



TRI-VALLEY LOCAL HAZARD MITIGATION PLAN

Volume 2
Planning Partner Annexes

Agency Review Draft
October 2023



TETRA TECH



Tri-Valley Local Hazard Mitigation Plan

Volume 2—Planning Partner Annexes

October 2023

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Appendices

- Appendix A. Planning Partner Expectations
- Appendix B. Annex Instructions and Templates

ACRONYMS

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

- AB—Assembly Bill
- BRIC—Building Resilient Infrastructure and Communities
- Cal OES—California Office of Emergency Services
- CAP—Climate action plan
- CBC—California Building Code
- CDD—Community Development Department
- CEQA— California Environmental Quality Act
- CERT—Community Emergency Response Team
- CFR—Code of Federal Regulations
- CIP—Capital improvement plan
- CRS—Community Rating System
- DMA—Disaster Mitigation Act
- DMC—Dublin Municipal Code
- DSRSD— Dublin San Ramon Services District
- EBMUD—East Bay Municipal Utility District
- EOP—emergency operations plan
- FEMA—Federal Emergency Management Agency
- FMA—Flood Mitigation Assistance Grant Program
- FY—fiscal year
- GHAD— Geological Hazard Abatement District
- GHG—greenhouse gas
- GIS—Geographic information system
- HMGP—Hazard Mitigation Grant Program
- IBC—International Building Code
- ICS—incidental command system
- ISO—Insurance Services Office (insurance underwriter)
- LPFD—Livermore-Pleasanton Fire Department
- MRP— Municipal Regional Stormwater NPDES Permit
- NFIP— National Flood Insurance Program

- NIMS—National Incident Management System
- NPDES—National Pollutant Discharge Elimination System
- NRCS—Natural Resources Conservation Service
- OSD—Operations Services Department
- PMC—Pleasanton Municipal Code
- POC—point of contact
- SB—Senate Bill
- SEMS—Standardized Emergency Management System
- THIRA—Threat & Hazard Identification & Risk Assessment
- TVHMP—Tri-Valley Hazard Mitigation Program

INTRODUCTION

BACKGROUND

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

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

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

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

There are two types of Planning Partners that participated in this process, with distinct needs and capabilities:

- Incorporated municipalities
- Special purpose districts.

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

THE PLANNING PARTNERSHIP

Prior Collaboration and Solicitation of Potential Additional Partners

The agencies that participated in the 2018 Hazard Mitigation Plan, Cities of Dublin, Livermore, and Pleasanton and the Dublin San Ramon Services District agreed to again collaborate on the 2023 plan update. One additional special district, Zone 7 Water Agency, was contacted in June 2022 for possible participation. Zone 7 opted not to participate.

Planning Partner Expectations

The planning team developed the following list of planning partner expectations, which were confirmed by participating planning partners (see Appendix A for details):

- Complete administrative tasks:
 - Planning partner collaboration agreement
 - Designate points of contact.
 - Approve the steering committee.
- Participate, as able, in additional opportunities:
 - Attend steering committee meetings.
 - Attend or host public meetings or open houses.
 - Participate in and advertise the public review and comment period prior to adoption.
- Support the steering committee.
- Support the public involvement strategy.
- Complete the jurisdictional annex template:
 - Attend the mandatory workshop.
 - Perform a capability assessment.
 - Review the risk assessment.
 - Review area-wide mitigation recommendations.
 - Develop a mitigation action plan.
- Adopt the plan.

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

ANNEX-PREPARATION PROCESS

Templates

Templates were created to help the Planning Partners prepare their jurisdiction-specific annexes. Since special purpose districts operate differently from incorporated municipalities, separate templates were created for the two types of jurisdictions. The templates were created so that all criteria of Section 201.6 of 44 CFR would be met, based on the partners' capabilities and mode of operation. Templates available for the planning partners' use were specific as to whether the partner's annex is an update to a previous hazard mitigation plan or a first-time hazard mitigation plan. 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. Detailed instructions on the completion of these templates, including key definitions of required jurisdiction-specific components, were provided to all participating planning partners. Reviewers of this plan seeking to "crosswalk" plan content to the Section 201.6 44 CFR requirements are encouraged to review these instructions in conjunction with the content of this volume. The templates and their instructions can be found in Appendix B to this volume.

Jurisdictional annexes were completed in three phases. Phase 1 was initiated in June 2022 and Phase 3 concluded in December 2022. At the Phase 3 Workshop, the planning team reviewed instructions for completing the Phase 3

portion of the annexes, which focuses on action plan development. All planning partners seeking DMA compliance under this plan attended the meeting. The following topics were discussed:

- Jurisdiction-specific natural events history
- Risk ranking
- Action plan development.

In the risk-ranking discussion, each planning partner was asked to review the ranked risk specifically for its jurisdiction, based on the impact on its population and/or facilities. Municipalities based this ranking on probability of occurrence and the potential impact on people, property and the economy. Special purpose districts based this ranking on probability of occurrence and the potential impact on their constituency, their vital facilities and the facilities' functionality after an event. The methodology followed that used for the area-wide risk ranking presented in Volume 1. The objectives of this exercise were to familiarize the partnership with how to use the risk assessment as a tool to support other planning and hazard mitigation processes and to help prioritize types of mitigation actions that should be considered. Hazards that were ranked as “high” or “medium” for each jurisdiction as a result of this exercise were considered to be priorities for identifying appropriate mitigation actions, although jurisdictions also identified actions to mitigate “low” ranked hazards as appropriate.

Tool Kit

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

- Previous hazard mitigation plan annexes for those jurisdictions who are updating existing plans
- A catalog of mitigation best practices
- The goals and objectives developed for the update to the plan
- Information on the FEMA Hazard Mitigation Assistance grant program
- Information on past hazard events that have impacted the planning area
- County-wide and jurisdiction-specific maps for hazards of concern
- The risk assessment results developed for this plan
- Jurisdiction-specific annex templates, with instructions for completing them
- FEMA guidance on plan integration
- The results of the public survey conducted as part of the public involvement strategy

The toolkit provided each planning partner with resources to develop a mitigation action plan. Planning partners were asked to review the following to assist in the identification of actions:

- **The jurisdiction’s capability assessment**—Reviewed to identify capabilities that the jurisdiction does not currently have but should consider pursuing, or capabilities that should be revisited and updated to include best available information. Reviewed to determine how existing capabilities can be leveraged to increase or improve hazard mitigation in the jurisdiction. Additionally, planning partners used this capability assessment to identify existing capabilities that may be expanded or enhanced to better support the mitigation goals and objectives of this plan.

- **The jurisdiction’s National Flood Insurance Program compliance table**—Reviewed to identify opportunities to increase floodplain management capabilities.
- **The jurisdiction’s review of its adaptive capacity for climate change**—Reviewed to identify ways to leverage or continue to improve existing capacities and to improve understanding of other capacities.
- **The jurisdiction’s identified opportunities for future integration**—Reviewed to identify specific integration actions to be included in the mitigation strategy.
- **Jurisdiction-specific vulnerabilities**—Reviewed to identify actions that will help reduce known vulnerabilities.
- **The mitigation best practices catalog**—Reviewed to identify actions that the jurisdiction should consider including in its action plan.
- **Public input**—Reviewed to identify potential actions and community priorities.

Prioritization

44 CFR requires actions identified in the action plan to be prioritized (Section 201.c.3.iii). The planning team and steering committee developed a methodology for prioritizing the action plans that meets the needs of the partnership and the requirements of 44 CFR. All identified actions were prioritized in two categories—implementation and grant pursuit—as defined by the following criteria:

- Implementation priority
 - **High Priority**—An action that meets multiple objectives, has benefits that exceed costs, and has a designated source of funding. Action can be completed in the short term (1 to 5 years). The key factors for high-priority actions are that they have designated funding sources and can be completed in the short term.
 - **Medium Priority**—An action that meets multiple objectives, has benefits that exceed costs, and does not have a designated source of funding but is eligible for funding. Action can be completed in the short term (1 to 5 years) once funding is secured. The key factors for medium-priority actions are that they are eligible for funding though no specific funding source has been designated, and they can be completed within the short term. Medium-priority actions become high-priority actions once funding is secured.
 - **Low Priority**—An action that will mitigate the risk of a hazard, has benefits that do not exceed the costs or are difficult to quantify, has no designated source of funding, and is not eligible for any known grant funding. Action can be completed in the long term (1 to 10 years). Low-priority actions are generally “wish-list” actions. Their financing is unknown, and they have a long-term timeframe for completion. These actions may be eligible for grant funding from programs that have not yet been identified.
- Grant pursuit priority
 - **High Priority**—An action that meets identified grant eligibility requirements, has high benefits, and is listed as high or medium priority; local funding options are unavailable or available local funds could be used instead for actions that are not eligible for grant funding.
 - **Medium Priority**—An action that meets identified grant eligibility requirements, has medium or low benefits, and is listed as medium or low priority; local funding options are unavailable.
 - **Low Priority**—An action that has not been identified as meeting any grant eligibility requirements.

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 priority 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.

Benefit/Cost Review

44 CFR requires the prioritization of the action plan to emphasize a benefit/cost analysis of the proposed actions. Because some actions may not be implemented for up to 10 years, benefit/cost analysis was qualitative and not of the detail required by FEMA for project grant eligibility under the Hazard Mitigation Assistance 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 benefits and costs as follows:

- 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.
- 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.

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

For many of the strategies identified in this action plan, funding might be sought under FEMA's Hazard Mitigation Assistance grant program. This program requires 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.

Analysis of Mitigation Actions

All planning partners reviewed their recommended actions to classify each action based on the hazard it addresses and the type of mitigation it involves. Mitigation types used for this categorization are as follows:

- **Prevention**—Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
- **Property Protection**—Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
- **Public Education and Awareness**—Actions to inform citizens and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
- **Natural Resource Protection**—Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- **Emergency Services**—Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
- **Structural Projects**—Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.
- **Climate Resilient**—Actions that incorporate methods to mitigate and/or adapt to the impacts of climate change. Includes aquifer storage and recovery activities, incorporating future-conditions projections in project design or planning, or actions that specifically address jurisdiction-specific climate change risks, such as sea level rise or urban heat island effect.
- **Community Capacity Building**—Actions that increase or enhance local capabilities to adjust to potential damage, to take advantage of opportunities, or to respond to consequences. Includes staff training, memorandums of understanding, development of plans and studies, and monitoring programs.

These categories include categories identified in the Community Rating System (CRS) 2017 *CRS Coordinators Manual* (OMB No. 1660-0022, Figure 510-4). The CRS categories expand on the four categories in FEMA’s 2013 *Local Mitigation Handbook*. They provide a more comprehensive range of options, thus increasing integration opportunities. The use of CRS guidance enhances the CRS credit potential for this plan, for the benefit of planning partners who participate in the CRS program.

In addition to the CRS categories, two other categories were included in the analysis. The climate resilient category was added to facilitate the incorporation of climate adaptation planning into hazard mitigation plans in accordance with California Senate Bill 379 (see Section 4.8.2 in Volume 1 of this plan). Community capacity building was added to clearly identify opportunities for expanding on existing capabilities.

COMPATIBILITY WITH PREVIOUS APPROVED PLANS

All of the identified planning partners for this updated were covered by the FEMA-approved 2018 Tri-Valley Local Hazard Mitigation Plan. Table 1 lists all the partners, the role this multi-jurisdictional plan will play in achieving compliance, and CRS status.

Table 1. Prior Plan Status

	Prior Plan Adoption Date	Will Be Covered by This Hazard Mitigation Plan?	CRS Community	This Hazard Mitigation Plan Will Become CRS Plan of Record?
City of Dublin	7/17/2018	Yes	No	N/A
City of Livermore	6/11/2018	Yes	Yes	Yes
City of Pleasanton	8/21/2018	Yes	Yes	Yes
Dublin San Ramon Services District	5/15/2018	Yes	N/A	N/A

FINAL COVERAGE UNDER THE PLAN

All planning partners fully met the participation requirements specified by the Steering Committee, have annexes included in this volume, and will seek DMA compliance under this plan. Table 2 lists the jurisdictions and their ultimate status in this plan.

Table 2. Planning Partner Status

	Attended Steering Committee Annex Completion Discussion?	Completed Template?	Covered by This Plan?
City of Dublin	Yes	Yes	Yes
City of Livermore	Yes	Yes	Yes
City of Pleasanton	Yes	Yes	Yes
Dublin San Ramon Services District	Yes	Yes	Yes

1. CITY OF DUBLIN

1.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Jordan Foss, Management Analyst
100 Civic Plaza
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Alternate Point of Contact

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

Table 1-1. Local Hazard Mitigation Planning Team Members

Name	Title
Michael Cass	Principal Planner
Andrew Russell	Director of Public Works
Jeff Baker	Director of Community Development
Gregory Shreeve	Building Official
John Stefanski	Assistant to the City Manager
Laurie Sucgang	City Engineer/Assistant Director of Public Works

1.2 JURISDICTION PROFILE

1.2.1 Location and Features

Dublin is a suburban city of the East Bay Area (San Francisco) and Tri-Valley regions of Alameda County, California, United States. Located along the north side of Interstate 580 and at the intersection of Interstate 680, roughly 35 miles (56 km) east of downtown San Francisco, 23 miles (37 km) east of downtown Oakland, and 31 miles (50 km) north of downtown San Jose. According to the United States Census Bureau, the city has a total area of 15.23 square miles (40 km²) of which 0.03% is water. The City of Dublin is generally bounded by the City of San Ramon to the north, Castro Valley to the west, the City of Pleasanton to the south, and the City of Livermore to the east.

1.2.2 History

Dublin has long been known as the Crossroads of the Bay Area. Dublin now sits at the crossroads of two major freeways: Interstate 580 and Interstate 680. However, the significance of the crossroads dates back more than 200 years when Dublin served as the crossroads of two important stage routes - one from the Bay Area to Stockton

and the other from Martinez to San Jose. The Alamilla Spring, located in the Dublin area, provided a place for travelers to change horses and freshen up before continuing their journey. Dublin has a rich history dating back to 1772 when Pedro Fages led an expedition of 16 mounted men on a journey in search of a land route to Drake's Bay, now known as San Francisco Bay. Their return journey brought them through the Amador Valley. The city of Dublin was incorporated on February 2, 1982.

During the past 20 years, the rapidly expanding Tri-Valley area has become renowned as a place of prosperity, a center for internationally acclaimed business parks, and home to some of the world's largest corporations. The City of Dublin, located at the crossroads of the Tri-Valley, has contributed to the planned growth and forward thinking of the area. The City continues to look ahead to expand and enhance the quality of life for members of the community.

1.2.3 Governance

The City of Dublin is a general law city operating under a City Council / City Manager form of local government. This form of government combines an elected mayor and council and an appointed local government administrator. The City Council elections are nonpartisan. The Mayor serves a two-year term, and Council members serve four-year terms. The Mayor and City Council, as a collegial body, are responsible for setting policy, setting/prioritizing goals and objectives, and approving the budget. The Mayor, with confirmation by the City Council, makes appointments to the City's advisory commissions and committees. The Council appoints the City Manager, who is responsible for the day-to-day administrative operation of the City, including: delivery of services, hiring of personnel, implementation of capital projects and preparation.

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

1.3 CURRENT TRENDS

1.3.1 Population

According to the California Department of Finance, the population of the city of Dublin as of January 1, 2022, was 72,932. Since 2017, the population has grown at an average annual rate of 4.4 percent.

1.3.2 Development

The City of Dublin has consistently been listed as one of the fastest growing cities in the State. Since 2010, the City has witnessed significant population growth from 46,036 residents to 72,932 residents in 2022. While the City expects to see continued growth in population as new residential and mixed-use developments are planned and constructed in the Downtown and Eastern Dublin, population growth is expected to slow as the City approaches an estimated build-out population level of 83,595.

Identifying previous and future development trends is achieved through a comprehensive review of permitting since completion of the previous plan and in anticipation of future development. Tracking previous and future growth in potential hazard areas provides an overview of increased exposure to a hazard within a community. Table 1-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

Table 1-2. Recent and Expected Future Development Trends

Criterion	Response																														
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan? <i>If yes, give the estimated area annexed and estimated number of parcels or structures.</i>	No																														
Is your jurisdiction expected to annex any areas during the performance period of this plan? <i>If yes, describe land areas and dominant uses.</i> <i>If yes, who currently has permitting authority over these areas?</i>	No																														
Are any areas targeted for development or major redevelopment in the next five years? <i>If yes, briefly describe, including whether any of the areas are in known hazard risk areas</i>	<p>Yes</p> <p>Major development includes the East Ranch development in eastern Dublin, continued buildup of the Boulevard project, and several projects located around the West Dublin and Dublin BART Stations.</p> <p>Western Dublin has several projects that fall within a high wildfire severity zone, including the Inspiration Drive Assisted Care and Memory Care Facilities and the Hexel Redevelopment Project.</p> <p>Downtown Dublin has several projects that will be developed, including Amador Station, Regional Street Affordable, St. Patrick Way/Avalon West, portions of which fall within the Alquist-Priolo Earthquake Fault Zone, Medium Liquefaction Zone and FEMA Flood Zones.</p> <p>There are undeveloped parcels along I-580 in the Eastern Dublin Specific Plan Area located within a FEMA flood zone that are anticipated for future development.</p>																														
<p>How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?</p> <table border="1"> <thead> <tr> <th></th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> <th>2021</th> </tr> </thead> <tbody> <tr> <td>Single Family</td> <td>643</td> <td>488</td> <td>141</td> <td>137</td> <td>108</td> </tr> <tr> <td>Multi-Family</td> <td>90</td> <td>42</td> <td>13</td> <td>19</td> <td>23</td> </tr> <tr> <td>Other</td> <td>6</td> <td>4</td> <td>6</td> <td>4</td> <td>10</td> </tr> <tr> <td>Total</td> <td>739</td> <td>534</td> <td>160</td> <td>160</td> <td>141</td> </tr> </tbody> </table>		2017	2018	2019	2020	2021	Single Family	643	488	141	137	108	Multi-Family	90	42	13	19	23	Other	6	4	6	4	10	Total	739	534	160	160	141	
	2017	2018	2019	2020	2021																										
Single Family	643	488	141	137	108																										
Multi-Family	90	42	13	19	23																										
Other	6	4	6	4	10																										
Total	739	534	160	160	141																										
Provide the number of new construction permits for each hazard area or provide a qualitative description of where development has occurred.	<ul style="list-style-type: none"> Special Flood Hazard Areas: 4 Landslide: 0 High Liquefaction Areas: 0 Wildfire Risk Areas: 248 																														
Describe the level of buildup in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	The City has a current population of 72,932 and an anticipated buildup population of 83,595 residents.																														

1.4 CHANGES IN PRIORITIES

The City's mitigation priorities have remained the same since the last mitigation plan update.

1.5 CAPABILITY ASSESSMENT

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

Findings of the capability assessment were reviewed to identify opportunities to expand, initiate or integrate capabilities to further hazard mitigation goals and objectives. Where such opportunities were identified and

determined to be feasible, they are included in the action plan. The “Analysis of Mitigation Actions” table in this annex identifies these as community capacity building mitigation actions. The findings of the assessment are presented as follows:

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

Table 1-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code	Yes	No	Yes	No
<i>Comment: Title 7, Chapter 7.32 DMC adopts The 2022 California Building Code, Part 2, Title 24 of the California Code of Regulations, a portion of the California Building Standards Code, as defined in the California State Health and Safety Code Section 18901 et seq. (hereinafter referred to as the “state code”), and any rules and regulations promulgated pursuant thereto including the International Building Code, 2021 Edition, including Appendix Chapters C, F, G, H, and I, as published by the International Code Council, and as referenced in and adopted pursuant to California State Health and Safety Code Sections 17922 and 18935, (hereinafter referred to as the “IBC”) are hereby adopted and incorporated by reference herein. (Ordinance 137-22, Adopted on November 15, 2022)</i>				
Zoning Code	Yes	No	Yes	No
<i>Comment: Title 8, DMC, Chapters 8.04 to 8.144. The purpose of this Ordinance is to promote and protect the public health, safety, peace, comfort, convenience, and general welfare and to preserve and enhance the aesthetic quality of the City by providing regulations to ensure an appropriate mix of land uses, and that each land use relates properly to adjacent land uses in an orderly manner, and for the following more particularly specified purposes.</i>				
Subdivisions	Yes	No	Yes	No
<i>Comment: Title 9, DMC, Chapters 9.04 to 9.56. This title shall regulate and control the design and improvement of subdivisions of land within the city and supplement the provisions of the Subdivision Map Act of the State of California set forth at Government Code Section 66410 et seq. concerning the design, improvement and survey data of subdivisions, the form and content of all maps provided for by the Subdivision Map Act, and the procedure to be followed in securing the official approval of the city regarding the maps.</i>				
Stormwater Management	Yes	No	No	No
<i>Comment: Title 7, Chapter 7.74 DMC. The purpose of this chapter is to ensure the future health, safety and general welfare of city of Dublin citizens by: (1) Eliminating non-stormwater discharges to the municipal separate storm sewer; (2) Controlling the discharge to municipal separate storm sewers from spills, dumping or disposal of materials other than stormwater; and (3) Reducing pollutants in stormwater discharges to the maximum extent practicable. The intention 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. Integration Opportunity: Pursue mitigation opportunities through green infrastructure planning.</i>				
Post-Disaster Recovery	Yes	No	No	Yes
<i>Comment: Appendix F of the City’s Emergency Operations Plan includes the City’s Recovery Operations Framework which identifies the roles, responsibilities, and tasks associated with the nine functions typically performed in all disaster recovery operations with the objectives of increasing awareness of the issues involved in disaster recovery, explaining roles and responsibilities, and providing guidelines for disaster recovery programs.</i>				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Real Estate Disclosure	No	Yes	Yes	Yes
Comment: California State Civil Code 1102 requires full disclosure on natural hazard exposure of the sale/re-sale of any and all real property. To be implemented by sellers and realtors. Integration Opportunity: The information of hazards and risk contained in this plan could be used to support enforcement of this law.				
Growth Management	Yes	No	Yes	Yes
Comment: California state law requires that every county and city prepare and adopt a comprehensive long-range plan to serve as a guide for community development. The General Plan for the City of Dublin was adopted February 11, 1985, and most recently amended November 15, 2022. The General Plan contains 12 elements that address many aspects of the community including: land use, housing, parks and open space, community design, infrastructure, safety, sustainability, and conservation of resources. The General Plan is the City's overarching policy document. All City policies and ordinances must be consistent with the General Plan. The Planning Division is responsible for maintaining the General Plan and preparing amendments to the document as directed by the City Council. Integration Opportunity: Integrate the hazard mitigation plan into the General Plan pursuant to California AB2140 and SB 379.				
Site Plan Review	Yes	No	No	No
Comment: Title 9, Chapter 9.08 DMC. The form and contents, submittal and approval of tentative tract maps for the subdivision of five or more parcels and tentative parcel maps for the subdivision of four (4) or fewer parcels shall be governed by the provisions of this chapter. (Ordinance 4-16, Adopted in 2016)				
Environmental Protection	Yes	No	No	No
Comment: Several Ordinances pertain to Environmental Protection including Title 7, Chapter 7.20, DMC: WATERCOURSE PROTECTION, Title 7, Chapter 7.30, DMC: WASTE MANAGEMENT PLAN, Title 7, Chapter 7.56, DMC: TREES, Title 7, Chapter 7.94, DMC: GREEN BUILDING, Title 5, Chapter 5.56, DMC: GREEN BUILDING PRACTICES FOR CITY PROJECTS				
Floodplain Management Regulations	Yes	No	No	Yes
Comment: Title 7, Chapter 7.24, DMC. It is the purpose and objective of these regulations, and the flood load and flood resistant construction requirements of the building codes are to promote the public health, safety and general welfare and to minimize public and private losses due to flood conditions in specific flood hazard areas through the establishment of comprehensive regulations for management of flood hazard areas. (Ordinance 137-22, Adopted on November 15, 2022)				
Emergency Management	Yes	No	No	Yes
Comment: Title 2, Chapter 2.44, DMC. The declared purposes of this chapter are to provide for the preparation and carrying out of plans for the protection of persons and property within this city in the event of an emergency; the direction of the emergency organization; and the coordination of the emergency functions of this city with all other public agencies, corporations, organizations, and affected private persons. Integration Opportunity: This plan should fully support and integrate into the City's Emergency Management program.				
Other	Yes	No	Yes	No
Comment: The California Environmental Quality Act (CEQA) requires state and local agencies to identify the significant environmental impacts of their actions and to avoid or mitigate those impacts, if feasible. California Senate Bill 379 requires that local government incorporate climate adaptation and resiliency strategies in the safety element of their general plans.				
Planning Documents				
General Plan	Yes	No	Yes	Yes
Is the plan compliant with Assembly Bill 2140? Yes				
Comment: The General Plan for the City of Dublin was adopted February 11, 1985, and most recently amended November 15, 2022. Chapter 8, section 8.3 of the General Plan includes the Safety Element. This section includes an emergency preparedness policy that states: In 2010 the City adopted a Local Hazard Mitigation Plan as an annex to the Comprehensive Emergency Management Plan to assess hazards and mitigate risks prior to a disaster event. The City will periodically review the Plan to prepare for emergencies.				
Capital Improvement Plan	Yes	No	No	Yes
How often is the plan updated? Every year.				
Comment: Current CIP in effect for the City covers Fiscal Year 2022-2023 through Fiscal Year 2026-2027. The projects as proposed in this document have been prioritized based on the need for infrastructure preservation, repair and safety, and critical planning for future city service delivery. Program funding is allocated under the following categories: general improvements, public art, parks, and streets. Integration opportunity: FEMA grant eligible projects within the CIP that will reduce risk from hazards assessed by this plan could be included in the City's action plan.				
Disaster Debris Management Plan	Yes	No	No	No
Comment: The City adopted the Cities of Dublin and Pleasanton Disaster Debris Management Plan on March 15, 2022				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Floodplain or Watershed Plan	No	No	No	No
<i>Comment: The City is a participating community in the National Flood Insurance Program and implements the program thorough the Dublin Municipal Code, Chapter 7.24. The City does not currently have a stand-alone flood hazard management plan or watershed management plan.</i>				
Stormwater Plan	Yes	Yes	Yes	Yes
<i>Comment: The City of Dublin Municipal code contains regulations pertaining to watercourse protection, floodplain management and stormwater management in Chapters 7.20, 7.24, and 7.74. The City is a permittee under the California Regional Water Quality Control Board, San Francisco Bay Region, Municipal Regional Stormwater NPDES Permit, Order No. R2-2022-0018, NPDES Permit No. CAS612008.</i>				
Urban Water Management Plan	No	Yes	No	No
<i>Comment: The City receives retail water services from Dublin San Ramon Services District (DSRSD) and DSRSD receives wholesale water services from Zone 7 Water Agency (Zone 7). Both DSRSD and Zone 7 have collaborated together on their respective Urban Water Management Plans.</i>				
Habitat Conservation Plan	No	No	No	No
<i>Comment: N/A for the City of Dublin</i>				
Economic Development Plan	Yes	No	No	No
<i>Comment: The City's general plan includes an economic development element which was most recently amended on November 14, 2016.</i>				
Shoreline Management Plan	No	No	No	No
<i>Comment: N/A for the City of Dublin</i>				
Community Wildfire Protection Plan	Yes	No	No	Yes
<i>Comment: City of Dublin Wildfire Management Plan. Adopted July 9, 1996; revised March 5, 2002. The City upholds the building and fire code requirements in the adopted California Building and Fire Codes for those areas the City has designated as urban-wildland interface.</i>				
Forest Management Plan	No	No	No	No
<i>Comment: N/A for the City of Dublin</i>				
Climate Action Plan	Yes	No	Yes	Yes
<i>Comment: The City Council adopted the Climate Action Plan, 2030 and Beyond in September 2020. The Climate Action Plan (CAP) establishes the beginning of a vision for the City of Dublin (City) to reach carbon neutrality by 2045 and includes quantified actions the City will take to reduce greenhouse gas (GHG) emissions by 65,090 MT CO₂e by 2030 while growing the population and economy.</i>				
Emergency Operations Plan	Yes	No	Yes	No
<i>Comment: The City Council adopted an Emergency Operations Plan on November 17, 2020.</i>				
Threat & Hazard Identification & Risk Assessment (THIRA)	Yes	Yes	Yes	Yes
<i>Comment: This is identified in the City's Emergency Operations Plan, Chapter 2.</i>				
Post-Disaster Recovery Plan	Yes	Yes	Yes	Yes
<i>Comment: This is identified in the City's Emergency Operations Plan, Appendix F.</i>				
Continuity of Operations Plan	Yes	No	Yes	Yes
<i>Comment: This is identified in the City's Emergency Operations Plan, Appendix G.</i>				
Public Health Plan	No	Yes	No	No
<i>Comment: Alameda County Health Care Services Agency: mission of Health Care Services Agency is to provide fully integrated health care services through a comprehensive network of public and private partnerships that ensure optimal health and well-being and respect the diversity of all residents.</i>				

Planning and regulatory capabilities will be expanded and improved upon by implementing actions in the Hazard Mitigation Action Plan, including Action DUB-2. The following will be taken into consideration:

- Future emergency management capabilities considerations:
 - To improve its capabilities, Dublin will be undertaking an assessment of its existing emergency management program by performing a gap analysis, conducting multiple EOC trainings and

exercises, and supplemental EOC position trainings. These position trainings will include the EOC sections—management, operations, planning, logistics, and finance. *Action items: DUB 13,14,15*

- The City will collaborate with various partners—Alameda County Fire Department, Alameda County Sheriff's Department, and Dublin San Ramon Services District (DSRSD)—in its effort to improve all aspects of emergency management. *Action items: DUB 13,14,15*
- Future flood management capabilities considerations
 - The City may consider participation in the Community Rating System (CRS).
 - The City may consider the drafting of a substantial damage response plan. *Action item DUB 20*
- Future planning partners collaboration:
 - The City will consider participating with the other HMP planning partners for grant opportunities on matters that would relate to all of them.

