yes	Yes	Yes	Medium	Medium
28.	3	High	Medium	Yes	Yes	Yes	Medium	High
29.	2	High	High	Yes	No	Yes	High	Low
30.	2	High	High	Yes	No	Yes	High	Low
G-1	11	High	Low	Yes	No	Yes	High	Low
G-2	5	Medium	Medium	Yes	Yes	Yes	Medium	Medium
G-3	9	Low	Low	Yes	No	Yes	Low	Low
G-4	11	Low	Low	Yes	No	Yes	High	Low
G-5	2	Low	Low	Yes	No	Yes	High	Low

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

TABLE 11-10. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Drought	MP-5, MP6,MP-22, MP-24		MP-5			
Earthquake	MP-1, MP-2, MP-3, MP-4, MP-5, MP-6, MP-8, MP-9, MP-10, MP-11, MP-12, MP-13, MP-14, MP-25, MP-26, MP-27, MP-28, MP-29	MP-1, MP-10	MP-4, MP-5		MP-4, MP-9, MP-11, MP-12, MP-13, MP-25, MP-28	MP-1, MP-3, MP-25, MP-27,MP-29

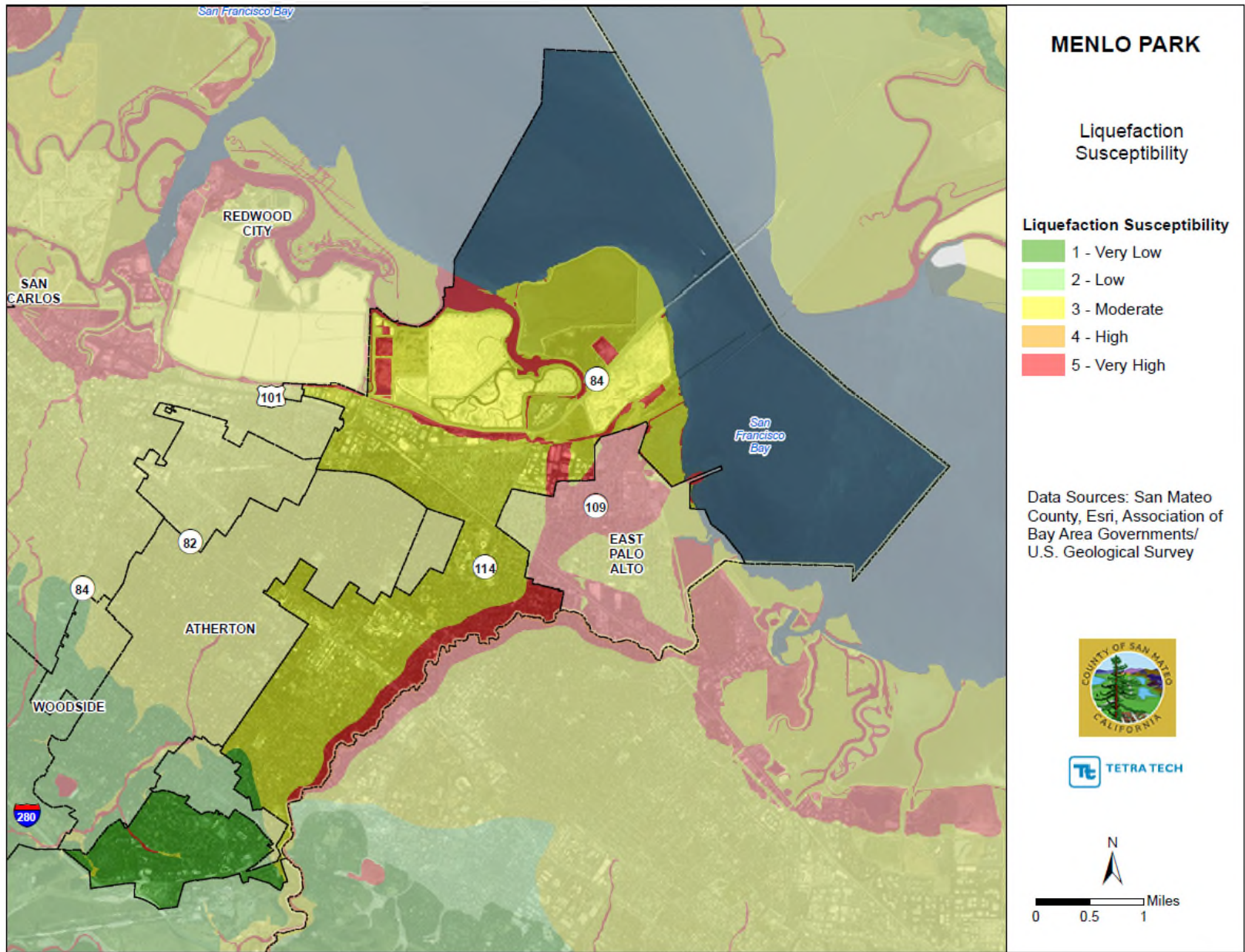


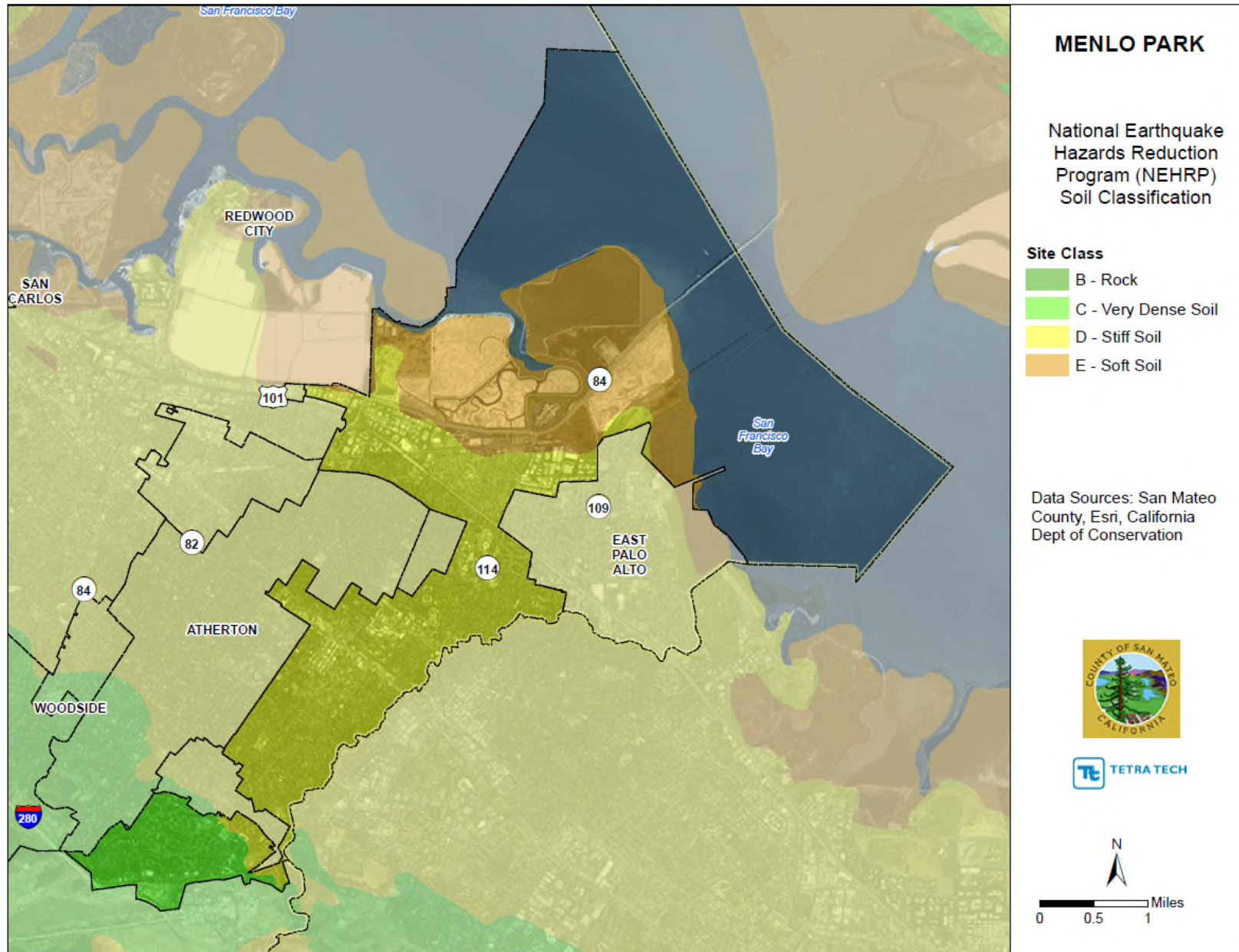


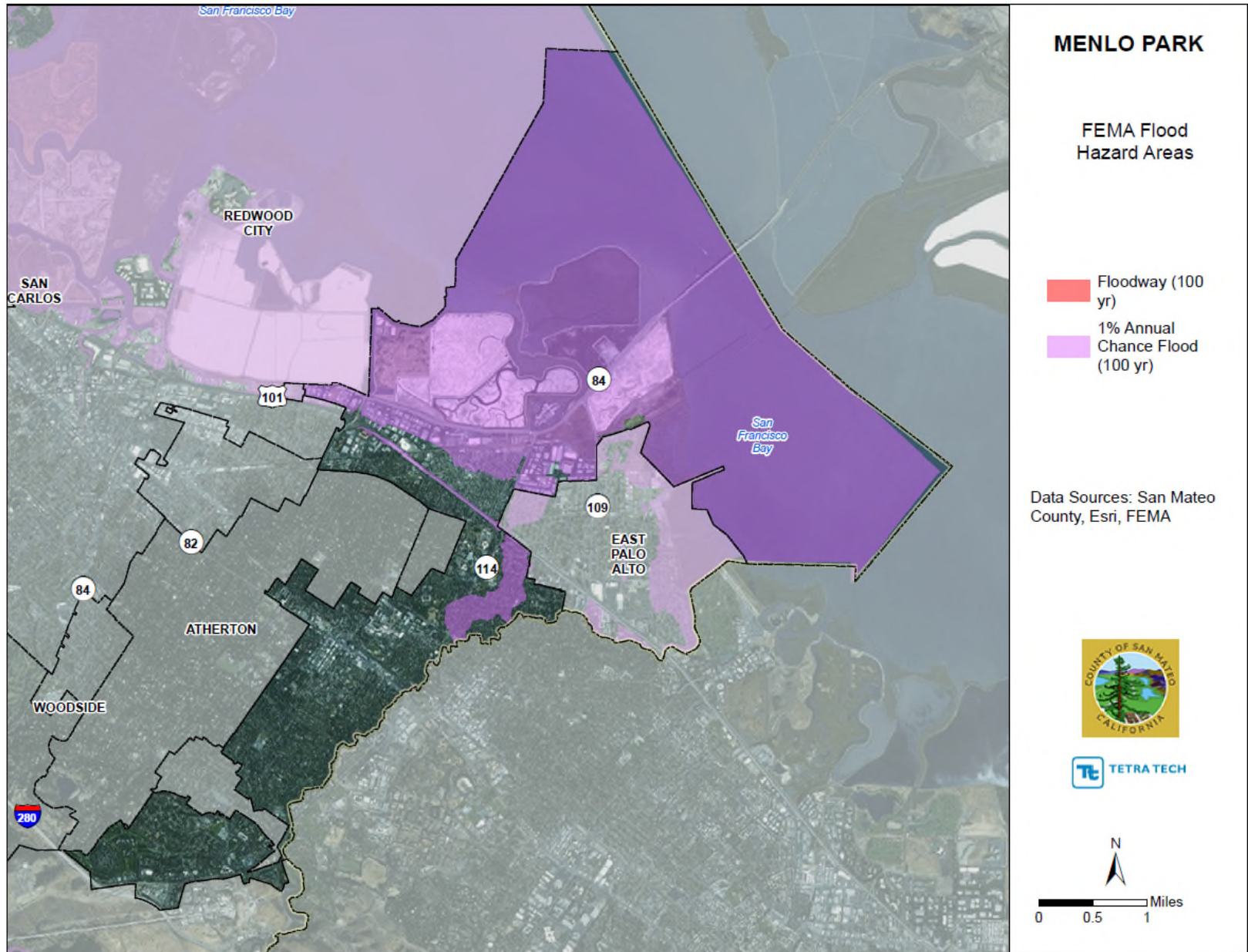
TABLE 11-10. ANALYSIS OF MITIGATION ACTIONS

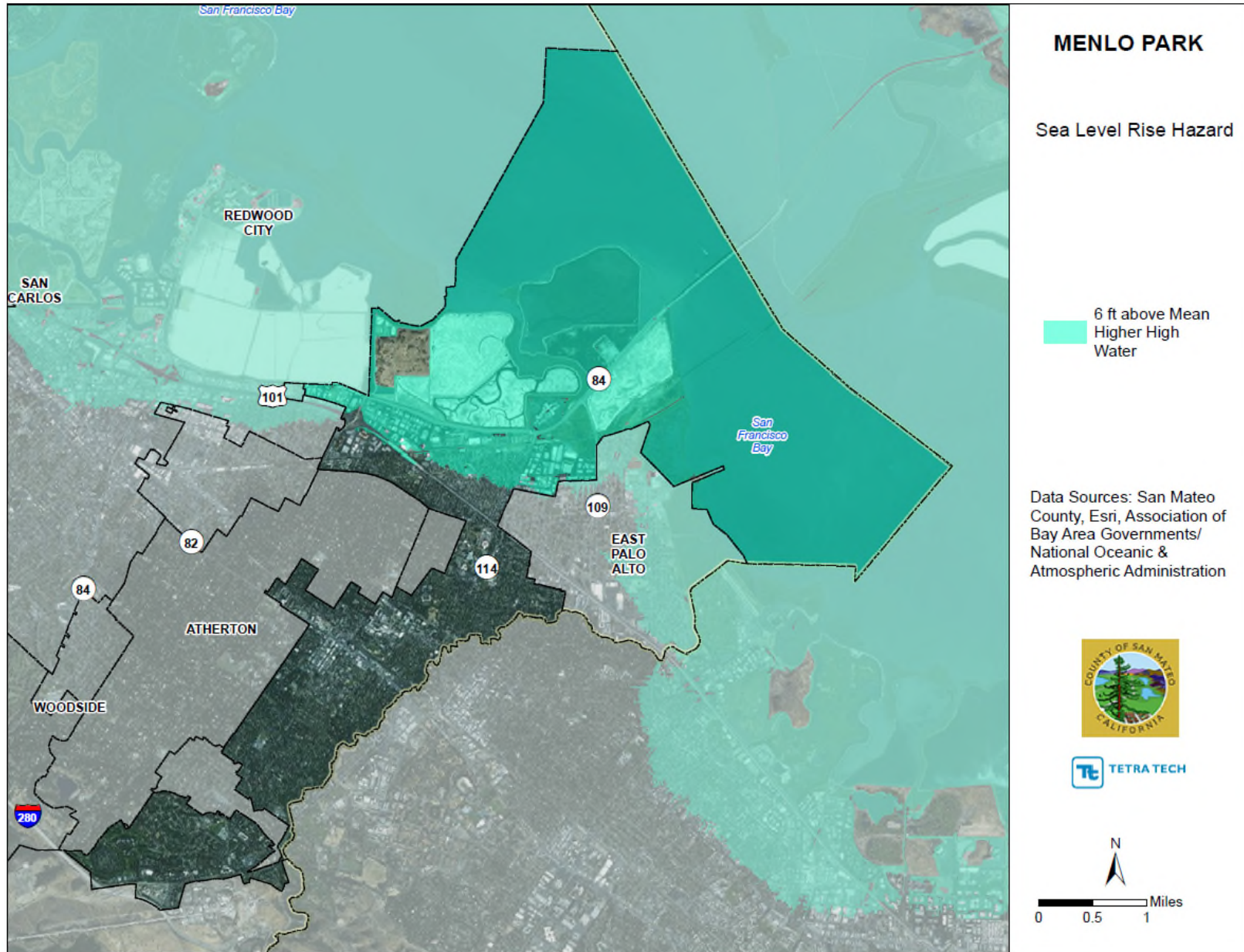
Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Flood	MP-1,MP-2, MP-3, MP-4, MP-5, MP-6, MP-7, MP-8, MP-9, MP-10, MP-11, MP-12, MP-13, MP-14, MP-15, MP-16, MP-17, MP-18, MP-19, MP-20, MP-21, MP-22, MP-23, MP-28,MP-30	MP-1, MP-10, MP-19	MP-4, MP-5, MP-7, MP-21	MP-15, MP-16, MP-17, MP-18	MP-4, MP-9, MP-11, MP-12, MP-13, MP-17,MP-28	MP-1, MP-3, MP-17, MP-30
Landslide	MP-5, MP-6, MP-8, MP-9, MP-12, MP-14	MP-1	MP-5		MP-9, MP-12	
Severe Weather	MP-2, MP-3, MP-4, MP-5, MP-6, MP-7, MP-8, MP-9, MP-10, MP-11, MP-12, MP-13, MP-14, MP-21, MP-22, MP-23,MP-27, MP-28	MP-1, MP-10	MP-4, M-5, MP-7, MP-21		MP-4, MP-9, MP-11, MP-12,MP-28	MP-3, MP-27

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











Chapter 12.

City of Millbrae

12.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact	Alternate Point of Contact
Colleen Haupt, Project Manager	Khee Lim, City Engineer
621 Magnolia Avenue	621 Magnolia Avenue
Millbrae, CA 94030	Millbrae, CA 94030
Telephone: 650-259-2354	Telephone: 650-259-2347
e-mail Address: chaupt@ci.millbrae.ca.us	e-mail Address: klim@ci.millbrae.ca.us

12.2 Jurisdiction Profile

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

- ❖ Date of Incorporation—January 14, 1948
- ❖ Current Population—23,136 (as of January 1, 2016 – CA DOF)
- ❖ Population Growth—3% growth since 2010 Census (21,536). As of January 2014, Millbrae had a total population of 22,605. According to census data, Millbrae’s population grew by four percent from 2000 to 2010. However, the Association of Bay Area Governments (ABAG) predicts that Millbrae’s growth will pick up over the next two decades, bringing the population to 25,700 by 2030.
- ❖ Location and Description—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.
- ❖ Brief History—Millbrae boasts over 22,000 residents of diverse ethnic, national, and cultural backgrounds. Residents are employed in various industries throughout the Bay Area and children attend one of five public elementary schools, or private schools. The City's senior citizen community, with the eager generosity of the City's many service clubs and private donations, recently dedicated an attractive new senior wing within the Millbrae community center. Millbrae's approach is demarcated by a picturesque new overpass. A small city with global vision, Millbrae proudly nurtures Sister City relationships with La Serena, Chile, Mosta, Malta, and its newest Sister City Kaiping, China.

The City of Millbrae has experienced its share of disasters, which include the Loma Prieta Earthquake of 1989, the winter storms of 1998 which resulted in landslides in the area of Sleepy Hollow,



Clearfield, and Morningside as well as flooding around the Westin and Clarion Hotels. In the year 2000 Millbrae experienced the Crestview landslide.

Major Government facilities include the Millbrae Park and Recreation Center, the City Hall complex, which contains City Administration and San Mateo County Sheriff's Office Millbrae Patrol Bureau, two fire stations, the Chetcuti Community Center and a water treatment and corporation yard. Millbrae is also home to the Bart Intermodal Station, which is a transportation hub for BART, CalTrain and Samtrans.

- ❖ **Climate**—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.
- ❖ **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.
- ❖ **Development Trends**— 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.
- ❖ **Properties** might also reflect the importance of modern transportation networks in their architectural style. For example, properties that show the influence of new, speedier forms of transportation emerged in a variant of Art Deco style known as Streamline Moderne. Streamline Moderne buildings borrowed curves, shiny metal, circular windows from newly modernized cars, train and ships. Smooth surfaces and “speed lines” are also characteristics of the style.



- ❖ Millbrae’s development continues to be shaped by the transportation network that surrounds it. As a major hub on the networks that connect rail (Caltrain), mass transit (BART and SAMTRANS) and air travel (SFO), the city has attracted higher density commercial and residential development along the rail line and State Highway 82/El Camino Real. The downtown area on Broadway and the west side of El Camino Real north of Victoria Street still display some of the small town feeling of the mid-20th Century.
- ❖ The City of Millbrae General Plan identifies policies and programs addressing the development and redevelopment of land, preservation of parks and open spaces, provision of housing for current and future residents, conservation of natural resources, improvement of the circulation and transportation system, control of noise and protection of life and property from hazards. Additionally, the General Plan assures that tax money is generated to provide high levels of public services and maintenance of public facilities and infrastructure.

12.3 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 12-1. An assessment of fiscal capabilities is presented in Table 12-2. An assessment of administrative and technical capabilities is presented in Table 12-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 12-4. Classifications under various community mitigation programs are presented in Table 12-5. An assessment of education and outreach capabilities is presented in Table 12-6.

TABLE 12-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code <i>Comment: Local Building Official and Fire Marshal for Standards Codes – Muni Code 9.05.010 – Adopted California Building Code, 2013 Edition, 11/26/2013, Ordinance 746</i>	Yes	No	Yes
Zoning Code <i>Comment: Community Development MMC 10.05, Adoption of Zoning Plan, Adopted 10/13/09, Ordinance 726MMC 10.05</i>	Yes	No	No
Subdivisions <i>Comment: Public Works & Community Development MMC 10.15, Adopted 6/17/51, Ordinance 69,</i>	Yes	No	No
Stormwater Management <i>Comment: Public Works MMC 8.70 & MRP 2.0 Order No. R2-2015-0049 NPDES Permit No. CAS612008</i>	Yes	Yes	Yes
Post-Disaster Recovery <i>Comment: Community Development with Public Works San Mateo County Public Works Mutual Aid Resolution 074124 adopted 10/20/05</i>	Yes	No	No



TABLE 12-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Real Estate Disclosure <i>Comment: County Assessors 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>	No	Yes	Yes
Growth Management <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>	Yes	No	Yes
Site Plan Review <i>Comment: 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 of the necessary permits and entitlements, including Planning Commission and/or City Council approval before construction.</i>	Yes	No	No
Environmental Protection <i>Comment: 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>	Yes	No	Yes
Flood Damage Prevention <i>Comment: Public Works MMC 8.50, Flood Damage Prevention, Adopted 9/23/03, Ordinance 688MMC 8.50</i>	Yes	No	Yes
Emergency Management <i>Comment: This role and position is currently be defined for assignment. (Municipal Code with Title 19, Division 2)</i>	Yes	No	Yes



TABLE 12-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Climate Change	Yes	No	No
<p>Comment: <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></p> <p><i>Climate Protection and Sustainability Goals and Policies:</i></p> <ul style="list-style-type: none"> • <i>U.S. Mayor's Climate Protection Agreement, Adopted 6/12/07, Resolution 07-31.</i> • <i>Participated in ICLEI- Cities for Climate Protection Campaign, Adopted 6/12/07, Resolution 07-32.</i> • <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> • <i>Currently participating in the countywide RICAPS program for regionally-integrated climate action planning, GHG inventories and CAP development.</i> • <i>Currently preparing a draft CAP pursuant to adopted targets and in coordination with RICAPS.</i> <p><i>The Safety Element of the City of Millbrae General Plan (1998) contains policies related to climate change effects and adaptation:</i></p> <p><i>Policy S1.1 Location of A Future Development; Policy S1.8 Reforestation</i></p> <ul style="list-style-type: none"> • <i>Policy S1.12 Ordinances and Codes</i> • <i>Policy S1.17 Drainage Channels, Hydraulic Pumps and Conduits</i> • <i>Policy S1.18 Hazards</i> • <i>Policy S1.19 Rise in Sea level</i> • <i>Policy S2.2 Emergency Services Facilities</i> • <i>Policy S2.3 Hazardous Awareness</i> <p><i>The San Mateo County Sea-Level Rise Vulnerability Assessment: The City of Millbrae is participating 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 is currently scheduled for completion in August, 2016.</i></p>			
Other		No	No
<p>Comment:</p>			
General or Comprehensive Plan	Yes	No	Yes
<p><i>Is the plan equipped to provide linkage to this mitigation plan? Yes.</i></p> <p>Comment: <i>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 began in March, 2016 and is estimated to be completed in the fall of 2017. The Updated General Plan will include linkages to the Local Hazard Mitigation Plan</i></p>			





TABLE 12-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
<p>Capital Improvement Plan</p> <p><i>What types of capital facilities does the plan address? Utilities, building improvements, engineering, equipment, and similar projects. Specific projects in the 2015-2020 CIP include street improvements, storm drains, water system, sewer collection system, water pollution control plant, public facilities, parks, studies and technology, and garage (listed in budget)</i></p> <p><i>How often is the plan updated? Annually</i></p> <p>Comment: Public Works with Finance</p>	Yes	No	No
<p>Floodplain or Watershed Plan</p> <p>Comment: Public Works</p> <p><i>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></p>	No	No	No
<p>Stormwater Plan</p> <p>Comment: Public Works with Community Development</p> <p><i>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></p>	Yes	No	No
<p>Habitat Conservation Plan</p> <p>Comment: N/A – if one developed would be defined by Community Development</p>	No	No	No
<p>Economic Development Plan</p> <p>Comment: Community Development, Comprehensive Annual Financial Report</p> <p><i>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></p> <p><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></p>	Yes	No	No
<p>Shoreline Management Plan N/A</p> <p>Comment: Managed by Bay Area Conservation Development District with U.S. Fish and Wildlife Service</p>	No	Yes	No



TABLE 12-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Community Wildfire Protection Plan <i>Comment: Fire Marshal and Building Official</i> Annex to 2010 Association of Bay Area Governments Local Hazard Mitigation Plan, Millbrae <i>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.</i> Community Wildfire Protection Plan <i>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 land owners, communities, neighborhoods, open spaces and other environmental resources in the planning area that may be at risk of fire hazards.</i> Municipal Code Chapter 9.30 (Fire Code) <i>Chapter 9.30 of the Millbrae Municipal Code (Fire Code) was last updated as a result of Ordinance 757 passed October 27, 2015. 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.</i>	Yes	No	No
Forest Management Plan <i>Comment: National Forest Service</i>	No	No	Yes
Climate Action Plan <i>Comment: Public Works with Community Development</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. Please Climate Change Section for more details.</i>	Yes	No	No
Other <i>Comment: Urban Water Management Plan (2010, 2015), Millbrae Station Area Specific Plan (2016)</i>	Yes	No	No
Comprehensive Emergency Management Plan <i>Comment: This role and position is currently being defined for assignment.</i>	Yes	No	No





TABLE 12-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Threat & Hazard Identification & Risk Assessment	Yes	No	No
<p>Comment: <i>Community Development to align with General Plan.</i> <i>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).</i></p> <p><i>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.</i></p> <p><i>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.</i></p> <p><i>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.</i></p> <p><i>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.</i></p>			
Post-Disaster Recovery Plan	Yes	No	No
<p>Comment: <i>This role and position is currently being defined for assignment.</i></p>			
Continuity of Operations Plan	Yes	No	No
<p>Comment: <i>This role and position is currently being defined for assignment.</i></p>			
Public Health Plan	No	Yes	No
<p>Comment: <i>San Mateo County Health System</i></p>			

TABLE 12-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	Yes, Water and Sanitation
Incur Debt through General Obligation Bonds	Yes





TABLE 12-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	No
Other	No

TABLE 12-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Community Development / 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	Community Development\Local/ Contract Support/Public Works
Staff with training in benefit/cost analysis	Yes	Community Development\Local/ Contract Support
Surveyors	Yes	/ Contract Support (San Mateo County Public Works)
Staff capable of making substantial damage estimates	Yes	Community Development\Local/ Contract Support
Personnel skilled or trained in GIS applications	Yes	Community Development\Local/ Contract Support/Public Works
Scientist familiar with natural hazards in local area	Yes	Community Development\Local/ Contract Support
Emergency manager (via San Mateo County Emergency Operation Services)	Yes	Community Development\Local/ Contract Support
Grant writers	Yes	Community Development\Local/ Contract Support/Public Works

TABLE 12-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	1981
When did the Flood Insurance Rate maps become effective?	September 30, 1981
What local department is responsible for floodplain management?	Public Works & Community Development
Who is your floodplain administrator? (department/position) Per Municipal Code section 8.50.260.2	City Planner, Building Official, Public Works Director, City Engineer



TABLE 12-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
<ul style="list-style-type: none"> Is this a primary or auxiliary role? 	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	Ordinance 688, 1976
<ul style="list-style-type: none"> Does your floodplain management program meet or exceed minimum requirements? 	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?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes
<ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	Training on any new regulations.
Does your jurisdiction participate in the Community Rating System (CRS)?	No
<ul style="list-style-type: none"> If so, is your jurisdiction seeking to improve its CRS Classification? 	Yes
How many Flood Insurance policies are in force in your jurisdiction?	61
<ul style="list-style-type: none"> What is the insurance in force? 	\$18,323,800
<ul style="list-style-type: none"> What is the premium in force? 	\$61,392
How many total loss claims have been filed in your jurisdiction?	38
<ul style="list-style-type: none"> How many claims were closed without payment/are still open? 	14 CWOP
<ul style="list-style-type: none"> What were the total payments for losses? 	\$178,560.42

TABLE 12-5. COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
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	
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A



TABLE 12-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Link to the last Hazard Mitigation Annex and Emergency Preparedness information
Do you utilize social media for hazard mitigation education and outreach?	Yes – PD & FD No – City of Millbrae
<ul style="list-style-type: none"> If yes, please briefly describe. 	FD, PD with focus on public safety in general.
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
<ul style="list-style-type: none"> If yes, please briefly specify. 	Muni Code - Emergency Services Disaster Board
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	CERT program
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	SMC Alert via PD and FD

12.4 Integration with Other Planning Initiatives

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

12.4.1 Existing Integration

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

- ❖ General Plan – Community Development & Public Works: The General CIP Storm Projects-Storm Drain System Master Plan will integrate information and link with the LHMP be prepared to address deficiencies in the 2015 General system. The Master Plan Update, in the Hazards & Safety Element will link with LHMP.
- ❖ New FEMA maps: The City of Millbrae has received the FEMA Flood Map Update in 2016 and Public Works will update flood insurance information as needed based on the updated maps. The FEMA Flood Map Update for 2016 is in the draft stage and there will be additional opportunities for the City to comment on the new FEMA flood maps.





Opportunities for Future Integration

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

- ❖ 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
- ❖ Update Flood Damage Prevention Ordinance to 2004 standards
- ❖ Increased integration with public outreach initiatives

12.5 Jurisdiction-Specific Natural Hazard Event History

Table 12-6 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 12-6. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Crestview Landslide & Pinehurst Court		February 2000	\$11,000,000
Sleepy Hollow, Clearfield & Morningside Landslide	DR-1203	February 1998	Unknown
1989 Loma Prieta Earthquake	DR-845	October 1989	Unknown
Landslide @ 21 & 25& 29 Via Canon	DR-677	February 1983	Not available

12.6 Jurisdiction-Specific Vulnerabilities

Repetitive loss records are as follows:

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

Other noted vulnerabilities include:

- ❖ City Water Storage Tanks are not up to current seismic codes. Tanks have been in service since 1970 and have passed their useful life. The City of Millbrae recently completed the Water Storage Tanks Master Plan and is actively seeking funding to implement the projects recommended in the Master Plan.





- ❖ Aging water distribution system. Majority of the 75 miles of water distribution system are also over 60 years old and in urgent need of replacement and retrofit
- ❖ Aging sanitary sewer collection system. Majority of the 55 miles sanitary sewer mains are over 60 years old and in urgent need of replacement.

12.7 Hazard Risk Ranking

Table 12-7 presents the ranking of the hazards of concern.

TABLE 12-7. HAZARD RISK RANKING

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

12.8 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 12-8 lists the actions that make up the City of Millbrae hazard mitigation action plan. Table 12-9 identifies the priority for each action. Table 12-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 12-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action #MB-1: Water System Inter-Tie with San Francisco Airport						
Existing	Drought, Earthquake	2, 4, 5, 7, 8, 10 & 11	City of Millbrae	Medium	Water Enterprise Fund	Short Term
Action #MB-2: Water Storage Tanks Seismic Upgrade/Retrofit/Replacement						
Existing	Drought, Earthquake	2, 4, 5, 7, 8, 10 & 11	City of Millbrae	High	Water Enterprise Fund & SRF	Long Term
Action #MB-3: Tree Trimming Program						
New & Existing	Severe Weather, Wildfire	1 & 2	City of Millbrae	Low	General Fund	On Going
Action #MB-4: Emergency Evacuation Warning System & Shelter						



TABLE 12-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	Earthquake, Landslide, Wildfire, Flood, Tsunami	2, 3, 6, 9 & 10	City of Millbrae	High	General Fund	Long Term
Action #MB-5: Construct New Public Works Corporation Yard West of US101						
New	Earthquake, Flood, Tsunami	1, 4, 6 & 11	City of Millbrae	High	General Fund & Enterprise Funds	Long Term
Action #MB-6: Inspect and Retrofit Millbrae Avenue Overpass						
Existing	Earthquake	1, 4, 6 & 11	City of Millbrae	Medium	General Fund	Ongoing
Action #MB-7: Retrofit, acquire, or relocate the identified SRL property within Millbrae.						
Existing	Flood	1,3,4,5,6,7, 8,11	City of Millbrae	High	HMGP, PDM	Long Term
Action G-1 —Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.						
Existing	All	1, 3, 4, 5, 6, 7, 11	Jurisdictions	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
Action G-2 —Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.						
New and existing	All	All	Jurisdictions	Low	General Fund	Long-term
Action G-3 —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.						
New and existing	Flooding	2, 3, 5, 6, 8	San Mateo County Unincorporated and Municipalities with SFHAs	Low	General Fund	Short-term and ongoing
Action G-4 —Where feasible, implement a program to record high water marks following high-water events.						
New and existing	Flooding, Severe Weather	1, 3, 4, 5, 6	Jurisdictions	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
Action G-5 —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	Jurisdictions	Low	General Fund	Short-term
Action G-6 —Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.						
New and existing	All	2, 3, 4, 5, 6, 7, 8, 10, 11	Jurisdictions	Low	Operating Budgets	Ongoing
Action G-7 — Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						





TABLE 12-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New and existing	All	All	Jurisdictions	Low	General Fund	Short- and long-term
Action G-8 — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All	1, 4	Jurisdictions	Low	Staff Time, General Funds	Short-term

TABLE 12-9. MITIGATION STRATEGY PRIORITY SCHEDULE

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

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





TABLE 12-10. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Drought						MB-1 MB-2
Flood						MB-4 MB-5 MB-7
Earthquake		MB-2 MB-6				MB-4 MB-5
Landslide					MB-4	
Severe Weather	MB-3				MB-4	

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

12.9 Future Needs to Better Understand Risk/Vulnerability

None

12.10 Additional Comments

Approximately four year ago, the San Mateo County Sheriff’s Office Millbrae Patrol Bureau, along with other public safety partners such as, EMS, SamTrans, County offices of Probation, Public Works, Coroner’s Office and others, operate on a 700Mhz trunked two-way radio system using ‘P25’ technology. P25 is the industry standard for mission critical use and has proven functionality for interoperable communication amongst like users. Since the installation of this technology five years ago, the County has made it a priority to maintain the system and has recently funded radio infrastructure upgrades to: double channel capacity, ensure upgrades keep the system reliable, add additional frequencies and increase licensing. These upgrades will allow more agencies of any public safety discipline to join the system and provide more capacity in the event of a catastrophic emergency.

The budget for F/Y 2016-17, will include funding for an Emergency Preparedness Coordinator position. The coordinator will be responsible for reviewing relevant plans/documents to determine compliance with CalEOS/FEMA requirements and to provide training for City staff.

Below is a list of current City Municipal Operations Programs and Projects. Millbrae also has an extensive list of Communitywide Programs and Projects.

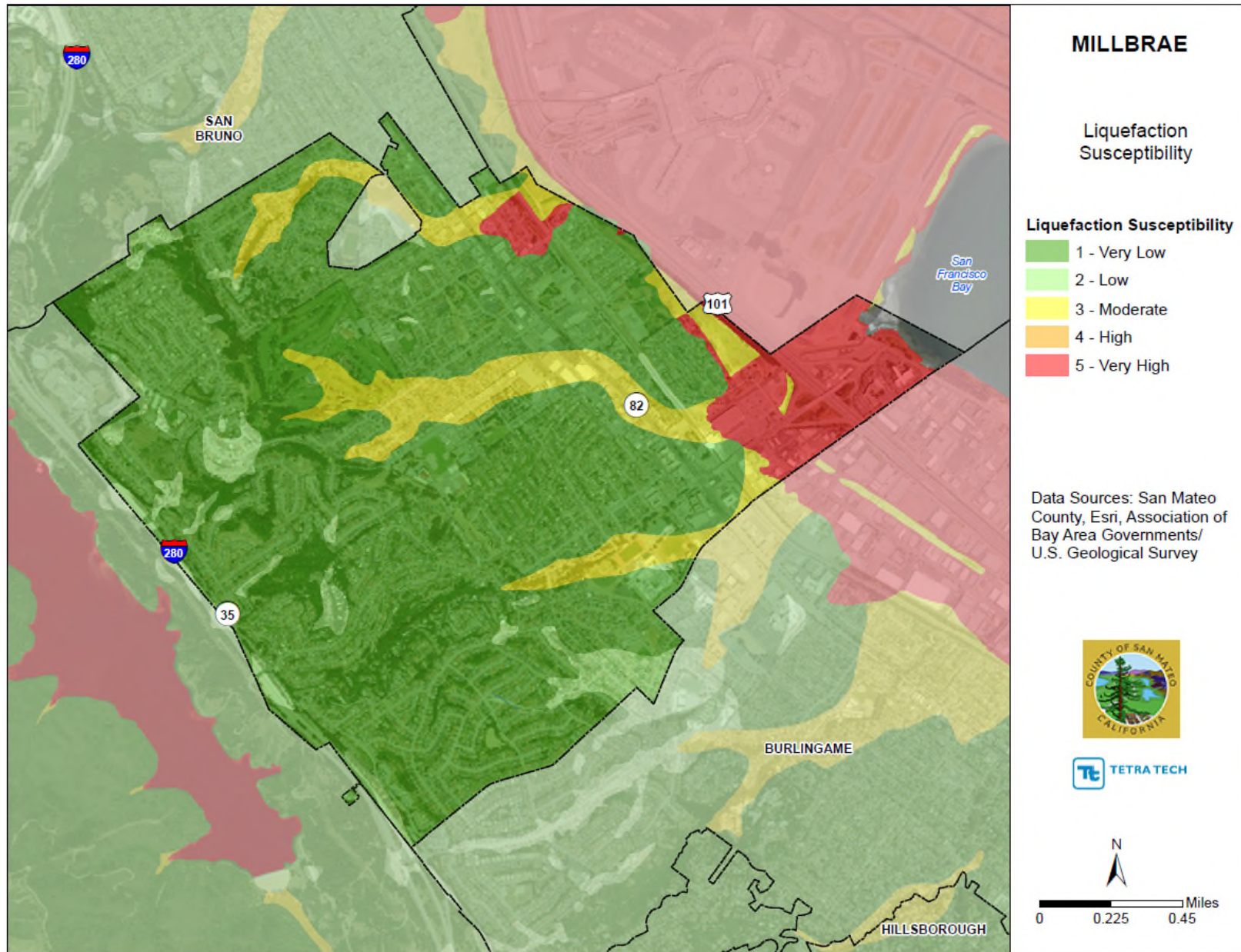
Municipal Operations Programs and Projects:

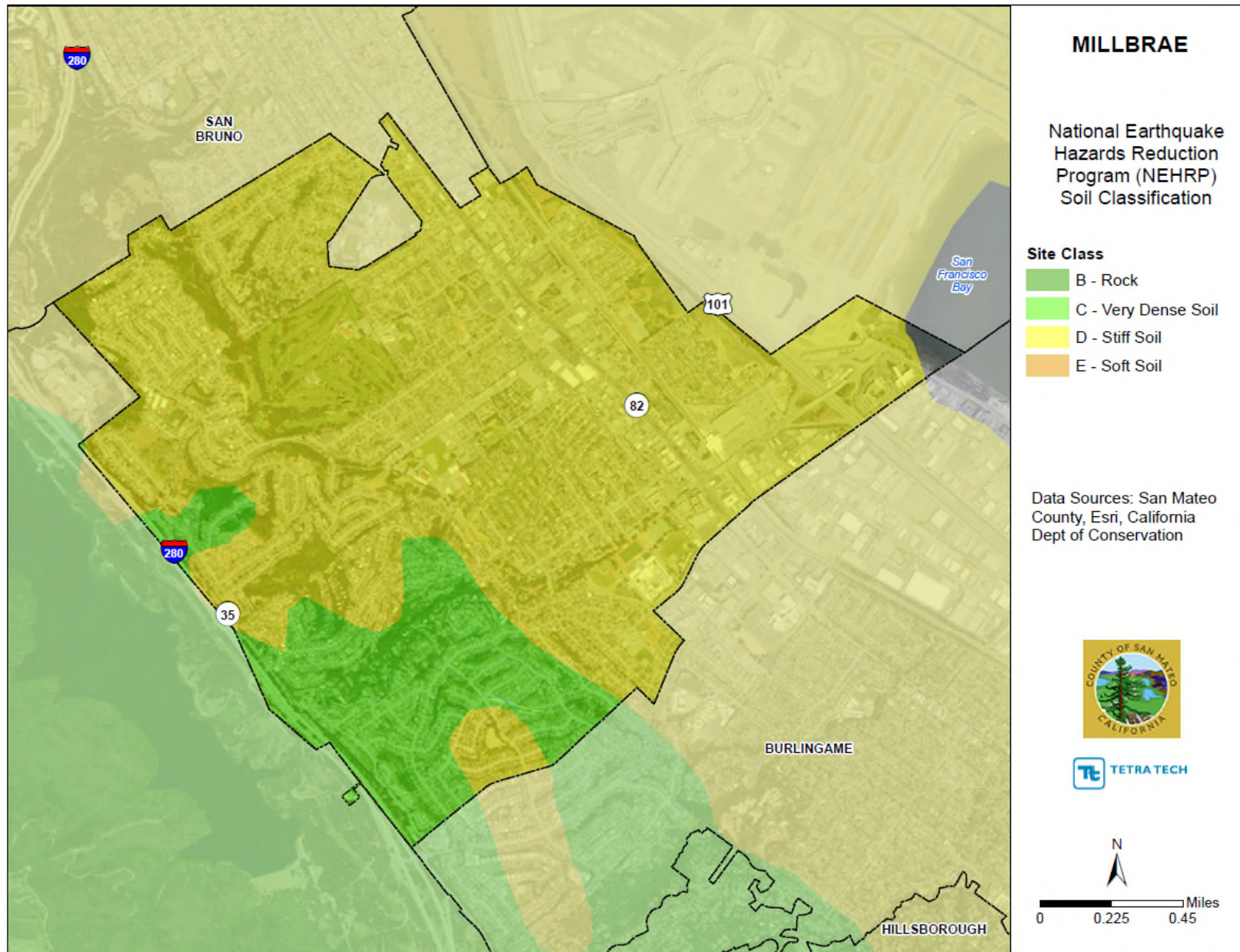
- ❖ Installed the co-generation system and grease receiving station at the City’s Water Pollution Control Plant in 2006, which increased the bio-gas and related energy production.
- ❖ Implemented the Clean Energy Project in 2012, which included a number of measures that reduce GHG emissions in the City’s government operations.
- ❖ Certified City Hall and the Library as Green Businesses and promote the program to businesses.



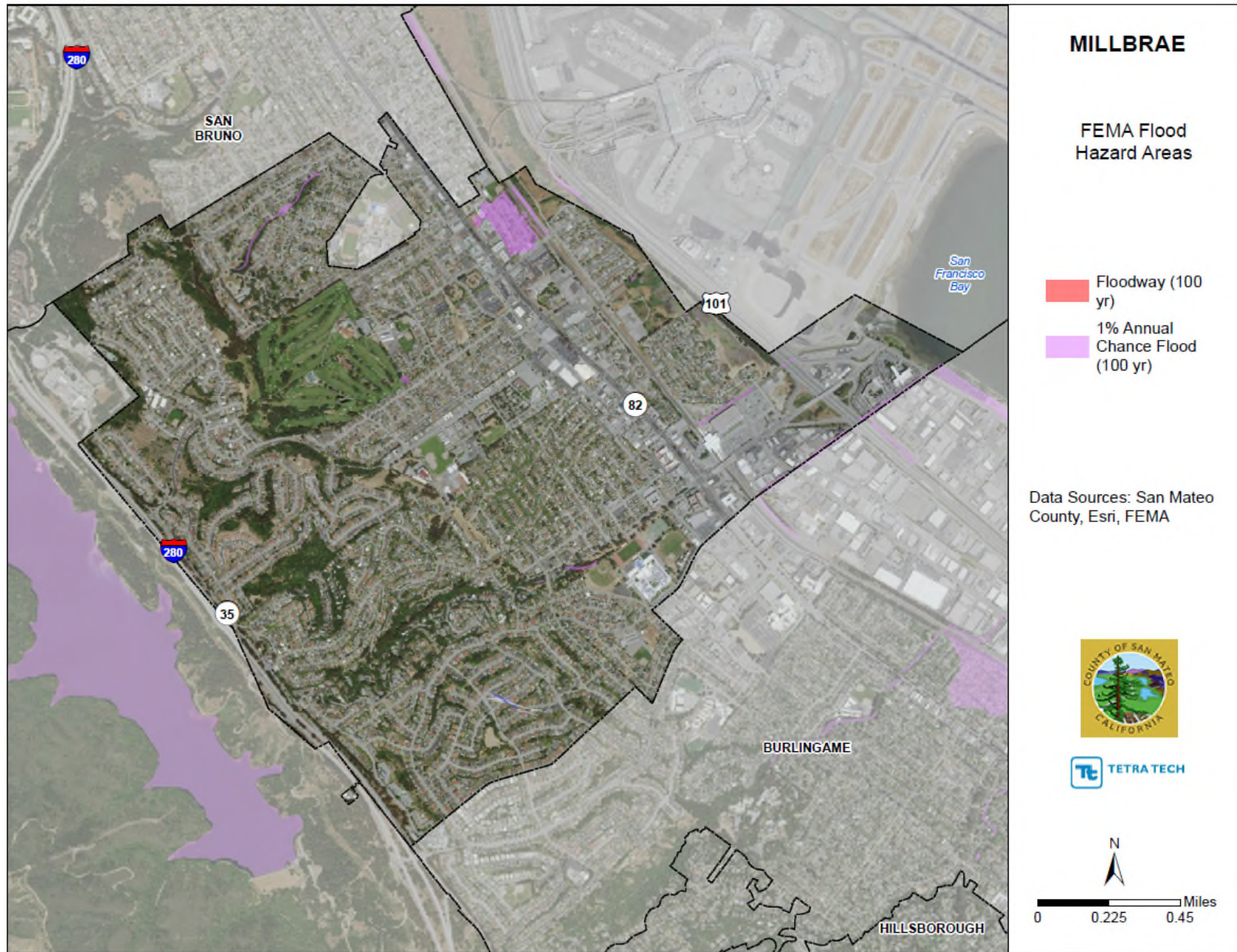


- ❖ Currently participating in Demand response Program/Energy Alert Days to reduce energy during peak demand by turning off lights, equipment and appliances. Participating City facilities included City Hall, Police Department and the Library.
- ❖ Off-set municipal greenhouse gas emissions through PG&Es Climate Smart Program from 2008-2012, reducing a cumulative total of 1.36 MMTCO₂e.
- ❖ Participate in winter and summer Spare the Air Day alerts to inform employees and the community on measures for reducing air pollutants.
- ❖ Implement the Commuter Options and Incentives Program to promote alternative transportation modes to reduce single occupancy driving.
- ❖ Installed LED lights in traffic lights in 2010.
- ❖ Upgrade interior and exterior lighting to energy-saving technology.
- ❖ Upgrade five City parks with smart irrigation controllers to save energy and water.
- ❖ Certify City Hall and Library as Green Businesses and promote the program to other businesses.











Chapter 13. City of Pacifica

13.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

Joseph Spanheimer, Police Captain
2075 Coast Highway
Pacifica, CA 94044
Telephone: 650-738-7319
e-mail Address: spanheimerj@pacificapolice.org

Alternate Point of Contact

Christian Murdock, Associate Planner
1800 Francisco Boulevard
Pacifica, CA 94044
Telephone: 650-738-7444
e-mail Address: murdockc@ci.pacifica.ca.us

13.2 Jurisdiction Profile

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

- ❖ **Date of Incorporation**— November 22, 1957
- ❖ **Current Population**— 37,806 (as of January 1, 2016 – CA DOF)
- ❖ **Population Growth**— Projected population, 2020: 39,300; 2030: 39,600 (Source: Association of Bay Area Governments (ABAG) Projections 2009)
- ❖ **Location and Description**—The City of Pacifica is spread along a six mile (10 km) stretch of coastal beaches and hills in north 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. State Route 35 comprises the city's eastern border. Pacifica is bordered by Daly City on the north, the cities of South San Francisco and San Bruno to the east, as well as several miles of Golden Gate National Recreation Area (GGNRA). Pacifica is bordered by unincorporated San Mateo County area to the south.
- ❖ **Brief History**—Before European settlers arrived, 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.

- ❖ **Climate**—Pacifica has a cool summer Mediterranean climate typical of coastal areas of California. Based on National Weather Service records, average January temperatures range from 45.8 °F to 56.7 °F and average September temperatures range from 53.9 °F to 71.8 °F. Annual precipitation averages 30.29 inches. There are an average of 66 days annually with measurable precipitation, most of which falls from October through May. Summer fog often produces light drizzle in the night and morning hours. Condensation from the fog also produces fog drip from trees overnight. No measurable snowfall has been recorded since records began. The southeastern portions of the city, such as Park Pacifica, are known to be much sunnier than the rest of the city.
- ❖ **Governing Body Format**—The City of Pacifica is governed by a city council of five elected members, with each council seat in turn 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.
- ❖ **Development Trends**—The City of Pacifica is largely built-out in areas with development potential. A significant portion of the City’s land area is set aside as permanent open space, with no potential for future development. The result is that most projects in the City involve redevelopment of obsolete or underutilized sites. Since the overwhelming majority of Pacifica’s developed land area is dedicated to residential use, most development projects reviewed by the City relate to infill development on scattered vacant lots, or significant renovations or redevelopment of existing structures. Overall, the level of development activity in Pacifica over the past several years has been relatively low in comparison to other cities in San Mateo County.

13.3 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 13-1. An assessment of fiscal capabilities is presented in Table 13-2. An assessment of administrative and technical capabilities is presented in Table 13-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 13-4. Classifications under various community mitigation programs are presented in Table 13-5. An assessment of education and outreach capabilities is presented in Table 13-6.



TABLE 13-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code Comment: <i>Pacifica Municipal Code (PMC) Title 8; § , Ord. 799, eff. 12/25/2013</i>	Yes	No	Yes
Zoning Code Comment: <i>PMC Title 9, Chapter 4; §22.02, Ord. 363</i>	Yes	No	Yes
Subdivisions Comment: <i>PMC Title 10; §7, Ord. 456-85, eff. 12/25/1985</i>	Yes	No	Yes
Stormwater Management Comment: <i>PMC Title 6, Chapter 12; §1, Ord. 617-C.S., eff. 7/27/1994</i>	Yes	No	Yes
Post-Disaster Recovery Comment:	No	No	No
Real Estate Disclosure Comment: <i>Sewer Laterals: PMC Title 6, Chapter 13, Article 6; §1, 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>	Yes	No	Yes
Growth Management Comment: <i>PMC Title 9, Chapter 5; §1, Ord. 604-C.S., eff. 7/8/1993</i>	Yes	No	No
Site Plan Review Comment: <i>PMC Title 9, Chapter 4, Article 32; §13.01, Ord. 363, as amended by §II (A), Ord. 489-C.S., eff. 10/14/1987, §3, Ord. 541-C.S., eff. 1/10/1990, §3, Ord. 582-C.S., eff. 1/8/1992, and §II(A), Ord. 613-C.S., eff. 4/13/1994, §1, Ord. No. 771-C.S., eff. 6/24/2010</i> <i>PMC Title 9, Chapter 4, Article 43; §VI, Ord. 610-C.S., eff. 3/16/1994</i>	Yes	No	No
Environmental Protection Comment: <i>General Plan Conservation Element; 1980</i> <i>Preservation of Heritage Trees: PMC Title 4, Chapter 12; §1, Ord. 542-C.S., eff. 1/10/1990</i>	Yes	No	No
Flood Damage Prevention Comment: <i>PMC Title 7, Chapter 5; §1, Ord. 506-C.S., eff. 7/27/1988</i>	Yes	No	No
Emergency Management Comment: <i>PMC Title 7 Chapter 2 §4-2.06</i>	Yes	No	No
Climate Change Comment:	No	No	No
Other Comment: <i>Title 6, Chapters 6-11, 13 (Sewer System and Wastewater)</i>	Yes	No	Yes
General or Comprehensive Plan <i>Is the plan equipped to provide linkage to this mitigation plan? No</i>	Yes	No	Yes



TABLE 13-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
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 2014 update of the General Plan does contain direct references to the LHMP and hazards of concern.			
Capital Improvement Plan	Yes	No	No
Comment: The City of Pacifica's current Capital Improvement Plan (CIP) is a planning tool used to prioritize capital projects for the 2015-2020 years. The plan is updated every year identifying new projects and updating the status of existing projects. These projects include various infrastructure maintenance, storm drain improvements, parks and play field upgrades, and sewer facility improvements.			
Floodplain or Watershed Plan	No	No	No
Comment:			
Stormwater Plan	Yes	No	No
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.			
Habitat Conservation Plan	No	No	No
Comment: N/A			
Economic Development Plan	Yes	No	No
Comment: Plan accepted by City Council in 2013			
Shoreline Management Plan	No	No	No
Comment:			
Community Wildfire Protection Plan	No	No	No
Comment:			
Forest Management Plan	No	No	No
Comment:			
Climate Action Plan	Yes	No	Yes
Comment: Climate Action Plan; 7/14/2014			
Other	Yes	No	No
Comment: Local Coastal Land Use Plan			
Comprehensive Emergency Management Plan	Yes	Yes	No
Comment: City of Pacifica Emergency Operations Plan May 2014, San Mateo County Emergency Operations Plan w/ Annexes, fall 2015			
Threat & Hazard Identification & Risk Assessment	No	Yes	No
Comment: San Mateo County Hazard Vulnerability Assessment, Jan 2015			
Post-Disaster Recovery Plan	Yes	No	No
Comment: City of Pacifica Emergency Operations Plan, San Mateo County Emergency Operations Plan, May 2015, w/ Continuity of Operations Plan Annex			



TABLE 13-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Continuity of Operations Plan <i>Comment: In development, estimated date of completion- spring 2017</i>	No	No	No
Public Health Plan <i>Comment: San Mateo County Health Department</i>	No	Yes	No

TABLE 13-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No, Vote required
User Fees for Water, Sewer, Gas or Electric Service	Yes, Sewer
Incur Debt through General Obligation Bonds	No, 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 13-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Planning Dept: Director, Assoc. Planner, Asst. Planner (x2).
Engineers or professionals trained in building or infrastructure construction practices	Yes	Public Works Dept.: City Engineer, Assoc. Engineer (x2), Assist. Engineer
Planners or engineers with an understanding of natural hazards	Yes	Planning Dept: Director, Assoc. Planner, Asst. Planner (x2). Public Works Dept.: City Engineer, Assoc. Engineer (x2), Assist. Engineer
Staff with training in benefit/cost analysis	No	N/A
Surveyors	Yes	Contract support- CSG Consultants
Staff capable of making substantial damage estimates	Yes	Contract support- CSG Consultants
Personnel skilled or trained in GIS applications	No	Planning Dept.: Assoc. Planner
Scientist familiar with natural hazards in local area	Yes	Contract support- CSG Consultants
Emergency manager	Yes	Pacifica Police Department Captain



TABLE 13-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Grant writers	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

TABLE 13-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	Feb 4, 1981
When did the Flood Insurance Rate maps become effective?	October 16, 2012
What local department is responsible for floodplain management?	Planning Department
Who is your floodplain administrator? (department/position)	Planning Dept.: Building Official (Contracted)
• Is this a primary or auxiliary role?	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	7-27-1988
• Does your floodplain management program meet or exceed minimum requirements?	Meet
• If so, in what ways?	N/A
When was the most recent Community Assistance Visit or Community Assistance Contact?	4-29-2010
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
Does your jurisdiction participate in the Community Rating System (CRS)?	Yes
• If so, is your jurisdiction seeking to improve its CRS Classification?	No
How many Flood Insurance policies are in force in your jurisdiction?	398
• What is the insurance in force?	\$112,489,900
• What is the premium in force?	\$293,319
How many total loss claims have been filed in your jurisdiction?	111
• How many claims were closed without payment/are still open?	39 (1 open, 38 CWOP)
• What were the total payments for losses?	\$756,406





TABLE 13-5. COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	Yes	7	May 1, 2013
Building Code Effectiveness Grading Schedule	No		
Public Protection	No		
Storm Ready	Yes	Tsunami Ready	1-15-14
Firewise	No		

TABLE 13-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes, Police Administrative Captain
Do you have personnel skilled or trained in website development?	Yes, Pacifica MIS Division
Do you have hazard mitigation information available on your website?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	A winter storm preparedness page, and Emergency Preparedness and Safety Commission links to relevant outside sites
Do you utilize social media for hazard mitigation education and outreach?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Facebook, Next Door, Twitter, and the countywide SMC Alert system refer people to information on the city’s website
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
<ul style="list-style-type: none"> If yes, please briefly specify. 	The Emergency Preparedness and Safety Commission meets once a month and has a page on the City’s website
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	SMC Alert (by Everbridge) is a mass notification system using text and phone.
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	The city has three warning sirens along the coast. The sirens also have voice capability.

13.4 Integration with Other Planning Initiatives

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





1.1.1 Existing Integration

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

- ❖ **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, and tsunamis, all of which are profiled in the LHMP.
- ❖ **General Plan:** The Safety Element of the General Plan incorporates direct references to the LHMP. Additionally, it integrates information on pertinent local natural hazards, especially in the Safety Element. The Safety Element includes information on seismic and geologic hazards, flooding and drainage concerns, hazardous materials, and fire hazards.

1.1.2 Opportunities for Future Integration

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

- ❖ **General Plan:** The City is undertaking an overall General Plan Update process that will incorporate references to the Local Hazard Mitigation Plan.
- ❖ As an action item, the City intends to update to the flood damage prevention ordinance as a future integration opportunity.
- ❖ The City of Pacifica is participating in a sea level rise vulnerability assessment. The Assessment is part of a long-term resilience strategy to ensure our community, ecosystems, and economy are prepared for climate change. The effort is being conducted through a collaborative, multi-stakeholder effort.

13.5 Jurisdiction-Specific Natural Hazard Event History

Table 13-6 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 13-6. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Weather	tbd	Jan 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	Jan 2015	Approx. 2.5 acres of trees and brush burned
Severe Weather	n/a	Dec 14, 2014	\$280,000 - Major flooding, power outages and debris from trees and sand along the coastline



TABLE 13-6. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Tsunami	n/a	Mar 11, 2011	Warning – no subsequent event, 8.9 earthquake in Japan caused Tsunami warning to West Coast of California
Severe Weather (Coastal Erosion)	CDAA-2010-04	Mar 2009	Severe coastal erosion prompting red-tagging of adjacent homes and apartments
Severe Weather	1646	Mar 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	1628	Dec 17, 2005- Jan 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.

13.6 Jurisdiction-Specific Vulnerabilities

Repetitive loss records are as follows:

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

Other noted vulnerabilities include:

- ❖ Western Linda Mar area flooding (urban drainage flooding)
- ❖ Coastal erosion, Rockaway Beach Avenue, north to city limits





- ❖ Transportation isolation/Accessibility (arterial, bridges over highway, single-entry neighborhoods) Highway One (California State Route 1) is the major road that connects the city's neighborhoods and allows for traffic in and out of the city. In the very south, Pacifica is connected to the next community via a bridge and a tunnel. In the very north, Pacifica is connected to the City of San Francisco by Interstate 280 (I-280). The other access into or out of Pacifica is Sharp Park Road (that connects with California State Route 35 (CA-35)). There are areas of Highway One which may be susceptible to landslides due to the steep grade. There have been some minor rock slides in the area. If areas of Highway One were blocked due to a landslide, the City may be severely limited to access equipment, parts, and materials to fix infrastructure.

13.7 Hazard Risk Ranking

Table 13-7 presents the ranking of the hazards of concern.

TABLE 13-7. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	48	High
2	Severe Weather	33	Medium
3	Flood	30	Medium*
4	Landslide	28	Medium*
5	Tsunami	22	Medium
6	Wildfire	18	Medium
7	Drought	3	Low
8	Dam Failure	0	None

*The Risk Ranking Score for two hazard types were increased using subjective assessments. Flood was raised from 18 to 30 due to the fact that two of the locations in Pacifica that are most prone to flooding are in the Pacific Coastal Zone, encompass a major transportation artery and a state highway which is the City's primary transportation artery, and affect two large shopping centers which account for a sizeable percentage of tax revenue and supplies (grocery and pharmacy). Landslide was also increased from 24 to 28. Landslide risk is brought about not only by Severe Weather, but by routine everyday wave action which affects the coastal bluffs. Landslide risk affects residential and business districts in the Pacific Coastal Zone, a major transportation artery into/out of the City, and the state highway which is the City's main transportation route.

13.8 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 13-8 lists the actions that make up the City of Pacifica hazard mitigation action plan. Table 13-9 identifies the priority for each action. Table 13-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.



TABLE 13-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
PA-1— Pacifica will build infrastructure to accommodate increases in low impact flooding to mitigate impacts from expected increases in incidents of shallow flooding,						
Existing	Flooding, Severe Weather	1,6,7	Engineering, Public Works	Medium	Planned local drainage fund	Medium term
PA-2—Pacifica will be conducting an update of its Emergency Operations Plan to ensure an effective and coordinated response to disasters within the city,						
New and existing	All Hazards	1, 2, 3,6, 8, 10	Police Department	Low	Staff time, General fund	Short term
PA-3-- Pacifica will update its flood damage prevention ordinance to mitigate against damage of residential and commercial property in flood prone areas,						
New and existing	Flood, Severe Weather	1, 2, 3, 4 7, 8, 10	Planning Department	Low	Staff time, General fund	Short term
PA-4—Pacifica 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						
Existing	Flood, Landslide	1, 2, 3,	Engineering, Public Works	High	HMGP Grant	Short term
PA-5— Pacifica will pursue opportunities to preserve and protect critical transportation infrastructure to mitigate against isolation, economic loss and ensure public safety.						
New and existing	Earthquake, Flood, Landslide, Severe Weather, Tsunami, Wildfire	1, 2, 4, 5, 6, 8	Engineering, Public Works	High	HMGP, PDM Grant, bonds, General fund	Medium term
PA-6— Pacifica will seek to replace/upgrade its seismically-vulnerable facilities to ensure provision of vital services following a hazard event.						
Existing	Earthquake	1, 3, 4, 5, 6, 7	Engineering, Public Works	High	HMGP, PDM Grant, bonds, General fund	Long term
PA-7— Pacifica will preserve, protect, or relocate hazard prone infrastructure to maintain critical services and maintain the environment.						
Existing	Earthquake, Flood Landslide, Tsunami	1, 4, 5, 6	Engineering, Public Works	High	HMGP Grant, bonds, General fund	Medium term
PA-8— Pacifica will develop and deliver business outreach programs to mitigate against the functional loss of community businesses and promote business resiliency.						
New and existing	Severe Weather, Earthquake, Flood, Wildfire, Landslide, Tsunami	1, 2, 3, 9, 10	Police Department/ Emergency Management	Low	Staff time	Short term
PA-9— 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.						
Existing	Drought	3, 4, 5, 6, 8	Public Works, Waste Water	Medium	General fund, Staff time	Medium term





TABLE 13-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<p>PA-10—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> <ul style="list-style-type: none"> • 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 						
Existing	All Hazards	1, 2, 3, 4, 6, 7, 9, 10	Police Department/ Emergency Management	Low	Staff time, General fund	Long term
<p>Action G-1—Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.</p>						
Existing	All	1, 3, 4, 5, 6, 7, 11	Jurisdictions	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
<p>Action G-2—Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.</p>						
New and existing	All	All	Jurisdictions	Low	General Fund	Long-term
<p>Action G-3—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>						
New and existing	Flooding	2, 3, 5, 6, 8	San Mateo County Unincorporated and Municipalities with SFHAs	Low	General Fund	Short-term and ongoing
<p>Action G-4—Where feasible, implement a program to record high water marks following high-water events.</p>						
New and existing	Flooding, Severe Weather	1, 3, 4, 5, 6	Jurisdictions	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
<p>Action G-5—Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.</p>						
New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	Jurisdictions	Low	General Fund	Short-term
<p>Action G-6—Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.</p>						
New and existing	All	2, 3, 4, 5, 6, 7, 8, 10, 11	Jurisdictions	Low	Operating Budgets	Ongoing
<p>Action G-7— Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.</p>						





TABLE 13-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New and existing	All	All	Jurisdictions	Low	General Fund	Short- and long-term
Action G-8 — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All	1, 4	Jurisdictions	Low	Staff Time, General Funds	Short-term

TABLE 13-9. MITIGATION STRATEGY PRIORITY SCHEDULE

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

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



TABLE 13-10. ANALYSIS OF MITIGATION ACTIONS

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

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

13.9 Future Needs to Better Understand Risk/Vulnerability

The City will examine the feasibility of conducting a Facilities Study Plan, to include a Needs Assessment, looking at all city owned structures. The results of this study may have an impact on the City's long range budgeting to bring all its facilities up to current seismic and energy efficiency standards.

Hazard scenarios should continue to be examined to determine cost effective ways to address the hazard if possible and make the community and its infrastructure more resilient. Future climate science and related regional weather events will cause potential revision of hazard mitigation strategies and their implementation.