Table 1-4. Development and Permitting Capability

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

Development and permitting capabilities will be expanded and improved upon by implementing actions in the Hazard Mitigation Action Plan, including Action DUB-17.

Table 1-5. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service <i>If yes, specify:</i>	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	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other <i>If yes, specify:</i>	No

The City would consider applying for mitigation and other grants for related projects that exceed the City's current budget.

The City could expand its fiscal authority by adopting utility user fees, using private activity bonds, or withholding public expenditures in hazard-prone areas. However, the City has not identified a need for any of these actions at this time.

Table 1-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Community Development Department	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Public Works Department, Community Development Department, Chief Building Official.	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Community Development Department, Public Works Department; Geological Hazard Abatement Districts (GHAD)	Yes
Staff with training in benefit/cost analysis <i>If Yes, Department /Position:</i> Finance/Administrative Services Department	Yes
Surveyors <i>If Yes, Department /Position:</i> The City contracts for these services	Yes
Personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> The City contracts for these services	Yes
Scientist familiar with natural hazards in local area <i>If Yes, Department /Position:</i> The City contracts for these services	Yes
Emergency manager <i>If Yes, Department /Position:</i> City Manager's Office, Assistant to the City Manager	Yes
Grant writers <i>If Yes, Department /Position:</i> Various Departments and Positions.	Yes
Other <i>If Yes, Department /Position:</i>	No

Administrative and technical capabilities will be expanded and improved upon by implementing actions in the Hazard Mitigation Action Plan, including Action DUB-13.

Table 1-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> Links to the Tri-Valley hazard mitigation plan web site are provided on the City's Disaster preparedness page: http://www.dublin.ca.gov/94/Disaster-Preparedness	Yes
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i> City utilizes Nextdoor, Twitter and Facebook for education and outreach on a variety of topics including hazard mitigation.	Yes
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe:</i>	No
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> CERT, Alameda County Fire Department	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> The City has partnered with Alameda County on a new emergency notification system, "AC Alert," powered by Everbridge. It is an ultra-high-speed telephonic communication service used for emergency notifications.	Yes

Education and outreach capabilities will be expanded and improved upon by implementing actions in the Hazard Mitigation Action Plan, including Action DUB-10.

Table 1-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Community Development Department
Who is your floodplain administrator? (department/position)	Gregory Shreeve, Community Development Department, Building and Safety Division, Chief Building Official
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	11/15/2022
Does your jurisdiction have an NFIP Substantial Damage Response Plan? <i>If yes, what is the date of adoption and is it a stand-alone plan or a component of another plan (if another plan, please specify)?</i> <i>If no, how does your jurisdiction enforce substantial damage provisions of the NFIP-required floodplain management regulations?</i> Unknown. This need is addressed in the Mitigation Action Plan.	No
Does your floodplain management program exceed minimum requirements? <i>If yes, in what ways?</i> We are in the process of updating this and will be exceeding the minimum requirements.	Yes
When was the most recent Community Assistance Visit or Community Assistance Contact? <i>Note: The State Water Resources Control Board assisted the City in the adoption of the updated Floodplain Management Program.</i>	02/05/2016
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <i>If yes, state what they are.</i>	No
Are any RiskMAP projects currently underway in your jurisdiction? <i>If yes, state what they are.</i>	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <i>If no, state why.</i>	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? <i>If yes, what type of assistance/training is needed?</i>	No
Does your jurisdiction participate in the Community Rating System (CRS)? <i>If yes, is your jurisdiction interested in improving its CRS Classification?</i> <i>If no, is your jurisdiction interested in joining the CRS program?</i> No	No
How many flood insurance policies are in force in your jurisdiction? ^a <i>What is the insurance in force?</i> \$31,013,800 <i>What is the premium in force?</i> \$150,817	91
How many total loss claims have been filed in your jurisdiction? ^a <i>What were the total payments for losses?</i> \$0	3

a. According to FEMA statistics as of 04/30/2022

Table 1-9. Community Classifications

	Participating?	ID Number	Classification	Date Classified
FIPS Code	Yes	06-001-20018	N/A	N/A
Unique Entity ID #	Yes	H7R6FXBY88V5	N/A	N/A
Community Rating System	No	N/A	N/A	N/A
Building Code Effectiveness Grading Schedule	Yes	060705	2	09/26/2018
Public Protection	Yes	Unknown	02/2X	10/01/2020
StormReady	No	N/A	N/A	N/A
Firewise	No	N/A	N/A	N/A

Table 1-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts	Low
<i>Comment:</i> The City's Climate Action Plan speaks broadly to heat and drought impacts. However, the City has not completed a comprehensive jurisdiction level evaluation of climate change impacts.	
Jurisdiction-level monitoring of climate change impacts	Low
<i>Comment:</i> The City is not monitoring jurisdiction-level impacts	
Technical resources to assess proposed strategies for feasibility and externalities	Medium
<i>Comment:</i> The City of Dublin has a professional staff with the capabilities to assess strategies. In addition, the State of California offers a variety of planning guidance and resources to assist local communities with climate change strategies.	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	High
<i>Comment:</i> The City of Dublin adopted a Climate Action Plan (CAP) to reduce GHG emissions in 2010 and updated the plan in 2013 and 2020. The 2020 CAP update includes a detailed emissions inventory for both community and municipal emissions. The GHG emissions inventory in the 2020 CAP update is based on 2015 data. Subsequent inventories have been completed for 2017 and 2019. Another GHG inventory will be completed for the year 2022.	
Capital planning and land use decisions informed by potential climate impacts	Medium
<i>Comment:</i> The CAP contains several GHG emission reduction strategies pertaining to land use and the General Plan includes policies and actions related to reducing risk from natural hazard events, such as flood and wildfire, in the Safety Element; however, these strategies do not account for impacts from climate change. The City has a Capital Improvement Program in which all projects conform to the General Plan and the California Environmental Quality Act.	
Participation in regional groups addressing climate risks	Medium
<i>Comment:</i> The City joined the Alameda County Climate Protection Project in 2007 and is part of the Bay Area Air Quality Management District. City staff participates in regional committees such as the Bay Area Energy Resource Network, the goal of which is to develop successful climate, resource, and sustainability programs.	
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Medium
<i>Comment:</i> There are several state actions and regulations that require local governments to consider climate change in public decision-making processes such as Senate Bill 379 (SB379), which requires that the impacts of climate change be addressed in local general plans. The CAP sets forth several areas where GHG emissions are considered in decision-making and development processes.	
Identified strategies for greenhouse gas mitigation efforts	High
<i>Comment:</i> The City Council adopted the Climate Action Plan 2030 and Beyond in September 2020. The Climate Action Plan (CAP) includes 22 measures to achieve a 40% reduction in GHG emissions below 1990 levels by 2030 and established the path for the City to reach carbon neutrality by 2045.	
Identified strategies for adaptation to impacts	Medium
<i>Comment:</i> Although the CAP is focused on GHG reduction strategies rather than climate change adaptation, it identifies strategies that support co-benefits such as implementing the City's Green Stormwater Infrastructure Plan to decrease heat island effect and control stormwater runoff. In addition, the City's General Plan includes a sustainability element that includes policies related to drought tolerant landscaping, reduction of heat island effect, and stormwater retention.	
Champions for climate action in local government departments	Medium
<i>Comment:</i> The Public Works Department implements and champions the CAP, along with support from the City Manager's Office.	
Political support for implementing climate change adaptation strategies	Low
<i>Comment:</i> The City Council has a long history of supporting efforts related to climate change including the endorsement of the U.S. Mayors' Climate Protection Agreement in 2005 and the adoption of the CAP in 2010, 2013 and 2020; however, a clear set of climate change adaptation strategies and directives have not yet been developed.	
Financial resources devoted to climate change adaptation	Low
<i>Comment:</i> There have been no financial resources devoted to climate change adaption to date.	

Criterion	Jurisdiction Rating ^a
Local authority over sectors likely to be negative impacted	Medium
<p>Comment: Dublin San Ramon Services District is the water utility for the City. The City shares responsibility for stormwater facilities with private property owners and the Alameda County Flood Control and Water Conservation District. The City is a participant in the NFIP and enforces the provisions of its flood damage prevention ordinance. Fire protection services are contracted through the Alameda County Fire Department.</p>	
Public Capacity	
Local residents' knowledge of and understanding of climate risk	Medium
<p>Comment: The City is a leader in environmental stewardship and has placed emphasis on conservation efforts and the establishment of renewable energy resources. The CAP includes a number of strategies to increase the public's awareness of climate change and GHG reduction strategies; however, no public outreach program focused on climate change impacts and adaptation currently exists.</p>	
Local residents' support of adaptation efforts	Low
<p>Comment: The City is a leader in environmental stewardship and has placed emphasis on conservation efforts and the establishment of renewable energy resources. The CAP includes a number of strategies to increase the public's awareness of climate change and GHG reduction strategies; however, no public outreach program focused on climate change impacts and adaptation currently exists.</p>	
Local residents' capacity to adapt to climate impacts	Medium
<p>Comment: The City of Dublin's population would be expected to be able to adapt to many climate impacts as residents are well educated with more than 67 percent of the adult population holding a bachelor's degree or higher, relatively well off with a median household income almost double the state average, relatively young with only 9 percent of the population 65 years and over, and relatively healthy with about 4 percent of residents under age 65 reporting a disability, which is less than half the national average. However, residents may not know what actions to take to adapt to climate change impacts.</p>	
Local economy's current capacity to adapt to climate impacts	High
<p>Comment: The majority of the employed population in the City works in management, business, science and the arts, which would be likely to be able to adapt to the impacts of climate change. Only a very small portion of the population is employed in natural resource-based industries such as farming or forestry.</p>	
Local ecosystems' capacity to adapt to climate impacts	Unsure
<p>Comment: Local ecosystems ability to adapt to climate impacts at this time is unclear. The western hills are ecologically important and part of an area of regional significance identified by the National Park Service. Riparian areas, particularly in western Dublin, are important wildlife habitat. The General Plan identified policies for the conservation of these areas.</p>	
<p>a. High = Capacity exists and is in use; Medium = Capacity may exist but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.</p>	

1.6 INTEGRATION REVIEW

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

1.6.1 Existing Integration

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

- **City of Dublin General Plan**—the November 14, 2016, amendment to the City’s General Plan includes an emergency preparedness policy that integrates the City’s hazard mitigation plan.
- **City of Dublin Emergency Operations Plan**—In 2010 and in 2017 the City adopted a Local Hazard Mitigation Plan as an annex to the Comprehensive Emergency Management Plan to assess hazards and mitigate risks prior to a disaster event.
- **Post-Disaster Recovery Program**— Appendix F of the City’s Emergency Operations Plan includes the City’s Recovery Operations Framework which identifies the roles, responsibilities, and tasks associated with the functions typically performed in all disaster recovery operations with the objectives of increasing awareness of the issues involved in disaster recovery, explaining roles and responsibilities, and providing guidelines for disaster recovery programs.
- **Climate Change**—Pursuant to California SB379, all future updates to the City’s General Plan and Climate Action Plan should address the adaptive capacity requirements of SB379 which includes full integration of the hazard mitigation plan.

1.6.2 Opportunities for Future Integration

The capability assessment presented in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **City of Dublin General Plan**—Since this 2017 hazard mitigation planning effort differs substantially from the prior hazard mitigation plan of record for the City of Dublin, all future amendments to the General Plan should revisit hazard mitigation plan integration opportunities by adopting relevant policies in its safety element.
- **City of Dublin Emergency Operations Plan (EOP)**—All future updates to the City’s EOP should look to the 2023 Tri-Valley Hazard Mitigation Plan as a major source of information on exposure and vulnerability to natural hazards of concern for the City.
- **Post-Disaster Recovery Program**—Future updates to the City’s General Plan, EOP or the Tri-Valley Hazard Mitigation Plan should consider the inclusion of a post-disaster recovery component. Since these three programs are already fully integrated, only one of these programs would need to include this component.
- **Floodplain Management Regulations Ordinance**—The City should consider the inclusion of higher regulatory flood protection standards appropriate for the flood risk within the City as mitigation actions for this plan.
- **Climate Change**—Pursuant to California SB379, all future updates to the City’s General Plan and Climate action plan should address the adaptive capacity requirements of SB379 which includes full integration of the hazard mitigation plan.
- **Capital Improvement Program (CIP)**—The City should look to the Hazard Mitigation Plan as a possible source to grant funding that could leverage City’s funding for grant eligible capital projects. This plan has the ability to fold in new capital projects through the plan maintenance strategy of the plan.
- **City of Dublin Green Infrastructure Plan**—This plan is required by the Municipal Regional Stormwater NPDES Permit (MRP) and mandates the inclusion of low impact development drainage design into storm drain infrastructure. The intent of the plan is to describe how permittees under the MRP

will shift their impervious surfaces and storm drain infrastructure from traditional storm drain infrastructure to a more resilient, sustainable system that slows runoff by dispersing it and/or infiltrating it. The goals, objectives and actions identified in this plan and the hazard mitigation plan should be coordinated and complementary, as appropriate.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan presented in this annex.

1.7 RISK ASSESSMENT

1.7.1 Jurisdiction-Specific Natural Hazard Event History

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

Table 1-11. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Severe Weather & Flood	EM-3591	December 31, 2022-January 13, 2023	The Bay Area was hit by repeated atmospheric river events resulting in numerous shallow landslides, downed trees, and localized flooding. Damage Estimate: Approximately \$1M +
Wildfire	N/A	August 22, 2022	58-acre wildfire off I-580 near Eden Canyon Road and the Schaefer Ranch neighborhood. Required the City to open the Shannon Community Center as a reunification center for those who chose to evacuate. No Damage: \$0
COVID-19 Pandemic	DR-4482	January 20, 2020 - ongoing	Staffing interruptions
Wildfire	N/A	October 17, 2017	50-acre wildfire requiring automated alert system notification to 150 residents to evacuate to City sponsored Shelter. No Damage \$0
Wildfire	N/A	August 22, 2017	75-acre wildfire on Camp Parks requiring road closures and automated alert system notification residents directed to City sponsored reunification center. No Damage \$0
Drought	N/A	Years 2014-2015	California Governor declared a state of emergency based on drought conditions in California; City proclaimed Local Emergency and mandatory conservation efforts to show support to water purveyors.
Gas Line Leak	N/A	June, 2006	Private undergrounded jet fuel gas line traversing City of Dublin sustained a leak.
Gasoline Spill	N/A	May, 2009	Privately operated gasoline tanker spill in neighboring jurisdiction leaked into City of Dublin storm-drain system. City had partial emergency operation center activation, provided temporary lodging vouchers and animal sheltering services to impacted neighborhoods.
Flash Flood	N/A	February, 1999	Weeks of severe winter weather and horizontal rain caused significant damage to public facilities.

1.7.2 Hazard Risk Ranking

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

Table 1-12. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Earthquake	36	High
2	Severe Weather	33	Medium
3	Landslide	28	Medium
4	Flood	15	Low
5	Wildfire	10	Low
6	Drought	9	Low
7	Dam Failure	6	Low

1.7.3 Jurisdiction-Specific Vulnerabilities

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

Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: None

Other Noted Vulnerabilities

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

1.8 STATUS OF PREVIOUS PLAN ACTIONS

Table 1-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 1-13. Status of Previous Plan Actions

Action Item from Previous Plan	Status of Action	New Action #
Action D-1—Where appropriate, support retrofitting or relocation of structures in high hazard areas, prioritizing structures that have experienced repetitive losses.	Carried over to updated plan	DUB-1
Action D-2—Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community as feasible.	Carried over to updated plan	DUB-2

Comment: Not started due to staffing capacity. Carry over to plan update. The former Dolan Lumber building on Scarlett Court received extensive water damage and was demolished in 2005. There are other properties in the flood plain, but none have experienced repetitive losses.

Comment: The City Council adopted an update to the General Plan Safety Element on November 15, 2022 (Resolution 133-22), which integrates the Hazard Mitigation Plan by reference.

Action Item from Previous Plan	Status of Action	New Action #
Action D-3—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan. Comment: The City of Dublin actively participated in the plan maintenance strategy included in the TVHMP including monitoring and evaluation. The City of Dublin will participate in the five-year comprehensive update to the TVHMP.	Carried over to updated plan	DUB-3
Action D-4—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements: <ul style="list-style-type: none">• Enforce the flood damage prevention ordinance.• Participate in floodplain identification and mapping updates.• Provide public assistance/information on floodplain requirements and impacts. Comment: Ongoing. The City has been in compliance with ISO / NFIP for over 20 years. No issues or comments were raised during the last audit. The City has an ISO / NFIP score of 7.	Carried over to updated plan	DUB-4
Action D-5—Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following: Conduct a Climate Adaptation Evaluation and Develop a Climate Adaptation Plan. Comment: The City Council of the City of Dublin adopted the “City of Dublin Climate Action Plan, 2030 and Beyond” on September 15, 2020, by Resolution 100-20. The City has not completed a Climate Adaptation Plan.	Carried over to updated plan	DUB-5
Action D-6—Integrate flood protection mechanisms into the City’s Green Infrastructure Plan. Comment: The City Council of the City of Dublin adopted the “City of Dublin Green Stormwater Infrastructure Plan” on June 18, 2019, by Resolution 65-19. The City of Dublin Five-Year Capital Improvement Program 2020-2025 includes a project, ST0121 Green Stormwater Infrastructure, with funding appropriation through Fiscal Year 2022-23 for planning, design, and construction of various citywide green stormwater infrastructure projects. Many such projects will provide flood prevention benefits.	Completed	
Action D-7—Develop a Regional Catastrophic Debris Management Plan to minimize recovery time post-disaster. Comment: The City Council of the City of Dublin adopted the “Cities of Dublin and Pleasanton Joint Disaster Debris Management Plan on March 15, 2022, by Resolution 21-22.	Completed	
Action D-8—Coordinate with existing GHADs, as applicable, on the mitigation of geological hazards, including landslides. Comment: Ongoing. Members of the City Council of the City of Dublin serve as Board members of the three geologic hazard abatement districts (GHADs) within the corporate limits of the City of Dublin. City of Dublin staff serve as GHAD staff, with day-to-day GHAD services provided through agreements between the GHADs and consultants/contractors.	Carried over to updated plan	DUB-6
Action D-9—Complete a Citywide Street Storm Drain Condition Assessment. Comment: City of Dublin Five-Year Capital Improvement Program 2022-2027 includes a project, STNEW02 Citywide Storm Drain Improvements, with funding in Fiscal Year 2023-24 for a storm drainage master plan and/or condition assessment report with recommendations for maintenance or improvements.	Carried over to updated plan	DUB-7
Action D-10—Update City’s Flood Damage Prevention Ordinance in accordance with State of California model. Comment: The City Council adopted an update to the Floodplain Management Regulations (DMC 7.24) on November 15, 2022, by resolution 137-22.	Completed	
Action D-11—Utilize vegetation management to reduce risks in existing development and open space land. Comment: Ongoing. Each year the City Council declares there is a public nuisance created by weeds and combustible debris growing and accumulating upon the streets, sidewalks, and property in the City of Dublin. Property owners are notified of violations and orders for abatement. If abatement is not completed, the City of Dublin shall, at the expense of owners, have weeds or refuse removed.	Carried over to updated plan	DUB-8

Action Item from Previous Plan	Status of Action	New Action #
Action D-12—Reduce hazard vulnerabilities for non-City owned building throughout Dublin. Continually update and adopt building standard codes to incorporate the latest knowledge and design standard to protect people and property against known seismic, fire, flood and landslide risk in both structural and non-structural building and site components. <i>Comment:</i> Ongoing. The City adopts new building standard codes every three years.	Carried over to updated plan	DUB-9
Action D-13—Streamline the permitting process to rebuild residential and commercial structures following disaster; prepare an informational handout for property owner and contractors on steps to rebuild following a major disaster. <i>Comment:</i> The City has not established a post-disaster streamlined permitting process for residential and commercial structures.	Carried over to updated plan	DUB-18
Action D-14—Improve the disaster-resistance of natural gas delivery system to increase public safety and to minimize damage and service disruption following a disaster. Educate private property owners about gas line shut off procedures. <i>Comment:</i> The City of Dublin does not control natural gas delivery system standards. PG&E and the California Public Utilities Commission are responsible for this.	Removed; no longer feasible	
Action D-15—Provide outreach activities related to hazard mitigation and disaster preparedness. Revitalize and maintain Tri-Valley Hazard Mitigation Plan website, create printed materials for public and business owners. <i>Comment:</i> The City of Dublin posted the TVHMP to the City's website at https://dublin.ca.gov/94/Disaster-Preparedness . This website also serves as the City's clearinghouse for all information regarding hazard mitigation and disaster preparedness.	Carried over to updated plan	DUB-10
Action D-16—Establish cooling centers and encourage landscaping improvement to reduce Dublin's residents' vulnerability to extreme heat events, severe storms, and associated hazards. Integrate extreme heat readiness into City operations, services and best practices. <i>Comment:</i> On July 1, 2020, the City Manager of the City of Dublin approved Administrative Policy 5.3 which formalized the City's Cooling Center Activation Protocol.	Completed	
Action D-17—Coordinate disaster preparation and mitigation practices with private sector, public institutions and other public bodies. Maintain an emergency notification system (reverse 9-1-1) to deliver community alerts. Seek guidance from Cal OES and Alameda County OES how best to work and educate private sector about business resilience. <i>Comment:</i> The City no longer maintains an emergency notification system (reverse 9-1-1) as Alameda County has enacted AC Alert, Countywide emergency notification system and smartphone app. The City promotes AC Alert on its various Social Media Channels and print publications to encourage the public to sign-up and subscribe to emergency notifications. The City continues to engage with the Alameda County Emergency Management Association to learn about best practices for community engagement around disaster preparedness. The action carried over to the next plan is revised to capture AC Alert.	Carried over to updated plan	DUB-11
Action D-18—Explore local legislation to regulate the storage of hazardous materials to be protected from flood zones. Continue to assess the potential impact from hazardous material stored and transported through Dublin. <i>Comment:</i> This is addressed within the Building Code, Fire Code, and Flood Plain Ordinance. The City currently applies State standards, not local requirements.	Completed	
Action D-19—Reduce hazard vulnerabilities for City owned building and public facilities throughout Dublin. Continue City's Injury and Illness Prevention Program and Safety Plan of Action including regular facility inspections including office spaces to eliminate hazards. <i>Comment:</i> Ongoing. The Injury and Illness Prevention Program and Safety Plan of Action continue annually with regular facility inspections.	Carried over to updated plan	DUB-12

Action Item from Previous Plan	Status of Action	New Action #
Action D-20—Collaborate with Dublin San Ramon Services District (DSRSD), Zone 7, local, state, regional and federal partners to increase the security of Dublin's water supply from climate change impacts. Continue to encourage private and public water recycling, gray water use, and ensure compliance with State's Water Efficient Landscape Ordinance and Bay Friendly Landscaping Guidelines. <i>Comment: The City utilizes recycled water for the maintenance of its public parks and facility landscaping. However, DSRSD and Zone 7 are the appropriate entities to increase security of Dublin's water supply. The City would prefer listed action items be more explicit around the roles and activities the City can undertake itself.</i>	Removed; no longer feasible	
Action D-21—Protect vulnerable electric systems and facilities and build resiliency so disruption to the system is minimized during and following disasters. Ensure adequate redundancy in the form of photovoltaic generation, battery storage systems, energy efficiency, and mobile generators including fuel is available to maintain critical facilities. <i>Comment: In progress and estimated to be completed in 2023. The City of Dublin Five-Year Capital Improvement Program 2022-2027 includes a project, G10121 Citywide Energy Improvements. This project will increase energy efficiency and resiliency at several City buildings and street intersections. Project improvements include, but are not limited to, installing, or enlarging solar PV electricity generation, battery storage and backups, generators, hydrogen fuel cell traffic signal backup power supplies, upgraded HVAC and lighting systems and controls.</i>	Completed	
Action D-22—Conduct ongoing training for City Personnel to ensure they have necessary training and equipment to deal with a hazard (including natural and man-made disasters); Test and train City Disaster Service Workers and those assigned to Emergency Operations Center (R.A.C.E.S.); pre-screen, train and educate Disaster Services Volunteers for same. <i>Comment: The City typically provides annual disaster preparedness and emergency operations training each year, typically during the month of October in collaboration with the Alameda County Fire Department. New employees are required to take basic SEMS/NIMS and ICS courses.</i>	Carried over to updated plan	DUB-13

1.9 HAZARD MITIGATION ACTION PLAN

Table 1-14 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 1-15 identifies the priority for each action. Table 1-16 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 1-14. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
Action DUB-1—Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas. <i>Hazards Mitigated: Dam Failure, Earthquake, Flood, Landslide, Severe Weather, Wildfire</i>	Existing 4, 5, 6, 10	City of Dublin Public Works	N/A	High	HMGP, BRIC, FMA	Long-term
Action DUB-2—Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, as feasible. <i>Hazards Mitigated: Dam Failure, Drought, Earthquake, Flood, Landslide, Severe Weather, Wildfire</i>	Both 1, 2, 5, 8, 10, 11, 12	City of Dublin Community Development	N/A	Low	Staff Time, General Funds	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
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Action DUB-3—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan with ongoing participation and cooperation among planning partners.

Hazards Mitigated: Dam Failure, Drought, Earthquake, Flood, Landslide, Severe Weather, Wildfire

Both	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	City of Dublin City Manager's Office / Disaster Preparedness	All City of Dublin departments identified as lead or support agencies	Low	Staff Time, General Funds	Ongoing
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Action DUB-4—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:

- Enforce the flood damage prevention ordinance.
- Participate in floodplain identification and mapping updates.
- Provide public assistance/information on floodplain requirements and impacts.

Hazards Mitigated: Dam Failure, Flood

Both	1, 4, 6, 8, 11	City of Dublin Community Development	City of Dublin Public Works	Low	Staff Time, General Funds	Ongoing
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Action DUB-5—Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following:

- Conduct a Climate Adaptation Evaluation
- Develop a Climate Adaptation Plan

Hazards Mitigated: Drought, Flood, Landslide, Severe Weather, Wildfire

Both	1, 2, 8, 9, 12	City of Dublin Public Works / Environmental Services	N/A	Low	Staff Time, General Funds	Short-term
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Action DUB-6—Coordinate with existing GHADs, as applicable, on the mitigation of geological hazards, including landslides.

Hazards Mitigated: Landslide, Earthquake

Both	1, 8, 10	City of Dublin Public Works	GHADs	Low	Staff Time, GHAD and HMGP, BRIC and other grants	Ongoing
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Action DUB-7—Complete a Citywide Street Storm Drain Condition Assessment.

Hazards Mitigated: Flood, Severe Weather

Existing	1, 4, 8, 10	City of Dublin Public Works	N/A	High	Staff Time, Capital Project with general funds	Short-term
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Action DUB-8—Utilize vegetation management to reduce risks in existing development and open space land.

Hazards Mitigated: Flood, Landslide, Severe Weather, Wildfire

Existing	10, 12	City of Dublin Fire Prevention Bureau & Public Works	Alameda County Fire Department, Private Property Owners, East Bay Regional Park District	Low	Staff Time	Ongoing
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Action DUB-9—Reduce hazard vulnerabilities for non-City owned building throughout Dublin. Continually update and adopt building standard codes to incorporate the latest knowledge and design standard to protect people and property against known seismic, fire, flood and landslide risk in both structural and non-structural building and site components.

Hazards Mitigated: Earthquake, Flood, Landslide, Severe Weather, Wildfire

Both	1, 2, 6, 8, 10, 11	City of Dublin Community Development / Building	Alameda County Fire Department, International Code Council	Low	Staff Time	Ongoing
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Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
Action DUB-10 —Provide outreach activities related to hazard mitigation and disaster preparedness. Update and maintain Tri-Valley Hazard Mitigation Plan website, create printed materials for public and business owners. Maintain an emergency notification system (AC Alert) to deliver community alerts.						
<u>Hazards Mitigated:</u> Dam failure, Drought, Earthquake, Flood, Landslide, Severe Weather, Wildfire	Both 3, 7, 9	City of Dublin City Manager's Office / Disaster Preparedness	Alameda County Fire Department, Alameda County Sheriff's Office	Low	Staff Time, General Funds	Ongoing
Action DUB-11 —Coordinate disaster preparation and mitigation practices with private sector, public institutions, and other public bodies. Seek guidance from Cal OES and Alameda County OES how best to work and educate private sector about business resilience.						
<u>Hazards Mitigated:</u> Dam failure, Drought, Earthquake, Flood, Landslide, Severe Weather, Wildfire	Both 3, 7, 9	City of Dublin City Manager's Office / Disaster Preparedness	Alameda County Fire Department, Alameda County Sheriff's Office	Low	Staff Time, General Funds	Ongoing
Action DUB-12 —Reduce hazard vulnerabilities for City owned building and public facilities throughout Dublin. Continue City's Injury and Illness Prevention Program and Safety Plan of Action including regular facility inspections including office spaces to eliminate hazards.						
<u>Hazards Mitigated:</u> Earthquake, Severe Weather	Both 1, 5, 8	City of Dublin Human Resources	Alameda County Fire Department, City of Dublin Safety Consultant	Medium	Staff Time, General Funds	Ongoing
Action DUB-13 —Conduct ongoing annual training for City Personnel to ensure they have necessary training and equipment to deal with a hazard (including natural and man-made disasters); Test and train City Disaster Service Workers and those assigned to Emergency Operations Center; pre-screen, train and educate Disaster Services Volunteers for same.						
<u>Hazards Mitigated:</u> Dam Failure, Earthquake, Flood, Landslide, Severe Weather, Wildfire	Both 1, 7, 10	City of Dublin City Manager's Office / Disaster Preparedness	Alameda County Fire Department; Alameda County Sheriff's Office	Low	Staff Time, General Funds	Ongoing
Action DUB-14 —Update the City's Continuity of Operations Annex to the Emergency Operations Plan						
<u>Hazards Mitigated:</u> Dam Failure, Drought, Earthquake, Flood, Landslide, Severe Weather, Wildfire	Existing 1, 7	City of Dublin City Manager's Office / Disaster Preparedness	Alameda County Fire Department	Low	Staff Time, General Funds	Short-term
Action DUB-15 —Update the City of Dublin Post-Disaster Recovery Plan Annex to the Emergency Operations Plan						
<u>Hazards Mitigated:</u> Dam Failure, Drought, Earthquake, Flood, Landslide, Severe Weather, Wildfire	Existing 1, 7	City of Dublin City Manager's Office / Disaster Preparedness	Alameda County Fire Department	Low	Staff Time, General Funds	Short-term
Action DUB-16 —Offer GIS Hazard Mapping online for residents and design professionals. Expand GIS capabilities to track permits by hazard zone.						
<u>Hazards Mitigated:</u> Dam Failure, Earthquake, Flood, Landslide, Severe Weather, Wildfire	Both 1, 7, 9	City of Dublin City Manager's Office / Information Technology	N/A	Medium	Staff Time, General Funds, BRIC	Short-term
Action DUB-17 —Streamline the permitting process to rebuild residential and commercial structures following disaster; prepare an informational handout for property owners and contractors on steps to rebuild following a major disaster						
<u>Hazards Mitigated:</u> Dam Failure, Earthquake, Flood, Landslide, Severe Weather, Wildfire	Both 1, 2	City of Dublin Community Development	N/A	Low	Staff Time, General Funds	Short-Term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action DUB-18 —Pursue a long-term maintenance permit for riparian areas from the appropriate resource agencies to allow the city to be able to proactively maintain riparian and drainage courses.						
<i>Hazards Mitigated:</i> Flood, Severe Weather						
Both	5, 8, 10,12	City of Dublin Public Works	N/A	Low	Staff Time, General Funds	Long-Term

Action DUB-19—Identify and construct landslide prevention and protection projects for the areas with historic recurring slides including along Dublin Blvd. (between Silvergate and Inspiration Drive) and along Crossridge and the surrounding streets around the Iron Horse Open Space Park.

Hazards Mitigated: Earthquake, Landslide, Flood, Severe Weather, Wildfire

Both	5, 8, 10, 12	City of Dublin Public Works	N/A	High	Staff Time, General Funds, HMGP, BRIC	Short-Term
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Action DUB-20—Explore the feasibility of developing a Substantial Damage Response/Management Plan and develop the plan if feasible.

Hazards Mitigated: Flood, Severe Weather

Both	1, 4, 5, 6, 8, 10	City of Dublin City Manager's Office / Disaster Preparedness, Community Development Department, Building and Safety Division	N/A	Low	Staff Time, California Adaptation Grant Program	Short-Term
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Action DUB-21—Explore the feasibility of identifying socially vulnerable populations at the census block level. If deemed feasible, develop the dataset for future planning efforts.

Hazards Mitigated: Dam Failure, Drought, Earthquake, Flood, Landslide, Severe Weather, Wildfire

Both	1, 9, 10, 12	City of Dublin City Manager's Office / Disaster Preparedness, Community Development Department, Building and Safety Division	N/A	Low	Staff Time, General Fund	Short-Term
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a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date

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

Table 1-15. Mitigation Action Priority

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

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

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

Table 1-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
High-Risk Hazards								
Earthquake	2, 9, 17	1, 6, 9, 12, 19	10, 11, 16	20	10	6, 20		2, 3, 6, 11, 13, 14, 15, 16, 17, 21
Medium-Risk Hazards								
Severe Weather	2, 7, 9, 17	1, 7, 8, 9, 12, 19	10, 11, 16	8, 18, 20	10	19		2, 3, 5, 7, 11, 13, 14, 15, 16, 17, 20, 21
Landslide	2, 9, 17	1, 6, 8, 9, 19	10, 11, 16	8, 20	10	6, 19		2, 3, 5, 6, 11, 13, 14, 15, 16, 17, 21
Low-Risk Hazards								
Flood	2, 4, 7, 9, 17	1, 7, 8, 9, 19	4, 10, 11, 16	8, 18, 20	10	19		2, 3, 5, 7, 11, 13, 14, 15, 16, 17, 20, 21
Wildfire	2, 9, 17	1, 8, 9, 19	10, 11, 16	8, 20	10	19		2, 3, 5, 11, 13, 14, 15, 16, 17, 21
Drought	2	1	10, 11		10			2, 3, 5, 11, 14, 17
Dam Failure	2, 4, 17	1	4, 10, 11, 16		10			2, 3, 11, 13, 14, 15, 16, 17, 21

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

1.10 PUBLIC OUTREACH

Table 1-17 lists public outreach activities for this jurisdiction.

Table 1-17. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
News Flash Email	August 22, 2022	1,076
Twitter Post	September 12, 2022	479
Twitter Post	September 29, 2022	466
Facebook Post	September 12, 2022	3
Facebook Post	September 29, 2022	173

1.11 INFORMATION SOURCES USED FOR THIS ANNEX

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

- **City of Dublin Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **City of Dublin Floodplain Management Regulations Ordinance**—The Floodplain Management Regulations ordinance was reviewed for compliance with the National Flood Insurance Program.
- **City of Dublin Five-Year Capital Improvement Program 2022-2027**—The Capital Improvement Program was reviewed for identifying information for this annex, including existing and future capital projects to be incorporated.
- **City of Dublin Climate Action Plan 2030 & Beyond**—The Climate Action Plan was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Cities of Dublin and Pleasanton Disaster Debris Management Plan**—The Disaster Debris Management Plan was reviewed for consistency and identifying information for this annex.
- **City of Dublin Emergency Operations Plan**—The Emergency Operations Plan was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **City of Dublin General Plan: Safety Element**—The Safety Element was reviewed for the full capability assessment and for identifying opportunities for action plan integration.

The following outside resources and references were reviewed:

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

DUBLIN CRITICAL FACILITIES (MAP 1 OF 2)

- Health and Medical
- Food, Water, Shelter
- Safety and Security
- City Boundary
- County Boundary
- Dublin San Ramon Services District

- +— Rail
- Interstate
- Expressway
- Major Road
- Local Road

0 1 2 Miles

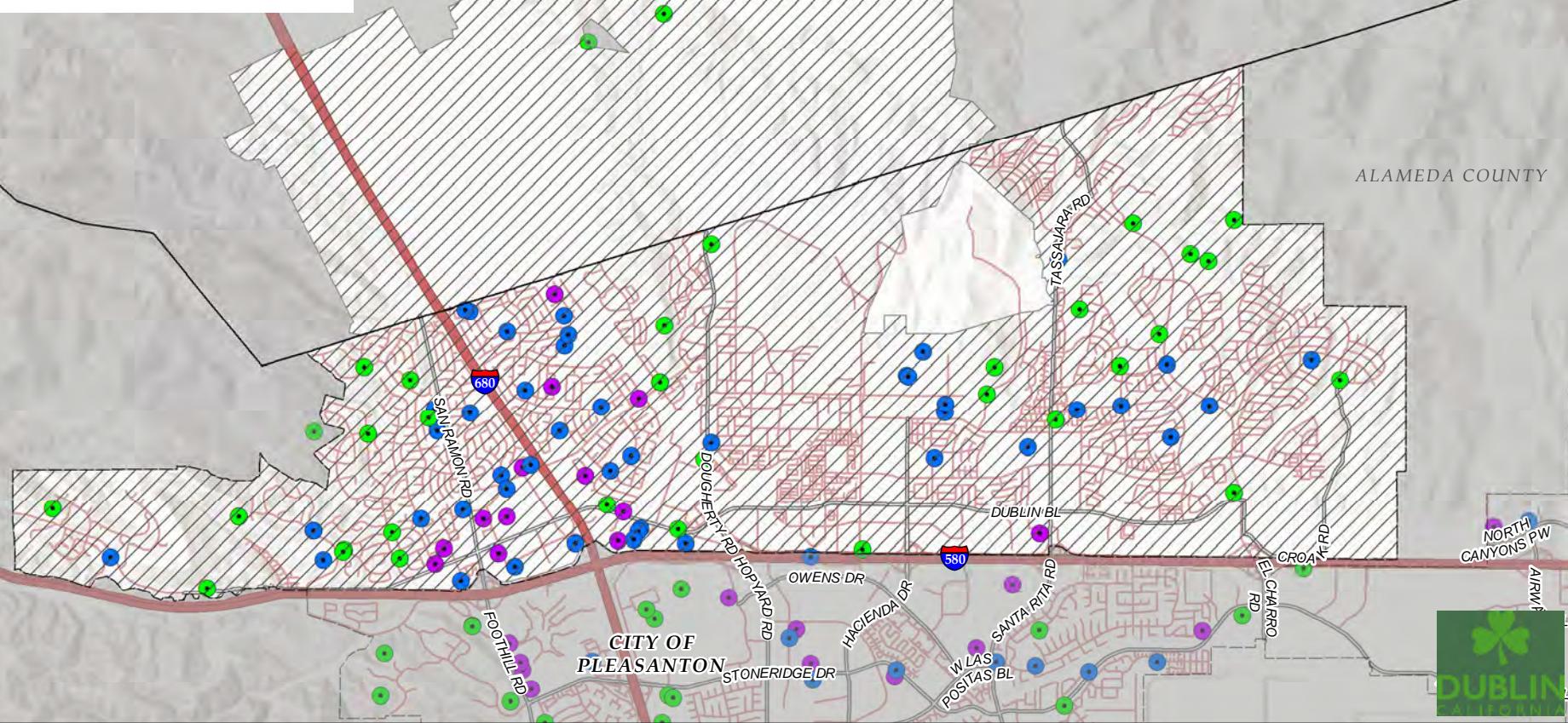
Data Sources: City of Dublin, City of Livermore, City of Pleasanton, Dublin San Ramon Services District, Alameda County, ESRI



Map created for the 2023 Tri-Valley Local Hazard Mitigation Plan

CONTRA COSTA COUNTY

ALAMEDA COUNTY



DUBLIN CRITICAL FACILITIES (MAP 2 OF 2)

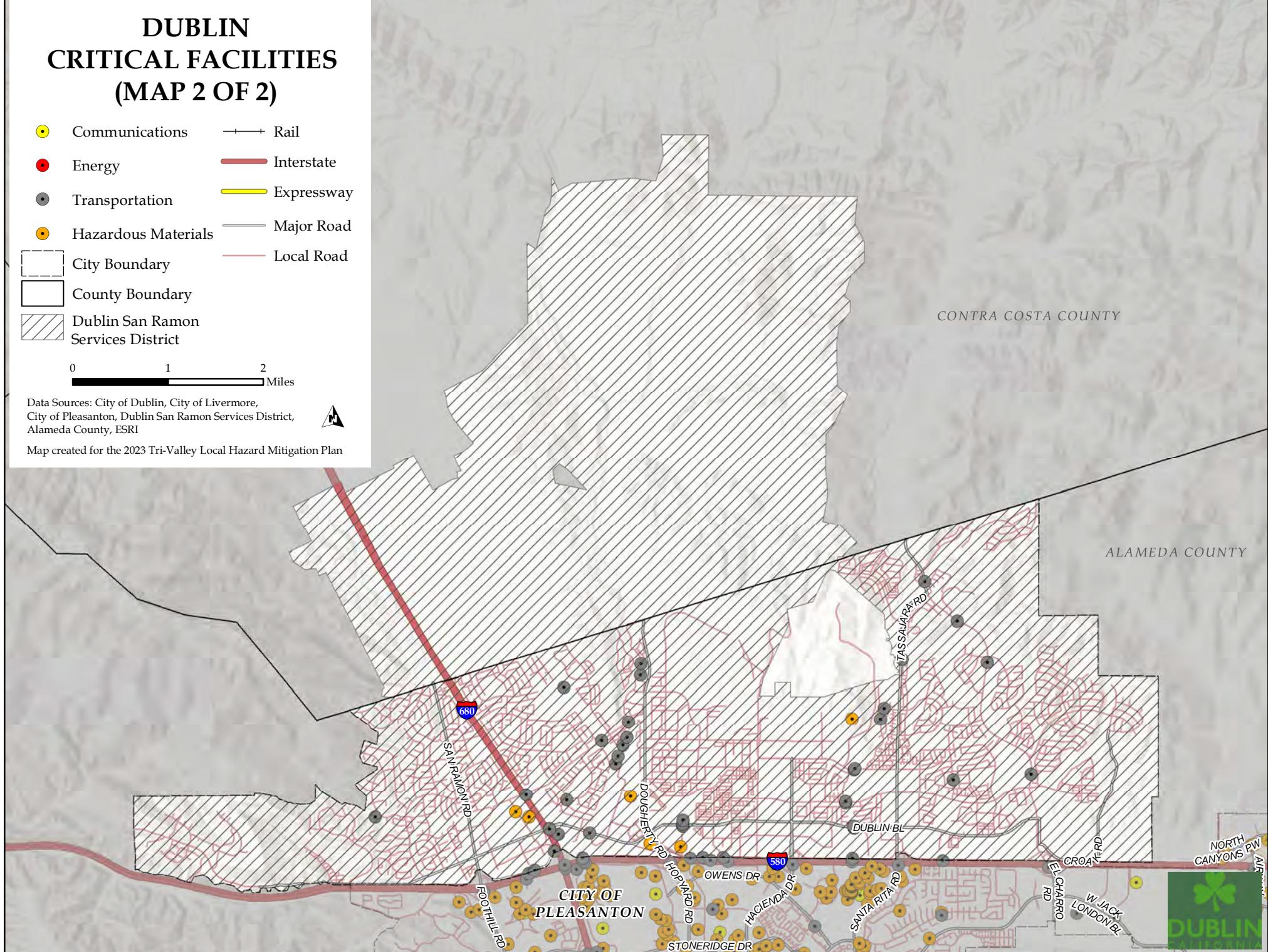
- Communications
- Energy
- Transportation
- Hazardous Materials
- City Boundary
- County Boundary
- Dublin San Ramon Services District

- +— Rail
- +— Interstate
- +— Expressway
- +— Major Road
- +— Local Road

0 1 2 Miles

Data Sources: City of Dublin, City of Livermore, City of Pleasanton, Dublin San Ramon Services District, Alameda County, ESRI

Map created for the 2023 Tri-Valley Local Hazard Mitigation Plan



DUBLIN DAM FAILURE HAZARD

City Boundary

Rail

Dublin San

Interstate

Ramon Services
District

Expressway

Inundation Area

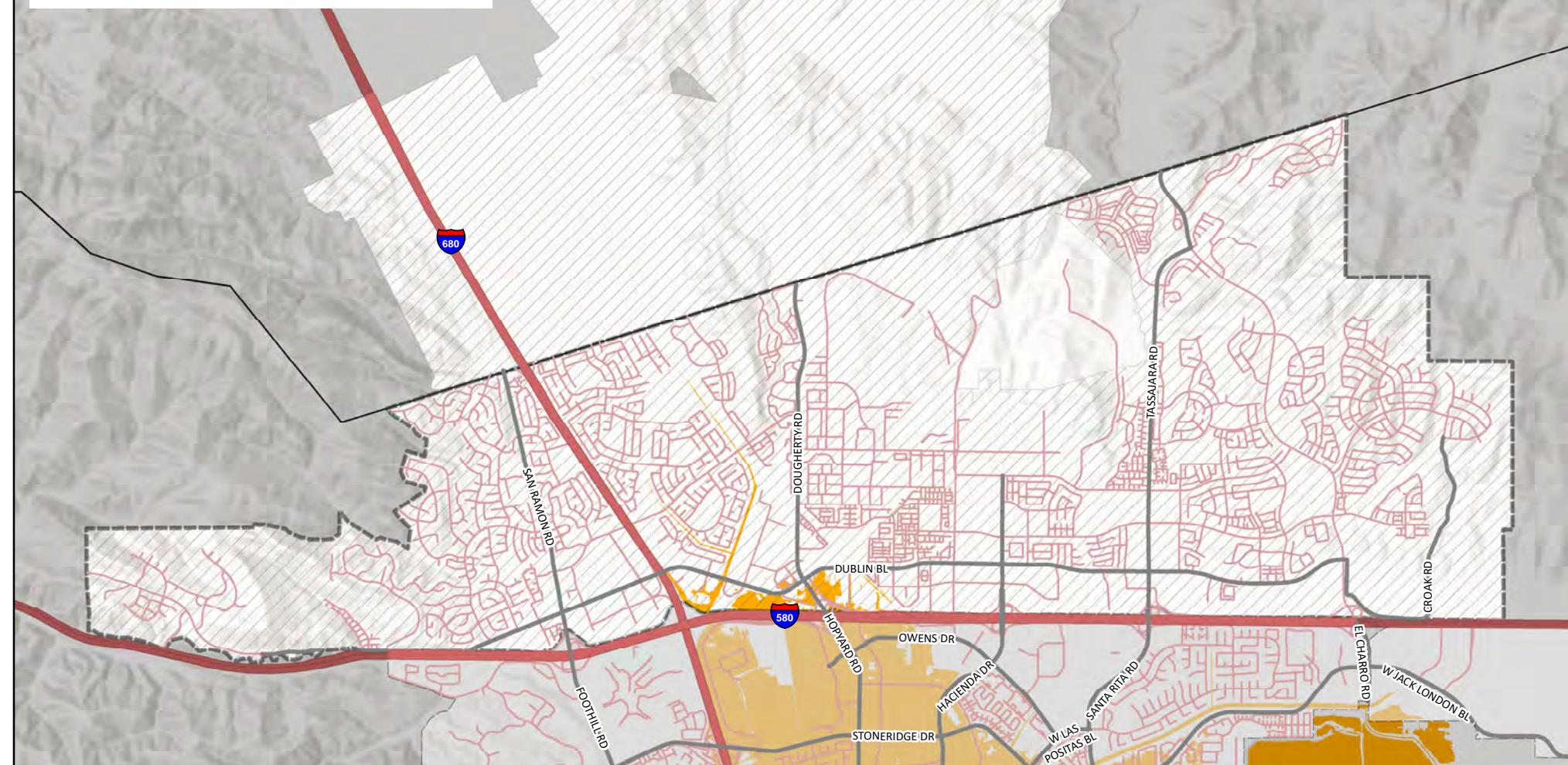
Major Road

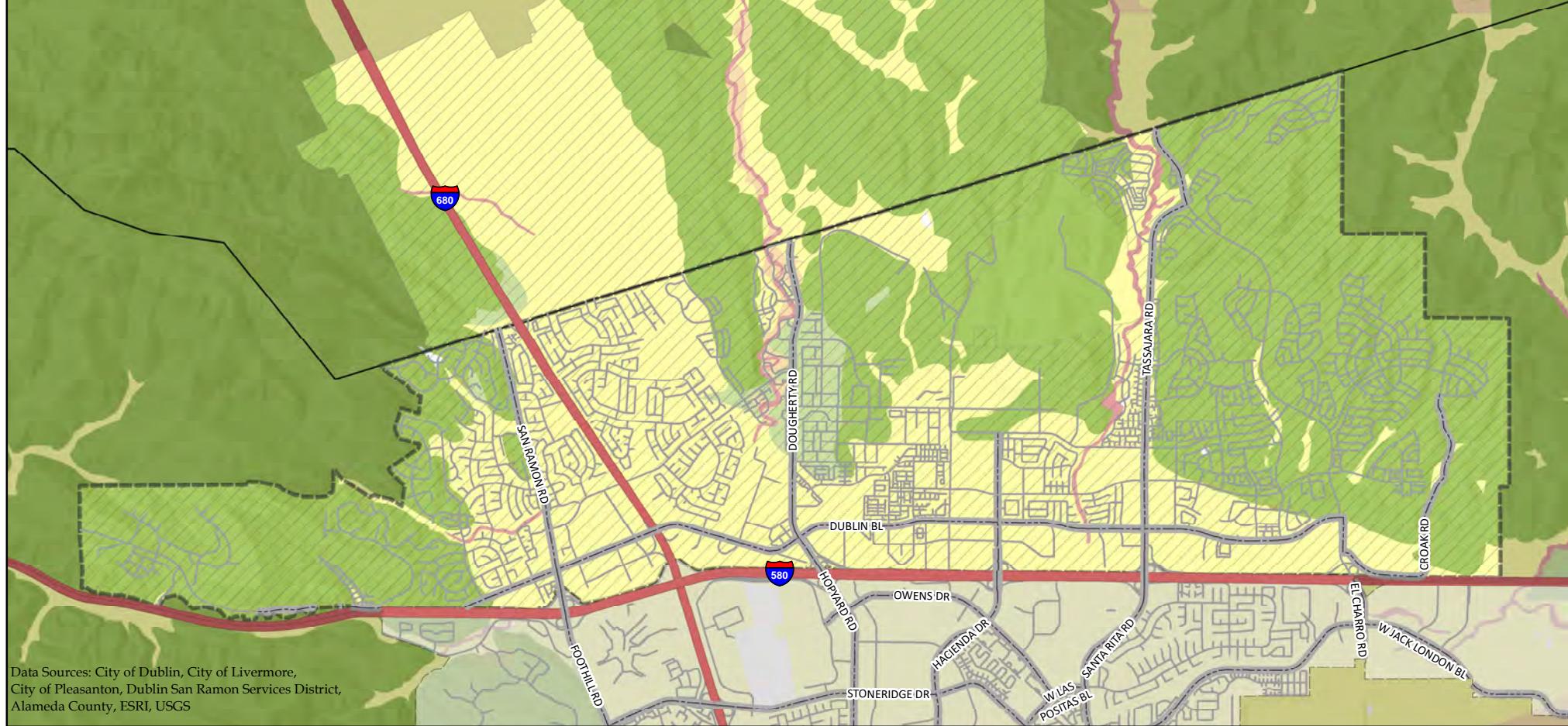
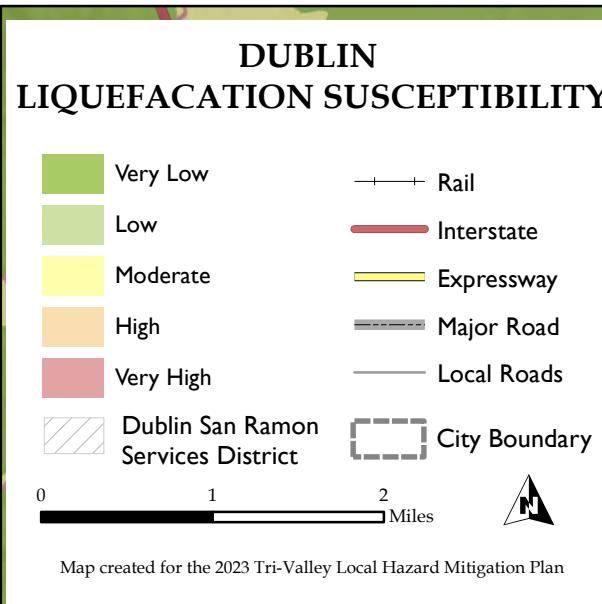
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Data Sources: City of Dublin, City of Livermore,
City of Pleasanton, Dublin San Ramon Services District,
Alameda County, ESRI, CA DWR

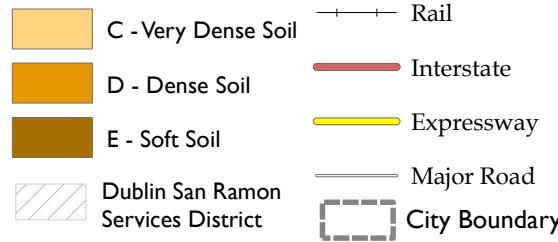


Map created for the 2023 Tri-Valley Local Hazard Mitigation Plan





DUBLIN NEHRP SOILS

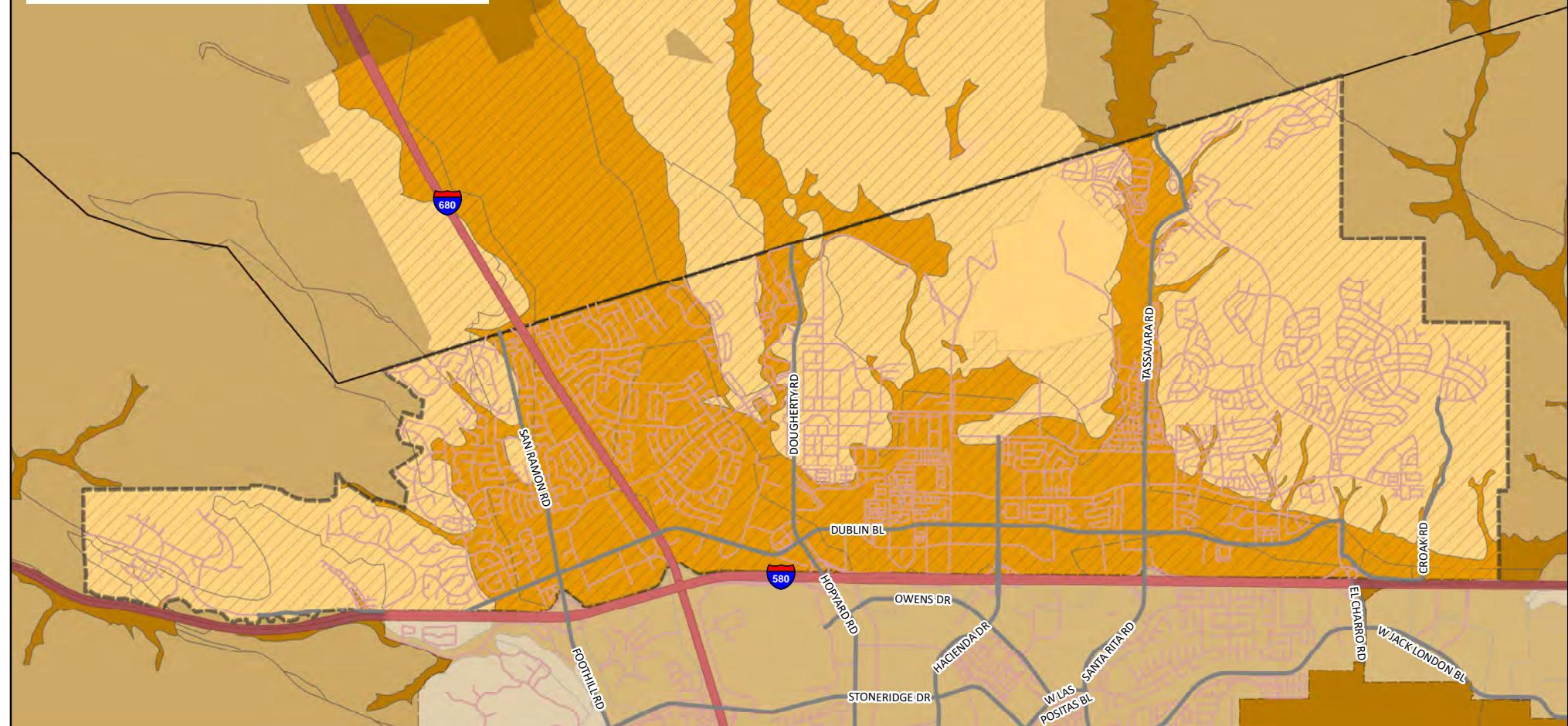


0 1 2 Miles



Data Sources: City of Dublin, City of Livermore, City of Pleasanton, Dublin San Ramon Services District, Alameda County, ESRI, USGS

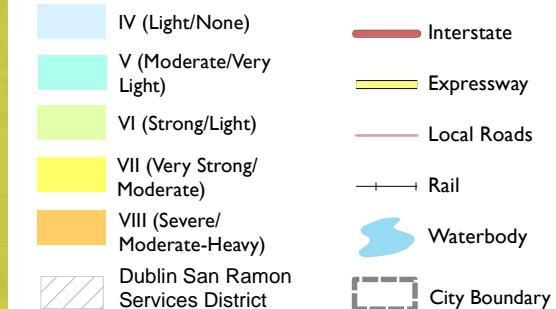
Map created for the 2023 Tri-Valley Local Hazard Mitigation Plan