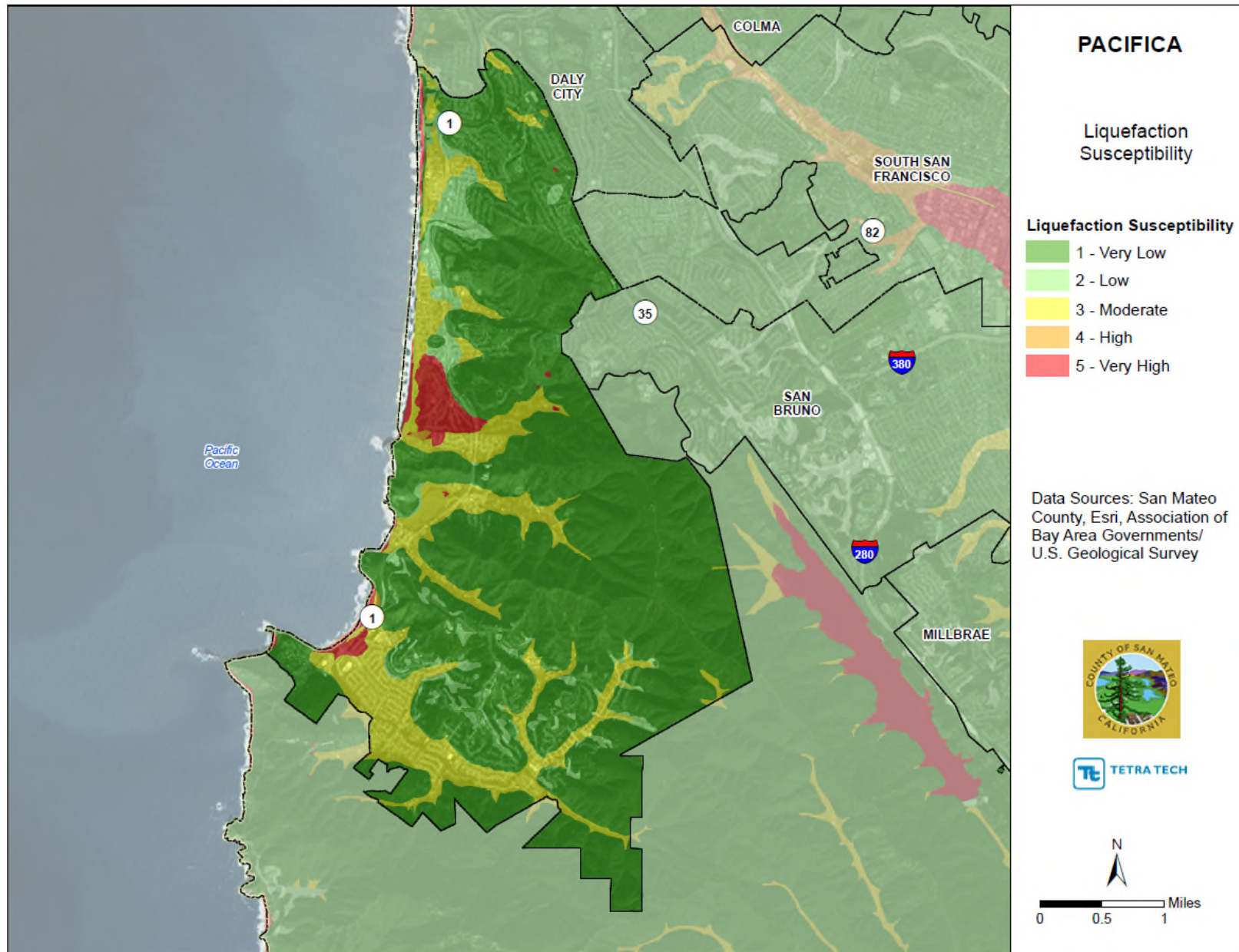
13.10 Additional Comments

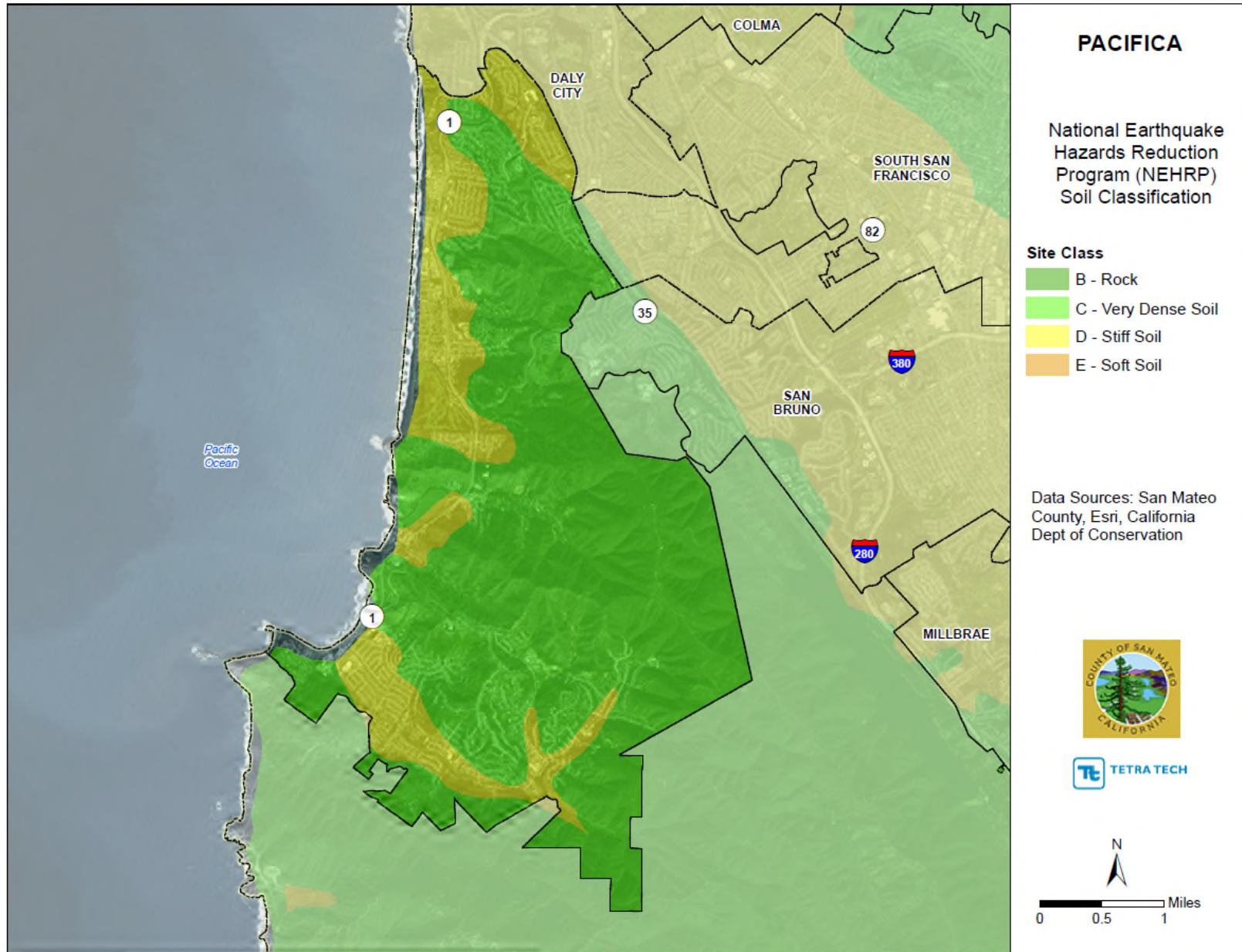
One of the hazards assessed and named in this 2016 annex does not have applicability to the City of Pacifica: dam failure. Pacifica is sufficiently far away and overland that a dam failure will not have any direct effect within the city limits. Although the effects will be substantial on the Bay side of San Mateo County, it is improbable that Pacifica would experience the effects, so that hazard is not addressed.

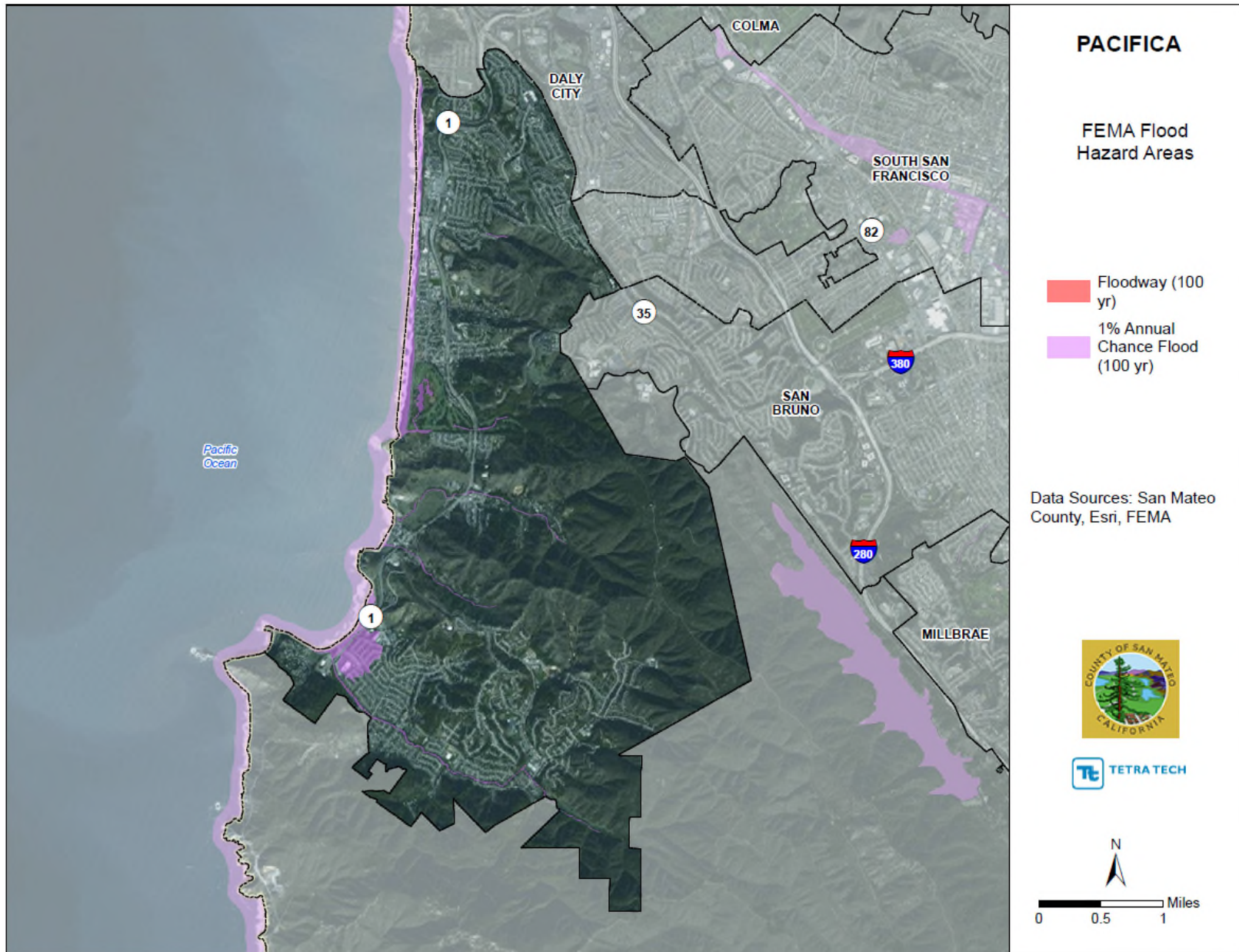


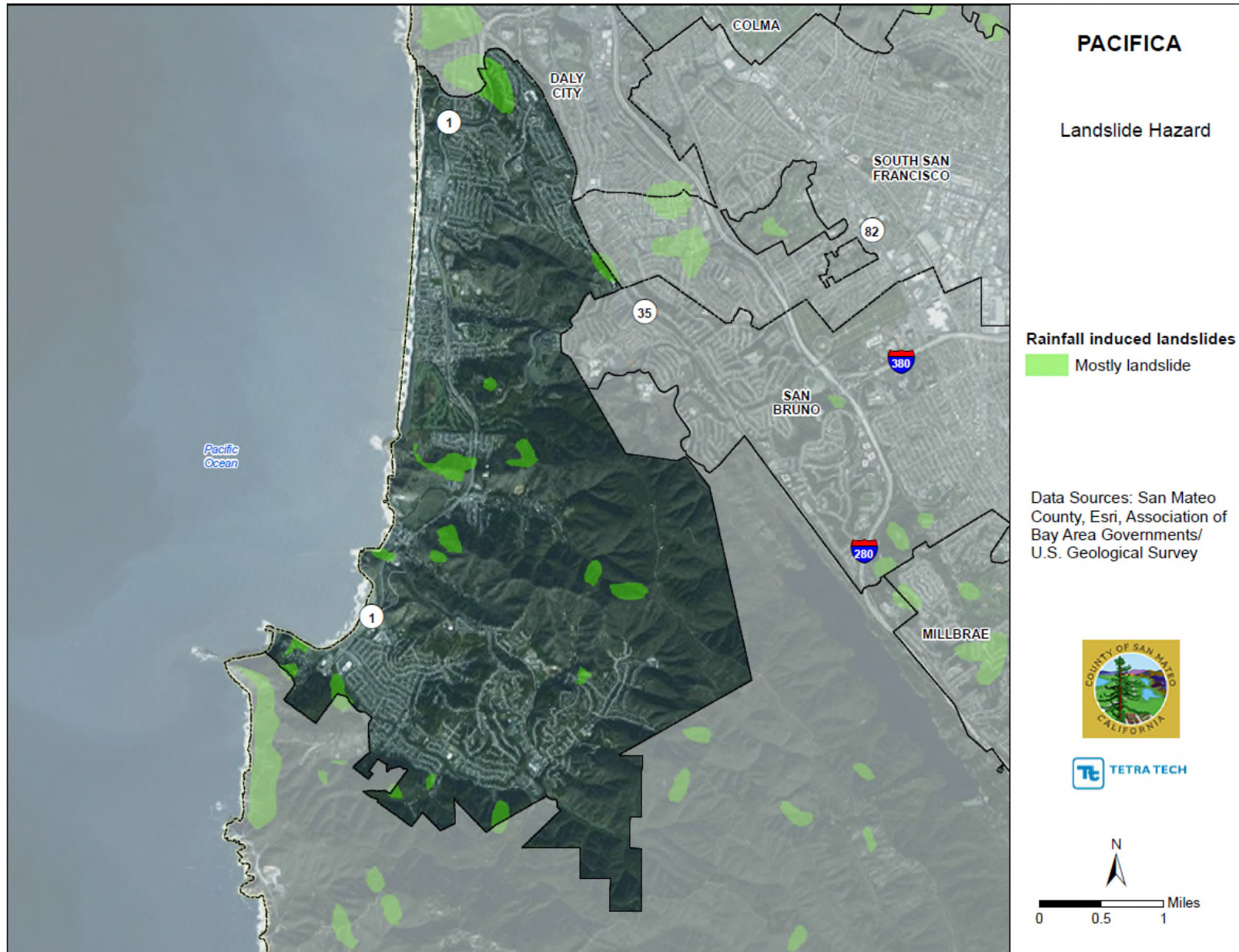
Pacifica experiences severe weather conditions nearly every winter. Those conditions routinely cause mild to moderate flooding, temporary power outages, and debris such as downed trees. A significant component of severe storms are the tidal conditions which have caused extreme coastal erosion. Eroded areas have now encroached into residential and commercial districts causing the loss of use of those properties. Recently, several homes and apartment buildings have either been deemed uninhabitable due to conditions or they've been demolished.

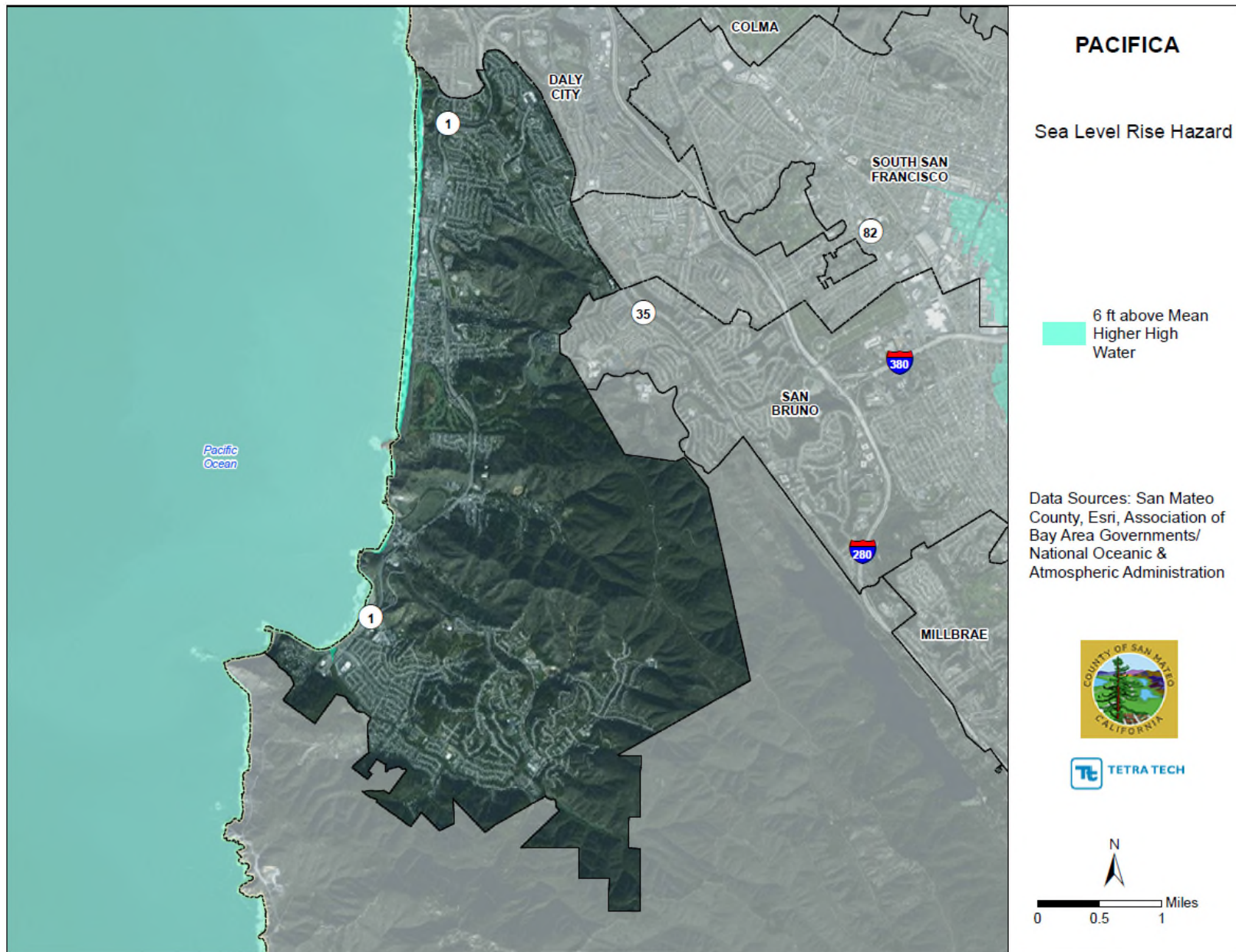
The City of Pacifica will actively participate in the plan maintenance strategy identified in this plan.

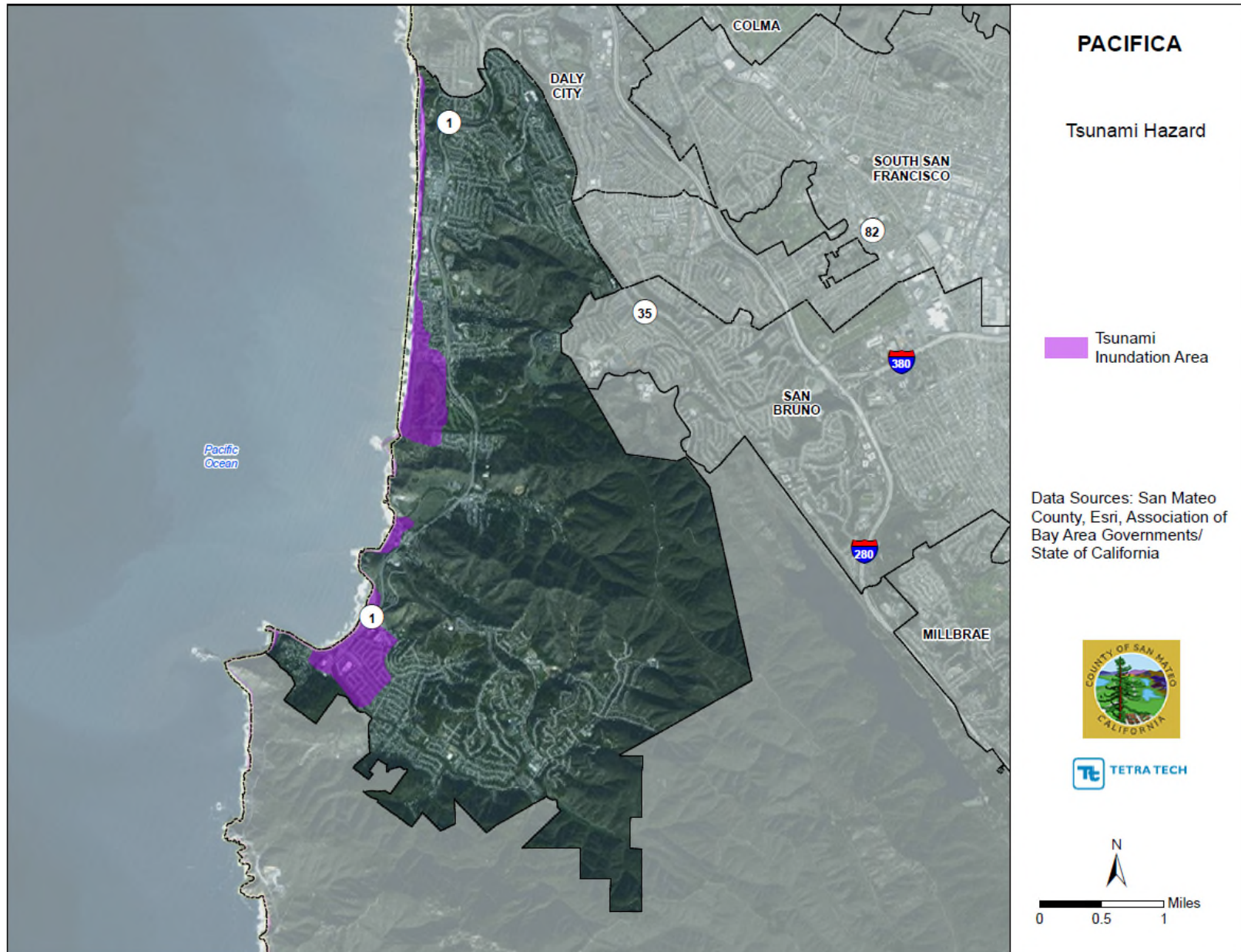


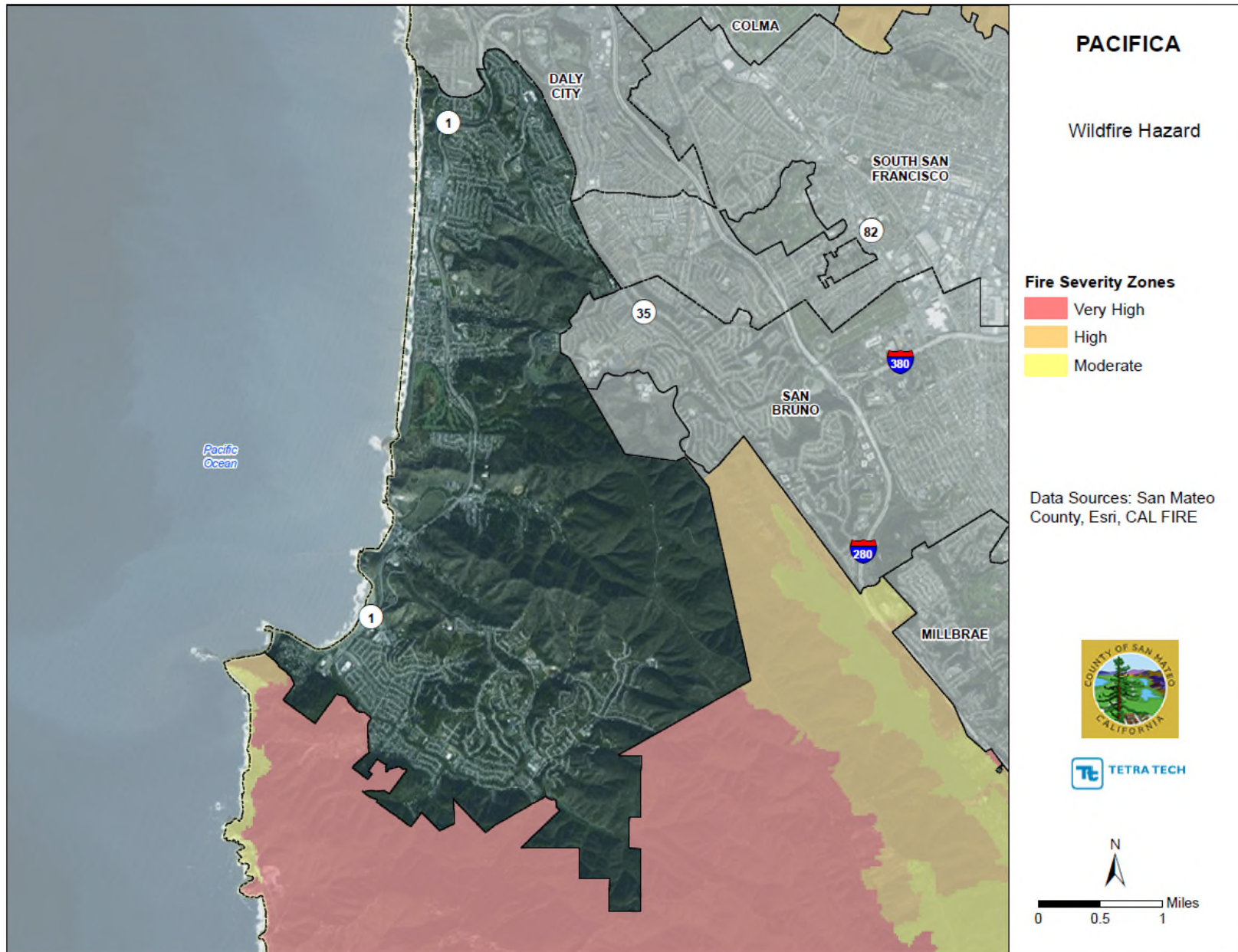














Chapter 14. Town of Portola Valley

14.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

Jeremy Dennis, Town Manager
765 Portola Road
Portola Valley, CA 94028
Telephone: 650-851-1700 ext. 215
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Alternate Point of Contact

Debbie Pedro, Planning Director
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Portola Valley, CA 94028
Telephone: 650-851-1700 xt. 218
e-mail Address: dpedro@portolavalley.net

14.2 Jurisdiction Profile

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

- ❖ Date of Incorporation— 1964
- ❖ Current Population—Portola Valley’s population is 4,751 (as of January 1, 2016 – CA DOF)
- ❖ Population Growth— According to ABAG, Portola Valley’s projected population change from 2000-2020 is 1% from 4,462 to 4,500. Between 2000 and 2010, the average household size decreased from 2.58 to 2.47 person per household.
- ❖ Location and Description— The Town of Portola Valley is a small, rural residential municipality located in San Mateo County. Surrounded by wooded hills, this pristine and picturesque town encompasses approximately ten square miles and is bounded by the Town of Woodside, Unincorporated Stanford lands, unincorporated areas along the Skyline area and the County boundary at Los Trancos Creek. The Town is bisected by the San Andreas Fault Zone which is made up of a number of individual fault traces. An extensive trail system, scenic roads, open space and natural views contribute to one's feeling of being in the country. Commercial activity is encouraged to the extent that it primarily meets needs of residents of the community. These factors have enabled the town to retain a rural ambiance reminiscent of earlier days.
- ❖ Brief History— Named for Spanish explorer Gaspar de Portolá, who led the first party of Europeans to explore the San Francisco Peninsula in 1769, Portola Valley was originally part of the 13,000 acre Rancho el Corte de Madera granted to Maximo Martinez by the Mexican government. The origins of the modern town of Portola Valley are in the little logging town of Searsville that stood along Sand Hill Road from the 1850s until 1891. It offered services for the men who came to cut the redwoods for the post gold rush building boom. By the dawn of the twentieth century, Searsville had been abandoned, and a reservoir, known today as Searsville Lake, had been created. The area became a place of small farms and large estates. Immigrants from Ireland, Portugal, Croatia, Italy, China, the Philippines, Chile, and Germany joined the Californios to raise strawberries, herd cattle and cut firewood. The large landowners came from San Francisco to escape the summer fog. A few were year round residents. In response to fast-paced residential development after World War II, Portola

Valley residents voted to incorporate in order to have local control over development with the goals of preserving the beauty of the land, fostering low density housing, keeping government costs low through volunteerism, and limiting services to those necessary for local residents.

- ❖ **Climate**— Weather in Portola Valley is usually mild during most of the year. Summers are dry and can be hot; winter temperatures rarely dip much below freezing. Average January temperatures are a maximum of 60 °F and a minimum of 36 °F. Average July temperatures are a maximum of 88 °F and a minimum of 51 °F. The average annual precipitation is 21 inches.
- ❖ **Governing Body Format**— Portola Valley is a general law city with five elected council members. The Council selects the Mayor and appoints the Town Manager and Town Attorney. The Town employs 13 full-time employees, contracts for police services with the County of San Mateo Sheriff's Office, and receives fire services from the Woodside Fire Protection District. The Council is responsible for adopting the plan, the Town Manager is responsible for overseeing its implementation.
- ❖ **Development Trends**— A major goal of the Town is to permit development in a way that preserves the natural environment, protects natural drainage, ensures safe development given the town's geology, and maintains the rural character of the Town. The Town subscribes to the principle of low intensity development which is appropriate to its location on the fringe of the urban area of the Peninsula and provides a transition between urban densities of adjoining communities and non-intensive land uses west of the skyline. Portola Valley is a community of single family residences, mostly on lots ranging from one to two-and-a-half acres or more. The exceptions are in the older part of the town that has some lots as small as 4,000 square feet, and three other small areas with minimum lot sizes of 15,000 or 20,000 square feet. Little new office and commercial development is anticipated. Only 18 acres of lands are planned and zoned for commercial and office uses, and most of that land is developed. As the town reaches buildout, the development potential is increasingly affected by geologic and infrastructure constraints. Most of the remaining vacant land is in steep and often hazardous terrain.

14.3 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 14-1. An assessment of fiscal capabilities is presented in Table 14-2. An assessment of administrative and technical capabilities is presented in Table 14-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 14-4. Classifications under various community mitigation programs are presented in Table 14-5. An assessment of education and outreach capabilities is presented in Table 14-6.



TABLE 14-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code Comment: Title 15, Portola Valley Municipal Code (Ord. 2013-400, § 1, 2013; Ord. 2010-388 § 1, 2010; Ord. 2009-377 § 1, 2009; Ord. 2008-373 § 1, 2008; Ord. 2003-348 § 1 (part), 2003; Ord. 1999-321 § 1 (part), 1999) Other Jurisdiction Authority: Chapter 15.16 Woodside Fire Protection District administers the Fire Code State Mandated: Department of Water Resources, Water Efficient Landscape Ordinance	Yes	Yes	Yes
Zoning Code Comment: Title 18, Portola Valley Municipal Code (Ord. 1994-279 § 2 (part), 1994; Ord. 1994-276 § 4 Exh. A (part), 1994; Ord. 1988-242 § 2 Exh. A (part), 1988; Ord. 1987-219 § 3, 1987; Ord. 1986-210 § 2, 1986; Ord. 1981-185 § 1, 1981; Ord. 1967-80 § 1 (6912.1), 1967; Ord. 2001-338 § 8 (part), 2001)	Yes	No	No
Subdivisions Comment: Title 17, Portola Valley Municipal Code (Ord. 1988-230 § 3 (Exh. B) (part), 1988) (Ord. 1979-168 § 1 (part), 1979; Ord. 1967-71 § 1 (7610.2), 1967) State Mandated: Subdivision Map Act	Yes	No	Yes
Stormwater Management Comment: Chapter 8.28 “Stormwater Management and Discharge Control” (Ord. 1998-308 § 2 (part), 1998) Other Jurisdiction Authority: Regional Water Quality Control Board State Mandated: Water Resources Board, Clean Water Act	Yes	Yes	Yes
Post-Disaster Recovery Comment: Chapter 15.26 “Post-Disaster Demolition”, Chapter 15.24, “Post Disaster Safety Assessment Placards”, Chapter 15.28 Disaster Repair and Reconstruction” (Ord. 1999-317 § 2 (part), 1999)	No		
Real Estate Disclosure Comment: Chapter 15.08, Ord. 1970.100 “Residential Data Reports” Ord. 1978-163 § 1, 1978; Ord. 1975-138 § 1, 1975; Ord. 1970-100§ 4, 1970	Yes	No	No
Growth Management Comment: Title 18, Zoning, Portola Valley Municipal Code (Ord. 1994-279 § 2 (part), 1994; Ord. 1994-276 § 4 Exh. A (part), 1994; Ord. 1988-242 § 2 Exh. A (part), 1988; Ord. 1987-219 § 3, 1987; Ord. 1986-210 § 2, 1986; Ord. 1981-185 § 1, 1981; Ord. 1967-80 § 1 (6912.1), 1967; Ord. 2001-338 § 8 (part), 2001)	Yes	No	No
Site Plan Review Comment: Chapter 18.64 “Architectural and Site Plan Review” (Ord. 1994-279 § 2 (part), 1994; Ord. 1994-276 § 4 Exh. A (part), 1994; Ord. 1988-242 § 2 Exh. A (part), 1988; Ord. 1987-219 § 3, 1987; Ord. 1986-210 § 2, 1986; Ord. 1981-185 § 1, 1981; Ord. 1967-80 § 1 (6912.1), 1967; Ord. 2001-338 § 8 (part), 2001)	Yes	No	No
Environmental Protection Comment: Sustainability Element, Portola Valley General Plan January 28, 2009 State Mandated: California Energy Commission	Yes		Yes

TABLE 14-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Flood Damage Prevention Comment: Chapter 18.32 "F-P (Floodplain) Combining District Regulations (Ord. 2005-358, § 1, 2005)	Yes		Yes
Emergency Management Comment: Chapter 2.24 "Emergency Organization and Protection" Ord. 2014-404, § 1, 2014	Yes	No	No
Climate Change Comment: Sustainability Element, Portola Valley General Plan January 28, 2009	Yes	Yes	No
Other Comment:	No	No	No
General or Comprehensive Plan <i>Is the plan equipped to provide linkage to this mitigation plan?</i> Comment: No, but the town has a comprehensive Safety Plan which discusses major potential safety issues and mitigations	No	No	No
Capital Improvement Plan <i>What types of capital facilities does the plan address?</i> Trails, streets, town hall, and other infrastructure. <i>How often is the plan updated?</i> Comment: Yearly, as part of the Town's budget process	Yes	No	No
Floodplain or Watershed Plan Comment: Safety Element, Portola Valley General Plan; Chapter 18.32 "F-P (Floodplain) Combining District Regulations; no adopted management plan July 28, 2010	Yes		Yes
Stormwater Plan Comment: Stormwater Requirements as part of single family home construction; no Plan	No	No	No
Habitat Conservation Plan Comment: Conservation Element in General Plan May 25, 2011	Yes	No	No
Economic Development Plan Comment: None	No	No	No
Shoreline Management Plan Comment: N/A	No	No	No
Community Wildfire Protection Plan Comment: Yes, last adopted in 2010	No	CalFire	No
Forest Management Plan Comment: None	No	No	No
Climate Action Plan Comment: in process- late 2016 completion anticipated	Yes	No	Yes



TABLE 14-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Other			
Comment:			
Comprehensive Emergency Management Plan	No	No	No
Comment: None			
Threat & Hazard Identification & Risk Assessment	No	No	No
Comment: None			
Post-Disaster Recovery Plan	No	No	No
Comment: None			
Continuity of Operations Plan	No	No	No
Comment: None			
Public Health Plan	No	Yes	No
Comment: None			

TABLE 14-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes, Utility User Tax
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	No current
Development Impact Fees for Homebuyers or Developers	Yes
Other	No

TABLE 14-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Planning and Public Works Department; Planning Director and Public Works Director
Engineers or professionals trained in building or infrastructure construction practices	Yes	Public Works Department; PW Director
Planners or engineers with an understanding of natural hazards	Yes	Planning and Public Works Department; Planning Director and Public Works Director



TABLE 14-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Staff with training in benefit/cost analysis	No	
Surveyors	Yes	Public Works Department and Consultant basis; PW Director
Staff capable of making substantial damage estimates	Yes	Public Works Department; PW Director
Personnel skilled or trained in GIS applications	Yes	Planning Department; Planning Director
Scientist familiar with natural hazards in local area	Yes	Geologic Committee
Emergency manager	Yes	Town Manager
Grant writers	Yes	Town Administration and Public Works Department; Sustainability Manager and PW Director

TABLE 14-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	10-17-78
When did the Flood Insurance Rate maps become effective?	10-16-2012
What local department is responsible for floodplain management?	Public Works
Who is your floodplain administrator? (department/position)	Public Works Director
• Is this a primary or auxiliary role?	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	2005
• Does your floodplain management program meet or exceed minimum requirements?	Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	6/26/2008
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
• If so, please state what they are.	
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
Does your jurisdiction participate in the Community Rating System (CRS)?	No
• If not, is your jurisdiction interested in joining the CRS program?	No
How many Flood Insurance policies are in force in your jurisdiction?	36
• What is the insurance in force?	\$ 10,698,600
• What is the premium in force?	\$ 43,758
How many total loss claims have been filed in your jurisdiction?	9
• How many claims were closed without payment/are still open?	0
• What were the total payments for losses?	\$ 669,972



TABLE 14-5. COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	No		
Building Code Effectiveness Grading Schedule	No		
Public Protection	No		
Storm Ready	No		
Firewise	No		

TABLE 14-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	No
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	Yes
• If yes, please briefly describe.	Wildland Fire Mitigation information
Do you utilize social media for hazard mitigation education and outreach?	Yes
• If yes, please briefly describe.	On a community listserve, but planning efforts to commence this year on social media use
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
• If yes, please briefly specify.	Environmental Protection and Public Works Committees
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
•	SMC Alert, Rapid Notify, and EPC-run radio systems
Do you have any established warning systems for hazard events?	Yes
• If yes, please briefly describe.	Two separate phone tree call programs, local ham and am radio systems

14.4 Integration with Other Planning Initiatives

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

14.4.1 Existing Integration

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

- ❖ Safety Element of the General Plan – the Safety Plan explicitly states the dangers related to earthquakes, wildfires, flooding and landslides. Early in its history, the Town integrated these hazards into land use policy and emergency preparedness; CERRP was created early in the town’s existence, and the Emergency Preparedness Committee has been active for many years. Land use policy limiting certain developments near faults, areas prone to landslide and other hazards has been in place for many years as well.
- ❖ Conservation Element of the General Plan- the Conservation Plan speaks to protection of water as a resource and flooding as a hazard, and describes the use of the Geologic Map and Ground Movement Potential Map to assist in flooding issues.
- ❖ Sustainability Element – This element recommends the use of drought-resistant plants.
- ❖ Land Use Element – This element cites as two of its general objectives the following – 5.To encourage and, where appropriate, require the conservation of water in new and existing developments and buildings. 6. To ensure that development in areas subject to geologic, fire and flooding hazards is controlled so that people and structures are not exposed to unacceptable levels of risk. “

14.4.2 Opportunities for Future Integration

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

- ❖ Use of social media to communicate hazards and hazard mitigation; currently the town does not employ social media, and expects to use these tools in an emergency. A social media policy is in draft form, and a communications consultant has been hired to assist with development of these tools.
- ❖ Better integration of general plan with LHMP- current language in the General Plan does not directly cite the LHMP, but alludes to general emergency planning. Where appropriate, better and more direct linkage between the General Plan and the LHMP will be made.

14.5 Jurisdiction-Specific Natural Hazard Event History

Table 14-6 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 14-6. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Storm	N/A	December 23, 2012	\$237,000
Severe Storms	N/A	2005/06	\$30,000
Severe Storm(s)	DR-1203	2/9/1998	Unknown
Landslide on Alpine Road	N/A	1998	\$10 million
Severe Storm(s)	DR-1155	1/4/1997	Unknown
Severe Storm(s)	DR-1046	3/12/1995	Unknown
Severe Storm(s)	DR-1044	1/10/1995	Unknown



14.6 Jurisdiction-Specific Vulnerabilities

Repetitive loss records are as follows:

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

Other noted vulnerabilities include:

- ❖ No other needs; Town Center was built in 2008 and has up-to-date generators, water systems and other emergency tools. Minor improvements to EOC, including new technology, to be completed in 2016

14.7 Hazard Risk Ranking

Table 14-7 presents the ranking of the hazards of concern.

TABLE 14-7. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	48	High
2	Wildfire*	18	High
3	Landslide	39	High
4	Severe Weather	33	Medium
5	Flood	18	Medium
6	Drought	9	Low
7	Tsunami	0	Low
8	Dam Failure	0	Low

*Hazard ranking increased due to local knowledge of hazard.

14.8 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 14-8 lists the actions that make up the Town of Portola Valley hazard mitigation action plan. Table 14-9 identifies the priority for each action. Table 14-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.



TABLE 14-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
PV-1 - The Town will adopt a comprehensive 2030 Climate Action Plan in 2016.						
Existing	All	1,3,4,5,6,7,10,11	Sustainability	Medium	Staff time, General Fund	On-going
PV – 2 - The Town has adopted two successive Water Efficient Landscape Ordinances to assist residents create drought-tolerant landscaping; each has been more strict in its allowances on the types and amount of landscaping and the amount of budgeted water.						
Existing and New	Drought	4,6,7	Conservation Committee	Low	Staff Time	Medium
PV – 3 - The Town is amending its Green Building Ordinance to continue to encourage higher levels of energy and water efficiency in new construction.						
New	Drought	3,4,7	Planning, Sustainability	Low	Staff Time	On-going
PV- 4 - Calwater water main project provides for seismic protection across the San Andreas Fault along Portola Road at Town Center						
Existing	Earthquake	4,7,11	Public Works	High	CalWater	On-going
PV – 5 Buy Earthquake simulation/asset allocation software						
New and Existing	Earthquake	1,3,4,6,7,9,11	Administration	Low	General Fund	Short
PV- 6 The Town has planted drought-tolerant demonstration gardens so residents can see the types of plants that can flourish in low-water conditions.						
New and existing	Drought	4,6,7	Public Works	Low	General Fund	On-going
PV- 7 - The Town is undergoing a Town Center Master Planning effort that, in part, will plan for the accommodate future emergency planning efforts, including staging and evacuation.						
New						
	Earthquake, Wildfire	1,2,9,11	Planning	Medium	General Fund, staff time	On-going
PV – 8 - The Town is exploring weather-based irrigation controllers and end-point water meters for Town fields to maximize water use.						
Existing	Drought	4,7	Public Works	Low	General Fund	On-going



TABLE 14-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
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PV-9 - The Town is exploring rain water catchment and graywater reuse projects in Town facilities, both to reduce water use and serve as a demonstration and example to residents

New and existing	Drought	4,7	Public works Sustainability	Medium	General Fund	On-going
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PV – 10 - The Town will complete paving of road sections used by bicyclists in 2016, providing a wider roadway to use in the case of an emergency evacuation.

New

	Earthquake, Wildfire	4,6,11	Public Works	High	General Fund, Capital Funds	On-going
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PV – 11 - Town is rebranding and launching an online energy/water analysis tool to assist residents in understanding where they are using the most resources and connect them with tools to use them more efficiently.

New and existing	Drought	4,7	Sustainability	Low	Staff Time	On-going
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PV-12 - The Town, together with the Woodside Fire Protection District, continue to fund, and encourage residents to take advantage of, a chipping program offered each year.

Existing	Wildfire	1,2,3,6,7	Public Works	Low	Staff Time, General fund	On-going
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PV-13 - The Water Conservation Committee continues to explore innovative methods to conserve water for residents.

New and existing	Drought	2,3,4,7,10	Water Conservation Committee	Low	Staff Time	On-going
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PV – 14 - The Town hosts Firewise workshops and two CERPP trainings provided by the Woodside Fire Protection District. In 2011, the Conservation Committee worked with the Fire District and developed a “Fire Safety and Habitat Preservation” workshop with is on the Town’s website.

Existing	Wildfire	6,7	Sustainability	Low	Staff time	On-going
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PV-15 - The Emergency Preparation Committee provides residents with shelter in place educational materials and hosts a table at the annual Town Picnic to conduct outreach on developing a family disaster plan, among others.

Existing	All	6,7	Sustainability	Low	Staff time	On-going
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TABLE 14-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<p>PV – 16 - The Town regularly conducts emergency preparedness exercises and will open its Emergency Operations Center at least once a year to ensure its usefulness and operational capacity.</p>						
Existing	All	1,2,3,5,6,8,9,10	Administration	Low	Staff time	On-going
<p>PV-17- The Town’s Emergency Preparedness Committee continues to explore ways to improve the town’s disaster readiness; recent activity includes creating a Portola Valley emergency radio station and advertising it to residents through direct mail and email marketing, improving existing communications equipment and better coordination with adjacent town’s preparedness efforts.</p>						
Existing	All	All	Sustainability, Administration	Medium	General Fund, committee funds	On-going
<p>PV-18 - The Town’s senior management sits on the CERRP board and partially funds and participates in its efforts.</p>						
Existing	All	1,2,5,6,8, 10	Administration	Low	Staff Time, General Fund	On-going
<p>PV-19 - The Town coordinates with Woodside Fire Protection District on efforts to maintain brush and vegetative growth for fire prevention including tree trimming programs, brush clearance, and other defensible space outreach efforts as necessary to ensure all roads are passable.</p>						
New and existing	Wildfire	1,2,6,7	Public Works	Low	Staff time, general fund	On-going
<p>PV- 20 - Work with the Town Geologist to continue maintaining and updating the Town’s Geologic and Ground Movement Potential Map to ensure that it contains the most current and correct information.</p>						
New and existing	Earthquakes, Landslides	1,3,7,11	Planning	Low	Staff time	Short
<p>PV- 21 - The Town will explore a seismic retrofit program for existing residences.</p>						
New and existing	Earthquake	7,11	Planning	Medium	Staff time	Medium
<p>PV – 22 - Work with the Emergency Preparedness Committee to improve public education regarding hazard risks (e.g., fire, earthquake, flood) and preparation tools.</p>						
New and existing	All	2,7	Sustainability	Low	Staff time	On-going
<p>PV-23 - Work with Public Works Committee to ensure all emergency access gates are maintained.</p>						



TABLE 14-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New and existing	Earthquake, wildfire	11	Public Works, PW Committee	Low	Staff time, general fund	On-going
Action G-1 —Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.						
Existing	All	1, 3, 4, 5, 6, 7, 11	Jurisdictions	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
Action G-2 —Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.						
New and existing	All	All	Jurisdictions	Low	General Fund	Long-term
Action G-3 —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.						
New and existing	Flooding	2, 3, 5, 6, 8	San Mateo County Unincorporated and Municipalities with SFHAs	Low	General Fund	Short-term and ongoing
Action G-4 —Where feasible, implement a program to record high water marks following high-water events.						
New and existing	Flooding, Severe Weather	1, 3, 4, 5, 6	Jurisdictions	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
Action G-5 —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	Jurisdictions	Low	General Fund	Short-term
Action G-6 —Consider the development and implementation of a Capital Improvements Program (CIP) to increase regulatory, financial, and technical capability to implement mitigation actions.						
New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	Jurisdictions	High	CIP component of general fund (if implemented)	Long term
Action G-7 —Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.						
New and existing	All	2, 3, 4, 5, 6, 7, 8, 10, 11	Jurisdictions	Low	Operating Budgets	Ongoing
Action G-8 — Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and existing	All	All	Jurisdictions	Low	General Fund	Short- and long-term

TABLE 14-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action G-9 — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.	New and Existing	All	1, 4	Jurisdictions	Low	Staff Time, General Funds

TABLE 14-9. MITIGATION STRATEGY PRIORITY SCHEDULE

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Priority ^a
PV-1	8	High	Medium	Yes	Yes	Yes	High	High
PV-2	3	Medium	Low	Yes	No	Yes	High	Low
PV-3	3	Medium	Low	Yes	No	Yes	Medium	Low
PV-4	3	High	Low	Yes	No	Yes	High	Low
PV-5	7	Medium	Low	Yes	No	Yes	Medium	Low
PV-6	3	Low	Low	Yes	No	Yes	Low	Low
PV-7	4	High	Medium	Yes	No	Yes	High	Low
PV-8	2	Medium	Low	Yes	No	Yes	Medium	Low
PV-9	2	High	Low-Medium	Yes	No	Yes	High	Low
PV-10	3	High	High	Yes	No	Yes	High	Low
PV-11	2	Low	Low	Yes	No	Yes	Medium	Low
PV-12	5	High	Low	Yes	No	Yes	High	Low
PV-13	5	Medium	Low	Yes	No	Yes	Medium	Low
PV-14	2	High	Low	Yes	No	Yes	High	Low
PV-15	2	High	Low	Yes	No	Yes	High	Low
PV-16	8	High	Low	Yes	No	Yes	High	Low
PV-17	11	High	Medium	Yes	No	Yes	High	Low
PV-18	6	High	Low	Yes	No	Yes	High	Low
PV-19	4	High	Low	Yes	No	Yes	High	Low
PV-20	4	High	Low	Yes	No	Yes	Medium	Low
PV_21	2	High	Low	Yes	No	Yes	Medium	Low
PV_22	2	High	Low	Yes	No	Yes	Medium	Low
PV-23	1	High	Low	Yes	No	Yes	High	Low
Action G-1	7	High	High	Yes	Yes	No	High	High



TABLE 14-9. MITIGATION STRATEGY PRIORITY SCHEDULE

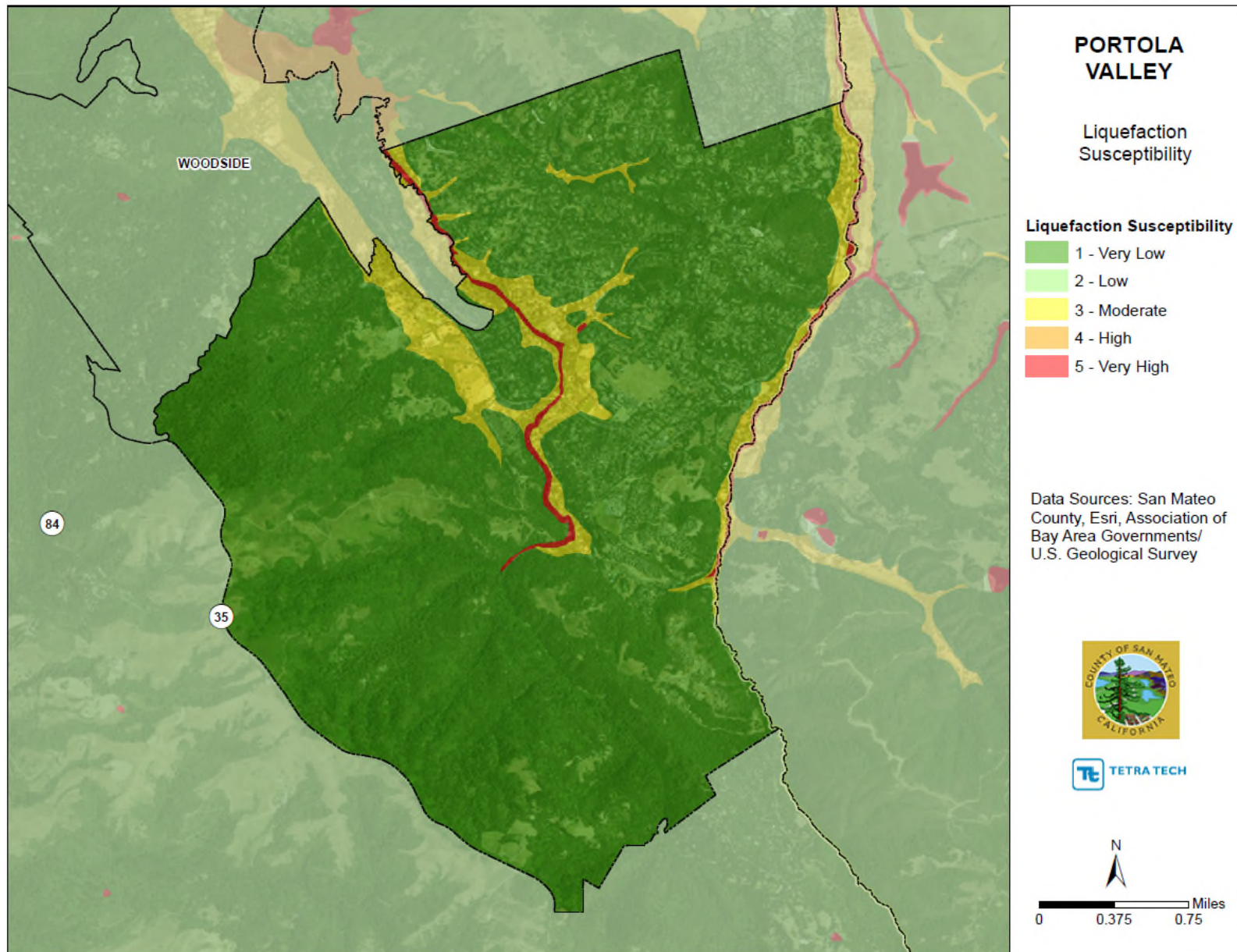
Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Priority ^a
Action G-2	11	High	Low	Yes	No	Yes	High	Low
Action G-3	5	Medium	Low	Yes	No	Yes	High	Low
Action G-4	5	Medium	Medium	Yes	Yes	Yes	Medium	Medium
Action G-5	9	Medium	Low	Yes	No	No	Medium	Low
Action G-6	9	High / Medium	High	Yes	No	Yes (if component of general fund)	High	Low
Action G-7	9	Low	Low	Yes	No	Yes	Low	Low
Action G-8	11	Low	Low	Yes	No	Yes	High	Low
Action G-9	2	Low	Low	Yes	No	Yes	High	Low

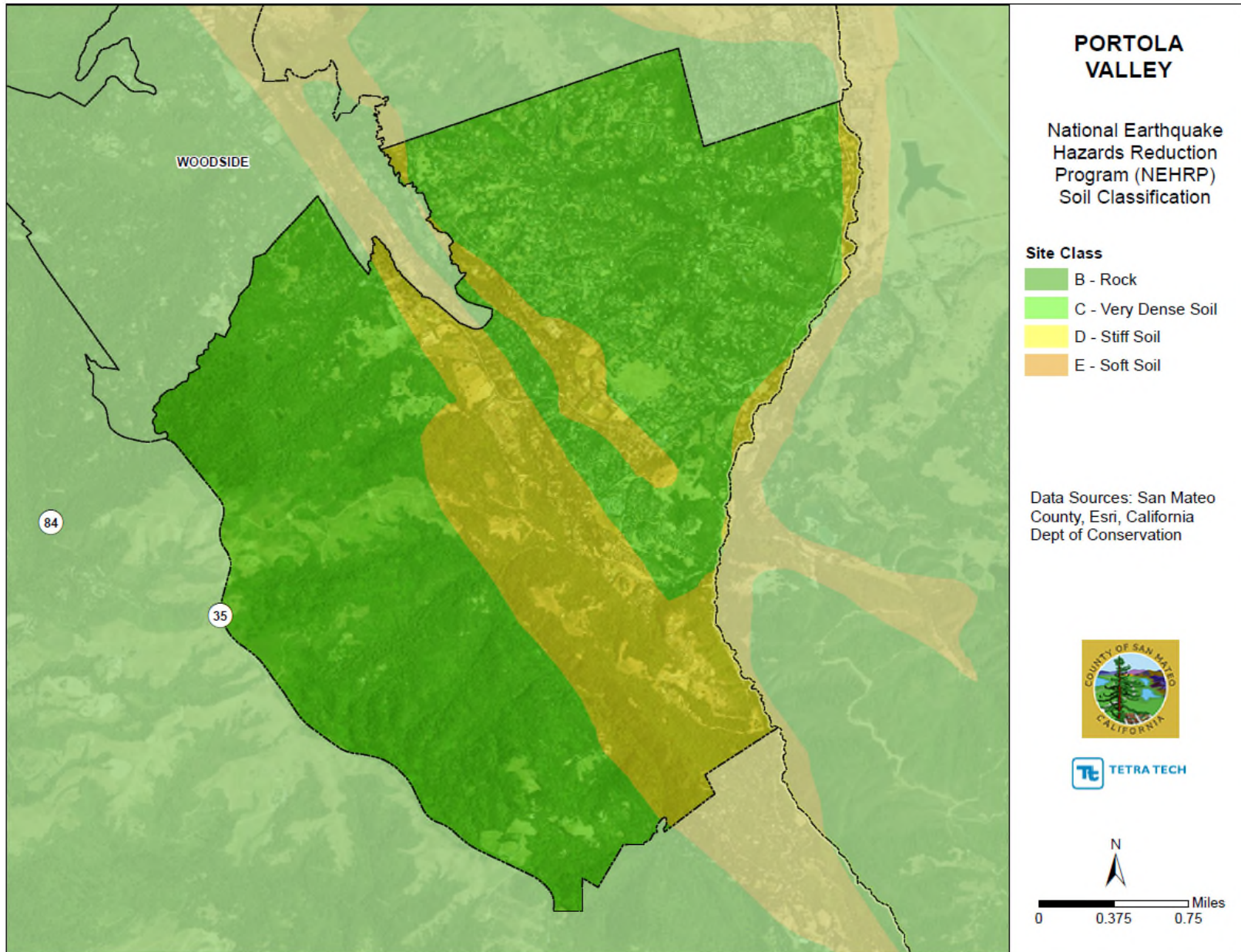
ANALYSIS OF MITIGATION ACTIONS

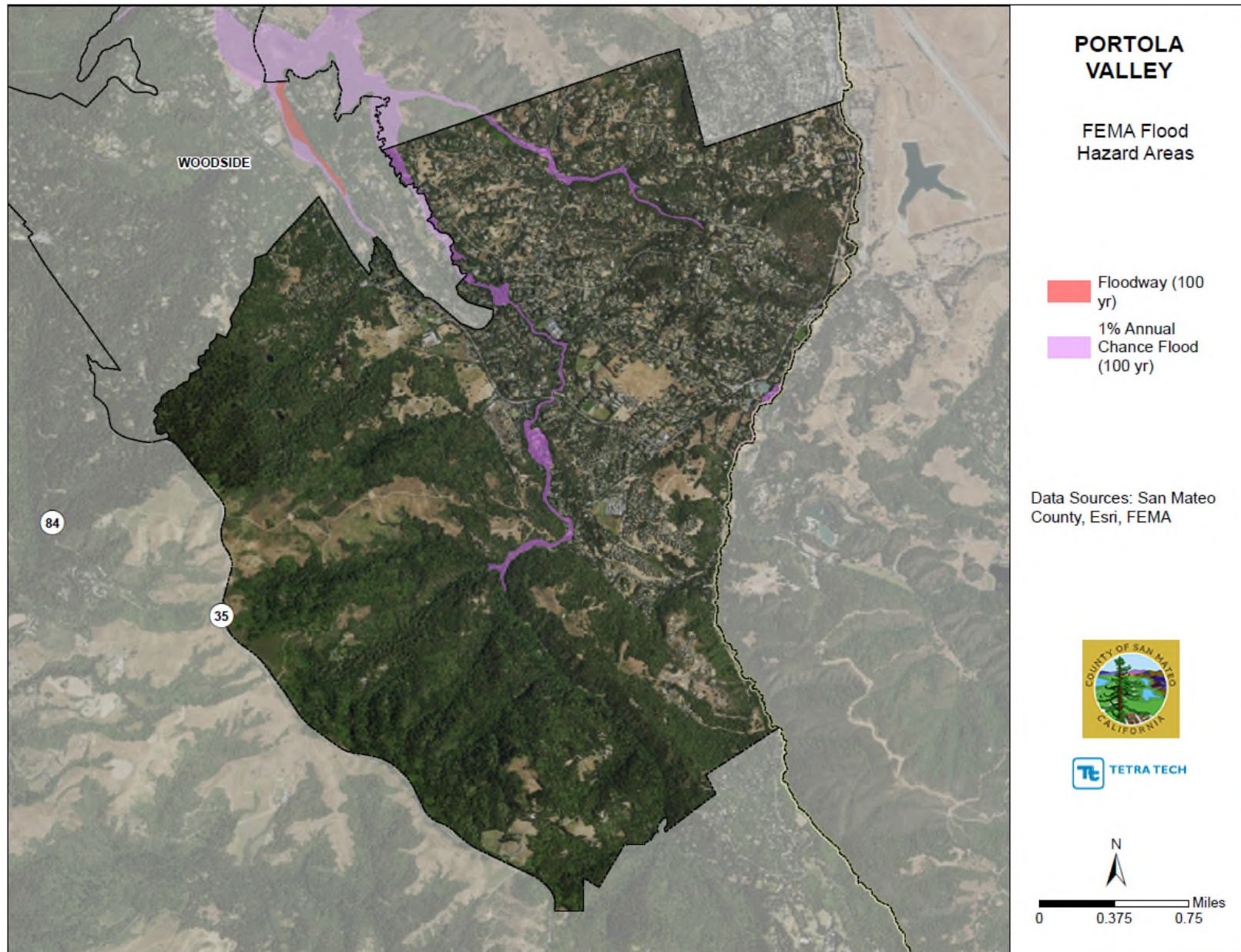
TABLE 14-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

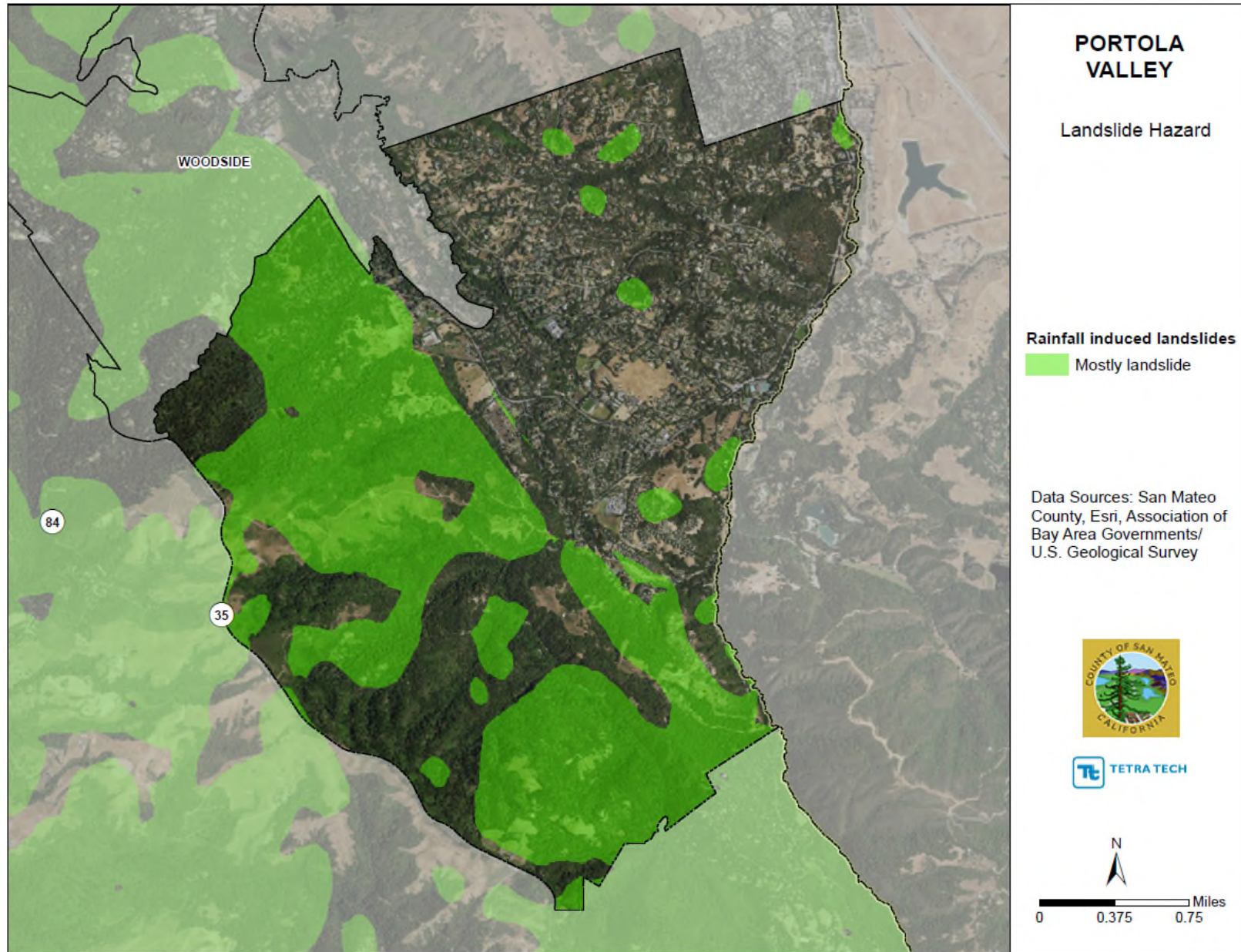
Hazard Type	Action Addressing Hazard, by Mitigation Type					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Drought	1,2,3,8	2,3,9	2,6, 9, 11, 13,15,16, 22	2,3,6,8,9,11,13		3
Earthquake	1,5, 20,21,22	4, 21	5, 10, 15, 21, 22 23		5, 7, 10, 17, 18, 23	4,7,10
Flood	1,22		15, 16, 22		7, 10, 17, 18	
Landslide	1, 20,22		15, 16, 22		7,10,17, 18	
Severe weather	1, 22		15, 16, 22		7, 10	
Wildfire	1, 12, 19, 21	12, 14, 19	10, 14, 15, 19, 23	12	7, 10, 17, 18, 23	7, 10

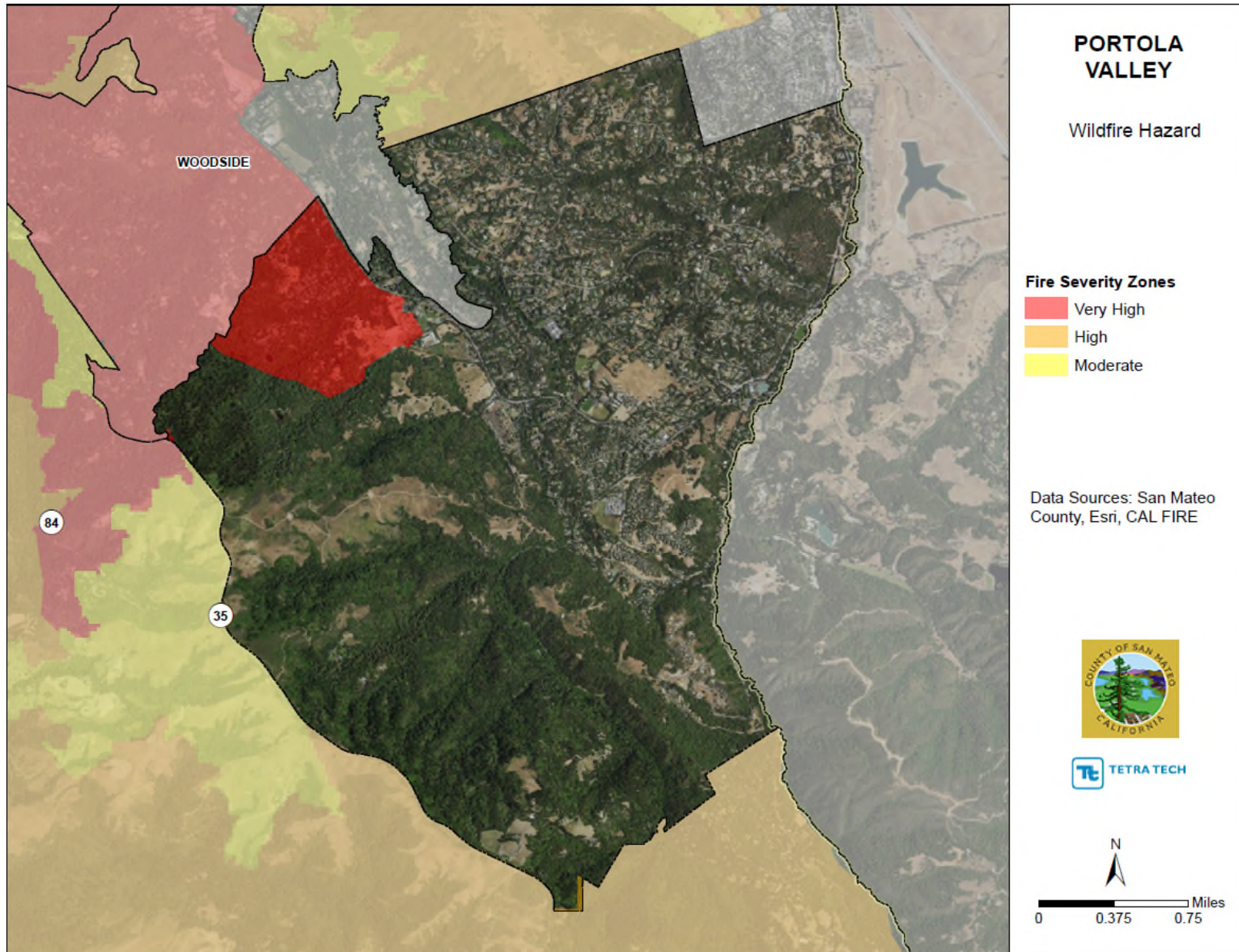














Chapter 15.

City of Redwood City

15.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

David Pucci, Deputy Chief, Redwood City Fire
755 Marshall St.
Redwood City, Ca. 94063
Telephone: 650-780-7400
e-mail Address: dpucci@redwoodcity.org

Alternate Point of Contact

Christy Adonis, Emergency Preparedness Coordinator
755 Marshall St.
Redwood City, Ca. 94063
Telephone: 650-780-7400
e-mail Address: cadonis@redwoodcity.org

15.2 Jurisdiction Profile

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

- ❖ **Date of Incorporation**—First incorporated 1867, Re-incorporated as a town in 1897⁷,
- ❖ **Current Population**—85,992 (as of January 1, 2016 – CA DOF)
- ❖ **Population Growth**—Redwood City has experiences a boom in population beginning in 2010. In 2014, the Silicon Valley Business Journal identified Redwood City as one of the top 5 fastest growing cities in Silicon Valley. The Journal estimates that between 2013 and 2014, Redwood City experienced a population growth of 2% - a boost that surpasses the actual percentage population increase from the 2000-2010 decade. The Business Journal theorizes that this population boom is the direct result of the growth of the tech industry in the area and the amenities associated with centrally located, urban areas⁸.

TABLE 15-1

Year	Population	Percentage Increase from Previous Decade	Source
2000	75,402 (actual)		U.S. Census 2000
2010	76,815 (actual)	1.9%	U.S. Census 2010
2020	84,892 (projection)	10.5%	Redwood City General Plan, Housing Element (May 2010)
2030	92,013 (projection)	8.4%	Redwood City General Plan, Housing Element (Adopted 10/20/2014)
Total projected percentage increase (2000-2030)		22%	

⁷ http://geonames.usgs.gov/apex/f?p=gnispq:3:0::NO::P3_FID:277584

⁸ <http://www.bizjournals.com/sanjose/news/2014/05/12/silicon-valleys-fastest-growing-cities-for-2014.html>

- ❖ **Location and Description**—The City of Redwood City is located in the State of California on the San Francisco Peninsula approximately 25 miles south of San Francisco and 27 miles north of the City of San Jose. The City is located in San Mateo County and is approximately 19 square miles in land area with a mean elevation of 15 feet above sea level. Redwood City is bordered by Menlo Park to the east, North Fair Oaks to the south, Foster City to the north, and San Carlos to the east. The City additionally wraps partially around Emerald Lake Hills to the west. The San Francisco Bay borders Redwood City to the east. The City hosts a section of U.S. Route 101 along to the east and provides easy access to Highway 280. Additionally, California’s historic thoroughfare, the El Camino Real (as California State Route 82), passes through central Redwood City. Redwood City is considered densely populated, with an estimated 3,955 persons per square mile compared to the California state average of 239 persons per square mile.

Redwood City contains natural geographical features along its border with the East Bay. Specifically, the City contains Redwood Shores, a community located on a San Francisco Bay lagoon. In addition to the developed Redwood Shores Lagoon, Redwood City contains Bair Island, a marsh area consisting of three islands – Inner, Middle, and Outer. The California Department of Fish and Game’s Bair Island Ecological Reserve consists of approximately 2,000 acres of the Middle and Outer Island while the remainder of the area are part of the Don Edwards Wildlife Refuge⁹. Bair Island represents the largest open space island in the San Francisco Bay and is home to a variety of animal species¹⁰.

Redwood City’s location on the San Francisco Bay serves as key factor in water transportation. The Port of Redwood City is the only deep water port in south San Francisco Bay with inland transportation access to the Union Pacific Railroad and U.S. Highway 101¹¹.

- ❖ **Brief History**—Redwood City is rich in history and local lore. As the oldest city on the San Francisco Peninsula, Redwood City has a long and varied history. Originally a port town during the Gold Rush, Redwood City became the County Seat of the newly formed San Mateo County in 1856. Downtown grew into a vital center for commerce, government, and manufacturing in the early 20th Century, before declining in the 1960s and 1970s. During the late 1900s and early 2000s Downtown Redwood City began revitalizing, and this revitalization continues today.

The land that eventually became Downtown Redwood City was once part of a vast Spanish rancho owned by the Arguello family, which was used for grazing cattle and horses and for providing missions in the area with supplies of food and animal hides. When California became part of the United States, the redwoods in the Santa Cruz Mountains were logged for use in construction to the north in rapidly growing San Francisco. Initially, the logs, cut from the redwood forests along the peninsula skyline, were dragged overland by oxen teams. Soon, however, a deep-water channel off the bay was discovered in what is now Downtown Redwood City. A wharf or “embarcadero” was established at the point furthest inland which was still navigable for shipping lumber to San

⁹ <https://www.wildlife.ca.gov/Lands/Places-to-Visit/Bair-Island-ER>

¹⁰ <http://www.sfgate.com/bayarea/article/NEW-LIFE-FOR-BAY-SANCTUARY-Once-farmland-salt-2570542.php>

¹¹ <http://www.redwoodcityport.com/p7iq/html/Overview.html>



Francisco. The availability of water transport greatly increased the efficiency of the lumber trade. A small village consisting of the homes of laborers connected with the redwood trade and supporting business sprang up around the wharf.

Redwood City exploded in population following World War II. The town expanded outward, annexing territory toward the Bay and inland toward the Santa Cruz Mountains. San Mateo County grew rapidly in population, and the county government built many large institutional buildings in the Downtown area. As regional shopping malls, freeways, and suburban sprawl siphoned energy away from Downtown, the area stagnated and declined. During this period, many historic buildings fell into disrepair or were lost altogether. Today the Historic Courthouse is beautifully restored and is the center of community life, bridging a proud past with a promising future¹².

- ❖ **Climate**—The slogan for Redwood City is “Climate Best by Government Test.” This slogan references a climatological report by the United States and German Governments before World War I that tied Redwood City for the world’s best climate with the Canary Islands and North Africa’s Mediterranean Coast¹³. Presently, Redwood City enjoys a typically Mediterranean climate characterized by warm, dry summers and mild winters. Historically, July is the warmest month for the city, with average high temperatures reaching low 80s. December and January are typically the coolest months, with average lows reaching the low 40s. July 1972 and January 1949 experienced record high and low temperatures of 110 degrees Fahrenheit and 16 degrees Fahrenheit, respectively. Average precipitation for the city is approximately 20 inches per year, with the wettest month being February (4.1”) and the driest being July (0”)¹⁴.
- ❖ **Governing Body Format**—The City of Redwood City is a Charter City. The type of government employed by the Redwood City is a Council-Manager format. This format is characterized by a legislative and executive branch. The legislative branch consists of a seven-member City Council. The City Council generally functions to provide legislative direction and set City policy. The executive branch consists of a Council-appointed City Manager. This City Manager is responsible for the operational activities of all City Departments; implementing the City’s general policy guidelines; submitting for adoption a balanced budget; recommending strategies and solutions to City Council; following legislative activities and keeping Council apprised of potential impacts to the City. The City Council assumes responsibility for the adoption of this plan; the City Manager will oversee its implementation.
- ❖ **Development Trends**—The redevelopment of Middlefield Road (Century Theater and “Theater Way”) in 2004, the removal of the Annex Building and development of Courthouse Square in 2006, and the adoption of the Downtown Precise Plan in 2011 set the stage for a development boom in downtown Redwood City. The DTPP created an urban vision along with a clear set of development standards and design guidelines for development in the core of downtown. By having the zoning in place as the market improved post- recession, developers were able to move quickly with project proposals.

¹² <http://www.redwoodcity.org/about-the-city/history>

¹³ <http://sanfrancisco.cbslocal.com/2015/04/24/why-is-climate-best-by-government-test-the-slogan-for-redwood-city/>

¹⁴ <http://www.weather.com/weather/monthly/l/Redwood+City+CA+94063:4:US>

Even though the downtown development caps for office and residential have been reached, development trends in Redwood City are expected to continue. The City has several newly-created Mixed-Use zoning corridors (2013) that are spurring new development along El Camino Real and Veterans Boulevard. Also, being a mid-peninsula stop for CalTrain as well as extensive service by SamTrans, the City will likely continue to attract high-density and transit-oriented development.

Specific development projects completed during the 2010-2015 period include a total of 13 residential and mixed use facilities, including a 305 unit residential complex, a 37,000 square foot assisted living facility and a 302,000 square foot office/retail space. Future anticipated development includes ten projects under construction and seven approved for construction. Notable projects currently under construction as of the writing of this plan include a 130,000 square foot mixed use facility, a 177 room, 109,000 square foot hotel, and a 67,000 square foot office building.

15.3 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 15-2. An assessment of fiscal capabilities is presented in Table 15-3. An assessment of administrative and technical capabilities is presented in Table 15-4. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 15-5. Classifications under various community mitigation programs are presented in Table 15-6. An assessment of education and outreach capabilities is presented in Table 15-7.

TABLE 15-2. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code	Yes	No	Yes
<i>Comment: The 2013 California Building Residential, Electrical, Mechanical, Plumbing, Energy, Historical Building, Existing Building, and Green Building Standards Codes, as adopted by the California Building Standards Commission, were adopted by reference by Redwood City in January, 2014. Redwood City Municipal Code (RCMC) Chapter 9</i>			
Zoning Code	Yes	No	No
<i>Comment: Redwood City Zoning Codes were most recently updated on December 7, 2015 through Ordinance No. 1130-365, new zoning code language reflects higher regulation standards for sloping lots specifically to mitigate against wildfire and landslide hazards (Ord. No. 1130-363, § 4, 6-22-15)</i>			
Subdivisions	Yes	No	No
<i>Comment: RCMC Chapter 30. Subdivision Ordinance was updated on January 9 2012, Ord 2374.</i>			
Stormwater Management	Yes	No	Yes
<i>Comment: RCMC, Chapter 27A, Ordinance No. 2090, June 12, 1995</i>			
Post-Disaster Recovery	No	No	No
<i>Comment:</i>			



TABLE 15-2. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Real Estate Disclosure	No	No	Yes
Comment: CA. State Civil Code 1102 requires full disclosure on Natural hazard Exposure of the sale/re-sale of any and all real property.			
Growth Management	Yes	No	Yes
Comment: The Housing Element of the Redwood City General Plan contains information regarding growth management in Redwood City. The Housing Element was last updated and adopted in October 2014.			
Site Plan Review	Yes	No	Yes
Comment: Engineering Design Standards – June 2014			
Environmental Protection	No	No	No
Comment:			
Flood Damage Prevention	Yes	No	No
Comment: RCMC Chapter 41, Ordinance No. 22777, January 10, 2005			
Emergency Management	Yes	No	Yes
Comment: RCMC, Chapter 10, Ordinance No. 1524, § 2, February 14, 1972			
Climate Change	No	No	Yes
Comment: SB 97 directs California Environmental Quality Act (CEQA) Guidelines to address greenhouse gas emissions. Other state policies include AB 32 and SB 375 and regulations of the Climate Action Plan.			
Other	Yes	No	No
Comment: Water Model Efficient Landscape Ordinance, December 2015, Eastern Low Lying Area Drainage Master Plan, 2010 Urban Water management Plan, Seismic Vulnerability Assessment Pipe Replacement Assessment			
General or Comprehensive Plan	Yes	No	Yes
<i>Is the plan equipped to provide linkage to this mitigation plan? Yes</i>			
Comment: Safety and housing elements are regularly updated and provide opportunity for hazard mitigation integration.			
Capital Improvement Plan	Yes	No	No
<i>What types of capital facilities does the plan address? Water, sewer, stormwater</i>			
<i>How often is the plan updated? 5-10 years</i>			
Comment: CIP part of RC Master Plan			
Floodplain or Watershed Plan	No	No	No
Comment:			
Stormwater Plan	Yes	No	Yes
Comment: California Statewide Stormwater Management Plan, last revised in 2012; Redwood City – June 2015			
Habitat Conservation Plan	No	No	No
Comment:			
Economic Development Plan	Yes	No	No
Comment: Economic Development is addressed in the General Plan.			
Shoreline Management Plan	No	No	No
Comment:			



TABLE 15-2. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Community Wildfire Protection Plan	Yes	Yes	Yes
<i>Comment: San Mateo County CWPP, May 2010</i>			
Forest Management Plan	No	No	No
<i>Comment:</i>			
Climate Action Plan	Yes	No	No
<i>Comment: City of Redwood City Climate Action Plan, April 22, 2013</i>			
Other	Yes	No	No
<i>Comment: Downtown Precise Plan, July 2013; Flood Incident Response Annex to the Redwood City EOP.</i>			
Comprehensive Emergency Management Plan	Yes	No	Yes
<i>Comment: Redwood City Emergency Operations Plan - 2006</i>			
Threat & Hazard Identification & Risk Assessment	No	No	No
<i>Comment:</i>			
Post-Disaster Recovery Plan	No	No	No
<i>Comment:</i>			
Continuity of Operations Plan	Yes	No	No
<i>Comment: Redwood City EOP contains a COOP plan during pandemic incidents, 2009</i>			
Public Health Plan	No	Yes	No
<i>Comment: San Mateo County Health Plans, reports, and Community Health Needs Assessments</i>			

TABLE 15-3. FISCAL CAPABILITY

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

TABLE 15-4. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Community Development Department – Planning & Engineering, Engineers



TABLE 15-4. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Engineers or professionals trained in building or infrastructure construction practices	Yes	Community Development Department – Building Inspection and Code Enforcement, Building Inspectors
Planners or engineers with an understanding of natural hazards	Yes	Community Development Department – Planning & Engineering, Engineers
Staff with training in benefit/cost analysis	Yes	Community Development Department – Planning & Engineering, Engineers
Surveyors	Yes	Community Development Department – Contracted service – dependent on funding
Staff capable of making substantial damage estimates	Yes	Community Development Department – Building Inspection and Code Enforcement, Building Inspectors
Personnel skilled or trained in GIS applications	Yes	Community Development Department – Planning Services - Maps, GIS & Property Research - GIS Coordinator
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Fire Department – Disaster Preparedness, Emergency Preparedness Coordinator
Grant writers	Yes	Grant writers available in departments for most grants – contracted service for larger grants (dependent on funding)

TABLE 15-5. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	05/17/1982
When did the Flood Insurance Rate maps become effective?	07/15/2015
What local department is responsible for floodplain management?	Community Development Department
Who is your floodplain administrator? (department/position)	Community Development Department – City Engineer
• Is this a primary or auxiliary role?	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	January 10, 2005
• Does your floodplain management program meet or exceed minimum requirements?	Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	October 2014
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No



TABLE 15-5. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
Do your flood hazard maps adequately address the flood risk within your jurisdiction? • If no, please state why.	No Not revised to include coastal hazards and Sea Level Rise.
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	Yes CFM training/designation would be beneficial
Does your jurisdiction participate in the Community Rating System (CRS)? • If not, is your jurisdiction interested in joining the CRS program?	No No
How many Flood Insurance policies are in force in your jurisdiction? • What is the insurance in force? • What is the premium in force?	315 \$97,688,100 \$245,375
How many total loss claims have been filed in your jurisdiction? • How many claims were closed without payment/are still open? • What were the total payments for losses?	37 8 \$438,904.88

TABLE 15-6. COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	No	N/A	N/A
Building Code Effectiveness Grading Schedule	No	N/A	N/A
Public Protection	Yes	2	2013
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A

TABLE 15-7. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes – City Manager’s Office – Public Communication Manager
Do you have personnel skilled or trained in website development?	Yes – Part of Finance Department - Information Technology’s function
Do you have hazard mitigation information available on your website?	No
Do you utilize social media for hazard mitigation education and outreach?	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs already in place that could be used to communicate hazard-related information?	No
Do you have any established warning systems for hazard events?	Yes



TABLE 15-7. EDUCATION AND OUTREACH

Criteria	Response
<ul style="list-style-type: none"> If yes, please briefly describe. 	Redwood City encourages registration with SMC Alert

15.4 Integration with Other Planning Initiatives

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

15.4.1 Existing Integration

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

- ❖ City of Redwood City General Plan, Safety Element—The City of Redwood City has already integrated hazard mitigation into the General Plan Safety Element, including specific initiatives on hazard mitigation planning updates, hazard risks, and associated objectives.

15.4.2 Opportunities for Future Integration

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

- ❖ General Plan, Safety Element – Per SB-379, Redwood City is anticipating an update to their safety element to reflect vulnerability assessment results for climate change impacts. These assessment results will reprioritize identified climate change related goals, policies and objectives currently identified in the Safety Element. Though not required during this 2016 planning process, Redwood City’s proactive approach to planning and compliance will result in a streamlined safety element update following the 2021 LHMP planning process.
- ❖ General Plan, Housing Element – The Housing Element of the City’s General Plan currently includes information on certain hazards (i.e. fire, earthquake, and hazardous materials). The City recognizes that the next update to the Housing Element would benefit greatly through the incorporation of elements of the hazard mitigation. The City intends to review current parallels between both planning initiatives for future integration.
- ❖ Redwood City Community Climate Action Plan – The Climate Action Plan provides the City with an opportunity to directly integrate hazard mitigation with existing goals and objectives. Since the Climate Action Plan already provides a strategic guide for minimizing the impact of human activity on the environment, integration of hazard mitigation is a fitting and strategic next step. Redwood City anticipates that future assessments to the Climate Action Plan will include hazard mitigation as it relates to air quality, land use, and other factors.
- ❖ Public Outreach – Redwood City recognizes that there are currently public information opportunities available to facilitate public engagement regarding hazard mitigation. The City will look into



developing a more robust program that involves using these current capabilities to expand outreach specific to hazard mitigation.

- ❖ Redwood City is currently working with other jurisdictions to establish a flood control district before the next hazard mitigation update cycle. The establishment of the flood control district would provide Redwood City and other affected jurisdictions with additional subject matter expertise and assistance in regional flood hazard identification, regulations, remediation, and public education.
- ❖ The City of Redwood City’s Downtown Precise Plan describes the future of the downtown area, regulates private development, and recommends future City projects. Integration of hazard mitigation goals and objectives will be considered during the next update of this plan.
- ❖ The City of Redwood City’s Draft Inner Harbor Specific Plan (IHSP) includes information regarding sea-level rise and an overall, long term adaptation strategy for the IHSP area. Integration of appropriate hazard mitigation goals and objectives could be considered for inclusion in the final, adopted IHSP. The Final IHSP is expected sometime after the adoption of the HMP.
- ❖ The City of Redwood City intends to review the Building Code Effectiveness Grading Schedule for potential implementation.

15.5 Jurisdiction-Specific Natural Hazard Event History

Table 15-6 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 15-6. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Flood	N/A	12/11/2014	Flooding caused damage to multiple manufactured homes – property and personal property damage reported.
Fire	FM-2856	9/10/2010	Mutual aid provided in fire response.
Severe Storm (s)	N/A	1/20/2010	Minor flooding and power outages reported. Tree debris from storm winds.
Severe Storm (s)	N/A	10/13/2009	Minor flooding and power outages reported. Tree debris from storm winds.
Severe Storm(s)	DR-1646	6/5/2006	Minor flooding and power outages reported. Tree debris from storm winds.
Severe Storm(s)	DR-1628	2/3/2006	Minor flooding and power outages reported. Tree debris from storm winds.
Severe Storm(s)	DR-1203	2/9/1998	Minor flooding and power outages reported. Tree debris from storm winds.



TABLE 15-6. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Storm(s)	DR-1155	1/4/1997	Minor flooding and power outages reported. Tree debris from storm winds.
Severe Storm(s)	N/A	3/4/1996	Minor flooding and power outages reported. Tree debris from storm winds.
Severe Storm(s)	DR-1046	3/12/1995	Minor flooding and power outages reported. Tree debris from storm winds.
Severe Storm(s)	DR-1044	1/10/1995	Minor flooding and power outages reported. Tree debris from storm winds.
Freezing	DR-894	2/11/1991	Reports of dead trees – subsequent safety concern for falling trees and wildfire fuels.
Earthquake	DR-845	10/18/1989	\$3 million in damages to old City courthouse.
Flood	DR-758	2/21/1986	Unknown
Coastal Storm	DR-677	2/9/1983	Unknown
Flood	DR-651	1/7/1982	Unknown
Drought	EM-3023	1/20/1977	Unknown
Flood	DR-145	2/25/1963	Unknown
Severe Storm(s)	DR-138	10/24/1962	Unknown
Flood	DR-122	3/6/1962	Unknown
Flood	DR-82	4/4/1958	Unknown
Fire	DR-65	12/29/1956	Unknown
Flood	DR-47	12/23/1955	Unknown
Flood	DR-15	02/05/1954	Unknown

15.6 Jurisdiction-Specific Vulnerabilities

Repetitive loss records are as follows:

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

Other noted vulnerabilities include:

- ❖ Redwood Shores –The Redwood Shores community was built upon reclaimed land in the San Francisco Bay marshes. The soft ground that supports the community, known as bay mud, poses

serious liquefaction concerns for a moderate to large earthquake. Additionally, Redwood Shores is vulnerable to sea-level rise due to the large levee system that currently shields the community from the bay.

- ❖ Pacific Shores and Seaport Center – Both areas are known to be at-risk flood areas, particularly when combined with natural tidal phenomenon.
- ❖ Route 101/Bayshore Road – A series of manufactured homes along Route 101 and Bayshore Road are identified at-risk areas for flooding.

15.7 Hazard Risk Ranking

Table 15-7 presents the ranking of the hazards of concern.

TABLE 15-7. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe Weather	33	High*
3	Wildfire	15	High*
4	Flood	18	Medium
5	Landslide	18	Medium
6	Dam and Reservoir Failure	10	Low
7	Tsunami	9	Low
8	Drought	3	Low

*Severe weather and wildfire changed to high due to local knowledge and experience with these hazards and their overall impact on the community.

15.8 Status of Previous Plan Initiatives

Table 15-8 summarizes the initiatives that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

TABLE 15-8 HAZARD MITIGATION ACTION PLAN MATRIX

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
Action 1.A —Review the General Plan Public Safety Element, Municipal Code, Zoning Regulations, hazard area maps, and LHMP implementation strategies for consistency with each other.	X		
Comment: Ongoing initiative that is a standard jurisdictional practice.			



TABLE 15-8 HAZARD MITIGATION ACTION PLAN MATRIX

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
Action 1.B —Train fire fighters, police officers, building inspectors, public works, community development, construction and inspection and parks and recreation staff to levels appropriate for their hazard mitigation tasks and responsibilities.		X	
<i>Comment:</i> Rephrased for clarity and carried over into the new plan.			
Action 1.C —Provide training for City staff who apply its building regulations and planning standards, emphasizing the lessons learned in locations that have experienced disasters.	X		
<i>Comment:</i> Ongoing initiative that is a standard jurisdictional practice.			
Action 1.D —Conduct disaster-preparedness exercises for the types of hazards discussed in this LHMP.		X	
<i>Comment:</i> Rephrased for focus on less-exercised hazards and carried over into the new plan.			
Action 1.E —Apply training to City staff to deal with emergencies and to levels appropriate for their hazard mitigation tasks and responsibilities.		X	
<i>Comment:</i> Ongoing initiative – partially complete. Carry over to include language on training for new employees.			
Action 2.A —Support the efforts and education of people with disabilities to prepare for disasters.		X	
<i>Comment:</i> Carry over and rephrase to emphasize coordination with the County and awareness level training.			
Action 2.B —Distribute appropriate public information about hazard mitigation programs and projects at City-sponsored events.		X	
<i>Comment:</i> Currently no mitigation specific information is available. Rephrase and carry over with an intent to develop mitigation-focused materials.			
Action 2.C —Train citizens to deal with emergencies at times when professional responders would be overwhelmed.	X		
<i>Comment:</i> Ongoing initiative that is a standard jurisdictional practice through the City’s CERT program. Federal process identifies CERT as part of response.			
Action 3.A —Continue to enforce the Uniform Building Code provisions pertaining to grading and construction relative to seismic hazards.	X		
<i>Comment:</i> Ongoing initiative that is a standard jurisdictional practice.			
Action 3.B —Continue to enforce Uniform Building Code requirements for addressing liquefaction potential in the design of structures.	X		
<i>Comment:</i> Ongoing initiative that is a standard jurisdictional practice			



TABLE 15-8 HAZARD MITIGATION ACTION PLAN MATRIX

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
Action 3.C —The water department will examine its existing infrastructure, identify sources of potential funding to upgrade its older facilities, and install new infrastructure to the latest seismic standards under its Seismic Improvement Plan (SIP 1-4). Replacement of non-seismically-designed water-system infrastructure and pipelines may take well over one hundred years to accomplish, leaving the city potentially very vulnerable to a loss of water supply in a large earthquake for the next several decades future until new sources of mitigation funds are identified and retrofits completed.		X	
Comment: Some infrastructure successfully upgraded, however more upgrades are needed. Carry over to new plan with minor change			
Action 4.A —Develop and carry out environmentally sensitive flood reduction programs.		X	
Comment:			
Action 4.B —Require engineered floodplain and hydrologic analysis to be prepared for new development projects within or directly adjacent to 100-year floodplains.			
Comment: Ongoing initiative that is a standard jurisdictional practice			
Action 4.C —Limit uses in floodways to those tolerant of occasional flooding, including but not limited to outdoor recreation and natural resource areas.	X		
Comment: Ongoing initiative that is a standard jurisdictional practice			
Action 5.A —Require construction and/or maintenance of natural and/or human-made retaining structures that will help control landslide risk in key residential and/or commercial areas.	X		
Comment: Ongoing initiative that is a standard jurisdictional practice included in the Redwood City Building Code.			
Action 5.B —Require retrofit or implement stabilizing measures for hillside developments within moderate to high landslide areas that predate current best practices and codes.	X		X
Comment: Ongoing initiative that is a standard jurisdictional practice regarding new development. Requiring retrofit for existing buildings is not feasible due to private property ownership.			
Action 5.C —Require any development proposed in an area of moderate or high landslide potential to be subject to review and recommendation by a State-registered engineering geologist.	X		
Comment: Ongoing initiative that is a standard jurisdictional practice.			
Action 6.A —Maintain the California defensible space ordinance (Gov. Code 51182 and California Building Code 7a) which requires that buildings that are within areas of moderate fire hazard areas and which are close to areas of high or extreme fire hazard areas shall maintain 100’ of defensible space (or the distance to the property line, whichever is closer) and have noncombustible exteriors.		X	
Comment: Carry over with revised language.			



TABLE 15-8 HAZARD MITIGATION ACTION PLAN MATRIX

Action Item	Completed	Carry Over to Plan Update	Removed; No Longer Feasible
Action 6.B —Continue to conduct current fuel management programs and investigate and apply new and emerging fuel management techniques.	X		X
<i>Comment:</i> Ongoing initiative that is a standard jurisdictional practice regarding fuel management programs when feasible or due to secondary effects. Redwood City conducts weed abatement procedures and established fire roads serve a dual purpose for fuel management, however, traditional and emerging techniques for fuel management are not feasible within City limits.			
Action 6.C —Continue to require an enhanced fire protection plan in high or extreme wildland fire hazard areas.	X		
<i>Comment:</i> Ongoing initiative that is a standard jurisdictional practice through EOP Annex, training, exercise and response initiatives.			

15.9 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 15-9 lists the actions that make up the City of Redwood City hazard mitigation action plan. Table 15-10 identifies the priority for each action. Table 15-11 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 15-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action RC-1 —Train Redwood City staff directly involved in hazard mitigation process and project implementation to levels appropriate for their hazard mitigation tasks and responsibilities.						
N/A	All	1, 2, 3, 5, 6, 8, 10	Redwood City Fire, Community Development, Engineer	Low	General Fund	Ongoing
Action RC-2 —Conduct disaster-preparedness exercises for the types of hazards discussed in this LHMP with a focus on less-exercised hazards such as landslide and flood response.						
N/A	All	1, 2, 3, 5, 6, 8, 10	Redwood City	Low / Medium	General Fund, FEMA Grants, DHS Grants	Ongoing
Action RC-3 —Develop an awareness level training program for new City staff to address emergencies and to levels appropriate for their hazard mitigation tasks and responsibilities.						
N/A	All	1, 2, 3, 6, 8, 10	Redwood City	Low	General Fund	Ongoing



TABLE 15-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action RC-4 —Examine the City’s existing infrastructure, identify sources of potential funding to upgrade its older facilities, and install new infrastructure to the latest seismic standards under its Seismic Improvement Plan. The seismic vulnerability assessment – Water distribution system assessment has identified key water infrastructure that should be replaced to mitigate the effect of seismic events.						
Existing	Earthquake	1, 3, 4, 5, 6, 7	Redwood City Engineer	Medium	General Fund, CDBG, FEMA Hazard Mitigation Grants	Short-Term
Action CRC-5 —Develop and carry out environmentally sensitive flood reduction programs.						
Existing	Flood, Severe Weather	1, 3, 4, 5, 6, 7, 11	Redwood City Community Development	Medium / High	General Fund, FEMA Hazard Mitigation Grants, EPA Grants	Long-term
Action RC-6 —Develop a targeted wildfire awareness public information program for property owners in the WUI, including information on managing potential fuel sources on their privately owned property..						
N/A	Wildfire	2, 3, 7, 9	Redwood City Fire	Low	General Fund	Short-term and Ongoing
Action RC-7 —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.						
Existing	All	1, 3, 4, 5, 6, 7, 11	Redwood City	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
Action RC-8 —Continue to support the countywide actions identified in this plan.						
New and existing	All	All	Redwood City	Low	General Fund	Short- and long-term
Action RC-9 —Actively participate in the plan maintenance strategy identified in this plan.						
New and existing	All	All	DHSEM, Redwood City	Low	General Fund	Short-term
Action RC-10 —Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.						
New and existing	All	All	Redwood City	Low	General Fund	Long-term
Action RC-11 —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.						
New and existing	Flooding	2, 3, 5, 6, 8	Redwood City	Low	General Fund	Short-term and ongoing



TABLE 15-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action RC-12 —Where feasible, implement a program to record high water marks following high-water events.						
New and existing	Flooding, Severe Weather	1, 3, 4, 5, 6	Redwood City	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
Action RC-13 —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	Redwood City	Low	General Fund	Short-term
Action RC-14 —Improve the recycled water system as outlined in Phase II.A and Phase II.B Pipeline Alignment Study to alleviate demand on the domestic water system during times of drought.						
Existing	Drought	1, 4, 5, 6	Redwood City Public Works	High	General Fund, Federal and State Grants	Long-term
Action RC-15 —Continue to evaluate the City’s stormwater drainage and pumping system to determine upgrades to mitigate flooding conditions.						
Existing	Flooding, Severe Weather	1, 3, 4, 5, 7	Redwood City Public Works, Engineer	Low	General Fund	Ongoing
Action RC-16 —Upgrade and add sanitary sewer lines in accordance with the 2013 Sewer System Master Plan to add capacity and redundancy, while reducing the risk of major service blockage.						
New and existing	Flooding, Earthquake	1, 3, 4, 5, 7, 11	Redwood City Public Works, Engineer	Medium / High	General Fund, FEMA Hazard Mitigation Grants	Short-term
Action RC-17 —Seek opportunities to improve upon or exceed minimum standards regarding defensible space, where able and appropriate.						
N/A	Wildfire	1, 4, 5, 6, 7	Redwood City Public Works, Fire	Medium	General Fund	Ongoing
Action RC-18 —Conduct engineering study on Fire Station 12 to test seismic stability and other hazard-related structural standards.						
Existing	Earthquake	1, 2, 3, 4, 6, 7	Redwood City Engineer, Fire	Medium	General Fund, FEMA Hazard Mitigation Grants	Short-term
Action RC-19 —Implement recommendations provided by Fire Station 12 study.						
Existing	Earthquake	1, 2, 3, 4, 6, 7	Redwood City Engineer, Fire	Medium / High	General Fund, FEMA Hazard Mitigation Grants	Long-term
Action RC-20 —Conduct engineering study on Public Works building to test seismic stability and other hazard-related structural standards.						
Existing	Earthquake	1, 2, 3, 4, 6, 7	Redwood City Engineer, Public Works	Medium	General Fund, FEMA Hazard Mitigation Grants	Short-term



TABLE 15-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action RC-21 —Implement recommendations provided by Public Works building study.						
Existing	Earthquake	1, 2, 3, 4, 6, 7	Redwood City Engineer, Public Works	Medium / High	General Fund, FEMA Hazard Mitigation Grants	Long-term
Action RC-22 —Determine status of local dams through continued communications with the County.						
Existing	Dam Failure, Flooding	1, 2, 3, 4, 6, 7, 8, 10	Redwood City Engineer, Public Works	Low	General Fund	Short-term and ongoing
Action RC-23 —Establish a vegetation management program that focuses on clearing and maintenance of the hillside.						
Existing	Wildfire, Severe Weather	4, 5, 6, 7, 8	Redwood City Fire, Public Works	Medium	General Fund, Federal and State Grants	Short-term and ongoing
Action RC-24 —Continue drought public outreach, including the encouragement of water conservation methods during non-drought times.						
N/A	Drought	1, 2, 3, 5, 6	Redwood City Fire, Community Development	Low	General Fund	Ongoing
Action RC-25 —Expand the recycled water system to work towards City-wide coverage.						
Existing	Drought, Earthquake, Wildfire	1, 4, 5, 6	Redwood City Public Works	High	General Fund, Federal and State Grants	Long-term
Action RC-26 —Collect data to better understand the tsunami hazard and its effect on Redwood City.						
N/A	Tsunami	1, 3, 4, 6, 8	Redwood City Community Development, Fire	Low	General Fund	Short-term
Action RC-27 — Evaluate adequacy of existing levees and make improvements on levees to reduce impacts from flooding and coastal hazards.						
Existing	Flooding, Tsunami	1, 3, 4, 5, 6, 7, 11	Redwood City Public Works, Building	Medium / High	General Fund, Federal (FEMA, USACE) and State Grants	Long-term



TABLE 15-10. MITIGATION STRATEGY PRIORITY SCHEDULE

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



TABLE 15-10. MITIGATION STRATEGY PRIORITY SCHEDULE

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Priority ^a
Action RC-20	6	Medium	Medium	Yes	Yes	Yes	High	Medium
Action RC-21	6	High	Medium / High	Yes	Yes	Partial	Medium	Medium
Action RC-22	8	Medium	Low	Yes	No	Yes	High	Low
Action RC-23	5	Medium	Medium	Yes	Yes	Yes	Medium	Medium
Action RC-24	5	Medium	Low	Yes	No	Yes	High	Low
Action RC-25	4	High	High	Yes	Yes	Partial	Medium	High
Action RC-26	5	Low	Low	Yes	No	Yes	Medium	Low
Action RC-27	7	High	Medium / High	Yes	Yes	Partial	High	High

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

TABLE 15-11. ANALYSIS OF MITIGATION ACTIONS

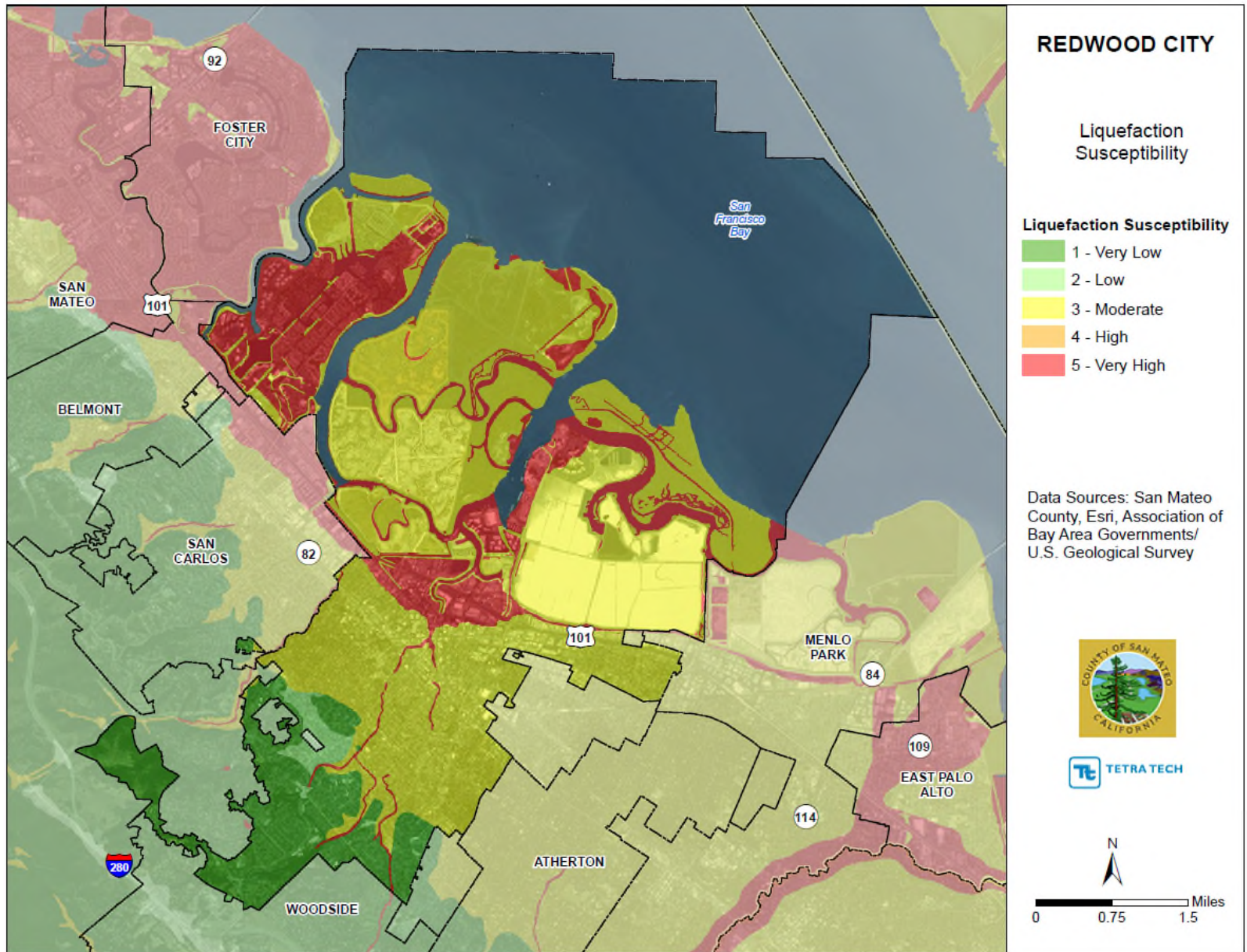
Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Climate Change	1, 2, 3, 7, 8, 9, 10, 13	10	1, 2, 3, 10	-	2	7
Dam Failure	1, 2, 3, 7, 8,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

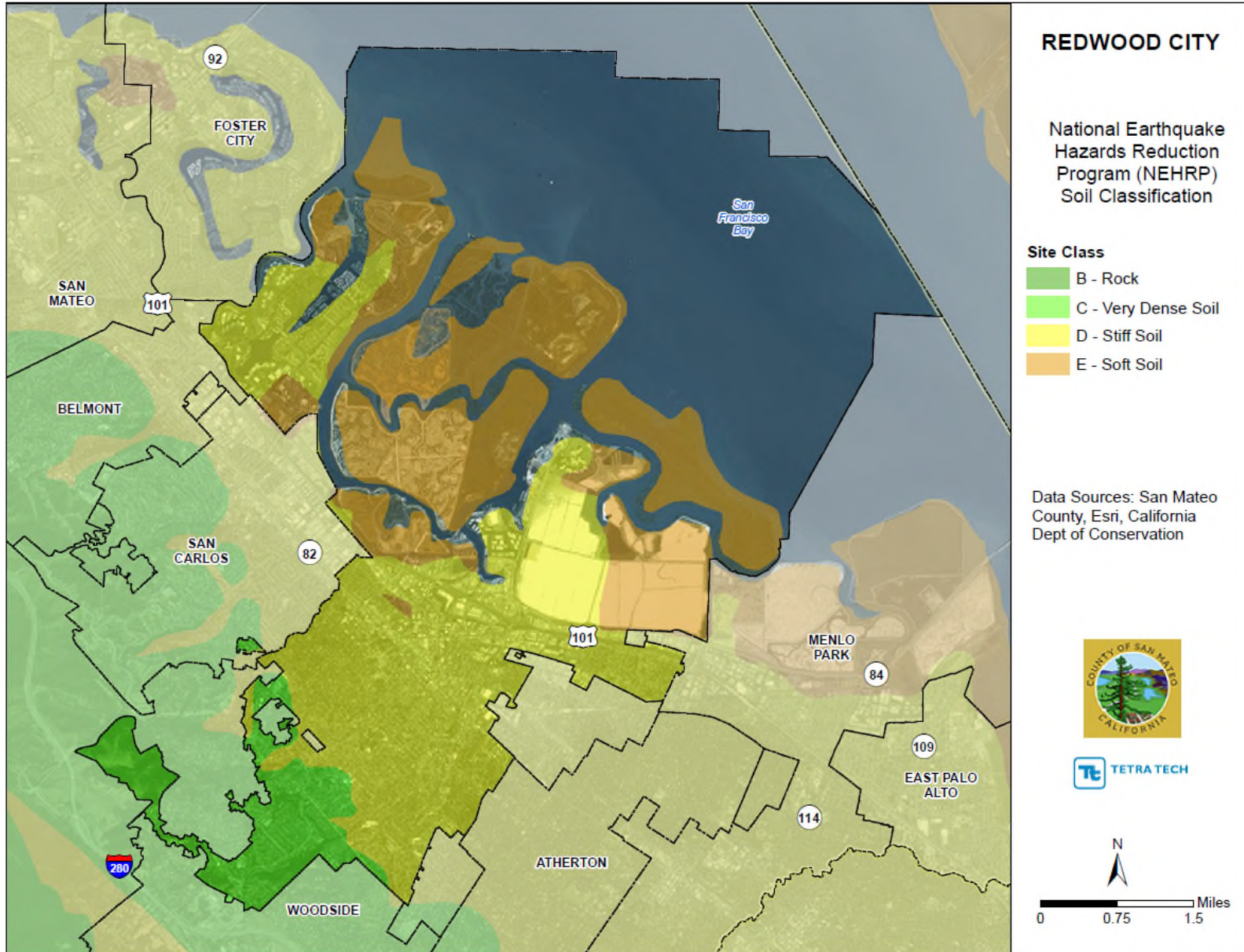


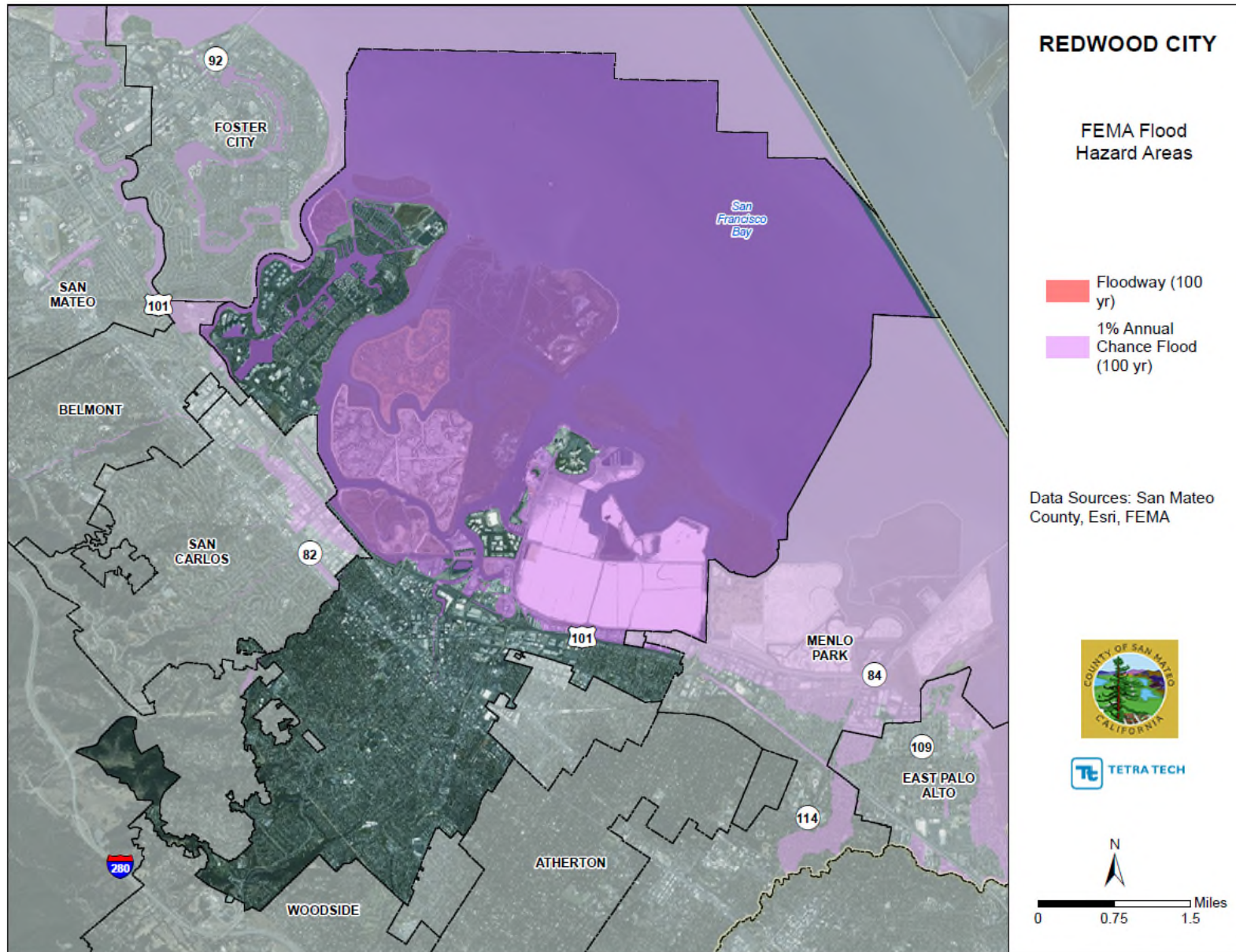
TABLE 15-11. ANALYSIS OF MITIGATION ACTIONS

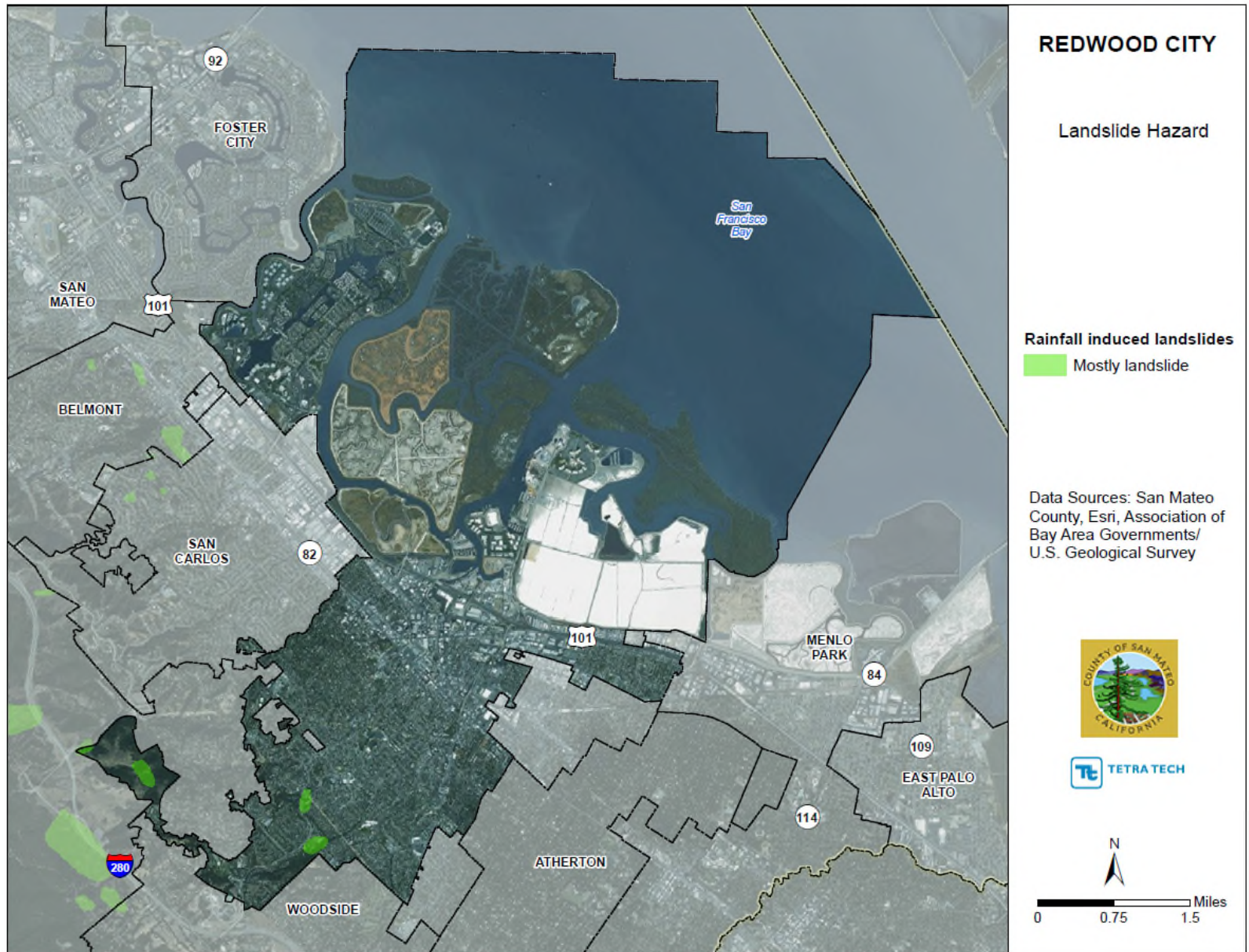
Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Severe Weather	1, 2, 3, 4, 7, 8, 9, 10, 12, 13, 15, 23	10, 12, 15	1, 2, 3, 10	5, 23	2	7, 15
Tsunami	1, 2, 3, 7, 8, 9, 10, 13, 27	10, 27	1, 2, 3, 10, 26	-	2	7, 27
Wildfire	1, 2, 3, 7, 8, 9, 10, 13, 17, 23	10	1, 2, 3, 6, 10	23	2	7
Human-Caused Hazards	1, 2, 3, 7, 8, 9, 10, 13	10	1, 2, 3, 10	-	2	7

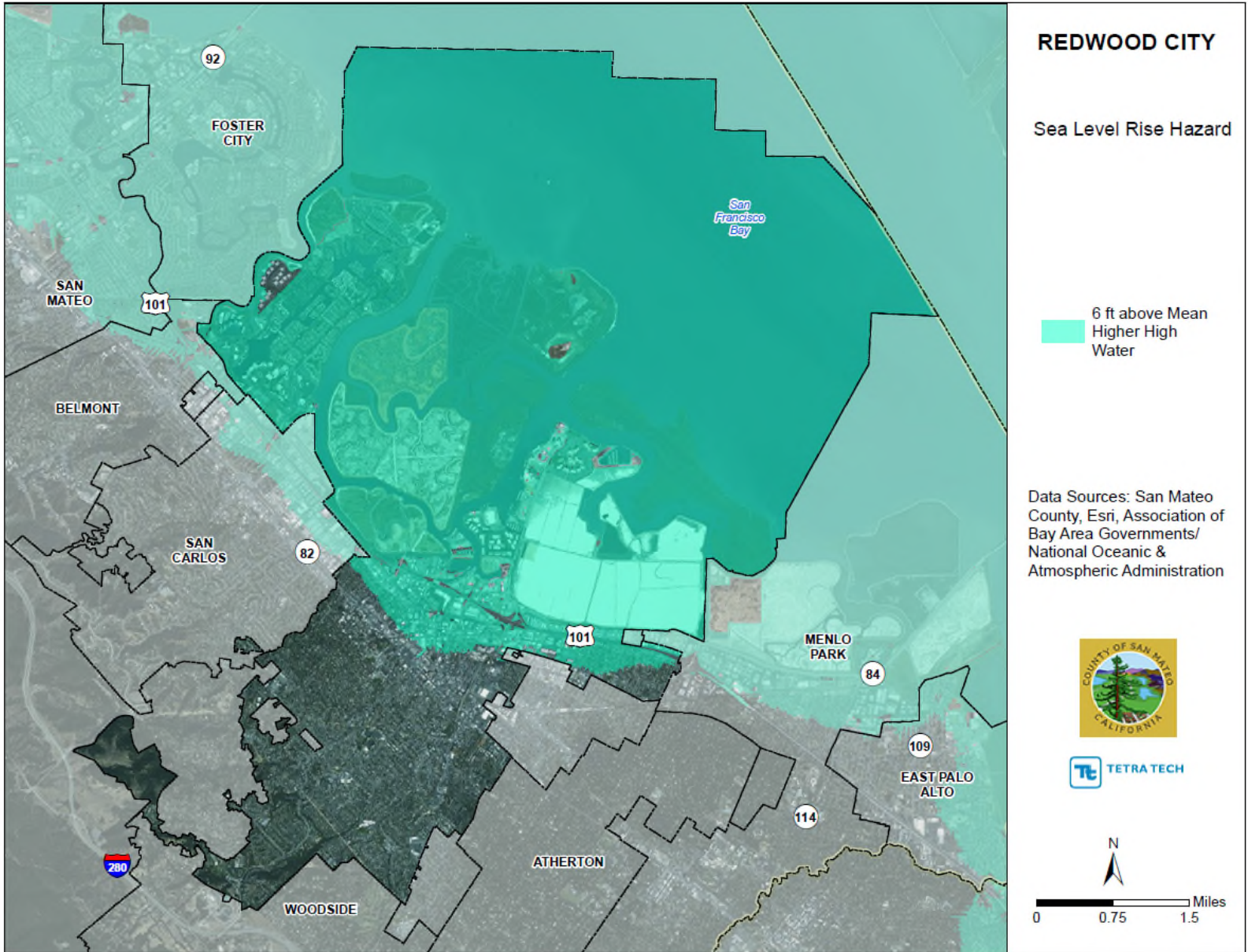
a. See the introduction to this volume for explanation of mitigation types.

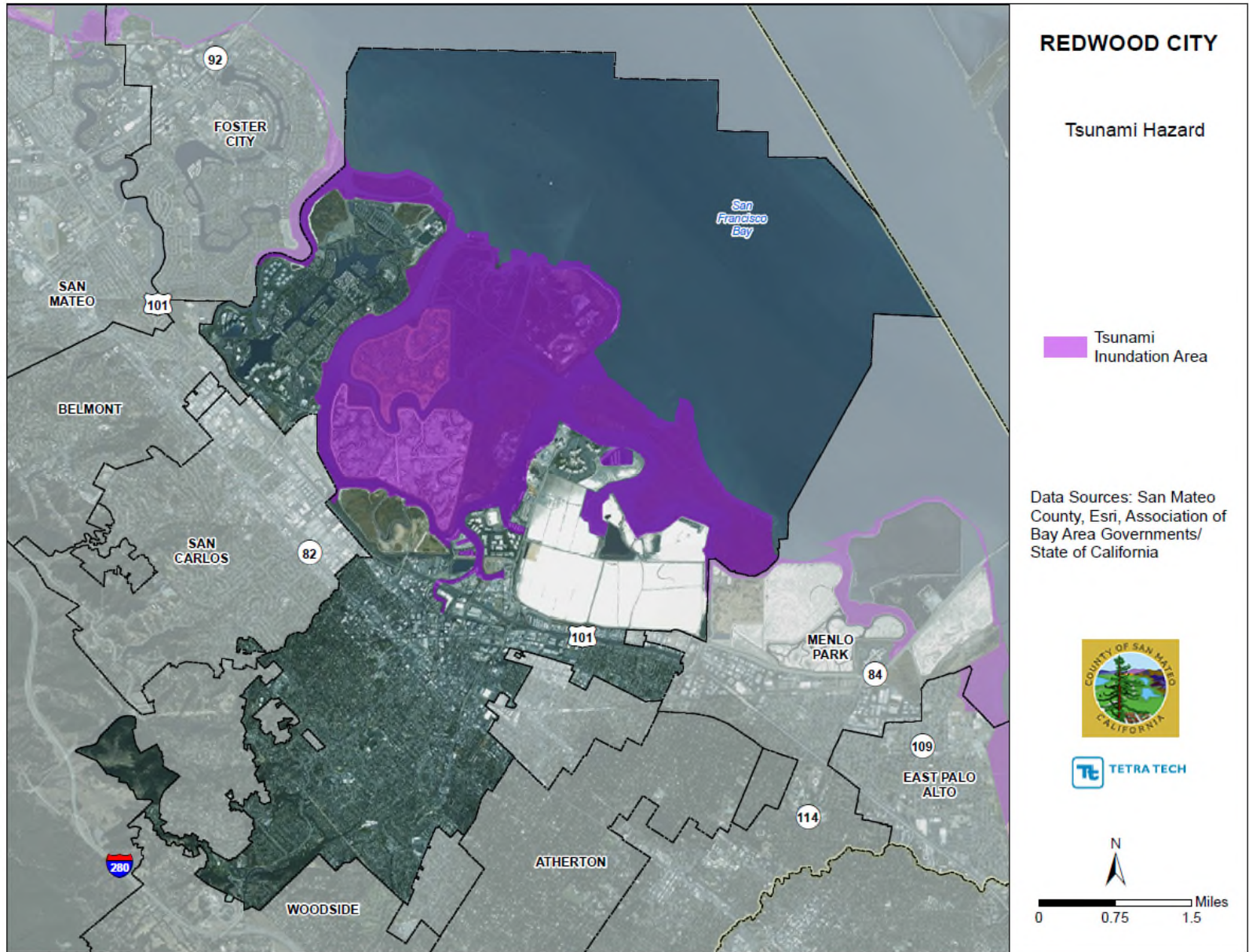


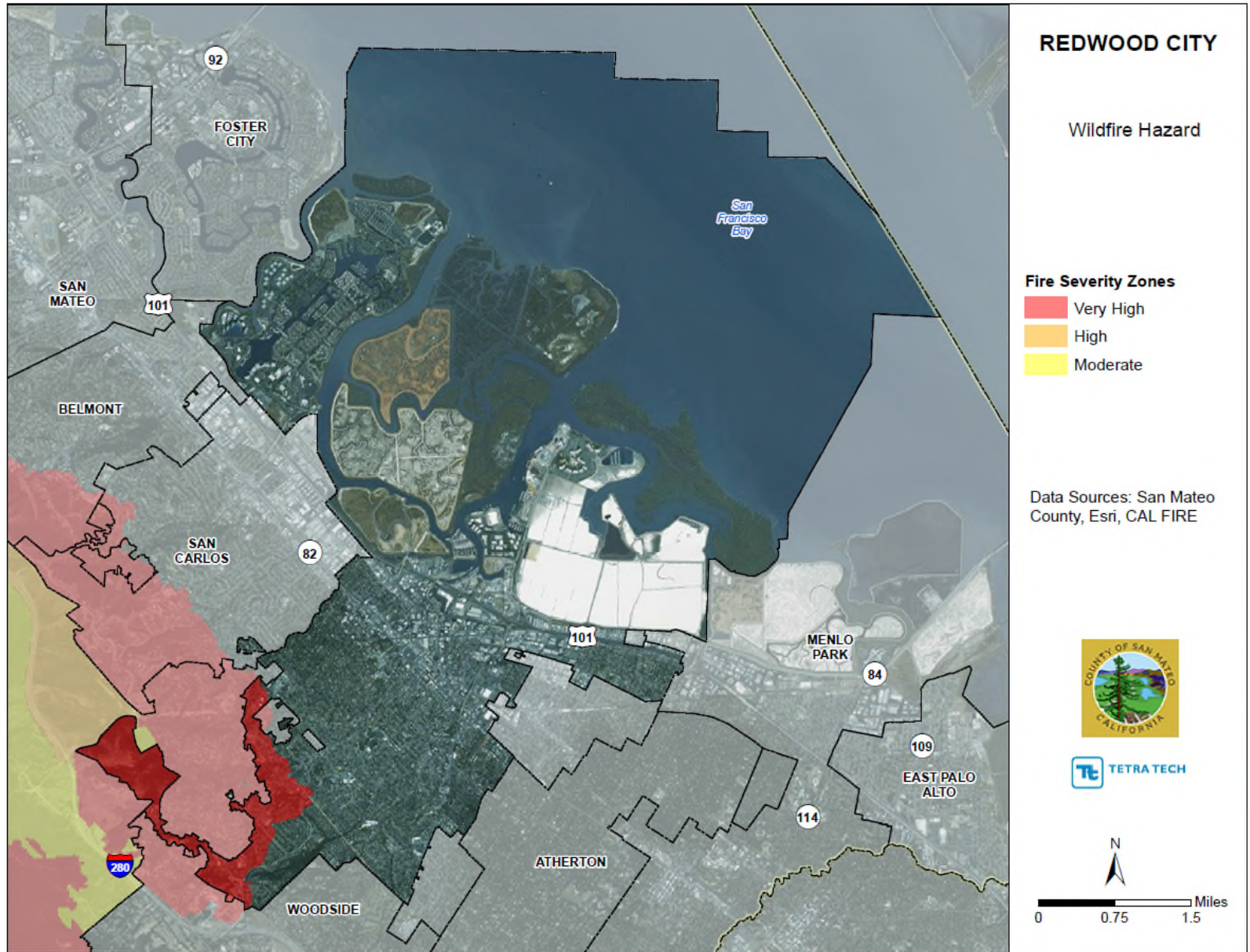














Chapter 16. City of San Bruno

16.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

Dave Cresta, Fire Battalion Chief
555 El Camino Real
San Bruno, CA, 94066
Telephone: 650 616-7144
e-mail Address: dcresta@sanbruno.ca.gov

Alternate Point of Contact

Tami Yuki, Assistant City Manager
567 El Camino Real
San Bruno, Ca 94066
Telephone: 650-616-7072
e-mail Address: tyuki@sanbruno.ca.gov

16.2 Jurisdiction Profile

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

- ❖ Date of Incorporation—1914
- ❖ Current Population— 45,360 (as of January 1, 2016 – CA DOF)
- ❖ Population Growth— Based on data tracked by the California Department of Finance, San Bruno has experienced 2.7% population growth from 2014 to 2015. Per the US Census population growth between 2000 and 2010 was 7.08 %.
- ❖ Location and Description— San Bruno is located on the San Mateo Peninsula, approximately 12 miles south of San Francisco. San Bruno is adjacent to the San Francisco International Airport as well as US Highways 101 and California Interstate 280. San Bruno borders the cities of Millbrae to the south, Pacifica to the west and South San Francisco to the north.
- ❖ Brief History—Much of San Bruno had been developed from wilderness to ranch land by the 1880s. The ranches supplied San Francisco with horses, milk, and meat. After the San Francisco earthquake and fire in 1906, the San Bruno Park addition was developed into housing. Several other new neighborhoods sprung up in the area until 1914 when San Bruno became an official municipality. At that time San Bruno had roughly 1,400 residents. Today San Bruno is known as an airport city. Mills Field was dedicated in 1927 near the site now occupied by San Francisco International Airport, but it took many years for the airport to become the success it is today. The many other more established airports in the area, along with the short and often swampy runways made Mills Field unpopular with aviators and businesses alike until 1945 when voters approved a million bond into the improvement and expansion of the airport. Since then the airport has become one of the busiest in the world, and San Bruno has grown into an international city right along with it.
- ❖ Climate—San Bruno enjoys a mild climate characterized by cool dry summers and chilly wet winters. January is the coldest month with an average high is 55.9 F. September is the warmest month with an average high of 72.7 F. Temperatures exceed 90 °F (32 °C) on an average of 4 days annually. Fog and low overcast are common during the night and morning hours in



the summer months, which are generally very dry except for occasional light drizzle from the fog. Total annual precipitation, most of which falls from November to April, averages 20.11 inches.

- ❖ **Governing Body Format**—The City of San Bruno is a General Law City. San Bruno is governed by the City Council and operates under a Council-Manager form of government. As the policy making body, the City Council has the ultimate responsibility to the people of San Bruno and the implementation of all programs and City services. It approves all ordinances, resolutions, and major contracts, modifies and approves the budget, and has the responsibility of employing a City Manager and City Attorney. The Council appoints citizens to nine advisory boards, commissions and committees. All major changes in direction or emphasis and organizational changes must be approved by the City Council. The City Manager is responsible for implementing the programs and policies which are established by the City Council. The City Council is responsible for adoption and implementation of this plan.
- ❖ **Development Trends**— The City of San Bruno, like most other California communities, experienced a significant economic downturn from 2006-2008. However, San Bruno has experienced an economic turnaround since then. The issuance of building permits has risen from 1,122 in 2009 to 1,523 in 2015. The biggest increase has been seen in residential alterations, which rose steadily from 239 building permits in 2009 to 580 building permits in 2015 while the number of residential units constructed in San Bruno has increased as well. Not only has the general economy improved in the last seven years, in early 2013 the City of San Bruno adopted its Transit Corridors Specific Plan for a 155-acre area that includes its downtown and its major BART and Caltrain station transportation facilities. Additionally, San Bruno residents adopted Measure N in November of 2014 that allows for increased building heights, increased residential densities, and above-ground parking garages in the Transit Corridors Plan area. The clear vision for the future provided by the adopted Transit Corridors Plan and the development incentives of Measure N have resulted in considerable interest for new development and redevelopment within the Plan area. San Bruno is a location for a significant number of large technology businesses and is the headquarters for YouTube and Walmart.com.

16.3 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 16-1. An assessment of fiscal capabilities is presented in Table 16-2. An assessment of administrative and technical capabilities is presented in Table 16-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 16-4. Classifications under various community mitigation programs are presented in Table 16-5. An assessment of education and outreach capabilities is presented in Table 16-6.

TABLE 16-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code	Yes	No	Yes
<i>Comment: Title 11, updated by Ord. 1816 (2014), the 2016 update expected for adoption late-2016</i>			
Zoning Code	Yes	No	No
<i>Comment: Title 12, Article III, last comprehensive update Ord. 1410 (August 23, 1982)</i>			





	Local Authority	Other Jurisdiction Authority	State Mandated
Subdivisions <i>Comment: Title 12, Article II, last comprehensive update Ord. 1352 (September 22, 1980)</i>	Yes	No	No
Stormwater Management <i>Comment: County SMCWPPP, Chapter 10.18</i>	Yes	Yes	Yes
Post-Disaster Recovery <i>Comment:</i>	No	No	No
Real Estate Disclosure <i>Comment: CA. State Civil Code 1102 requires full disclosure on Natural hazard Exposure of the sale/re-sale of any and all real property.</i>	No	No	Yes
Growth Management <i>Comment: Ordinance 1284 (June 1, 1977) and Transit Corridors Plan (March 12, 2013)</i>	Yes	No	No
Site Plan Review <i>Comment: Coordinated between Community Development and Public Services Departments, Title 12, Article III</i>	Yes	No	No
Environmental Protection <i>Comment: CA Environmental Quality Act (CEQA)</i>	No	No	Yes
Flood Damage Prevention <i>Comment: Addressed through section 1612 of the 2013 CBC</i>	Yes	Yes	Yes
Emergency Management <i>Comment: Fire Department, Chapter 2.48</i>	Yes	No	No
Climate Change <i>Comment: Climate Action Plan is currently in administrative draft</i>	No	No	No
Other <i>Comment: Chapter 10. 12 (Water Quality Control), Chapter 10.13 (Inspection, repair, and replacement of private sewer laterals), Chapter 10.16 (Water Conservation), Chapter 11.30 (Seismic hazard identification program for unreinforced masonry buildings), Chapter 11.24 (International fire code)</i>	Yes	No	No
General or Comprehensive Plan <i>Comment: San Bruno General Plan – Adopted 3/24/09; The Plan includes the Public Services and Facilities Element; and the Healthcare and Safety Element</i>	Yes	No	No
Capital Improvement Plan (CIP) <i>Comment: The CIP is adopted annually and the budget covers a 5-year span; it addresses City facilities, Water, Storm, Sewer Infrastructure</i>	Yes	No	No
Floodplain or Watershed Plan <i>Comment:</i>	No	No	No
Stormwater Plan <i>Comment: Storm Drain Master Plan – Adopted June 10, 2014</i>	Yes	No	No
Habitat Conservation Plan <i>Comment:</i>	No	No	No
Economic Development Plan <i>Comment: San Bruno General Plan – Economic Development Element</i>	Yes	No	No





	Local Authority	Other Jurisdiction Authority	State Mandated
Shoreline Management Plan	No	No	No
Comment:			
Community Wildfire Protection Plan	Yes	No	No
Comment: The Fire Mitigation and Vegetation Management Program is adopted and funded each fiscal year and coordinated between the San Bruno Fire Dept. and Community Services Dept.			
Forest Management Plan	No	No	No
Comment: San Bruno Fire Mitigation and Vegetation Management Plan			
Climate Action Plan	Pending	No	No
Comment: Climate Action Plan is currently in administrative draft			
Other	Yes	No	No
Comment: Walk Bike Master Plan, San Bruno Transit Corridors Specific Plan (TCP), U.S. Navy Site Specific Plan			
Comprehensive Emergency Management Plan	Yes	No	No
Comment Addressed in the City's Emergency Operations Plan May, 2008			
Threat & Hazard Identification & Risk Assessment	Yes	No	No
Comment: Addressed in the City's Emergency Operations Plan, May, 2008			
Post-Disaster Recovery Plan	Yes	No	No
Comment: Addressed in the City's Emergency Operations Plan May, 2008			
Continuity of Operations Plan	Yes	No	No
Comment: Addressed in City's Emergency Operations Plan May, 2009			
Public Health Plan	No	Yes	No
Comment: San Mateo County Public Health			

TABLE 16-2. FISCAL CAPABILITY

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





TABLE 16-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Community Development Department and Public Services Department
Engineers or professionals trained in building or infrastructure construction practices	Yes	Community Development Department and Public Services Department
Planners or engineers with an understanding of natural hazards	Yes	Community Development Department and Public Services Department
Staff with training in benefit/cost analysis	Yes	Finance Department
Surveyors	Yes	Contract surveyor staff
Staff capable of making substantial damage estimates	Yes	Community Development Department
Personnel skilled or trained in GIS applications	Yes	Contract GIS Consultant Long-Range Planning Manager in the Community Development Dept.
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Fire Battalion Chief
Grant writers	Yes	Management Analyst in the Public Services Department

TABLE 16-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	3/30/1981
When did the Flood Insurance Rate maps become effective?	No SFHA
What local department is responsible for floodplain management?	Public Services, Engineering
Who is your floodplain administrator? (department/position)	City Engineer
• Is this a primary or auxiliary role?	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	N/A
• Does your floodplain management program meet or exceed minimum requirements?	N/A
When was the most recent Community Assistance Visit or Community Assistance Contact?	N/A
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
Does your jurisdiction participate in the Community Rating System (CRS)?	No
• If not, is your jurisdiction interested in joining the CRS program?	Yes
How many Flood Insurance policies are in force in your jurisdiction?	18
• What is the insurance in force?	\$3,174,800





Criteria	Response
• What is the premium in force?	\$22,080
How many total loss claims have been filed in your jurisdiction?	18
• How many claims were closed without payment/are still open?	6
• What were the total payments for losses?	\$96,668.67

TABLE 16-5. COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	No		
Building Code Effectiveness Grading Schedule	No		
Public Protection	No		
Storm Ready	No		
Firewise	No		

TABLE 16-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes(if yes, please specify) City Manager’s Office
Do you have personnel skilled or trained in website development?	No one on staff who is trained in website development; however, each department has a representative who is trained to update San Bruno’s website pages.
Do you have hazard mitigation information available on your website?	Yes
• If yes, please briefly describe.	The Fire Department has a page dedicated to disaster preparedness.
Do you utilize social media for hazard mitigation education and outreach?	Yes
• If yes, please briefly describe.	Individual departments use various social media sites to provide education and information related to hazard mitigation.
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
• If yes, please briefly specify.	The Community Preparedness Committee promotes emergency preparedness planning and education to prepare residents to mitigate the potential consequences of natural and man-made disasters.
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
• If yes, please briefly describe.	The City operates a cable television station where hazard-related information could be communicated.
Do you have any established warning systems for hazard events?	Yes





Criteria	Response
• If yes, please briefly describe.	SMC Alert

16.4 Integration with Other Planning Initiatives

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

16.4.1 Existing Integration

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

- ❖ San Bruno's General Plan, last updated in 2009, integrates the hazard mitigation plan through its *Public Services and Facilities Element and its Healthcare and Safety Element*.
- ❖ The development review process includes adhering to CEQA, which requires mitigation for identified natural hazards.