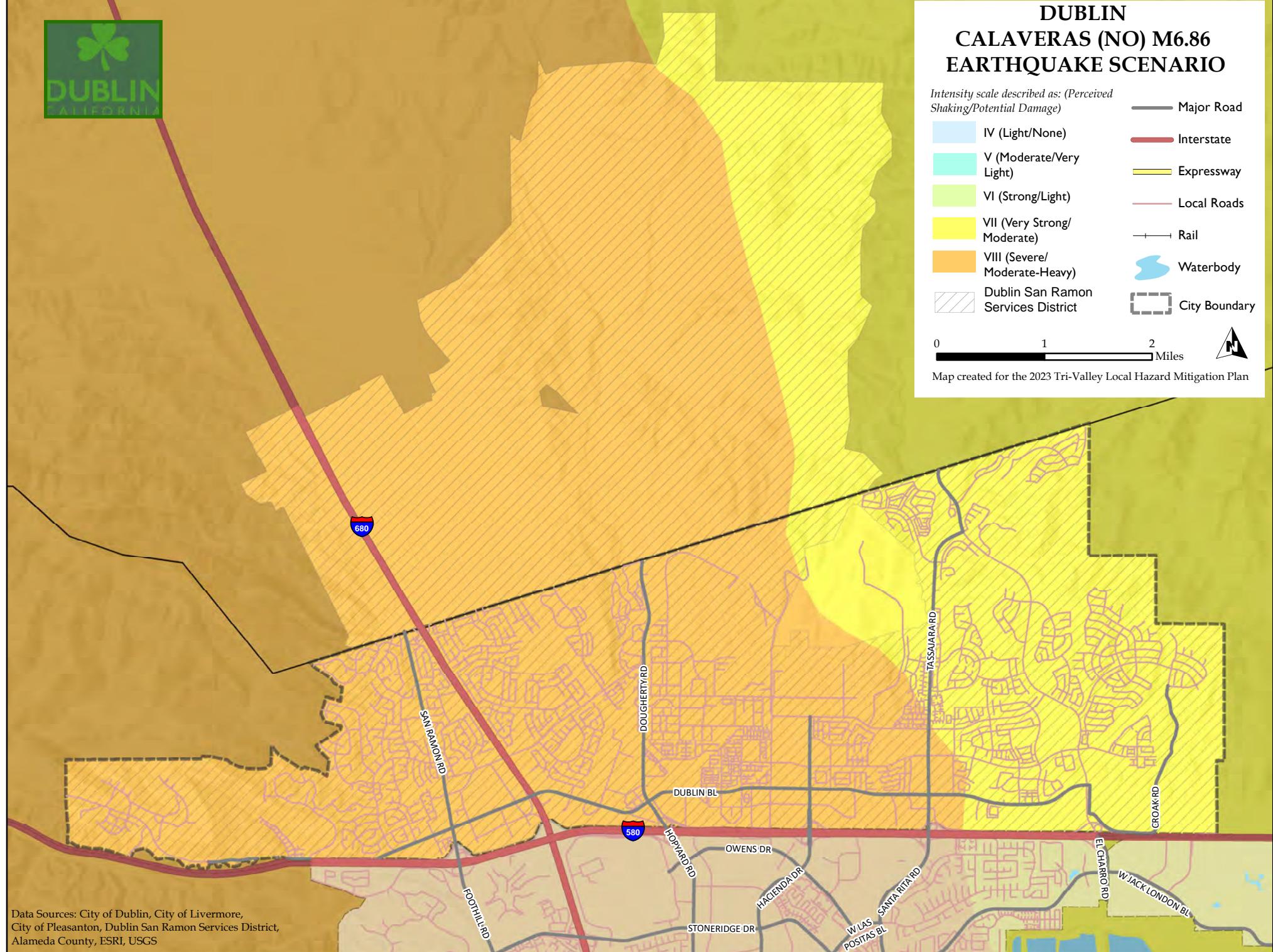


DUBLIN CALAVERAS (NO) M6.86 EARTHQUAKE SCENARIO

Intensity scale described as: (Perceived Shaking/Potential Damage)



Map created for the 2023 Tri-Valley Local Hazard Mitigation Plan

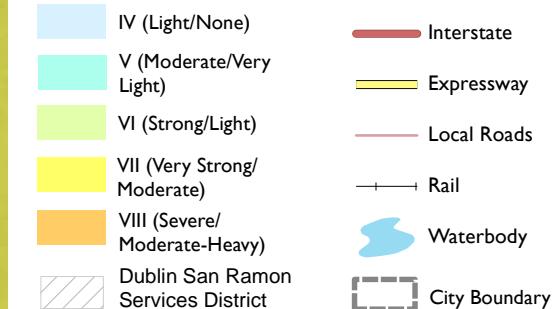


Data Sources: City of Dublin, City of Livermore, City of Pleasanton, Dublin San Ramon Services District, Alameda County, ESRI, USGS



DUBLIN GREENVILLE (NO) M6.86 EARTHQUAKE SCENARIO

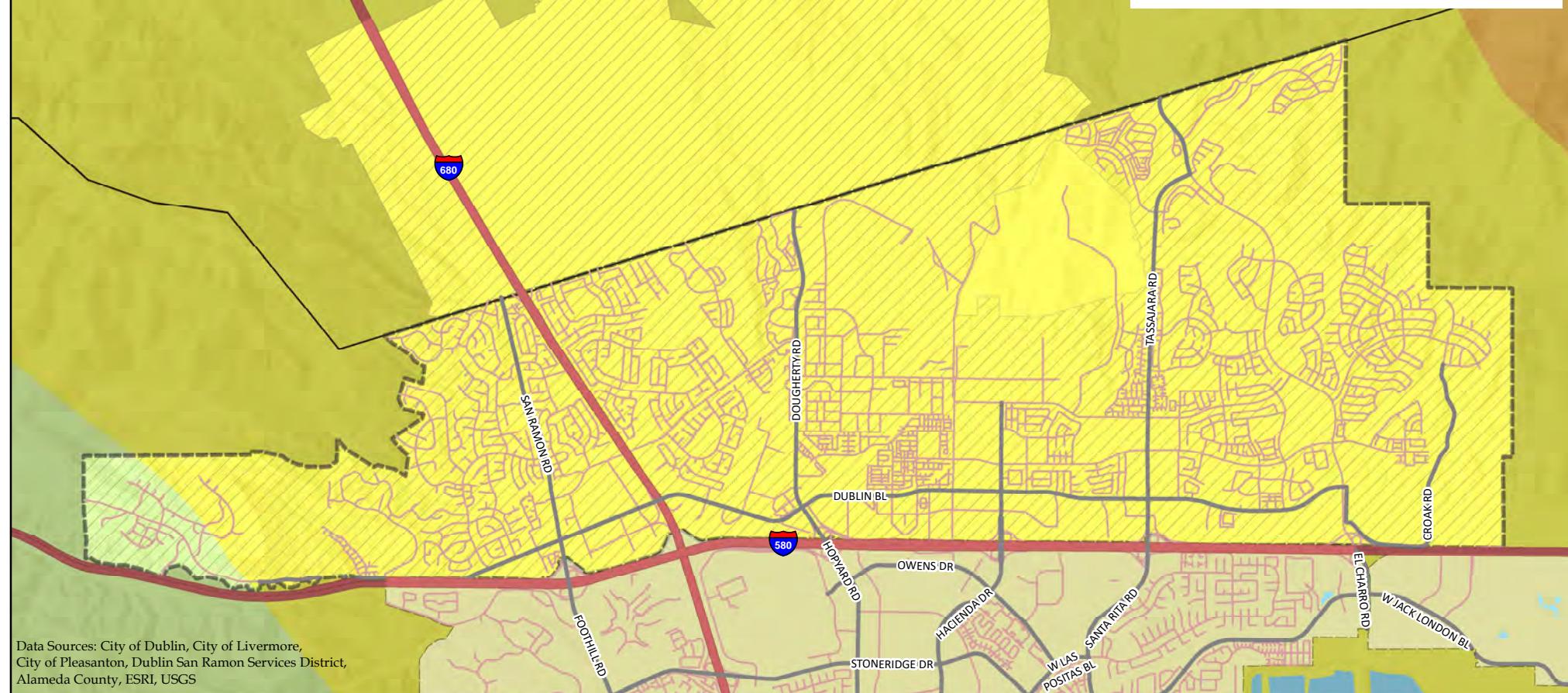
Intensity scale described as: (Perceived Shaking/Potential Damage)



0 1 2 Miles



Map created for the 2023 Tri-Valley Local Hazard Mitigation Plan

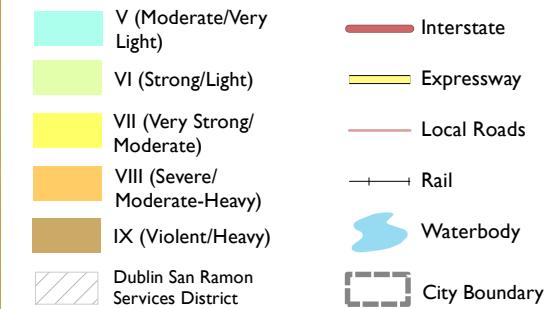


Data Sources: City of Dublin, City of Livermore, City of Pleasanton, Dublin San Ramon Services District, Alameda County, ESRI, USGS

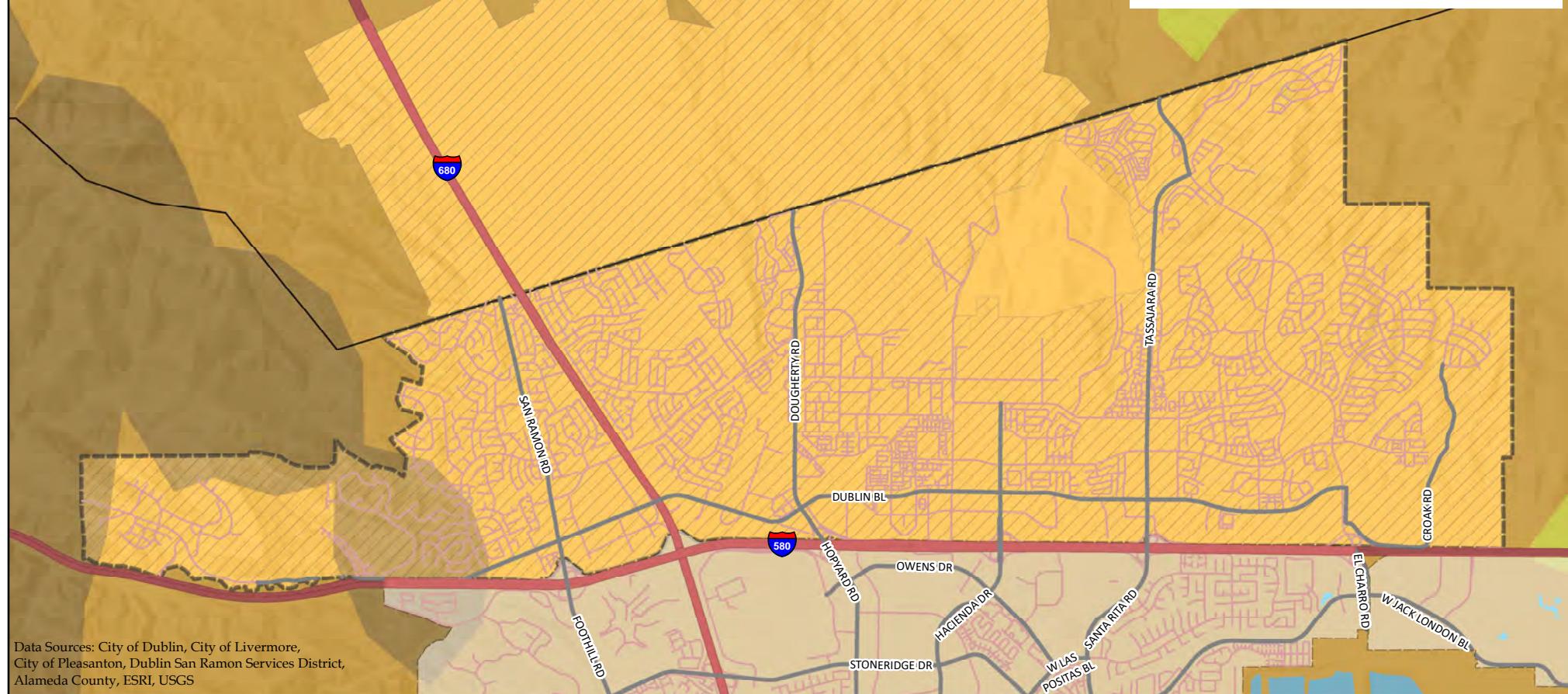


DUBLIN HAYWIRED (NO) M6.86 EARTHQUAKE SCENARIO

Intensity scale described as: (Perceived Shaking/Potential Damage)



Map created for the 2023 Tri-Valley Local Hazard Mitigation Plan



Data Sources: City of Dublin, City of Livermore, City of Pleasanton, Dublin San Ramon Services District, Alameda County, ESRI, USGS



DUBLIN LAS POSITAS (NO) M6.5 EARTHQUAKE SCENARIO

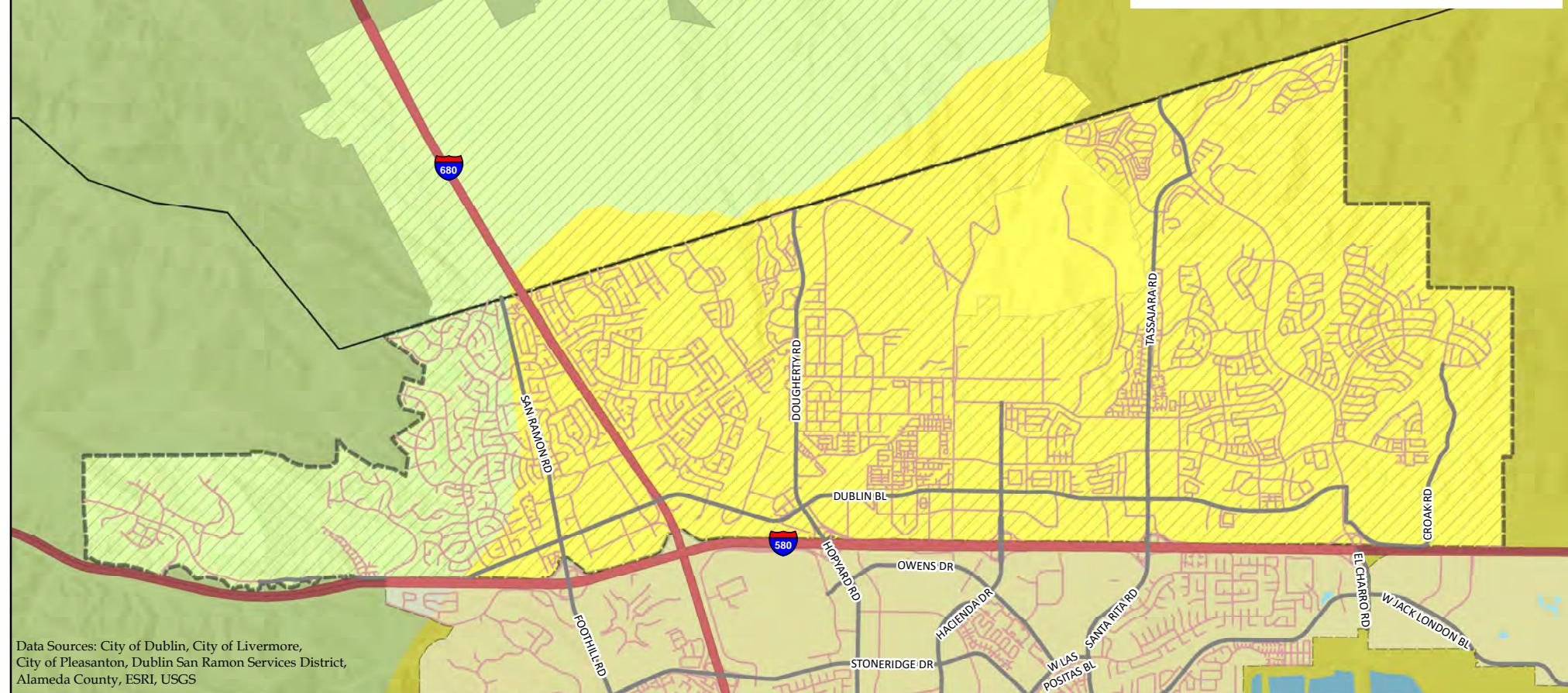
Intensity scale described as: (Perceived Shaking/Potential Damage)



0 1 2 Miles



Map created for the 2023 Tri-Valley Local Hazard Mitigation Plan



Data Sources: City of Dublin, City of Livermore, City of Pleasanton, Dublin San Ramon Services District, Alameda County, ESRI, USGS



DUBLIN MT. DIABLO (NO) M6.5 EARTHQUAKE SCENARIO

Intensity scale described as: (Perceived Shaking/Potential Damage)



0 1 2 Miles

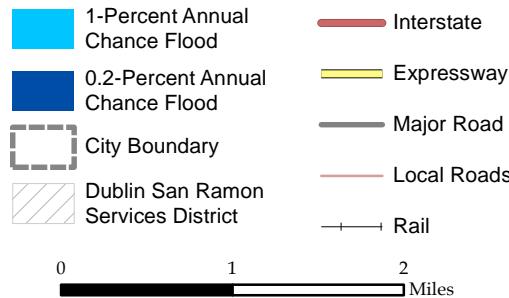


Map created for the 2023 Tri-Valley Local Hazard Mitigation Plan



Data Sources: City of Dublin, City of Livermore, City of Pleasanton, Dublin San Ramon Services District, Alameda County, ESRI, USGS

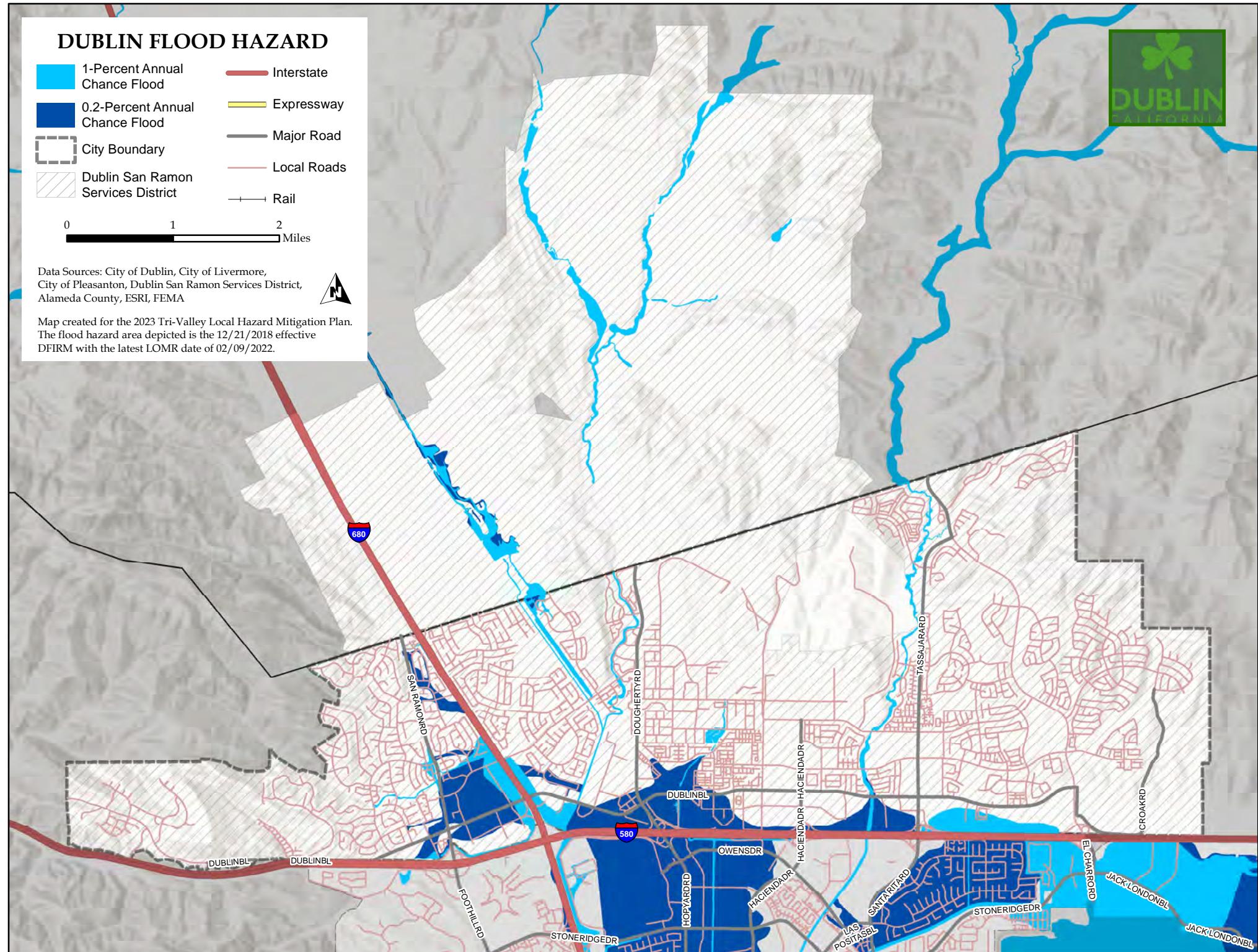
DUBLIN FLOOD HAZARD



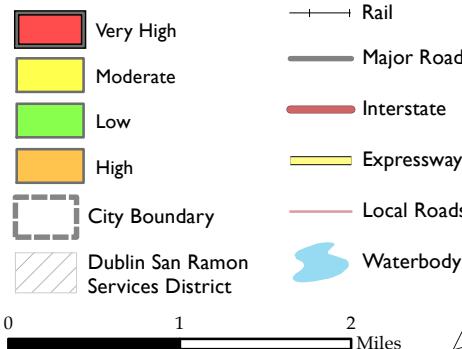
Data Sources: City of Dublin, City of Livermore, City of Pleasanton, Dublin San Ramon Services District, Alameda County, ESRI, FEMA



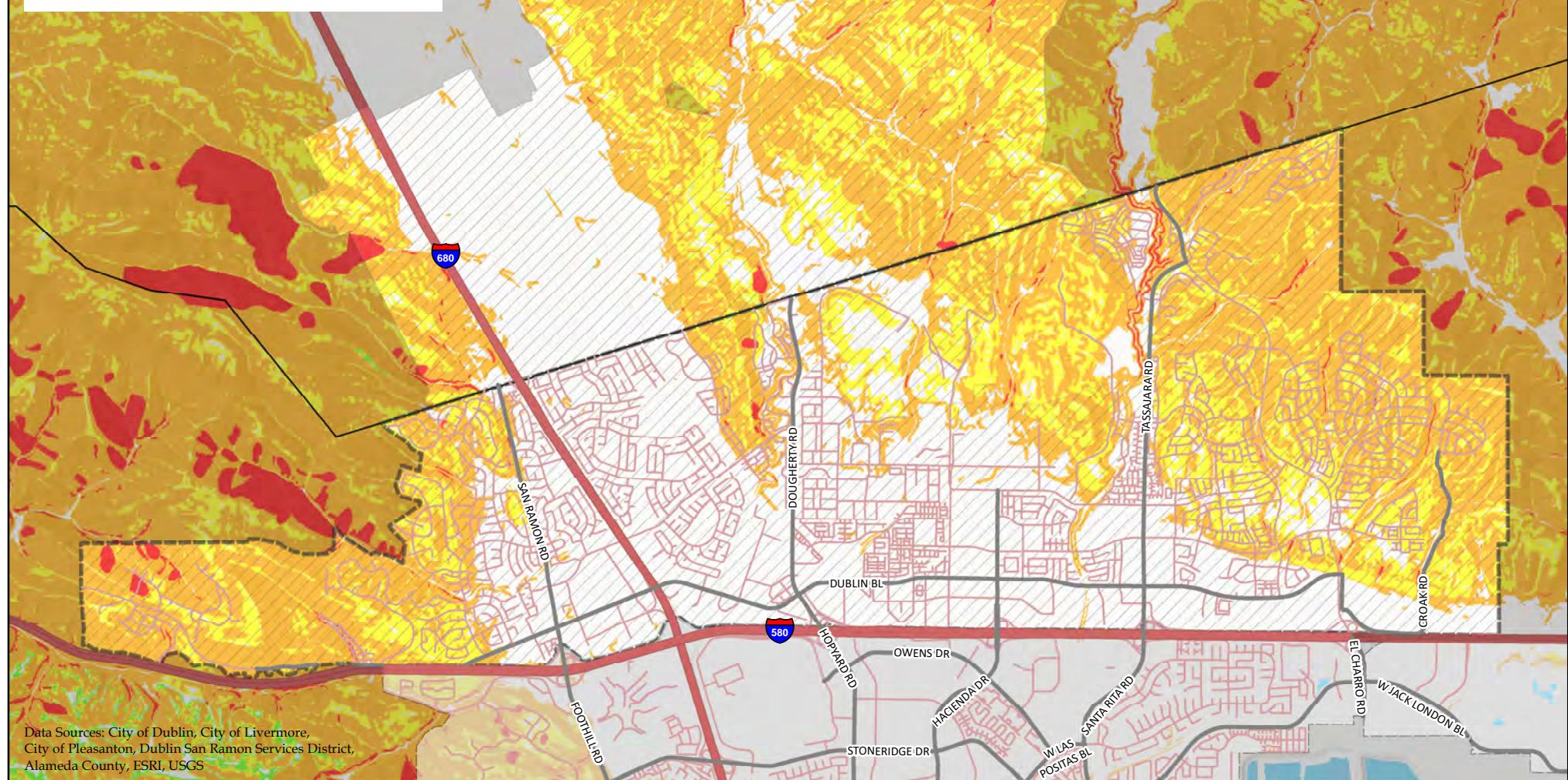
Map created for the 2023 Tri-Valley Local Hazard Mitigation Plan. The flood hazard area depicted is the 12/21/2018 effective DFIRM with the latest LOMR date of 02/09/2022.



DUBLIN SUSCEPTIBILITY TO DEEP-SEATED LANDSLIDE



Map created for the 2023 Tri-Valley Local Hazard Mitigation Plan



Data Sources: City of Dublin, City of Livermore, City of Pleasanton, Dublin San Ramon Services District, Alameda County, ESRI, USGS

WILDFIRE HAZARD SEVERITY ZONES

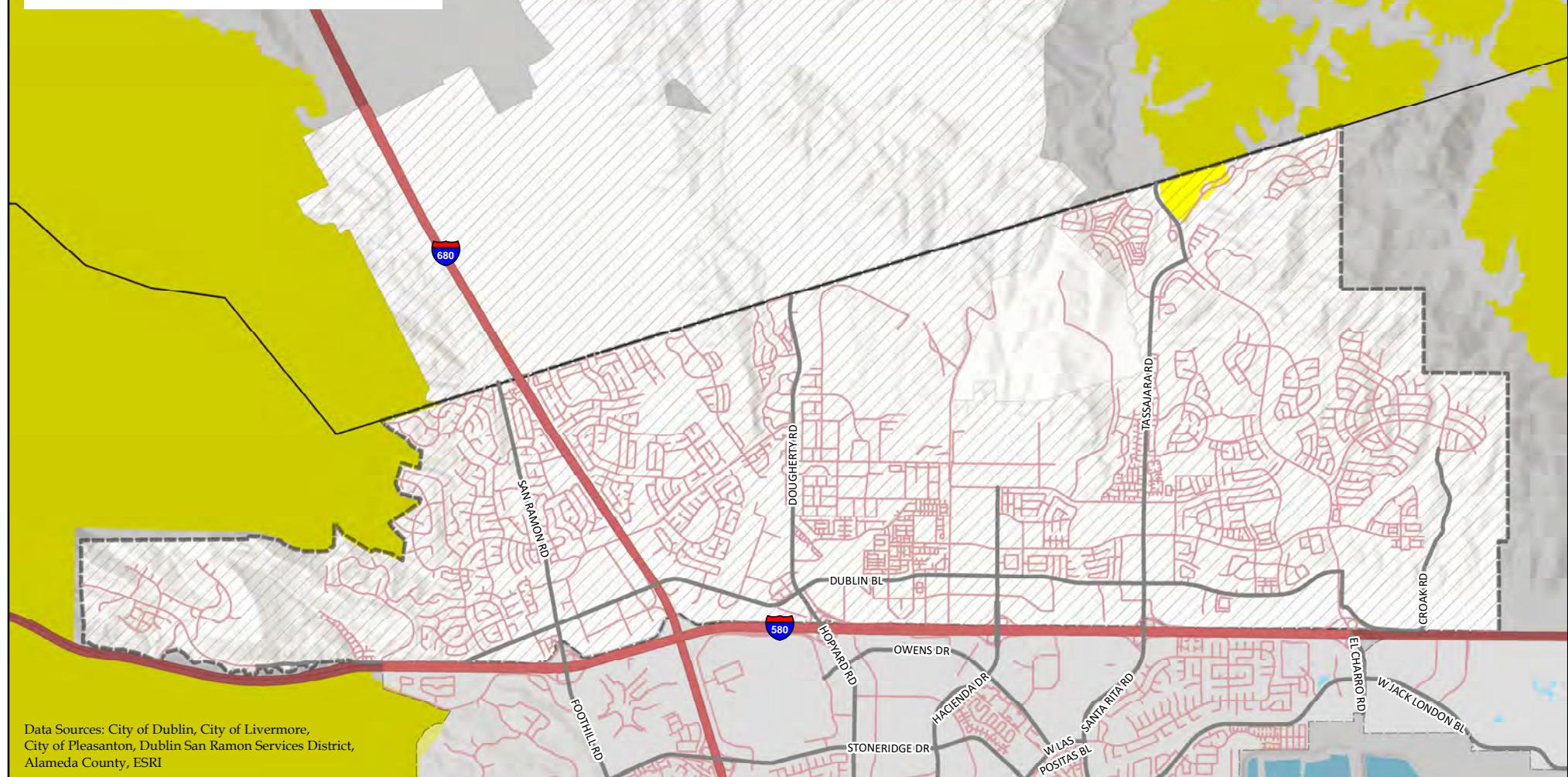
Fire Severity Zone

Very High	Major Road
High	Interstate
City Boundary	Expressway
Dublin San Ramon Services District	Local Roads
Rail	Waterbody

0 1 2 Miles



Map created for the 2023 Tri-Valley Local Hazard Mitigation Plan



Data Sources: City of Dublin, City of Livermore, City of Pleasanton, Dublin San Ramon Services District, Alameda County, ESRI

2. CITY OF LIVERMORE

2.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Jake Potter, Associate Planner
1052 South Livermore Avenue
Livermore, CA, 94550
(925) 960-4548
japotter@LivermoreCA.gov

Alternate Point of Contact

Susan Frost, Special Projects Coordinator
1052 South Livermore Avenue
Livermore, CA, 94550
(925) 960-4434
smfrost@LivermoreCA.gov

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 2-1.

Table 2-1. Local Hazard Mitigation Planning Team Members

Name	Title
Steve Riley	Principal Planner
Ben Murray	Principal Planner
Susan Frost	Special Projects Coordinator
Jake Potter	Associate Planner
Herbert Cole	Emergency Manager
Anthony Smith	Water Resources Division Manager
Bob Vinn	City Engineer
Edward Reyes	Assistant Civil Engineer
Rick Teczon	Senior Civil Engineer
Tricia Pontau	Senior Planner
Jana Ruijgrok-Neubauerova	Special Projects Coordinator
Joe Prime	Maintenance and Golf Operations Manager
Tracy Hein	Livermore Pleasanton Fire Department Disaster Preparedness Manager
Aaron Lacey	LPFD Deputy Fire Chief
Ryan Rucker	LPFD Deputy Fire Chief/ Fire Marshal
Mallika Ramachandran	Assistant Engineer

2.2 JURISDICTION PROFILE

2.2.1 Location and Features

Livermore is located in the Livermore Valley in eastern Alameda County about 43 miles southeast of San Francisco, 30 miles southeast of Oakland, and 29 miles northeast of San Jose. The Livermore Valley is edged to

the north, south and east by rolling hills within which the urbanized area is located. Several creeks and arroyos traverse the city including Altamont Creek, Arroyo Seco, Arroyo Mocho, Arroyo Las Positas, Collier Canyon Creek and Arroyo del Valle. Livermore is bisected by Interstate 580 which runs east-west through Alameda County. The Union Pacific Railroad, which also serves the ACE train commuter rail service, roughly parallels the freeway to the south. The Livermore Municipal Airport, located on the western edge of the city, is a general aviation airport which primarily serves the Tri-Valley Area.

2.2.2 History

The City of Livermore was founded in 1869 by William Mendenhall. In the years leading up to incorporation in 1876, the Livermore Valley was used mainly for grazing land for cattle and sheep. Mendenhall named the city in honor of his friend Robert Livermore, a prominent rancher in the valley. Livermore's development as a city was based on the Western Pacific Railroad and the commerce the railroad brought with it, as well as cattle ranches and vineyards. Since its incorporation, Livermore has grown from its agricultural roots to a thriving suburban community. While retaining much of its agricultural heritage, Livermore now provides a variety of housing and employment opportunities. Major employers include Lawrence Livermore and Sandia National Laboratories, Valley Care Health Systems, US Foods and several local public agencies, including the City of Livermore, Livermore Area Recreation and Park District and the Livermore Valley Joint Unified School District.

2.2.3 Governance

The City of Livermore operates under the Council/Manager form of government. The Council, as the legislative body, represents the entire community and is empowered under the General Law of California to formulate city-wide policy. The city council is comprised of four council members and a mayor. Council members serve four-year terms, and the mayor serves a two-year term. The mayor is elected at-large; and beginning in 2020, council members are elected from districts. The city manager is appointed by the council and serves as the chief executive officer responsible for day-to-day administration of city affairs and implementation of council policies.

The city council assumes responsibility for the adoption of this plan; the city manager will oversee its implementation.

2.3 CURRENT TRENDS

2.3.1 Population

In January 2022, the population of Livermore was 86,149 (California Department of Finance). According to the U.S. Census Bureau, as of July 1, 2021, approximately 59% of Livermore's population was White alone, 21% was Hispanic, 13% was Asian alone, and 2% was Black alone. Further, approximately 23% of Livermore's population was under the age of 18, 13% were over the age of 65, and approximately 5% were below 65 years in age with a disability, based on 2021 U.S. Census Bureau records. According to Livermore's *2022 Point in Time Unsheltered and Sheltered Report*, there were 242 homeless individuals in the City as of February 23, 2022, including 174 unsheltered and 68 sheltered. Livermore's median household income (2016-2020) was \$131,664, the median home value (2016-2020; owner occupied) was \$806,100, and approximately 94% of those above the age of 25 held at least a high school diploma, according to July 1, 2021 U.S. Census Bureau data.

Although Livermore contains a highly educated, diverse, and high-income-earning populace, it does contain

vulnerable populations that could be more acutely impacted by local hazards like fire or flood. Such populations include children, the elderly, those with disabilities, and the homeless/ unsheltered.

2.3.2 Development

Under general plan policies, residential development is limited to an average range between 140 to 700 units per year. Due to the urban growth boundary, residential development has primarily been in-fill in recent years. In 2020, there were 32,390 households and 46,110 jobs in Livermore. The 2003 Livermore General Plan anticipates about 40,000 residential units and 86,000 jobs at buildout.

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

2.4 CHANGES IN PRIORITIES

The City's mitigation priorities have remained the same since the last mitigation plan update.

2.5 CAPABILITY ASSESSMENT

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

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

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

Table 2-2. Recent and Expected Future Development Trends

Criterion	Response																														
<p>Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan? If yes, give the estimated area annexed and estimated number of parcels or structures.</p>	<p>Yes</p> <p>Approximately 104 total acres consisting of 6 parcels and approximately five existing buildings. Annexed uses include the existing Concannon Winery and adjacent vineyards and vacant lands for new commercial and open space.</p>																														
<p>Is your jurisdiction expected to annex any areas during the performance period of this plan? If yes, describe land areas and dominant uses.</p> <p>If yes, who currently has permitting authority over these areas?</p>	<p>Yes</p> <p>The city intends to annex mining lands on its western periphery. The parcels are currently vacant, are approximately 122 acres in size, and would be zoned to accommodate industrial uses.</p> <p>Alameda County</p>																														
<p>Are any areas targeted for development or major redevelopment in the next five years? If yes, briefly describe, including whether any of the areas are in known hazard risk areas</p>	<p>Yes</p> <p>The city intends to implement the council-adopted Isabel Neighborhood Specific Plan in the northwest part of the city. Primary uses would include residential, office, and commercial. Portions of the plan area are within high wildfire severity zones and have a high and very high susceptibility to deep-seated landslides. Annexed mining lands along Livermore's western periphery would also be redeveloped with industrial uses. The mining lands have a high susceptibility to liquefaction and are within the 100-year and 500-year flood zones. The city anticipates implementation of the Arroyo Vista Neighborhood Plan and redevelopment around the Southfront area in the industrial portion of the city north of Las Positas Road. Proposed uses include residential. There are no significant hazards in the area.</p>																														
<p>How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?</p>	<table border="1"> <thead> <tr> <th></th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> <th>2021</th> </tr> </thead> <tbody> <tr> <td>Single Family</td> <td>9</td> <td>91</td> <td>48</td> <td>14</td> <td>1</td> </tr> <tr> <td>Multi-Family</td> <td>28</td> <td>28</td> <td>110</td> <td>55</td> <td>88</td> </tr> <tr> <td>Other</td> <td>0</td> <td>1</td> <td>6</td> <td>4</td> <td>11</td> </tr> <tr> <td>Total</td> <td>37</td> <td>120</td> <td>164</td> <td>73</td> <td>100</td> </tr> </tbody> </table>		2017	2018	2019	2020	2021	Single Family	9	91	48	14	1	Multi-Family	28	28	110	55	88	Other	0	1	6	4	11	Total	37	120	164	73	100
	2017	2018	2019	2020	2021																										
Single Family	9	91	48	14	1																										
Multi-Family	28	28	110	55	88																										
Other	0	1	6	4	11																										
Total	37	120	164	73	100																										
<p>Provide the number of new construction permits for each hazard area or provide a qualitative description of where development has occurred.</p>	<ul style="list-style-type: none"> Special Flood Hazard Areas: 17 Landslide: 27 High Liquefaction Areas: 3 Wildfire Risk Areas: 0 																														
<p>Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.</p>	<p>According to the city's draft 2023 Housing Element's vacant and underutilized lands inventory, Livermore has viable capacity for another 5,419 residential units, including development of the Isabel Neighborhood Specific Plan in the northwest part of the city. The specific plan also includes approximately two million square feet of office and commercial uses. The draft 2023-2031 Housing Element is scheduled for consideration by the city council in March 2023, and an update of the general plan is in progress. Therefore, buildout and housing projections will likely change prior to the next Tri Valley Hazard Mitigation Plan Update in five years.</p>																														

Table 2-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code	Yes	No	Yes	Yes
Comment: Livermore Building Code incorporates the California Building Code with small adjustments. Most current code adopted in 2019. Livermore adopted the 2022 Building Code on January 1, 2023, in accordance with state requirements.				
Zoning Code	Yes	No	Yes	Yes
Comment: Livermore Development Code adopted in 2010; updated through December 13, 2021, by Ordinance 2131.				
Subdivisions	Yes	No	Yes	Yes
Comment: Livermore's Subdivision Ordinance is incorporated into the Livermore Development Code, as passed in May 2010 updated through December 13, 2021, by Ordinance 2131.				
Stormwater Management	Yes	Yes	Yes	Yes
Comment: City Storm Drain Master Plan for city-owned property was adopted in January 2022; Zone 7 Stream Management Master Plan for Zone 7 owned facilities/property adopted in 2006 with a plan horizon of 2034.				
Post-Disaster Recovery	No	No	No	Yes
Comment: Preparation of plan proposed.				
Real Estate Disclosure	Yes	No	Yes	Yes
Comment: City uses real estate disclosure to provide notice regarding special conditions and requirements on properties; Cal. Civ. Code §1102 et seq.				
Growth Management	Yes	No	Yes	Yes
Comment: Livermore's General Plan Land Use Element contains maximum residential density ranges for all residential land use designations in the City, in conformance with Cal. Gov. Code §65300 et seq. City policy conforms to the requirements of The California Housing Crisis Act of 2019 (SB 330), which prevents cities from implementing growth management programs or limiting the number of annual housing units.				
Site Plan Review	Yes	No	No	Yes
Comment: Site plan approval required by Livermore Development Code Chapter 9 and Livermore's specific plan areas for all new development and redevelopment projects.				
Environmental Protection	Yes	Yes	Yes	Yes
Comment: The city conforms to the requirements of the California Environmental Quality Act for development review as well as applicable environmental protection requirements for businesses. The city coordinates with other agencies including Regional Water Quality Control Board, Bay Area Air Quality Management District, California Department of Fish and Wildlife, U.S. Fish and Wildlife Service, and Alameda County Health Department.				
Flood Damage Prevention	Yes	Yes	Yes	Yes
Comment: The city has agreements with Zone 7 for stream management and flood protection projects. The city's floodplain ordinance implements NFIP requirements, plus 1' of freeboard and elevation certificates of new buildings adjacent to creeks.				
Emergency Management	Yes	Yes	Yes	Yes
Comment: Livermore's comprehensive Emergency Management Plan consists of the Emergency Operations Plan, adopted Jan. 22, 2018, by City Council Resolution 2018-009, and plan annexes that include Mass Care and Shelter Plan, Debris Management Plan, etc.; Plan conforms with the state-mandated Standardized Emergency Management System and the National Incident Management System.				
Climate Change	Yes	No	Yes	Yes
Comment: General Plan Climate Change Element adopted in 2009; Climate Action Plan adopted in 2012; updated Climate Action Plan adopted on November 28, 2022. California Senate Bill 379 requires cities to include climate adaptation and resiliency strategies in their general plans. 2022 Climate Action Plan that includes GHG reduction strategies and mitigation and resiliency policies.				
Historic Preservation	Yes	No	No	No
Comment: Livermore maintains a comprehensive historic preservation program that includes a citywide historic context statement, citywide historic resources inventory, and historic preservation ordinance, adopted April 12, 2021, by City Council Ord. 21-22.				
Planning Documents				
General Plan	Yes	No	Yes	Yes
Is the plan compliant with Assembly Bill 2140? Yes				
Comment: Current Livermore General Plan was adopted in 2004. The Safety Element of the General Plan was amended by Council Resolution 2018-163 consistent with the requirements of AB 2140.				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity
Capital Improvement Plan <i>How often is the plan updated?</i> Every 2 years <i>Comment:</i> FY 2021-2023 CIP adopted in June 2021 by City Council Resolution 2021-088. The CIP is coordinated with Zone 7 and Livermore Area Recreation & Park District improvement plans.	Yes	No	Yes	Yes
Disaster Debris Management Plan <i>Comment:</i> Debris Management Master Plan reviewed by California Office of Emergency Services and the U.S. Federal Emergency Management Agency. City adopted the plan in March 2019.	Yes	No	No	Yes
Floodplain or Watershed Plan <i>Comment:</i> City coordinates with Zone 7 who is responsible for flood control. The city regulates the watershed by enforcing the Municipal Regional Permit and the NFIP requirements plus 1' freeboard and elevation certificates for all new buildings next to creeks. The city has a stream maintenance program which allows the city to maintain all creeks within city limits including creeks owned by Livermore Area Recreation & Park District and Zone 7.	No	Yes	No	Yes
Stormwater Plan <i>Comment:</i> City Storm Drain Master Plan adopted in January 2022; Zone 7 Stream Management Master Plan adopted in 2006 with a plan horizon of 2034.	Yes	Yes	Yes	Yes
Urban Water Management Plan <i>Comment:</i> Livermore adopted a Water Master Plan in 2018. Livermore also adopted the 2020 Urban Water Management Plan in June 2021, which applies in areas served by city. California Water Service provides water to remaining areas of the city, which is governed by the CalWater 2020 Urban Water Management Plan, also adopted in June 2021.	Yes	Yes	Yes	Yes
Habitat Conservation Plan <i>Comment:</i> City participates in the Eastern Alameda County Conservation Strategy.	No	Yes	No	No
Economic Development Plan <i>Comment:</i> The 2020-2025 Economic Development Strategic Plan was approved by the city council in October 2019.	Yes	No	No	Yes
Shoreline Management Plan <i>Comment:</i> Not applicable	No	No	No	No
Community Wildfire Protection Plan <i>Comment:</i> Alameda County	No	Yes	No	Yes
Forest Management Plan <i>Comment:</i> Not applicable	No	No	No	No
Climate Action Plan <i>Comment:</i> City CAP adopted in 2012. Livermore is undergoing a comprehensive update to its Climate Action Plan that includes GHG reduction strategies and mitigation and resiliency policies. The City Council will consider adoption of the plan by the end of 2022.	Yes	No	No	Yes
Emergency Operations Plan <i>Comment:</i> Livermore's comprehensive Emergency Management Plan consists of the Emergency Operations Plan, adopted Jan. 22, 2018, by City Council Resolution 2018-009, and plan annexes that include Mass Care and Shelter Plan, Debris Management Plan, etc.; Plan conforms with the state-mandated Standardized Emergency Management System and the National Incident Management System.	Yes	Yes	Yes	Yes
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment:</i> TVHMP Volume 1: Planning Area Wide Elements, Part 2; Chapter 5-16 is the THIRA.	Yes	No	No	Yes
Post-Disaster Recovery Plan <i>Comment:</i> Preparation of plan proposed.	Yes	No	No	Yes
Continuity of Operations Plan <i>Comment:</i> Continuity of Operations Plan/ Continuity of Government Plan completed and under review by city manager's office and executive team. Anticipated adoption by end of 2022.	Yes	No	No	Yes
Public Health Plan <i>Comment:</i> Alameda County Public Health Department prepares a Community Health Improvement Plan	No	Yes	Yes	Yes
Historic Preservation <i>Comment:</i> Livermore maintains a comprehensive historic preservation program that includes a citywide Historic Context Statement, citywide Historic Resources Inventory, and Historic Preservation Ordinance, adopted April 12, 2021, by City Council Ord. 21-22.	Yes	No	No	No

Planning and regulatory capabilities will be expanded and improved upon by implementing actions in the Hazard Mitigation Action Plan, including Action LIV-15.

The City would consider collaborating with the planning partners on an area-wide substantial damage response plan (Action LIV-18).

Table 2-4. Development and Permitting Capability

Criterion	Response
Does your jurisdiction issue development permits?	Yes
If yes, which department? <i>Building, Planning and Engineering Divisions of the Community Development Department (CDD); Water Resources Division of Public Works Department</i>	
If no, who does?	
Does your jurisdiction have the ability to track permits by hazard area?	Yes
Does your jurisdiction have a buildable lands inventory?	No

Development and permitting capabilities will be expanded and improved upon by implementing actions in the Hazard Mitigation Action Plan, including Action LIV-11.

Table 2-5. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Yes
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
If yes, specify: 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
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes
If yes, specify: Landscape maintenance districts	

The City would be interested in pursuing grant opportunities, including mitigation and other emergency management related grants, to fund projects that exceed the City's fiscal limitations.

The City could expand its fiscal authority by using private activity bonds or withholding public expenditures in hazard-prone areas. However, the City has not identified a need for any of these actions at this time.

Table 2-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices	Yes
<i>If Yes, Department /Position:</i> CDD/ Planning/Assistant, Associate, Senior Planners; Engineering/Assistant and Associate Engineers	
Engineers or professionals trained in building or infrastructure construction practices	Yes
<i>If Yes, Department /Position:</i> CDD; Building and Engineering	
Planners or engineers with an understanding of natural hazards	Yes
<i>If Yes, Department /Position:</i> CDD/ Planning/Assistant, Associate, Senior Planners; Engineering/Assistant and Associate Engineers	
Staff with training in benefit/cost analysis	Yes
<i>If Yes, Department /Position:</i> CDD/Engineering/ Assistant and Associate Engineers/ Associate and Senior Planners	
Surveyors	Yes
<i>If Yes, Department /Position:</i> CDD/Engineering/Contract	
Personnel skilled or trained in GIS applications	Yes
<i>If Yes, Department /Position:</i> Information Technology/Contract; CDD/Planning/ Assistant, Associate, Senior Planners; Engineering/Engineering Tech	
Scientist familiar with natural hazards in local area	Yes
<i>If Yes, Department /Position:</i> CDD/Planning/Contract	
Emergency manager	Yes
<i>If Yes, Department /Position:</i> City Manager's Office/Management Analyst-Disaster Preparedness; LPFD/Disaster Preparedness Coordinator	
Grant writers	Yes
<i>If Yes, Department /Position:</i> CDD/ Planning/Assistant, Associate, Senior Planners; Engineering/Assistant and Associate Engineers	
Other	No
<i>If Yes, Department /Position:</i>	

In the future, the City would consider adding new technical capabilities to the EOC, which would incorporate integration with neighboring jurisdictions and agencies and flood monitoring, among others.

Table 2-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	Yes
<i>If yes, briefly describe:</i> 2018 Tri-Valley Hazard Mitigation Plan	
Do you use social media for hazard mitigation education and outreach?	Yes
<i>If yes, briefly describe:</i> Advertise CERT trainings; post family disaster preparedness tips	
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
<i>If yes, briefly describe:</i>	
Do you have any other programs in place that could be used to communicate hazard-related information?	Yes
<i>If yes, briefly describe:</i> Living Arroyos Program, LPFD Public Education Program	
Do you have any established warning systems for hazard events?	Yes
<i>If yes, briefly describe:</i> Next Door, Nixle, AC Alert	

Education and outreach capabilities will be expanded and improved upon by implementing actions in the Hazard Mitigation Action Plan, including Action LIV-1.

Table 2-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Engineering Div; Community Development Department
Who is your floodplain administrator? (department/position)	Pam Lung, Coordinator
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date that your flood damage prevention ordinance was last amended?	11/15/2022
Does your jurisdiction have an NFIP Substantial Damage Response Plan? <i>If yes, what is the date of adoption and is it a stand-alone plan or a component of another plan (if another plan, please specify)?</i> <i>If no, how does your jurisdiction enforce substantial damage provisions of the NFIP-required floodplain management regulations?</i> Unknown. This need is addressed in the Mitigation Action Plan.	No
Does your floodplain management program exceed minimum requirements? <i>If yes, in what ways?</i> 1 ft. freeboard requirement, requires elevation certificates for new construction next to creeks	Yes
When was the most recent Community Assistance Visit or Community Assistance Contact?	2019
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <i>If yes, state what they are.</i>	No
Are any RiskMAP projects currently underway in your jurisdiction? <i>If yes, state what they are.</i>	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <i>If no, state why.</i> Inundation due to storm drains.	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? <i>If yes, what type of assistance/training is needed?</i> Training additional staff in duties of floodplain management	Yes
Does your jurisdiction participate in the Community Rating System (CRS)? <i>If yes, is your jurisdiction interested in improving its CRS Classification?</i> Yes <i>If no, is your jurisdiction interested in joining the CRS program?</i>	Yes
How many flood insurance policies are in force in your jurisdiction? ^a <i>What is the insurance in force?</i> \$32,401,800 <i>What is the premium in force?</i> \$105,042	86
How many total loss claims have been filed in your jurisdiction? ^a <i>What were the total payments for losses?</i> N/A	1

a. According to FEMA statistics as of 04/30/2022

Table 2-9. Community Classifications

	Participating?	ID Number	Classification	Date Classified
FIPS Code	Yes	06-001-00000-41992	N/A	N/A
Unique Entity ID #	Yes	KGBMZK3CQF36	N/A	N/A
Community Rating System	Yes	N/A	6	10/01/2020
Building Code Effectiveness Grading Schedule	No	N/A	N/A	N/A
Public Protection	No	N/A	N/A	N/A
StormReady	Yes	N/A	N/A	N/A
Firewise	No	N/A	N/A	N/A

Table 2-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts Comment: The City expanded the scope of its Climate Action Plan to include climate adaptation. In 2020, as part of the CAP update, the City conducted a Climate Change Vulnerability Analysis that evaluates climate change impacts in Livermore. The City is currently updating the Vulnerability Analysis as part of the General Plan Update to include additional analysis of sensitive community structures, functions and populations.	High
Jurisdiction-level monitoring of climate change impacts Comment: The City's updated CAP includes an analysis of climate change impacts and calls for regular updates to the plan to monitor climate change impacts and adjust the City's climate adaptation strategy as needed.	High
Technical resources to assess proposed strategies for feasibility and externalities Comment: City staff and/or consultants are available to assess strategies for feasibility.	Medium
Jurisdiction-level capacity for development of greenhouse gas emissions inventory Comment: City staff utilize consultants to prepare greenhouse gas emissions inventories.	Medium
Capital planning and land use decisions informed by potential climate impacts Climate change impacts are typically not considered during capital planning or land use decisions beyond what is required during CEQA environmental review. The City's updated CAP calls for the City to consider potential climate impacts in capital planning and land use decisions, however, the process to do so has not been established.	Low
Participation in regional groups addressing climate risks Comment: Staff participates in regional discussions with StopWaste, East Bay Community Energy, Bay Area Climate Adaptation Network, the Metropolitan Transportation Commission and the Association of Bay Area Governments.	High
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes Comment: While CEQA requires consideration of GHG emissions during environmental review there is no clear authority to otherwise consider climate change impacts during the decision-making process.	Low
Identified strategies for greenhouse gas mitigation efforts Comment: Climate Action Plan outlines strategies for reducing GHG emissions within the community and city operations.	High
Identified strategies for adaptation to impacts Comment: The Climate Action Plan outlines strategies to adapt to climate change impacts within the community and City operations	High
Champions for climate action in local government departments Comment: The City is working to fill a new staff position to coordinate climate action efforts across City departments.	Medium
Political support for implementing climate change adaptation strategies Comment: The city currently has support for climate change adaptation within city management and the city council.	Medium
Financial resources devoted to climate change adaptation Comment: The City currently dedicates limited staff time to implement climate adaptation efforts. Additionally, many capital improvement projects address climate adaption. The new climate staff position mentioned above will be tasked with developing a more robust City program to implement climate adaptation projects.	Medium
Local authority over sectors likely to be negative impacted Comment: The City has authority over critical municipal facilities and public infrastructure and coordinates with other public agencies, such as Zone 7, Regional Water Quality Control Board, CalTrans, Livermore Area Recreation and Park District, regarding hazard mitigation. The City also has authority to establish standards for new private development that facilitate more climate-resilient buildings, infrastructure, and landscapes.	Medium

Criterion	Jurisdiction Rating ^a
Public Capacity Local residents' knowledge of and understanding of climate risk	Medium
Comment: Approximately 58 percent of Climate Action Plan survey respondents indicated that they are well informed about the local climate change impacts facing Livermore.	
Local residents' support of adaptation efforts Comment: Approximately 75% of Climate Action Plan survey respondents indicated that it is important for the City to take action on climate change. The climate impacts of most concern are drought/water availability and wildfire/air quality impacts. Approximately 68% of respondents said the City should be either very or moderately invested in pursuing climate action.	High
Local residents' capacity to adapt to climate impacts Comment: Approximately 50% of Climate Action Plan survey respondents feel that they have the proper capacity to prepare for and/or respond to climate change impacts in Livermore.	Medium
Local economy's current capacity to adapt to climate impacts Comment:	Unsure
Local ecosystems' capacity to adapt to climate impacts Comment:	Unsure
a. High = Capacity exists and is in use; Medium = Capacity may exist but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.	

2.6 INTEGRATION REVIEW

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

2.6.1 Existing Integration

Some level of integration of content from the 2018 Tri-Valley local hazard mitigation plan has already been established in the following local plans and programs:

- **Urban Water Management Plan**—Consistent with the California Water Code, this plan provides long-term water supply and resource planning. The plan as updated in 2021 and assesses seismic risk to facilities, including measures to address the risk
- **Capital Improvement Program**—Incorporates identified hazard mitigation projects from the 2018 plan that are consistent with other adopted plans and programs
- **Living Arroyos Program**—Regional volunteer program for hands-on stream maintenance and restoration. Apprenticeship program for students at Las Positas Community College.
- **Zone 7 Stream Management Master Plan**—Multi-objective master plan addressing flood control, water quality, recycled water, and recreation.
- **Livermore Storm Management Plan**—City-wide program for maintaining creeks and outfalls that considers risks identified in the current HMP.

- **Storm Drain Master Plan**—City master plan prioritizing capital improvements to storm drains.
- **Livermore General Plan**—The General Plan includes an updated Safety Element, which addresses identified natural hazards specified in the current HMP.
- **Livermore Development Code**—The Development Code includes development requirements that can address hazard mitigation.
- **Livermore Municipal Code**—The Municipal Code includes development requirements that can address hazard mitigation.
- **Livermore Building Code**—The Building Code includes related State codes for hazard mitigation.
- **Climate Action Plan**—The 2022 Climate Action Plan was adopted in November 2022, following the completion of the 2018 HMP, and provides an assessment of greenhouse gas emissions by the community and identifies strategies for reducing emissions. Discussion of climate change resiliency and adaptation and identification of appropriate community actions to address resiliency are included in the CAP.

2.6.2 Opportunities for Future Integration

The capability assessment presented in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Design Standards and Guidelines**—The Design Standards and Guidelines provide design guidance for private and public developments. Acknowledgement of information from the hazard mitigation plan, including identification of potential hazards and mitigation requirements, will be incorporated into the next update of the Design Standards and Guidelines. The update will include identification of additional design elements that can address hazard mitigation.
- **Capital Improvement Program**—Incorporates hazard mitigation projects consistent with other adopted plans and programs. Improvement plans and projects that address hazard mitigation will be identified.
- **Living Arroyos Program**—Regional volunteer program for hands-on stream maintenance and restoration. This is an apprenticeship program for students at Las Positas Community College. The City will work with the Community College to incorporate identification of natural hazards and mitigation opportunities in the curriculum of this program.
- **Livermore Storm Management Plan**—This is a city-wide program for maintaining creeks and outfalls. Information from the hazard mitigation plan will be incorporated into the plan including identification of projects that address hazard mitigation.
- **Storm Drain Master Plan**—This is the city master plan prioritizing capital improvements to storm drains. Information from the hazard mitigation plan will be incorporated into the plan including identification of projects that address hazard mitigation.
- **Livermore General Plan**—The General Plan includes a Safety Element that addresses natural hazards. An update of the General Plan is in progress and will be consistent with the requirements of AB 2140 and SB 379.
- **Livermore Development Code**—The Development Code includes zoning and subdivision regulations. Information from the hazard mitigation plan will be incorporated into the Development Code that addresses hazard mitigation.

- **Livermore Municipal Code**—The Municipal Code includes ordinances regarding city operations and other regulations. The Municipal Code will be updated, as appropriate, to incorporate the information from the hazard mitigation plan.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan presented in this annex.

2.7 RISK ASSESSMENT

2.7.1 Jurisdiction-Specific Natural Hazard Event History

Table 2-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 2-11. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Severe winter storms, flooding	FEMA-3591-EM	12/30/2022 – ongoing	As of the writing of this report: \$8,333,500
COVID-19 Pandemic	DR-4482	January 20, 2020 - ongoing	Impacts to staffing and resources
Severe winter storms, flooding and mudslides	DR-4308	4/1/2017	\$11,715,000
Winter storm, Doolan Road tree damage	—	4/18/2015	\$5,000
Severe winter storms, flooding, landslides and mudslides	DR-1646	6/5/2006	Minor damage in the community
Flash Flood	DR-1203	2/2/1998	\$28,052
Flash Flood	DR-1044	1/3/1995-2/10/1995	\$13,796
Flash Flood	DR-1046	2/13/1995-4/19/1995	\$147,737
Tornado	—	4/25/1994	Minor damage in the community
Earthquake – Greenville Fault	—	1/12/1980	Moderate structural damage in the community

2.7.2 Hazard Risk Ranking

Table 2-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property and the economy. Mitigation actions target hazards with high and medium rankings.

Table 2-12. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Earthquake	34	High
2	Severe Weather	33	Medium
3	Flood	15	Low
4	Landslide	12	Low
5	Drought	9	Low
6	Wildfire	6	Low
7	Dam Failure	8	Low

2.7.3 Jurisdiction-Specific Vulnerabilities

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

Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: None

Other Noted Vulnerabilities

The based on a review of the results of the risk assessment, public involvement strategy, and other available resources, no other vulnerabilities have been identified.

2.8 STATUS OF PREVIOUS PLAN ACTIONS

Table 2-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 2-13. Status of Previous Plan Actions

Action Item from Previous Plan	Status of Action	New Action #
Action L-1—Where appropriate, support retrofitting or relocation of structures in high hazard areas, prioritizing structures that have experienced repetitive losses.	Carried over to updated plan	LIV-18

Comment: The city has not identified facilities that experience repetitive losses, but this action will be carried over to address potential future needs.