16.4.2 Opportunities for Future Integration

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

- ❖ The City is currently working on the Climate Action Plan, which should identify opportunities for hazard mitigation.
- ❖ The City will adopt the 2016 CA Building Code, which will further strengthen the city's plans and programs to address potential risks and hazards.
- ❖ In 2016, the City will adopt a comprehensive update of the zoning section of the Municipal Code. This will allow for more compact development within the city's existing core and will align with both the adopted General Plan and Transit Corridors Plan. It will allow for redevelopment of older infrastructure, aligning with LAND f-3 of the Hazard Mitigation Plan.

16.5 Jurisdiction-Specific Natural Hazard Event History

Table 16-6 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 16-6. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Drought Emergency	N/A	2014-2016	N/A
Severe Storms	N/A	12/2014	\$1.1 Million
Fire	FM-2856	9/10/2010	\$55 Million
Winter Storms/Landslides	N/A	1998	N/A
Loma Prieta Earthquake	DR-845	1989	N/A



16.6 Jurisdiction-Specific Vulnerabilities

Repetitive loss records are as follows:

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

Other noted vulnerabilities include:

- ❖ Flooding of properties in Belle Air neighborhood during heavy storm events.
- ❖ Lack of generators at critical water pump station facilities
- ❖ Seismically retrofit water tanks. Installing flexible connection at inlet and outlet pipelines.
- ❖ Inefficient and old generators at critical City facilities.

16.7 Hazard Risk Ranking

Table 16-7 presents the ranking of the hazards of concern.

TABLE 16-7. HAZARD RISK RANKING

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

16.8 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 16-8 lists the actions that make up the City of San Bruno hazard mitigation action plan. Table 16-9 identifies the priority for each action. Table 16-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 16-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
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SB-1 — Increase public awareness of Disaster Preparedness by teaching the “Get Ready” Campaign to the community





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	All Hazards	1, 2, 3, 7, 9	Fire	Low	Staff time, General Funds	On-Going
SB-2 — Improve emergency planning by providing training to Care Home Facilities in the Community						
New and Existing	All Hazards	1, 2, 3, 7, 9	Fire	Low	Staff time, General Funds	On-Going
SB-3 — Ensure adequate water supply during emergencies and disaster recovery						
Existing	All Hazards	1, 4, 11	Public Works	Low	Staff time, Water Funds	On-Going
SB-4 — Assess City's vulnerability to drought risk and implementation of water conservation measures to improve water supply						
Existing	Drought	1, 4	Public Works	Low	Staff time, Water Funds	On-Going
SB-5 — Conduct regular maintenance for drainage system and flood control structures						
Existing	Flood	1, 4, 7	Public Works	Low	Staff time, General Funds	On-Going
SB-6 — Rehabilitate the City's stormwater system to reduce local flooding caused by inadequate storm drainage						
New and Existing	Flood	1, 4, 7	Public Works	High	General Funds	Long-Term
SB-7 — Continue to maintain the minimum National Flood Insurance Program participation requirement for communities with no mapped Special Flood Hazard Area.						
New	Flood	1, 4, 5, 9	Public Works	Medium	Staff time, General Funds	Short-Term
SB-8 — Form partnership between local and regional entities to support multi-jurisdictional floodplain management						
New	Flood	1, 2, 4, 8, 9, 10	Public Works	Low	Staff time, General Funds	Long-Term
SB-9 — Establish local funding mechanisms for stormwater flood mitigation						
New	Flood	1, 2, 8	Public Works	Low	Staff time, General Funds	Long-Term
SB-10 — Increase awareness of urban flood risk and safety for property owners						
New	Flood	1, 2, 3, 4, 7, 9, 10	Public Works	Low	Staff time, General Funds	Short-Term
SB-11 — Assess City's vulnerability to sea level rise						
New	Flood	1, 3, 5, 6, 7, 10	Public Works	Medium	Staff time, General Funds	Long-Term
SB-12 — Mitigate the impacts of sea-level rise in San Bruno						
New	Flood	1, 4, 7	Public Works	Medium	Staff time, General Funds	Long-Term
SB-13 — Provide sandbags to residents in anticipation of rainstorms and public outreach on locations to obtain the sandbags						
Existing	Flood	1, 9	Public Works	Low	Staff time, General Funds	On-Going





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SB-14 — Comply with applicable performance standards of any National Pollutant Discharge Elimination System municipal stormwater permit that seeks to manage increases in stormwater run-off flows from new development and redevelopment construction projects						
New and Existing	Flood	1, 4	Public Works	Low	Staff time, General Funds	On-Going
SB-15 — Incorporate FEMA guidelines and suggested activities into local government plans and procedures for managing flood hazards.						
New and Existing	Flood	1, 2, 3, 5, 7, 10	Public Works	Medium	Staff time, General Funds	Short-Term
SB-16 — Retrofit or replace critical lifeline facilities and/or their backup facilities that are shown to be vulnerable to damage in natural disasters.						
New and Existing	All Hazards	1, 4, 5, 7, 11	Public Works	High	Staff time, Water Fund, Wastewater Fund	Long-Term
SB-17 — Provide back-up emergency power at critical infrastructure facilities.						
New and Existing	All Hazards	1, 11	Public Works	Medium	Staff time, Water Fund, Wastewater Fund	Short-Term
SB-18 — Seek and implement training for supervisory and management personnel regarding establishing and maintaining a field command post based on ICS principles.						
New	All Hazards	1, 2, 3, 4, 5, 8, 9, 10	Police	Low	Staff time, General Fund	Long-Term
SB-19 — Enhance radio communications at critical areas in the city including the mall and the Crossings Complex to ensure officer and public safety.						
New	All Hazards	1, 2, 4, 7, 9, 10, 11	Police	High	Staff time, General Fund	Long-Term
SB-20 — Work to sustain interoperable communications and virtual dispatch capabilities with an allied agency that provides for redundancy and hardening of dispatch center.						
Existing	All Hazards	1, 2, 3, 4, 6, 7, 8, 9, 10	Police	High	General Fund (Operating Budget)	Long-Term
SB-21 — Take steps to enhance the security of the police station facility to include the repair and replacement of the video system, intercom system, and keyless access system.						
Existing	All Hazards	1, 4, 9, 11	Police	High	General Fund (CIP)	Short-Term
SB 22 - Continue to support community emergency preparedness through delivery of CERT and other resident training and public education outreach through the Community Preparedness Advisory Committee						
Existing	All Hazards	1, 2, 6, 9, 10	Police and Fire	Low	Staff time, General Fund	Ongoing
SB 23 – Abate potential fire hazards through an annual program of vegetation management in right-of-way, easements, and open space						
New and existing	Wildfire	7	Community Services and Fire	Medium	Staff time, General Fund	On-going





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SB-24 – Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community.						
New and existing	All Hazards	1-10	Community Development	Low	Staff time, General Funds	Ongoing
SB-25 — Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New	All Hazards	1-10	City Manager’s Office	Low	Staff time, General funds	Ongoing
SB-26 – Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New	All Hazards	1-10	City Manager’s Office	Low	Staff Time, General funds	Ongoing
SB-27 – Work with Chief Building Official to obtain a BCEGS classification.						
New	All Hazards	1, 4, 5, 6, 7	Community Development	Low	Staff time, General funds	Short-Term
SB-28 – Encourage the cooperation of utility system providers and cities, counties, and special districts, and PG&E to develop strong and effective mitigation strategies for infrastructure systems and facilities.						
Existing	All Hazards	1-10	City Manager’s Office	Low	Staff Time, General funds	Ongoing
SB-29 - Comply with all applicable building and fire codes, as well as other regulations (such as state requirements for fault, landslide, and liquefaction investigations in particular mapped areas) when constructing or significantly remodeling infrastructure facilities.						
Existing	Earthquake	1, 4, 5, 6, 7	Fire, Community Development	Low	Staff Time, General funds	Ongoing
SB-30 – Continue requirements in zoning ordinances to address hillside development constraints in areas of steep slopes that are likely to lead to excessive road maintenance or where roads will be difficult to maintain during winter storms due to landsliding.						
Existing	Landslide	1, 4, 5, 6, 7	Community Development	Low	Staff Time, General Funds	Ongoing
SB-31 – Coordinate planning for short-term sheltering of residents of the community with the American Red Cross.						
New	Earthquake, Landslide, Wildfire, Flood, Severe Weather	1-8, 10	Community Development	Medium	Staff Time, General Funds, Grant Funding	Long-Term
SB-32 – Develop a plan for interim housing for those displaced by a natural hazard.						
New	Earthquake, Landslide, Wildfire, Flood	1-8, 10	Community Development	Medium	Staff Time, General Funds, Grant Funding	Long-Term
SB-33 – Encourage local government building inspectors to take classes on a periodic basis (such as the FEMA-developed training classes offered by ABAG) on retrofitting of single-family homes						
Existing	Earthquake	1,3,4	Community Development	Low	Staff Time, General Funds	Ongoing





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SB-34 – Encourage private retrofit contractors and home inspectors doing work in the City to take retrofit classes on a periodic basis (such as the FEMA- developed training classes offered by ABAG or additional classes that might be offered by the CALBO Training Institute) on retrofitting of single- family homes.						
Existing	Earthquake	1,3,4,10	Community Development	Low	Staff Time, General Funds	Ongoing
SB-35 – Work to educate building owners, local government staff, engineers, and contractors on privately-owned soft-story retrofit procedures and incentives using materials such as those developed by ABAG						
Existing, Underfunded	Earthquake	1,3,4,10	Community Development	Low	Staff Time, General Funds	Ongoing
SB-36 – Continue to require that all new housing be constructed in compliance with requirements of the most recently adopted version of the California Building Code.						
Existing	Earthquake	1, 4, 5, 6, 7	Community Development	Low	Staff Time, General Funds	Ongoing
SB-37 – Conduct appropriate employee training and support continued education to ensure enforcement of building codes and construction standards, as well as identification of typical design inadequacies of housing and recommended improvements.						
Existing	Earthquake	1,3,4	Community Development	Low	Staff Time, General Funds	Ongoing
SB-38 – Adopt and amend as needed updated versions of the California Building and Fire Codes so that optimal fire-protection standards are used in construction and renovation projects of private buildings.						
Existing	Wildfire	1, 4, 5, 6, 7	Community Development, Fire	Low	Staff Time, General Funds	Ongoing
SB-39 – Consider implementing requirements for fire sprinklers in all new multifamily housing, regardless of distance from a fire station.						
Existing	Wildfire	1, 4, 5, 6, 7	Community Development, Fire	Low	Staff Time, General Funds	Ongoing
SB-40 – Consider implementing requirements for fire sprinklers in all new mixed use development to protect residential uses from fires started in non- residential areas.						
Existing	Wildfire	1, 4, 5, 6, 7	Community Development, Fire	Low	Staff Time, General Funds	Ongoing
SB-41 – Conduct periodic fire-safety inspections of all multi- family buildings, as required by State law.						
Existing	Wildfire	1, 4, 5, 6, 7	Community Development, Fire	Low	Staff Time, General Funds	Ongoing
SB-42 – Continue to require the bracing of new water heaters and flexible couplings on gas appliances.						
Existing	Earthquake, Wildfire	1, 4, 5, 6, 7	Community Development	Low	Staff Time, General Funds	Ongoing
SB-43 – Comply with all applicable building and fire codes, as well as other regulations (such as state requirements for fault, landslide, and liquefaction investigations in particular mapped areas) when constructing or significantly remodeling government-owned facilities.						
Existing	Earthquake, Landslide, Wildfire, Flood	1, 4, 5, 6, 7	Community Development, Fire	Low	Staff Time, General Funds	Ongoing





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
SB-44 – Establish a framework and process for pre-event planning for post-event recovery that specifies roles, priorities, and responsibilities of various departments within the local government organization, and that outlines a structure and process for policy-making involving elected officials and appointed advisory committees.						
Existing	Earthquake, Landslide, Wildfire, Flood	1-10	City Manager’s Office	Medium	Staff Time, General Funds	Ongoing
SB-45 – Prepare a basic Recovery Plan that outlines the major issues and tasks that are likely to be the key elements of community recovery, as well as integrate this planning into response planning.						
Existing, Underfunded	Earthquake, Landslide, Wildfire, Flood	1-10	City Manager’s Office	Medium	Staff Time, General Funds	Ongoing
SB-46 – Continue to enforce State-mandated requirements, such as the California Environmental Quality Act, to ensure that mitigation activities for hazards, such as seismic retrofits and vegetation clearance programs for fire threat, are conducted in a way that reduces environmental degradation such as air quality impacts, noise during construction, and loss of sensitive habitats and species, while respecting the community value of historic preservation.						
Existing	Earthquake, Landslide, Wildfire, Flood	1, 4, 5, 6, 7	Community Development	Low	Staff Time, General Funds	Ongoing
SB-47 – Adopt and enforce land-use policies that reduce sprawl, preserve open space, and create compact, walkable urban communities.						
Existing	Landslide, Wildfire, Flood, Drought	1, 4, 5, 6, 7	Community Development	Low	Staff Time, General Funds	Ongoing
SB-48 – 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. (This Act is intended to deal with the specific hazard of active faults that extend to the earth’s surface, creating a surface rupture hazard.)						
Existing	Earthquake	1, 4, 5, 6, 7	Community Development	Low	Staff Time, General Funds	Ongoing
SB-49 - Work to retrofit older downtown areas and redevelopment districts to protect architectural diversity and promote disaster-resistance.						
Existing, underfunded	Earthquake, Landslide, Wildfire, Flood	1, 2, 4, 5, 6, 7, 10	Community Development	High	Staff Time, General Funds, Public Private Partnerships	Ongoing
SB-50 - Broaden awareness on emergency alerting by educating the public on SMC Alert						
New and existing	All Hazards	1,3,9	Public Safety	Low	Staff time	On-going
SB-51 - Update the Emergency Operations Plan with integration of the Hazard Mitigation Plan						
New and Existing	All Hazards	1, 2, 3, 4, 9	Emergency Management	Medium	EMPG	Short-term
SB – 54 – Ensure adequate supplies and equipment to support to support the community’s needs at emergency shelters.						





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New and existing	All hazards	1, 2, 3, 4, 5, 6, 7	Lead contact Community Services	Low	Staff time, General Fund	Short-term

Action G-1—Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.

Existing	All	1, 3, 4, 5, 6, 7, 11	Jurisdictions	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
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Action G-2—Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.

New and existing	All	All	Jurisdictions	Low	General Fund	Long-term
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TABLE 16-9. MITIGATION STRATEGY PRIORITY SCHEDULE

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





Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Priority ^a
SB-19	7	High	High	Yes	No	No	High	Low
SB-20	9	High	High	Yes	No	Yes	High	Low
SB-21	4	High	High	Yes	No	Yes	High	Low
SB-22	5	High	Low	No	No	Yes	High	Low
SB-23	1	High	Medium	Yes	No	Yes	High	Low
SB-24	10	High	Low	Yes	No	Yes	Existing	Low
SB-25	10	High	Low	Yes	No	Yes	Existing	Low
SB-26	10	High	Low	Yes	No	Yes	High	Low
SB-27	5	High	Low	Yes	No	Yes	High	Low
SB-28	10	High	Low	Yes	No	Yes	Existing	Low
SB-29	5	High	Low	Yes	No	Yes	Existing	Low
SB-30	5	High	Low	Yes	No	Yes	Existing	Low
SB-31	9	High	Medium	Yes	Yes	Yes	High	Medium
SB-32	9	High	Medium	Yes	Yes	Yes	High	Medium
SB-33	3	High	Low	Yes	No	Yes	Existing	Low
SB-34	4	High	Low	Yes	No	Yes	Existing	Low
SB-35	4	High	Low	Yes	No	Yes	Existing, Underfunded	Low
SB-36	5	High	Low	Yes	No	Yes	Existing	Low
SB-37	3	High	Low	Yes	No	Yes	Existing	Low
SB-38	5	High	Low	Yes	No	Yes	Existing	Low
SB-39	5	High	Low	Yes	No	Yes	Existing	Low
SB-40	5	High	Low	Yes	No	Yes	Existing	Low
SB-41	5	High	Low	Yes	No	Yes	Existing	Low
SB-42	5	High	Low	Yes	No	Yes	Existing	Low
SB-43	5	High	Low	Yes	No	Yes	Existing	Low
SB-44	10	High	Medium	Yes	No	Yes	Existing	Low
SB-45	10	High	Medium	Yes	No	Yes	Existing, Underfunded	Low
SB-46	5	High	Low	Yes	No	Yes	Existing	Low
SB-47	5	High	Low	Yes	No	Yes	Existing	Low
SB-48	5	High	Low	Yes	No	Yes	Existing	Low
SB-49	7	High	High	Yes	Yes	No	Existing, Underfunded	Medium
SB-50	3	High	Low	Yes	No	Yes	High	Low
SB-51	5	Medium	Medium	Yes	Yes	No	Medium	High
SB-52	12	Low	Low	Yes	No	Yes	High	Low
SB-53	2	Low	Low	Yes	No	Yes	High	Low





Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Priority ^a
SB-54	7	High	Low	Yes	No	No	High	Medium
Action G-1	7	High	High	Yes	Yes	No	High	High
Action G-2	11	High	Low	Yes	No	Yes	High	Low

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

TABLE 16-10. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure						
Drought	SB-1, SB-2, SB-3, SB-4, SB-18, SB-19, SB-20, SB-21, SB-24, SB-25, SB-26, SB-27, SB-28, SB-46, SB-47, SB-50, SB-51, SB-52,		SB-1, SB-2, SB-3, SB-4, SB-18, SB-46, SB-50		SB-52	
Earthquake	SB-1, SB-2, SB-3, SB-16, SB-17, SB-18, SB-19, SB-20, SB-21, SB-22, SB-24, SB-25, SB-26, SB-27, SB-28, SB-29, SB-31, SB-32, SB-33, SB-34, SB-35, SB-36, SB-42, SB-43, SB-44, SB-45, SB-46, SB-48, SB-49, SB-50, SB-51, SB-52	SB-29, SB-33, SB-34, SB-35, SB-36, SB-37, SB-43	SB-1, SB-2, SB-3, SB-18, SB-22, SB-29, SB-31, SB-32, SB-33, SB-34, SB-35, SB-36, SB-37, SB-42, SB-43, SB-44, SB-46, SB-49, SB-50		SB-3, SB-17,, SB-31, SB-32, SB-44, SB-45, SB-52	SB-16





Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Flood	SB-1, SB-2, SB-5, SB-6, SB-7, SB-8, SB-9; SB-10, SB-11, SB-12, SB-13, SB-15, SB-18, SB-19, SB-20, SB-21, SB-22, SB-24, SB-25, SB-26, SB-27, SB-28, SB-31, SB-32, SB-43, SB-44, SB-45, SB-46, SB-47, SB-49, SB-50, SB-51, SB-52	SB-7, SB-9, SB-43	SB-1, SB-2, SB-5, SB-6, SB-7, SB-8, SB-9; SB-10; SB-11, SB-12; SB-13, SB-15, SB-18, SB-22, SB-31, SB-32, SB-43, SB-44, SB-46, SB-49, SB-50	SB-14	SB-13,, SB-31, SB-32, SB-44, SB-45	SB-9, SB-12
Landslide	SB-1, SB-2, SB-13, SB-18, SB-19, SB-20, SB-21, SB-22, SB-24, SB-25, SB-26, SB-27, SB-28, SB-30, SB-31, SB-32, SB-43, SB-44, SB-45, SB-46, SB-47, SB-49, SB-50, SB-51, SB-52	SB-30, SB-43	SB-1, SB-2, SB-13, SB-18, SB-22, SB-30, SB-31, SB-32, SB-43, SB-44, SB-46, SB-49, SB-50		SB-13, SB-31, SB-32, SB-44, SB-45, SB-52	
Severe Weather	SB-1, SB-2, SB-18, SB-19, SB-20, SB-21, SB-22, SB-24 , SB-25, SB-26, SB-27, SB-28, SB-46, SB-50, SB-51, SB-52		SB-1, SB-2, SB-18, SB-46, SB-50		SB-52	
Tsunami						





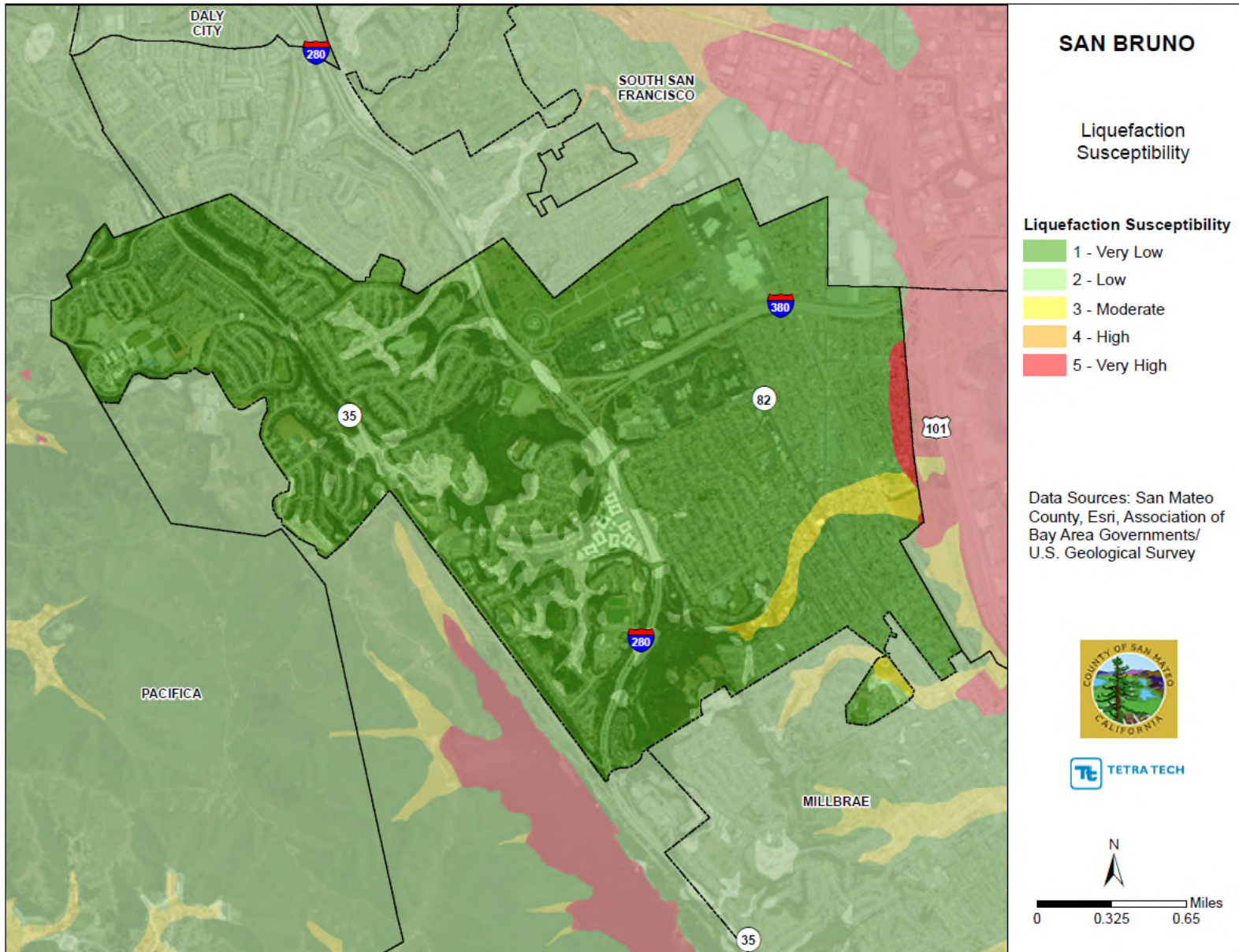
Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Wildfire	SB-1, SB-2, SB-3; SB-17, SB-18, SB-19, SB-20, SB-21, SB-22, SB-23, SB-24, SB-25, SB-26, SB-27, SB-28, SB-31, SB-32, SB-38, SB-39, SB-40, SB-41, SB-42, SB-43, SB-44, SB-45, SB-46, SB-47, SB-49, SB-50, SB-51, SB-52	SB-38, SB-39, SB-40, SB-43,	SB-1, SB-2, SB-3, SB-18, SB-22, SB-31, SB-32, SB-38, SB-39, SB-40, SB-41, SB-42., SB-43, SB-44, SB-46, SB-49, SB-50		SB-3, SB-17, SB-31, SB-32, SB-44, SB-45, SB-52	

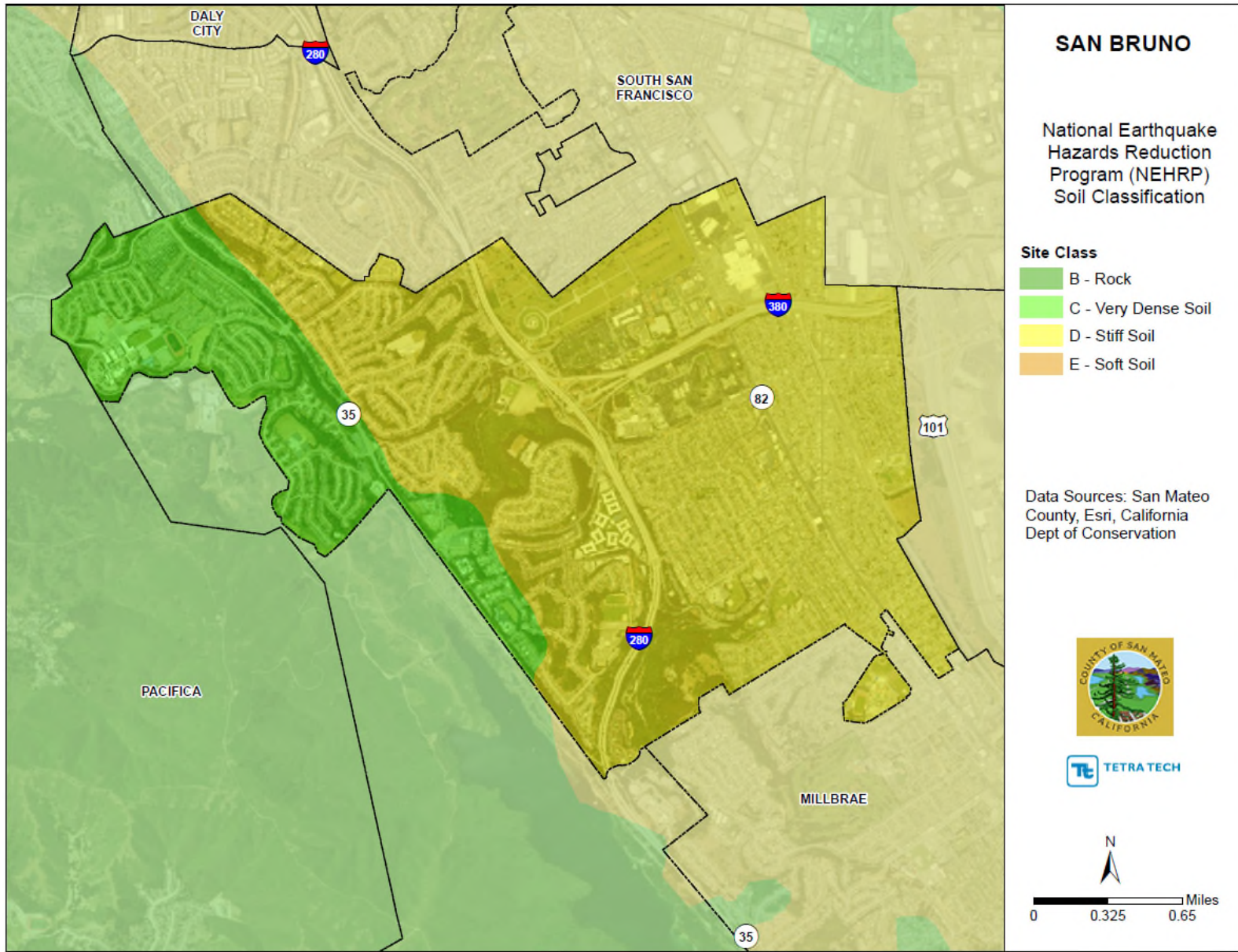
a. See the introduction to this volume for explanation of mitigation types.

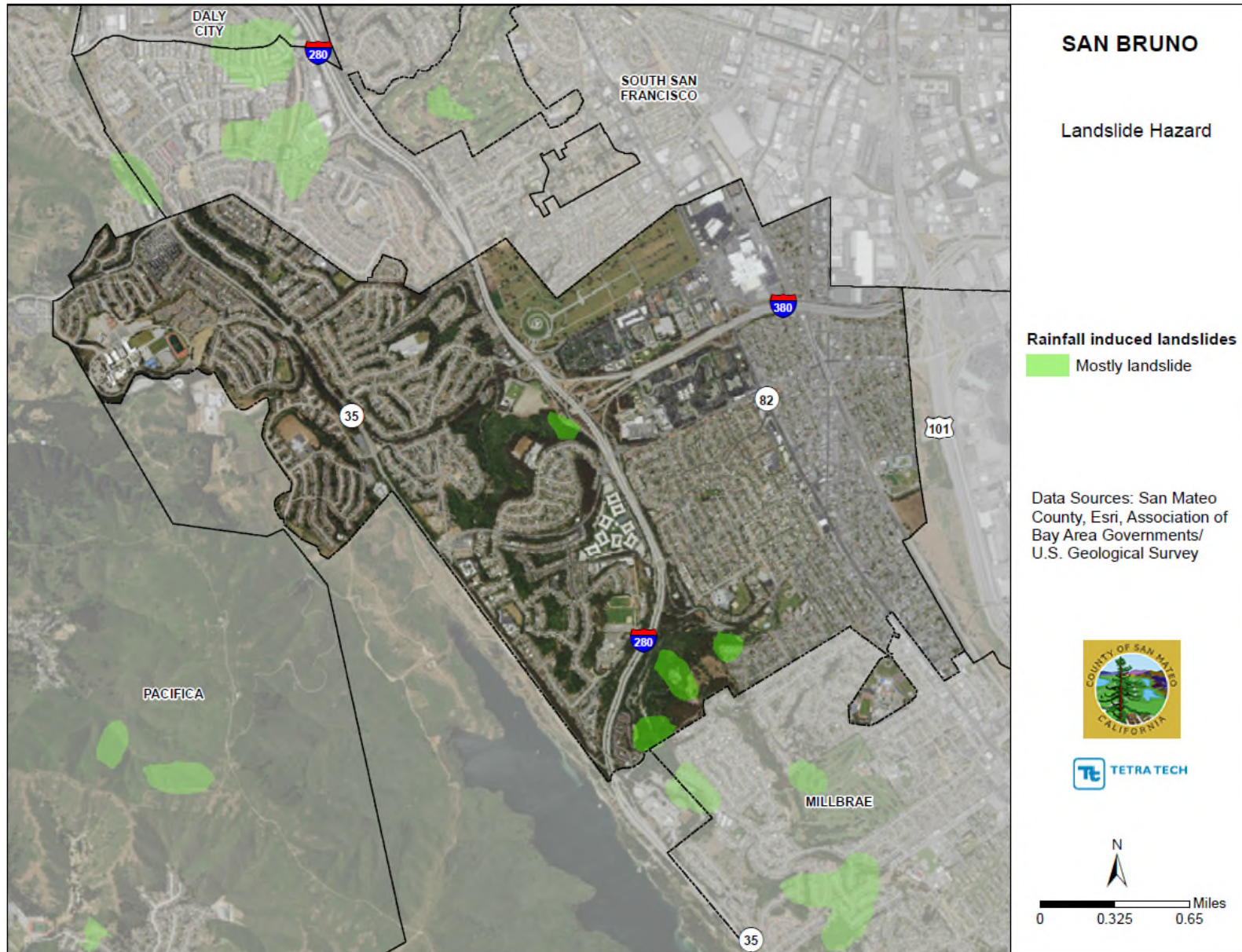
16.9 Additional Comments

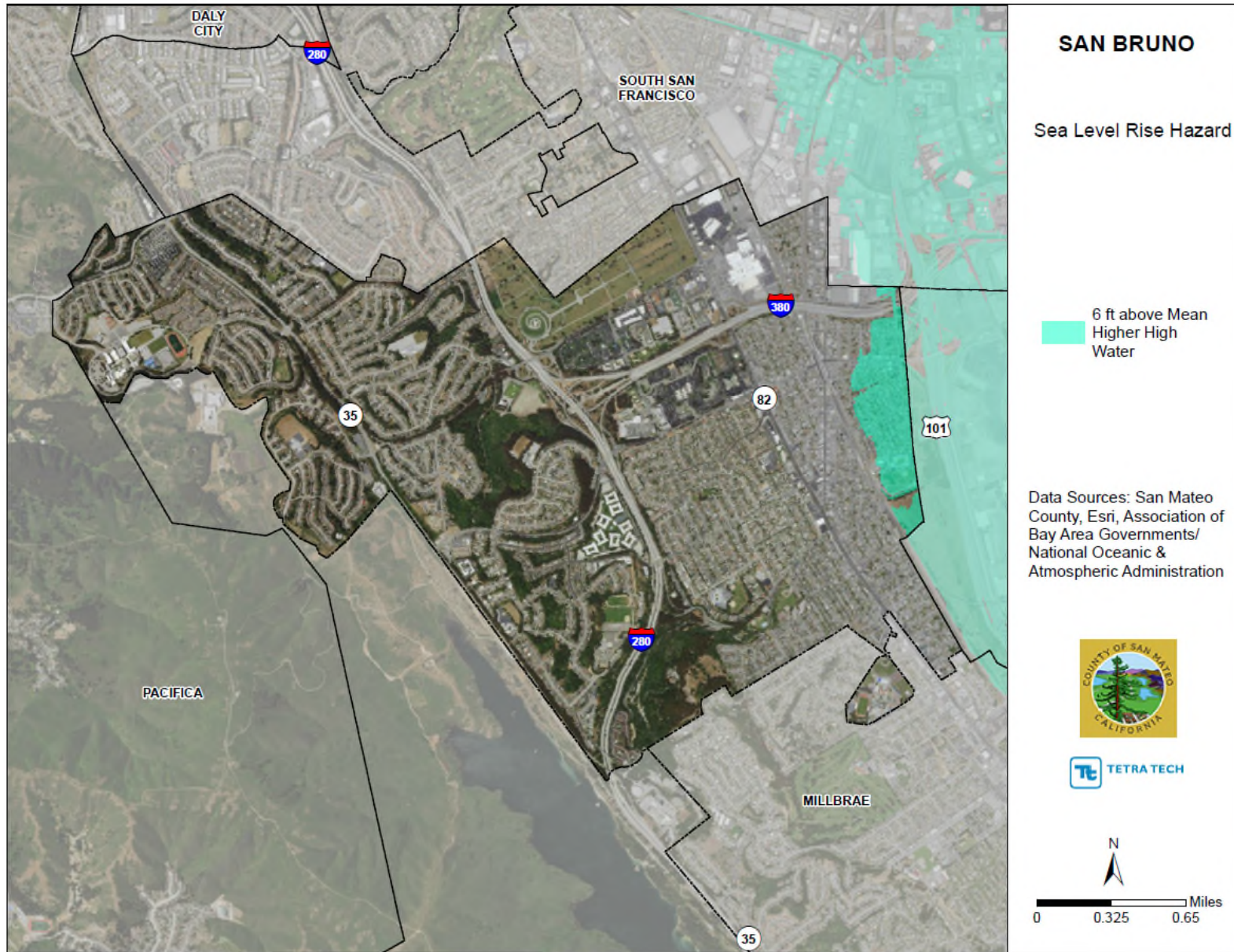
The City of San Bruno endured one of the worst pipeline disasters in U.S. history on Sept. 9, 2010 when a Pacific Gas & Electric (PG&E) 30-inch diameter, steel natural gas pipeline, exploded beneath a San Bruno community. The pipeline rupture unleashed millions of cubic feet of flammable natural gas over the Crestmoor neighborhood. The gas ignited flames that soared over 100 feet into the air. Eight people were killed, 66 people were injured, 38 homes were destroyed and scores more were damaged. San Bruno has fought to hold PG&E accountable. The City pushed for PG&E to be bear significant financial penalty. The City also called for the California Public Utilities Commission (CPUC) to direct PG&E to adopt and fund a series of remedial measures to ensure systemic regulatory change in the future, including the installation of lifesaving fully Automatic Shutoff Valves, a new model for pipeline oversight, one in which cities develop relationships with regulators and public utility operators, where cities join together in discussion and problem solving to address the critical challenges that face communities and the nation related to aging infrastructure, the need to balance the competing policy considerations of ratemaking and safety, and the critical need to hold utility companies fully accountable for the highest possible standard of system maintenance and operation. Safety must be the highest and first priority outcome. The City has worked tirelessly since the explosion to hold both PG&E and the CPUC accountable and for safety reform with one single overriding objective in mind – to assure that what happened in San Bruno, never happens again anywhere.

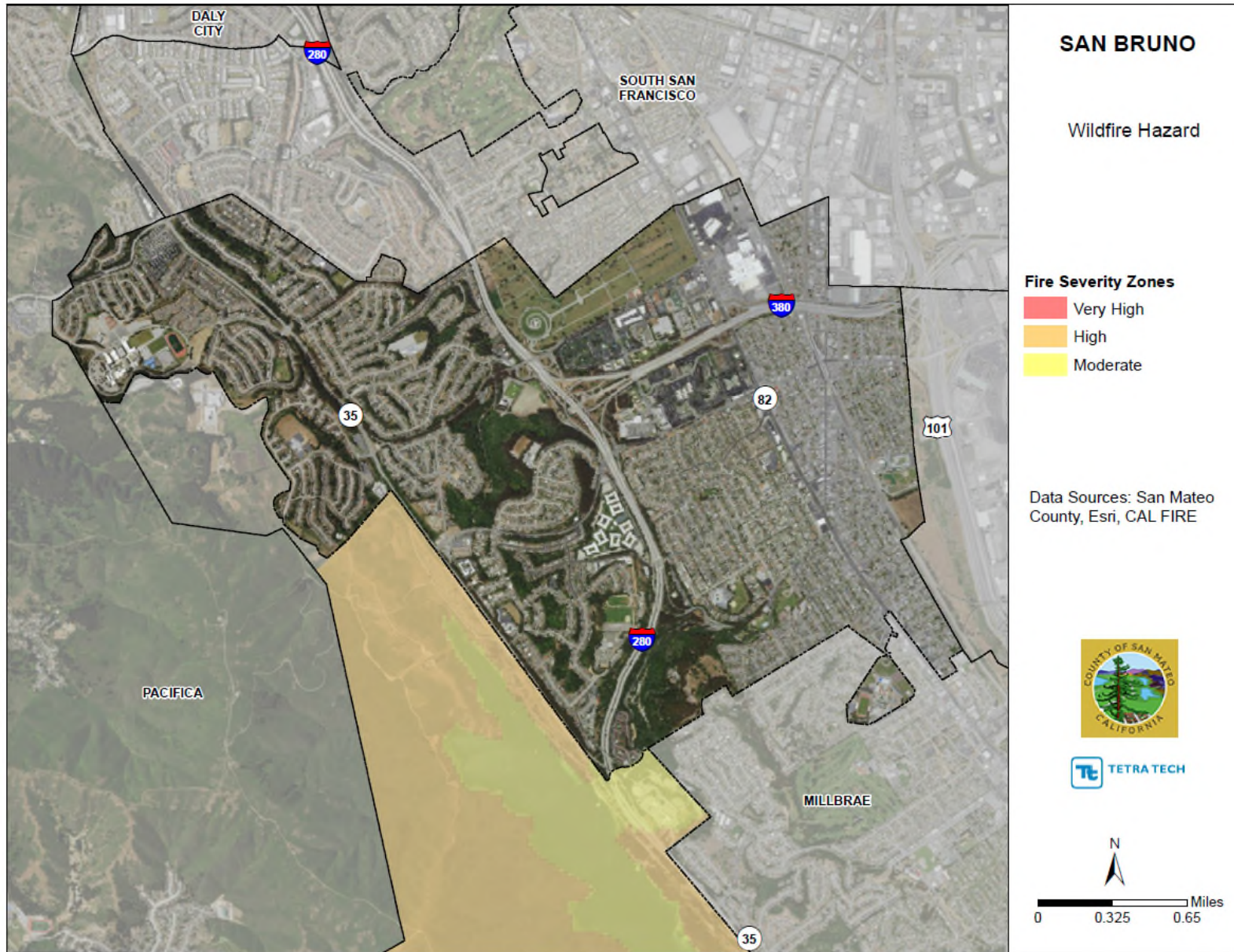














Chapter 17.

City of San Carlos

17.1 Hazard Mitigation Plan Point of Contact

<p style="text-align: center;">Primary Point of Contact</p> <p style="text-align: center;">Jay Walter, Public Works Director 600 Elm Street San Carlos, CA 94070 Telephone: 650-802-4203 e-mail address: jwalter@cityofsancarlos.org</p>	<p style="text-align: center;">Alternate Point of Contact</p> <p style="text-align: center;">Tara Peterson, Assistant City Manager 600 Elm Street San Carlos, CA 94070 Telephone: 650-802-4230 e-mail address: tpeterson@cityofsancarlos.org</p>
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17.2 Jurisdiction Profile

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

- ❖ **Date of Incorporation** — 1925
- ❖ **Current Population** — 29,008 (as of January 1, 2016 – CA DOF)
- ❖ **Population Growth** — The City of San Carlos has enjoyed a steady increase in population since its incorporation in 1925. During the 1950s, the City gained the reputation as the fastest growing town in the west. Between 1970 and 2000, the population increased by 6.4%. Between 2000 and 2030, the population is expected to increase by nearly 22%. The table below illustrates the actual and projected numbers for this three-decade time period (2010-2030).

Year	Population	Percentage Increase from Previous Decade	Source
2000	27,718 (actual)		U.S. Census 2000
2010	28,406 (actual)	2.5%	U.S. Census 2010
2020	30,100 (projection)	6%	San Carlos 2030 General Plan, Housing Element, 2015 ¹⁵
2030	31,900 (projection)	6%	San Carlos 2030 General Plan, Housing Element, 2015
Total projected percentage increase (2000-2030)		15%	

- ❖ **Location and Description** — The City of San Carlos is located in the State of California on the San Francisco Peninsula approximately half-way between San Francisco and San Jose. The City is located

¹⁵ http://www.cityofsancarlos.org/generalplanupdate/whats_new_/san_carlos_2030_general_plan___adopted.asp





in San Mateo County and is surrounded by Belmont to the north, Redwood City to the east and southeast, and unincorporated areas of the county to the south and west. The City consists of approximately 5.5 square miles and hosts a section of U.S. Route 101 along its eastern border. Additionally, California's historic thoroughfare, the El Camino Real (as California State Route 82), passes through San Carlos. San Carlos is considered a densely populated city, with an estimated 5,129 persons per square mile compared to the California state average of 239 persons per square mile.

The San Carlos Airport is located along the northeast section within city limits approximately 20 miles south of downtown San Francisco. It is home to approximately 500 aircraft and over 25 aviation related businesses. The San Carlos Airport provides multiple emergency response and safety-related services for the City and County, including Air-Ambulance, Medevac flights, and law enforcement patrols¹⁶.

San Carlos is home to two museums. The first, the Museum of San Carlos History – located adjacent to Fire Station #13 on Laurel Street – focuses on the rich history of the City. Permanent exhibits focus on the City from the 1800s to 1900s through the display of historical photos and artifacts. Visiting exhibits vary throughout the year¹⁷. The Hiller Aviation Museum is located on the grounds of the San Carlos Airport. This interactive museum features hands-on experiences with flight simulators and airplane sections and focuses on the history of aviation and advancements within the field. Additionally, visitors may listen to live communications between air traffic controllers and pilots flying into San Carlos Airport¹⁸.

- ❖ **Brief History** — The area presently known as the City of San Carlos was originally inhabited by the Ohlone Tribe of Native Americans. By 1542, European settlers began exploring, and in 1775, Lt. Juan Manuel de Ayala anchored his ship, the San Carlos, in the San Francisco Bay to develop a map of the area. Between the 1770s and 1854, the Spanish Government granted the lands consisting of present-day San Carlos to Spanish nationals. In 1854, the first American purchased and occupied land in the area. The laying of the San Francisco to San Jose railroad around the late 1800s began great changes in the San Carlos area, as settlers mobilized to develop a town. The airport was established in 1919 and the first fire department was formed in 1927. In June 1925, the residents of San Carlos voted to incorporate the City. By 1927, San Carlos had its first elected mayor, James Hugh Martin.
- ❖ **Climate** — The City of San Carlos enjoys a Mediterranean climate characterized by warm, dry summers and mild winters. Historically, July is the warmest month for the City, with average high temperatures reaching the low to mid 80s. December and January are typically the coolest months, with average lows reaching the low 40s. July 1972 and January 1949 experienced record high and low temperatures of 110 degrees Fahrenheit and 16 degrees Fahrenheit, respectively. Average precipitation for the City is approximately 20 inches per year, with the wettest month being February (4.1") and the driest being July (0")¹⁹.
- ❖ **Governing Body Format** — The type of government employed by the City of San Carlos is a Council-Manager format. This format is characterized by a legislative and executive branch. The legislative branch consists of a five-member City Council. The City Council generally functions to provide

¹⁶ <http://publicworks.smcgov.org/san-carlos-airport>

¹⁷ <http://www.sancarloshistorymuseum.org/>

¹⁸ <http://hiller.org/exhibits.shtml>

¹⁹ <http://www.weather.com/weather/monthly/l/94070>



legislative direction and set City policy. The executive branch consists of a Council-appointed City Manager. This City Manager is responsible for the operational activities of all City Departments; implementing the City's general policy guidelines; submitting for adoption a balanced budget; recommending strategies and solutions to City Council; following legislative activities; and keeping Council apprised of potential impacts to the City²⁰. The City Council assumes responsibility for the adoption of this plan; the City Manager oversees its implementation.

- ❖ **Development Trends** — Development between 2011 and 2015 saw minimal development activity. Notable projects included new commercial buildings totaling 26,840 sq. ft. and 4 residential units.

The City of San Carlos expects regular development between 2016 and 2021. As of May, 2016, San Carlos has received applications for 35 new units. San Carlos also has approximately 411 units approved, but construction is not currently underway. Finally, San Carlos has 34 units currently under construction. Applications, approved, and under construction projects total 480 units. Approximately 700,000 square feet of these projects is dedicated to non-residential use.

17.3 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 17-1. An assessment of fiscal capabilities is presented in Table 17-2. An assessment of administrative and technical capabilities is presented in Table 17-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 17-4. Classifications under various community mitigation programs are presented in Table 17-5. An assessment of education and outreach capabilities is presented in Table 17-6.

TABLE 17-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code	Yes	No	Yes
<i>Comment: The 2013 California Building Residential, Electrical, Mechanical, Plumbing, Energy, Historical Building, Existing Building, and Green Building Standards Codes, as adopted by the California Building Standards Commission, were adopted by reference by the City of San Carlos in 2013. Building code regulations and amendments found in Chapter 15.04.</i>			
Zoning Code	Yes	No	No
<i>Comment: City of San Carlos Zoning Codes were most recently updated January 2016, Chapter 18.</i>			
Subdivisions	Yes	No	No
<i>Comment: City of San Carlos Subdivision Codes were most recently updated in 2004; however, much of the ordinance is from 1981, Chapter 17.</i>			
Stormwater Management	Yes	No	Yes
<i>Comment: City of San Carlos Stormwater Management and Discharge Control Codes were most recently updated in 2011, Subchapter 13.14.</i>			
Post-Disaster Recovery	No	No	No
<i>Comment:</i>			

²⁰ <http://cityofsancarlos.org/depts/cm/default.asp>



	Local Authority	Other Jurisdiction Authority	State Mandated
Real Estate Disclosure <i>Comment: CA. State Civil Code 1102 requires full disclosure on Natural hazard Exposure of the sale/re-sale of any and all real property.</i>	No	No	No
Growth Management <i>Comment: The Housing Element of the City of San Carlos General Plan contains information regarding growth management in San Carlos. The Housing Element was last updated and adopted in May 2015.</i>	Yes	No	Yes
Site Plan Review <i>Comment: City of San Carlos Development Plan Review Procedures were most recently updated in 2011, Subchapter 18.36.090.</i>	Yes	No	No
Environmental Protection <i>Comment: City of San Carlos Environmental Review Procedures were most recently updated in 2011, Subchapter 18.27.050.</i>	Yes	No	Yes
Flood Damage Prevention <i>Comment: City of San Carlos Flood Damage Prevent Ordinance was most recently updated in 2012, Subchapter 15.56.</i>	Yes	No	No
Emergency Management <i>Comment: City of San Carlos Emergency Organization and Preparedness codes were most recently updated in 2013, Subchapter 2.28.</i>	Yes	No	Yes
Climate Change <i>Comment: SB 97 directs California Environmental Quality Act (CEQA) Guidelines to address greenhouse gas emissions. Other state policies include AB 32 and SB 375 and regulations of the Climate Action Plan.</i>	No	No	Yes
Other <i>Comment: Chapter 18.14 (Stream Development and Maintenance Overlay District), 2011 Chapter 13.12 (Underground Utility Districts), 1987 Chapter 13.04 through 13.10 (Sewer Use), 2011 Chapter 15.30 (Seismic Hazard Identification Program for Unreinforced Masonry Buildings), 1989</i>	Yes	No	No
General or Comprehensive Plan <i>Is the plan equipped to provide linkage to this mitigation plan? Yes Comment: The Town 2030 General Plan was last revised and adopted in October 2009. The Housing Element was last revised in May 2015.</i>	Yes	No	Yes
Capital Improvement Plan (CIP) <i>What types of capital facilities does the plan address? Wastewater and Sewer Systems; Street and Sidewalk repairs; Park and Facility renovations and repairs; equipment acquisitions; plans and studies; stormwater improvements and NPDES permit requirements; library improvements; housing projects; and more. How often is the plan updated? The CIP is updated every year. Comment: The most recent version is for FY 2014-2016; however, FY 2012 and FY 2010 CIPs are also available on the City website.</i>	Yes	No	No
Floodplain or Watershed Plan <i>Comment: Watershed Project completed for Bay Area and hosted on the Oakland Museum website.</i>	Yes	Yes	No



	Local Authority	Other Jurisdiction Authority	State Mandated
Stormwater Plan Comment: Industrial and Commercial Business Inspection Plan and Enforcement Response Plan (Municipal Regional Stormwater Permit Provisions), Prepared May 2011 and Revised June 2013; Construction Best Management Practices (BMPs), n.d.	Yes	No	No
Habitat Conservation Plan Comment:	No	No	No
Economic Development Plan Comment: The City updates its Economic Development Plan between every 1-3 years, with the most recent version being for 2016-2019.	Yes	No	No
Shoreline Management Plan Comment:	No	No	No
Community Wildfire Protection Plan Comment: <i>San Mateo County CWPP</i>	No	No	Yes
Forest Management Plan Comment:	No	No	No
Climate Action Plan Comment: The City of San Carlos adopted its first Climate Action Plan in 2009, developing the plan in parallel with the 2030 General Plan.	Yes	No	No
Other Comment: The Sanitary Sewer Management Plan (SSMP) was developed by the San Carlos Department of Public Works and last updated in January 2016. The SSMP includes an Overflow Emergency Response Plan (OERP) element. The El Niño Flood Preparedness and Response Guide for Homeowners and Residents was prepared by the City in conjunction with ABAG in 2016. The Apartment Inspection Program was implemented 1999 by Ordinance. This program addresses deferred maintenance of Building and Fire code-related items within rental units and common area of apartment complexes.	Yes	Yes	No
Comprehensive Emergency Management Plan Comment:	Yes	No	Yes
Threat & Hazard Identification & Risk Assessment Comment:	No	No	Yes
Post-Disaster Recovery Plan Comment:	No	No	Yes
Continuity of Operations Plan Comment:	Yes	No	Yes
Public Health Plan Comment: <i>San Mateo County Health Department assessments, reports, and plans.</i>	No	Yes	Yes

TABLE 17-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	No





Financial Resources	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes, Sewer, Solid Waste
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes, Special Gas Tax Fund
Incur Debt through Private Activity Bonds	No
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes, Police Grants, State funding for street repairs, Active Transportation programs, Federal Technical Assistance Grants
Development Impact Fees for Homebuyers or Developers	No
Other	No

TABLE 17-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Community Development Department—Planning Division, City Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Public Works Department and Community Development Department—Building Division
Planners or engineers with an understanding of natural hazards	Yes	Public Works Department—Engineering Division
Staff with training in benefit/cost analysis	Yes	Public Works Department – Engineering Division
Surveyors	Yes	On-call Consultant Surveyors as needed
Staff capable of making substantial damage estimates	No	Not in Public Works Department
Personnel skilled or trained in GIS applications	Yes	Management Analyst in Public Works Department
Scientist familiar with natural hazards in local area	Yes	On-call Consultant Services as needed
Emergency manager	Yes (Partial)	San Mateo County OES
Grant writers	Yes	Department-based

TABLE 17-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	09/15/1977
When did the Flood Insurance Rate maps become effective?	07/16/15
What local department is responsible for floodplain management?	Department of Community Development (Building Division)
Who is your floodplain administrator? (department/position)	Building Official
<ul style="list-style-type: none"> ▪ Is this a primary or auxiliary role? 	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	No





Criteria	Response
What is the date of adoption of your flood damage prevention ordinance?	October 16, 2012
<ul style="list-style-type: none"> Does your floodplain management program meet or exceed minimum requirements? 	Meet
When was the most recent Community Assistance Visit or Community Assistance Contact?	March 2012
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
Does your jurisdiction participate in the Community Rating System (CRS)?	Yes
<ul style="list-style-type: none"> If so, is your jurisdiction seeking to improve its CRS Classification? 	Not at this time.
How many Flood Insurance policies are in force in your jurisdiction?	237
<ul style="list-style-type: none"> What is the insurance in force? What is the premium in force? 	\$82,788,500 \$330,704
How many total loss claims have been filed in your jurisdiction?	56
<ul style="list-style-type: none"> How many claims were closed without payment(CWOP)/are still open? What were the total payments for losses? 	24 CWOP \$163,319.72

TABLE 17-5. COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	Yes	9	5/1/2013
Building Code Effectiveness Grading Schedule	Yes	3	2011
Public Protection	Yes (Redwood City FD)	2	2013
Storm Ready	No	N/A	N/A
Firewise	No	N/A	N/A

TABLE 17-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes, City Manager’s Department
Do you have personnel skilled or trained in website development?	Yes, IT Manager
Do you have hazard mitigation information available on your website?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Community Relations News Releases; Floodplain Information on Building Division Webpage
Do you utilize social media for hazard mitigation education and outreach?	Yes





Criteria	Response
<ul style="list-style-type: none"> If yes, please briefly describe. 	Facebook, Twitter, Virtual Town Hall, Nextdoor, Instagram
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Police Education Series, Good Living Newsletter, TV Channel
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	San Mateo County Emergency Alert System

17.4 Integration with Other Planning Initiatives

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

17.4.1 Existing Integration

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

- ❖ City of San Carlos 2030 General Plan—The City of San Carlos has integrated hazard mitigation into several elements of its General Plan. The Housing Element notes State regulations and the need for the City to consider environmental constraints, including biological resources, hazardous materials, and flooding, amongst others; it also includes information on where these resources and hazards are most typically located to guide development away from hazard-prone areas. The Environmental Management Element considers the importance of certain habitats to the community (i.e., wetlands, riparian habitats, woodlands, and areas with protected species, etc.), helping the City determine the best locations to maintain open spaces within the community. Lastly, the Safety Element examines geologic seismic hazards to the community and provides maps for expansive soil locations, dam inundation areas, floodplains, and fire risk.
- ❖ City of San Carlos Climate Action Plan—The City of San Carlos took an innovative approach to developing its first Climate Action Plan by doing so in conjunction with its 2030 General Plan. This ensures that the Climate Action Plan is consistent with the General Plan and sets the stage for integration with future planning mechanisms. Additionally, the Climate Action Plan seeks to increase public health through the reduction of greenhouse gas emissions and also integrates mitigation measures by planning adaption strategies for climate change.
- ❖ City of San Carlos Sanitary Sewer Management Plan—In accordance with the San Francisco Regional Water Quality Control Board (SFRWQCB) and the California State Water Resources Control Board (SWRCB), the SSMP integrates hazard awareness and mitigation efforts, most notably to ensure public health and to reduce stormwater. The SSMP also contains an overflow emergency response plan (OERP) that provides notification, response, reporting, and impact mitigation procedures.





17.4.2 Opportunities for Future Integration

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

- ❖ City of San Carlos Climate Action Plan—The Climate Action Plan provides the City with an opportunity to directly integrate hazard mitigation with existing goals and City. Since the Climate Action Plan already provides a strategic guide for minimizing the impact of human activity on the environment, integration of hazard mitigation is a fitting and strategic next step. San Carlos anticipates that future assessments to the Climate Action Plan will include hazard mitigation as it relates to air quality, land use, water conservation, climate adaptation (sea level rise), and other factors. The City plans to continue integrating the Climate Action Plan with its General Plan and other applicable City plans.
- ❖ Capital Improvement Program (CIP)—The City of San Carlos maintains a comprehensive CIP, which guides capital improvement projects over a specified period (currently FY 2014-2016). Many projects included in the current CIP relate to hazard mitigation. The City should review the CIP to ensure mitigation actions for the Hazard Mitigation Plan (HMP) update are consistent with approved capital improvement projects. Additionally, the City can use the HMP update and any new mitigation initiatives as areas to explore in future CIP.
- ❖ SSMP—Although the City’s SSMP already considers hazard mitigation to some extent, the City can explore integrating stormwater and public health hazard mitigation initiatives with the SSMP where applicable. Additionally, while reviewing and updating the HMP, the City should consider any sewer overflow mitigation measures identified in the SSMP OERP.
- ❖ Economic Development Plan—The City Economic Development Plan contains project initiatives and goals that could be integrated with the Hazard Mitigation Plan. At least one suggested action considers the impact of flooding, although there is no project category related to hazard mitigation. The City could consider adding an element to its initiative matrix so that smart development and land use practices avoid construction in hazard-prone areas.
- ❖ Public Outreach—The City has multiple resources on hazard mitigation, disaster preparation, and outreach on its website. The City of San Mateo may eventually explore developing a public information program that creates a cohesive platform to deliver this information to residents; such a program may also be designed in a way to enhance the City’s CRS rating.

17.5 Jurisdiction-Specific Natural Hazard Event History

Table 17-6 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 17-6. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Fire	FM-2856	9/10/2010	Unknown
Severe Storm(s)	DR-1646	6/5/2006	Unknown
Severe Storm(s)	DR-1628	2/3/2006	\$26,516.28 Debris removal
Severe Storm(s)	DR-1203	2/9/1998	Unknown



Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Storm(s)	DR-1155	1/4/1997	Unknown
Severe Storm(s)	DR-1046	3/12/1995	Unknown
Severe Storm(s)	DR-1044	1/10/1995	Unknown
Freezing	DR-894	2/11/1991	Unknown
Earthquake	DR-845	10/18/1989	Debris removal
Flood	DR-758	2/21/1986	Unknown
Coastal Storm	DR-677	2/9/1983	\$10,354.90 Debris removal
Flood	DR-651	1/7/1982	\$22,265.00 Debris removal
Drought	EM-3023	1/20/1977	Unknown
Flood	DR-145	2/25/1963	Unknown
Severe Storm(s)	DR-138	10/24/1962	Unknown
Flood	DR-122	3/6/1962	Unknown
Flood	DR-82	4/4/1958	Unknown
Fire	DR-65	12/29/1956	Unknown
Flood	DR-47	12/23/1955	Unknown
Flood	DR-15	02/05/1954	Unknown

17.6 Jurisdiction-Specific Vulnerabilities

Repetitive loss records are as follows:

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

No other vulnerabilities were noted by the City.

17.7 Hazard Risk Ranking

Table 17-7 presents the ranking of the hazards of concern.

TABLE 17-7. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	48	High
2	Flood*	24	High
3	Wildfire*	30	High
4	Severe Weather	33	Medium
5	Landslide	18	Medium
6	Drought	3	Low
7	Dam Failure	0	No Impact/Exposure



8	Tsunami	0	No Impact/Exposure
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* The ranking increased from Medium to High based on local knowledge of hazard susceptibility within San Carlos.

17.8 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 17-9 lists the actions that make up the City of San Carlos hazard mitigation action plan. Table 17-10 identifies the priority for each action. Table 17-11 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 17-9. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action CSC-1 — Develop drought contingency plan.						
N/A	Drought	2, 3, 5, 6, 8	San Carlos Public Works	Low	General Fund, FEMA Hazard Mitigation Grants	Short-term
Action CSC-2 — Implement public outreach plan on importance of water conservation.						
N/A	Drought	1, 2, 3, 5, 6	San Carlos Public Works	Low	General Fund	Ongoing
Action CSC-3 — Convert spray irrigation to drip irrigation in public areas.						
Existing	Drought	1, 4, 5, 6	San Carlos Public Works	High	General Fund, Federal and State Grants	Long-term
Action CSC-4 — Develop recycled water option for resident’s irrigation needs.						
New	Drought	1, 4, 5, 6	San Carlos Public Works	High	General Fund, Federal and State Grants	Long-term
Action CSC-5 — Develop a Continuity of Operations plan.						
N/A	All Hazards (Earthquake Focus)	2, 3, 5, 6, 8, 10	San Carlos Planning Department, Public Works	Medium	General Fund, FEMA Hazard Mitigation Grants	Short-term
Action CSC-6 — Provide backup power for critical infrastructure and facilities in earthquake-prone areas.						
Existing and New	All Hazards (Earthquake Focus)	1, 4, 6, 7	San Carlos Public Works	High	General Fund, FEMA Hazard Mitigation Grants	Short-term
Action CSC-7 — Warehouse critical infrastructure repair materials						
Existing	All Hazards (Earthquake Focus)	1, 4, 6, 7	San Carlos Public Works	Medium	General Fund, FEMA Hazard Mitigation Grants	Short-Term
Action CSC-8 — Train emergency responders.						





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
N/A	All Hazards (Earthquake Focus)	1, 2, 3, 6, 10	Redwood City Fire Department	Low	General Fund, FEMA Hazard Mitigation Grants	Ongoing
Action CSC-9 — Maintain drainage system.						
Existing	Flooding	3, 4, 6, 7	San Carlos Public Works	Medium	General Fund	Ongoing
Action CSC-10 — Provide redundancy for critical facilities and infrastructure in flood areas.						
Existing	Flooding	1, 4, 6, 7	San Carlos Public Works	High	General Fund, FEMA Hazard Mitigation Grants	Short-term
Action CSC-11 — Include replacement of critical drainage system elements in Capital Improvement Program.						
Existing	Flooding	1, 2, 3, 4, 6, 7	San Carlos Public Works	Low / Medium	General Fund	Short-Term
Action CSC-12 — Maintain current CRS Rating.						
N/A	Flooding	All	San Carlos Building Department, Public Works	Low	General Fund	Ongoing
Action CSC-13 — Harden/relocate critical infrastructure in high risk landslide areas.						
Existing	Landslide	1, 4, 6, 7	San Carlos Building Department, Public Works	Medium / High	General Fund, FEMA Hazard Mitigation Grants	Long-Term
Action CSC-14 — Increase emergency communications alternatives.						
N/A	Severe Weather	1, 3, 4, 9	Redwood City Fire Department	High	General Fund, FEMA Hazard Mitigation Grants	Short-term
Action CSC-15 — Purchase NOAA weather radios.						
New	Severe Weather	1, 3, 4, 9	Redwood City Fire Department	Medium	General Fund, FEMA Hazard Mitigation Grants	Short-term
Action CSC-16 — Equip vital facilities with emergency power sources.						
Existing	Severe Weather	1, 4, 6, 7	San Carlos Public Works	High	General Fund, FEMA Hazard Mitigation Grants	Short-term
Action CSC-17 — Utilize/maintain San Mateo County Public Works Mutual Aid agreement for assistance.						
N/A	Severe Weather	2, 3, 6, 8, 10	San Carlos Public Works	Low	General Fund	Ongoing
Action CSC-18 — Implement best management practices on public land to reduce potential fuel loads near homes.						
N/A	Wildfire	1, 2, 3, 4, 5, 6, 7	San Carlos Public Works	Low	General Fund	Short-term then Ongoing



Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action CSC-19 — Evaluate and remove non-native species of trees that pose an increased risk of an urban interface fire.						
N/A	Wildfire	1, 2, 3, 4, 5, 6, 7	San Carlos Public Works	Low	General Fund	Short-term
Action CSC-20 — Increase public outreach and education on the dangers of wildland fires.						
N/A	Wildfire	2, 3, 6, 7, 8, 10	City Manager’s Office, Redwood City Fire Department	Low	General Fund, FEMA Hazard Mitigation Grants	Ongoing
Action CSC-21 — Establish/maintain fire response and evacuation routes.						
Existing	Wildfire	1, 2, 3, 6, 7, 8	Redwood City Fire Department	Low	General Fund	Ongoing
Action CSC-22 — Obtain services from an outside consultant to identify FEMA or other hazard mitigation grant opportunities, apply for grants that can be used to fund the City’s identified Hazard Mitigation Actions and administer any grants received and subsequent audits.						
N/A	All Hazards	All	San Carlos City Manager’s Office	Low/Medium	General Fund	Ongoing (as needed)
Action CSC-23 — Develop an inventory of soft-story buildings in San Carlos.						
Existing	Earthquake	1, 3, 5, 8	San Carlos Building Division	Medium	HMGP, Staff Time, General Funds	Short-term
Action CSC-24 — Continue to educate the public on the dangers of pipeline failure						
N/A	Human-Caused	1, 2, 3, 5, 6	San Carlos City Manager’s Office, San Carlos Public Works	Low	General Fund	Ongoing
Action G-1 —Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.						
Existing	All	1, 3, 4, 5, 6, 7, 11	Jurisdictions	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
Action G-2 —Consider participation in incentive-based programs such as the Tree City and StormReady.						
New and existing	All	All	Jurisdictions	Low	General Fund	Long-term
Action G-3 —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.						
New and existing	Flooding	2, 3, 5, 6, 8	Jurisdictions	Low	General Fund	Short-term and ongoing
Action G-4 —Where feasible, implement a program to record high water marks following high-water events.						





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New and existing	Flooding, Severe Weather	1, 3, 4, 5, 6	Jurisdictions	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
Action G-5 —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	Jurisdictions	Low	General Fund	Short-term
Action G-6 —Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.						
New and existing	All	2, 3, 4, 5, 6, 7, 8, 10, 11	Jurisdictions	Low	Operating Budgets	Ongoing
Action G-7 — Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and existing	All	All	Jurisdictions	Low	General Fund	Short- and long-term
Action G-8 — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All	1, 4	Jurisdictions	Low	Staff Time, General Funds	Short-term

TABLE 17-10. MITIGATION STRATEGY PRIORITY SCHEDULE

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





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





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

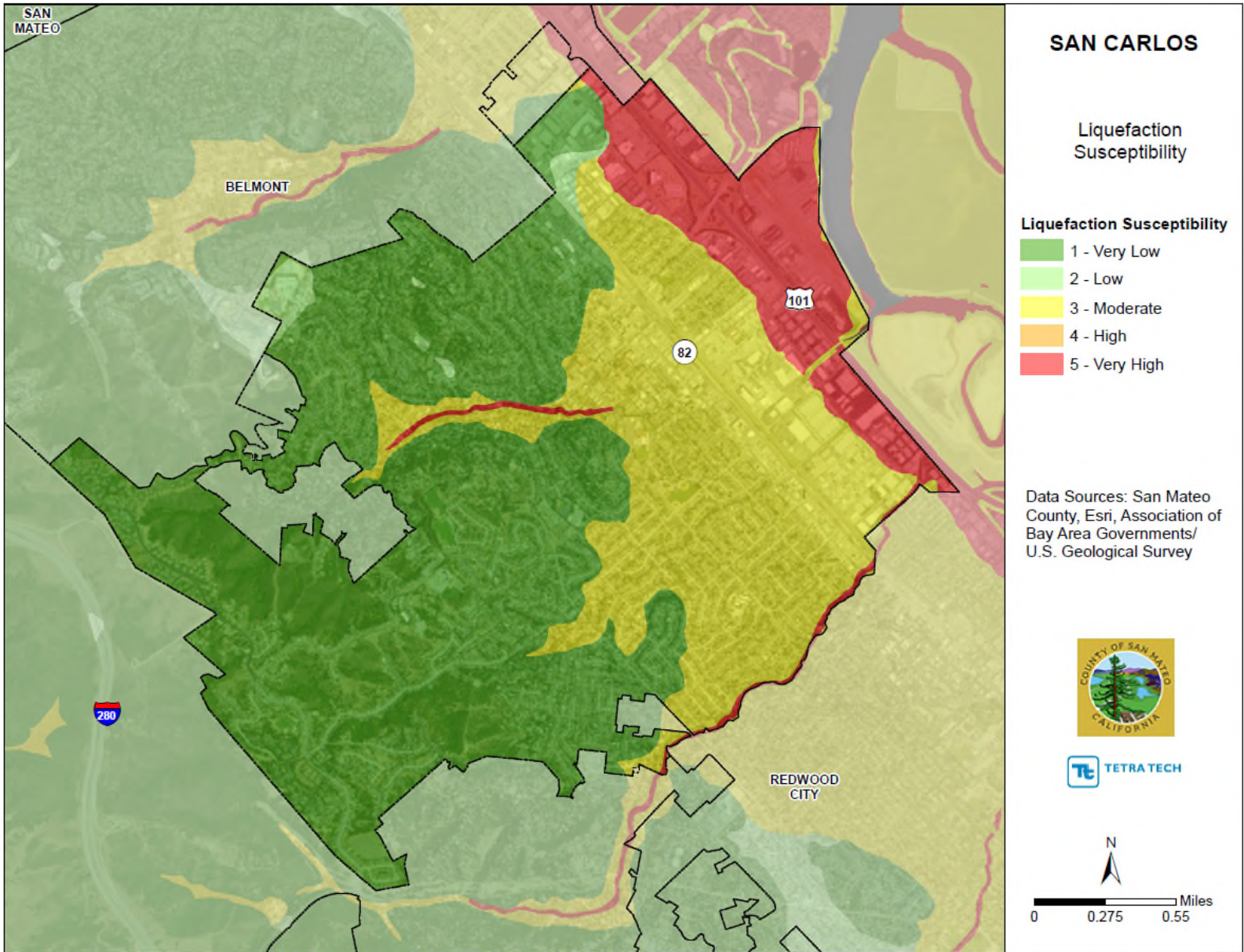
a. See the introduction to this volume for explanation of priorities.