Action Item from Previous Plan	Status of Action	New Action #
Action L-2—Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including General Plan, Development Code, Municipal Code, Design Standards and Guidelines, Specific Plans.	Carried over to updated plan	LIV-11
Comment: Ongoing. Amendment to the Safety Element to include TVHMP was approved by City Council 9-26-18 (Reso. 2018-163). Updated Climate Action Plan adopted on November 28, 2022. General Plan Update and update to the Livermore Development Code are currently underway. Hazard Mitigation considered in the Storm Drain Master Plan Update approved January 2022. Integration of hazard mitigation to be considered for other development-related plans as appropriate. Revised carryover action wording for 2023 plan update.		
Action L-3—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.	Removed; no longer feasible	
Comment: The city plans to assess appropriate actions for preparing the 2023 hazard mitigation plan update. Grant Monitoring & Coordination- The city has pursued FEMA Hazard Mitigation grants to implement projects for the Arroyo Las Positas and Collier Canyon. Plan Integration - Amendment to the Safety Element to include TVHMP approved by the city council on 9-26-18 (Reso. 2018-163). Plan to integrate relevant information from the TVHMP into the General Plan Update, and hazard identification and mitigation considered in Climate Action Plan Update (2022), and Storm Drain Master Plan update (2021). Continuing Public Involvement- The city completed the Public Information Plan and is working to enhance the Community Disaster Preparedness Education Plan, as well as expand CERT and community education and training opportunities. Staff handed out emergency preparedness materials at multiple Farmers Market events, made two public disaster preparedness presentations at the library, and created public education campaign materials for website, social media, and downtown kiosks on disaster preparedness. The city will continue to support plan maintenance for the 2023 plan update. This is part of the city's ongoing capabilities and does not need to be included in the mitigation plan.		
Action L-4—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements: <ul style="list-style-type: none">• Enforce the flood damage prevention ordinance.• Participate in floodplain identification and mapping updates.• Provide public assistance/information on floodplain requirements and impacts.	Carried over to updated plan	LIV-16
Comment: Ongoing. The city exceeds the minimum NFIP requirements. The city continues to work to maintain a good standing and is compliant under NFIP. The city CRS rating was upgraded to a Class 6.		
Action L-5—Identify and pursue strategies to increase adaptive capacity to climate change including, but not limited to, updates of the General Plan and Climate Action Plan.	Completed	
Comment: Ongoing. The Climate Action Plan Update completed in November 2022. General Plan update currently underway and will include consideration of the TVHMP.		
Action L-6—Develop/update Continuity of Operations (COO) and Continuity of Government (COG) Plans to support organizational resiliency in the event of a disaster.	Completed	
Comment: Update of COO and COG completed in 2022.		
Action L-7—Develop a Post Disaster Recovery Plan that addresses all potential hazards and supports the efficient, timely and effective recovery of the community and public services and facilities. Ensure that Post Disaster Recovery Plan complies with U.S. Army Corps of Engineers, NRCS, FEMA, and state and local regulatory requirements to repair damage and receive public assistance in a timely manner.	Completed	
Comment: The City of Livermore Emergency Operations Plan updated in January of 2018 includes a Post-Disaster Recovery Operations Section. The plan is also in process of a two-year update.		
Action L-8—Consider hazard mitigation when designing the new construction, rehabilitation, retrofitting and/or replacement of projects identified in the CIP, particularly critical facilities.	Removed; no longer feasible	
Comment: The city continues to consider hazard mitigation with projects included in the capital improvement plan in addition to meeting current state and local building standards. The 2023 hazard mitigation plan includes specific capital improvement projects that address identified hazards. This is done programmatically and does not need to be a stand-alone mitigation action.		

Action Item from Previous Plan	Status of Action	New Action #
Action L-9—Update and maintain GIS mapping to include information for all mapped hazards that may affect properties in the community. <i>Comment:</i> Ongoing. FEMA flood layers have been included in the City's GIS maps. Staff is currently working with the Information Technology Division to add additional hazard layers (like fire and landslide) to the GIS platform.	Carried over to updated plan	LIV-12
Action L-10—Support the area-wide initiatives identified in Volume 1 of the hazard mitigation plan. <i>Comment:</i> The City of Livermore will continue to support area-wide initiatives as has been done over the last five years. This is a part of the city's ongoing capabilities and does not need to be included as a mitigation action.	Removed; no longer feasible	
Action L-11—Continue and expand public information and education activities for residents and businesses regarding hazard mitigation, emergency preparation, emergency response, and real estate disclosures. <i>Comment:</i> This action is too broad. Public outreach regarding seismic retrofits will be included as a new action item.	Removed; no longer feasible	
Action L-12—Develop evacuation plan that addresses all members of the community including special needs populations including, but not limited to, seniors, low-income households, disabled, and non-English speaking households. <i>Comment:</i> The city uses Zonehaven AWARE to notify residents on evacuation information. Information is available in four languages.	Completed	
Action L-13—Provide staff training as needed to support plan implementation, plan maintenance and reporting requirements. Coordinate training with plan partners. <i>Comment:</i> City staff has appropriate training and education for implementation of projects identified in hazard mitigation plan. This is done programmatically and does not need to be part of the mitigation action plan.	Completed	
Action L-14—Develop and implement a program to capture perishable data after significant events (e.g., high watermarks, preliminary damage estimates, and damage photos) to support future mitigation efforts including implementation and maintenance of the hazard mitigation plan. <i>Comment:</i> City uses Veoci to capture and store all damage assessments and photographs for significant events. This is programmatic and does not need to be part of the mitigation action plan.	Completed	
Action L-15—Participate in programs such as Firewise, StormReady and the Community Rating System. <i>Comment:</i> The City participates in StormReady and the Community Rating System Programs.	Completed	
Action L-16—Implement programs such as “Tree Watch” that proactively manage problem areas through use of selective removal of hazardous trees, tree replacement, trimming, etc. <i>Comment:</i> The Public Works Maintenance Department has completed a city-side tree inventory in 2022.	Completed	
Action L-17—Amend existing landscape and other related ordinances to encourage appropriate planting near overhead power, cable, and phone lines. <i>Comment:</i> Not completed due to lack of funding and staff resources.	Carried over to updated plan	LIV-13
Action L-18—Continue Annual Weed Abatement program. <i>Comment:</i> Ongoing. The Public Works Maintenance Department annually provides weed abatement to areas where it is needed through staff and contractors.	Carried over to updated plan	LIV-14
Action L-19—Install emergency generators, or secure lease/rental agreements, in critical facilities, as identified in the CIP, including the Water Reclamation Plant, Fire Stations, and Airport facilities. <i>Comment:</i> Installation of a permanent on-site emergency generator at the Water Reclamation Plant was completed in October 2020. Installation of a generator at the airport is planned for FY 20-21. The City is also planning to replace the backup generator at Fire Station # 6 in 2022.	Completed	
Action L-20—Install backup battery systems for traffic signals as identified in the CIP. <i>Comment:</i> All new traffic signals have battery back-ups installed. The city is in the process of installing batter backups to existing locations.	Completed	

Action Item from Previous Plan	Status of Action	New Action #
Action L-21—As part of the approved Civic Center Meeting Hall, include facilities for an Emergency Operations Center. <i>Comment:</i> An Emergency Operations Center was included in the new Civic Center Meeting Hall.	Completed	
Action L-22—Develop a Floodplain Management Plan to describe how city will maintain CRS Classification 9 and work towards Classification 8 and integrate flood damage reduction into public information, development and capital improvement processes. <i>Comment:</i> The City achieved a CRS Class 6 Rating in 2020 and continues to integrate flood damage considerations into its CIP and routine maintenance programs but has not done so in a formal Floodplain Management Plan.	Completed	
Action L-23—Develop a Climate Resiliency Plan as part of an update to the Climate Action Plan to identify weather trends and infrastructure subject to damage in increasingly severe weather events and identify mitigation projects. <i>Comment:</i> Updated Climate Action Plan adopted in November 2022 addresses climate resiliency.	Completed	
Action L-24—Maintain annual inspection records and update GIS and cost tracking process to reflect accurate city facility data. <i>Comment:</i> Public Works Maintenance/Asset Management implemented the NexGen computerized maintenance management system to more efficiently track records and provide updated information to inform GIS edits. Implementation of the NexGen system completed in fall 2021.	Completed	
Action L-25—Develop a Debris Management Plan that is coordinated with other regional agencies, addresses all potential hazards and supports the efficient, timely and effective recovery of the community and public services and facilities. <i>Comment:</i> The City has completed the Debris Management Plan. It is currently pending FEMA and state approval.	Completed	
Action L-26—Complete an inundation study to develop flood data for 2-year to 100-year storms that is integrated with the updated Zone 7 flood study. <i>Comment:</i> Storm Drain Master Plan Update adopted in January 2021.	Completed	
Action L-27—Incorporate grant eligible capital improvement projects into the hazard mitigation plan annually. <i>Comment:</i> Incorporation of grant eligible capital improvement projects into the hazard mitigation plan will be coordinated with the biannual CIP.	Carried over to updated plan	LIV-15
Action L-28—Mitigate for landslide and flood damage on Collier Creek by adding to the CIP projects to design and construct a debris basin upstream of Collier Canyon Road and to grade and plant creek banks to restore capacity of Arroyo Las Positas through the Las Positas Golf Course. <i>Comment:</i> Project has been funded with completion of design for the Collier Creek improvements in 2023 and design for the Arroyo Las Positas improvements in 2024.	Completed	
Action L-29—Continue and expand public education and outreach programs, including CERT, to provide consistent and accessible information regarding hazards and mitigation for residents and businesses. <i>Comment:</i> The Livermore Pleasanton Fire Department has an active Community Emergency Response Team (CERT) program. The City completed the Public Information Plan and is working to enhance the Community Disaster Preparedness Education Plan, as well as expand CERT and community education and training opportunities. Staff handed out emergency preparedness materials at multiple Farmers Market events, made two public disaster preparedness presentations at the library, and created public education campaign materials for website, social media, and downtown kiosks on disaster preparedness.	Completed	
Action L-30—Develop a restoration plan to preserve and restore Cottonwood Creek on the city owned property along Doolan Road. Plan would restore the drainage function of Cottonwood Creek and minimize loss to Doolan Road, public utilities and private property threatened by eucalyptus tree grove at the top of the creek bank. <i>Comment:</i> Work is not currently being planned to restore this portion of Cottonwood Creek. The City will continue to evaluate the hazards and the feasibility of this project.	Removed; no longer feasible	

Action Item from Previous Plan	Status of Action	New Action #
Action L-31—Complete the update to the Emergency Operations Plan. <i>Comment:</i> The City of Livermore Emergency Operations Plan update was completed in January 2018.	Completed	
Action L-32—Develop a Threat & Hazard Identification & Risk Assessment (THIRA). <i>Comment:</i> The city has determined that a stand-alone THIRA is not necessary. Portions of the TVHMP provide information regarding potential hazards and threats.	Removed; no longer feasible	
Action L-33—Install storm drain back-up pumps and back-up power at road and railroad undercrossings (Isabel Ave., Murietta Blvd., P Street, L Street, Livermore Avenue). <i>Comment:</i> Three stations (Livermore, P Street, and Murrieta) have back-up pumps, but not back-up power, installed. Isabel Station was turned over the Caltrans several years back and isn't the City's responsibility.	Completed	
Action L-34—Assess the earthquake vulnerability of existing road undercrossings (Isabel Ave., Murietta Blvd., P Street, Livermore Avenue, Greenville Rd.) and overcrossings (First St./railroad, Mines Road/railroad, Vasco Road/railroad) and existing culverts and bridges over creeks (Arroyo Mocho at Concannon Blvd., Holmes St., Arroyo Rd., Stanley Blvd.; Arroyo Las Positas at Vasco Rd., Central Ave., Heather Lane, Bluebell Ave.). <i>Comment:</i> This project is on the CIP list but not budgeted for the next two years. The city will continue to evaluate the hazard and incorporate this action programmatically if deemed feasible in the future.	Removed; no longer feasible	

2.9 HAZARD MITIGATION ACTION PLAN

Table 2-14 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 2-15 identifies the priority for each action. Table 2-16 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 2-14. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action LIV-1—Seismic Hazard Public Outreach: Create a comprehensive outreach program to inform the public of seismic hazards and provide resources to improve community resilience during earthquakes. Outreach to include the following components: 1) Contact owners of residential properties constructed prior to 1980, inform that home may not be tied to the foundation, and provide resources to increase safety; 2) Contact residents to inform about safety hazards of unanchored furniture during earthquake; 3) Contact owners of soft story buildings, provide resources to increase safety.						
<i>Hazards Mitigated:</i> Earthquake						
Existing	4, 7, 9, 10	Community Development	Public Information Officer	Low	General Fund	Short-term
Action LIV-2—City Asset Seismic Evaluation: Evaluate the city's critical facilities (such as city hall, fire/police, airport, etc.), utilities (such as storm, sewer, water, etc.), bridges/overcrossings, and above-ground storage tanks (such as water and fuel tanks) for system vulnerabilities and resilience in an earthquake. Identify strategies to increase resilience, redundancies, and to bring facilities to current seismic standards. Identify project partners, stakeholders and potential grants for the evaluation and strategies.						
<i>Hazards Mitigated:</i> Earthquake						
Existing	1, 4, 6, 8, 10	Engineering	Asset Management	High	FEMA Grants (HMGP, BRIC), General Fund	Long-term
Action LIV-3—Maintenance Service Center Flood Protection: Study the Maintenance Service Center and its proximity to the Arroyo Mocho Channel to determine its resilience during flooding events. Identify and undertake feasible projects to mitigate flooding damages and identify funding strategies.						
<i>Hazards Mitigated:</i> Flood, Severe Weather						
Existing	1, 4, 6, 10, 12	Engineering	Maintenance	Medium	FEMA FMA, General Fund	Long-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
Action LIV-4 —Airport Flood Protection: Evaluate recommendations in the Schaaf & Wheeler 2016 Airport Flood Protection Analysis and Alternatives Summary Report and update the study. Identify and undertake feasible projects to mitigate flooding damages and identify funding strategies.						
<i>Hazards Mitigated:</i> Flood, Severe Weather						
Existing	4, 6, 10	Engineering	Airport	Medium	FEMA FMA, General Fund	Long-term
Action LIV-5 —Debris Basin Study: Conduct a study with Zone 7 and other agencies to identify feasible locations for implementation of upstream watershed debris basin or other drainage system redundancies (e.g., overflow pipes) to reduce flood impacts. Redundancy locations could include Collier Canyon Creek, Arroyo Las Positas, and other major water courses. Identify project partners, stakeholders and potential grants for the study.						
<i>Hazards Mitigated:</i> Flood, Severe Weather						
Existing	1, 7, 8, 10, 12	Engineering		Medium	FEMA FMA, General Fund	Long-term
Action LIV-6 —Advance Flood Warning System: Create a citywide advance flood warning system that informs city staff and the public of future impacts from flood, severe weather, or dam failure. System may include digital and/or physical infrastructure.						
<i>Hazards Mitigated:</i> Flood, Severe Weather						
Existing	1, 3, 7, 9	Engineering	Emergency Management	Medium	FEMA Grants (HMGP, FMA), General Fund	Short-term
Action LIV-7 —Active Water Level Management: Identify City-owned storm drain manholes, stream culverts, and other stormwater infrastructure as appropriate locations for active water level management. At each location, install “smart cover” style sensors, level gauges, remote level sensors, or other monitoring equipment to help determine flow levels, schedule maintenance activities, and respond to floods in progress.						
<i>Hazards Mitigated:</i> Flood, Severe Weather						
Both	1, 8, 10	Water Resources	Engineering	Medium	General Fund	Short-term
Action LIV-8 —Arroyo Desilting: Conduct desilting operations along the Arroyo Las Positas east and west of Airway Boulevard to ensure proper hydraulic flow and to prevent future flooding impacts.						
<i>Hazards Mitigated:</i> Flood, Severe Weather						
Existing	10, 12	Water Resources	Engineering	Low	General Fund	Short-term
Action LIV-9 —Ag Land Runoff Study: Evaluate impacts of surface drainage from vineyard and agricultural areas to residential tracts, including areas such as Tuscany Circle and Charlotte Way/ Stockton Loop. Identify and undertake feasible projects to mitigate flooding damages and identify funding strategies.						
<i>Hazards Mitigated:</i> Flood						
Existing	1, 6, 10, 12	Water Resources	Engineering	Low	FEMA FMA, General Fund	Short-term
Action LIV-10 —Creek Embankment Study: In partnership with other agencies, conduct citywide creek embankment studies to determine seismic and flood vulnerabilities and identify mitigation measures such as slope stabilization. Identify project partners, stakeholders and potential grants for the study.						
<i>Hazards Mitigated:</i> Flood, Severe Weather, Earthquake						
Existing	1, 6, 7, 10, 12	Engineering		High	FEMA FMA, General Fund	Long-term
Action LIV-11 —Development Code Update: Update the Livermore Development Code and/or Zoning Map to: 1) require that new development consider and reduce impacts of natural hazards; 2) provide incentives for seismic upgrades; and 3) streamline reconstruction after declared disasters. Updates could include overlay districts, new entitlement process, etc.						
<i>Hazards Mitigated:</i> Earthquake, Severe Weather, Flood, Landslide, Drought, Wildfire, Dam Failure						
New	2, 4, 5, 6, 8, 10, 11	Planning		Low	Staff Time	Short-term

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action LIV-12 —GIS Hazard Mapping: Incorporate all hazard maps into the City's Geographic Information System, including Wildland-Urban Interface areas. Ensure maps are dynamic and searchable, and that staff and public have access [carried over from previous plan].						
<i>Hazards Mitigated:</i> Earthquake, Flood, Landslide, Wildfire, Dam Failure						
Both	1, 3, 7, 9	Planning	Information Technology	Low	General Fund, Staff Time	Short-term
Action LIV-13 —Overhead Utility Landscaping: Amend existing landscape and other related ordinances to encourage appropriate planting near overhead power, cable, and phone lines [carried over from previous plan].						
<i>Hazards Mitigated:</i> Severe Weather, Wildfire						
Both	2, 8, 10, 12	Planning		Low	Staff Time	Short-term
Action LIV-14 —Annual Weed Abatement Program: Continue Annual Weed Abatement program [carried over from previous plan].						
<i>Hazards Mitigated:</i> Wildfire, Flood, Severe Weather						
Both	10, 12	Maintenance		Low	General Fund, Staff Time	Ongoing
Action LIV-15 —Capital Improvement Plan Review: Incorporate grant eligible capital improvement projects into the Hazard Mitigation Plan biannually to coincide with Capital Improvement Plan/ budget review [carried over from previous plan].						
<i>Hazards Mitigated:</i> Earthquake, Severe Weather, Flood, Landslide, Drought, Wildfire, Dam Failure						
Both	8, 10	Planning	Engineering	Low	Staff Time	Ongoing
Action LIV-16 —Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:						
<ul style="list-style-type: none"> • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts. [carried over from previous plan]. 						
<i>Hazards Mitigated:</i> Flood						
Both	1, 4, 6, 9	Community Development		Low	General Fund, Staff Time	Ongoing
Action LIV-17 —Where appropriate, support retrofitting or relocation of structures in high hazard areas, prioritizing structures that have experienced repetitive losses. [carried over from previous plan].						
<i>Hazards Mitigated:</i> Earthquake, Severe Weather, Flood, Landslide, Wildfire, Dam Failure						
Both	1, 2, 4, 6, 8	Engineering		High	FEMA Grants (HMGP, BRIC, FMA)	Ongoing
Action LIV-18 —Substantial Damage Response/Management Plan						
<ul style="list-style-type: none"> • Explore feasibility of developing the plan • Develop plan if deemed feasible 						
<i>Hazards Mitigated:</i> Severe Weather, Flood						
Both	1, 4, 5, 6, 8, 10	Planning		Low	General Fund, Staff Time, California Adaptation Grant Program	Ongoing
Action LIV-19 —Explore the feasibility of identifying socially vulnerable populations at the census block level. If deemed feasible, develop the dataset for future planning efforts.						
<i>Hazards Mitigated:</i> Dam Failure, Drought, Earthquake, Flood, Landslide, Severe Weather, Wildfire						
Both	1, 9, 10, 12	Planning		Low	General Fund, Staff Time	Ongoing

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

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

Table 2-15. Mitigation Action Priority

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

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

Table 2-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
High-Risk Hazards								
Earthquake	11	2, 17	1, 12					2, 12, 15, 19
Medium-Risk Hazards								
Severe Weather	11, 13	17	6	8, 14	6, 7	3, 4, 5, 7	13	3, 4, 5, 15, 18, 19
Low-Risk Hazards								
Flood	11, 16	17	6, 12, 16	8, 14	6, 7	3, 4, 5, 7, 9, 10		3, 4, 5, 9, 10, 12, 15, 16, 18, 19
Landslide	11	17	12					12, 15, 19
Drought	11	17						15, 19
Wildfire	11, 13	17	12	14			13	12, 15, 19
Dam Failure	11	17	12					12, 15, 19

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

2.10 PUBLIC OUTREACH

Table 2-17 lists public outreach activities for this jurisdiction.

Table 2-17. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
City Interactive Story Map	12/1/22	N/A
Downtown Farmers' Market	9/22/22	~30
City Social Media Postings	9/9/22	~30
City Online Survey	8/11/22	149

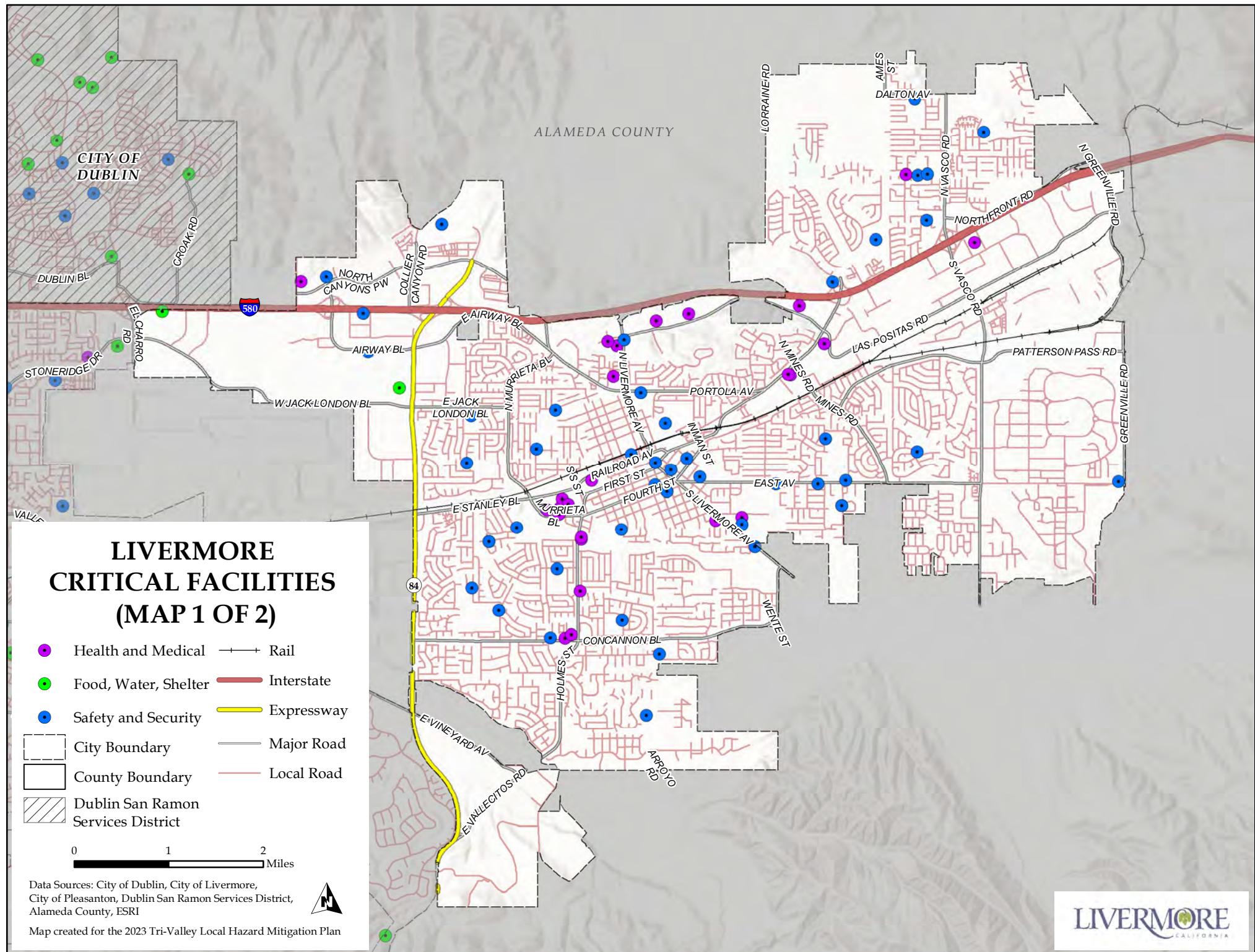
2.11 INFORMATION SOURCES USED FOR THIS ANNEX

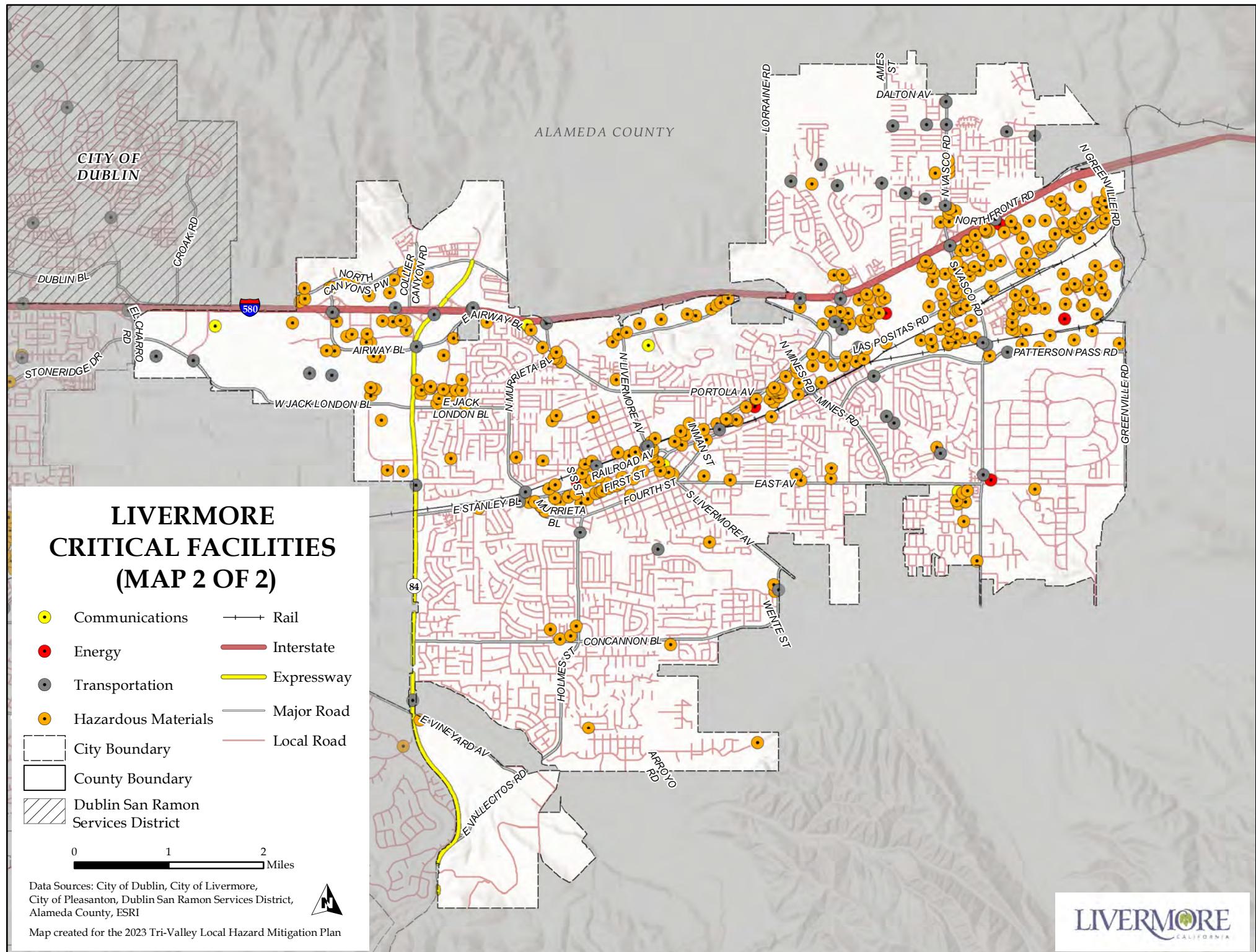
The following technical reports, plans, and regulatory mechanisms were reviewed to provide information for this annex.