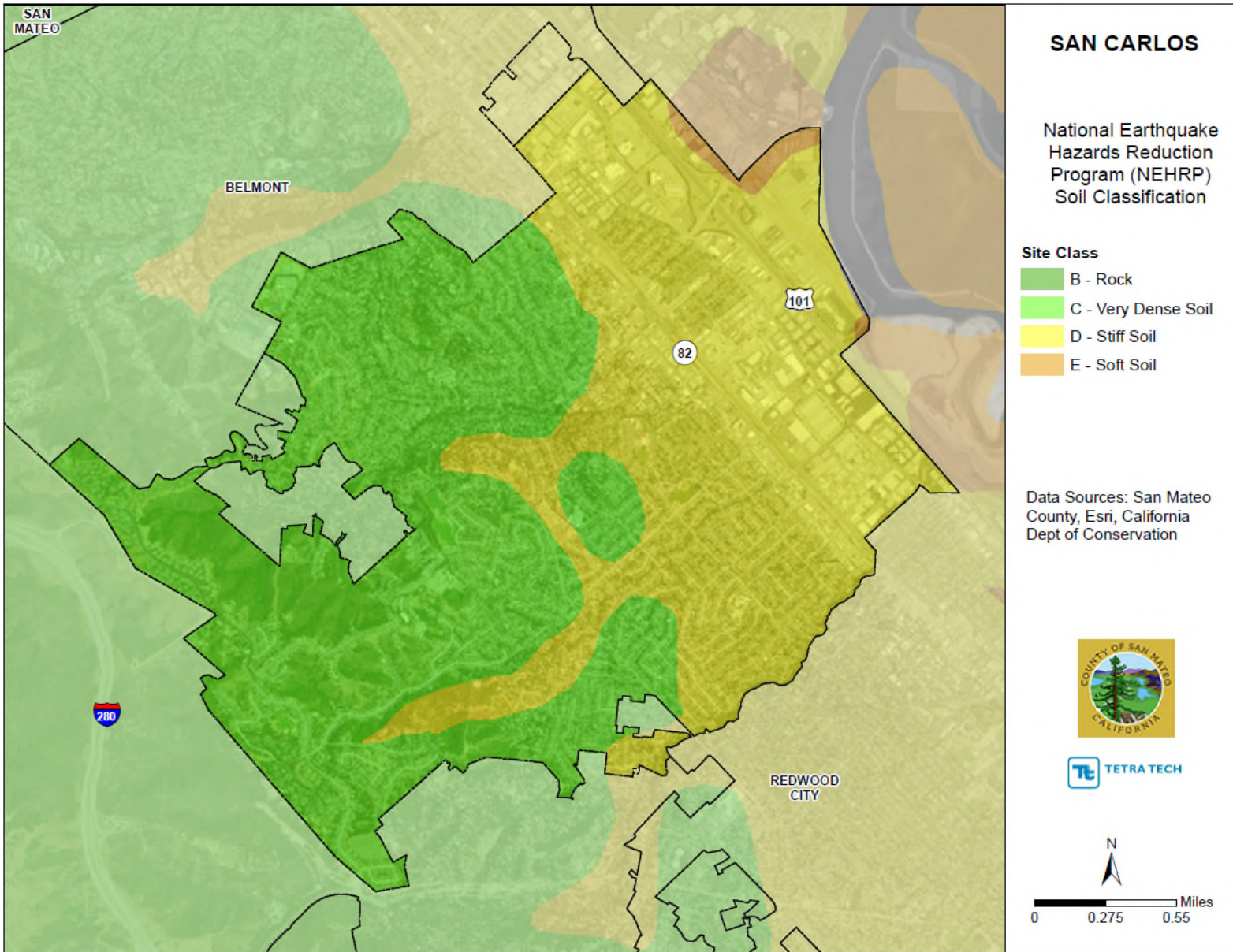
TABLE 17-11. ANALYSIS OF MITIGATION ACTIONS

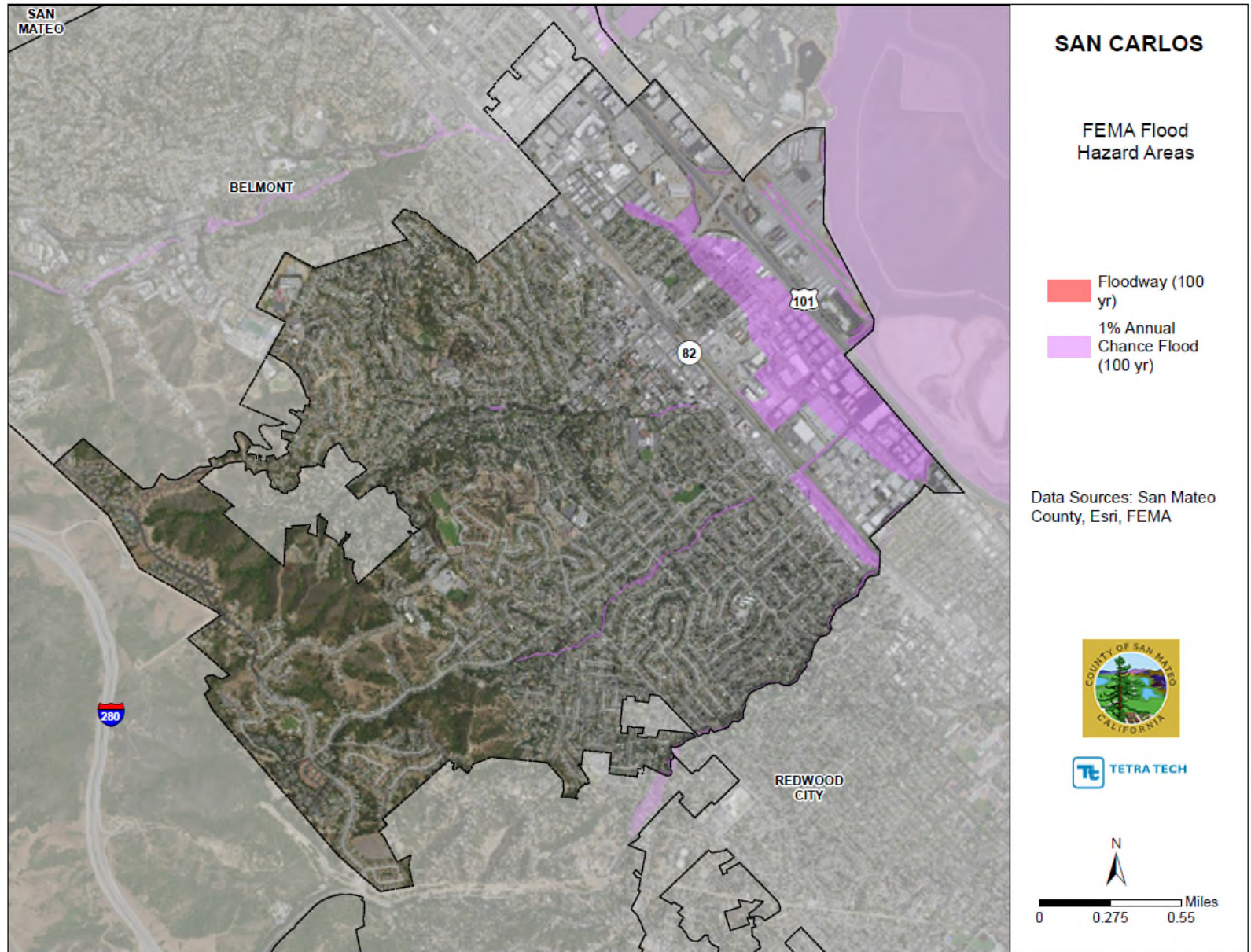
Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Drought	1, 4, 8, 22	-	2, 8	3, 4	1, 4, 5, 6, 8	3, 7
Earthquake	8, 23, 22	-	8	-	5, 6, 8	7,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

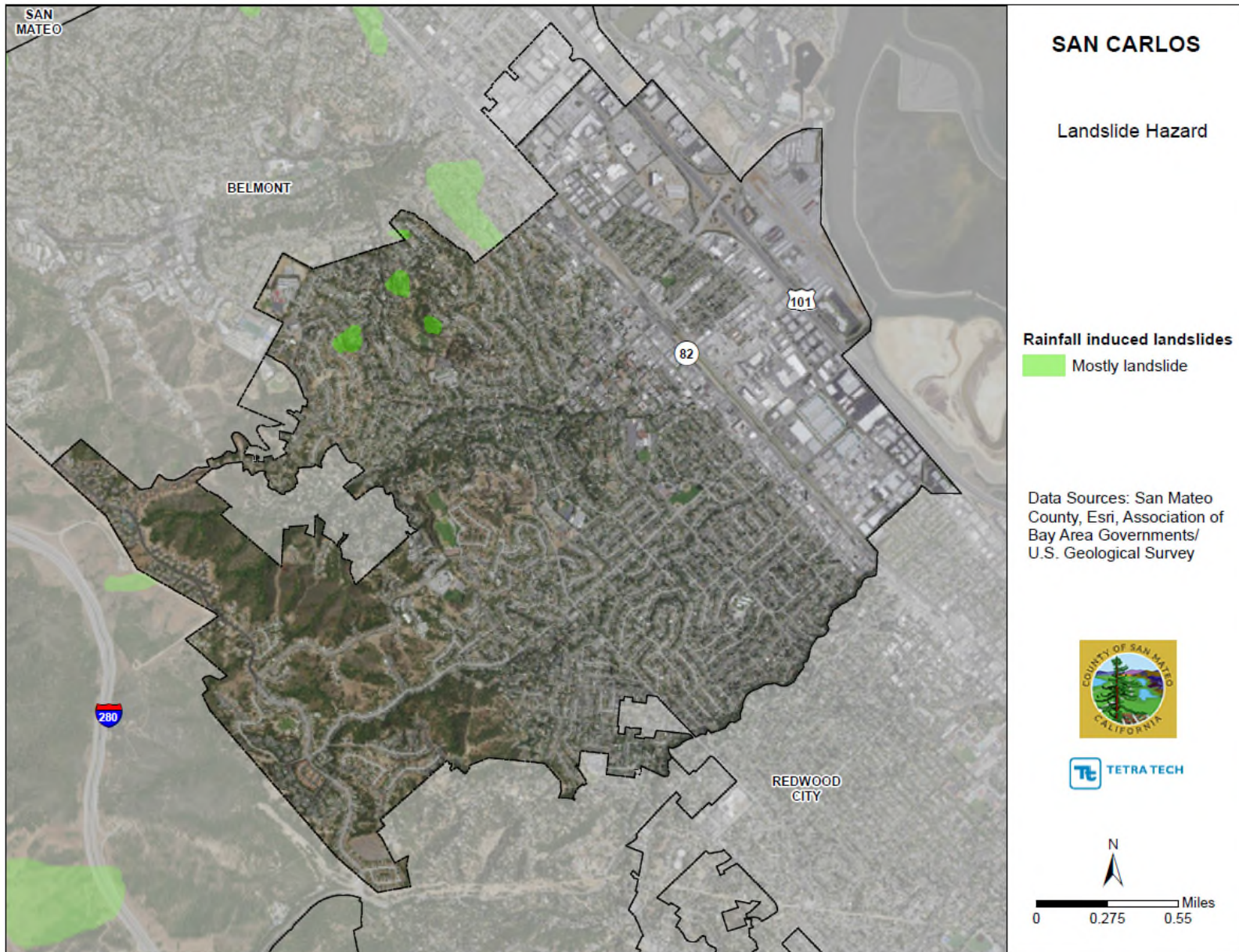
a. See the introduction to this volume for explanation of mitigation types.

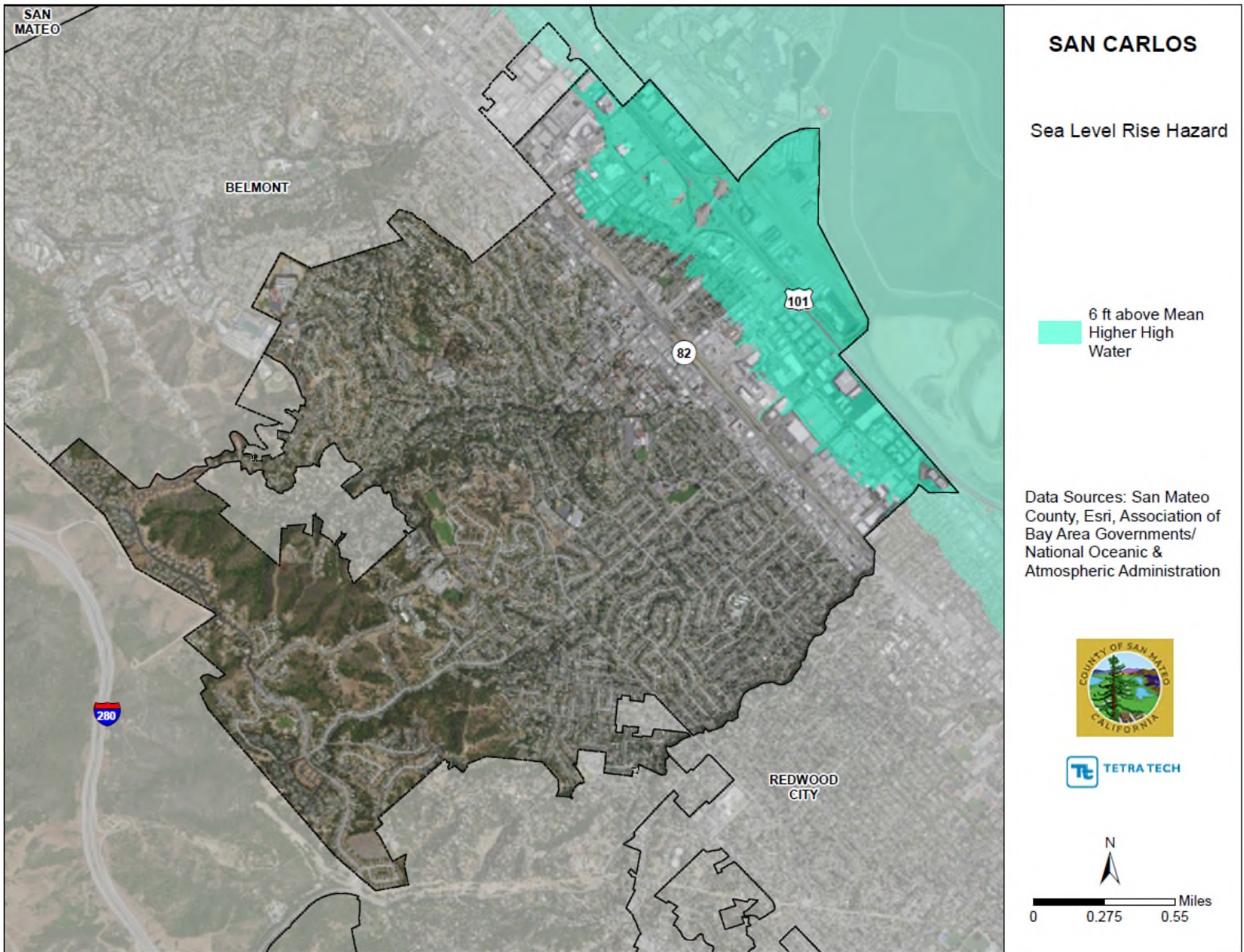


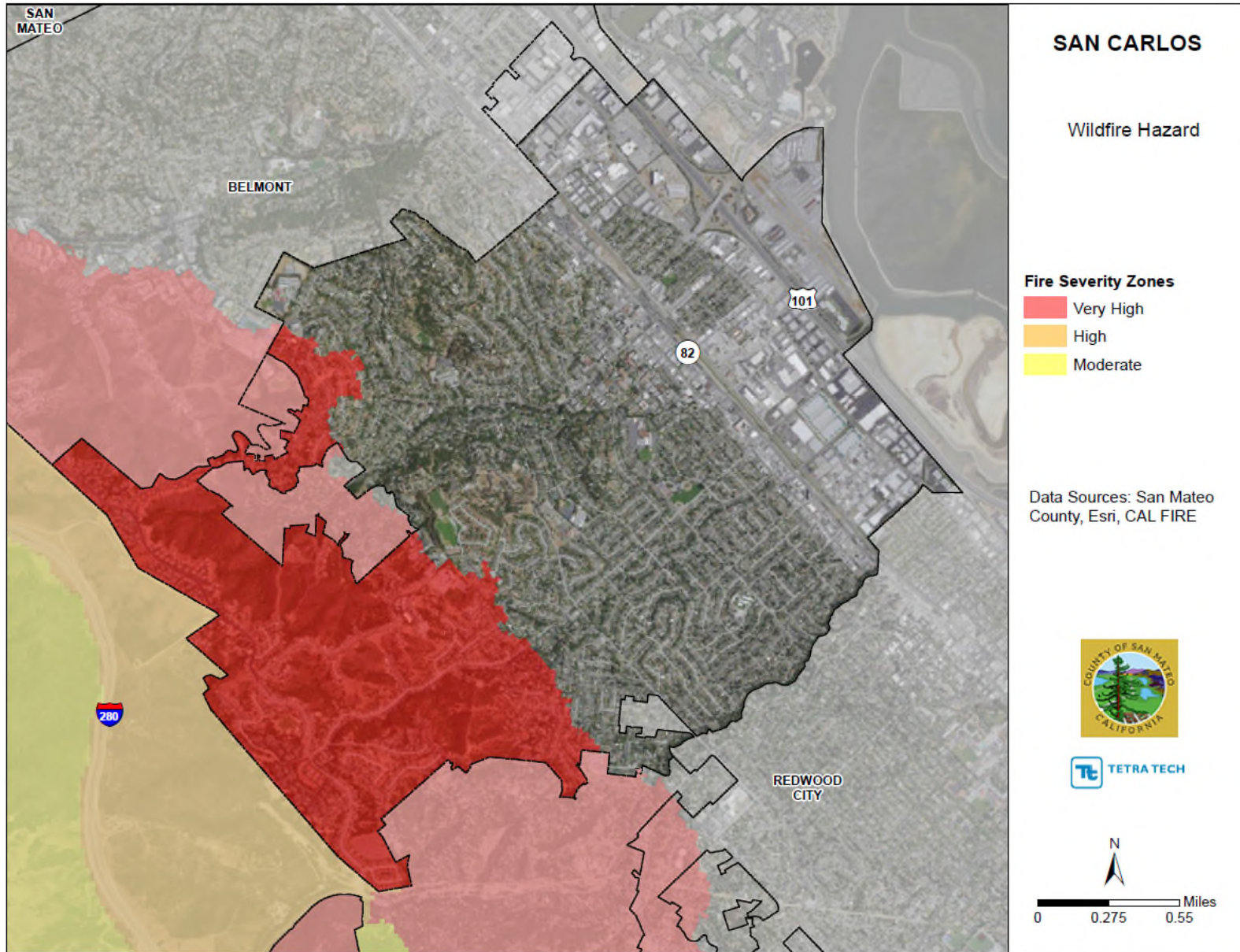












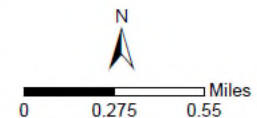
SAN CARLOS

Wildfire Hazard

Fire Severity Zones

- Very High
- High
- Moderate

Data Sources: San Mateo County, Esri, CAL FIRE





Chapter 18.

City of South San Francisco

18.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

Ken Anderson Sr. Disaster Preparedness Manager
 480 North Canal Street
 South San Francisco CA 94080
 Telephone: 650-829-3950
 e-mail Address: ken.anderson@ssf.net

Alternate Point of Contact

Gerry Kohlmann Fire Chief
 480 North Canal Street
 South San Francisco CA 94080
 Telephone: 650-829-3950
 e-mail Address: Gerry.kohlmann@ssf.net

18.2 Jurisdiction Profile

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

- ❖ Date of Incorporation—1908
- ❖ Current Population—64,585 (as of January 1, 2016 – CA DOF)
- ❖ Population Growth—Census in 2000 (60,552) Census in 2010 (63,632) up 5.1% to be estimated at year 2014 (67,009) up 5.3% since 2010.
- ❖ Location and Description—Located in San Mateo County, California. Situated in the San Francisco Bay Area, just south of the City of San Francisco, the City is 9.5 square miles. South City borders the cities of San Bruno to the South, and Daly City and the Town of Colma to the North.
- ❖ Brief History—In 1890, after Lux's death, his heirs sold the land to Peter Iler of Omaha, who was representing meat packer Gustavus F. Swift. Swift selected the site as South San Francisco, a West Coast stockyard and market place, similar to his operations in South Omaha and South Chicago.

Needing money, Swift aligned with several Chicago capitalists and formed two joint stock corporations: South San Francisco Land and Improvement Company, and the Western Meat Company. The driving force behind the Land and Improvement Company was William J. Martin whose efforts to attract industries and workers to South San Francisco led to the city's growth and its incorporation on September 19, 1908. Major industries continued to locate in South San Francisco and two world wars brought a transition to shipbuilding. The Shaw-Batcher shipyard built cargo ships and between wars it built barges and dredges and fabricated pipe, becoming one of the pioneers of automatic welding machinery. The shipyard in South San Francisco had four berths from which ships were launched sideways, two on each side of a large basin at Oyster Point. Following World War II the population boomed and a well-balanced community of industrial and residential areas developed.

The 1950's brought modern industrial parks to the East of 101 area, such as Cabot, Cabot and Forbes; freight forwarding, light industries, and other airport related businesses thrived. A new era for South



San Francisco began in 1976 with the founding of Genentech by venture capitalist Robert Swanson and molecular biologist Dr. Herbert Boyer. Their objective: to explore ways of using recombinant DNA technology to create breakthrough medicines. This earned South San Francisco the title of "Birthplace of Biotechnology", and thus attracted other biotech and pharmaceutical businesses to the area, bringing economic growth and stability to the community for several years. In 2008, the city celebrated its centennial with many memorable events honoring its forefathers, and recognizing businesses, organizations, and outstanding citizens for their contributors.

- ❖ Climate—South San Francisco has warm, dry summers and cool, relatively wet winters. South San Francisco is frequently windy. Summer is the windiest with winds averaging 13.6 mph. The City gets an average of 20 inches of rain per year. And its warmest days come in July averaging 71 degrees.
- ❖ Governing Body Format – The City of South San Francisco is governed by a 5 member city council, elected to 4-Year Terms. The City consists of Sixteen Departments, Boards and Commissions, City Attorney, City Clerk, City Manager, City Treasurer, Finance, Economic Community Development, Public Works, Fire, Police, Information Technology, Human Resources, Library, Parks and Recreation, Oversight Board, and the Successor Agency to the Redevelopment Agency. The City Council assumes responsibility of the adoption of this plan: the City Manager will oversee its implementation.
- ❖ Development Trends— Anticipated development levels for the City of South San Francisco (City) within the next five years are moderate to high, consisting of both residential rental and for-sale housing, commercial mixed-use, and public facilities. All of the new development will be infill, as the City is a medium sized City in the San Francisco Bay Area and surrounding by other developed jurisdictions. The City recently adopted a specific plan that focuses new development within the downtown core and nearby the Caltrain commuter station. Additionally, adoption of a recent sales tax measure will provide funds for development of a new library, and a shared police and fire municipal facility.

18.3 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 18-1. An assessment of fiscal capabilities is presented in Table 18-2. An assessment of administrative and technical capabilities is presented in Table 18-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 18-4. Classifications under various community mitigation programs are presented in Table 18-5. An assessment of education and outreach capabilities is presented in Table 18-6.

TABLE 18-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code <i>Comment: MC Title 15 Adopted March 2014 Chapter 15.08.010</i>	Y	N	Y
Zoning Code <i>Comment: MC Title 20 Adopted July 28th 2010 Effective August 28th 2010 Div 1 thru 6</i>	Y	N	Y
Subdivisions <i>Comment: MC Title 19 Adopted 1982 Chapter 19</i>	Y	N	Y





	Local Authority	Other Jurisdiction Authority	State Mandated
Stormwater Management Comment: MC Chapter 14.04 Adopted 2013	Y	N	Y
Post-Disaster Recovery Comment: MC Title 2 Adopted August 1971 Chapter 2.72.080 managed by SSFFD	Y	N	N
Real Estate Disclosure Comment: CA State Civil Code 1102 requires full disclosure on natural Hazard Exposure of the sale of any and all real Prop	N	N	Y
Growth Management Comment:	N	N	N
Site Plan Review Comment:	N	N	N
Environmental Protection Comment: CA Environmental Quality Act (CEQA)	N	N	Y
Flood Damage Prevention Comment: MC Title 15, January 2009 Chapter 15.56.030	Y	N	Y
Emergency Management Comment: MC Title 2, Adopted July 1971, Chapter 2.72 Managed by SSFFD	Y	N	N
Climate Change Comment:	N	N	N
Other Comment: Unreinforced Structure MC Chapter 15.28 1990, Fire Code Adopted 2014 as per MC 15.24.010	Y	N	N
General or Comprehensive Plan <i>Is the plan equipped to provide linkage to this mitigation plan? Yes, Land Use, Planning, Parks, Public Facilities, Economic Development, Open Space, Conservation Element, Health and Safety, Transportation, Housing Element</i> Comment: General Plan Adopted 1999 (Housing Element Adopted 2015)	Y	N	N
Capital Improvement Plan <i>What types of capital facilities does the plan address?</i> <i>How often is the plan updated? Yearly</i> Comment: Street, Sewer, Parks, Trees, City Facilities, Storm, Infrastructure	Y	N	N
Floodplain or Watershed Plan Comment:	N	N	N
Stormwater Plan Comment: Stormwater Pollution Prevention Plan June 2015 (WQCP)	Y	N	N
Habitat Conservation Plan Comment: General Plan Conservation Element, Open Space Element, 1999	N	N	N
Economic Development Plan Comment: General Plan, Economic Development Element, 1999	Y	N	N
Shoreline Management Plan Comment:	N	N	N



	Local Authority	Other Jurisdiction Authority	State Mandated
Community Wildfire Protection Plan Comment: MC Title 8, Article 2, Chapter 8.54.070 and 8.54.080 Adopted January 2013	Y	N	N
Forest Management Plan Comment: MC Title 13, Tree Preservation Chapter 13.30 March 2016	Y	N	N
Climate Action Plan Comment: Approved 2/2014	Y	N	Y
Other Downtown Station Specific Plan, Parks & Recreation Master Plan Comment: Adopted February, 2015, Adopted July 2015	Y	N	N
Comprehensive Emergency Management Plan Comment: SSF EOP Managed by the SSFFD 2007	Y	N	N
Threat & Hazard Identification & Risk Assessment Comment:	N	N	N
Post-Disaster Recovery Plan Comment: SSF EOP (TAB 13 Recovery and Chapter 4 Recovery) Managed by SSFFD 2007	Y (Partial)	N	N
Continuity of Operations Plan Comment: SSF EOP (Page 104 Use of SSF Employees)Managed by SSFFD 2007, Administrative Instruction (AI) City Employee Responsibility to Respond in Emergencies June 2005	Y (Partial)	N	N
Public Health Plan Comment: Managed by County Health Agency	N	Y	N

TABLE 18-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes 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, Library, Parks & Rec, Public Safety Grants
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes





TABLE 18-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	ECD/PW
Engineers or professionals trained in building or infrastructure construction practices	Yes	ECD/PW
Planners or engineers with an understanding of natural hazards	Yes	ECD/PW/Fire
Staff with training in benefit/cost analysis	Yes	PW/Consultants
Surveyors	Yes	PW/Consultants
Staff capable of making substantial damage estimates	Yes	PW/Fire/ECD
Personnel skilled or trained in GIS applications	Yes	IT/GIS Coordinator
Scientist familiar with natural hazards in local area	No	N/A
Emergency manager	Yes	Fire/Emergency Services Manager
Grant writers	Yes	Fire/PW/Parks/ECD/Consultant

TABLE 18-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	1981
When did the Flood Insurance Rate maps become effective?	1981 (original Map) 10/16/2012 current
What local department is responsible for floodplain management?	PW/Engineering
Who is your floodplain administrator? (department/position)	PW/Director & City Engineer
<ul style="list-style-type: none"> Is this a primary or auxiliary role? 	Auxiliary
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	1/14/2009
<ul style="list-style-type: none"> Does your floodplain management program meet or exceed minimum requirements? 	Meets
When was the most recent Community Assistance Visit or Community Assistance Contact?	8/22/2014
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
<ul style="list-style-type: none"> If so, please state what they are. 	
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
<ul style="list-style-type: none"> If no, please state why. 	
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
<ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	
Does your jurisdiction participate in the Community Rating System (CRS)?	No
<ul style="list-style-type: none"> If not, is your jurisdiction interested in joining the CRS program? 	Yes
How many Flood Insurance policies are in force in your jurisdiction?	381
<ul style="list-style-type: none"> What is the insurance in force? What is the premium in force? 	\$ 114,748,200 \$ 376,234





Criteria	Response
How many total loss claims have been filed in your jurisdiction?	77
<ul style="list-style-type: none"> How many claims were closed without payment/are still open? What were the total payments for losses? 	8 \$ 3,136385.95

TABLE 18-5. COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	No		
Building Code Effectiveness Grading Schedule	No		
Public Protection	No		
Storm Ready	No		
Firewise	No		

TABLE 18-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes City Manager’s Office
Do you have personnel skilled or trained in website development?	No each Dept. has trained person who can update the website IT is lead
Do you have hazard mitigation information available on your website?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Fire Dept. Page
Do you utilize social media for hazard mitigation education and outreach?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Fire/PD/PW/Parks/City use of Social Media
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
<ul style="list-style-type: none"> If yes, please briefly specify. 	
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	City Cable Channel
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	SMC Alert, Social Media Sites, Twitter, FB,

18.4 Integration with Other Planning Initiatives

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

18.4.1 Existing Integration

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





- ❖ City General Plan, provides guidance and supports the LHMP actions and efforts to acquire grant funding or other financing opportunities as well as land use or redevelopment
- ❖ Smoke Alarm Program, Our Fire department engine companies install fire smoke alarms in an existing dwelling as needed upon discovery during incident calls or public calls to schedule installation. Providing a Safer City to live in.
- ❖ City’s Emergency Operations Plan 2007 (EOP) provides mitigation improvements, grant opportunities and guidance after a disaster

18.4.2 Opportunities for Future Integration

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

- ❖ City’s Emergency Operations Plan (EOP) to be Revised. Provides grant opportunities and guidance after a disaster
- ❖ Pedestrian Master Plan can provide grant opportunities and guidance and reduce risk
- ❖ Sea Level Rise (County Master Plan) Impact on Critical Infrastructure such as City’s Water Quality Control Plant (WQCP)

18.5 Jurisdiction-Specific Natural Hazard Event History

Table 18-6 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 18-6. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Weather/Flood	N/A	12/11/2015	\$3,598,050.
Severe Storm(s)	DR-1646	6/5/2006	Unknown
Severe Storm(s)	DR-1628	2/3/2006	Unknown
Severe Weather-Tornado	N/A	3/20/2005	Unknown
Severe Storm(s)	DR-1046	3/12/1995	Unknown
Severe Storm(s)	DR-1044	1/10/1995	Unknown
Earthquake	DR-845	10/18/1989	Unknown

18.6 Jurisdiction-Specific Vulnerabilities

Repetitive loss records are as follows:

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

Other noted vulnerabilities include:





❖ None

18.7 Hazard Risk Ranking

Table 18-7 presents the ranking of the hazards of concern.

TABLE 18-7. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe Weather	33	Medium
3	Landslide	21	Medium
4	Flood	18	Medium
4	Tsunami	18	Medium
6	Wildfire*	3	Medium
7	Drought	3	Low
8	Dam Failure	0	Low

*Wildfire increase to medium due to anticipated future development on the San Bruno Mountain and Sign Hill.

18.8 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 18-8 lists the actions that make up the City of South San Francisco hazard mitigation action plan. Table 18-9 identifies the priority for each action. Table 18-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 18-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action SSF-1 Implement Colma Creek flood control improvement measures by raising flood walls to mitigate overflow along areas of the canal						
Existing	Flood/Severe Storm	1,3,4,5,6,7,8,11	PW	High	HMGP, PDM, EMA,	Ongoing
Action SSF 2 Initiate storm drain improvements with the goal of mitigating flood damage to reduce or eliminate claims						
Existing	Flood/Severe Storm	1,3,4,5,6,7,8,11	PW	High	HMGP, PDM, EMA,	Long Term
Action SSF 3 Construct a tide gate to mitigate flood waters from SF Bay						
New	Flood/Severe Weather/Tsunami	1,2,3,4,5,6,7,8,10,11,	PW/Engineering	High	HMGP, PDM, EMA	Long Term
Action SSF 4 Identify critical City-owned bridges and roads that are affected by flooding and are in need of seismic retrofitting						
Existing	Flood/Severe Storm/Earthquake	1,3,4,5,6,7,8,11	PW/Engineering	High	HMGP, PDM, EMA, General Funds	Long Term





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action SSF 5 Integrate planning elements of the Hazard Mitigation Plan into the General Plan, Emergency Operations Plan (EOP), Parks Master Plan and Facility Master Plan; conduct ongoing maintenance of these plans (AB2140)						
Existing	All	All	Fire/Planning	Medium	PDM, Staff Time, General Funds	Ongoing
Action SSF 6 Develop an Oyster Point Landfill Master Plan to mitigate flood damage and reduce or eliminate claims						
New	Flood/Severe Weather	1,3,4,5,6,7,8,11	Planning/PW	High	HMGP, PDM, EMA, General Funds	Long Term
Action SSF 7 Conduct an inventory of building types (i.e. soft-story commercial, residential, or industrial structures) for all City-owned and privately owned buildings as a first step to establishing voluntary or mandatory programs for retrofitting these buildings						
Existing	Earthquake	All	Planning/Building/Fire	Low	HMGP, Staff Time, General Funds	Ongoing
Action SSF 8 Due to building age and condition, construct a new City Center to house the Library, PD Station, Fire Station, and Parks & Rec.						
New	All	All	Planning	High	Measure W Bond, Grants, General Funds	Ongoing
Action SSF 9 Implement Sign Hill wildfire mitigation measures (i.e. removal of dead trees due to drought and disease)						
New	Wildfire/Drought	1,2,3,4,5,6,7,8,10,11,	Parks/Fire	Low	HMGP, PDM, Staff Time, General Funds	Short-term ongoing
Action SSF 10 Retrofit, acquire, or relocate the identified SRL property within SSF.						
Existing	Flood	1,3,4,5,6,7,8,11	PW	High	HMGP, PDM	Long-Term
Action SSF 11 Construction to the current Emergency Operations Center (EOC) to include a 2 nd floor. Improving emergency management and preparedness capabilities as well as continuity of operations and continuity of government caused by any hazard.						
Existing	All	All	Engineering/Fire	Medium	DHS Grant, CIP, General Fund	Ongoing
Action G-1 —Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.						
Existing	All	1, 3, 4, 5, 6, 7, 11	Jurisdictions	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
Action G-2 —Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.						
New and existing	All	All	Jurisdictions	Low	General Fund	Long-term





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action G-3 —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.						
New and existing	Flooding	2, 3, 5, 6, 8	Jurisdictions	Low	General Fund	Short-term and ongoing
Action G-4 —Where feasible, implement a program to record high water marks following high-water events.						
New and existing	Flooding, Severe Weather	1, 3, 4, 5, 6	Jurisdictions	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
Action G-5 —Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	Jurisdictions	Low	General Fund	Short-term
Action G-6 —Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.						
New and existing	All	2, 3, 4, 5, 6, 7, 8, 10, 11	Jurisdictions	Low	Operating Budgets	Ongoing
Action G-7 — Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and existing	All	All	Jurisdictions	Low	General Fund	Short- and long-term
Action G-8 — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All	1, 4	Jurisdictions	Low	Staff Time, General Funds	Short-term

TABLE 18-9. MITIGATION STRATEGY PRIORITY SCHEDULE

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Priority ^a
SSF1	8	High	High	Yes	Yes	No	High	High
SSF2	8	High	High	Yes	Yes	Yes	High	High
SSF3	10	High	High	Yes	Yes	No	High	High
SSF4	8	High	High	Yes	Yes	No	High	High
SSF5	11	Medium	Low	Yes	Yes	Yes	Low	Low
SSF6	8	Medium	High	Yes	Yes	No	Medium	High
SSF7	11	Medium	Low	Yes	Yes	Yes	Low	Low
SSF8	11	High	High	Yes	Yes	No	High	High





Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Priority ^a
SSF9	10	Medium	Low	Yes	Yes	Yes	Medium	Low
SSF10	8	Medium	High	No	Yes	No	Medium	Medium
SSF 11	11	High	Medium	Yes	Yes	Yes	Medium	Medium
Action G-1	7	High	High	Yes	Yes	No	High	High
Action G-2	11	High	Low	Yes	No	Yes	High	Low
Action G-3	5	Medium	Low	Yes	No	Yes	High	Low
Action G-4	5	Medium	Medium	Yes	Yes	Yes	Medium	Medium
Action G-5	9	Medium	Low	Yes	No	No	Medium	Low
Action G-6	9	Low	Low	Yes	No	Yes	Low	Low
Action G-7	11	Low	Low	Yes	No	Yes	High	Low
Action G-8	2	Low	Low	Yes	No	Yes	High	Low

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

TABLE 18-10. ANALYSIS OF MITIGATION ACTIONS

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

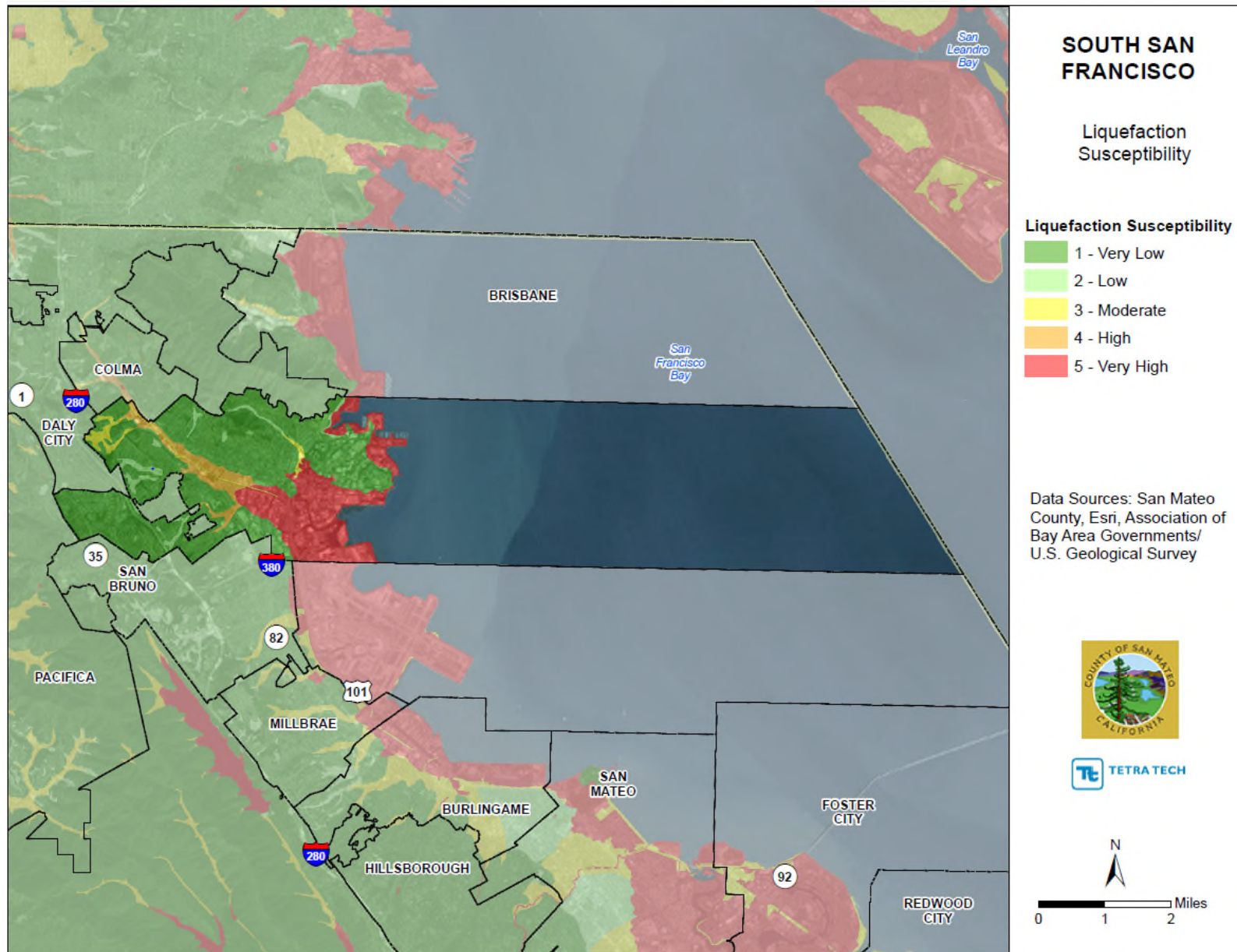
a. See the introduction to this volume for explanation of mitigation types.

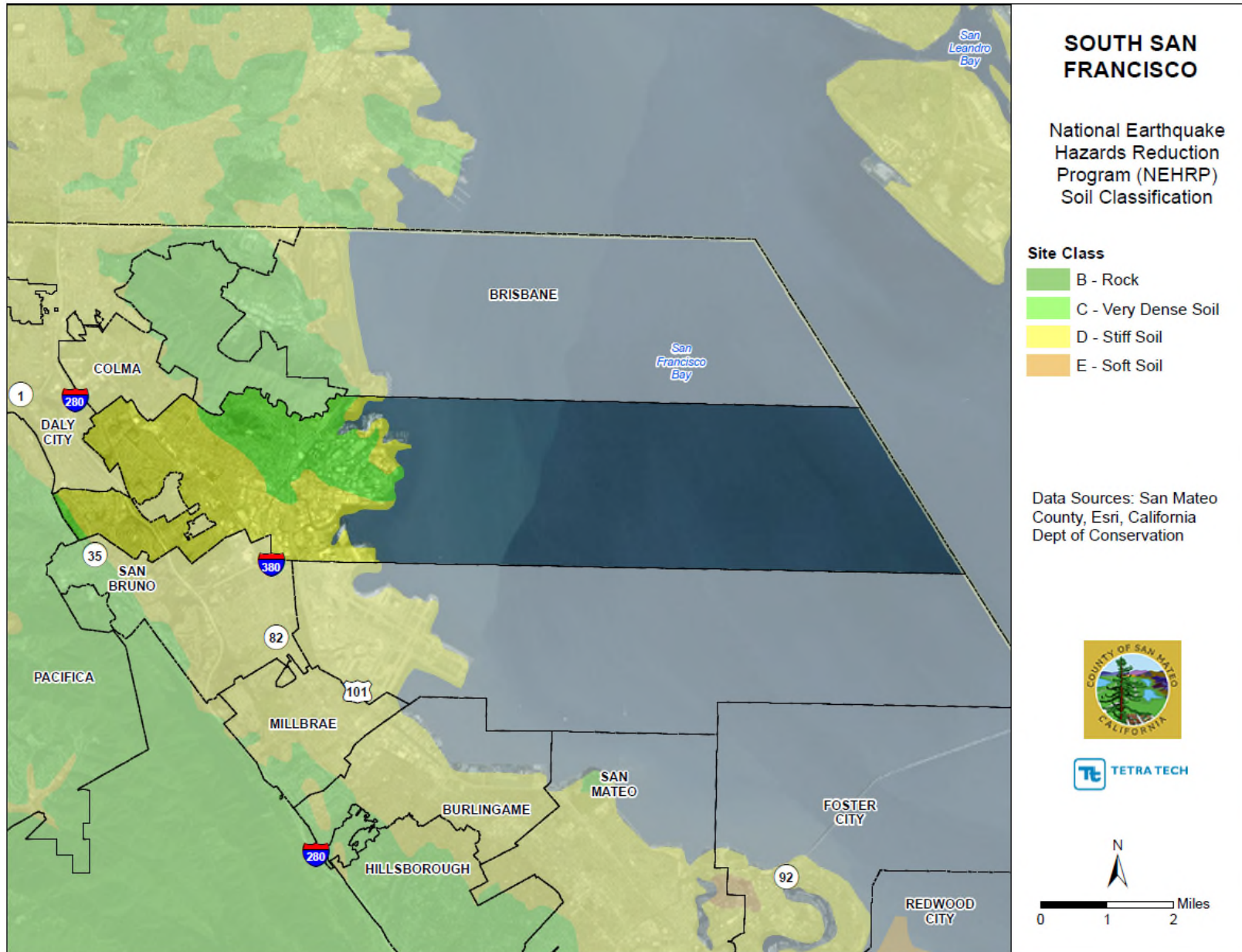


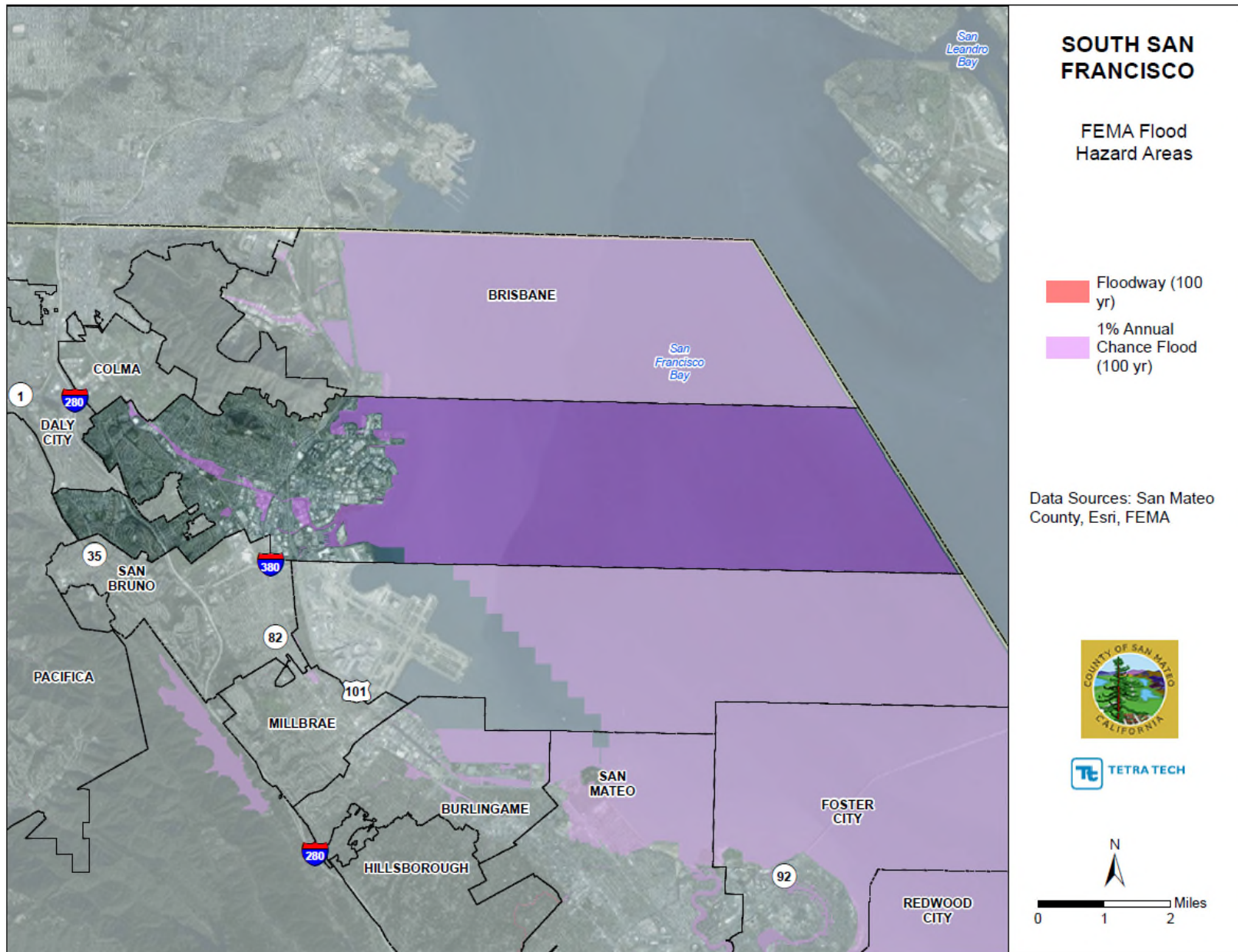


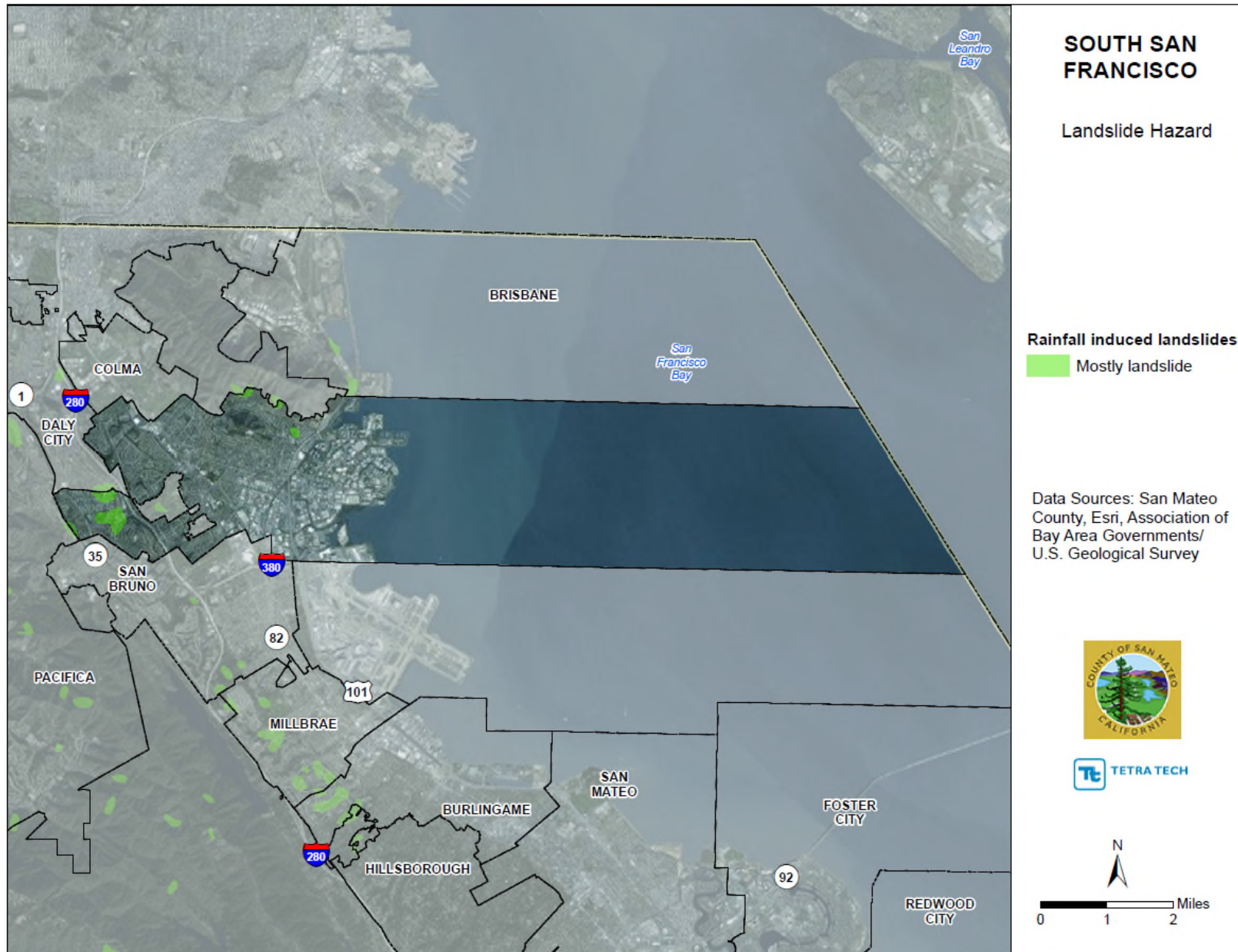
18.9 Future Needs to Better Understand Risk/Vulnerability

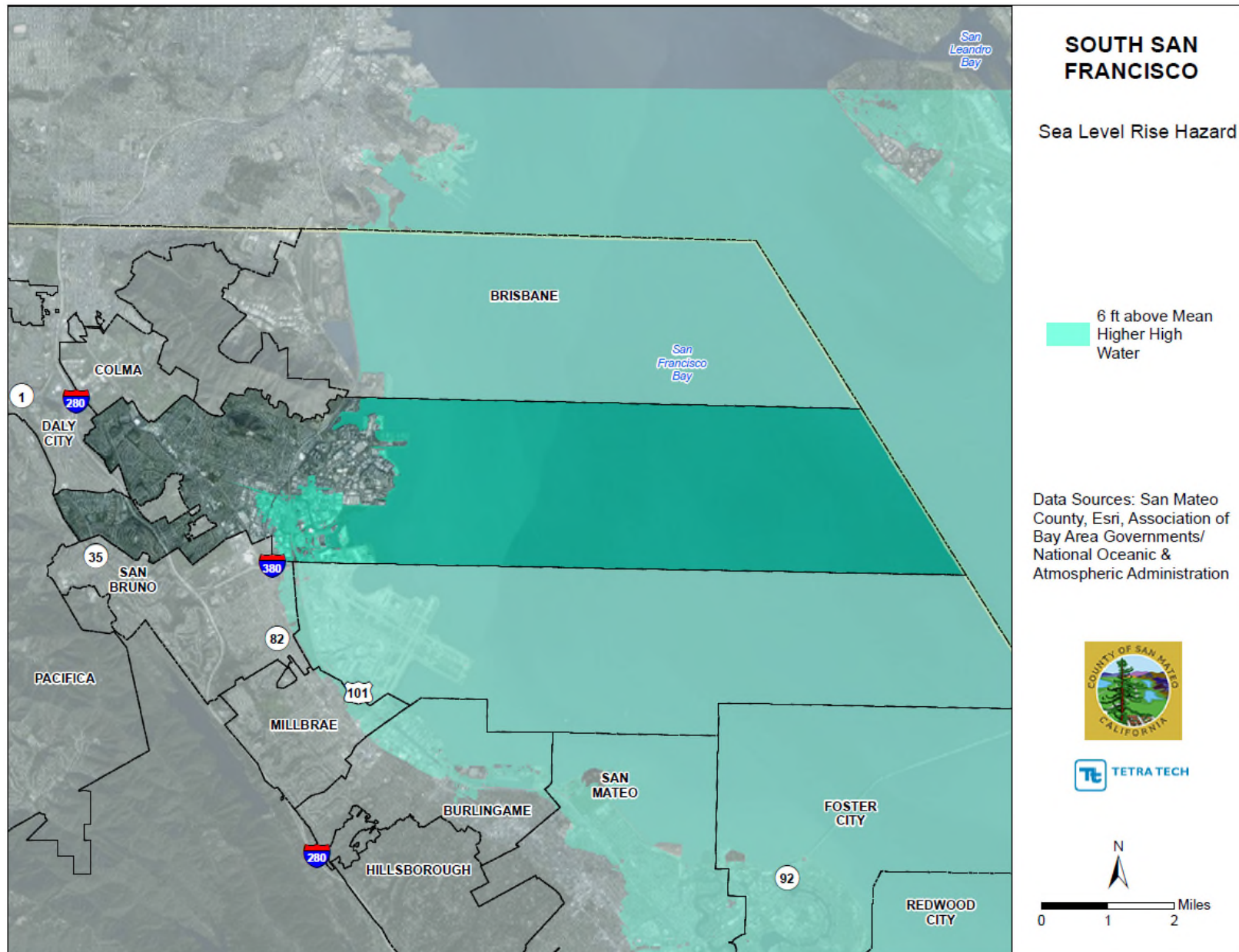
Complete a Threat & Hazard Identification & Risk Assessment to more thoroughly understand the city's risk to human-caused and technological hazards.

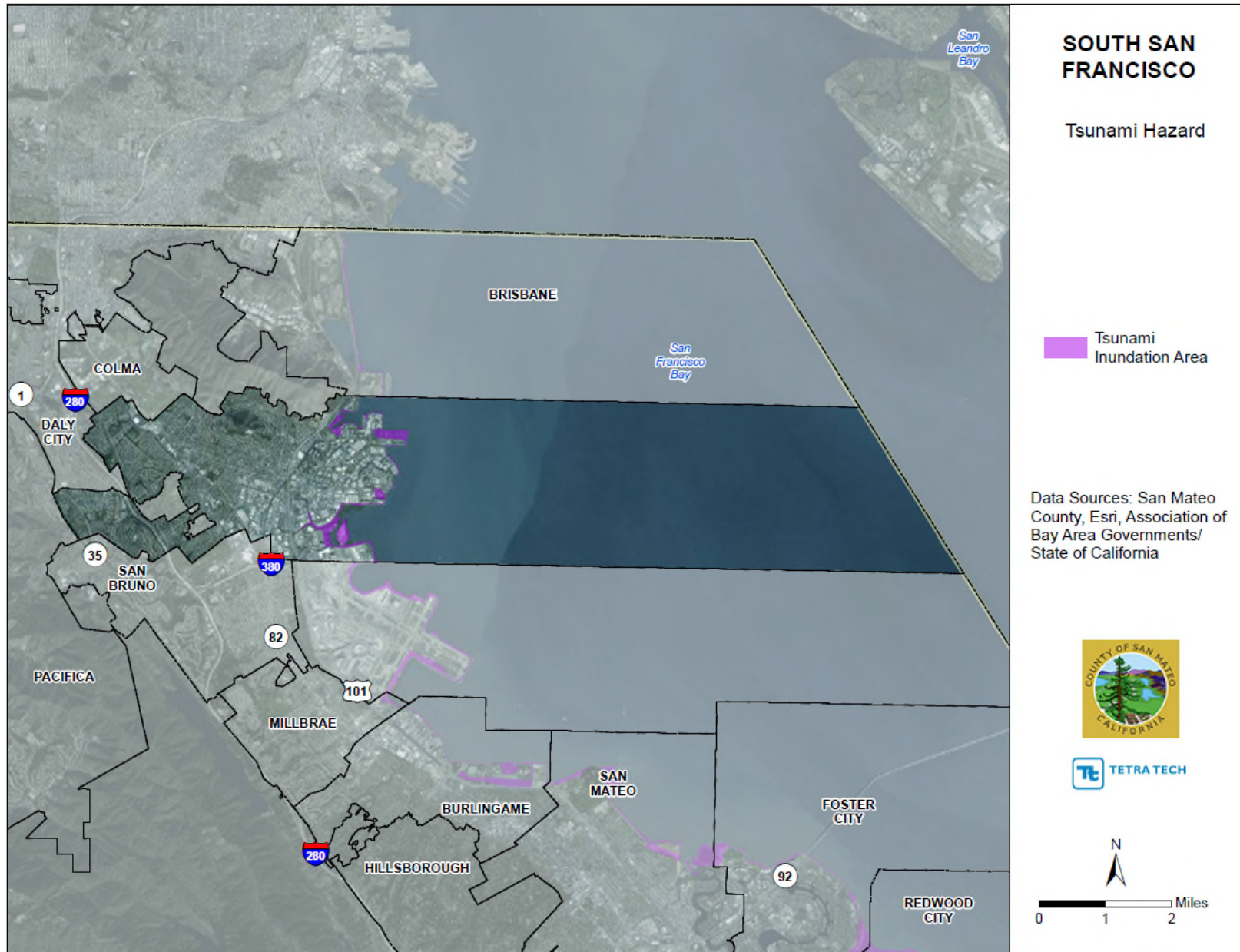


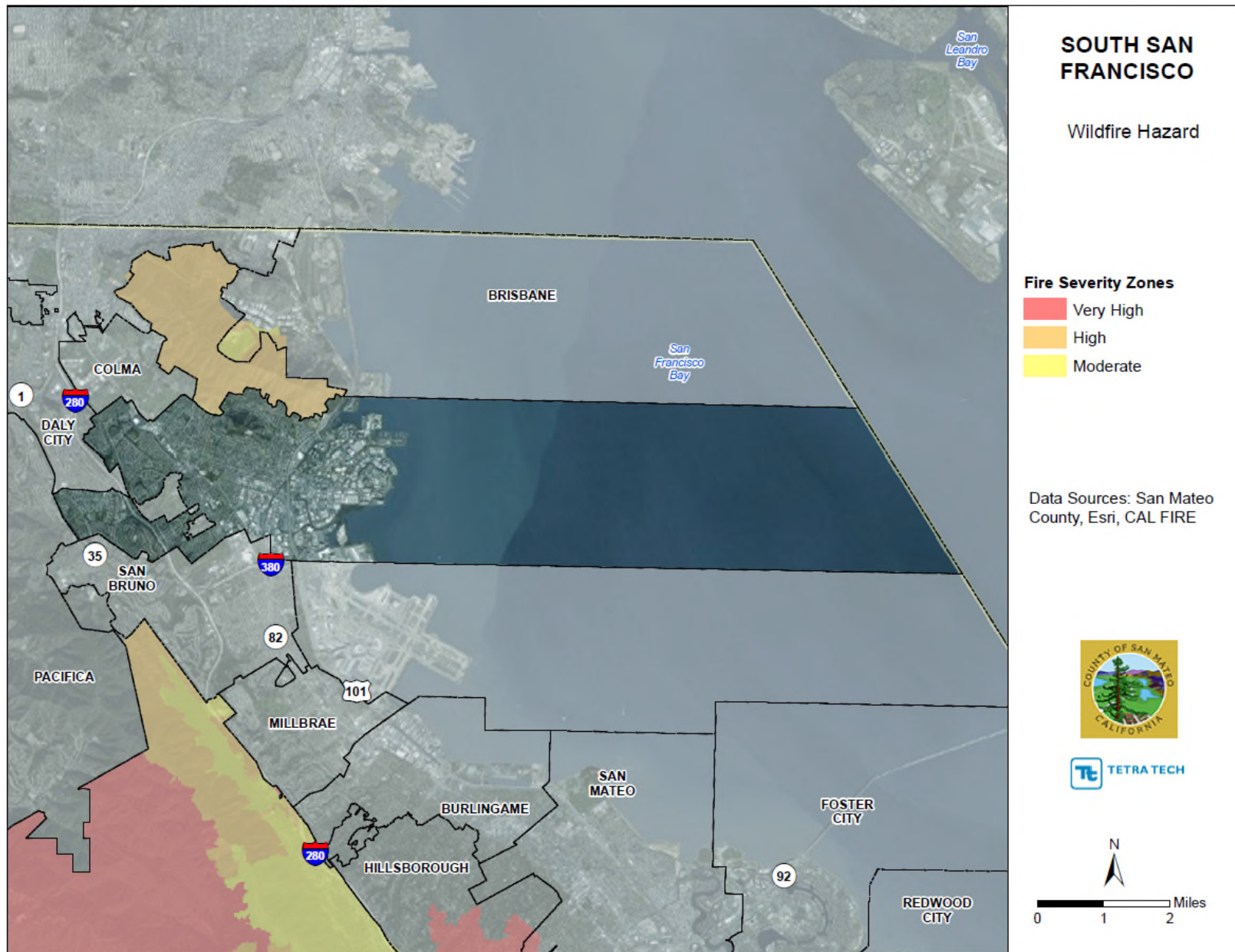














Chapter 19. Town of Woodside

19.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact	Alternate Point of Contact
Dong Nguyen, Deputy Town Engineer	Sean Rose, Town Engineer
2955 Woodside Road	2955 Woodside Road
Woodside, CA 94062	Woodside, CA 94062
Telephone: 650-851-6790ext. 115	Telephone: 650-851-6790ext. 114
E-mail Address: dnguyen@woodsidetown.org	E-mail Address: srose@woodsidetown.org

19.2 Jurisdiction Profile

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

- ❖ **Date of Incorporation**—1956
- ❖ **Current Population**—5,664 (as of January 1, 2016 – CA DOF)
- ❖ **Location and Description**—The Town of Woodside is located on the San Francisco Peninsula, midway between San Jose and San Francisco, in San Mateo County. The town has a total area of approximately 11.7 square miles. Woodside has 18 full time employees with an annual operating budget of approximately \$8 million. The Town owns and operates three buildings, Town Hall and Independence Hall, and a network of roadway and trail infrastructure. The Town also owns the building that houses the Woodside library which is operated by the San Mateo County Library System Woodside Library.
- ❖ **Brief History**—The Woodside area was originally home to natives belonging to the Ohlone tribe. In 1769, led by Gaspar de Portolá, Spanish explorers searching for San Francisco Bay camped at a site near Woodside.

Woodside is located on the Rancho Cañada de Raymundo Mexican Land grant. Woodside is said to be the oldest English-speaking settlement in the southern part of the San Francisco Peninsula. The first English-speaking settlers arrived in the early 19th century to log the rich stands of redwoods. Charles Brown constructed the first sawmill in Woodside on his Mountain Home Ranch around 1838. His adobe house, built in 1839, still stands today. By mid-century, the Woodside area had a dozen mills producing building materials for a booming San Francisco.

In 1849, during the California Gold Rush, 20-year-old Mathias Alfred Parkhurst purchased 127 acres (0.5 km²) of timberland and named it "Woodside"; of course, this name was kept. By the late 19th century, Woodside was home to country estates. The Sequoia Redwood trees in Woodside are





currently 3 generation growth. The first generation of the Redwood trees were used to build San Francisco original homes. After the 1906 San Francisco Earthquake, the lumberjacks returned to Woodside to cut the second growth of redwood so they could be used for the rebuilding of San Francisco again.

- ❖ **Climate**—As is true of most of the California coastal areas, weather in Woodside is usually mild during most of the year. Summers are dry and can be hot; winter temperatures rarely dip much below freezing. Average winter temperatures vary from 36 to 60°F and average summer temperatures from 51 to 88°F. Annual rainfall averages 30 inches and falls on an average of 61 days. The record maximum temperature was 114°F on July 22, 2006, and the record minimum temperature was 17 °F on February 6, 1989. Hills and mountains between Woodside and the Pacific coast make fog much less prevalent than in nearby San Francisco. As well, during the summer, Woodside's climate is remarkably hotter than that of San Francisco.
- ❖ **Governing Body Format**— Woodside is a general law Town with a Council-Manager system of government. The Town Council is comprised of seven members who are each elected to represent a geographic district. This provides the Town with public direction from the Town Council and professional administration through the Town Manager. The Town is assisted by a Planning Commission, Architectural Site Review Board, and 11 citizen advisory committees. The Town organization consists of the Planning and Building, Administration and Finance, and Public Works Departments. The Town's Council would be responsible for adopting this plan and would work closely with all Town Departments on the implementation.
- ❖ **Development Trends**— The overwhelming majority of Woodside's developed land area is dedicated to residential use. The Town is largely built-out in areas with development potential, with a significant portion of the Town's land area set aside as permanent open space. Accordingly, most projects reviewed by the Town involve renovation or redevelopment of existing developed parcels including full remodels of obsolete or underutilized sites, or residential in fill development on topographically challenging vacant lots. Overall, the level of development activity in Woodside over the past several years has been relatively high due in large part to the overall economic health and activity in the Bay Area region.

19.3 Capability Assessment

An assessment of legal and regulatory capabilities is presented in Table 19-1. An assessment of fiscal capabilities is presented in Table 19-2. An assessment of administrative and technical capabilities is presented in Table 19-3. Information on National Flood Insurance Program (NFIP) compliance is presented in Table 19-4. Classifications under various community mitigation programs are presented in Table 19-5. An assessment of education and outreach capabilities is presented in Table 19-6.