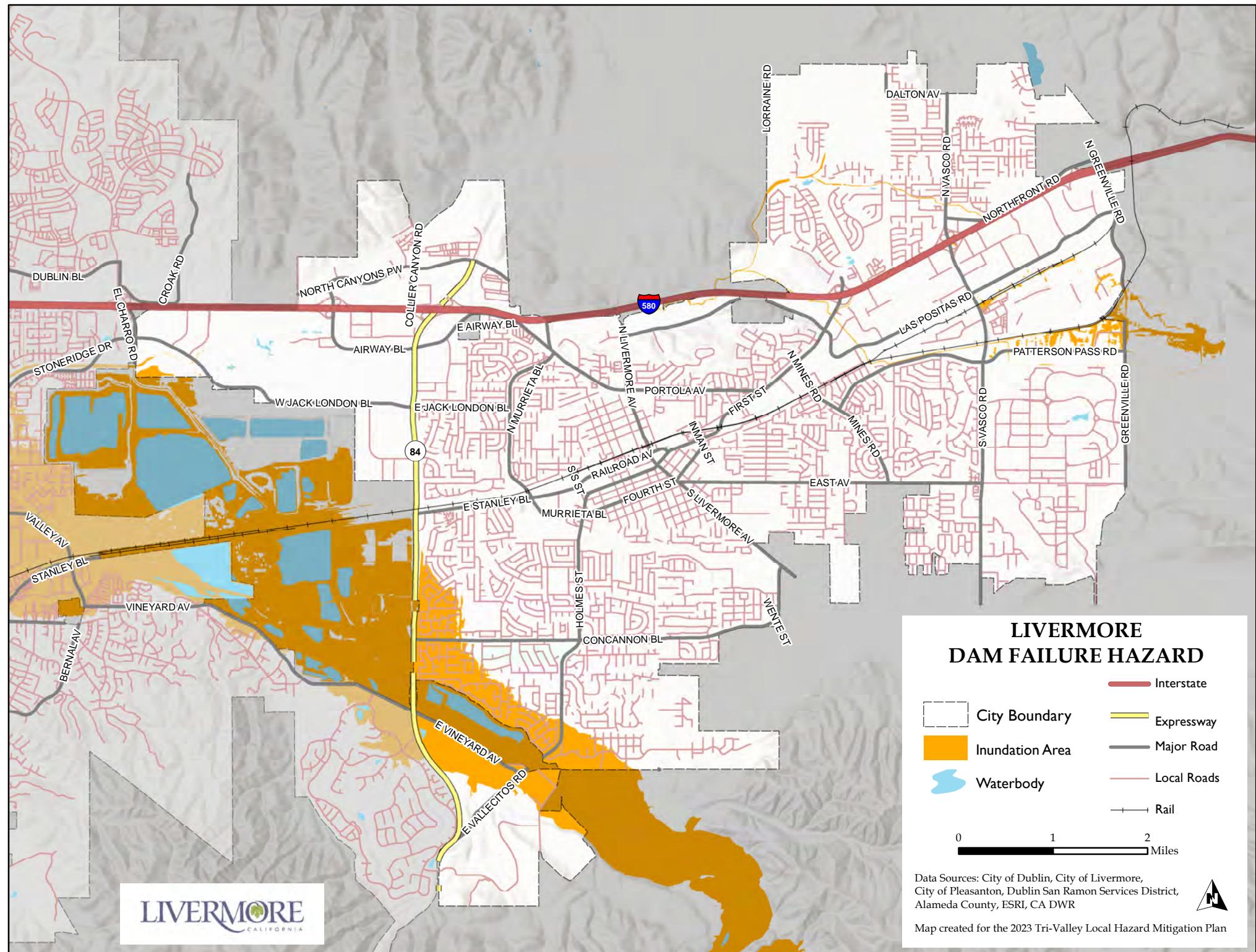
- **City of Livermore Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **City of Livermore Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
- **City of Livermore Permit Center Permit Records**—The Permit Center Permit Records were reviewed for identifying the number of Building Permits in the City from 2017-2021.
- **City of Livermore 2003 – 2025 General Plan Environmental Impact Report**—Livermore’s General Plan Environmental Impact Report was reviewed to obtain projected number of dwelling units at build out.
- **City of Livermore Draft 2023 Housing Element**—Livermore’s draft 2023 Housing Element was reviewed to obtain vacant and underutilized land information and population data.
- **City of Livermore 2022 Point in Time Count – Unsheltered and Sheltered Report**—Livermore’s 2022 Point in Time Count was reviewed to obtain the number of homeless individuals in the City.

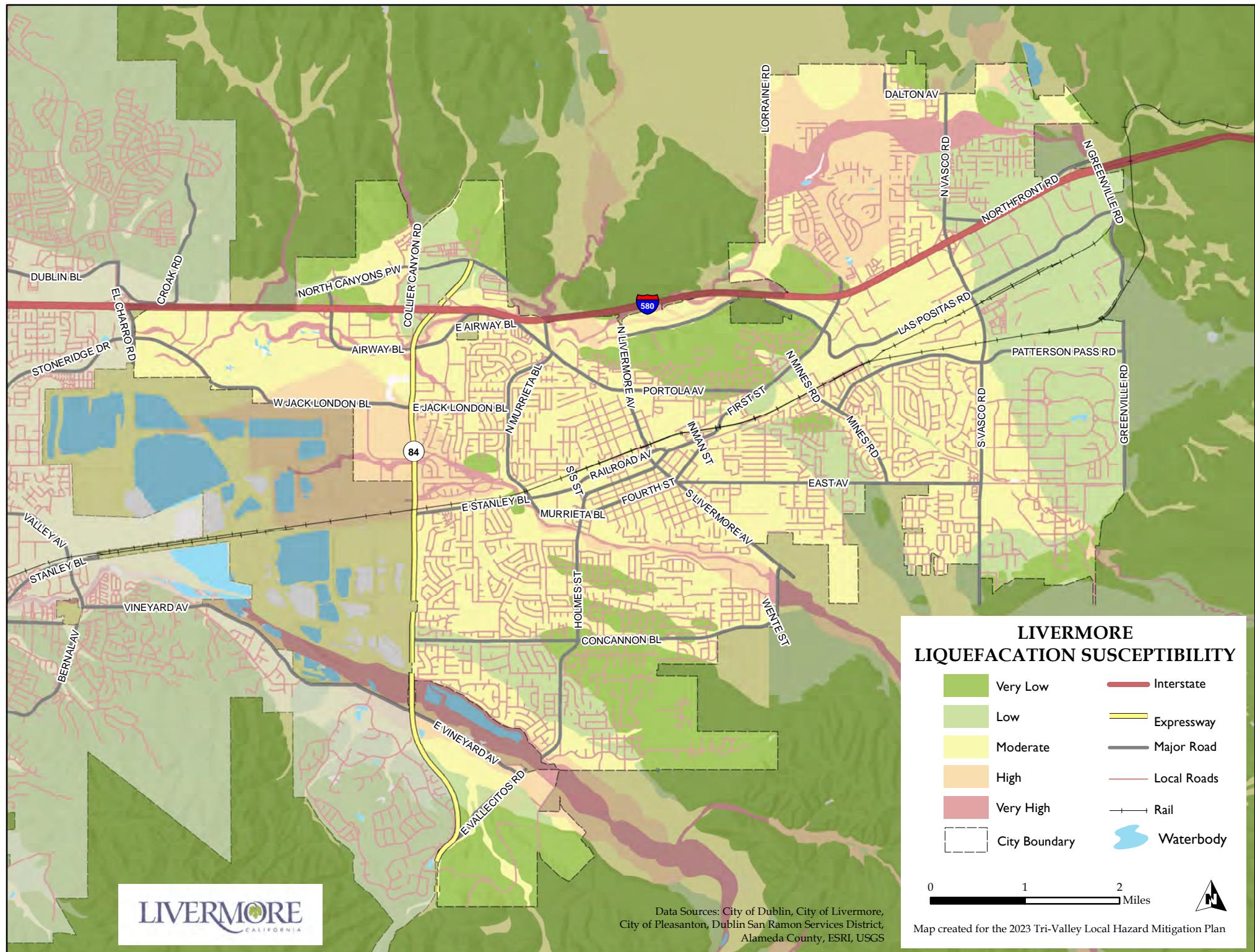
The following outside resources and references were reviewed:

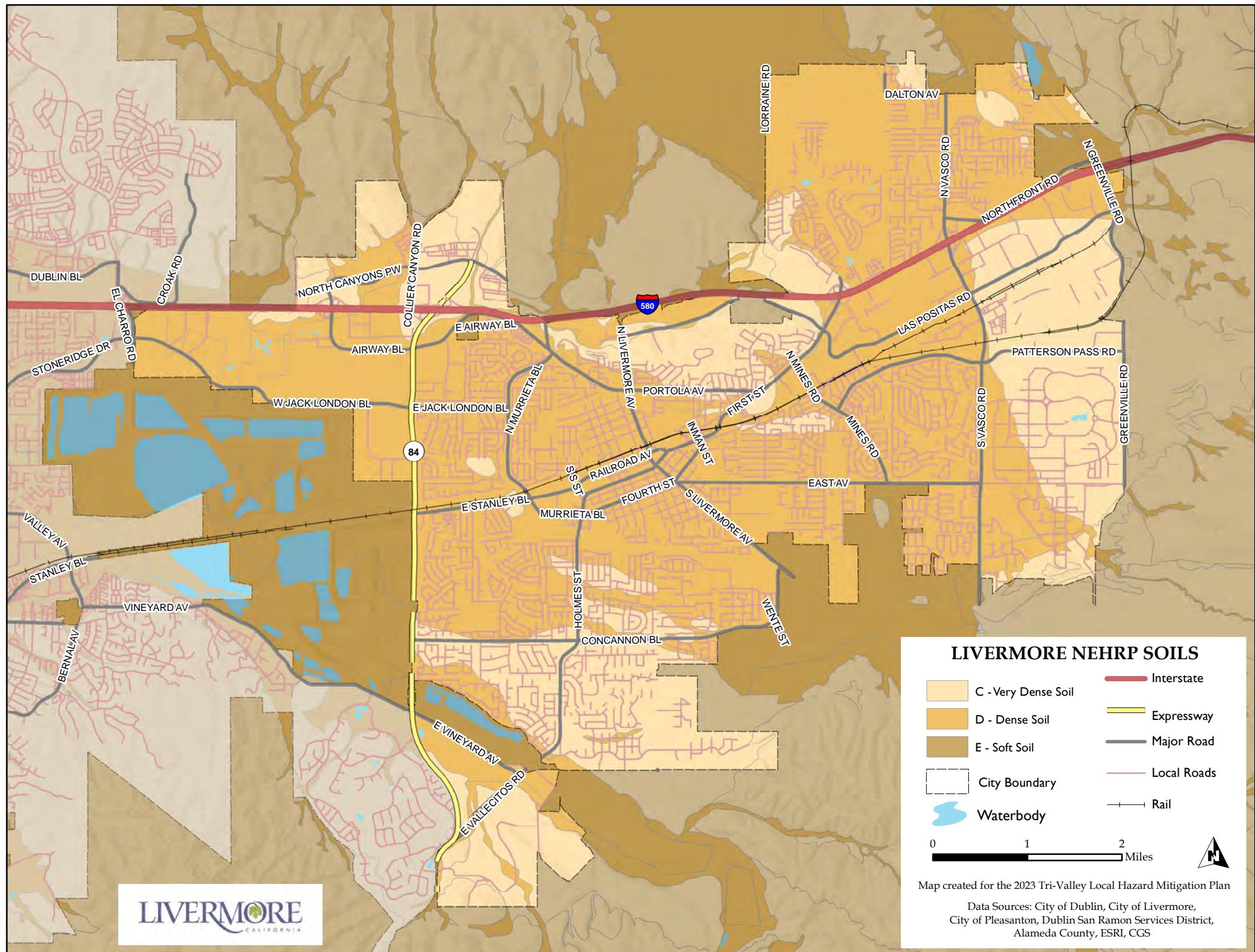
- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.