TABLE 19-1. LEGAL AND REGULATORY CAPABILITY

	Local Authority	Other Jurisdiction Authority	State Mandated
Building Code Comment: Woodside Municipal Code (WMC) Title XV Chapter 150, Sections 150.01 through 150.99; Effective 1/9/14	YES	NO	YES
Zoning Code Comment: WMC Title XV, Chapter 153, Sections 153.001 through 153.999; 3/25/99	YES	NO	YES
Subdivisions Comment: WMC Title XV Chapter 152. Sections 152.001 through 152.999; 4/8/82	YES	NO	YES
Stormwater Management Comment: WMC Title XV, Chapter 151, Section 151.043; subdivisions subject to WMC Title XV, Chapter 152, Section 152.070. 4/12/84	YES	NO	YES
Post-Disaster Recovery Comment:	NO	NO	NO
Real Estate Disclosure Comment: CA. State Civil Code 1102 requires full disclosure on Natural hazard Exposure of the sale/re-sale of any and all real property.	NO	NO	YES
Growth Management Comment: None. Growth in the Town of Woodside is limited by multiple environmental constraints and sewer capacity. Large portions of the Town are zoned for Special Conservation Planning based on the number of these constraints (Zoning Districts SCP-5, SCP-7 and SCP-10).	NO		NO
Site Plan Review Comment: WMC Title XV, Chapter 151, Sections 151.01 through 151.77; and Chapter 153, Sections 153.001 through 153.999; 3/25/99	YES	NO	NO
Environmental Protection Comment: WMC Title XV Chapter 153, Section 153.001 through 153.999; Woodside General Plan (2012) Conservation Element; and Residential Design Guidelines (2012; Revised 2016); Compliance with CEQA; and CESA; and Fish and Game Code, etc. 3/25/99	YES	NO	YES
Flood Damage Prevention Comment: WMC Title V, Chapter 55, Sections 55.01 through 55.53; the Town enforces FEMA's floodplain administration regulations, which regulate impervious surface coverage and site drainage. 1/22/01	YES	NO	NO
Emergency Management Comment: WMC Title III, Chapter 33, Sections 33.01 through 33.0711/22/01	YES	NO	NO
Climate Change Comment:	NO	NO	NO
Other Comment:			
General or Comprehensive Plan <i>Is the plan equipped to provide linkage to this mitigation plan? Yes.</i>	YES	NO	NO





	Local Authority	Other Jurisdiction Authority	State Mandated
<i>Comment: The General Plan currently contains a Natural Hazards and Safety Element that addresses various potential hazards facing the Town and policies and action programs to address these hazards. The Natural Hazards and Safety Element describes the natural and man-made disasters that have occurred since a previous general plan. It has a section on 'Acceptable Risk' and includes tables on Risk Classification of Structures, Occupancies and Land Uses, and a Table on the Location of Structures and Land Uses in Relation to Defined Hazard Areas.</i>			
Capital Improvement Plan	YES	NO	NO
<i>What types of capital facilities does the plan address? Trails, streets, town hall, and other infrastructure. The Town's Capital Improvement Plan consist of a 5 year Plan to improve infrastructure including the Town Center Main Pump Station Upgrade, Storm Drain Improvements, Road Improvements, and Trail Improvements.</i>			
<i>How often is the plan updated? 5 years</i>			
Comment: Reviewed yearly as part of Town's budget process			
Floodplain or Watershed Plan	NO	NO	NO
Comment:			
Stormwater Plan	YES	NO	NO
Comment: 1978 Storm Drain Master Plan and any subsequent revisions; Town General Plan (2012) Public Utilities Element, includes discussion, policies and strategies on retaining storm water runoff and utilizing natural drainages.			
Habitat Conservation Plan	YES	NO	NO
Comment: Town of Woodside General Plan (2012) includes a Conservation Element. The Town also has an ongoing Backyard Habitat Program to encourage residents to preserve, restore, and connect natural habitat areas.			
Economic Development Plan	YES	NO	NO
Comment: The Town of Woodside is almost entirely a residential community and has only two very limited commercial areas. Development within the commercial areas is guided by the Town of Woodside Town Center Area Plan (Adopted 1970; Amended 1977) and the Skylonda Area Plan (Adopted 1985).			
Shoreline Management Plan	N/A	N/A	N/A
Comment: The Town of Woodside does not have shoreline areas.			
Community Wildfire Protection Plan	NO	YES	NO
Comment: The Town of Woodside Fire Management Plan (2003). Woodside Fire Protection District			
Forest Management Plan	NO	NO	NO
Comment: Town of Woodside General Plan (2012), Conservation Elements. Woodside Fire Protection District			
Climate Action Plan	YES	NO	NO
Comment: Town of Woodside Climate Action Plan; 9/22/2015 (Targets set by AB 32, California Global Warming Solutions Act of 2006)			
Other			
Comment:			
Comprehensive Emergency Management Plan	NO	YES	NO
Comment: County of San Mateo Emergency Operations Plan 2013			
Threat & Hazard Identification & Risk Assessment	NO	NO	NO
Comment:			
Post-Disaster Recovery Plan	NO	NO	NO
Comment: Emergency Operations Plan			



	Local Authority	Other Jurisdiction Authority	State Mandated
Continuity of Operations Plan	NO	NO	NO
Comment:			
Public Health Plan	NO	YES	NO
Comment: San Mateo County Health			

TABLE 19-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	No
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	Yes (For 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
Other	No

TABLE 19-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Engineering / Planning
Engineers or professionals trained in building or infrastructure construction practices	Yes	Engineering Department: Town Engineer, Deputy Engineer, Contract Engineers (x2) / Building Official, Contract Structural Engineers / Plan Checkers (CSG Consultants)
Planners or engineers with an understanding of natural hazards	Yes	Engineering Department: Town Engineer, Deputy Engineer, Contract Engineers (x2) / Building Official, Contract Structural Engineers / Plan Checkers (CSG Consultants)Contract Geologist
Staff with training in benefit/cost analysis	Yes	Engineering / Planning
Surveyors	Yes	Contract Surveyors (CSG Consultants)
Staff capable of making substantial damage estimates	No	Building Department
Personnel skilled or trained in GISapplications	Yes	Engineering / Planning
Scientist familiar with natural hazards in local area	Yes	Engineering / Planning / Geology





Staff/Personnel Resources	Available?	Department/Agency/Position
Emergency manager	Yes	Town Manager
Grant writers	Yes	Engineering (3) / Planning (2)

TABLE 19-4. NATIONAL FLOOD INSURANCE PROGRAM COMPLIANCE

Criteria	Response
When did the community enter the NFIP?	October 19, 1979
When did the Flood Insurance Rate Maps become effective?	September 14, 2015
What local department is responsible for floodplain management?	Public Works Department
Who is your floodplain administrator? (department/position)	Town Engineer
<ul style="list-style-type: none"> Is this a primary or auxiliary role? 	Primary
Are any certified floodplain managers on staff in your jurisdiction?	Deputy Town Engineer
What is the date of adoption of your flood damage prevention ordinance?	November 22, 2001
<ul style="list-style-type: none"> Does your floodplain management program meet or exceed minimum requirements? 	Meet
<ul style="list-style-type: none"> If so, in what ways? 	N/A
When was the most recent Community Assistance Visit or Community Assistance Contact?	UNknown
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
<ul style="list-style-type: none"> If so, please state what they are. 	
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
<ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	
Does your jurisdiction participate in the Community Rating System (CRS)?	No
<ul style="list-style-type: none"> If so, is your jurisdiction seeking to improve its CRS Classification? 	N/A
<ul style="list-style-type: none"> If not, is your jurisdiction interested in joining the CRS program? 	No
How many Flood Insurance policies are in force in your jurisdiction?	38
<ul style="list-style-type: none"> What is the insurance in force? 	\$ 11,592,000
<ul style="list-style-type: none"> What is the premium in force? 	\$ 16,458
How many total loss claims have been filed in your jurisdiction?	16
<ul style="list-style-type: none"> How many claims were closed without payment/are still open? 	9
<ul style="list-style-type: none"> What were the total payments for losses? 	\$ 342,979.80



TABLE 19-5. COMMUNITY CLASSIFICATIONS

	Participating?	Classification	Date Classified
Community Rating System	No		
Building Code Effectiveness Grading Schedule	No		
Public Protection	No		
Storm Ready	No		
Firewise	Yes	N/A. Our Council participates on the Adhoc Committee	N/A

TABLE 19-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes. Town Clerk is the Community Information officer, Building Official works closely with CERPP to provide any necessary updates.
Do you have personnel skilled or trained in website development?	Yes, Contracted IT. Engineering and Planning Departments regularly update the website.
Do you have hazard mitigation information available on your website?	Yes, Emergency Services including Emergency Preparedness, Fire Safety Construction and the Wildland Urban Interface and Rapid Notify Self Registration all have links on the Town website.
Do you utilize social media for hazard mitigation education and outreach?	Yes
<ul style="list-style-type: none"> ▪ If yes, please briefly describe. 	Nextdoor Woodside
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
<ul style="list-style-type: none"> ▪ If yes, please briefly specify. 	Emergency Preparedness Committee and Citizens of Emergency and Preparedness Program (CERPP) promote emergency preparedness and response capability at the citizen and neighborhood level in the event of a disaster. In association with the Woodside Fire Protection District.
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
<ul style="list-style-type: none"> ▪ If yes, please briefly describe. 	Town website, SMC Alert
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> ▪ If yes, please briefly describe. 	San Mateo County Alert System is an alert notification system used to immediately contact you during urgent or emergency situations with useful information and updates.



19.4 Integration with Other Planning Initiatives

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

19.4.1 Existing Integration

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

- ❖ **General Plan:** The General Plan contains a Natural Hazards and Safety Element . Additionally, it integrates information on pertinent local natural hazards, especially in the Safety Element. The Safety Element includes information on seismic and geologic hazards, flooding and drainage concerns, hazardous materials, and fire hazards. For further compliance, the Town will reference the LHMP in future updates.
- ❖ **Town of Woodside Sanitary Sewer Overflow and Backup Response Plan** – To ensure minimal environmental impact to receiving waters of the United States of America and to minimize exposure to the general public and to private property. During a catastrophic event, the Town's sewer system operation would be evaluated and a damage assessment would be completed to ensure the function of the necessary utility.
- ❖ **Town Emergency Preparedness Committee** – The Emergency Preparedness Committee supports the General Plan policies to institute or participate in education related to natural hazards and to support emergency preparedness education. The Emergency Preparedness Committee works with Town staff to develop and maintain appropriate plans and procedures for responding to disasters, including wildfires, earthquakes, floods and other emergencies. The Emergency Preparedness Committee supports the work of the Citizens' Emergency Response and Preparedness Program (CERPP) to develop a network of volunteers to respond to emergencies at the neighborhood level.
- ❖ **Capital Improvements Plans** – Staff will continue to evaluate ways in which mitigation strategies can be incorporated into the CIP planning process and selected projects.
- ❖ **Defensible Space Matching Fund Program** - The purpose of the Town's Defensible Space Matching Fund Program is to encourage Woodside residents to create and maintain defensible space for fire protection around their homes and the perimeter of their properties through the provision of a matching fund grant to help offset the cost of this undertaking. The Town reimburses residents 50% of the cost of creating defensible space, up to a maximum of \$2,000.

19.4.2 Opportunities for Future Integration

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

- ❖ **Flood Plain Ordinance Update** – An update of the floodplain ordinance is planned to ensure compliance with and new FEMA requirements.



- ❖ Update Geologic Map– The Town is currently updating its Town-wide Geologic Map which will include an updated and more accurate location of seismic faults and associated seismic hazards. The location of the seismic faults and landslides are used to help provide design parameters for new development.

19.5 Jurisdiction-Specific Natural Hazard Event History

Table 19-6 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 19-6. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Fire	None	Unknown	Trees downed local powerlines and caused fire damaging residential barn
Storm	Portola Road	12/23/2012	\$112,829
Storm	Kings Mountain Road	12/2005	\$142k
Wildfire	N/A	8/2002	Fallen Trees created large residential fire
Storm	DR-1155	1/1997	California Severe Storms
Landslide	N/A	1988	Large landslides on Summit Springs Road

19.6 Jurisdiction-Specific Vulnerabilities

Repetitive loss records are as follows:

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

Other noted vulnerabilities include:

- ❖ Town Center Pump Station Generator – (to be replaced this year)

19.7 Hazard Risk Ranking

Table 19-7 presents the ranking of the hazards of concern.

TABLE 19-7. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	48	High
2	Wildfire	48	High
3	Severe Weather	33	Medium





4	Landslide	20	Medium
5	Flood	6	Medium
6	Drought	3	Low

19.8 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 19-8 lists the actions that make up the Town of Woodside hazard mitigation action plan. Table 19-9 identifies the priority for each action. Table 19-10 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 19-8. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
WS-1 —Update Town Geologic Map showing to better show zones of potential geologic hazards.						
Existing	Earthquake, Landslide	1,2,3,4,5,6,7,8,9,10	Public Works	Low	Town Budget	Short-term
WS-2 — Work with Calwater to expedite review and processing of water tanks for fire suppression in high severity areas.						
Existing	Wildfire	1,2,3,4,5,6,7,8,10,11	Public Works	High	Town Budget	Ongoing
WS-3 — Work with PG&E to promote Vegetation Removal Program and to seek large scale tree removal projects near overhead lines.						
New	Wildfire, Severe Weather, Drought	1,2,3,4,5,6,7,10,11	Public Works	Medium	PG&E	Ongoing
WS-4 —Continued to upgrade equipment for Town Vegetation Removal Program						
Existing	Wildfire, Severe Weather, Drought	1,2,3,4,5,6,7,8,9,10	Public Works		Town Budget	Short term
WS-5 — Provide Sandbag Program and continued educational outreach for storm season.						
Existing	Severe Weather, Flood	1,2,3,4,5,6,7,8,9,10	Public Works	Low	Town Budget	Ongoing
WS-6 — 5 year CIP for upgrading and maintaining storm drain conveyance facility.						
Existing	Severe Weather, Flood	1,2,3,4,5,6,7,8,11	Administration, Public Works	High	Town Budget	Ongoing

WS-7—Continue to support Defensible Space Match Fund Program to reduce the threat of wildfire in the community.



Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	Wildfire, Severe Weather,	1,2,3,4,5,6,7,8,10,11	Public Works	Medium	Town Budget	Ongoing

WS-8— Continue to support the Community Emergency Response Training through Citizens Emergency Response Preparedness Program (CERPP)

Existing	All Hazards	1,2,3,4,5,6,7,8,9,10	Administratiob	Medium	Town Budget	Ongoing
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WS-9—Upgrade majority of sewer system including providing new Town Center pump station with built in redundancy for natural disasters. (Back generators, overflow wetwell capacity, and contract with West Bay Sanitation District to provide emergency back up services.

Existing	All Hazards	1,2,3,4,5,6,7,8,10,11	Public Works	High	Town Budget	Ongoing
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WS-10—Obtain good standing and compliance with 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:

- Enforcement of the flood damage prevention ordinance
- Participate in floodplain identification and mapping updates
- Provide public assistance/information on floodplain requirements and impacts.

Existing	Landslide, Severe Weather, Flood	1,2,3,4,5,6,7,8,9,10,11	Public Works	Medium	Town Budget	Ongoing
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WS-11—Continue to improve water efficiency in all public facilities by installing water efficient fixtures, monitoring the maintenance of Town’s fields, and continued support of the California Department of Water Resources Water Efficient Landscape Ordinance for all development projects.

Existing	Drought	1,2,3,4,5,6,7,8,10,11	Public Works	Medium	Town Budget	Ongoing
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WS-12— Continue to support the county wide actions defined in Volume I of the hazard mitigation plan.

Existing	All Hazards	1,2,3,4,5,6,7,8,9,10,11	Town of Woodside	Low	Town Budget	Ongoing
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WS-13— Actively participate in the plan maintenance strategy and protocols outlined in Volume I of the hazard mitigation plan.

Existing	All Hazards	1,2,3,4,5,6,7,8,9,10,11	Town of Woodside	Low	Town Budget	Ongoing
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WS-14— Integrate the hazard mitigation plan into other plans, programs or resources that dictate land use or redevelopment.

Existing	All Hazards	1,2,3,4,5,6,7,8,9,10,11	Town of Woodside	Low	Town Budget	Ongoing
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WS-15—Improve the development of a post disaster recovery plan and a debris management plan.



Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	Earthquake, Wildfire, Severe Weather, Landslide, Flood	1,2,3,4,5,6,7,8,9,10,11	Town of Woodside	Medium	Town Budget	Ongoing

Action G-1—Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.

Existing	All	1, 3, 4, 5, 6, 7, 11	Jurisdictions	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)
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Action G-2—Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.

New and existing	All	All	Jurisdictions	Low	General Fund	Long-term
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Action G-4—Where feasible, implement a program to record high water marks following high-water events.

New and existing	Flooding, Severe Weather	1, 3, 4, 5, 6	Jurisdictions	Medium	General Fund; FEMA Grant Funds (Public Assistance)	Long-term
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Action G-5—Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.

New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	Jurisdictions	Low	General Fund	Short-term
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Action G-7—Provide incentives for eligible non-profits and private entities, including homeowners, to adapt to risks through structural and nonstructural retrofitting.

New and existing	All	2, 3, 4, 5, 6, 7, 8, 10, 11	Jurisdictions	Low	Operating Budgets	Ongoing
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TABLE 19-9. MITIGATION STRATEGY PRIORITY SCHEDULE

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



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

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

TABLE 19-10. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Earthquake	WS-1,WS-2, WS-5, WS-8, WS-12, WS-13, WS-14, WS-15	WS-1, WS-2, WS-5, WS-9, WS-12, WS-13, WS-14, WS-15	WS-1, WS-8, WS-12, WS-13, WS-14, WS-15	WS-9	WS-8	WS-9
Wildfire	WS-1,WS-2, WS-3, WS-4, WS-7, WS-8, WS-12, WS-13, WS-14, WS-15	WS-1,WS-2, WS-3, WS-4, WS-7, WS-8, WS-12, WS-13, WS-14, WS-15	WS-1,WS-2, WS-3, WS-4, WS-7, WS-8, WS-12, WS-13, WS-14, WS-15	WS-3, WS-7	WS-8	WS-2
Landslide	WS-1, WS-4, WS-5, WS-8, WS-1,WS-2, WS-3, WS-4, WS-7, WS-8, WS-12, WS-13, WS-14, WS-15	WS-1, WS-4, WS-5, WS-8, WS-1,WS-2, WS-3, WS-4, WS-7, WS-8, WS-12, WS-13, WS-14, WS-15	WS-1, WS-8, WS-11, WS-12, WS-13, WS-14, WS-15	WS-3, WS-7	WS-8	





Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Flood	WS-5, WS-6, WS-8, WS-9, WS-10, WS-12, WS-13, WS-14, WS-15	WS-5, WS-6, WS-8, WS-9, WS-10, WS-12, WS-13, WS-14, WS-15	WS-8, WS-11, WS-12, WS-13, WS-14, WS-15	WS-1, WS-5, WS-6, WS-8, WS-9, WS-10, WS-12, WS-13, WS-14, WS-15	WS-8	WS-9
Drought	WS-1, WS-2, WS-3, WS-4, WS-11, WS-12, WS-13, WS-14, WS-15	WS-1, WS-2, WS-3, WS-4, WS-11, WS-12, WS-13, WS-14, WS-15	WS-7, WS-8, WS-11, WS-12, WS-13, WS-14, WS-15	WS-2, WS-3, WS-4, WS-7, WS-8, WS-12, WS-13, WS-14, WS-15	WS-8	WS-2
Severe Weather	WS-1, WS-2, WS-3, WS-4, WS-5, WS-6, WS-7, WS-10, WS-11, WS-12, WS-13, WS-14, WS-15	WS-1, WS-2, WS-3, WS-4, WS-11, WS-12, WS-13, WS-14, WS-15	WS-7, WS-8, WS-11, WS-12, WS-13, WS-14, WS-15	WS-2, WS-3, WS-4, WS-7, WS-8, WS-12, WS-13, WS-14, WS-15	WS-8	WS-2

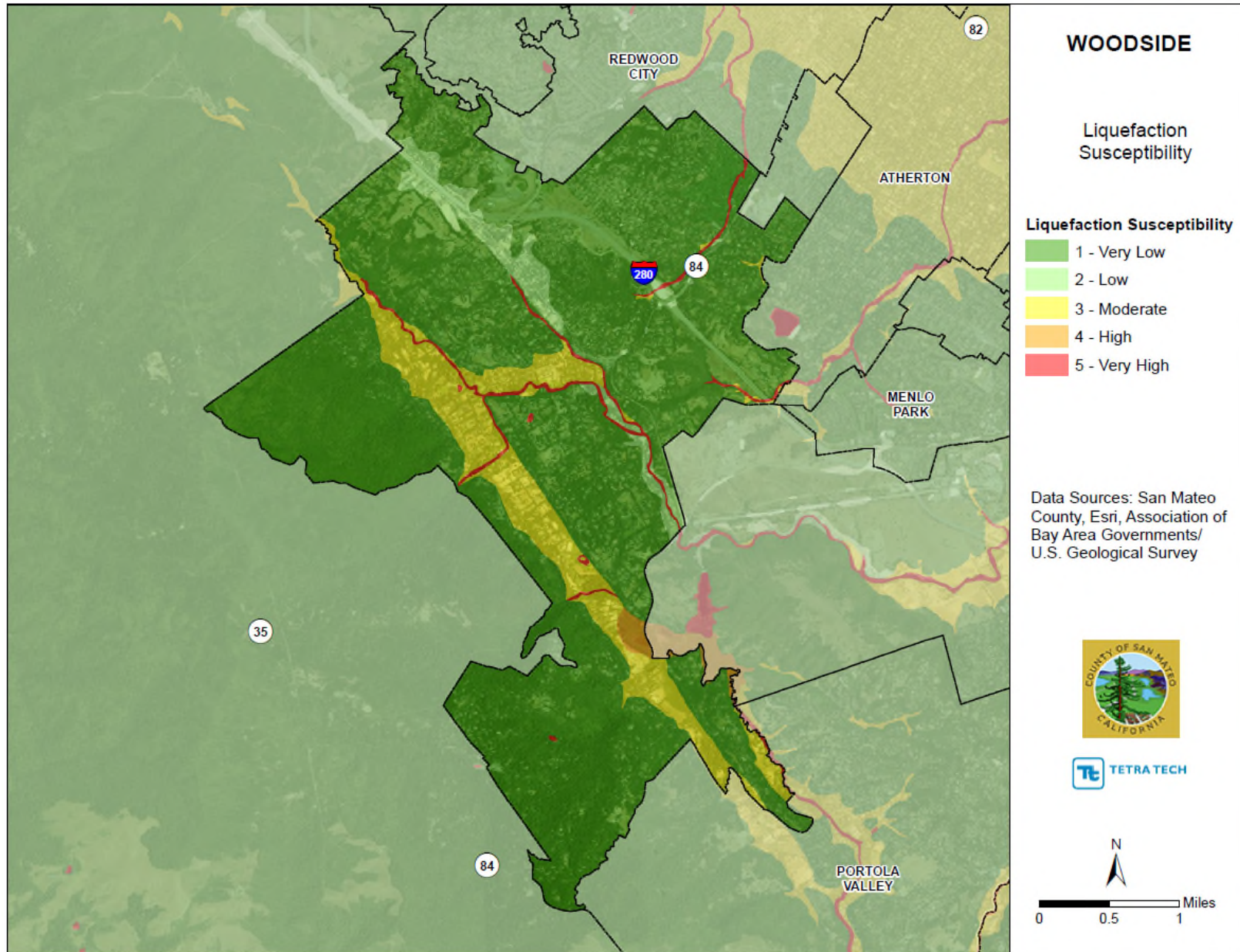
a. See the introduction to this volume for explanation of mitigation types.

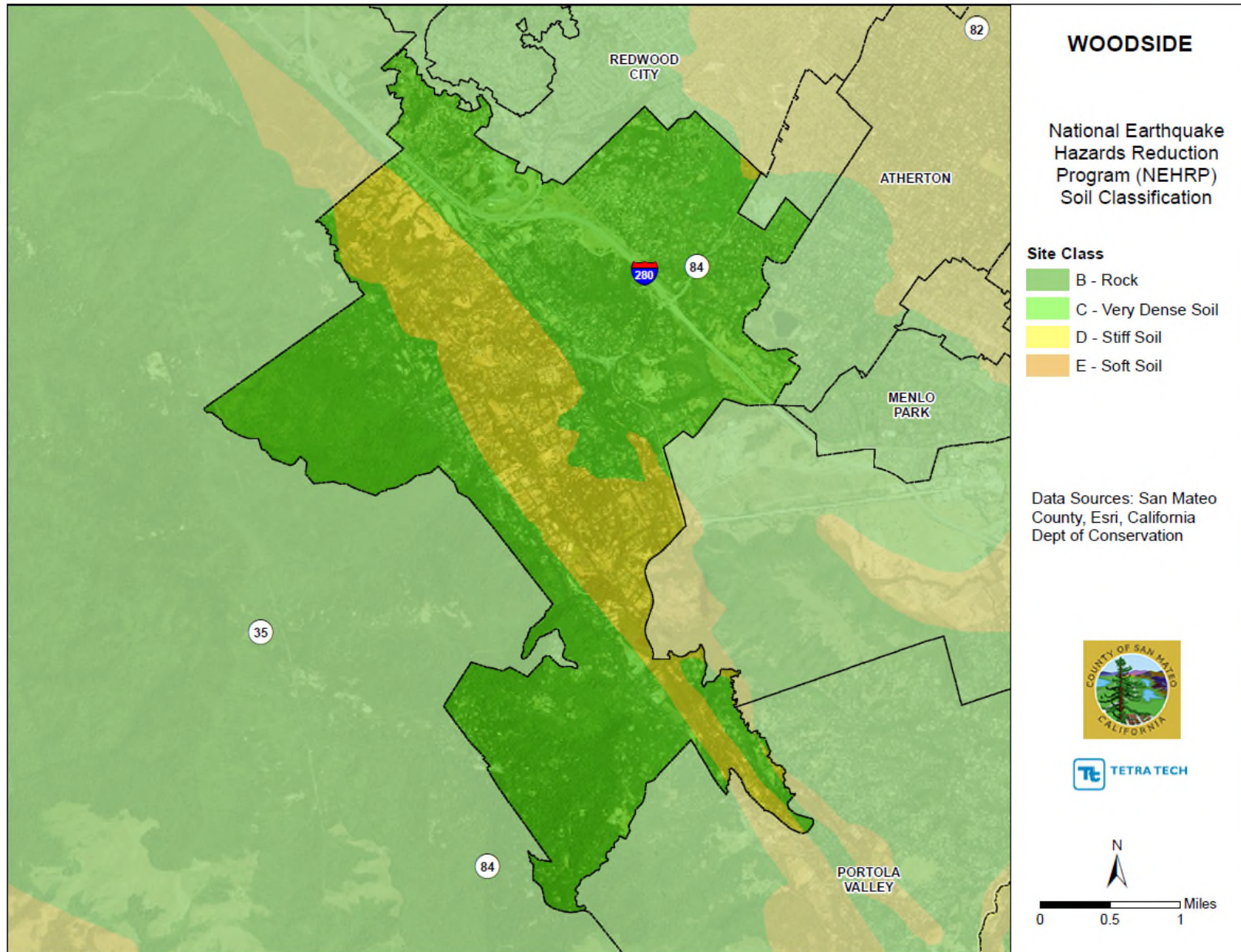
19.9 Future Needs to Better Understand Risk/Vulnerability

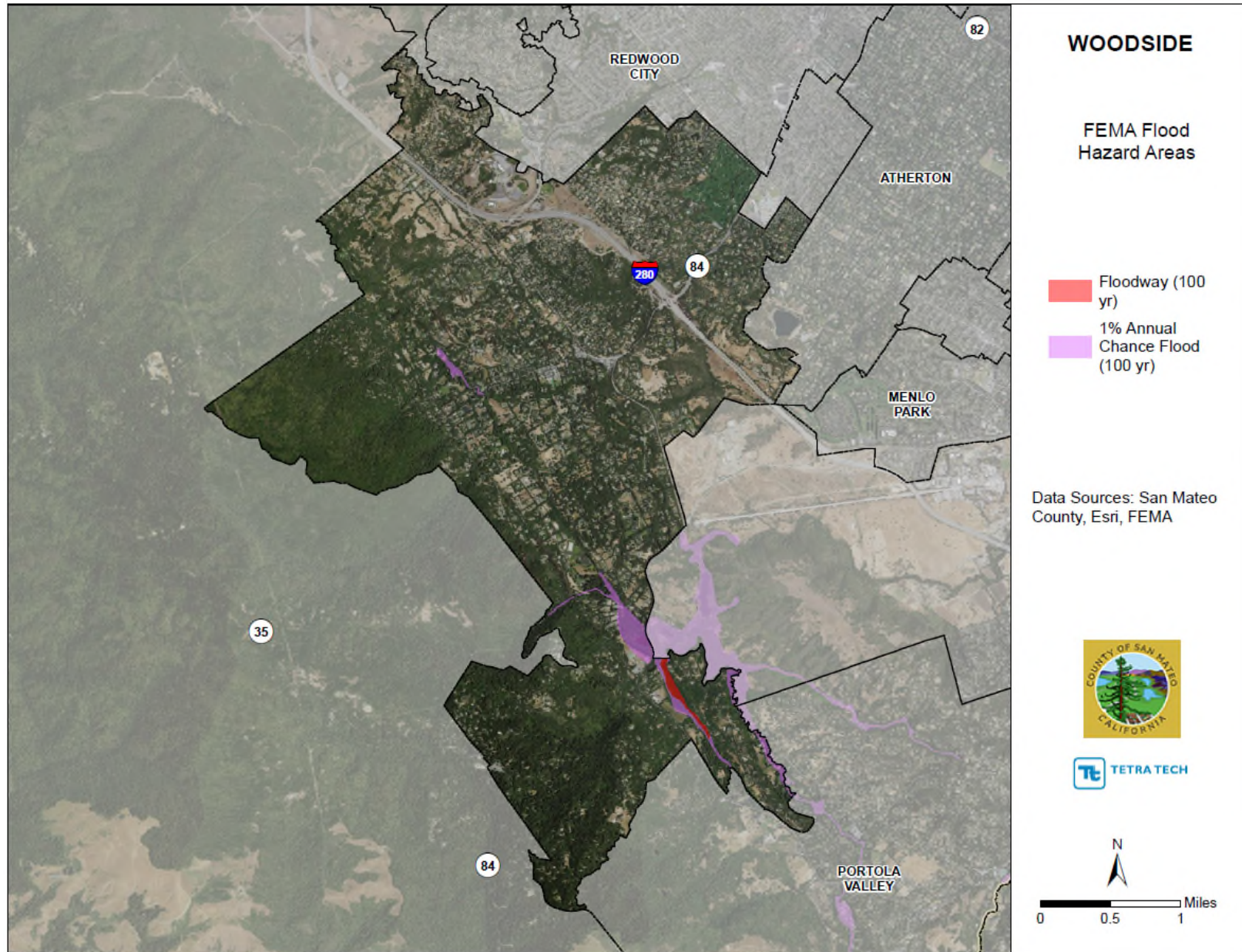
- ❖ Survey of the number of residents that have 3+ days of emergency supplies, Family Management and Communication Plans, including plans for pets.
- ❖ Review and adoption of the Town’s new Geologic Hazards/Fault Map;
- ❖ Education regarding communication in the event of disaster and/or evacuation when technology is down (i.e., cell phones, telephones, computers not working)

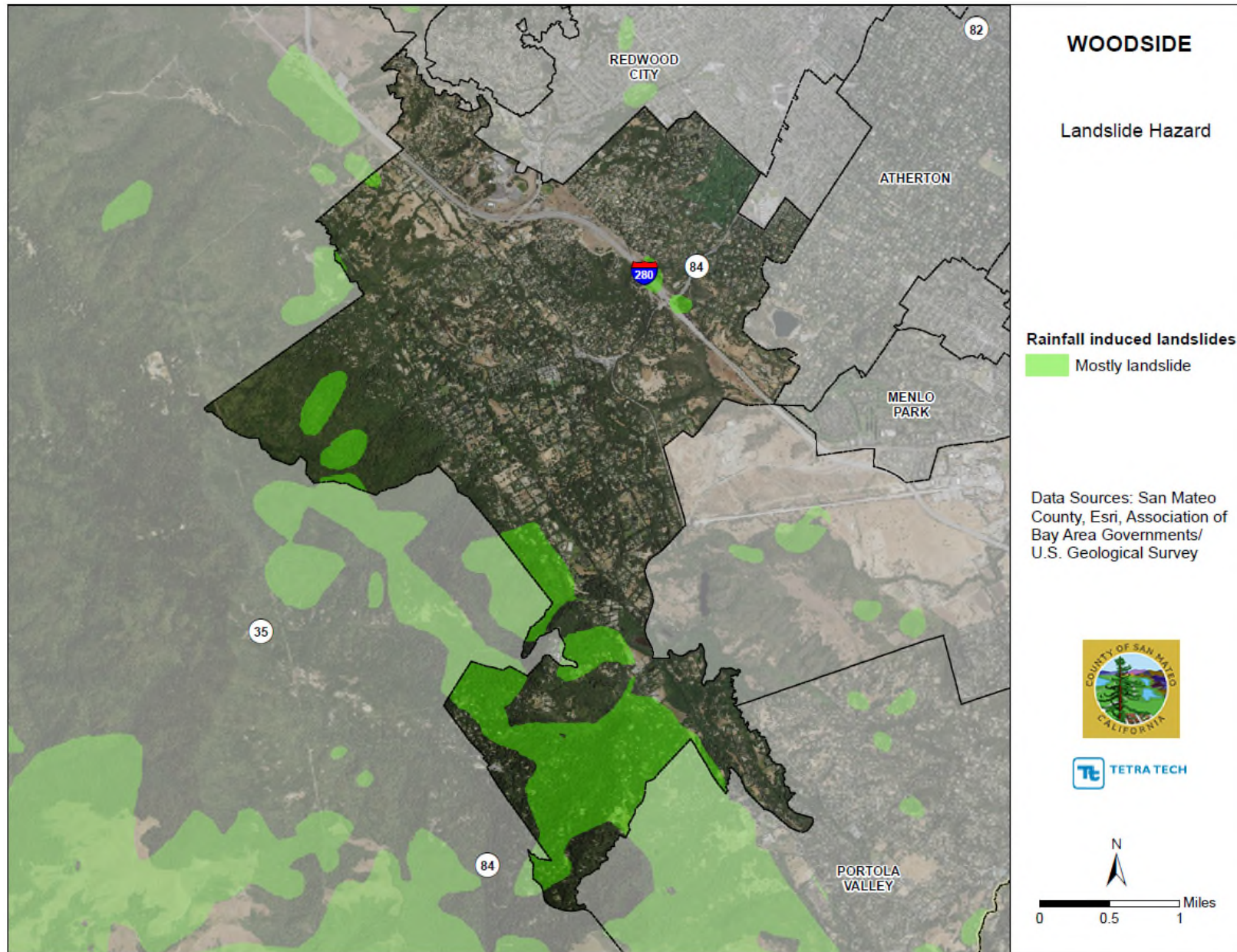
19.10 Additional Comments

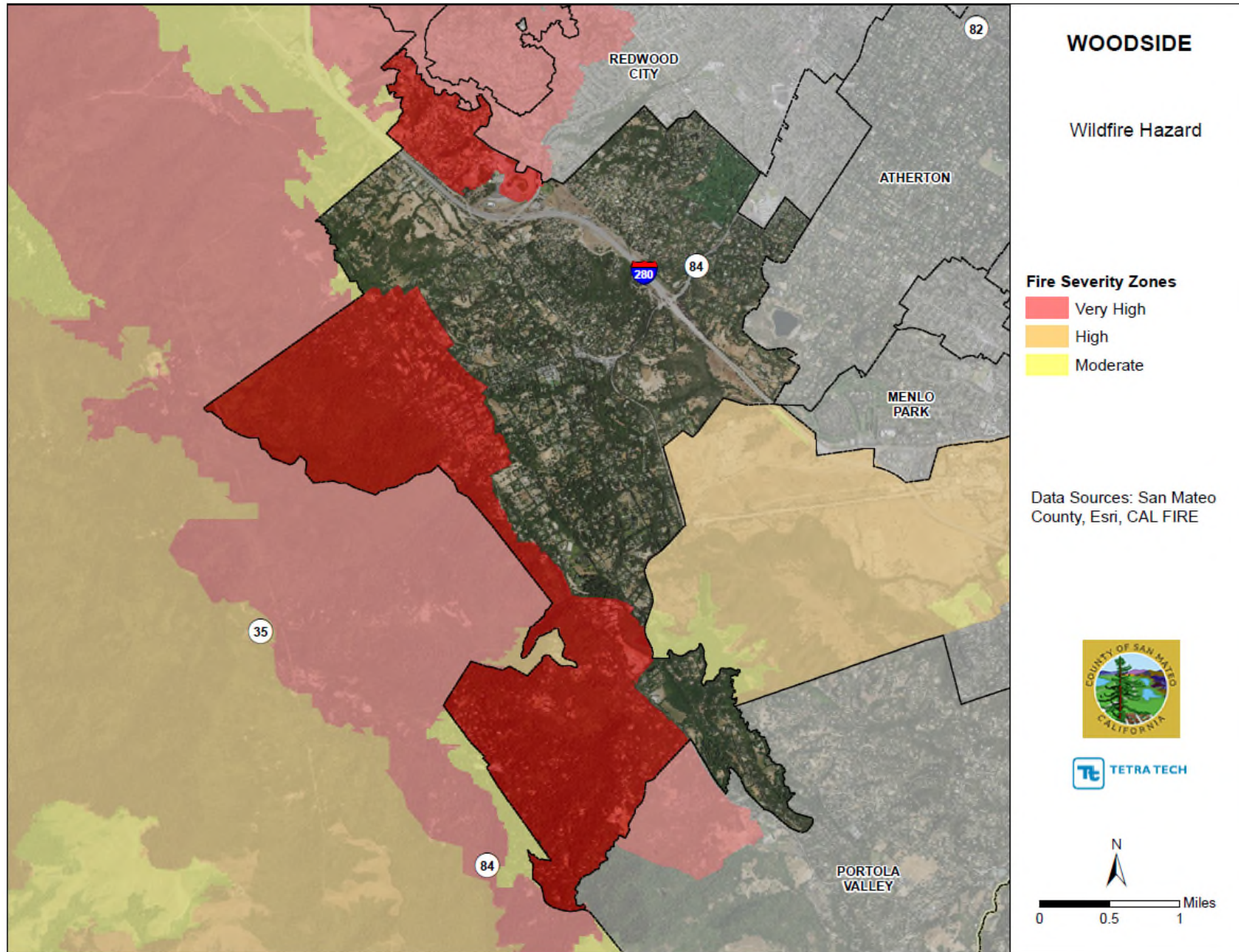
The Town of Woodside recognizes the need for ongoing education of its residents regarding living with the risks of hazards such as Earthquakes, Wildfire, Landslides, and Liquefaction/Settlement that may affect critical roads and evacuation routes. The Town conducts periodic emergency drills and Office of Emergency Services (OES) operations. The Town might be able to share lessons learned from the drills with the public, so that the drills are an opportunity for ongoing education and preparation.









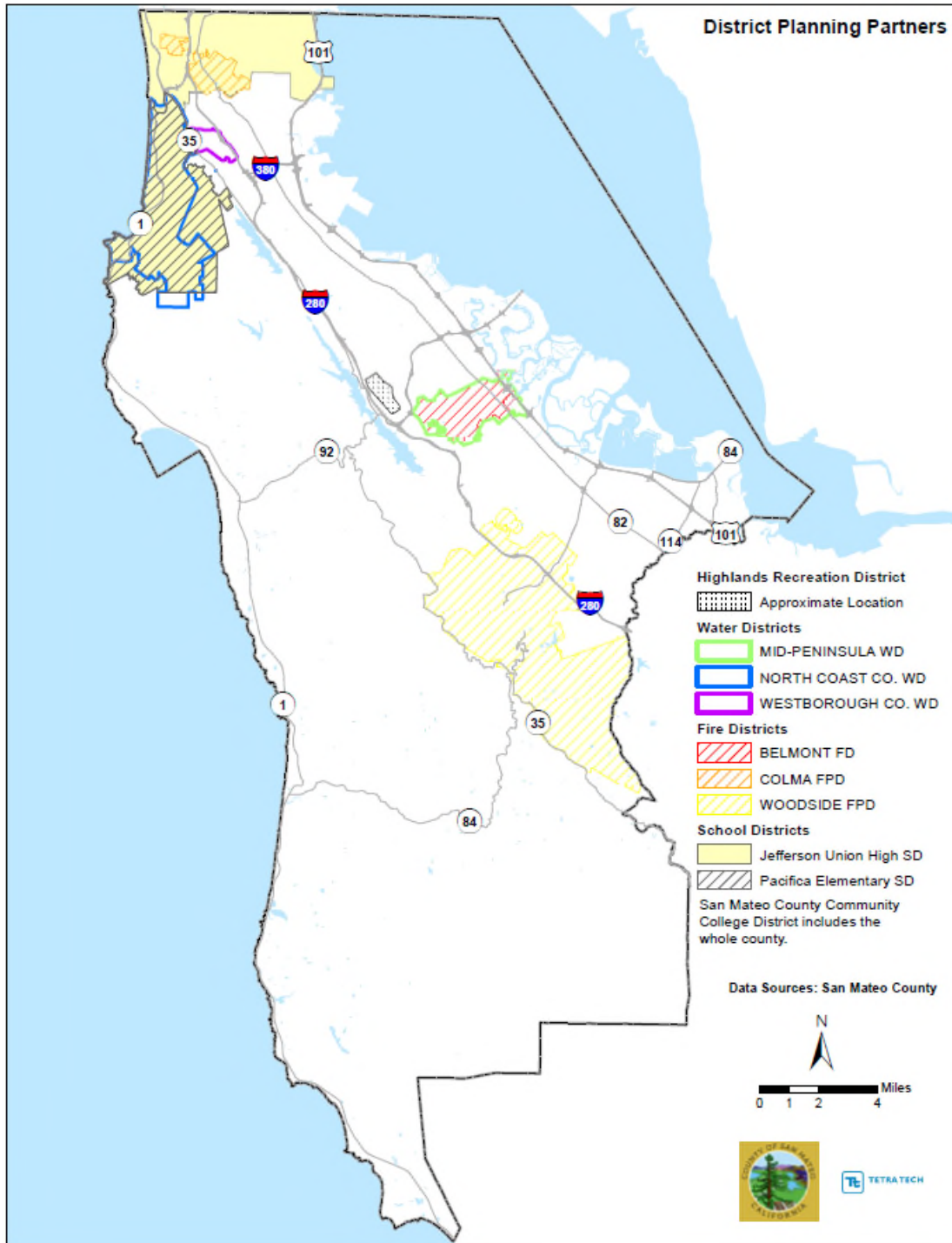


SECTION 3:
ANNEXES FOR SPECIAL DISTRICT PARTNERS



Volume 2, Section 3 contains the jurisdictional annexes completed by the special district planning partners. This section is grouped into four parts by district type – fire, water, education, and recreation. The Figure below provides the overview of boundaries for all special district planning partners.

JURISDICTIONAL BOUNDARIES – SPECIAL DISTRICT PLANNING PARTNERS





Part 1 - Fire Districts





Chapter 1.

Belmont Fire Protection District

1.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

Matt Lucett, Management Analyst
One Twin Pines Lane, Suite 230
Belmont, CA 94002
Telephone: 650-595-7437
e-mail Address: mlucett@belmont.gov

Alternate Point of Contact

Captain Pat Halleran
One Twin Pines Lane, Suite 230
Belmont, CA 94002
Telephone: 650-595-7430
e-mail Address: phalleran@belmont.gov

1.2 Jurisdiction Profile

1.2.1 Overview

The Belmont Fire Protection District formed as an independent district in 1928, providing fire service to the City of Belmont. Over the years the district's service area has expanded to include portions of the Harbor Industrial and Devonshire Canyon areas of unincorporated San Mateo County. The district operated independently until 1974 when it was established as a subsidiary district of the City of Belmont. As a subsidiary district, the Belmont City Council assumes governance as the district's Board of Directors. The fire district receives a segregated share of the 1% property tax revenue within the district's boundaries and is not subsidized by Belmont's general fund revenues. The district employs 24 personnel servicing approximately 27,000 residents and responded to over 2,600 calls for service in 2015. Lastly, the district provides a county-wide hazardous materials response team through a contract with the County of San Mateo County and is also part of a shared management services agreement with the cities of San Mateo and Foster City. The Belmont city council assumes responsibility for the adoption of this plan; the city's Local Hazard Mitigation Plan Working Group will oversee its implementation.

1.2.2 Service Area and Trends

The District serves a population of approximately 27,000 and the service area encompasses 4.6 square miles within the City of Belmont and approximately 60 acres in the unincorporated Harbor Industrial Area (HIA) of San Mateo County.

Belmont's population is expected to grow by about 3,000 people by 2035, which is an increase of 8 percent from the 2013 population and an annual growth rate of 0.3%. Additionally, by 2035 total households are expected to increase by 900, or 11.3 percent, with an annual growth rate of 0.4 percent.

With much of the city currently "built out", or developed, and with the preservation of open space a priority, undeveloped land available for development is limited. Most of the development over the next 20 years is



likely to take place on sites that are currently vacant and/or on sites that are currently underutilized. Additionally, future development may come from expanded development of sites with existing structures or redevelopment of sites and structures that come to the end of their useful life over the next 20 years. Most of the vacant and underutilized sites in the Belmont Planning Area tend to be clustered in the eastern half of the city, especially in the Belmont Village Priority Development Area (PDA). It is likely that much of the growth and change in Belmont over the next 20 years will occur in these areas.

According to the 2011 American Community Survey (ACS), there were approximately 3,771 seniors living in Belmont. As the large baby boomer generation continues to age, Belmont, like the rest of San Mateo County, is expected to see a growing senior population. According to *Key Housing Trends in San Mateo County*, the county can expect to see a 76 percent increase in the number of seniors. Over the last three years, the department has averaged 2,729 requests for services annually, of which over 60 percent have been related to medical emergencies. The fire district anticipates this trend continuing.

1.2.3 Assets

Table 1-1 summarizes the critical assets of the district and their value.

TABLE 1-1. DISTRICT ASSETS

Asset	Value
Property	
None	
Total:	
Critical Infrastructure and Equipment	
2016 Seagrave Fire Engine with Ladders & Contents	\$850,000
2008 Seagrave Fire Engine with Ladders & Contents	\$850,000
2008 Ford First Responder with Contents	\$100,000
2001 Ford Expedition with Contents	\$100,000
2001 Ford F250 with Contents	\$80,000
2013 Chevy Impala with Contents	\$40,000
Total: 6	\$2,020,000
Critical Facilities	
Fire Station 14, 911 Granada Street, Belmont	\$4,938,961
Fire Station 15, 2701 Cipriani Boulevard, Belmont	\$1,040,673
Total: 2	\$5,979,634





1.3 Planning and regulatory Capabilities

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- ❖ 2013 Local Fire Code Ordinance
- ❖ 2015 Fire & Panic Safety Inspection Program Ordinance
- ❖ California Health & Safety Code
- ❖ 2013 California Fire Code
- ❖ City of Belmont General Plan, Safety Element

1.4 Fiscal, Administrative and Technical Capabilities

An assessment of fiscal capabilities is presented in Table 1-2. An assessment of administrative and technical capabilities is presented in Table 1-3.

TABLE 1-2. FISCAL CAPABILITY

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

TABLE 1-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Department of Public Works/Civil Engineer, PW Director, Sr. Civil Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Department of Public Works/All engineering and inspection personnel
Planners or engineers with an understanding of natural hazards	Yes	Department of Public Works/City Engineer, Sr. Civil Engineer
Staff with training in benefit/cost analysis	No	
Surveyors	Yes	Department of Public Works/Sr. Civil Engineer
Personnel skilled or trained in GIS applications	Yes	Belmont Information Technology Department, GIS Coordinator, Department of Public Works/Engineering Technician/Associate Civil Engineer
Scientist familiar with natural hazards in local area	No	





Staff/Personnel Resources	Available?	Department/Agency/Position
Emergency manager	Yes	Belmont Police Department, Police Captain
Grant writers	Yes	Designated Engine Captain
Other	No	

1.5 Education and Outreach Capabilities

An assessment of education and outreach capabilities is presented in Table 1-6.

TABLE 1-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes, PIO through Belmont Police Department
Do you have personnel skilled or trained in website development?	Yes, Fire Department Management Analyst and City of Belmont Information Technology Dept.
Do you have hazard mitigation information available on your website?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Dedicated web page in partnership with City of Belmont
Do you utilize social media for hazard mitigation education and outreach?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Outreach/Education provided primarily through Nextdoor, Twitter, City Website and City Manager’s Weekly Update
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
<ul style="list-style-type: none"> If yes, please briefly specify. 	City of Belmont Planning Commission, Parks & Recreation Commission
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes, Limited
<ul style="list-style-type: none"> If yes, please briefly describe. 	Vegetation Management Program providing information on wildfire threat within community
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	SMC Alert in partnership with San Mateo County OES

1.6 Integration with Other Planning Initiatives

The following describe the jurisdiction’s process for integrating the hazard mitigation plan into existing plans and programs.





1.6.1 Existing Integration

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

- ❖ Fire and Panic Safety Inspection Program

1.6.2 Opportunities for Future Integration

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

- ❖ Belmont Fire Protection District Vegetation Management Program—Formalizing program would provide detailed goals, objectives and strategies in mitigating the significant wildfire threat within the district’s response area.

1.7 Jurisdiction-Specific Natural Hazard Event History

Table 1-5 lists all past occurrences of natural hazards within the jurisdiction. Table 1-5. Natural Hazard Events

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Weather	N/A	December 11, 2014	Increased calls for service throughout service area
Severe Weather	N/A	December 17-19, 2010	Increased calls for service throughout service area
Severe Weather	N/A	January 18-22, 2010	Increased calls for service throughout service area
Severe Weather	N/A	October 13, 2009	Increased calls for service throughout service area
Power Outage	N/A	July 21, 2008	Increased calls for service throughout service area
Severe Weather	N/A	May & July 2008	Increased calls for service throughout service area
Severe Weather	N/A	January 25-28, 2008	Increased calls for service throughout service area
Severe Weather	N/A	January 3-7, 2008	Increased calls for service throughout service area
Severe Weather	N/A	April 3-5, 2006	Increased calls for service throughout service area
Severe Weather	N/A	March 27, 2006	Increased calls for service throughout service area
Heat Emergency	N/A	June 2000	Increased calls for service throughout service area
Severe Weather	DR-1203	December 1997-February 1998	Increased calls for service throughout service area





Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Loma Prieta Earthquake	DR-845	October 17, 1989	Increased calls for service throughout service area

1.8 Jurisdiction-Specific Vulnerabilities

Noted vulnerabilities the jurisdiction include:

- ❖ Differential foundation movement at Fire Station 15 attributed to on-going compression of the underlying artificial fill material and colluvium.

1.9 Hazard Risk Ranking

Table 1-6 presents the ranking of the hazards of concern.

TABLE 1-6. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	48	High
2	Wildfire	36	High
3	Severe Weather	33	High
4	Landslide	18	Medium
5	Flood	18	Medium
6	Dam Failure	6	Low
7	Drought	3	Low
8	Tsunami	0	Low

1.10 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 1-7 lists the actions that make up the Belmont Fire Protection District hazard mitigation action plan. Table 1-8 identifies the priority for each action. Table 1-9 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 1-7. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
BFPD-1 —Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.						
Existing	All Hazards	4, 5, 7, 9, 10	Lead Contact	High	HMGP, PDM, FMA, CDBG-DR	Short-term
BFPD-2 —Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within Belmont and the County of San Mateo.						





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New and Existing	All Hazards	2, 4,	Fire Board	Low	Staff Time, General Funds	On-going
BFPD-3 —Coordinate with the City of Belmont in developing and implementing 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.						
Existing	All Hazards	1, 2, 4, 12	Lead Contact	Medium	Staff Time, General Funds	Short-term
BFPD-4 —Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and Existing	All Hazards	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	Lead Contact	Low	Staff Time, General Funds	Short-term
BFPD-5 —Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All Hazards	1, 4	Lead Contact	Low	Staff Time, General Funds	Short-term
BFPD-6 —Coordinate with the City of Belmont in the development of a post-disaster recovery plan and a debris management plan.						
New	All Hazards	1, 2, 4, 9	Lead Contact	Medium	EMPG	Long-term
BFPD-7 —Replace fire station that has been identified as structurally at risk from ground shaking due to on-going differential foundation movement.						
Existing	Earthquake	1, 4, 11	Fire Board & Lead Contact	High	HMGP & PDM	Long-term
BFPD-8 —Continue to coordinate with the City of Belmont Parks Department and the California Department of Forestry and Fire Protection (CAL-Fire) annually on requesting California Department of Corrections (CDC) crews to assist in vegetation removal within the wildland urban interface (WUI) areas of Belmont.						
Existing	Wildfire	2, 6, 7	Lead Contact	Low	Staff Time, General Funds	Short-term
BFPD-9 —Coordinate with local water district on assessing current water delivery infrastructure and fire suppression needs in wildland urban interface (WUI) areas in Belmont.						
Existing	Wildfire, Earthquake	1, 2, 6, 7	Lead Contact	Low	Staff Time, General Funds	Short-term
BFPD-10 — Continue to participate in FIRESAFE San Mateo County Committee in identifying opportunities to mitigate the wildfire threat within the fire district’s service area.						
Existing	Wildfire, Landslide, Drought	1, 2, 3, 7	Lead Contact	Low	Staff Time, General Funds	Short-term
BFPD-11 — Coordinate with the City of Belmont in the participation of the Firewise, StormReady and Community Rating System (CRS) programs						
New	Dam Failure, Flood, Severe Weather, Wildfire	1, 7	Lead Contact	Low	Staff Time, General Funds	Short-term
BFPD-12 — Continue with water conservation measures to promote water savings at both fire stations and during training exercises.						





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	Drought	2, 10	All Fire District Personnel	Low	Staff Time, General Funds	Short-term

TABLE 1-8. MITIGATION STRATEGY PRIORITY SCHEDULE

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

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

TABLE 1-9. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Earthquake	BFPD-2, BFPD-3, BFPD-4, BFPD-5	BFPD-1	BFPD-4		BFPD-7, BFPD-9	
Wildfire	BFPD-2, BFPD-3, BFPD-4, BFPD-5	BFPD-1, BFPD-9, BFPD-10, BFPD-11	BFPD-4, BFPD-10, BFPD-11	BFPD-8, BFPD-9, BFPD-10	BFPD-9, BFPD-10, BFPD-11	
Severe Weather	BFPD-2, BFPD-3, BFPD-4, BFPD-5, BFPD-6		BFPD-4, BFPD-11	BFPD-6	BFPD-11	





Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Landslide	BFPD-2, BFPD-3, BFPD-4, BFPD-5, BFPD-6	BFPD-1, BFPD-10	BFPD-4, BFPD-10	BFPD-10	BFPD-6, BFPD-10	
Flood	BFPD-2, BFPD-3, BFPD-4, BFPD-5, BFPD-6	BFPD-1	BFPD-4, BFPD-11		BFPD-6, BFPD-11	
Dam Failure	BFPD-2, BFPD-3, BFPD-4, BFPD-5, BFPD-6	BFPD-1	BFPD-4, BFPD-11		BFPD-6, BFPD-11	
Drought	BFPD-2, BFPD-3, BFPD-4, BFPD-5, BFPD-6	BFPD-1, BFPD-10	BFPD-4, BFPD-10, BFPD-12	BFPD-10	BFPD-6, BFPD-10	
Tsunami	BFPD-2, BFPD-3, BFPD-4, BFPD-5, BFPD-6	BFPD-1	BFPD-4		BFPD-6	

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



Chapter 2.

Colma Fire Protection District

2.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

Geoffrey Balton, Fire Chief

50 Reiner Street

Colma, CA 94014

Telephone: 650-755-5666

e-mail Address: gbalton@colmafd.org

Alternate Point of Contact

Herb Cheng, Fire Captain

50 Reiner Street

Colma, CA 94014

Telephone: 650-755-5681

e-mail Address: hcheng@colmafd.org

2.2 Jurisdiction Profile

2.2.1 Overview

The Colma Fire Protection District (CFPD) is an independent fire district governed by a three-member board of directors elected at large by the voters of the district. Originally organized by volunteers in 1925, the CFPD became a district in 1937 pursuant to Health and safety Code section 13800-13970. The Fire Board assumes responsibility for the adoption of this plan, the Fire Chief will oversee its implementation.

2.2.2 Service Area and Trends

The district serves a population of approximately 6,000 people. Its service area covers an area of 2.55 square miles and includes Broadmoor/Garden Village, the Town of Colma, and adjacent unincorporated areas.

The Districts enabling legislation permits the following authorized powers: fire protection services, rescue services, emergency medical services, hazardous materials emergency response services, ambulance services, and any other services relating to the protection of lives and property. CFPD's active powers include fire suppression, fire prevention, education and training, rescue services, emergency medical services, hazardous material response services (by joint powers authority) ambulance services (by joint powers authority) and Code Enforcement. CFPD responded to 816 calls in 2015 throughout the service area – a drastic increase from 1983, where calls ranged in the 200s.

2.2.3 Assets

Table 2-1 summarizes the critical assets of the district and their value.



TABLE 2-1. SPECIAL PURPOSE DISTRICT ASSETS

Asset	Value
Property	
Station 85 land (3/4 acre)	Unknown
Critical Infrastructure and Equipment	
E-86	\$477,627
E-85	\$350,000
E-285	\$350,000
T-85	\$569,435
V-85	\$40,000
V-86	\$37,906
Total:	\$1,824,968
Critical Facilities	
Colma Fire Protection District Headquarters – Station 85	
Main Building	\$2,746,665
Tower	\$142,623
Barn	\$268,467
Trailer	\$418,859
Total:	\$3,567,614

2.3 Planning and regulatory Capabilities

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- ❖ CFPD participates in the San Mateo County Pre-Hospital Emergency Medical Services Group (JPA). As a JPA participant, CFPD serves as the primary storage entity for EMS supplies for north San Mateo County. Resources include, but are not limited to perishable medical supplies (replaced by the JPA when expired), durable medical equipment, and an oxygen cylinder refilling truck.

2.4 Fiscal, ADMINISTRATIVE and TECHNICAL Capabilities

The jurisdiction participates in the Public Protection Class Rating System and currently has a rating of 4/9. This rating was achieved in June, 1996. An assessment of fiscal capabilities is presented in Table 2-2. An assessment of administrative and technical capabilities is presented in Table 2-3.

TABLE 2-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Capital Improvements Project Funding	No
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No





Financial Resources	Accessible or Eligible to Use?
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	Yes; 2014 CA Fire Safe Clearinghouse Grant, 2015 CA Fire Safe Clearinghouse Grant, SRA CAL Fire Prevention Fee Grant.
Development Impact Fees for Homebuyers or Developers	No
Other	No

TABLE 2-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	No	Informal agreement for Town of Colma and County resources
Engineers or professionals trained in building or infrastructure construction practices	No	Informal agreement for Town of Colma and County resources
Planners or engineers with an understanding of natural hazards	No	Informal agreement for Town of Colma and County resources
Staff with training in benefit/cost analysis	No	Informal agreement for Town of Colma and County resources
Surveyors	No	Informal agreement for Town of Colma and County resources
Personnel skilled or trained in GIS applications	No	Informal agreement for Town of Colma and County resources
Scientist familiar with natural hazards in local area	No	
Emergency manager	No	Informal coordination with Broadmoor Police Department
Grant writers	No	Informal agreement for Town of Colma and County resources
Other	No	

2.5 Education and Outreach Capabilities

An assessment of education and outreach capabilities is presented in Table 2-9.

TABLE 2-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	No
Do you have personnel skilled or trained in website development?	No
Do you have hazard mitigation information available on your website?	No
Do you utilize social media for hazard mitigation education and outreach?	No



Criteria	Response
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
▪ If yes, please briefly describe.	CERT, CPR, and Fire Safety Training for the public.
Do you have any established warning systems for hazard events?	Yes
▪ If yes, please briefly describe.	SMCAAlert

2.6 Integration with Other Planning Initiatives

The following describe the jurisdiction's process for integrating the hazard mitigation plan into existing plans and programs.

2.6.1 Existing Integration

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

- ❖ **Professional Trainings** – All CFPD fire suppression personnel are certified to the California State Firefighter II level and actively involved in the California Incident Command Certification Program. District staff train to enhance their knowledge in many topics to ensure that they are able to respond to events quickly, safely, and with maximum opportunity for success.
- ❖ **Public Education Program** – One of the core elements of CFPD's increases the preparedness and prevention of fire hazards within the communities it serves. To that end, it has developed a public education program that includes online resources, in person trainings, community events, and more.

2.6.2 Opportunities for Future Integration

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

- ❖ **Public Education and Outreach**—Expand District Preparedness Webpage to include the results of the hazard mitigation plan (HMP) update. Develop a comprehensive public information program that also coordinates hazard mitigation with the other public education initiatives.
- ❖ **Continued Integration With Jurisdictional Plans**—CFPD, San Mateo County, and the Town of Colma have all developed numerous plans to facilitate long-term growth, implementation of strategic goals/mission, and increased resiliency. CFPD plays an important role in the Town of Colma and the County as it enhances the safety of many residents in unincorporated Broadmoor Village. This HMP update marks one way in which CFPD will focus on increasing the coordination between District plans, County plans, and the Town of Colma plans to ensure that local governance considers the capabilities and resources of CFPD during a hazard event.



2.7 Jurisdiction-Specific Natural Hazard Event History

Table 2-5 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 2-5. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Fire	FM-2856	9/10/2010	Provided mutual aid response.
Severe Storm	DR-1646	6/5/2006	Provided mutual aid response.
Severe Storm	DR-1628	2/3/2006	Provided mutual aid response.
Severe Storm	DR-1203	2/9/1998	Provided mutual aid response.
Severe Storm	DR-1155	1/4/1997	Provided mutual aid response.
Severe Storm	DR-1046	3/12/1995	Provided mutual aid response.
Severe Storm	DR-1044	1/10/1995	Provided mutual aid response.
Earthquake	DR-845	10/18/1989	Provided mutual aid response.

2.8 Jurisdiction-Specific Vulnerabilities

Noted vulnerabilities the jurisdiction include:

- ❖ Station 85, located at 50 Reiner Street in Colma, CA serves as the primary fire and medical response headquarters for the Town of Colma, and Broadmoor Village and Garden Village in unincorporated San Mateo County. The main building for Station 85 was built in the 1950s is extremely vulnerable to the earthquake hazard. This facility houses all of the primary response vehicles for the district and is only accessible through a single access point. The district has experienced issues in the past due to poor design, causing delays in response time for sticking doors and inaccessibility. Additionally, storage capacity is segmented on the property with resources housed in four separate buildings – a trailer, a historic barn, an old training fire tower, and the main building. Without appropriate retrofits, upgrades, and new facilities, Station 85 is likely to partially or fully collapse, rendering CFPD personnel unable to assist their service areas in the event of a major earthquake – leaving approximately 6,000 people without appropriate fire and medical attention during a disaster.

2.9 Hazard Risk Ranking

Table 2-6 presents the ranking of the hazards of concern.

TABLE 2-6. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe Weather	45	Medium
3	Drought	0	No Impact
4	Dam Failure	0	No Impact
5	Flood	0	No Impact
6	Landslide	0	No Impact



Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
7	Tsunami	0	No Impact
8	Wildfire	0	No Impact

2.10 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 2-7 lists the actions that make up the CFPD hazard mitigation action plan. Table 2-8 identifies the priority for each action. Table 2-9 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 2-7. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action CFPD-1 – Develop a standing Master Services MOU with the Town of Colma to formalize existing administrative and technical services relationships.						
N/A	All Hazards	2, 3, 5, 8, 10	CFPD	Low	District Budget	Short
Action CFPD-2 —Develop a Continuity of Operations Plan for the District outlining redundancy priorities and a framework for continuation of district services in case of facility loss or other major service disruption.						
N/A	All Hazards	1, 2, 3, 5, 6, 9, 10	CFPD	Low	District Budget, Firefighting Grants	Short
Action CFPD-3 — Conduct an engineering study on requirements for building upgrade an retrofits to provide a recommendation and analysis on the benefit/cost of upgrading/retrofitting current facilities or replacing current facilities.						
Existing	Earthquake	1, 2, 3, 4, 5, 6	CFPD	Medium	District Budget, Firefighting Grants	Short
Action CFPD-4 — If so recommended by a completed engineering study, retrofit and upgrade current facilities to current seismic standards.						
Existing	Earthquake	3, 4, 5, 7, 11	CFPD	High	District Budget, Firefighting Grants, FEMA Hazard Mitigation Grants	Short
Action CFPD-5 — If so recommended by a completed engineering study, replace current facility complex with a seismically sound, single facility for consolidating, housing, distributing, and dispatching district and state resources for the district service area and northern San Mateo County.						
New	Earthquake	3, 4, 5, 7, 11	CFPD	High	District Budget, Firefighting Grants, FEMA Hazard Mitigation Grants	Medium
Action CFPD-6 —Develop a mitigation component to the existing district public outreach program including a mitigation supplement for training and an upgraded website.						
N/A	All Hazards	2, 3, 4, 5, 6, 9, 10	CFPD	Low	District Budget	Long
Action CFPD-7 —Replace the current facility permanent generator to ensure continued operations in the event of a power outage.						
New	Severe Weather	1, 4, 5, 6, 7	CFPD	Medium	District Budget, Firefighting Grants, FEMA Hazard Mitigation Grants	Short-Term



Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
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Action CFPD-8—Continue to support the countywide actions identified in this plan.

New and existing	All	All	CFPD	Low	General Fund	Short- and long-term
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Action CFPD-9—Actively participate in the plan maintenance strategy identified in this plan.

New and existing	All	All	CFPD	Low	General Fund	Short-term
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Action CFPD-10—Integrate the hazard mitigation plan into other plans, programs, or resources, that dictate land use or redevelopment.

New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	CFPD	Low	General Fund	Short-term
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TABLE 2-8. MITIGATION STRATEGY PRIORITY SCHEDULE

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

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





TABLE 2-9. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Earthquake	1, 8, 9, 10	1, 3, 4, 5	6	-	1, 2	1, 4, 5
Severe Weather	1, 8, 9, 10	1	6	-	1, 2, 7	1
Human-Caused	1, 8, 9, 10	1	6	-	1, 2	1

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



Chapter 3.

Woodside Fire Protection District

3.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

Daniel Ghiorso, Chief
 3111 Woodside Road
 Woodside, CA 94062
 Telephone: 650-851-1594
 e-mail Address: DGhiorso@woodsidefire.org

Alternate Point of Contact

Rob Lindner, Deputy Fire Chief
 3111 Woodside Road
 Woodside, CA 94062
 Telephone: 650-851-1594
 e-mail Address: rlindner@woodsidefire.org

3.2 Jurisdiction Profile

3.2.1 Overview

Woodside Fire Protection District (WFPD) serves approximately 25,000 residents through its three fire stations. The Fire District consists of paid and volunteer staff that seek to protect the life, property, and environment through prevention, education, preparedness, and emergency response. The following information provides a brief overview of WFPD and its resources.

- ❖ Date of Establishment — 1925
- ❖ Location and Description — The WFPD operates three stations, including:
 - Station 7: Woodside, CA
 - Station 8: Portola Valley, CA
 - Station 19: Redwood City, CA
- ❖ Administration Offices: Portola Valley, CA to be occupied in mid-summer
- ❖ Brief History — The residents of Woodside and Portola Valley began volunteering as firemen at the Woodside Fire District in 1924; other residents began supporting the mission of the district through administrative and governing roles. Although the Fire District originally began solely as a response organization, its scope has gradually expanded to include education, prevention, and preparedness. In the 1960s, the District began using self-contained breathing apparatus (SCBA) and in the 1970s, it added hazardous materials (HazMat) training to further ensure the safety of its responders. Engine companies began carrying medical equipment such as defibrillators beginning in the 1980s while the 1990s led to the advent of special operations, i.e., confined space, swift water, trench, low-angle, high-angle, and rope rescue.
- ❖ Governing Body Format — The WFPD is led by a Board of Directors and a Fire Chief. The Board oversees the regular review of District Finances and serves in an advisory role to ensure the WFPD



achieves its long and short term goals. Board meetings typically include discussion on training, operations, emergency medical services (EMS), fire prevention activities, and more.

3.2.2 Service Area and Trends

The district serves a daytime population of 25,000 people. Its service area covers an area of 32 Square Miles and includes the communities of Woodside, Portola Valley, Emerald Hills, Ladera, Los Trancos, Skyline, Vista Verde and some unincorporated areas of San Mateo County.

Since the year of 1990, the response capabilities of the Fire District has grown significantly. With the growth in capability, basic fire calls to an all hazard Fire department there has been a significant growth in response volume and added personnel and equipment. Calls totaling 703 calls per year in 1990 are now 4667 calls in 2015. While there have been no Fire related deaths in the past years, deaths due to Motor Vehicle and Bicycle accidents are present throughout the year. This would be attributed to the increase of traffic through the state roads leading and through the scenic corridor of the Fire District.

3.2.3 Assets

Table 3-1 summarizes the critical assets of the district and their value.

TABLE 3-1. SPECIAL PURPOSE DISTRICT ASSETS

Asset	Value
Property	
3 acres of land	This is property donated to the Fire District with no ability to sell or develop.
Critical Infrastructure and Equipment	
Engine 7	\$650,000
Engine 8	\$509,524
Engine 19	\$274,280
Engine 119b	\$121,747
Battalion 2	\$41,089
Med 2	\$63,412
Med 2A	\$19,948
Prevention 2	\$63,412
Chief 2	\$10,439
Patrol 8	\$144,167
ERV 7	\$29,521
Pub Ed	\$24,677
2014 Silverado Utility 7	\$30,692
2008 Bandit Chipper	\$3,343
2007 Chipper Truck	\$5,852
1942 White Engine (Historic)	\$60,000
1925 Dodge Pumper (Historic)	\$20,000
Training Trailer Safety	\$2,112
Station 7 Generator	\$20,000



Asset	Value
Station 8 Generator	\$15,000
Station 19 Generator	\$50,000
Total:	\$1,618,495
Critical Facilities	
WFPD Station 19 – 4191 Jefferson Ave., Redwood City	\$5,868,608
WFPD Station 7 – 3111 Woodside Road, Woodside	\$3,442,080
WFPD Station 8 – 135 Portola Road, Portola Valley	\$1,460,184
Total:	\$10,770,872

3.3 Planning and Regulatory Capabilities

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- ❖ Town of Woodside Evacuation Plan
- ❖ Town of Woodside Evacuation Plan-Unincorporated San Mateo County
- ❖ Town of Portola Valley Evacuation Plan
- ❖ Fire Prevention Standards
 - Photovoltaic Solar Installation Standards
 - Residential Sprinkler Plan Submittal
 - Residential Water Supply + Hydrants
 - Roadways/Driveways Requirements
 - Residential Plan Submittal
 - Solar System Requirements
 - Generator Requirements
 - Woodside Fire Code Ordinance No. 8
 - Perimeter Clearing Requirements
 - California Building Code (CBC) 7A
 - WUI-Approved Produces (Per CBC 7A)

3.4 Fiscal, Administrative and Technical Capabilities

An assessment of fiscal capabilities is presented in Table 3-2. An assessment of administrative and technical capabilities is presented in Table 3-3.

TABLE 3-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No





Financial Resources	Accessible or Eligible to Use?
State-Sponsored Grant Programs	Yes; 2014 CA Fire Safe Clearinghouse Grant, 2015 CA Fire Safe Clearinghouse Grant, SRA CAL Fire Prevention Fee Grant. All above grants are run jointly with San Mateo County Fire Safe and the Fire District.
Development Impact Fees for Homebuyers or Developers	No
Other	Yes, private donations to the Woodside Portola Valley Fire Protection Foundation

TABLE 3-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	No	
Engineers or professionals trained in building or infrastructure construction practices	Yes	Fire Prevention Division, Facilities Division
Planners or engineers with an understanding of natural hazards	No	
Staff with training in benefit/cost analysis	No	
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	Recently trained and work with the City of San Mateo on GIS Applications for District Fire Pre-Plans.
Scientist familiar with natural hazards in local area	No	
Emergency manager	No	
Grant writers	Yes	Formed a grant writing team of 3 individuals with support from staff around the year 2010.
Other	Yes	Public Education Specialist/CERPP Coordinator

3.5 Education and Outreach Capabilities

An assessment of education and outreach capabilities is presented in Table 3-6.

TABLE 3-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes, Public Education Specialist/CERPP Coordinator, Deputy Fire Marshal
Do you have personnel skilled or trained in website development?	Yes, Information Technology (IT) Division
Do you have hazard mitigation information available on your website?	No





Criteria	Response
<ul style="list-style-type: none"> If yes, please briefly describe. 	Public Education Section on Website includes Disaster Preparedness Information; Fire Prevention section of Webpage
Do you utilize social media for hazard mitigation education and outreach?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Twitter, Instagram, Nextdoor, PV Forum and Facebook
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes (more preparedness/prevention than mitigation)
<ul style="list-style-type: none"> If yes, please briefly specify. 	Citizens Emergency Response and Preparedness Program (CERPP) and Firewise Committee
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Fire Adaptive Community Program, Home Safety Checks, Girl/Boy Scout Fire Safety, Various Other Public Education Programs
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	SMC Alert System, Rapid Notify

3.6 Integration with Other Planning Initiatives

The following describe the jurisdiction’s process for integrating the hazard mitigation plan into existing plans and programs.

3.6.1 Existing Integration

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

- ❖ **Fire Prevention Section of Website** -- This portion of the website contains useful information, resources, and actions that can be taken at the property owner level to reduce risk to wildfires, house fires, and associated hazards. Information includes legislation and regulations for fire safety, natural resource measures (i.e., defensible space), and structural initiatives.
- ❖ **Public Education Program** – One of the core elements of the WFPD’s mission is to increase the preparedness and prevention of fire hazards within the communities it serves. To that end, it has developed a comprehensive public education program that includes online resources, in person trainings, community events, and more. The public education program is targeted towards both children and adults to create a culture of resilience.
- ❖ **Professional Trainings** – All WFPD fire suppression personnel are certified to the California State Firefighter II level and actively involved in the California Incident Command Certification Program. District staff spend approximately 37,700 training hours annually to enhance their knowledge in many topics to ensure that they are able to respond to events quickly, safely, and with maximum





opportunity for success. Additionally, every member of the WFPD is trained to the emergency medical technician (EMT) level and most are trained and hold the advanced EMT-P license to provide advanced life support.

❖ **Evacuation Planning** – The WFPD has developed an evacuation plan to apply to the jurisdictions whose residents it serves. The plans are reviewed and approved annually, and they contain guidelines for evacuation procedures for the community, including how evacuation relates to the following categories:

- All hazards evacuation planning
- Shelter requirements
- Transportation
- Traffic control
- Special facilities and special needs populations
- Non-resident/tourist evacuations
- Animal evacuations
- Et al.

The plans also include designation of roles and responsibilities, direction and control, the readiness levels utilized by WFPD, administration and support (records, plan maintenance, training), and references.

3.6.2 Opportunities for Future Integration

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

- ❖ **Public Education and Outreach**—Expand Disaster Preparedness Webpage to include the results of the hazard mitigation plan (HMP) update. Develop a comprehensive public information program that also coordinates hazard mitigation with the other public education initiatives.
- ❖ **Continued Integration With Jurisdictional Plans**—WFPD, San Mateo County, and the cities within San Mateo County have all developed numerous plans to facilitate long-term growth, implementation of strategic goals/mission, and increased resiliency. WFPD plays an important role in the County as it enhances the safety of many residents. This HMP update marks one way in which WFPD will focus on increasing the coordination between District plans, County plans, and City plans to ensure that local governance considers the unique capabilities and resources of WFPD during a hazard event.

3.7 Jurisdiction-Specific Natural Hazard Event History

Table 3-5 lists all past occurrences of natural hazards within the jurisdiction. Note: With the exception of 1992, WFPD did not experience any damages as a result of the identified hazards, however, personnel were deployed to the hazard events.



TABLE 3-5. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Fire	FM-2856	9/10/2010	WFPD assisted in a multi-jurisdictional response to the 2010 San Bruno Pipeline explosion and subsequent wildfire response.
Fire	N/A	8/2002	WFPD personnel assisted in the 6-alarm response to the 2002 Albion Fire.
Severe Storm(s)	DR-1155	1/4/1997	The District responded to landslides throughout their service area during the 1997 El Nino storms.
Fire	N/A	1992	A water tender and Type 6 patrol experienced some damage.
Earthquake	DR-845	10/18/1989	Unknown
Fire (Santa Clara County)	N/A	1986	WFPD responded to a multi-county, multi-jurisdiction fire in Palo Alto for a massive wildfire at the Arastradero Preserve.

3.8 Jurisdiction-Specific Vulnerabilities

Noted vulnerabilities the jurisdiction include:

- ❖ The Apparatus Bay for Station 8 sits on a faultline – Berrocal Fault.
- ❖ Station 7 is close to two fault lines – the San Andreas Fault and Canada Finger.
- ❖ Station 19 is close to a 36" natural gas pipeline. A pipeline explosion in this area would render Station 19 inoperable.

3.9 Hazard Risk Ranking

Table 3-6 presents the ranking of the hazards of concern.

TABLE 3-6. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Wildfire	48	High
3	Severe Weather	24	Medium
4	Dam Failure	0	No Impact/Exposure
5	Drought	0	No Impact/Exposure
6	Flood	0	No Impact/Exposure
7	Landslide	0	No Impact/Exposure



3.10 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 3-7 lists the actions that make up the Woodside Fire Protection District hazard mitigation action plan. Table 3-8 identifies the priority for each action. Anticipated timelines are typically dependent on funding availability. Table 3-9 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 3-7. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action WFPD-1 —Purchase new equipment for district response, including water tenders, rescue vehicles, and SUVs/Pick-up Trucks.						
New	All	4, 5, 6	WFPD	Medium	District Budget, FEMA Hazard Mitigation Grants, Firefighting Grants	Ongoing
Action WFPD-2 —Purchase a Type 3 Wildland Rig for regional response capabilities to large scale wildfires and provide training on operation for district staff.						
New	Wildfire	2, 4, 5, 6	WFPD	High (Est. \$400,000)	FEMA Hazard Mitigation Grants, Firefighting Grants	Short-Term
Action WFPD-3 —Replace permanent generators at Station 7 and Station 8 to ensure continuity of operations in case of a power outage.						
Existing	All	1, 4, 5, 6, 7	WFPD	Medium / High	District Budget, FEMA Hazard Mitigation Grants, Firefighting Grants, CDBG	Short-Term
Action WFPD-4 —Conduct engineering study on the impact of the Berrocal Fault on Station 8. Based on results, identify alternate location for Station 8.						
Existing	Earthquake	1, 2, 3, 4, 5, 6	WFPD	Medium	District Budget, FEMA Hazard Mitigation Grants	Short-Term
Action WFPD-5 — Reach 25% of district homes (approximately 375) in pursuit of the District’s Fire Adapted Communities program by 2021 through expansion and increased support of the Deputy Fire Marshal’s current public outreach initiatives.						
N/A	All (Focus on Wildfire)	1, 2, 3, 5, 6, 7, 9, 10	WFPD	Low	District Budget	Ongoing
Action WFPD-6 — Develop a strategic expansion plan for the district that identifies milestones for 5, 10, and 15 years.						
N/A	All	1, 2, 3, 4, 5, 6, 7, 8, 10	WFPD	Low	District Budget	Short-Term
Action WFPD-7 — Purchase and develop additional land for district operation expansion for Station 7 pursuant to strategic plan recommendations.						
Existing	All	1, 3, 4, 5, 6	WFPD	High	FEMA Hazard Mitigation Grants, Firefighting Grants	Long-term

Action WFPD-8—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.



Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	All	1, 3, 4, 5, 6, 7, 11	Woodside, Portola Valley, Redwood City, WFPD	High	FEMA Hazard Mitigation Grants	Long-term (depending on funding)

Action WFPD-9—Continue to support the countywide actions identified in this plan.

New and existing	All	All	WFPD	Low	General Fund	Short- and long-term
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Action WFPD-10—Actively participate in the plan maintenance strategy identified in this plan.

New and existing	All	All	WFPD	Low	General Fund	Short-term
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Action WFPD-11—Integrate the hazard mitigation plan into other plans, programs, or resources, that dictate land use or redevelopment.

New and existing	All	1, 2, 3, 4, 5, 6, 7, 8, 10	WFPD	Low	General Fund	Short-term
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TABLE 3-8. MITIGATION STRATEGY PRIORITY SCHEDULE

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





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

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

TABLE 3-9. ANALYSIS OF MITIGATION ACTIONS

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

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

3.11 Future Needs to Better Understand Risk/Vulnerability

WFPD is aware of local knowledge regarding large scale historic wildfire occurrences within the district. At the time of these wildfire, the land was largely undeveloped, so records were not developed. The areas of these





historic wildfires are not developed, and further research is required to fully understand the extent of these historic events and their impact on the land.

WFPD requires additional understanding of the fault line running under the Apparatus Bay of Station 8.

WFPD would like to collect information on the effect of pipeline explosion on wildfire in order to strengthen response capabilities through greater understanding of wildfire as a secondary hazard.

3.12 Additional Comments

The district lies in the flight path for both San Jose International Airport and San Francisco International Airport. The District is aware of the potential for wildfire as a result of a downed aircraft.





Part 2 – Water Districts



Chapter 4.

Mid-Peninsula Water District

4.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

Mr. Rick Bisio – Water Quality and Safety

3 Dairy Lane

Belmont, CA 94002

Telephone: 650-591-8941

e-mail Address: rickb@midpeninsulawater.org

Alternate Point of Contact

Mr. Rene Ramirez – Operations Manger

3 Dairy Lane

Belmont, CA 94002

Telephone: 650-591-8941

e-mail Address: rramirez@midpeninsulawater.org

4.2 Jurisdiction Profile

4.2.1 Overview

The Mid-Peninsula Water District is a special purpose district created in 1929 to provide potable water service to the City of Belmont receiving the water pre-treated from San Francisco Public Utilities Commission. The District's designated service area expanded throughout the years to include a small area of the City of San Carlos, City of Redwood City and the City of San Mateo. A five-member elected Board of Directors governs the District and the Board assumes responsibility for the adaption of this plan; the General Manager will oversee its implementation. Funding comes primarily through rates.

4.2.2 Service Area and Trends

As of December 15, 2015, the District serves 8,300 water connections with a staff of 18. The District services an area of approximately 4.63 square miles with a population of 26,748 (2015 Department of Finance estimate, City of Belmont).

The majority of Mid-Peninsula Water District service area is currently built out including the preservation of open space, any undeveloped land available for development is limited. Most development over the next 20 years will most likely occur on currently vacant sites or come from expanded development of sites with existing structures both residential and commercial as reviewed by the City of Belmont.

4.3 Special Purpose District Critical Facilities

Table 4-1 summarizes the critical facilities of the district on pages 1-2 through 1-4.



TABLE 4-1.

Asset	Value
Property	
11.5 Acres	\$5,750,000
Total:	
Critical Infrastructure and Equipment	
Buckland Tank Site (.1MG, .1MG)	\$3,000,000
Dekoven Tank Site (.72MG, 1.0MG)	\$3,500,000
Exbourne Tank Site (1.0MG, 1.5MG)	\$2,650,000
Hallmark Tank Site (2.5MG, 2.5MG)	\$4,400,000
Hersom Tank (1.5MG)	\$1,600,000
West Belmont Tank Site (.79MG, .79MG)	\$1,950,000
Buckland Hydro- pneumatic Tank	\$35,000
Dekoven Hydro- pneumatic Tank	\$40,000
Total length of pipe 105 Miles (\$1.32 million per mile X 105 miles)	\$198,000,000
Buckland Pump Station	\$91,000
Dekoven Pump Station	\$94,500
Exbourne pump Station	\$109,600
Hallmark Pump Station	\$91,000
Hannibal Pump Station	\$139,700
Hersom Pump Station	\$139,700
West Belmont Pump Station	\$109,700
Tunnels Pump Station	\$1,100,000
7 Intertie Stations	\$75,000
12 Pressure Regulator Stations	\$250,000
Emergency Generators	\$868,000
Fuel Dispensing Tank	\$9,800
Shop Equipment, SCADA and Tools	\$815,100
Office, Computers, Furniture, and Equipment	\$200,000.00
Total: \$ 219,268,100	
Critical Facilities	
Dairy Lane Admin and Corp Yard Building	\$2,750,000
Folger Drive Admin and Corp Yard Buildings	\$1,800,000
Buckland Pump Station Building	\$ 88,000
Dekoven Pump Station Building	\$ 149,200
Exbourne Pump Station Building	\$ 140,000
Hallmark Pump Station Building	\$ 139,000
Hallmark Storage Building	\$ 36,000
Hannibal Pump Station Vault	\$ 775,000
West Belmont Pump Station Building	\$155,300
West Belmont Tank Site Storage Building	\$ 49,100





Asset	Value
Total: \$ 60,081,600	

4.4 Planning and regulatory Capabilities

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- ❖ Urban Water Management Plan, 2010 – This plan focuses on the Mid-Peninsula Water District’s ability to meet water demand in a reliable and high quality manner, based on past and current water use. Part of the plan considers water shortage contingencies and water supply emergency response.

4.5 Fiscal, ADMINISTRATIVE and TECHNICAL Capabilities

An assessment of fiscal capabilities is presented in Table 4.2. An assessment of administrative and technical capabilities is presented in Table 4.3.

TABLE 4.2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes – Water Only
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	N/A

TABLE 4.3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	MPWD General Manager, Tammy Rudock and MPWD Operations Manager, Rene Ramirez and Pakpour Consulting Group, Inc. 5776 Stoneridge Mall Road, Suite 320 Pleasanton, CA 94588
Engineers or professionals trained in building or infrastructure construction practices	Yes	MPWD Operations Manager, Rene Ramirez and Pakpour Consulting Group, Inc. 5776 Stoneridge Mall Road, Suite 320 Pleasanton, CA 94588



Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with an understanding of natural hazards	Yes	Pakpour Consulting Group, Inc. 5776 Stoneridge Mall Road, Suite 320 Pleasanton, CA 94588
Staff with training in benefit/cost analysis	Yes	MPWD General Manager, Tammy Rudock and MPWD Operations Manager, Rene Ramirez and Pakpour Consulting Group, Inc. 5776 Stoneridge Mall Road, Suite 320 Pleasanton, CA 94588
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	MPWD Field Operations Supervisor, Brent Chester and Pakpour Consulting Group, Inc. 5776 Stoneridge Mall Road, Suite 320 Pleasanton, CA 94588
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	MPWD Lead Operator, Rick Bisio and MPWD Operations Manager, Rene Ramirez
Grant writers	Yes/No	MPWD General Manager, Tammy Rudock
Other	N/A	

4.6 Education and Outreach Capabilities

An assessment of education and outreach capabilities is presented in Table 4..

TABLE 4.4. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes/ MPWD General Manager, Tammy Rudock or MPWD Operations Manager, Rene Ramirez
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	Yes
If yes, please briefly describe.	Water Conservation Measures
Do you utilize social media for hazard mitigation education and outreach?	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
• If yes, please briefly describe.	Community Outreach Programs (Field Trips, Poster Contests, etc.).
Do you have any established warning systems for hazard events?	Yes



Criteria	Response
<ul style="list-style-type: none"> If yes, please briefly describe. 	Emergency Response Plan – Spill Prevention

4.7 Integration with Other Planning Initiatives

The following describe the jurisdiction’s process for integrating the hazard mitigation plan into existing plans and programs.

4.7.1 Existing Integration

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

- ❖ **Emergency Response Plan, Vulnerability Assessment** – The information from the Vulnerability Assessment on the Mid-Peninsula Water District Facilities has been integrated into the Emergency Response Plan as applicable to address vulnerable areas.
- ❖ **Urban Water Management Plan** – Information in the plan already includes emergency response plans and conservation measures for dealing with water shortages, which are linked as secondary hazard events to many disasters.

4.7.2 Opportunities for Future Integration

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

- ❖ **Public Outreach** – The Mid-Peninsula Water District recognizes that there are currently public information opportunities available to facilitate public engagement regarding hazard mitigation. The District will look into developing a more robust and targeted program that involves using current capabilities to expand and enhance outreach to local customers.

4.8 Jurisdiction-Specific Natural Hazard Event History

Table 4-5 lists all past occurrences of natural hazards within the jurisdiction of Mid-Peninsula Water District.

TABLE 4-5. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Earthquake	N/A	Current	Site Assessments
Freezing	DR-894	2/11/1991	Frozen service lines, damaged pump facility, site assessments
Earthquake	DR-845	10/18/1989	Leak in Tank, Site Assessments

4.9 Jurisdiction-Specific Vulnerabilities

Noted vulnerabilities the jurisdiction include:





- ❖ Critical facilities such as water infrastructure that includes but is not limited to reservoirs (tanks), pump stations, regulator stations, interties, backup diesel generators and communication towers (repeaters) are vulnerable to the effects of earthquakes
- ❖ Other Critical facilities are buildings owned by MPWD, these are vulnerable to damage by earthquakes, flooding/liquifaction in the lower part of MPWD Zone 1 service area.
- ❖ Liquefaction caused by earthquakes creating leaks and damage to water facilities
- ❖ Flooding that will effect buildings and infrastructure in the Zone 1 area located close to the bay or flooding due to a ruptured tank in the event of an earthquake.
- ❖ Severe Weather due to climate change freeze conditions or drought situations
- ❖ Wildfire, supply or lack of water for firefighting purposes
- ❖ Landslides, potential for property damage and damage to infrastructure

4.10 Hazard Risk Ranking

Table 4-6 presents the ranking of the hazards of concern.

TABLE 4-6. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe Weather	54	High
3	Wildfire	54	High
4	Landslide	45	Medium
5	Flood	30	Medium
6	Drought	30	Med
7	Dam Failure	0	Low

4.11 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 4-7 lists the actions that make up the Mid-Peninsula Water Districts hazard mitigation action plan. Table 4-8 identifies the priority for each action. Table 4-9 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 4-7. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
MPWD 1 – Vulnerability of critical facilities and infrastructure, assess and address (replacement schedule) through the Capital Improvement Plan. Promote planning and implementation of work coordinating with other agencies.						
Existing	Earthquakes	1,2,4,7, 8,11	MPWD, COB	High	HMGP, Staff, General Fund	Short and Long Term





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
MPWD 2 – Seismic retro fit or replace water tanks (reservoirs) to withstand impacts of earthquakes and to meet State and/or Federal requirements.						
Existing	Earthquakes	1,2,4,7,11	MPWD	High	HMGP, Staff, General Fund	Long Term
MPWD 3 – Work together with local fire authorities to assess available water and infrastructure for wildfire areas.						
Existing	Wildfire	1,2,4,7	MPWD, BFD, RCFD	High	HMGP, Staff, General Fund	Long Term
MPWD 4 – Research, review and implement measures to strengthen water infrastructure in areas prone to flooding and liquefaction, work with other agencies and utility providers.						
Existing	Flooding	1,2,4,7,8	MPWD	High	HMGP, Staff, General Fund	Long Term
MPWD 5 – Continue with Water Conservation Program to promote water saving measures and re-use of water during times of drought and from the effects of global warming						
Existing	Drought/Severe Weather	1,2,3,5	MPWD	Low	Staff, General Fund	Short Term
MPWD 6 – Reinforce and retain slopes on MPWD property to reduce the impact to buildings and critical facilities that could result in loss of water service.						
Existing	Landslides	1,2,4,7,	MPWD	Med	Staff, General Fund	Short
MPWD 7 – Rebuild interties and replace outdated flow meters to improve emergency water supply to neighboring water agencies and support Continuity of Operations Plan						
Existing	Earthquake, Severe Weather	1,2,4,6,7,8	MPWD, Cal Water, Redwood City Water	High	HMGP, Staff, General Fund	Long
Action G-1— Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and existing	All	All	Jurisdictions	Low	General Fund	Short- and long-term
Action G-2— Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All	1, 4	Jurisdictions	Low	Staff Time, General Funds	Short-term

TABLE 4-8. MITIGATION STRATEGY PRIORITY SCHEDULE

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Priority ^a
MPWD 1	6	High	High	Yes	Yes	No	Medium	High
MPWD 2	5	Med	High	Yes	Yes	Maybe	High	High





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

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

TABLE 4-9. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Earthquake	MPWD – 1, 2	MPWD - 2			MPWD – 3, 7	MPWD -1,2
Wildfire	MPWD – 1,7	MPWD – 3, 7		MPWD – 3, 7	MPWD – 3, 7	
Flooding	MPWD - 4	MPWD - 4				
Severe Weather	MPWD - 5	MPWD - 5	MPWD - 5		MPWD - 7	
Drought	MPWD - 5		MPWD - 5	MPWD - 5		
Landslides	MPWD - 6	MPWD - 6				MPWD - 6

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

4.12 Future Needs to Better Understand Risk/Vulnerability

The potential for funding to help pay for risk and vulnerability assessments.



Chapter 5.

North Coast County Water District

5.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact
Cari Lemke, General Manager
P.O. Box 1039 (2400 Francisco Blvd.)
Pacifica CA 94044
Telephone: 650-355-3462
e-mail Address: clemke@nccwd.com

Alternate Point of Contact
Scott Dalton, Superintendent
P.O. Box 1039 (2400 Francisco Blvd.)
Pacifica CA 94044
Telephone: 650-355-3462
e-mail Address: sdalton@nccwd.com

5.2 Jurisdiction Profile

5.2.1 Overview

The North Coast County Water District is a special district created in 1944 to provide potable water service to the coastal area south of the City of Daly City, west of the City of South San Francisco and City of San Bruno, and north of the City of Montara. The District began with the acceptance, from the County of San Mateo, of the assets and operation of Salada Beach Public Utility District; the District’s designated service area expanded throughout the years with the acquisition of Vallemar County Water District, San Pedro Water System and the Sharp Park Sanitary District. The District also acquired land by purchase or otherwise acquiring the land from private landowners. Later, in 1957, the City of Pacifica incorporated 9 unincorporated communities which coincided primarily with the North Coast County Water District’s service area.

Presently, the District is one of the San Francisco Public Utilities Commission's twenty-six wholesale customers and receives approximately 3,300 acre-feet of water deliveries annually, or 2.9 million gallons per day. This water is conveyed through a distribution system containing approximately 132 miles of pipelines ranging from 2-inches – 24-inches in diameter. The District operates 5 pump stations, 14 storage tanks, and 61 pressure regulating stations separating, but linking together, the 30 pressure zones. Pursuant to 22 CCR 64413.3 and the Water Supply Permit, the District is classified as a D4 distribution system.

The North Coast County Water District also operates a small recycled water system with 1 pump station, 1 tank and 4 service connections (e.g. City of Pacifica, Jefferson Union High School District, Pacifica School District). The District has opened a Residential Recycled Water Fill Station for residents to fill up to a 55-gallon container with recycled water for watering their gardens.

A five-member elected Board of Directors governs the District. The Board assumes responsibility for the adoption of this plan; the General Manager will oversee its implementation.



As of 2015, the District serves approximately 11,350 water connections and 4 recycled water service connections with a current staff of 20.

Funding comes primarily from water sales.

5.2.2 Service Area and Trends

The District serves a population of 38,551. Its service area covers 8,019 acres in City of Pacifica plus 606 acres of unincorporated land south of the City, extending up the slope of San Pedro Mountain.

Five of the ten common trends among water utility leaders that have had the most negative impact in the past five years include: (a) uncertain economy/financial instability, (b) availability/adequacy of water resources, (c) aging water infrastructure/capital needs, (d) shifting water demands, and (e) climate uncertainty. Some trends have been positive for some utilities while quite detrimental for others (such as the availability/adequacy of water resources). Although these extremes are largely a product of system characteristics and geographic differences, human nature seeks strategies to mitigate and master the challenges dealt in an effort to turn a negative trend positive.

The other five trends projected in “Forecasting the Future” are (f) increasing/expanding regulations, (g) changing workforce, (h) efficiency drivers/resource optimization, (i) mass/social media explosion, and (j) expanding technology application.

The North Coast County Water District’s annual average precipitation is 22.0 inches, virtually all of which is rainfall, with about 87 percent falling between November and April.

5.2.3 Assets

Table 5-1 summarizes the critical assets of the district and their value.

These numbers indicate the estimated replacement value at the present date that this report was issued.

TABLE 5-1. SPECIAL PURPOSE DISTRICT ASSETS

Asset		Value
Property		
San Pedro Valley Park (Watershed)	513+/- Acres	\$26,500,000
2400 Francisco Blvd: APN: 016-322-230	.79 Acres	\$316,000
Milagra Site: APN: 016-460-0030	17.83 Acres	\$7,132,000
Sharp Park Tank Site: APN: 017-470120	.30 Acres	\$120,000
Gypsy Hill Tank Site: APN: 016-442-03	3.10 Acres	\$1,240,000
Royce Tank Site: APN: 022-150-370	3.09 Acres	\$1,236,000
Vallemar Tank Site: APN: 018-160-020	.24 Acres	\$96,000
Christen Hill Tank Site: APN: 009-610-060	1.00 Acres	\$400,000
Hickey Tank Site: APN: 009-570-440	.25 Acres	\$100,000
Park Pacifica Site: APN: 023-622-440	.82 Acres	\$328,000
Sheila Tank Site APN: 023-110-010	1.00 Acres	\$400,000
Tapis Tank Site: APN: 023-110-050	.40 Acres	\$160,000



TABLE 5-1. SPECIAL PURPOSE DISTRICT ASSETS

Asset	Value
Fassler Tank Site APN: 022-330-070 .50 Acres	\$200,000
Skyline Intertie: APN: 009-320-170 .25 Acres	\$100,000
Total:	\$38,328,000
Critical Infrastructure and Equipment	
Milagra Tank (5MG)	\$5,000,000
Sharp Park Tank (.5MG)	\$600,000
Gypsy Hill Tank Site (3MG)	\$2,500,000
Royce Tank Site (3MG, 5MG, .75MG)	\$8,750,000
Vallemar Tank Site (.2MG)	\$400,000
Christen Hill Tank Site (3.8MG)	\$3,000,000
Hickey Tank Site (.6MG)	\$750,000
Park Pacifica Tank Site (1MG)	\$1,200,000
Sheila Tank (.1MG)	\$350,000
Tapis Tank (.4MG)	\$500,000
Fassler Tank (.5MG)	\$600,000
Total:	\$23,650,000
Critical Facilities	
Main Pump Station located at the Harry Tracy Treatment Plant	\$1,250,000
Milagra Pump Station	\$650,000
Royce Pump Station	\$500,000
Park Pacifica Pump Station	\$450,000
District Office	\$2,500,000
Total:	\$5,350,000

5.3 Planning and Regulatory Capabilities

There are no applicable North Coast County Water District (NCCWD) plans and regulatory capabilities for this Hazard Mitigation Plan Update. In August 2013, NCCWD selected a contractor to develop a 20-Year Long-Term Master Plan which will evaluate the District's existing water distribution system, identify any deficiencies in the distribution system, analyze for flow capacity and review regulatory compliance, and develop prioritized list of capital improvement projects to address any deficiencies. The 20-Year Long-Term Master Plan was approved at the March 16, 2016 Board Meeting. See Opportunities for Future Integration for more details on linkages to hazard mitigation.

5.4 Fiscal, ADMINISTRATIVE and TECHNICAL Capabilities

An assessment of fiscal capabilities is presented in Table 4.. An assessment of administrative and technical capabilities is presented in Table 5..



TABLE 5.2. FISCAL CAPABILITY

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

TABLE 5.3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Outsource/Brezack and Associates
Engineers or professionals trained in building or infrastructure construction practices	Yes	Outsource/Stetson Engineers
Planners or engineers with an understanding of natural hazards	Yes	Outsource/Stetson Engineers
Staff with training in benefit/cost analysis	Yes	Accountant
Surveyors	Yes	Outsource/Professional Land Services
Personnel skilled or trained in GIS applications	Yes	Outsource/Stetson Engineers
Scientist familiar with natural hazards in local area	No	-
Emergency manager	Yes	General Manager
Grant writers	Yes	Outsource/Stetson Engineers
Other	No	-

5.5 Education and Outreach Capabilities

An assessment of education and outreach capabilities is presented in Table 5.44.

TABLE 5.4. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes - Assistant to General Manager
Do you have personnel skilled or trained in website development?	Yes - Assistant to General Manager
Do you have hazard mitigation information available on your website?	No
Do you utilize social media for hazard mitigation education and outreach?	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs already in place that could be used to communicate hazard-related information?	No



Criteria	Response
Do you have any established warning systems for hazard events? <ul style="list-style-type: none"> If yes, please briefly describe. 	Yes Rapid Notify - Rapid Notify is a mass notification system that enables the District to send emergency and non-emergency communications by telephone, email and SMS text messaging. The system can be activated by District management from anywhere, alerting customers within minutes.

5.6 Integration with Other Planning Initiatives

The following describe the jurisdiction’s process for integrating the hazard mitigation plan into existing plans and programs.

5.6.1 Existing Integration

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

- ❖ Not applicable.

5.6.2 Opportunities for Future Integration

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

- ❖ 20-Year Long-Term Master Plan – Plan can be integrated through an amendment to the Master Plan to address new information (risks/hazards) that necessitate changing the scope or schedule of future Capital Improvement Program (CIP) projects.

5.7 Jurisdiction-Specific Natural Hazard Event History

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

TABLE 5-5. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Tsunami (Warning)	N/A	2011	Not Available. The 8.9 earthquake in Japan set off a Tsunami warning for the West Coast of California. Staff was called in to move vehicles and equipment to higher ground since the corporation yard is at sea level. No damage to facilities or infrastructure.





TABLE 5-5. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Landslide	N/A	1997	Not Available. Mudslide in the Pedro Point Area of Pacifica washed out a road leading to a water tank site.
Landslide	N/A	1993	Not Available. Landslide in the Vallemar Area of Pacifica caused water piping to separate. Piping was repaired and a flexible expansion joint fitting installed.
Severe Weather	N/A	1991	Not Available. Freezing caused service lines to fail.
Loma Prieta Earthquake	DR 845	1989	Not Available. Damage occurred to one water tank's piping connection. Pipe cracked, a repair clamp was installed.

5.8 Jurisdiction-Specific Vulnerabilities

Earthquakes. The North Coast County Water District's service area is located in the vicinity of the San Andreas Fault. The District has water mains that run parallel with the San Andreas Fault as well as water mains that cross the fault.

Severe Weather: The coastal climate of Pacifica has kept system failures due to severe weather at a minimum. Although historically Pacifica has had relatively mild weather when comparing to other parts of the United States, the future weather patterns are unknown. North Coast County Water District Standards reflect the mild climate that we are located in. If there was a long period of severe weather (freezing), service lines and pipeline appurtenances above any "frost line" would be subject to failure.

Flooding. The lower Linda Mar area in Pacifica is subject to flooding during times of extreme weather. Although the District has not been directly affected to date, the flooding has the potential of transporting objects that can strike hydrants and other above-ground appurtenances. Additionally, contamination may occur to potable water in the event of a flood in an area where there is a water main break and positive pressure is lost.

Drought. The State of California is currently in a drought. Drought can impact existing landscaping including large trees; trees can fall and uproot themselves pulling water piping out of the ground. In areas where pump stations are located, trees can sever power lines that feed pump station buildings. The indirect impacts of the drought include customers conserving water which results in less funding for capital improvements.

Fire. Pacifica is a coastal community surrounded in part by undeveloped land. Due to the lack of rain in recent years, these areas are more susceptible to fire. Although there have not been any natural occurring wildfires from the result of lightning strikes, there are many local, county, state, and federally owned trails that people can visit. There are also locations in the hills that attract homeless people. Fires can impact the North Coast County Water District if power was lost. The heat from fires may also impact tanks if the tank coatings fail. Although all of the tanks are closed tops, smoke and ash debris may be able to enter into the water via the tank vents and cause taste and odor problems.



Landslides and Accessibility. Highway One (California State Route 1) is the major road that connects the city’s neighborhoods and allows for traffic in and out of the city. In the very south, Pacifica is connected to the next community via a bridge and a tunnel. In the very north, Pacifica is connected to the City of San Francisco by Interstate 280 (I-280). The other access into or out of Pacifica is Sharp Park Road (that connects with California State Route 35 (C35)).

There are areas of Highway One which may be susceptible to landslides due to the steep grade. There have been some minor rock slides in the area. If areas of Highway One were blocked due to a landslide, the District may be severely limited to access equipment, parts, and materials to fix infrastructure. Coastal erosion induced landslide has the potential to affect pipelines that service the susceptible area.

Unknown condition of neighboring infrastructure. In recent years, water pipe failures have happened in near proximity to existing culvert piping. During repairs on failed water lines, staff has noticed that some existing culverts are in relatively poor condition. It is unknown if the culvert piping have indirectly caused the water pipes to fail, or if the failed water pipelines have caused the culvert piping to fail.

5.9 Hazard Risk Ranking

Table 5-6 presents the ranking of the hazards of concern.

TABLE 5-6. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	48	High
2	Severe Weather	33	Medium
3	Landslide	24	Medium
4	Flood	18	Medium
5	Fire	18	Medium
6	Tsunami	18	Medium
7	Drought	3	Low
8	Dam Failure	0	Low

5.10 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 5-7 lists the actions that make up the North Coast County Water District's hazard mitigation action plan. Table 5-8 identifies the priority for each action. Table 5-9 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 5-7. HAZARD MITIGATION ACTION PLAN MATRIX





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
NCCWD-1 Seismically Retrofit Water Storage Tanks and storage tank piping connections, including anchoring to foundation and flexible expansion joints to allow for movement.						
Existing	Earthquake	1, 4, 7, 11	NCCWD	Medium	Staff Time, General Funds	On-going
NCCWD-2 Increase existing storage capacity.						
New	Earthquake, Landslide, Fire	1, 4, 7,	NCCWD	High	Staff Time, General Funds	Long Term
NCCWD-3 Improve and add additional interconnections with neighboring agencies.						
New & Existing	Earthquake, Landslide, Fire, Dam Failure	1, 2, 7, 8, 10	NCCWD	High	Staff Time, General Funds between Neighboring Agencies	Long Term
NCCWD-4 Piping upgrades to include strengthening vulnerable piping crossing and running in the close vicinity to known faults as well as improving piping to increase flow capacities.						
Existing	Earthquake, Fire	1, 4, 7, 11	NCCWD	High	Staff Time, General Funds	On-going
NCCWD-5 Develop and implement a program to capture perishable data after significant events within the District’s GIS program to support future mitigation efforts including the implementation and maintenance of the hazard mitigation plan.						
New	All Hazards	1, 3, 4, 8, 10,	NCCWD	Low	Staff Time, General Funds	Short Term
NCCWD-6 Integrate the hazard mitigation plan into other plans and programs that support infrastructure investment choices, such as the capital improvement program and the 20 Year Master Plan.						
New	All Hazards	1, 3, 4, 5, 6, 7, 8	NCCWD	Low	Staff Time, General Funds	Short Term
NCCWD-7 Develop a long term plan and execute the plan for the District’s Corporation Yard and offices.						
Existing	Earthquake, Flood, Tsunami, Severe Weather	1, 4, 5, 7, 9, 11	NCCWD	High	Staff Time, General Funds	Long Term
NCCWD-8 Re-establishing existing and/or establishing new sources for supplemental potable water.						
New & Existing	Earthquake, Landslide, Drought, Fire, Dam Failure	2, 4, 5, 7, 8	NCCWD	High	Staff Time, General Funds	Long Term
Action G-1 — Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and existing	All	All	Jurisdictions	Low	General Fund	Short- and long-term
Action G-2 — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All	1, 4	Jurisdictions	Low	Staff Time, General Funds	Short-term

TABLE 5-8. MITIGATION STRATEGY PRIORITY SCHEDULE



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

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

TABLE 5-9. ANALYSIS OF MITIGATION ACTIONS

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

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

5.11 Future Needs to Better Understand Risk/Vulnerability

Classes available for Public Agencies from FEMA designed to help the Agencies better understand risk/vulnerability in their specific location. Perhaps these classes can also help agencies who are interested in mitigation planning to apply for grants.





Chapter 6.

Westborough Water District

6.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

Darryl Barrow, General Manager
2263 Westborough Boulevard
South San Francisco, CA 94080
Telephone: 650-589-1435
e-mail Address: dbarrow@westboroughwater.com

Alternate Point of Contact

Pakpour Consulting Group, District Engineer
Gary Ushiro, Project Manager
5776 Stoneridge Mall Road, Suite 320
Pleasanton, CA 94588
Telephone: 925-224-7717
e-mail Address: gushiro@pcgengr.com

6.2 Jurisdiction Profile

6.2.1 Overview

The Westborough Water District, formerly known as Callan Park County Water District is a special district created in 1961 to provide water distribution and sewer collection service to a 1 square mile area within the City of South San Francisco (West of 280 to Skyline Boulevard and South of King Drive in Daly City to San Bruno). A five-member elected Board of Directors governs the District. The Board assumes responsibility for the adoption of this plan; the General Manager will oversee its implementation. The District supplies water and sewer service to approximately 4,000 residential and commercial connections. The Westborough Water District owns the sanitary sewer system. Under an agreement, the North San Mateo County Sanitation District (City of Daly City) maintains the sewer system and disposes the sewage. The Westborough Water District presently employs five full-time employees and one part-time on-call worker. Funding comes primarily through water and sewer rates.

6.2.2 Service Area and Trends

The district serves a population of 14,050. The population is expected to remain nearly constant through 2035. Its service area covers an area of 1 square mile, which has a total replacement value of \$11,245,000.

Westborough Water District's service area is largely built-out in areas with development potential. Since the overwhelming majority of Westborough's developed land area is dedicated to residential use, most development projects reviewed by the City relate to infill development on scattered vacant lots, or significant renovations or redevelopment of existing structures. Commercial development consists of renovating existing shopping areas. Overall, the level of development activity in Westborough's service area over the past several years has been relatively low.

6.2.3 Assets

Table 6-1 summarizes the critical assets of the district and their value.



TABLE 6-1. SPECIAL PURPOSE DISTRICT ASSETS

Asset	Value
Property	
3.3 acres of land	\$225,000
Critical Infrastructure and Equipment	
Water facilities	\$5,800,000
Sewer facilities	\$2,910,000
Joint use facilities	\$140,000
Maintenance facilities	\$460,000
Water meters	\$640,000
Furniture and equipment	\$380,000
Total:	\$10,330,000
Critical Facilities	
Skyline Tank #1	\$1,520,000
Skyline Tank #2	\$2,155,000
Skyline Tank #3	\$1,710,000
Connection with WWD Water System	\$50,000
WWD Water Pump Station	\$405,000
Skyline Pump Station	\$150,000
WWD District Office	\$585,000
Skyline Storage Building	\$445,000
WWD Sewer Pump Station #1 (Avalon)	\$105,000
WWD Sewer Pump Station #2 (District Office)	\$760,000
WWD Sewer Pump Station #3 (Rowntree)	\$895,000
Total:	\$8,780,000

6.3 Planning and regulatory Capabilities

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- ❖ California Department of Public Health
- ❖ California and US Environmental Protection Agencies
- ❖ California Code of Regulations
- ❖ Federal Endangered Species Act
- ❖ California Environmental Quality Act (CEQA)
- ❖ State and Regional Water Quality Control Boards
- ❖ California Department of Water Resources
- ❖ American Water Works Association Standards
- ❖ District Water Quality Reports
- ❖ Urban Water Management Plan, 2010



6.4 Fiscal, ADMINISTRATIVE and TECHNICAL Capabilities

An assessment of fiscal capabilities is presented in Table 6-2. An assessment of administrative and technical capabilities is presented in Table 6-3.

TABLE 6-2. FISCAL CAPABILITY

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

TABLE 6-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Pakpour Consulting Group (District Engineer)
Engineers or professionals trained in building or infrastructure construction practices	Yes	Can contract for this service
Planners or engineers with an understanding of natural hazards	Yes	Pakpour Consulting Group G&E Engineering Systems, Inc.
Staff with training in benefit/cost analysis	Yes	Pakpour Consulting Group
Surveyors	Yes	Triad/Holmes Associates, Surveyors
Personnel skilled or trained in GIS applications	Yes	Pakpour Consulting Group District Staff
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	General Manager
Grant writers	No	
Other	N/A	

6.5 Education and Outreach Capabilities

An assessment of education and outreach capabilities is presented in Table 6-4.

TABLE 6-4. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes, General Manager
Do you have personnel skilled or trained in website development?	Yes, Assistant General Manager



Criteria	Response
Do you have hazard mitigation information available on your website?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Emergency Preparedness section of website
Do you utilize social media for hazard mitigation education and outreach?	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	<p>Water Faucet – Westborough Water District Newsletter which is distributed periodically (average of three times per year)</p> <p>Emergency Response System – Mass telephone notification system (phone service) allows District to pre-record a message and the phone service will notify customers who provided their phone numbers</p>
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Emergency Response System – Mass telephone notification system (phone service) allows District to pre-record a message and the phone service will notify customers who provided their phone numbers

6.6 Integration with Other Planning Initiatives

The following describe the jurisdiction’s process for integrating the hazard mitigation plan into existing plans and programs.

6.6.1 Existing Integration

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

- ❖ Seismic Vulnerability Assessment — The District prepared a Seismic Vulnerability Assessment in May 2012 to simulate what might realistically happen to water supplies for the Westborough Water District following a major earthquake. The results from the assessment will be used to identify improvements to the water distribution system and to develop a Seismic Improvement Program as part of a Capital Improvement Program.
- ❖ Urban Water Management Plan – This plan focuses on the Westborough Water District’s ability to meet water demand in a reliable and high quality manner, based on past and current water use. Part of the plan considers water shortage contingencies and water supply emergency response.





6.6.2 Opportunities for Future Integration

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

- ❖ Seismic Improvement Program—Ultimately, the Seismic Improvement Program should be implemented as part of an overall Capital Improvement Program.
- ❖ Interim Action Plan—The Seismic Improvement Program may take many years to implement. In the interim, the following action items can be considered. The three tanks at the Skyline tank site are all vulnerable to significant damage during a large magnitude earthquake. One approach to mitigate this vulnerability is to lower the water levels in the tanks. The District might look into an intertie with the City of San Bruno or possibly another intertie that allows access to SFPUC water, south of the Baden pump station.

6.7 Jurisdiction-Specific Natural Hazard Event History

Table 6-5 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 6-5. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Earthquake	DR-845	1989	\$25,000

6.8 Jurisdiction-Specific Vulnerabilities

Noted vulnerabilities the jurisdiction include:

- ❖ The main water pump station is not equipped with a generator in the event of power outage during severe weather or earthquake.
- ❖ Critical facilities such as water infrastructure that includes but is not limited to reservoirs (tanks), pump stations, regulator stations, interties, and communication towers (repeaters) are vulnerable to the effects of earthquakes
- ❖ Liquefaction caused by earthquakes creating leaks and damage to water facilities
- ❖ Insufficient supply of water for firefighting purposes during prolonged wildfires.
- ❖ Cross country water mains connecting 1) Williams Court and Williamsburg Court, 2) Wren Court and Wright Court, 3) Unwin Court and Liberty Court, and 4) Appian Way and Waverly Court has the potential to break during an earthquake and cause landslides or property damage to nearby homes .

6.9 Hazard Risk Ranking

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

TABLE 6-6. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High



Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
2	Landslide	36	Medium
2	Severe Weather	26	Medium
2	Wildfire	13	Medium
3	Flood	0	Low
3	Drought	0	Low
3	Dam Failure	0	Low

6.10 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 6-7 lists the actions that make up the Westborough Water District hazard mitigation action plan. Table 6-8 identifies the priority for each action. Table 6-9 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 6-7. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
WWD-1 —Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.						
Existing	All Hazards	4, 5, 7, 9, 10	WWD	High	HMGP, PDM, FMA, CDBG-DR	Short-term
WWD-2 — Integrate the hazard mitigation plan into other plans and programs that support infrastructure investments choices, such as the capital improvement program.						
New and Existing	All Hazards	2, 4	Board	Low	Staff Time, General Funds	On-going
WWD-3 —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.						
Existing	All Hazards	1, 2, 4	Emergency Management	Medium	Staff Time, General Funds	Short-term
WWD-4 —Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and Existing	All Hazards	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11	WWD	Low	Staff Time, General Funds	Short-term
WWD-5 —Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All Hazards	1, 4	WWD	Low	Staff Time, General Funds	Short-term
WWD-6 —Seismic retrofit or replace water tanks (reservoirs) to withstand impacts of earthquakes and to meet State and/or Federal requirements						
Existing	Earthquake	1, 2, 4, 7, 11	WWD	High	HMGP, Staff Time, General Fund	Long-term





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
WWD-7 —Install specially-engineered pipelines in areas subject to faulting, liquefaction, earthquake-induced landsliding, or other earthquake hazard.						
Existing	Earthquake	1, 2, 4, 7, 11	WWD	High	HMGP, Staff Time, General Fund	Long-term
WWD-8 —Relocate water mains in cross country areas to reduce the impact to buildings and critical facilities that could result in landslides or property damage						
Existing	Landslide	1,2,4,7	WWD	Medium	Staff Time, General Fund	Short-term
WWD-9 —Continue with Water Conservation Program to promote water saving measures and re-use of water during times of drought						
Existing	Severe Weather	1, 2, 3, 5	WWD	Medium	Staff Time, General Fund	On-going
WWD-10 —Create and maintain defensible space around structures and infrastructure						
Existing	Wildfire	1,2,4,7	WWD	Low	Staff Time, General Fund	On-going
WWD-11 —Obtain portable emergency generator sized for main Pump Station.						
Existing	Earthquake	1, 2, 4, 7, 11	WWD	Medium	HMGP, Staff Time, General Fund	Long-term
Action G-1 — Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and existing	All	All	Jurisdictions	Low	General Fund	Short- and long-term
Action G-2 — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All	1, 4	Jurisdictions	Low	Staff Time, General Funds	Short-term

TABLE 6-8. MITIGATION STRATEGY PRIORITY SCHEDULE

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





Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Priority ^a
WWD-11	5	High	Medium	Yes	Yes	Yes	High	High
G-1	11	Low	Low	Yes	No	Yes	High	Low
G-2	2	Low	Low	Yes	No	Yes	High	Low

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

TABLE 6-9. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Earthquake	WWD-2, WWD-3, WWD-4, WWD-5, WWD-6, WWD-7, WWD-11	WWD-1, WWD-6	WWD-4		WWD-11	WWD-6, WWD-7
Landslide	WWD-2, WWD-3, WWD-4, WWD-5, WWD-8	WWD-1, WWD-8	WWD-4			
Severe weather	WWD-2, WWD-3, WWD-4, WWD-5, WWD-6, WWD-9	WWD-1, WWD-9	WWD-9			
Wildfire	WWD-2, WWD-3, WWD-4, WWD-5, WWD-6, WWD-10	WWD-1, WWD-10	WWD-4			

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

6.11 Future Needs to Better Understand Risk/Vulnerability

Westborough Water District is in the process of developing a long term Capital Improvement Program which will be completed in December 2016. The CIP will include a seismic risk reduction plan for the District's critical facilities.





Part 3 – Education Districts



Chapter 7.

Jefferson Union High School District

7.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

John Schultz, Director of Operations
699 Serramonte Blvd. Ste. 100
Daly City, Ca. 94015
Telephone: (650) 550-7582
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Alternate Point of Contact

Patricia Ramos
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Daly City, Ca. 94015
Telephone: (650) 550-7955
e-mail Address: patramos@juhsd.net

7.2 Jurisdiction Profile

7.2.1 Overview

Established in 1922, the Jefferson Union High School District (**JUHSD**), “**The District**”, is a small-sized high school district at the north end of San Mateo County that borders San Francisco, in north central California. The District’s jurisdictional boundaries include the coastal cities of Pacifica, Daly City, Colma, Broadmoor and Brisbane. The District’s administrative offices are located at Serramonte del Rey (699 Serramonte Blvd., Ste. 100, Daly City, Ca. 94015).

- a) Pacifica has a population of 37,234 which covers 12.66 square miles or 8102.4 acres.
- b) Daly City has a population of 101,123 which covers 7.66 square miles or 4904.96 acres.
- c) Colma has a population of 1792 which covers 1.909 square miles or 1216 acres.
- d) Broadmoor has a population of 4176 which covers .450 square miles or 288 acres.

The District is funded under the local control funding formula by the state.

The District operates three comprehensive high schools, one restructured high school, one continuation high school, and multiple alternative programs. Our restructured school is affiliated with the Coalition of Essential Schools. The District also provides an extensive adult education program. All schools are fully accredited by the Western Association of Schools and Colleges. Three of our high schools have earned the prestigious “Distinguished Schools” recognition.

The District is also affiliated with the Daly City Youth Health Center (DCYHC), which is a school-linked program of the District. The DCYHC is also a satellite facility of the [San Mateo Medical Center](#) (SMMC). Since 1990, they have provided an all-inclusive, integrated primary medical services, peer health educational programs, and vocational “Job Readiness” workshops for the District’s youth.

1. **Jefferson High School:** (6996 Mission St. Daly City, Ca.) Circa: 1922
 - a) Jefferson is a comprehensive high school serving grades nine through twelve, which is located just south of San Francisco, near historic “Top-of-the-Hill” in a densely residential neighborhood of Daly City, along the Mission Street corridor that merges with the city of Colma, and situated



- on a 20-acre site. The campus has 12-buildings comprised of approximately 197,917 sq. ft., and an all-weather sports stadium. It also has a new science and music buildings.
- b) Jefferson’s current student population of 1148-students is characterized as having a richly diverse racial and ethnic group of students.
 - c) Jefferson has a reputation for high academic and athletic standards, despite its former designation as an underperforming school. The Jefferson Staff encourages students to achieve at their highest potential, developing skills necessary to become life-long learners and productive citizens.
2. **Westmoor High School:** (131 Westmoor Ave. Daly City, Ca.) Circa: 1956
 - a) Westmoor is a diverse comprehensive high school serving approximately 1648-students.
 - b) It is located in western Daly City just blocks from the Pacific Ocean, and is situated on a 66-acre campus. The campus is comprised of 5-buildings at approximately 211,974 sq. ft. In addition, it has 9-portable classroom buildings, an all-weather sports stadium and a new pool building.
 - c) Westmoor is committed to the integration of technology and a variety of teaching strategies in order to engage the whole student and prepare them for success in advanced study and employment.
 3. **Terra Nova High School:** (1450 Terra Nova Blvd. Pacifica Ca.) Circa: 1961
 - a) Terra Nova is a comprehensive high school serving approximately 994-students.
 - b) It is located in the Park Pacifica Highlands area in the Linda Mar District of Pacifica and is adjacent to the Sweeney Ridge (GGNRA) watershed. It is a 44-acre campus with 16-buildings at approximately 103,000 sq. ft.
 - c) Terra Nova recently built a state of the art 420-seat performing arts theater to support the student’s drama endeavors as well as those of surrounding community. It also has an all-weather sports stadium, and new science building.
 - d) Terra Nova’s collaborative efforts between students and teachers have proven to have a positive impact on their academic excellence. There is an ongoing meaningful commitment of parents, students, teachers and staff in support of the educational goals and objectives of the school.
 4. **Oceana High School:** (401 Paloma Ave. Pacifica, Ca.) Circa: 1962
 - a) Oceana is a small restructured high school with a college preparatory program for approximately 605-students.
 - b) It is located in the Sharp Park District of Pacifica and adjacent to the Milagra Ridge (GGNRA) watershed. Its 53-acre campus has 6-buildings at approximately 135,000 sq. ft.
 - c) Oceana also has an all-weather sports stadium and modernized natatorium.
 - d) Oceana serves a diverse student body through a student-centered curriculum that provides personalized support to all students in the achievement of academic excellence.
 5. **Thornton High School:** (115 First St. Daly City, Ca.) Circa: 1966
 - a) Thornton is a small continuation high school, which provides approximately 127-students with a second chance to obtain a high school diploma. It also has an award winning “Wilderness Survival” program (CEEP).
 - b) It is located in Daly City approximately 3-blocks south-east of Jefferson High School on the east side of Mission Street corridor.
 - c) Thornton sits on approximately 1-acre, which is comprised of 2-buildings at approximately 11,000 sq. ft.
 - d) Thornton has received the prestigious designation as a model continuation high school for 2016 by State Superintendent of Public Instruction Tom Torlakson.
 6. **Serramonte del Rey:** (699 Serramonte Blvd. Daly City, Ca.) Circa: 1968



- a) It is formally the Serramonte High School Campus, which is located adjacent to California Highway 1 (Cabrillo Highway) off ramp #509-A (Serramonte Blvd.) exit. The campus sits on approximately 21.8-acres and includes 1-building at approximately 147,384 sq. ft.
 - b) The high school academic programs officially closed as of 1995. Currently the campus houses the Jefferson Union High School District Office, the Adult Education Department programs, and the District's Therapeutic and the Adult Special Needs Transition Programs. The Adult Special Needs Transition Programs serves approximately 75 students.
 - c) The District also leases out portions of the facility to various church groups, CYO Transportation, CYO Athletics and a private school/day care center.
 - d) Serramonte's property also houses the Charter High School "Summit-Shasta".
7. **District Transportation Facility:** (8 Station Ave. Daly City, Ca.) Circa: 1964
- a) Is located off the south-west corner of the Jefferson High School campus in Daly City, Ca. and is comprised of two buildings at approximately 9189 sq. ft.
 - b) Its primary function is to house the District's fleet of 9-school buses and approximately 35 other motorized vehicles. In addition, it serves as the District's vehicle repair and building Maintenance Facility Hub.
 - c) The District provides the Home-to-school transportation requirements for over 100 Special Needs Students. In addition, we provide school bus transportation for the various athletic programs and field trips requests of the District's schools.
 - d) No students are at this site.

Our Mission Statement:

Jefferson Union High School District develops a community of critical thinkers and learners in a safe, challenging and equitable educational environment that instills dignity, enthusiasm and involvement.

Our Vision Statement:

Jefferson Union High School District students will be engaged local and global citizens. Graduates will be equipped with the adaptive skill and competencies necessary for college and career readiness and success in life.

The District Governing Board (Trustees) is comprised of five members elected from the community. The District's day-to-day operations is managed by the Superintendent and assisted by an Associate Superintendent-Education, an Associate Superintendent-Business Services, an Associate Superintendent-of Pupil Services and four Directors. The District Governing Board (Trustees) assumes responsibility for the adoption of this plan; the Jefferson Union High School District's Superintendent will oversee its implementation.

7.2.2 Service Area and Trends

The District serves a population of 4605 students. Its "service area" covers a range of approximately 206 acres of District property and 14,501.4 acres of our jurisdictional area, which is comprised of our various communities.

The 9th through 12th grade student population is composed of approximately 28% Hispanic, 31% Filipino, 14% Caucasian, 13% Asian Pacific Islander, 2% African American and 12% of other nationalities. 622 day school students which are certified as Limited English Proficient (LEP) are also receiving services from the District. The District provides special education services to approximately 421 students. The District also provides for the home-to-school



transportation requirements for the “Special Needs” students. 2,015 students which are identified as Local Control Funding make up approximately 44% of the District’s total enrolment. **Overall Estimated Growth remains static.**

7.2.3 Assets

Table 7-1 summarizes the critical assets of the district and their value.

TABLE 7-1. SPECIAL PURPOSE DISTRICT ASSETS

Asset	Value
Property	
Jefferson High School (20-acres with 12-buildings @ 197,917 sq. ft.)	\$66,964,450.00
Westmoor High School (66-acres with 5-buildings + 9-portable classrooms @ 211,974 sq. ft.)	\$70,049,120.00
Oceana High School (53-acres with 6-buildings @ 140,624 sq. ft.)	\$46,581,100.00
Terra Nova High School (44-acres with 16-buildings	\$52,909,060.00
Thornton High School (1-acre with 2-buildings @ 11,000 sq. ft.)	\$3,059,880.00
Serramonte del Rey (21.8 acres with 1-building @ 147,384 sq. ft.)	\$42,308,600.00
District Transportation Facility (2-buildings @ 9189 sq. ft.)	\$1,573,300.00
Critical Infrastructure and Equipment	
9-school buses @ \$150,000 ea.	\$1,350,000.00
12-student “home-to-school” passenger vans @ \$35,000 ea.	\$420,000.00
5-diesel generators (93kw, 146kw, 93kw, 93kw & 48kw)	\$237,639.00
15-Maintenance vehicles: @ \$45,000 ea.	\$675,000.00
1-new refuse truck @\$150,000	\$150,000.00
1-vehicle transport trailer	\$60,000.00
District communication system (automatic dialer, Phone system, website— etc.)	\$600,000.00
Power Distribution & Lighting systems	\$3,492,639.00
CNG Fueling Station for school buses (located at the Transportation Yard)	\$34,575.00
Hillside Drainage Ditches	\$7,019,853.00
EMS Server & equipment	150,000.00
Support Equipment: (tractors, mowers, forklifts—etc.)	250,000.00
	0
Total:	\$14,439,706.00
Critical Facilities	
Gymnasiums, cafeterias, & kitchens (used as emergency shelters @ 3-sites > Westmoor, Oceana & Terra Nova)]. All other facilities are used to maintain continuity of our educational process & programs.	\$283,445,510.00
MDF Distribution Center	\$1,500,000.00
Total:	\$284,945,510.00

7.3 Planning and Regulatory Capabilities

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:



- ❖ Education Code 32280-32289 “School Safety Plans”
- ❖ Government Code 3100 “Public employees as disaster service workers”.
- ❖ Code 8607 Standardized Emergency Management System.
- ❖ Governing Board Policy “BP3516 & 3517 (a)”.
- ❖ Code of Regulations 2400 – 2450, Title 19
- ❖ The above codes and policies will not conflict with the implementation of this plan.

7.4 Fiscal, ADMINISTRATIVE and TECHNICAL Capabilities

An assessment of fiscal capabilities is presented in Table 7-2. An assessment of administrative and technical capabilities is presented in Table 7-3.

TABLE 7-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes (Aedis Architectural Firm)
Authority to Levy Taxes for Specific Purposes	Yes (General Obligation Bond & Parcel Tax)
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes (Developer fees)
Other	None

TABLE 7-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Yes (Aedis Architectural Firm)
Engineers or professionals trained in building or infrastructure construction practices	Yes	Yes (Aedis Architectural Firm)
Planners or engineers with an understanding of natural hazards	Yes	Yes (Aedis Architectural Firm)
Staff with training in benefit/cost analysis	No	None
Surveyors	No	None
Personnel skilled or trained in GIS applications	No	None
Scientist familiar with natural hazards in local area	No	None
Emergency manager	Yes	Director of Operations-Maintenance, Health & Safety, Transportation and Emergency Preparedness
Grant writers	No	None
Other	None	None



7.5 Education and Outreach Capabilities

An assessment of education and outreach capabilities is presented in Table 7-6.

TABLE 7-6. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes (District Web-site with links to all sites)
Do you have personnel skilled or trained in website development?	Yes (Director of Information Technology)
Do you have hazard mitigation information available on your website?	Yes (“Big Five” Emergency Response Plan)
<ul style="list-style-type: none"> If yes, please briefly describe. 	Provides parents and the community information of various events that may occur. Such as: earthquake, wildfire, severe storms, intruder on campus, and shelter in place, student evacuation and reunification.
Do you utilize social media for hazard mitigation education and outreach?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	This is part of our 2015 Communications Plan, which currently being developed.
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
<ul style="list-style-type: none"> If yes, please briefly specify. 	District Governing Board of Trustees
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	District Communication Plan which includes a web-site, emergency phone dialer, emails & social media.
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Each facility has an internal public address system and capabilities of an emergency phone dialer.

7.6 Integration with Other Planning Initiatives

The following describe the jurisdiction’s process for integrating the hazard mitigation plan into existing plans and programs.

7.6.1 Existing Integration

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

- ❖ The District evaluated all of our facilities and developed a “District Facilities Master Plan”, which provides us with a condition report of all our high schools. Along with this, an engineering study was accomplished providing us with a plan and course of action, which also prioritized our specific facility needs. The District then went out to the community and obtained authorization for a General Obligation Bond Measure to modernize our school site facilities. With this authorization, the District has accomplished and will continue to perform seismic and ADA improvements and upgrades throughout the District’s facilities in accordance



with the current DSA (Department of State Architect) requirements. This process includes a “Bond Oversight Committee” to ensure that the District conforms to the specific Bond Measure, and that funds are not used for any other methods.

7.6.2 Opportunities for Future Integration

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

- ❖ The District’s “Facilities Master Plan” is a 10-year plan, which provides the District with goals and objectives on what specific buildings need improvements. Priority has been placed on seismic and ADA improvements as we look forward in increasing the Districts educational goals for our facilities.
- ❖ This ongoing plan will continue to evaluate the District’s needs as our student population either increases or decreases, and address any ongoing hazards and structural integrity risks. It will also take into consideration any future changes in DSA regulatory issues that emerge.
- ❖ Our “Injury and Illness Prevention Plan” can provide more detail on hazards most likely to impact the school locations and which mitigation projects would be most beneficial to the District. Our individual sites perform quarterly inspections, which provide specific safety issues that we act upon.
- ❖ CERT – Community Emergency Response Team: several of our site administrators and site maintenance foreman are CERT certified, which provides the District with additional preparation in case of a disaster.

7.7 Jurisdiction-Specific Natural Hazard Event History

Table 7-5 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 7-5. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Weather	_____	12/2015 & 01/2016	\$278,300.00 (Fallen Trees, Debris, Sunken Sidewalk & Driveway)
Severe Weather & Landslide	_____	12/20/2014	\$34,700.00 (Trees, Sinkhole & Landslide< it will cost significantly more once we receive an action plan)
Tsunami	_____	3/11/2011	\$7,640.58 (Tsunami Sheltering—CDAA #2011-02)
Severe Weather	_____	01/04/2008	\$41,391.68 (Trees, Debris, Power Distribution Panel Damaged)
Severe Weather & Landslide	DR-1628	02/03/2006	\$562,771.00 (Trees & Landslide)
Severe Weather	DR-1203	02/09/1998	\$4,200.00 (Trees & Debris)
Landslide	DR-758	02/28/1986	\$333,202.00 (Landslide)
Flood	DR-677	2/9/1983	Damage unknown – flooding caused school to be closed.
Landslide	DR-651	01/07/1982	\$199,900.00 (Landslide)





7.8 Jurisdiction-Specific Vulnerabilities

Noted vulnerabilities the jurisdiction include:

- ❖ There are various slope (hillside) instabilities along with drainage problems at Oceana, Jefferson and Terra Nova High Schools.
- ❖ Oceana & Terra Nova are adjacent to watersheds (Milagra & Sweeney Ridges, which are part of the GGNRA), that have an abundance of brush & trees, which is a potential wildfire zone.

7.9 Hazard Risk Ranking

Table 7-6 presents the ranking of the hazards of concern.

TABLE 7-6. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Landslide	54	High
2	Severe Weather	54	High
3	Earthquake	54	High
4	Wildfire	54	High
5	Tsunami	26	Medium
6	Flood	24	Medium
7	Drought	3	Low
8	Dam Failure	0	None

7.10 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 7-7 lists the actions that make up the Jefferson Union High School District hazard mitigation action plan. Table 7-8 identifies the priority for each action. Table 7-9 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 7-7. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
JUHSD #1 —Mitigate potential cause of landslide adjacent to Jefferson High School’s Sports Complex, by installing a curb to reroute the rain water flow. Engineering studies and recommendations are complete at a cost of approximately \$30,000.00. Recommended mitigation for slide is pending.						
Existing	Landslide	2,4,5,7,9,11	“The District”	High	San Mateo County Insurance Group & District General Fund	Short Term



Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
JUHSD #2 —Mitigate landslide adjacent to the Jefferson High School’s Sports Complex, which endangers the access road around the stadium from potentially collapsing and also impacts the Interstate 280 (Junipero Serra Daly City) off ramp. The probable repairs needed are to install a retaining wall. Work to be done in collaboration with the Daly City Public Works Department and the District.						
Existing	Landslide	2,3,5,7,10,11	“The District” and the Daly City Public Works Dept.	High	Unknown (Pending Engineering Required Actions)	Short Term
JUHSD #3 —Trim and remove Monterey Pine trees at all sites, which are insect & disease infested and have a potential of falling, and have fallen during a severe storm events.						
Existing	Severe Weather, Wildfire	1,4,7,11	“The District”	High	District General Fund	On-going
JUHSD #4 —Seismic improvements on Jefferson High School’s roof structure and exterior walls.						
Existing	Earthquake	1,2,4,5,7,8,11	“The District”	High	Bond	Short Term
JUHSD #5 —Repair the sunken roadway and sidewalk at Westmoor due to severe storms which occurred January, 2016.						
Existing	Severe Weather	1,2,7,11	“The District”	High	District General Fund	Short Term
JUHSD #6 — Replace existing 30-yr old dilapidated portable classrooms with new instructional facilities.						
Existing	All Weather	1,2,3,4,5,8	“The District”	High	Bond	Short Term
JUHSD #7 — Repair and/or replace existing deteriorating storm drainage ditches at Oceana’s (Milagra Ridge) hillside, along Jefferson’s north perimeter, and Terra Nova’s (Sweeney Ridge) hillside.						
Existing	Severe Weather	1,2,3,5,7,10,11	“The District”	High	Unknown	Long Term
JUHSD #8 — Replace deteriorating emergency generators, which are used for emergency facility lighting and vital electrical circuits.						
Existing	All Hazards	2,3,5,11	“The District”	High	Unknown	Long Term
JUHSD #9 —Provide equipment and staff training in support of our emergency response plan (“Big Five”), and community sheltering in preparation of earthquakes, severe weather events, potential wildfires, and other hazards.						
Existing	All Hazards	1,3,9,11	“The District”	Medium	Unknown	Short Term
JUHSD #10 — Upgrade existing athletic fields (baseball, softball & soccer) to minimize and reduce student injuries caused by deteriorating field conditions triggered by gopher activities, erosion, and severe weather.						
Existing	All Hazards	1,2,4,5,7,10,11	“The District”	High	Bond	Long Term
JUHSD #11 —Repair sunken roadway and sidewalk at Westmoor High School, which occurred in recent December 2015 and January 2016 storms.						
Existing	All Hazards	2,3,5,7,10,11	“The District”	High	District General Fund	Short Term
G-1 — Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and existing	All	All	Jurisdictions	Low	General Fund	Short- and long-term
G-2 — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All	1, 4	Jurisdictions	Low	Staff Time, General Funds	Short-term





TABLE 7-8. MITIGATION STRATEGY PRIORITY SCHEDULE

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

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

TABLE 7-9. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	None	None	None	None	None	None
Drought	1,2,3,5,7,10	1,2,3,5,7	2,3,5,9,10	1,2,3,5,10	1,2,3,5,7,10	1,2,7,10
Earthquake	1,2,4,5,6,7,8,9	1,2,4,6,7,8	1,2,4,5,6,7,8,10	1,2,3,5,7,10	1,2,3,4,5,7,10	1,2,4,7
Flood	1,2,5,7,10	1,2,5	1,2,5	1,2,5,10	1,2,5	1,2,5
Landslide	1,2,3,4,5,7,9	1,2,5	1,2,4,5,7,9	1,2,5,7,10	1,2,5	1,2,4,5,6
Severe Weather	1,2,3,5,7,9	1,2,5,7	1,2,5	1,2,5,10	1,2,5	1,2,5,7
Tsunami	None	None	9	None	9	None
Wildfire	None	3,9	9	3	3,9	None

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



7.11 Future Needs to Better Understand Risk/Vulnerability

In order to maintain continuity of our operations, a risk analysis of all our facilities' structural reliability and facility requirements is needed to ensure that our facilities will withstand either natural and/or man-made threat. In addition, training of staff is paramount to safeguard not only our students and staff but ensure the integrity of our facilities in case of potential disaster.

7.12 Additional Comments

- 1) The District also has a **Strategic Plan** (2014-2019), which provides the District's Mission, Vision and Core Values & Beliefs.
 - a. It will guide the District and provide a measurable means in the development of our students and staff in order to ensure our high performance, positive culture, and a safe learning environment.
- 2) The District has a **Communication Plan** (2015):
 - a. Is incorporated through the collaborative efforts of the District Staff and the Governing Board in order to improve our overall internal and external communication efforts, which includes website and social media.
 - b. This will also be a means of sharing and broadcasting the District's Emergency Action Plan and any emergency that emerges.
- 3) **Common Core:**
 - a. Common Core State Standards initiative is an educational program in the United States that details what "K-12" students should know in English Language Arts, Mathematics at the end of each grade.
 - b. This initiative was instituted by the District, which seeks to establish consistent educational standards across the country as well as to ensure that students graduating from high school are prepared to enter credit-bearing courses in two or four-year college program or to enter the workforce.
- 4) **Local Control and Accountability Plan (LCAP):**
 - a. Provides details regarding local educational agencies (LEA's) actions and expenditures to support pupil outcomes and overall performance pursuant to Education Code sections 52060, 52066, 47605, 47605.5 and 47606.5. The LCAP is submitted annually: and must describe the Districts goals and specific actions to achieve those goals for all pupils and including pupils with disabilities.
 - b. The LCAP is a comprehensive planning tool, which provides meaningful engagement and input from parents, pupils, and other stakeholders, including those represented by specific subgroups.
 - c. The LCAP will engage in issues such as: pupil achievement on standardized testing, Parental involvement and participation in the various programs, school attendance, graduation rates, pupil suspension and expulsion rates, and potential physical hazards on campus.



Chapter 8. Pacifica School District

8.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

John Hashizume, Director of Facilities
375 Reina del Mar Ave
Pacifica, CA 94044
Telephone: 650-738-6620
e-mail Address: jhashizume@pacificasd.org

Alternate Point of Contact

Josephine Peterson, Chief Business Official
375 Reina del Mar Ave
Pacifica, CA 94044
Telephone: 650-738-6613
e-mail Address: jpeterson@pacificasd.org

8.2 Jurisdiction Profile

8.2.1 Overview

Pacifica School District is a public school district whose mission is to prepare each child to meet the challenges of the future by providing an equitable, rigorous academic program which nurtures curiosity and inspires joy, confidence, and achievement in learning. The District was founded in 1961 as the Laguna Salada School District and changed its name to Pacifica in 2004. The District, located along the San Mateo County coast just south of San Francisco, consists of six schools, an education center, and District administrative facilities serving grades kindergarten through 8th and serves approximately 3,000 students with a full-time staff of approximately 300 employees. The District has a resident population of approximately 37,000 according to the 2010 census data. Operations are funded through local parcel tax revenue, state government education funds, and grants. The District’s Board has adoptive authority and the District’s Superintendent has oversight for implementation of the HMP.

8.2.2 Service Area and Trends

The District has a resident population of approximately 37,000 according to the 2010 census data and services an area of approximately 30 square miles.

Growth in student population at our schools is anticipated to be flat over the foreseeable future

8.2.3 Assets

Table 8-1 summarizes the critical assets of the district and their value.



TABLE 8-1. SPECIAL DISTRICT ASSETS

Asset	Value
Property (all figures are for buildings and contents)	
Ortega School	unknown
Ingrid B Lacy Middle School	unknown
Sunset Ridge School	unknown
District Office	unknown
Vallemar School	unknown
Ocean Shore School	unknown
Cabrillo School	unknown
Linda Mar Education Center	unknown
Oddstad School	unknown
Fairmont School	unknown
Total:	unknown
Critical Infrastructure and Equipment	
Portable generators	\$5,000
UHF radio systems	\$25,000
Total:	\$30,000
Critical Facilities	
Ortega School	\$15,900,000
Ingrid B Lacy Middle School	\$20,200,000
Sunset Ridge School	\$17,000,000
District Office	\$3,600,000
Vallemar School	\$12,700,000
Ocean Shore School	\$12,700,000
Cabrillo School	\$13,750,000
Linda Mar Education Center	\$11,400,000
Oddstad School	\$9,500,000
Fairmont School	\$5,000,000
Total:	\$121,780,000

8.3 Planning and regulatory Capabilities

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- ❖ California Education Code
- ❖ California Building Code as related to DSA-approved construction
- ❖ Local and regional laws and ordinances such as fire (Daly City municipal fire code) and water (North Coast County Water District)
- ❖ School District Integrated Pest Management Plan (IPM) – The IPM allows the Pacifica School District to focus on long-term prevention or suppression of pests through accurate pest identification,



monitoring for pest presence, and application of appropriate sanitation, mechanical, and physical controls.

- ❖ Comprehensive School Safety Plan, 2015-2016 – This document provides the basic organizational structure for emergency response to hazard and disaster events within the School District. It creates a standardized list of terms, delineates appropriate responsibilities, and identifies response procedures. This document contains actions specific to natural, manmade, and technological hazards.
 - Additionally, each building within the school district has its own site-specific safety plan that addresses factors and responses unique to that location.
- ❖ Injury and Illness Prevention Plan – This document focuses on the School District’s plans and procedures to maintain a safe and healthful work environment. It includes goals, compliance requirements, hazard identification, accident investigation, hazard mitigation, training, hazard communication, and program documentation.

8.4 Fiscal, ADMINISTRATIVE and TECHNICAL Capabilities

An assessment of fiscal capabilities is presented in Table 8-2. An assessment of administrative and technical capabilities is presented in Table 8-3.

TABLE 8-2. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	N/A

TABLE 8-3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	No	No in-house capability, City resources not available to us for this purpose
Engineers or professionals trained in building or infrastructure construction practices	No	No in-house capability, City resources not available to us for this purpose
Planners or engineers with an understanding of natural hazards	No	No in-house capability, City resources not available to us for this purpose
Staff with training in benefit/cost analysis	No	No in-house capability, City resources not available to us for this purpose



Staff/Personnel Resources	Available?	Department/Agency/Position
Surveyors	No	No in-house capability, City resources not available to us for this purpose
Personnel skilled or trained in GIS applications	No	No in-house capability, City resources not available to us for this purpose
Scientist familiar with natural hazards in local area	No	No in-house capability, City resources not available to us for this purpose
Emergency manager	Yes	Director of Facilities
Grant writers	Yes	District Administrator
Other	No	

8.5 Education and Outreach Capabilities

An assessment of education and outreach capabilities is presented in Table 8-6.

TABLE 8-6. EDUCATION AND OUTREACH

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

8.6 Integration with Other Planning Initiatives

The following describe the jurisdiction's process for integrating the hazard mitigation plan into existing plans and programs.

8.6.1 Existing Integration

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

- ❖ Injury and Illness Prevention Plan includes hazard identification and mitigation/correction projects as a core part of the document.



8.6.2 Opportunities for Future Integration

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

- ❖ Capital Project Plan can incorporate hazard mitigation projects and projects can consider the incorporation of hazard mitigation measures into their scopes
- ❖ Injury and Illness Prevention Plan could provide more detail on hazards most likely to impact the school locations and which mitigation projects would be most beneficial to the District.
- ❖ Public Outreach – The Pacifica School District recognizes that there are currently public information opportunities available to facilitate public engagement regarding hazard mitigation. The School District will look into developing a more robust and targeted program that involves using current capabilities to expand and enhance outreach to local residents and students.

8.7 Jurisdiction-Specific Natural Hazard Event History

Table 8-5 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 8-5. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe weather		1/2016	No significant damage
Wildfire		1/2015	No damage
Severe storm		12/14/2014	No significant damage
Tsunami warning		3/11/2011	No damage
Fire	FM-2856	9/10/2010	No significant damage
Severe storm	DR-1646	6/5/2006	No significant damage
Severe storm	DR-1628	2/3/2006	No significant damage
Severe storm	DR-1203	2/9/1998	No significant damage
Severe storm	DR-1155	1/4/1997	No significant damage
Severe storm	DR-1046	3/12/1995	No significant damage
Severe storm	DR-1044	1/10/1995	No significant damage
Freezing	DR-894	2/11/1991	unknown
Earthquake	DR-845	10/18/1989	unknown
Flood	DR-758	2/21/1986	unknown
Coastal storm	DR-677	2/9/1983	unknown
Flood	DR-651	1/7/1982	unknown
Drought	EM-3023	1/20/1977	unknown
Flood	DR-145	2/25/1963	unknown
Severe storm	DR-138	10/24/1962	unknown

8.8 Jurisdiction-Specific Vulnerabilities

Noted vulnerabilities the jurisdiction include:





- ❖ All sites subject to damage from flooding if City of Pacifica’s storm water management infrastructure in the immediate area of each site is overwhelmed. Cabrillo, Ortega, Vallemar, and Sunset Ridge schools also are adjacent to hills with significant slopes that could channel runoff into site structures and create water damage.
- ❖ All sites subject to damage from severe weather. All sites with exception of District Office complex and Ingrid B Lacy have tall trees on property with potential to damage nearby structures if they fall.
- ❖ All sites subject to earthquake damage to structures. Most structures are single-story, 40-50 years old, either wood, plasterboard, and/or partial brick with only a few receiving seismic upgrades. Ingrid B Lacy gym is reinforced concrete constructed in 2002.
- ❖ Cabrillo, Ingrid B Lacy, and Vallemar schools subject to tsunami inundation because they are within tsunami evacuation zones

8.9 Hazard Risk Ranking

Table 8-6 presents the ranking of the hazards of concern.

TABLE 8-6. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	48	High
2	Severe weather	33	Medium
3	Landslide	24	Medium
4	Flooding	18	Medium
5	Tsunami	18	Medium
6	Wildfire	18	Medium
7	Drought	3	Low
8	Dam failure	0	Low

8.10 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 8-7 lists the actions that make up the Pacifica School District hazard mitigation action plan. Table 8-8 identifies the priority for each action. Table 8-9 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 8-7. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
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Action 1—Retain consultant to assist PSD with addressing specific vulnerable areas and identifying hazard mitigation measures that can be incorporated in the district’s Capital Improvement Plan and are in congruence with and can be incorporated into hazard mitigation measures adopted by Pacifica school district, City of Pacifica, San Mateo County, and other regional, state, and federal agencies.





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New and existing	All	1,2,4,5,6,7,8,10	PSD Facilities	High	Staff time, general funds	Long-term
Action 2 —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.						
Existing	All	1,3,4,5,6,7	PSD Facilities	Medium	Staff time, general funds	Short-term
Action 3 —Support County-wide initiatives identified in Volume I of the hazard mitigation plan.						
Existing	All	1 through 10	Lead contact department for Plan	Low	Staff time, general funds	Short-term
Action 4 —Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and existing	All	1 through 10	Lead contact department for Plan	Low	Staff time, general funds	Short-term
Action 5 —Develop a post-disaster recovery plan and a debris management plan that is in congruence with the District’s Continuation of Operations Plan to be developed.						
Existing	All	1,2,3,7,8	PSD Facilities	Medium	Staff time, general funds	Long-term

TABLE 8-8. MITIGATION STRATEGY PRIORITY SCHEDULE

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

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



TABLE 8-9. ANALYSIS OF MITIGATION ACTIONS

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Flooding	1,2,3	1,2,3	1,2,5	1,3	1,5	1,2,3
Severe weather	1,2,3	1,2,3	1,2,5	1,3	1,5	1,2,3
Earthquake	1,2,3	1,2,3	1,2,5	1,3	1,5	1,2,3
Tsunami	1,2,3	1,2,3	1,2,5	1,3	1,5	1,2,3
Landslide	1,2,3	1,2,3	1,2,5	1,3	1,5	1,2,3
Drought	1,2,3	1,2,3	1,2,5	1,3	1,5	1,2,3
Wildfire	1,2,3	1,2,3	1,2,5	1,3	1,5	1,2,3
Dam failure	N/A	N/A	N/A	N/A	N/A	N/A

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

8.11 Future Needs to Better Understand Risk/Vulnerability

Professional advice as to specific risks and vulnerabilities that we face at our sites and opportunities and means to mitigate them.





Chapter 9.

San Mateo County Community College District

9.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

Jose D. Nuñez LEED AP
 Vice Chancellor, Facilities Planning, Maintenance & Operations
 San Mateo Community College District
 3401 CSM Drive
 San Mateo, CA 94402
 Telephone: (650) 358-6836
 E-mail Address: nunezj@smccd.edu

Alternate Point of Contact

Bill Woods
 Director of Public Safety
 1700 West Hillsdale Blvd., Building 1
 San Mateo, CA 94402
 Telephone: (650) 358-6840
 E-mail Address: woodsw@smccd.edu

9.2 Jurisdiction Profile

9.2.1 Overview

San Mateo County Community College District (SMCCD) serves approximately 40,000 people throughout San Mateo County at its three college campuses. Its academic and vocational program offerings vary widely in order to meet the educational needs of the community. These programs include transfer programs to the University of California and California State Universities, over 80 vocational degree and certificate programs, advanced professional training, and developmental education to prepare students for college studies.

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

- ❖ **Location and Description** — SMCCD is located in San Mateo County, CA, and operates three college campuses:
 - Cañada College in Redwood City, CA
 - CSM in San Mateo, CA
 - Skyline College in San Bruno, CA
- ❖ **Date of Establishment** — 1922
 - Cañada College – opened in 1968
 - College of San Mateo (CSM) – opened in 1963
 - Skyline College – opened in 1969
- ❖ **Brief History** — SMCCD opened in 1922 with only 35 students at its Baldwin campus in downtown San Mateo, CA. SMCCD originally consisted of only the area within the San Mateo Union High School District; however, Jefferson Union and Half Moon Bay high school districts were added in 1937.





Sequoia Union High School and South San Francisco Unified School Districts joined in the 1960s, and La Honda-Pescadero Unified School District joined in 1976.

In 1957, the Board of Trustees submitted a \$5.9 million bond request to voters that was approved by a three-to-one margin. The funding from this initiative allowed SMCCD to acquire the CSM campus and Skyline campus. Cañada College’s location was purchased in 1962. A second bond issue, approved in 1964, funded a significant portion of the construction of the facilities for the Cañada and Skyline campuses.

- ❖ **Governing Body Format**—SMCCD maintains boundary lines matching those of San Mateo County; however, the District Board of Trustees operates independently of the County government. The District Board of Trustees consists of five members elected by County voters every four years and one student member elected by students for a one-year term. Day-to-day operations are managed by the Board-appointed chancellor. Additionally, each college is fully accredited by the Western Association of Schools and Colleges, the recognized local accrediting agency for the western United States, affiliated with the Federation of Regional Accrediting Commissions of Higher Education.

9.2.2 Service Area and Trends

SMCCD serves a population of approximately 40,000 students and almost 900 employees. Its primary service area is San Mateo County, CA, and the District manages funds of \$119.2 million.

The District tracks student and staff demographics to accurately meet community needs. Demographics include student enrollment, student achievement, program offerings (degree/certificate offerings), program planning data (productivity measures), faculty and staff data, budget, and County demographics (population, housing, economy). Although the District offers compiled data on its main website through its Fact Books, the most recent of which is from 2014, additional data for each campus can be found on the unique college websites.

The following tables indicate relevant trends and statistics to provide a more detailed understanding of the community needs for SMCCD. Table 9.1 demonstrates the gender breakdown of student attendance by college. Table 9.2 indicates total headcounts (unduplicated) for the fall semester²¹. Table 9.3 provides information on faculty and staff employment, by gender.

TABLE 9.1. STUDENT ATTENDANCE AT SMCCD BY GENDER

Gender	Cañada			CSM			Skyline			District		
	Fa 2011	Fa 2012	Fa 2013	Fa 2011	Fa 2012	Fa 2013	Fa 2011	Fa 2012	Fa 2013	Fa 2011	Fa 2012	Fa 2013
Female	4,419	4,205	4,160	5,182	4,812	4,680	5,427	5,435	5,470	15,028	14,452	14,310

²¹ Total headcounts for the full year exceed these numbers due to spring and summer enrollments.





Gender	Cañada			CSM			Skyline			District		
Male	2,452	2,456	2,491	5,110	4,901	4,983	4,633	4,516	4,808	12,195	11,973	12,282
Total	6,871	6,661	6,651	10,292	9,713	9,663	10,060	9,951	10,278	27,223	26,425	26,592

TABLE 9.2. FALL FIRST CENSUS HEADCOUNT

	Cañada	CSM	Skyline	District	Change
Fall 2013	6,758	9,883	10,442	27,083	0.9%
Fall 2012	6,783	9,946	10,104	26,833	-3.1%
Fall 2011	6,922	10,540	10,236	27,698	-1.0%

TABLE 9.3. FACULTY AND STAFF COUNTS

	Faculty	Classified/Staff	Total
Female	174	308	482
Male	140	249	389
Total	314	557	871

9.2.3 Assets

Table 9.4 summarizes the critical assets of the district and their value. Values have been estimated to be as accurate as possible; however, information was not available for all assets.

TABLE 9.4. SPECIAL PURPOSE DISTRICT ASSETS

Asset	Value
Property	
595 acres of land (Total) ¹	Undetermined ²
132 acres of land (Cañada College)	N/A
154 acres of land (CSM)	N/A
125 acres of land (Skyline College)	N/A
184 acres of land (coastal property)	N/A
Critical Infrastructure and Equipment	
CSM Water Distribution System	\$30,000,000
CSM and Cañada Chiller Plants	\$25,000,000
DW Boiler Plants	\$50,000,000
Fixed (2) and Mobile Generators (4)	\$250,000
KCSM TV and FM Radio Broadcast Facilities	\$15,000,000
DW Radio Repeaters	\$1,350,000
DW Power Grid (12kv) and Cañada Solar Plant	\$70,000,000
District Office Data Center x 1 and DW MPOE x 3	\$45,000,000





Asset	Value
DW Vehicle Fleet	\$12,000,000
CAN and SKY Fueling Stations	\$2,500,000
DW Online Education	\$6,000,000
CSM-Specific Critical Infrastructure and Equipment (Total)³	\$17,911,921
<i>CATV</i>	<i>\$9,950</i>
<i>CW & HW</i>	<i>\$500,980</i>
<i>Comm</i>	<i>\$1,910,160</i>
<i>Elec</i>	<i>\$1,685,941</i>
<i>Fiber Optic</i>	<i>\$300,840</i>
<i>Fire Alarm</i>	<i>\$457,520</i>
<i>Fire Water</i>	<i>\$187,740</i>
<i>Gas</i>	<i>\$833,050</i>
<i>Lighting</i>	<i>\$3,665,224</i>
<i>Security</i>	<i>\$113,440</i>
<i>Sewer</i>	<i>\$1,284,420</i>
<i>Storm</i>	<i>\$4,738,710</i>
<i>Water</i>	<i>\$2,173,175</i>
<i>Unidentified</i>	<i>\$50,771</i>
Skyline-Specific Critical Infrastructure and Equipment (Total)³	\$11,643,632
<i>CATV</i>	<i>\$1,317</i>
<i>CW & HW</i>	<i>\$255,349</i>
<i>Comm</i>	<i>\$769,006</i>
<i>Elec</i>	<i>\$874,492</i>
<i>Fiber Optics</i>	<i>\$34,985</i>
<i>Fire Alarm</i>	<i>\$174,852</i>
<i>Gas</i>	<i>\$115,404</i>
<i>Lighting</i>	<i>\$1,584,723</i>
<i>Security</i>	<i>\$226,440</i>
<i>Sewer</i>	<i>\$894,371</i>
<i>Storm</i>	<i>\$3,900,969</i>
<i>Water</i>	<i>\$913,724</i>
<i>Unidentified</i>	<i>\$11,000</i>
<i>SUBTOTAL</i>	<i>\$9,756,632</i>
<i>Predicted</i>	<i>\$1,887,000</i>
Cañada-Specific Critical Infrastructure and Equipment (Total)³	\$12,946,410
<i>CATV</i>	<i>\$179,045</i>
<i>CW & HW</i>	<i>\$783,304</i>
<i>Comm</i>	<i>\$924,078</i>
<i>Elec</i>	<i>\$1,053,687</i>
<i>Fire Alarm</i>	<i>\$448,858</i>
<i>Gas</i>	<i>\$140,288</i>





Asset	Value
<i>Lighting</i>	\$1,900,285
<i>Security</i>	\$166,404
<i>Sewer</i>	\$771,298
<i>Storm</i>	\$3,400,744
<i>Water</i>	\$1,462,919
SUBTOTAL	\$11,230,910
<i>Predicted</i>	\$1,715,500
Critical Assets Total:	\$299,601,963
Critical Facilities	
SMCCD District Office (CSM Drive, San Mateo, CA 94402)	\$24,330,550.00
Cañada College	\$469,301,200.00
<i>CAN B1: Kinesiology</i>	\$45,425,000.00
<i>CAN B2: Book Store</i>	\$9,472,550.00
<i>CAN B3 Fine Arts</i>	\$112,839,150.00
<i>CAN B4 Athletic Field Restrooms</i>	\$736,000.00
<i>CAN B5 Student Center</i>	\$45,011,000.00
<i>CAN B6 University Conference Center</i>	\$7,027,650.00
<i>CAN B7 Facilities Maintenance Center</i>	\$16,581,850.00
<i>CAN B8 Administrative Services</i>	\$10,261,450.00
<i>CAN B9 Student Services</i>	\$89,322,800.00
<i>CAN B13 Classrooms</i>	\$43,527,500.00
<i>CAN B16 Science</i>	\$23,155,250.00
<i>CAN B17 Science</i>	\$13,969,050.00
<i>CAN B18 Science</i>	\$31,790,600.00
<i>CAN B19 Modular</i>	\$2,176,950.00
<i>CAN B20 Modular</i>	\$2,176,950.00
<i>CAN B21 Modular</i>	\$2,176,950.00
<i>CAN B22 Child Development Center</i>	\$13,650,500.00
College of San Mateo	\$854,964,050.00
<i>CSM B1 Public Safety</i>	\$28,716,650.00
<i>CSM B2 Music Classrooms</i>	\$20,453,900.00
<i>CSM B3 Theater</i>	\$24,482,350.00
<i>CSM B4 and 4A Fine Arts and Ceramics</i>	\$25,510,450.00
<i>CSM B5 Health and Wellness</i>	\$102,448,900.00
<i>CSM B6 Pool House</i>	\$1,883,700.00
<i>CSM B7 Facilities Maintenance Center</i>	\$21,864,950.00
<i>CSM B8 Gymnasium</i>	\$64,184,950.00
<i>CSM B9 Library/KCSM/Alt EOC</i>	\$58,909,900.00
<i>CSM B10 College Center</i>	\$164,336,150.00
<i>CSM B12 East Hall Classrooms</i>	\$25,732,400.00
<i>CSM B14 South Hall Classrooms</i>	\$30,081,700.00





Asset	Value
<i>CSM B15 Faculty Offices</i>	\$19,681,100.00
<i>CSM B16 West Hall Classrooms</i>	\$30,081,700.00
<i>CSM B17 Faculty Offices</i>	\$17,920,450.00
<i>CSM B18 North Hall Classrooms</i>	\$32,281,650.00
<i>CSM B19 Emerging Technologies</i>	\$38,322,600.00
<i>CSM B20 Horticulture</i>	\$21,448,650.00
<i>CSM B30 Team House</i>	\$8,953,900.00
<i>CSM B31 Field/Athletic Support</i>	\$441,600.00
<i>CSM B32 Field/Athletic Support</i>	\$2,033,200.00
<i>CSM B33 Child Development Center</i>	\$7,133,450.00
<i>CSM B34 Fire Academy/ITS/Chiller Plant</i>	\$15,136,300.00
<i>CSM B35 Regional Public Safety</i>	\$10,644,400.00
<i>CSM B36 Science</i>	\$76,652,100.00
<i>CSM B37 tennis court Restroom</i>	\$945,300.00
<i>CSM B38 Press Box</i>	\$828,000.00
<i>CSM B39 Athletic Field Restroom</i>	\$736,000.00
<i>CSM B39-45 Equipment and Events Storage</i>	\$3,117,650.00
Skyline College	\$650,653,900.00
<i>SKY B1 Fine Arts and Theater Complex</i>	\$122,664,750.00
<i>SKY B2 Campus Center</i>	\$56,605,300.00
<i>SKY B3 Physical Education</i>	\$45,327,250.00
<i>SKY B4 Multi Cultural/Cosmetic/Administrative</i>	\$98,837,900.00
<i>SKY B5 Library</i>	\$54,228,250.00
<i>SKY B6 Student and Community Center</i>	\$45,688,350.00
<i>SKY B7 Sciences and Allied Health</i>	\$77,311,050.00
<i>SKY B8 Academic Building</i>	\$51,430,300.00
<i>SKY B9 Automotive Lab 1</i>	\$3,996,250.00
<i>SKY B10 Automotive Lab 2</i>	\$5,981,150.00
<i>SKY B11 Automotive Lab 3</i>	\$8,040,800.00
<i>SKY B14 Child Development Center (Loma Chica)</i>	\$12,713,250.00
<i>SKY B15 Athletic Field Restrooms</i>	\$604,900.00
<i>SKY B16 Modular Building (Loma Chica)</i>	\$3,160,200.00
<i>SKY B17 track and Field House</i>	\$1,348,950.00
<i>SKY B18 Baseball Press Box</i>	\$345,000.00
<i>SKY B19 Pacific Heights Classrooms</i>	\$42,192,350.00
<i>SKY B21-24 Facilities Maintenance Center Buildings</i>	\$20,177,900.00
Critical Facilities Total:	\$1,974,919,150.00

Note:

¹ = Acreage numbers were obtained through various published SMCCD reports. Accurate property valuations could not be obtained in time for this report; however, the District is aware of the need to better evaluate and assess all real property, such as by assessor's parcel number.

² = Estimate property values significantly exceed assessed value due to land purchase dates (1963-1969) and the passage of Proposition 13 in 1978.



³ = In May 2016, "The InSite Report" was produced for each campus. This report used existing plan documents and other available information to account for as much infrastructure as possible. Each infrastructural element was then assigned a value per the cost of replacement in the market at the time of the report publishing.

9.3 Planning and regulatory Capabilities

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- ❖ SMCCD-wide Plans
 - Facilities Master Plan, All Campuses, 2011
 - San Mateo County Community College District Emergency Operations Plan (EOP), October 2014
 - San Mateo County Community College District Strategic Plan, September 2015
 - SMCCD Fact Book, 2014
 - Strategic Plan for Information Technology, 2012-2016
 - 2015 Amendment to Facilities Master Plan, 2015
 - Other Plans Available at: <http://collegeofsanmateo.edu/prie/smCCdplanningdocs.asp>
- ❖ Cañada College
 - Cañada College EOP, October 2014
 - Cañada Sustainability Plan, June 2013-2016
 - Educational Master Plan, Cañada College, 2012-2017
 - Other Plans Available at: <http://www.canadacollege.edu/plans/index.php>
- ❖ CSM
 - College of San Mateo EOP, October 2014
 - Educational Master Plan Update, 2012
 - CSM Sustainability Plan, June 2013 - 2016
 - Other Plans Available at: <http://collegeofsanmateo.edu/prie/planningdocs.asp>
- ❖ Skyline College
 - Business and Marketing Plan
 - Charter and Bylaws, Skyline College Institutional Planning Committee, 2005
 - Skyline College EOP, October 2014
 - Strategic Plan, 2012-2017
 - Skyline Sustainability Plan, June 2013 - 2016
 - Educational Master Plan Update, 2013-2019
 - Other Plans Available at: <http://www.skylinecollege.edu/prie/planning.php>

Note: All EOPs will be updated during 2016.

9.4 Fiscal, ADMINISTRATIVE and TECHNICAL Capabilities

An assessment of fiscal capabilities is presented in Table 9.5. An assessment of administrative and technical capabilities is presented in Table 9.6.



TABLE 9.5. FISCAL CAPABILITY

Financial Resources	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes, Capital Outlay Projects
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes, Parcel tax for operations
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs*	Yes
Development Impact Fees for Homebuyers or Developers	No
Other	Yes
Enrollment Fees	Yes
Non-Resident Tuition	Yes
Other Student Fees	Yes

*Note: As a community-supported district, SMCCD receives no State General Apportionment funding.

TABLE 9.6. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Facilities Department
Engineers or professionals trained in building or infrastructure construction practices	Yes	Facilities Department
Planners or engineers with an understanding of natural hazards	Yes	Public Safety Department, Facilities Department
Staff with training in benefit/cost analysis	Yes	Financial Services
Surveyors	No	-
Personnel skilled or trained in GIS applications	Yes	Geography Department (Academics)
Scientist familiar with natural hazards in local area	Yes	Geography Department (Academics)
Emergency manager	Yes	Vice Chancellor, Facilities Planning, Maintenance & Operations
Grant writers	Yes	Financial Services and through Foundation
Other	Yes	Subject matter experts (various), Academic Departments (i.e., professors), Information Technology (IT) services

9.5 Education and Outreach Capabilities

An assessment of education and outreach capabilities is presented in Table 9.7.



TABLE 9.7. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes, Marketing, Communications, and Public Relations Office, District Director of Community and Government Relations
Do you have personnel skilled or trained in website development?	Yes, Marketing, Communications, and Public Relations Office and IT Support
Do you have hazard mitigation information available on your website?	No
<ul style="list-style-type: none"> If yes, please briefly describe. 	Safety brochures and tips (not focuses on hazard mitigation, however) are available online.
Do you utilize social media for hazard mitigation education and outreach?	Yes (Partial)
<ul style="list-style-type: none"> If yes, please briefly describe. 	Each college campus has its own Facebook page, Twitter Account, LinkedIn, and Instagram account. Accounts are not targeted for hazard mitigation education and outreach but can be used to disseminate such information.
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
<ul style="list-style-type: none"> If yes, please briefly specify. 	Safety Committee
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Emergency Preparedness Webpage, Public Safety Department Websites (for each campus)
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	AlertU (Emergency Text Notifications)

9.6 Integration with Other Planning Initiatives

The following describe the jurisdiction’s process for integrating the hazard mitigation plan into existing plans and programs.

9.6.1 Existing Integration

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

- ❖ **Campus and District EOPs**—SMCCD maintains EOPs for both the entire San Mateo Community College District (i.e., comprehensive to all locations) and its individual campuses. The documents are designed to be compliant with the National Incident Management System (NIMS), Incident Command Structure (ICS), and the Standardized Emergency Management System (SEMS) while addressing needs unique to the higher education environment. The EOPs provide an overview of





operational concepts and aid the planned response to emergencies associated with large and complex human-caused events, natural hazards, and technological hazards. They consider responsibilities for response within the campus and coordination with outside, local entities. The documents reference and integrate with Federal and State regulations and policies, as well as remain consistent with other District policies.

- ❖ **Educational Master Plan**—The Educational Master Plan provides a College direction on implementing its strategy for educational goals and instruction. The planning process for such a document includes the Instructional Planning Council, Student Services Planning Council, Administrative Planning Council, College Planning Council, Academic Senate, and Classified Senate to ensure comprehensive input. It is designed to integrate with other College and District plans, and is similar to the Strategic Plan except focused more specifically on educational goals.
- ❖ **Facilities Master Plan**—SMCCD maintains a Facilities Master Plan for each of its college campuses. Each college is addressed individually; however, the full document contains the proposed projects for all three campuses to ensure comprehensive planning and tactical development. The Facilities Master Plan is similar to a jurisdictional Capital Improvements Plan (CIP), and the projects identified within are designed to address changing educational needs, maintenance and upgrade of existing structures, and expansion of college services throughout the region. The Facilities Master Plan integrates with each college’s Educational Master Plan and contains strategic review, option development, solution development, and various documentations. The document contains a few projects which tie into hazard mitigation, specifically, with managing transportation accidents and hazardous materials.
- ❖ **Strategic Plan**—The San Mateo Community College District Strategic Plan serves as the colleges’ vehicle to implement its mission and goals while acknowledging current (external and internal) community trends and needs. The Strategic Plan integrates with each College’s Educational Master Plan and resource allocation, and it provides the District a way to demonstrate accountability to stakeholders, taxpayers, and students. Some of the data trends investigated for their impact on SMCCD’s ability to achieve its long-term goals include demographic trends, workforce trends, housing trends, community college trends, state education policy trends, and new educational paradigms.
- ❖ **Strategic Plan for Information Technology**—This guidance document provides SMCCD a resource to ensure that its technology resources and services remain consistent with District and campus needs. It complies with other educational plans and considers the impact of hazard events and disasters. The Strategic Plan for Information Technology contains information on the Disaster Recovery Center and the District’s processes for business continuity as it relates to technology.
- ❖ **Sustainability Plan**—Cañada College, CSM, and Skyline have each developed a sustainability plan. These documents contain information on the College’s history of sustainability efforts, goals for sustainability planning, and possible projects and goals. The Sustainability Plan ties in well with hazard mitigation as many of these projects have the potential to reduce vulnerability to certain hazards and to increase overall resilience. Sustainability Plans specifically consider projects for onsite





generation, renewable energy, power storage, and system integration (which could enhance power redundancy during disasters); transportation; water, wastewater, and landscaping; and solid waste reduction and management. Originally developed in 2013 the campus plans are currently being updated.

9.6.2 Opportunities for Future Integration

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

- ❖ **Unique Needs Planning for Higher Education**—Consider evaluating and integrating the unique needs of a higher education environment into both the District’s and local governmental emergency planning processes. While many of these unique needs are implicitly considered in planning documents, they are not necessarily directly noted. Examples include the following:
 - SMCCD Colleges maintain no on-campus housing. The District, therefore, is not responsible for any residential needs or sheltering (other than shelter-in-place scenarios). SMCCD, however, may have difficulty in locating students post-event due to various residential locations.
 - SMCCD Colleges do offer international/study abroad programs. International students, while not living on campus (see point above) may require additional resources and aid during a hazard event due to language barriers, financial impacts, and healthcare access needs.
 - The higher education atmosphere, particularly when there is no resident population, has rotating levels of vulnerability. During peak periods (Monday through Friday, 7 a.m. to 9:30 p.m.), the Colleges will have a higher density population, increasing risk and potential impacts to certain hazards. In contrast, during non-peak time periods (weekends, evenings), the campus population will be much lower. While this decreases risk to certain hazards, it may increase communication and response difficulties as well. Additionally, population density not only varies throughout the week but also the season as fall and spring semesters have higher attendance rates than summer and winter.
 - In addition to constantly changing population densities on campuses, students, faculty, and staff also are not located in the same office or classroom while the campuses are open. The District does not currently have a way to track real-time attendance, and during a hazard event, it may be difficult to immediately determine whether anyone is missing. Although class rosters can serve as a tentative resource for identifying students, this resource would not account for students not in class or students that may be in a non-classroom setting, e.g., the library, computer labs, student center, etc.
- ❖ **Public Outreach**—SMCCD and its Colleges have many platforms and capabilities to disseminate emergency and preparedness information to students, staff, and faculty. The District will consider developing a targeted public outreach program to utilize these resources in the most efficient and effective way possible, allowing SMCCD to educate a large number of students, staff, and faculty on



campus resilience initiatives, what individuals can do to prepare, and where to gain more information.

- ❖ **Greater Hazard Mitigation/Disaster Planning Integration In College Plans**—SMCCD has developed numerous plans, both for individual colleges and for the District as a whole. While these plans integrate with each other to ensure consistency in higher education goals and implementation, many of them do not consider hazard mitigation or disaster planning even at a basic level. The District will begin to integrate the findings from its hazard mitigation annex and the County HMP update into future plans and updates to ensure that the schools have a thorough approach to all aspects of campus life, including safety and resilience.
- ❖ **Greater Integration with Jurisdictional Plans**—SMCCD, San Mateo County, and the cities within San Mateo County have all developed numerous plans to facilitate long-term growth, implementation of strategic goals, increased resiliency, etc. SMCCD plays a unique role in the County as it is a major stakeholder for the County, provides services to many residents, and is tied to the County through governance and funding. This HMP update marks one way in which SMCCD, both as a District and with each College, will focus on increasing the coordination between District/College plans, County plans, and City plans to ensure that local governance considers the unique needs and capabilities of SMCCD during a hazard event.

9.7 Jurisdiction-Specific Natural Hazard Event History

Table 9.8 lists all past occurrences of natural hazards within the jurisdiction.

TABLE 9.8. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Fire	N/A	1/2015	Pacifica 6-Alarm Canyon Wildfire, operational impact to Skyline Campus.
Severe Storms/Flooding	N/A	12/2014	CSM Campus served as a mass care shelter for 100 as a result of flooding in Belmont, Redwood City, and South San Francisco. Operational costs for the shelter were \$45,000.
Fire	FM-2856	9/10/2010	Skyline Campus experienced an operational impact as a result of the San Bruno pipeline explosion.
Earthquake	DR-845	10/18/1989	All properties experienced an operational impact during the Loma Prieta earthquake event. Damage estimates are unknown.

9.8 Jurisdiction-Specific Vulnerabilities

Noted vulnerabilities in the jurisdiction include:



- ❖ Severe weather – Higher velocity winds are experienced on all campuses as a result of higher elevation of facilities along hillside. SMCCCD expressed concerns on the effect of these winds on older facilities, specifically as it relates to roofing failure.
- ❖ Wildfire fuel – All three campuses are adjacent to privately-owned property that contains unkempt wildfire fuel.
- ❖ Landslides – All three campuses are exposed to some degree of landslides, mudslides, or slumping from above or below facilities.

9.9 Hazard Risk Ranking

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

TABLE 9-9. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Landslide	24	Medium
3	Wildfire	24	Medium
4	Severe Weather*	18	Medium
5	Drought	3	Low
-	Dam Failure	0	No impact/exposure
-	Flood	0	No impact/exposure
-	Tsunami	0	No impact/exposure

*The ranking increased from Low to Medium based on local knowledge of hazard susceptibility within SMCCCD.

9.10 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 9.10 lists the actions that make up the San Mateo County Community College District hazard mitigation action plan. Anticipated timelines are typically dependent on funding availability. Table 9.11 identifies the priority for each action. Table 9.12 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 9.10. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
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Action SMCCCD-1—Continue to plan for and increase the frequency of discussions- and operations-based exercises for Emergency Operations Center (EOC) Activations within each college campus and with District Executives to expand capacity and consistency in plans and procedures for emergencies associated with large and complex human-caused events, natural hazards, and technological incidents.



Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	All	1, 2, 5, 6, 7, 9	SMCCD District Facilities Planning & Operations Department	Medium	District/Campus Budgets, FEMA and DHS Grants	Ongoing
<p>Action SMCCD-2—Review and update 2011 versions of Emergency Procedures (AKA: Waterfall Document) maintained in every room, on the property of the District, and within each college campus to ensure consistency in planned procedures to emergencies associated with large and complex human-caused events, natural hazards, and technological incidents.</p>						
Existing	All	1, 2, 5, 7, 9	SMCCD District Public Safety Department	Low	District/Campus Budgets	Short-Term then Ongoing
<p>Action SMCCD-3—Review and update 2014 versions of Emergency Operations Plan (EOP) for the District and each college campus to ensure consistency in plans for emergencies associated with large and complex human-caused events, natural hazards, and technological incidents.</p>						
Existing	All	1, 2, 3, 5, 6, 7, 8, 10	SMCCD District Facilities Planning & Operations Department	Medium / Low	District/Campus Budgets, FEMA and DHS Grants	Short-Term
<p>Action SMCCD-4—Review and update 2014 Injury and Illness Prevention Program (IIPP)-based Evacuation Plans, Exterior Assembly Points, and Safety Zones.</p>						
Existing	All	1, 2, 3, 5, 6, 7, 8, 10	SMCCD District Facilities Planning & Operations Department (Facilities Systems) and Campus Public Safety Department	Medium / Low	District/Campus Budgets, FEMA and DHS Grants	Short-Term
<p>Action SMCCD-5—Review and update, as needed, Conditional Site Use Permit with the Pacific Gas and Electric Company for Emergency Base Camps and Staging Areas.</p>						
Existing	All	1, 2, 3, 5, 10	SMCCD District Facilities Planning & Operations Department	Low	District/Campus Budgets	Ongoing
<p>Action SMCCD-6—Annually review Memorandum of Understanding (MOU) with the San Mateo County Sheriff’s Area Office of Emergency Services to provide emergency shelters for disaster-displaced community members, emergency medical treatment/inoculations sites, access to KCSM radio, and logistic staging areas for emergency response and recovery efforts.</p>						
Existing	All	1, 2, 3, 5, 8, 10	SMCCD District Facilities Planning & Operations Department	Low	District/Campus Budgets	Ongoing

Action SMCCD-7—Review and annually update Facility Use Agreements with the American Red Cross to provide space for Public Emergency Shelters and Emergency Evacuation Centers.





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	All	1, 2, 3, 5, 8, 10	SMCCD District Public Safety Department	Low	District/Campus Budgets	Ongoing
<p>Action SMCCD-8—Develop and maintain a series of Public Safety Video Program to disseminate information about safety services and emergency preparedness relative to hazards, particularly seasonal hazards, to students, faculty, and staff, and present materials on a regular and a routine basis (e.g., monthly, quarterly, etc.).</p>						
New	All	1, 2, 3, 5, 6, 7, 8, 10	SMCCD District Public Safety Department	Medium	District/Campus Budgets, FEMA and DHS Grants	Short-Term then Ongoing
<p>Action SMCCD-9—Develop a District-wide multi-year Emergency Management-based Training and Exercise Program (TEP) as a living document to be updated, refined, and expanded annually. The multi-year TEP will identify the training and exercises that will help the organization build and sustain the core capabilities needed to address training and exercise program priorities in planning for emergencies in the higher education environment. (Note: Actions SMCCD-1 and SMCCD-10 should integrate into this action).</p>						
New	All	1, 2, 5, 6, 7, 9	SMCCD District Facilities Planning & Operations Department	Medium / High	District/Campus Budgets, FEMA and DHS Grants	Long-Term
<p>Action SMCCD-10—Develop an Emergency Management Academy in-service Training Program to cultivate an ongoing, cost-effective training initiative for college faculty and staff that is complementary to the required FEMA basic, intermediate, and advanced levels of emergency management training. The SMCCD Training Program will bridge practicum gaps between the theoretical FEMA emergency management subject matter and local application.</p>						
New	All	1, 2, 5, 6, 7, 8, 9, 10	SMCCD District’s Community, Continuing & Corporate Education Division	High	District/Campus Budgets, FEMA and DHS Grants	Long-Term
<p>Action SMCCD-11—Develop a District multi-year Hazardous Materials (HAZMAT)-based TEP that will identify the training help the organization build and sustain a culture of safety needed to address priorities in mitigating HAZMAT storage, handling, exposure and spill emergencies in the higher education environment.</p>						
New	Human-Caused Hazards	1, 2, 5, 6, 7, 8, 9, 10	SMCCD District Facilities Planning & Operations Department	Medium / High	District/Campus Budgets; EPA, FEMA, and DHS Grants; Utility Company Resources	Long-Term
<p>Action SMCCD-12—Develop a Continuity of Operations Plan (COOP) for, at a minimum, District-wide health and safety facilities, utilities, operational facilities, hazardous materials facilities and vital economic sustainability infrastructure.</p>						
New	All	1, 2, 3, 5, 6, 7, 8, 10	SMCCD District Facilities Planning & Operations Department and Campus Administrations	Medium	District/Campus Budgets, FEMA and DHS Grants	Short-Term





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action SMCCD-13 —Continue to evaluate and assess the value of critical infrastructure and assets, with a focus on those assets whose replacement values are currently unknown.						
Existing	Earthquake, Landslide	1, 4, 5, 6	SMCCD District Facilities Planning & Operations Department	Low	Capital Outlay Funds, District/Campus Budgets	Ongoing
Action SMCCD-14 —Continue to strengthen the relationship between SMCCD, San Mateo County Sheriff’s Area Office of Emergency Services, and the three municipalities where the campuses are housed (unincorporated San Mateo County for Cañada, San Mateo for CSM, and San Bruno for Skyline) and first responder organizations for each campus, to promote an integrated emergency management and planning process, where the local governments consider the unique needs and capabilities of SMCCD and where SMCCD coordinates response plans that are accurate to County/City capabilities. (Note: Action SMCCD-10 should integrate into this action).						
Existing	All	1, 2, 3, 8, 10	SMCCD District Facilities Planning & Operations Department and Campus Administrations	Low	District/Campus Budgets	Ongoing
Action SMCCD-15 —Enhance emergency notification procedures to consider the campuses’ more vulnerable populations, most notably, international students and students with access and functional needs.						
Existing	All	1, 2, 3, 8, 9, 10	SMCCD District Facilities Planning & Operations Department and Campus Administration	Medium	District/Campus Budgets, FEMA and DHS Grants	Short-Term
Action SMCCD-16 —Review existing non-emergency management/disaster preparedness plans and procedures (e.g., Educational Master Plans, Sustainability Plans, Facilities Master Plans) to integrate hazard mitigation and preparedness, where possible.						
Existing	All	1, 2, 3, 5, 6, 7, 8, 10	SMCCD District Office Administration and Campus Administrations	Low	District/Campus Budgets	Short-Term
Action SMCCD-17 —Encourage the review of planned infrastructure and strategic growth to ensure that new buildings will be developed outside of hazard-prone areas or constructed to be hazard-proof (earthquake resistant, fire resistant, etc.)						
New	All	1, 3, 4, 6, 7, 8, 11	SMCCD District Office Administration and District Facilities Planning & Operations Department	Low	Capital Outlay Funds, District/Campus Budgets	Ongoing





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
<p>Action SMCCD-18—Conduct an assessment on buildings, infrastructure, and open space on each campus to determine current vulnerability to hazards. Renovate or implement resilience projects to alleviate these concerns, as funding allows.</p>						
New and Existing	Earthquake, Landslide, Wildfire	1, 3, 4, 6, 7, 8, 11	SMCCD District Facilities Planning & Operations Department	Medium / High	Capital Outlay Funds, District/Campus Budgets	Ongoing
<p>Action SMCCD-19—Encourage a Whole Community approach, including the involvement of relevant academic and administrative departments, with plan revisions, and utilize SMCCD’s unique knowledge sources to enhance data collection.</p>						
Existing	All	1, 2, 3, 8, 10	SMCCD District Office Administration and SMCCD District Facilities Planning & Operations Department	Low	District/Campus Budgets	Ongoing
<p>Action SMCCD-20—ITS and Emergency Response System Upgrades: Upgrade Communications and information technology systems to provide for more resilience, greater redundancy, expanded and faster response time, and integration of systems infrastructure where appropriate. This includes the following: distributed Antenna and Emergency responder system upgrades; EAS coverage and infrastructure upgrades; and UPS system upgrades</p>						
New and Existing	All	1, 3, 4, 5, 6, 7, 9	SMCCD District Office Administration and SMCCD District Facilities Planning & Operations Department	High	District/Campus Budgets, FEMA Grants	3 years
<p>Action SMCCD-21—CSM Project: Trees-Fire Mitigation and Safety Project: Removal of eucalyptus trees on and around campus to reduce the likelihood and effect of urban/wild area interface fire issues and adverse impacts from severe weather.</p>						
Existing	Severe Weather, Wildfire	4, 5, 6, 7	SMCCD District Office Administration and SMCCD District Facilities Planning & Operations Department	Medium	District/Campus Budgets, FEMA Grants	1 year
<p>Action SMCCD-22—CSM Project: Water Distribution System Analysis and potential upgrade.</p>						



Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	Drought	1, 3, 4, 5, 6, 7	SMCCD District Office Administration and SMCCD District Facilities Planning & Operations Department	High	District/Campus Budgets, FEMA Grants	Ongoing

Action SMCCD-23—CSM Project: Integrated Solar and Energy Storage: Installation of 300KW of solar and 300 KW of energy storage with energy management software.

New	All	1, 3, 4, 5, 6, 7	SMCCD District Office Administration and SMCCD District Facilities Planning & Operations Department	High	District/Campus Budgets, FEMA Grants	2 years
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Action SMCCD-24—District-wide Project: Waste Management Services Contract: Provide range of waste management services to operations at all three campuses including hauling for FEMA/CAL OES qualifying events.

New and Existing	All	1, 2, 3, 4, 5, 6, 8, 10	SMCCD District Office Administration and SMCCD District Facilities Planning & Operations Department	Low	District/Campus Budgets	6 months
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Action SMCCD-25—Develop and regularly maintain SMCCD real property/land value estimates. Information maintained should include parcel numbers, physical address/location, acreage, common name, Assessor’s Valuation (Ca. Proposition 13), and Owner’s Valuation.

Existing	All	1, 4, 5, 6	SMCCD District Facilities Planning & Operations Department	Low	Capital Outlay Funds, District/Campus Budgets	Ongoing
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Action G-1— Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.

New and existing	All	All	Jurisdictions	Low	General Fund	Short- and long-term
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Action G-2— Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.

New and Existing	All	1, 4	Jurisdictions	Low	Staff Time, General Funds	Short-term
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TABLE 9.11. MITIGATION STRATEGY PRIORITY SCHEDULE

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





Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Priority ^a
Action SMCCD-22	6	High	High	Yes	Yes	Yes	High	Medium
Action SMCCD-23	6	High	High	Yes	Yes	Yes	High	Medium
Action SMCCD-24	8	Medium	Low	Yes	No	Yes	High	Low
Action SMCCD-25	4	Low	Low	Yes	No	Yes	Low	Low
G-1	11	Low	Low	Yes	No	Yes	High	Low
G-2	2	Low	Low	Yes	No	Yes	High	Low

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

TABLE 9-12. ANALYSIS OF MITIGATION ACTIONS

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

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





9.11 Future Needs to Better Understand Risk/Vulnerability

SMCCD's coastal property in Half Moon Bay has potential exposure to the tsunami hazard. SMCCD does not anticipate development of this land within the next 5 years, but the District may work with local partners to establish a community service complex. Additional data concerning the tsunami risk to this land and subsequent development should be addressed at such a time when SMCCD decides to pursue development of the land.

9.12 Additional Comments

In response to outreach and requests for support from the San Mateo County Sheriff's Area Office of Emergency Services (OES) and San Mateo County Emergency Managers Association (EMA), SMCCD is formally exploring the creation of an Emergency Management Academy and the delivery of certified emergency management training for public sector employees through the Community, Continuing & Corporate Education Division (CCCE) at the District. The initial indications are that this venture would be very complementary to the Police and Fire Academies conducted at CSM, and SMCCD would begin by hosting this emergency management certification effort through its Community Education Division.

This SMCCD division offers short, not-for-credit courses and workshops geared to educate and enhance the lives of people of all ages in the San Mateo County community. It is a self-supporting nonprofit entity; it is not funded by taxpayer money.

Community Education classes are open to everyone, with classes meeting at one of the three college campuses—Cañada College in Redwood City, CSM in San Mateo, and Skyline College in San Bruno—or at other locations within the County. SMCCD anticipates the delivery of this Emergency Management Academy at hosted city government locations and delivered during the normal workday to provide the least disruption to the existing workforce. This program is being developed with great intention to bridge any potential gaps between the theory-based FEMA Emergency Management Institute (EMI)-sponsored classes and emergency management at the various level of practice within the local community. The figures below depict the initial public and private sector projected certifications.

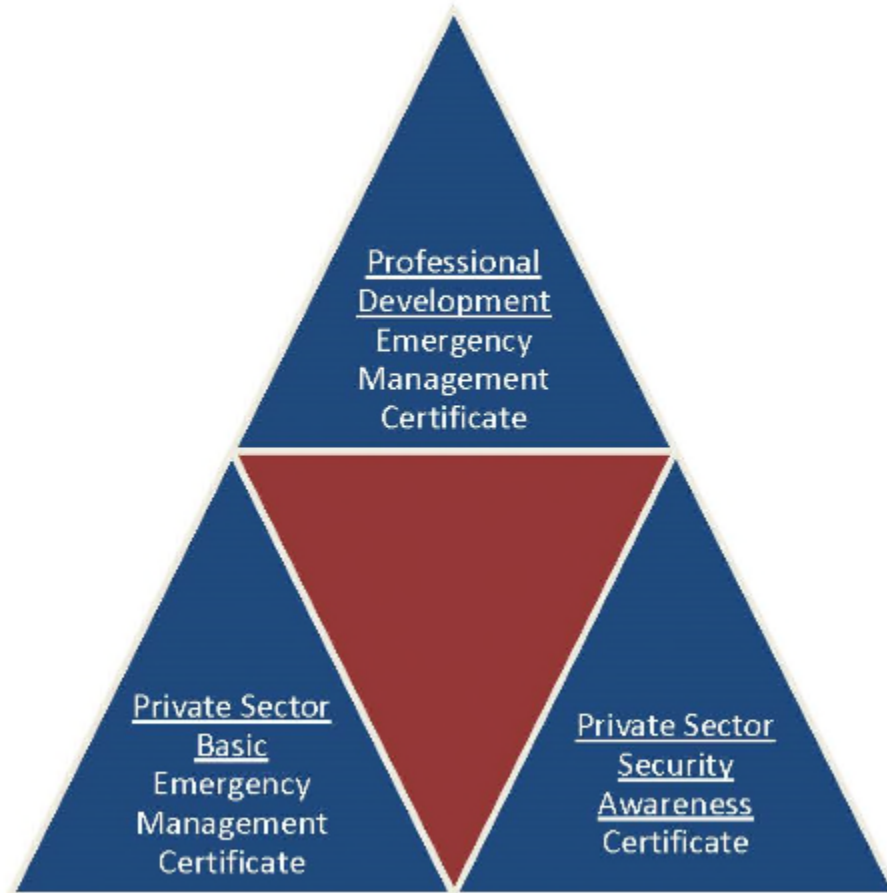


FIGURE 9-1. SMCCD EMERGENCY MANAGEMENT ACADEMY PUBLIC SECTOR PROJECTED CERTIFICATIONS





FIGURE 9-2. SMCCD EMERGENCY MANAGEMENT ACADEMY PRIVATE SECTOR PROJECTED CERTIFICATIONS





Part 4 – Recreation District





Chapter 10.

Highlands Recreation District

10.1 Hazard Mitigation Plan Point of Contact

Primary Point of Contact

Brigitte Shearer, General Manager

1851 Lexington Avenue

San Mateo, CA 94402

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e-mail Address: brigittes@highlandsrec.ca.gov

Alternate Point of Contact

Tricia Hall, Aquatics Supervisor

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10.2 Jurisdiction Profile

10.2.1 Overview

The General Manager of the Highlands Recreation District assumes responsibility for the adoption of this plan; the General Manager will oversee its implementation.

The Highlands Recreation District, formed in 1957, operates under the Community Services District law pursuant to government code 61000 et seq, for the purpose of providing recreational services within the District. Services are provided under the leadership and direction of an elected Board of Directors. The Board of Directors is committed to responding to the needs of the community based on timely and fiscally responsible prioritized planning. Financial support for planning, organizing and conducting all activities is derived from property taxes, program fees and special purpose grants.

The Highlands Recreation District's boundaries encompass the approximately 789 homes located in the San Mateo Highlands. The 3000 residents of the District enjoy access to the facility and reduced costs for participating, due to their property tax contributions. Those residing outside District boundaries may also participate in programs, events and activities by paying non-resident fees for each activity. The District's activities primarily occur at the Highlands Recreation Center, a 3.45-acre facility which includes a childcare center for infants and toddlers, a year-round swimming pool, a fitness room, 3 tennis courts, a playground, a gymnasium, two meeting rooms, and administrative offices. While all ages are welcome, the typical patrons are families with school-age children. The District also oversees 40 acres of open space on the northern end of the District's boundaries. No District activities occur there.

10.2.2 Service Area and Trends

The District serves two populations: those who live within District boundaries, and those who live outside the District. Within District boundaries, there are 789 households and a population of approximately 3000. Patrons from outside the District's boundaries number approximately an additional 6400, mostly from



unincorporated San Mateo (Baywood Park), the cities of San Mateo, Belmont, and Burlingame and the Township of Hillsborough. The District boundaries cover 1.88 square miles. Replacement value of the District's facilities is approximately \$7,500,000. The assessed valuation of all assets in the District, which includes the Recreation Center and the surrounding homes is approximately \$540,000,000. The District's western boundaries are less than 1 miles from the San Andreas fault.

The District provides recreation, wellness, enrichment and childcare services to its patrons. The District's primary 'customer base' consists of residents living within the District's boundaries, followed by non-residents whose children attend nearby Highlands Elementary School. However, the Recreation Center is a public facility which is open to all. As the Silicon Valley economy thrives and the local population increases, the demand for full day and after school child care has increased significantly. Our programs are operating at capacity, often with waitlists. The activities offered at our Center are vital to the well-being of the children and families that attend our programs. We also provide important health and wellness programs for our senior community. Finally the Center has historically been a gathering place for the Community. During a crisis, it would be important for our facility to be able to operate safely as a 'command center' for District-wide emergency services.

There is currently no plan for additional housing within the District's boundaries, so unless building codes/zoning permit additional structures on one property, population within boundaries are not expected to increase significantly. However, there is significant population growth projected for the immediately adjacent cities, all of whom we also serve (14-31% from 2000-2035). Therefore, the need to maintain a fully –functioning recreation facility is vital to the greater Peninsula population. Source: ABAG 2009 and <http://www.dof.ca.gov/research/demographic/reports/projections/interim/view.php>

10.3 Assets

Table 10-1 summarizes the critical assets of the district and their value.

TABLE 10-1. SPECIAL PURPOSE DISTRICT ASSETS

Asset	Value
Property	
3.45 acres – main facility site	\$7,000,000
40 acres of vacant, unimproved open space land ²²	No value
Critical Infrastructure and Equipment	
4 vehicles (3 vans for transport, 1 truck for CERT trailer transport)	\$75,000
Total:	\$75,000
Critical Facilities	
Main Building – offices, gymnasium, kitchen, fitness room, play (5,000 sq ft)	\$2,500,000
Early Education Center – 3 classrooms, meeting room, offices (3,000 sq ft)	\$3,000,000

²² The 40 acres of land are immediately adjacent to approximately 110 homes. Additional 700 homes are within very close proximity and, in many cases, also adjacent to open space land (not currently managed by the Highlands Recreation District). The 800 homes comprise a secured property tax base approaching \$500 million



Asset	Value
Swimming Pool & Locker rooms, Guard offices (Pool: 172,000 gal; building: 1,500 sq ft)	\$1,000,000
Playground	\$500,000
Tennis Courts (3)	\$500,000
Total:	\$7,500,000

This Table does not include the Elementary School which is located within District boundaries.

10.4 Planning and regulatory Capabilities

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

- ❖ HRD Emergency Action Plan (EAP 2016)
- ❖ Child Care Center Integrated Pest Management Plan (IPM 2015) – The IPM allows the Highlands Recreation District to focus on long-term prevention or suppression of pests through accurate pest identification, monitoring for pest presence, and application of appropriate sanitation, mechanical, and physical controls.
- ❖ Highlands Recreation District Health Policy (2014)– This policy ensures that the Highlands Recreation District can maintain a safe atmosphere, diminishing the potential for health-related issues and disease outbreaks.

10.5 Fiscal, ADMINISTRATIVE and TECHNICAL Capabilities

An assessment of fiscal capabilities is presented in Table 4.. An assessment of administrative and technical capabilities is presented in Table 10..

TABLE 10.2. FISCAL CAPABILITY

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

TABLE 10.3. ADMINISTRATIVE AND TECHNICAL CAPABILITY

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Independent Contractor
Engineers or professionals trained in building or infrastructure construction practices	Yes	Independent Contractor





Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with an understanding of natural hazards	Yes	Independent Contractor
Staff with training in benefit/cost analysis	Yes	General Manager
Surveyors	Yes	Independent Contractor
Personnel skilled or trained in GIS applications	Yes	Recreation Supervisor
Scientist familiar with natural hazards in local area	Yes	Independent Contractor
Emergency manager	Yes	General Manager
Grant writers	Yes	Independent Contractor
Other	No	

10.6 Education and Outreach Capabilities

An assessment of education and outreach capabilities is presented in Table 10..

TABLE 10.4. EDUCATION AND OUTREACH

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes, General Manager
Do you have personnel skilled or trained in website development?	Yes, in-house and contract capability.
Do you have hazard mitigation information available on your website?	Yes, linked to County Haz Mitigation plan
Do you utilize social media for hazard mitigation education and outreach?	Yes – FB, website, Nextdoor
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
<ul style="list-style-type: none"> If yes, please briefly specify. 	Community Emergency Response Team (CERT)
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	Community Emergency Response Team (CERT)
Do you have any established warning systems for hazard events?	On site alarms; Participate in San Mateo County Alert system

10.7 Integration with Other Planning Initiatives

The following describe the jurisdiction’s process for integrating the hazard mitigation plan into existing plans and programs.

10.7.1 Existing Integration

- ❖ The following plans and programs currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan:
- ❖ Child Care Center IPM – Mitigates infestation and waterborne/vector-borne diseases.
- ❖ Highlands Recreation District Health Policy – Mitigates disease outbreaks and pandemics.





- ❖ Emergency Action Plan – Outlines action plan for continuing operations during a hazard
- ❖ Hazardous Materials Business Plan – Outlines action plan for attending to Hazardous materials on site
- ❖ Hazardous Communication Plan – Outlines documentation policy for working with or around hazardous materials, during regular operations and/ or a hazard.
- ❖ Open Space Fuel Reduction Program – Oversee annual fuel reduction efforts in 40 acres of open space managed by District

10.7.2 Opportunities for Future Integration

The following plans and programs do not currently integrate the goals, risk assessment and/or recommendations of the hazard mitigation plan, but provide an opportunity for future integration. The Hazard Mitigation Action Steps listed below outline the specific tasks which will require coordination/ integration with the following programs and policies.

Note: all plans are overseen by General Manager and Board of Directors.

- ❖ CERT – Community Emergency Response Team – CERT team will assist with resident education and preparedness and expansion/ depth of emergency shelter plan documents and operation and HRD continuing operations plans
- ❖ Capital Improvement Plan/ long term financial projections – the CIP will more specifically include financing projections
- ❖ Emergency Action Plan – additional opportunity to integration exists to expand plan for continuing operations in event of a hazard
- ❖ All other plans listed above can be expanded to more specifically address each type of hazard

10.8 Jurisdiction-Specific Natural Hazard Event History

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

TABLE 10-5. NATURAL HAZARD EVENTS

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Landslide at facility	N/A	1970s	Portion of play yard was lost; Retaining wall built to secure hillside
Loma Prieta Earthquake	DR-845	1989	no significant damage within jurisdiction
Wildfire (possible arson, but high fire risk area)	N/A	1988	Smoke damage to residential homes, but no homes lost

10.9 Jurisdiction-Specific Vulnerabilities

Noted vulnerabilities the jurisdiction include:





- ❖ County drainage system throughout District – streets and open space is aging and may be vulnerable during heavy rainstorms or due to earthquake movement. – This could put multiple high value residences at risk
- ❖ 40-acre open space requires constant fuel reduction efforts to protect 200 immediately adjacent homes.
- ❖ Access for fire crews is limited due to failing roadway in 40-acre open space.
- ❖ Recreation Center does not have a generator to assist with emergency shelter operations or continuing operations. We provide childcare for infants and school age children on a daily basis
- ❖ Damage to the nearby Crystal Springs Dam and Highway 280 Bridge would immediately impact ingress/ egress to our District – for District residents, employees and patrons of our facility (e.g., parents picking up children from childcare).
- ❖ One Recreation Center Building was originally constructed in 1958, and lacks seismic reinforcement. This building is critical to our shelter capability and our ongoing childcare operations
- ❖ Another building at 2145 Bunker Hill Drive houses another childcare program which the District operates. That building (not included in our asset list as it is owned by the Methodist Church) also lacks seismic reinforcement, but is critical to our ongoing childcare operations
- ❖ SF Water maintains water towers in property adjacent to District property. A hazard that would damage either tower could result in significant erosion and/ or water damage to the District facility or adjacent lands
- ❖ Adjacent to the District is a 90-acre parcel of open space, currently under a Conservation Easement. Erosion/ land stability issues are unknown at this time. The District’s facility and numerous adjacent residences are potentially at risk
- ❖ District is surrounded by open space, some heavily wooded, some very steep and inaccessible. A wildfire could put the entire District, including District facilities and all 800 surrounding homes, as well as a 650-student elementary school at risk. 90 acres of open space has never been tended to with respect to fuel reduction.
- ❖ Drainage at District facility site consistently overflows during heavy rains. This now causes flooding in the pre-school building
- ❖ Swimming pool equipment is old and potentially vulnerable during an earthquake or heavy storms. Hazardous chemicals storage could be vulnerable.

10.10 Hazard Risk Ranking

Table 10-6 presents the ranking of the hazards of concern.

TABLE 10-6. HAZARD RISK RANKING

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Wildfire	54	High
1	Earthquake	54	High
1	Landslide	54	High
4	Severe Weather	45	Medium





10.11 Hazard Mitigation Action Plan and Evaluation of Recommended Actions

Table 10-7 lists the actions that make up the Highlands Recreation District hazard mitigation action plan. Table 10-8 identifies the priority for each action. Table 10-9 summarizes the mitigation actions by hazard of concern and the six mitigation types.

TABLE 10-7. HAZARD MITIGATION ACTION PLAN MATRIX

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action #HRD-1 —Design and construct new main building to replace existing building (and implement requisite continuity of operations plan during construction). Existing building (built in 1958) would require significant seismic retrofit, so complete rebuild is planned						
New (to replace existing)	Earthquake	1,4,5,7,	<u>HRD</u>	\$5 million	Grant, FEMA, COP, HMA	2025
Action # HRD-2 —Continue annual fuel reduction in District open space (40 acres) – through cal Fire crew work and annual goat grazing						
Existing	Wildfire	4,5,6,7,8.10	<u>HRD</u>	\$20,000 per year	Fire-Safe Council, FEMA, HMA	Annually
Action # HRD-3 —Engage San Mateo County to develop fuel reduction plan for 90 acres of Conservation Easement (not currently governed by District)						
N/A	Wildfire	1,2,3,4,5,7,8, 10	HRD	\$50,000 per year	Fire-Safe Council, FEMA, HMA	2018
Action # HRD-4 —Purchase generator to meet District emergency shelter and ongoing operational needs						
New	Earthquake, Severe Weather, wildfire	5,6,	<u>HRD</u>	\$20,000	Grant, HMA	2017
Action # HRD-5 —Construct more stable and water tight storage/ protection for swimming pool operating equipment and chemical storage						
Existing	Earthquake, Severe Weather	1,4,5,6,	<u>HRD</u>	\$150,000	Grant, HMA	2022
Action # HRD-6 —Assess erosion status/ earth movement mitigation steps in District open space						
Existing	Earthquake, Severe Weather, Landslide	1,4,5,6,7,	<u>HRD</u>	\$20,000	Grant, HMA	2019
Action # HRD-7 —Assess viability of and possibly implement repairs to ‘Old Fire Road’ in 40-acre open space to allow continuous access for fire fighting						
Existing	Wildfire	1,2,3,4,5,6,7 ,10	<u>HRD</u> , with SF water	Unknown	FEMA, Grant, HMA	2020
Action # HRD-8 —Assess erosion status/ earth movement mitigation in Conservation Easement property – adjacent to 500+ District residences (Land not currently governed by District)						





Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New	Earthquake, Severe Weather, Landslide	1,2,3,4,5,6,7,10	HRD	Unknown	Grant, HMA	2020
Action # HRD-9 —Identify ‘model’ properties showing proper defensible space preparation						
N/A	Wildfire	1,2,5,6,7,	HRD	\$2000	District operations	2017
Action # HRD-10 —Update Emergency Shelter operational guide/ plan						
N/A	Earthquake, Severe Weather, Wildfire, Landslide	2,3,5,6,7,8,10	HRD	\$5000	FEMA, Grant, HMA	2017
Action # HRD-11 —Develop continuity of operations plan for District						
N/A	Earthquake, Severe Weather, Wildfire, Landslide	1,2,3,4,5,6,8,10	HRD	\$3,000	FEMA, Grant, HMA	2018
Action # HRD-12 – Work with CERT group to educate and assist residents with disaster preparation –family disaster plan and supplies						
N/A	Earthquake, Severe Weather, Wildfire,	2,3,5,6,8,10	HRD / CERT	\$5,000	FEMA, Grant, HMA	2018
Action G-1 — Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and existing	All	All	Jurisdictions	Low	General Fund	Short- and long-term
Action G-2 — Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All	1, 4	Jurisdictions	Low	Staff Time, General Funds	Short-term

TABLE 10-8. MITIGATION STRATEGY PRIORITY SCHEDULE

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





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

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

TABLE 10-9. ANALYSIS OF MITIGATION ACTIONS

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

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