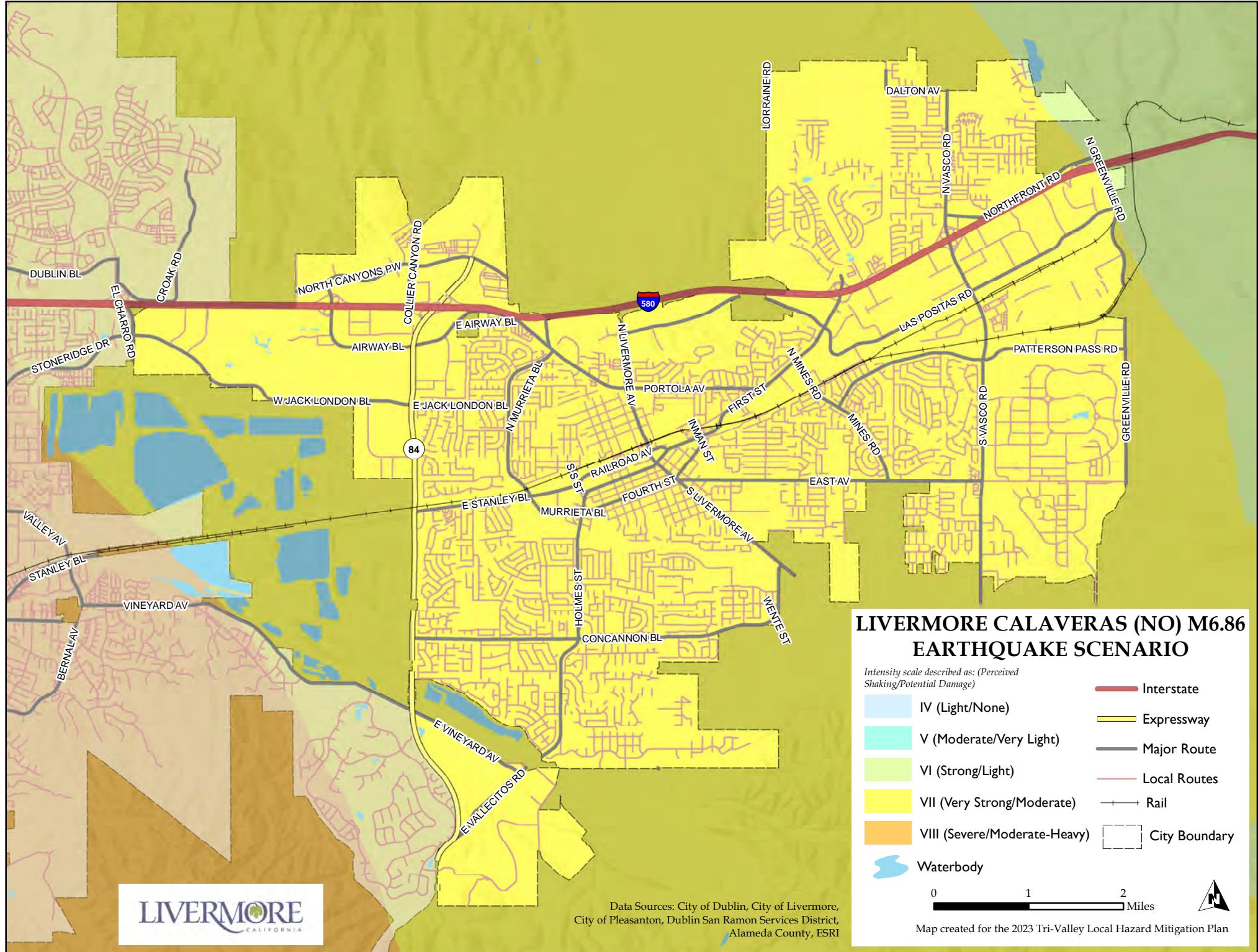


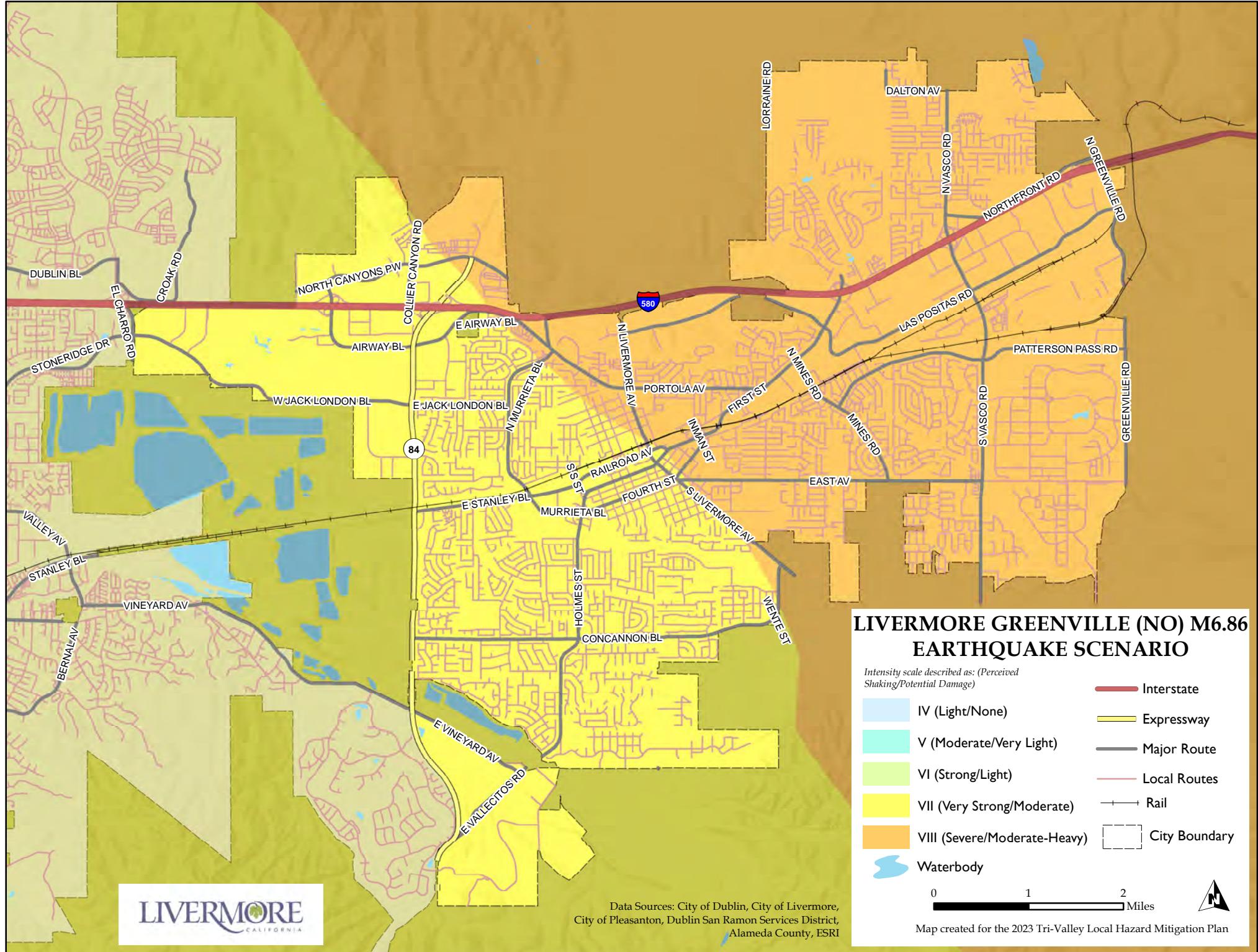


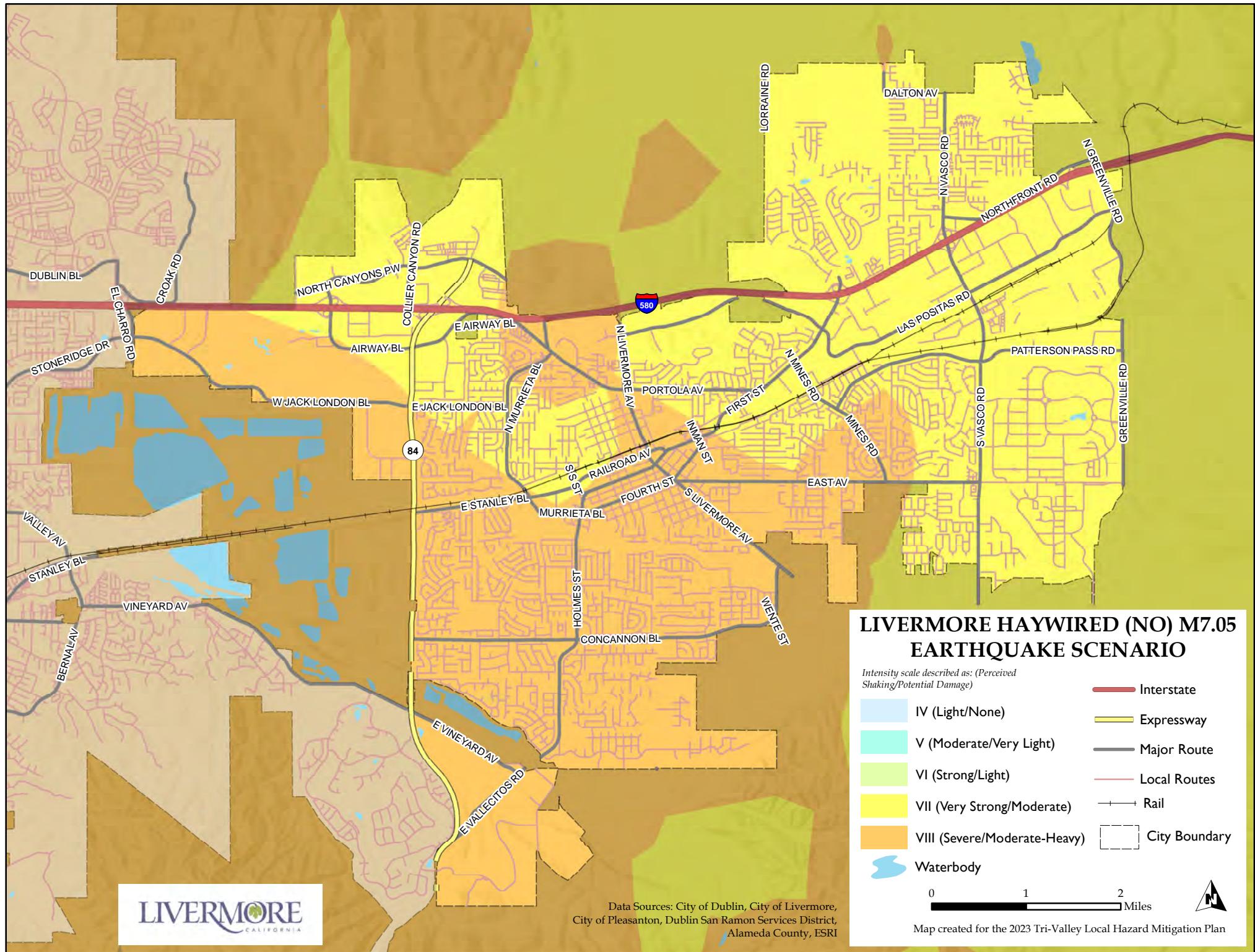


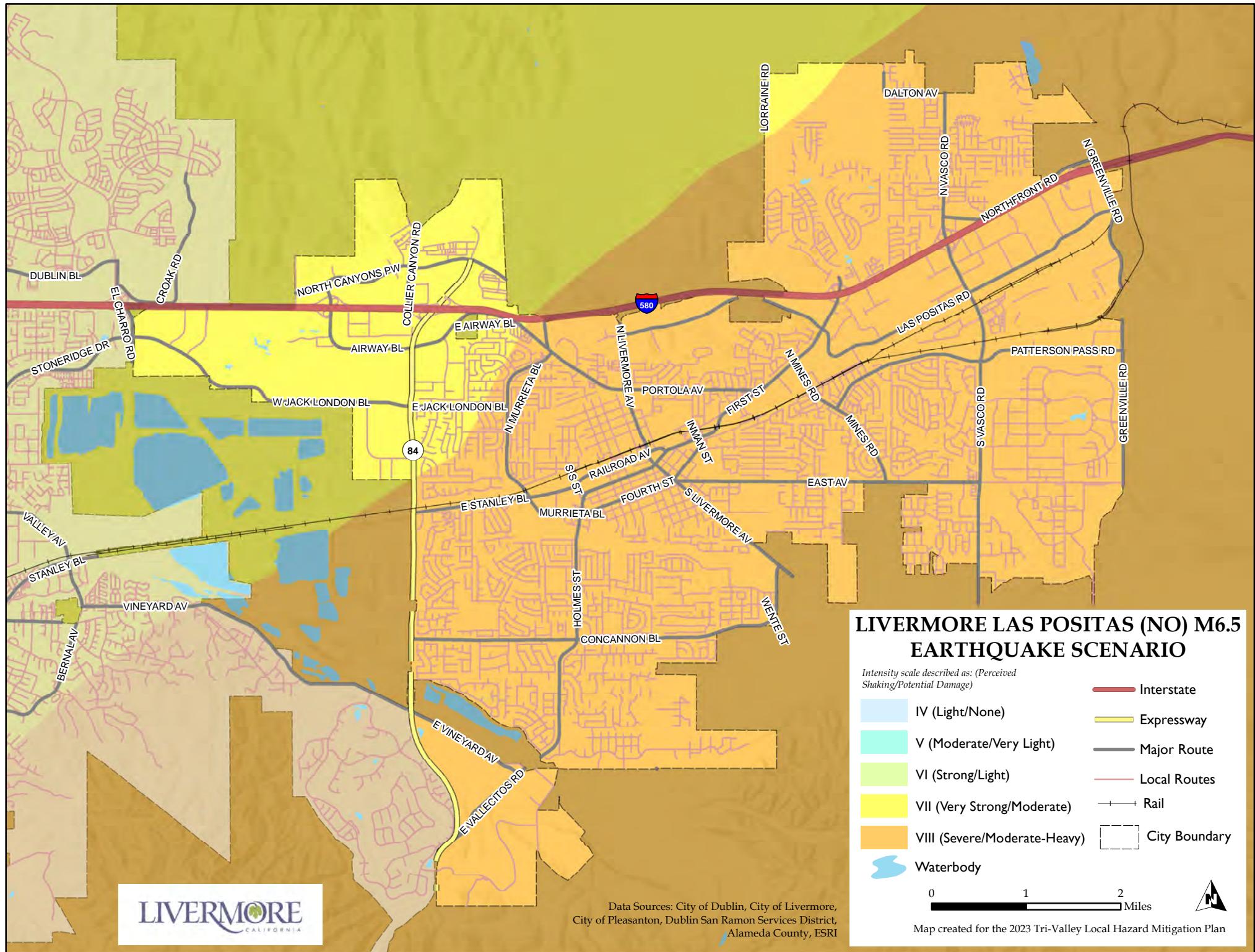


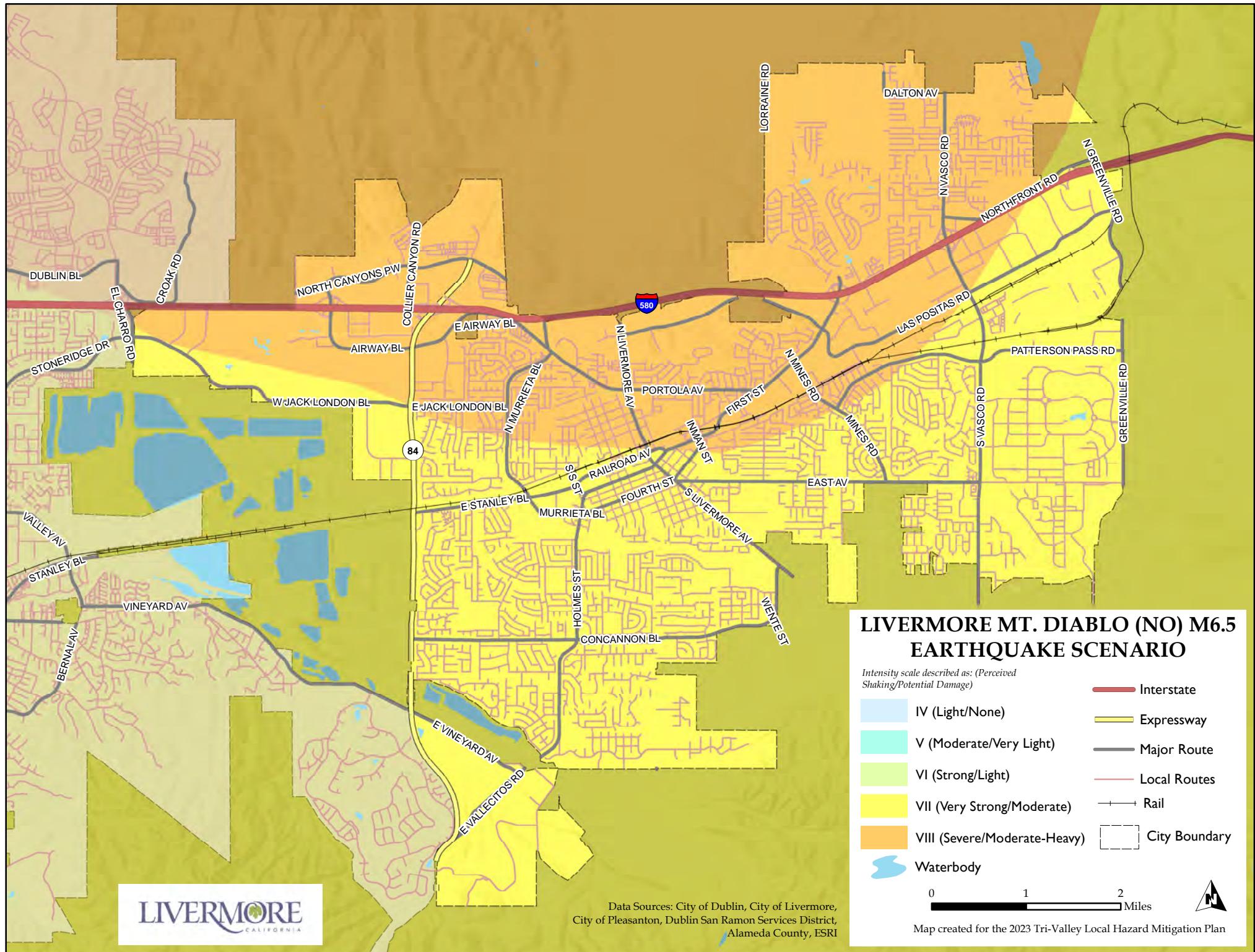


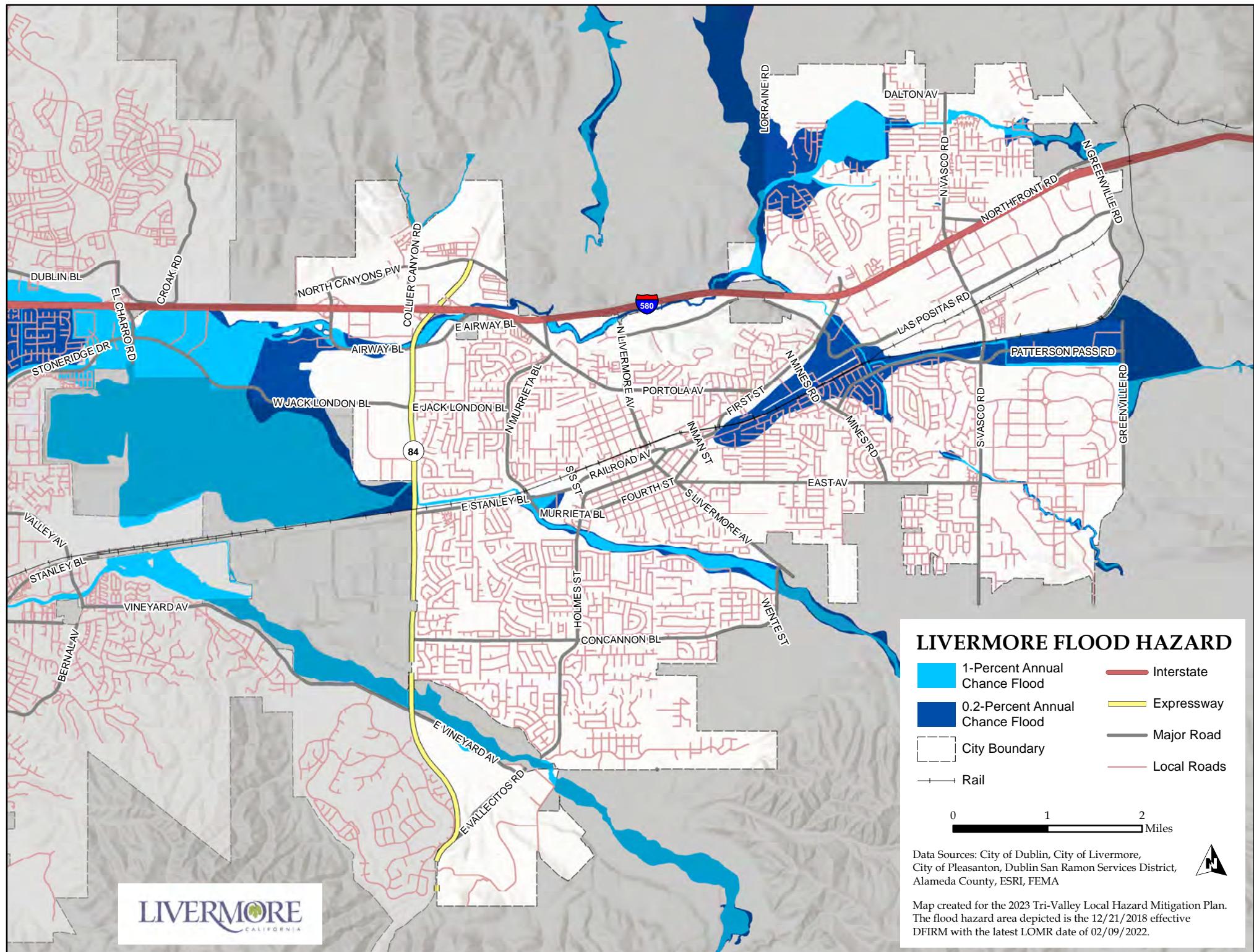


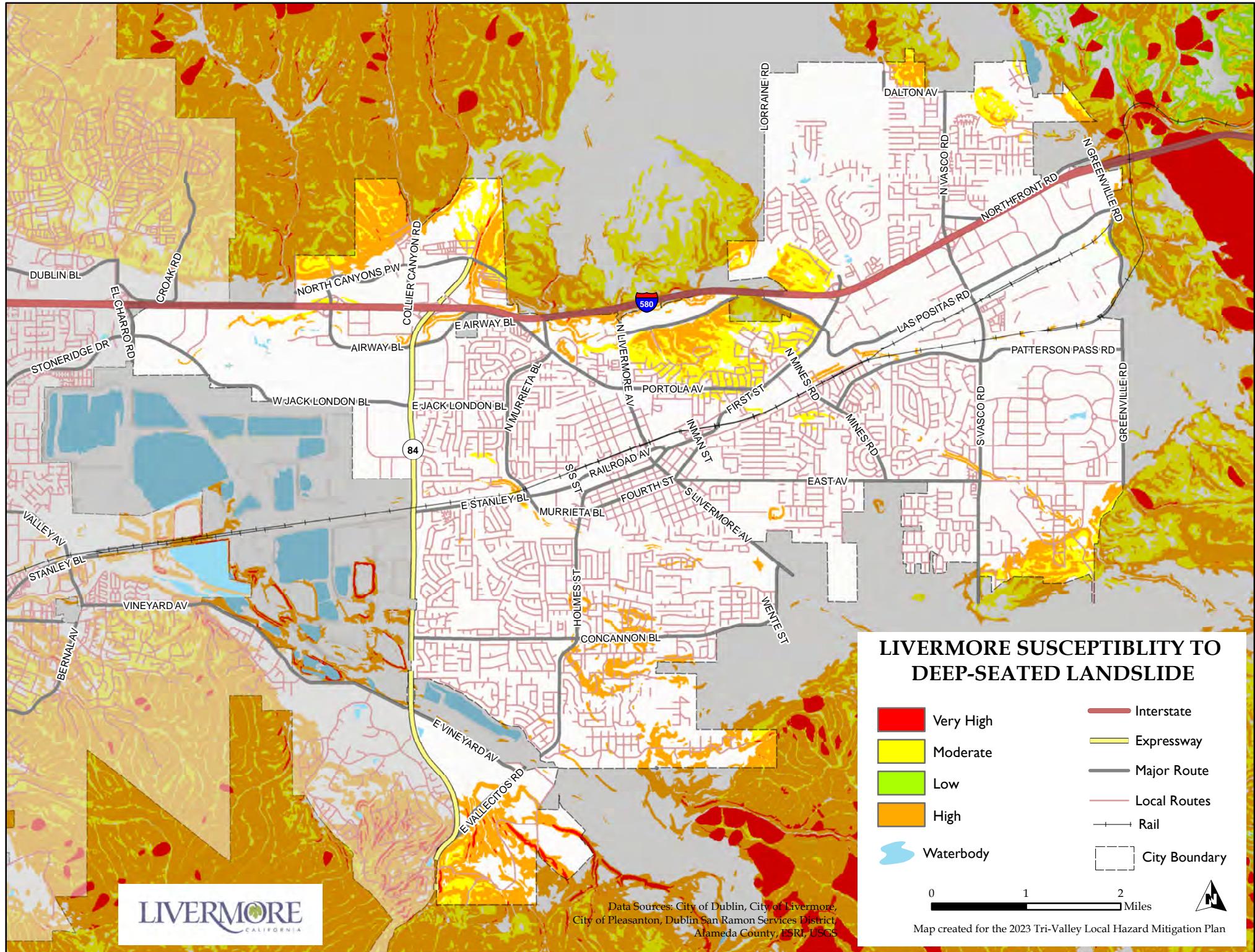


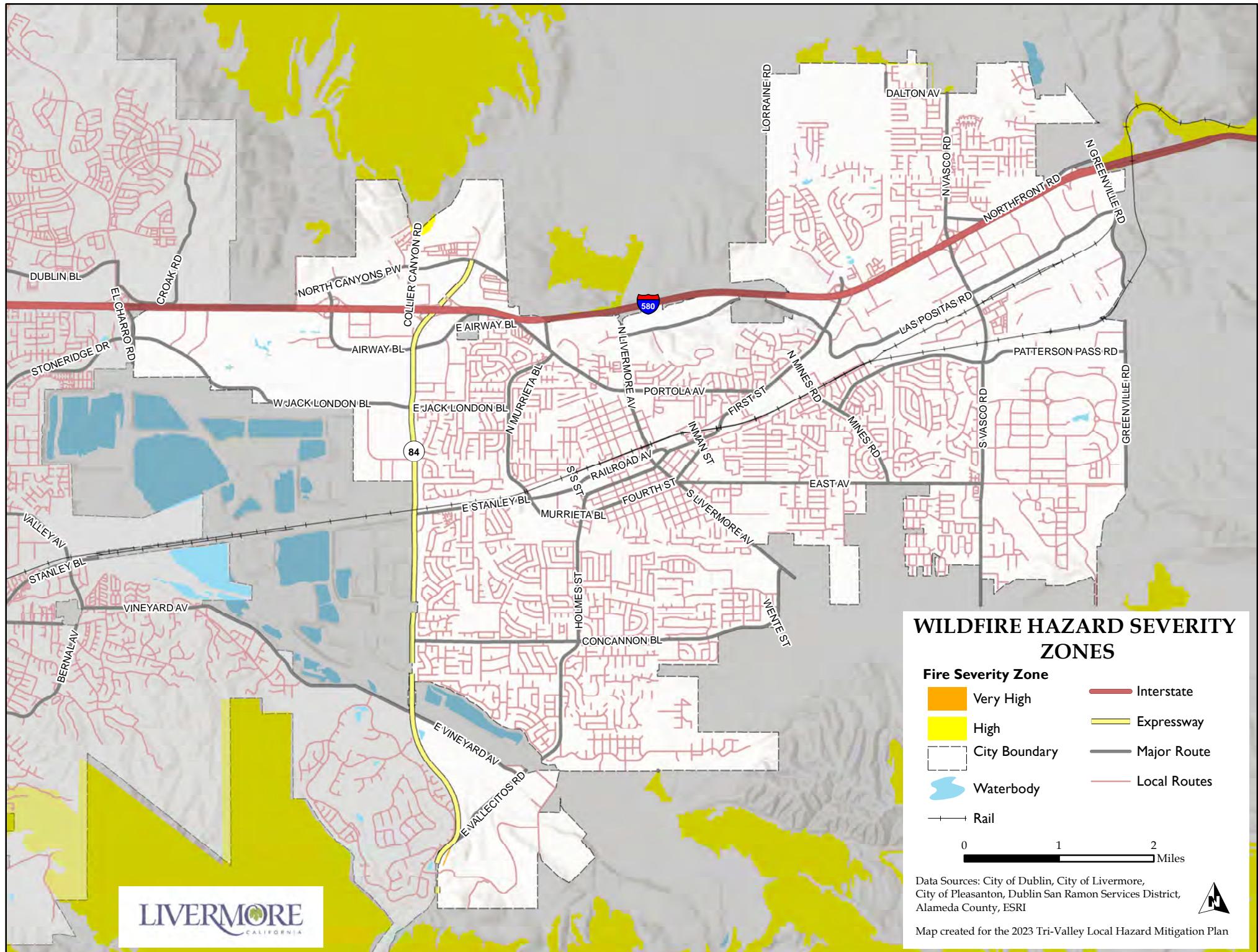












3. CITY OF PLEASANTON

3.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Diego Mora, Assistant Planner
PO Box 520
Pleasanton, CA 94566
925-931-5618
dmora@cityofpleasantonca.gov

Alternate Point of Contact

Ellen Clark, Director of Community Development
PO Box 520
Pleasanton, CA 94566
925-931-5606
eclark@cityofpleasantonca.gov

This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 3-1.

Table 3-1. Local Hazard Mitigation Planning Team Members

Name	Title
Diego Mora	Assistant Planner
Ellen Clark	Director of Community Development
Shweta Bonn	Senior Planner
Steve Kirkpatrick	Director of Engineering
Adam Nelkie	Assistant Director of Engineering
Rob Queirolo	Chief Building Official

3.2 JURISDICTION PROFILE

3.2.1 Location and Features

Pleasanton is located within Alameda County, one of nine Bay Area counties bordering the San Francisco Bay. Within city limits, Pleasanton comprises generally flat land that was once covered with native vegetation and agriculture and is now mostly developed with urban land uses. To the east of city limits lie sand and gravel quarries – a result of alluvial deposits from prehistoric streams flowing through the Tri-Valley – which in the future will convert to water conservation and recreational uses. To the south are vineyards along Vineyard Avenue and a series of gently to steeply sloping hills – the Southeast Hills – which sustain grazing lands and cattle. Finally, to the west, the seismically active Pleasanton and Main Ridges rise sharply, providing recreational and grazing areas. Downtown Pleasanton boasts some buildings from the late 1890s and is generally the center of community activities.

3.2.2 History

Although the area around Pleasanton was long inhabited by people before settlement by Europeans in 1769, the City's population remained modest in the four decades after the City's incorporation in 1894. By the late 1930s and early 1940s the population in Pleasanton was about 1,200 people. However, World War II triggered growth, and the City's population doubled between 1940 and 1950. The National Highway Act passed in 1956 brought Interstates 580 and 680 to the Tri-Valley, allowing for new economic activity. Also contributing to the rapid regional population growth was the federal government's sponsorship of the establishment of what is now Lawrence Livermore National Laboratory in 1950. This time period saw the development of tract neighborhoods outside the immediate downtown area, including: Amaral Acres on Kottinger Avenue, Jensen Tract on Santa Rita Road across from Amador Valley High School, Pleasanton Valley Estates near Santa Rita Road and Black Avenue, Heritage Valley, Pleasanton Heights, and Vintage Hills. The decades subsequent to the 1950s would see rapid population growth and expansion of the city limits to the north and east. The population of the City in the 1960s was estimated to be 4,200 people. Growth in Pleasanton was further supported by the construction of Hacienda – a major business park – which began in 1982, and construction of Stoneridge Shopping Center.

3.2.3 Governance

The City Council, comprising the Mayor and four City Councilmembers, is the governing body of the city, with all the regulatory and corporate powers of a municipal corporation provided under California State Law. In general, the Council supervises the operations of the City government by establishing policies and programs and appropriating funds for each service function, and the City Manager oversees implementation. Pleasanton has a district-based election system, each district has one Councilmember who resides in the district and who is just chosen by the electors residing in that district. The office of Mayor remains elected at-large by all voters. Councilmembers are elected for a term of four-years, and the Mayor is elected to a term of two-years. A Vice Mayor is selected by the Mayor each calendar year. The Mayor and Council are subject to term limits of eight years. The City has 10 committees, commissions, and task forces, which report to the City Council, and 13 departments (inclusive of the City Manager's and City Attorney's Office).

The City Council will review and adopt this plan, and the City Manager will oversee its implementation.

3.3 CURRENT TRENDS

3.3.1 Population

According to the 2020 U.S. Census, the population of Pleasanton was 79,871. Since 2017, the population has grown at an average annual rate of 1.65 percent.

3.3.2 Development

The City of Pleasanton adopted its General Plan in 2009, and City actions, such as those relating to land use allocations, annexations, zoning, subdivision, design review, redevelopment, and others must be consistent with the General Plan. The number of housing permits issued in 2022 is 53, which is slightly higher than the 41 permits issued in 2021 and similar to the number issued in 2020 (45 units). Housing production is expected to continue as a result of an improved economic climate, recent development activity, the Housing Crisis Act of 2019, interest in sites rezoned for high density development, and the City's efforts to encourage housing through the implementation of the 2023-2031 Housing Element's (adopted January 2023) new policies and programs. Per

the Housing Element, the City has planned for 5,965 units for the 2023 to 2031 planning period. Furthermore, new commercial development is located in various areas of Pleasanton. Examples of large scale projects include Workday, which included a six-story, approximately 410,000 square foot office building, parking garage, and other improvements near Stoneridge Mall; and an approximately 112,000 square foot new shopping center located in the eastern part of the City near the intersection of Stoneridge Drive and El Charro Road. Another example of a large scale project is 10X Genomics, which is currently constructing Phase 1 improvements, consisting of a three-story research and development, office and laboratory building totaling approximately 150,000-square-feet near Stoneridge. Additionally, 10X has the ability to construct up to an additional 231,000-square-foot research and development space and parking structure in future phases.

Identifying previous and future development trends is achieved through a comprehensive review of permitting since completion of the previous plan and in anticipation of future development. Tracking previous and future growth in potential hazard areas provides an overview of increased exposure to a hazard within a community. Table 3-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

Table 3-2. Recent and Expected Future Development Trends

Criterion	Response																														
<p>Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan? <i>If yes, give the estimated area annexed and estimated number of parcels or structures.</i></p>	No																														
<p>Is your jurisdiction expected to annex any areas during the performance period of this plan? <i>If yes, describe land areas and dominant uses.</i></p> <p>If yes, who currently has permitting authority over these areas?</p>	<p>Yes</p> <p>10807, 11033 and the two western parcels on Dublin Canyon Road, these four parcels total approximately 128.5-acres. Two of the four parcels each have one single-family residence. The remaining two parcels are vacant/open space. Secondly, annexation of the approximately 45-acre primarily vacant property at 4141 Foothill Road is anticipated.</p> <p>Alameda County</p>																														
<p>Are any areas targeted for development or major redevelopment in the next five years? <i>If yes, briefly describe, including whether any of the areas are in known hazard risk areas</i></p>	<p>Yes</p> <p>Yes, all sites identified for potential redevelopment as part of City's 2023 Housing Element update are within at least one hazard risk area. Due to the geographical location the City to known faults, all sites are within the Earthquake hazard risk area. Several sites consists of being in another known hazard risk area. For example, housing sites 1, 22, 23, and 26 are within a fire and landslide hazard risk areas. Housing sites 2, 4, 5, 6, 7, 9, 11, 12, 14, and 29 are within a flood hazard risk area.</p>																														
<p>How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?</p>	<table border="1"> <thead> <tr> <th></th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> <th>2021</th> </tr> </thead> <tbody> <tr> <td>Single Family</td> <td>50</td> <td>35</td> <td>111</td> <td>40</td> <td>25</td> </tr> <tr> <td>Multi-Family</td> <td>59</td> <td>56</td> <td>3</td> <td>0</td> <td>0</td> </tr> <tr> <td>Other</td> <td>3</td> <td>7</td> <td>11</td> <td>9</td> <td>16</td> </tr> <tr> <td>Total</td> <td>112</td> <td>98</td> <td>125</td> <td>49</td> <td>41</td> </tr> </tbody> </table>		2017	2018	2019	2020	2021	Single Family	50	35	111	40	25	Multi-Family	59	56	3	0	0	Other	3	7	11	9	16	Total	112	98	125	49	41
	2017	2018	2019	2020	2021																										
Single Family	50	35	111	40	25																										
Multi-Family	59	56	3	0	0																										
Other	3	7	11	9	16																										
Total	112	98	125	49	41																										
<p>Provide the number of new construction permits for each hazard area or provide a qualitative description of where development has occurred.</p>	<p>Development has occurred throughout the city during the performance period for this plan. The city does not have the ability to track the specific number of building permits issued by hazard area. It is important to note, however, that all new development was consistent with General Plan policies and municipal code standards.</p>																														
<p>Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.</p>	<p>The City of Pleasanton is substantially built out; however, several in-fill lots have not been developed, both with potential residential and non-residential uses. The City of Pleasanton is substantially built out; however, several in-fill lots have not been developed, both with potential residential and non-residential uses.</p>																														

3.4 CHANGES IN PRIORITIES

The City's mitigation priorities have remained the same since the last mitigation plan update.

3.5 CAPABILITY ASSESSMENT

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

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

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

Table 3-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code <i>Comment:</i> Pleasanton Building Code, last amended in 2019, (PMC § 20.08, Building Code)	Yes	Yes	Yes	Yes
Zoning Code <i>Comment:</i> Pleasanton Municipal Code, last amended in 2020 (PMC Title 18, Zoning)	Yes	No	Yes	Yes
Subdivisions <i>Comment:</i> Pleasanton Municipal Code, last amended in 2016 (PMC Title 19 Subdivisions)	Yes	No	Yes	Yes
Stormwater Management <i>Comment:</i> Pleasanton Municipal Code, last amended in 2016 (PMC § 9.14, Stormwater Management and Discharge Control)	Yes	Yes	Yes	Yes
Post-Disaster Recovery <i>Comment:</i> Preparation of subject plan in process	Yes	Yes	No	Yes
Real Estate Disclosure <i>Comment:</i> Cal. Civ. Code §1102 et seq.	Yes	Yes	Yes	Yes
Growth Management <i>Comment:</i> Cal. Gov. Code §65300 et seq.; (PMC § 17.36, Growth Management Program)	Yes	Yes	No	No

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity
Site Plan Review	Yes	No	No	Yes
<i>Comment:</i> Site Plan Review is completed with entitlements such as Design Review and/or Planned Unit Development review for new development projects				
Environmental Protection	Yes	Yes	Yes	Yes
<i>Comment:</i> California Environmental Quality Act (CEQA)				
Flood Damage Prevention	Yes	Yes	Yes	Yes
<i>Comment:</i> The City coordinates with Zone 7 Water Agency for stream management and flood protection.				
Floodplain Management Plan	Yes	No	Yes	Yes
<i>Comment:</i> Floodplain ordinance 1374 first adopted 7/19/1988; updated 7/19/2022 Ord. # 2239)				
Flood Insurance Rate Maps	Yes	No	Yes	Yes
<i>Comment:</i> Current FIRM date – August 3, 2009				
Emergency Management	Yes	Yes	Yes	Yes
<i>Comment:</i> Pleasanton Municipal Code, last updated 2016 (PMC § 2.44 Emergency Organization)				
Climate Change	Yes	Yes	Yes	Yes
<i>Comment:</i> California SB 379 requires cities to include climate adaptation and resiliency strategies in their general plans.				
Planning Documents				
General Plan	Yes	Yes	Yes	Yes
<i>Is the plan compliant with Assembly Bill 2140?</i> No				
<i>Comment:</i> Pleasanton's General Plan was adopted in 2009. The City will update its General Plan to comply with Assembly Bill 2140 in conjunction with adoption of the Hazard Mitigation Plan.				
Capital Improvement Plan	Yes	Yes	No	Yes
<i>How often is the plan updated?</i> Every 2 years				
<i>Comment:</i> The CIP was last updated in June 2021 for fiscal years 2021-22 through 2024-25				
Disaster Debris Management Plan	Yes	Yes	No	Yes
<i>Comment:</i> The City has adopted a Disaster Debris Management Plan as of April 2022.				
Floodplain or Watershed Plan	No	Yes	Yes	Yes
<i>Comment:</i> The City coordinates with Zone 7 Water Agency for stream management and flood protection.				
Stormwater Plan	Yes	Yes	Yes	Yes
<i>Comment:</i> Pleasanton Municipal Code, last amended in 2016				
Urban Water Management Plan	Yes	Yes	Yes	Yes
<i>Comment:</i> Pleasanton Municipal Code, last amended in 2021 (PMC § 9.30 Water Management Plan)				
Habitat Conservation Plan	No	Yes	No	No
<i>Comment:</i> Pleasanton participates in the Eastern Alameda County Conservation Strategy				
Economic Development Plan	Yes	No	No	No
<i>Comment:</i> Pleasanton's General Plan includes an Economic and Fiscal Element				
Shoreline Management Plan	No	No	No	No
<i>Comment:</i> Not applicable				
Community Wildfire Protection Plan	No	Yes	Yes	Yes
<i>Comment:</i> Alameda County				
Forest Management Plan	No	No	No	No
<i>Comment:</i> Not applicable				
Climate Action Plan	Yes	Yes	Yes	Yes
<i>Comment:</i> General Plan Air Quality and Climate Change Element adopted in 2009; Climate Action Plan 2.0 adopted in 2022.				
Emergency Operations Plan	Yes	Yes	Yes	Yes
<i>Comment:</i> The City updated its Emergency Operations Plan in 2018.				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity
Threat & Hazard Identification & Risk Assessment (THIRA) <i>Comment:</i> Bay Area Urban Areas Security Initiative	No	Yes	No	No
Post-Disaster Recovery Plan <i>Comment:</i> Association of Bay Area Governments, Bay Area Regional Disaster Resilience Action Plan Initiative	No	Yes	No	Yes
Continuity of Operations Plan <i>Comment:</i> None identified	No	No	No	No
Public Health Plan <i>Comment:</i> Alameda County Public Health Department	No	Yes	No	Yes

Planning and regulatory capabilities will be expanded and improved upon by implementing actions in the Hazard Mitigation Action Plan, including Action PLE-2.

Table 3-4. Development and Permitting Capability

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

Development and permitting capabilities will be expanded and improved upon by implementing actions in the Hazard Mitigation Action Plan, including Action PLE-8.

Table 3-5. Fiscal Capability

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

In the future, the City would consider applying for mitigation and other emergency management grant opportunities for projects that exceed the current City budget.

The City could consider collaborating with DSRSD on increasing fees related to water delivery services.

Table 3-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices <i>If Yes, Department /Position:</i> Community Development Department	Yes
Engineers or professionals trained in building or infrastructure construction practices <i>If Yes, Department /Position:</i> Community Development Department and Engineering Department	Yes
Planners or engineers with an understanding of natural hazards <i>If Yes, Department /Position:</i> Community Development Department	Yes
Staff with training in benefit/cost analysis <i>If Yes, Department /Position:</i> Finance Department	Yes
Surveyors <i>If Yes, Department /Position:</i> Engineering Department	Yes
Personnel skilled or trained in GIS applications <i>If Yes, Department /Position:</i> Information Technology	Yes
Scientist familiar with natural hazards in local area <i>If Yes, Department /Position:</i>	No
Emergency manager <i>If Yes, Department /Position:</i> Livermore-Pleasanton Fire Department	Yes
Grant writers <i>If Yes, Department /Position:</i> Various Departments	Yes

The City would consider exploring opportunities for upgrading its technical capabilities in the EOC to better interface with area jurisdictions and monitors.

Based on the existing capabilities listed above, the City could improve its technical capabilities by seeking the services of someone with scientific expertise in local hazards. However, the City has not identified a need to do so at this time.

Table 3-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website? <i>If yes, briefly describe:</i> Hazard Mitigation Plan website	Yes
Do you use social media for hazard mitigation education and outreach? <i>If yes, briefly describe:</i>	No
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <i>If yes, briefly describe:</i>	No
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> City newsletter	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i> Social media	Yes

Education and outreach capabilities will be expanded and improved upon by implementing actions in the Hazard Mitigation Action Plan, including Action PLE-11.

Table 3-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Engineering/Building
Who is your floodplain administrator? (department/position)	Adam Nelkie, Assistant Director of Engineering
Are any certified floodplain managers on staff in your jurisdiction?	Yes
What is the date that your floodplain management and damage prevention ordinance was last amended?	August 20, 2022, Ord No. 2239
Does your floodplain management program exceed minimum requirements? <i>If yes, in what ways?</i> The City maintains a CRS Certification of Class 7	Yes
When was the most recent Community Assistance Visit or Community Assistance Contact?	February 2016
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <i>If yes, state what they are.</i>	No
Are any RiskMAP projects currently underway in your jurisdiction? <i>If yes, state what they are.</i>	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <i>If no, state why.</i>	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program? <i>If yes, what type of assistance/training is needed?</i> Additional staff trained	Yes
Does your jurisdiction participate in the Community Rating System (CRS)? <i>If yes, is your jurisdiction interested in improving its CRS Classification?</i> Yes <i>If no, is your jurisdiction interested in joining the CRS program?</i>	Yes
How many flood insurance policies are in force in your jurisdiction? ^a <i>What is the insurance in force?</i> \$36,213,000 <i>What is the premium in force?</i> \$78,978	93
How many total loss claims have been filed in your jurisdiction? ^a <i>What were the total payments for losses?</i> \$56,774	19

a. According to FEMA statistics as of 04/30/2022

Table 3-9. Community Classifications

	Participating?	ID Number	Classification	Date Classified
FIPS Code	Yes	0657792	N/A	N/A
Unique Entity ID #	Yes	ZQLCND5KBU99	N/A	N/A
Community Rating System	Yes	060012	7	10/01/2017
Building Code Effectiveness Grading Schedule	Yes	N/A	2	March 2012
Public Protection	Yes	65871	3	10/1/2020
StormReady	No	N/A	N/A	N/A
Firewise	No	N/A	N/A	N/A

Table 3-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts	High
Comment: The City completed a Pleasanton-specific climate vulnerability assessment anticipating climate threats to the community, as part of the adopted CAP 2.0. As part of the Climate Action Plan adopted in February 2022, a greenhouse gas (GHG) inventory was conducted.	
Jurisdiction-level monitoring of climate change impacts	Low
Comment: The City has adopted a Climate Action Plan and the General Plan includes climate change policies. While climate change impacts are not specifically monitored, hazards are monitored via the local hazard mitigation plan.	
Technical resources to assess proposed strategies for feasibility and externalities	Medium
Comment: City staff and if needed, consultants are available to assess strategies for feasibility.	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	High
Comment: The City has an updated GHG inventory, conducted as part of the CAP 2.0 process and has a tracking system to analyze GHGs on an on-going basis.	
Capital planning and land use decisions informed by potential climate impacts	Medium
Comment: Impacts related to air quality and greenhouse gas emissions are evaluated on a project-by-project basis during environmental review.	
Participation in regional groups addressing climate risks	High
Comment: City participates in regional climate conversations among other cities working to address climate change.	
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Medium
Comment: Impacts related to air quality and greenhouse gas emissions are evaluated on a project-by-project basis during environmental review. Further, projects must comply with CAP 2.0 which have several actions related to development.	
Identified strategies for greenhouse gas mitigation efforts	High
Comment: The CAP 2.0 includes strategies and actions to reduce greenhouse gas emissions.	
Identified strategies for adaptation to impacts	Low
Comment: These strategies have been incorporated into the adopted CAP2.0.	
Champions for climate action in local government departments	Low
Comment: At this time, there is no dedicated staff to climate action planning, although the City is considering funding for this role as part of its budgeting process. Regardless, several staff across the City including within the Community Development, Operations Services, and City Managers Departments are working on various strategies to implement the adopted CAP 2.0 and participating in regional conversations.	
Political support for implementing climate change adaptation strategies	High
Comment: The city is supportive of strategies and actions outlined in the adopted CAP 2.0 and their strategic implementation.	
Financial resources devoted to climate change adaptation	Medium
Comment: While funds have not been specifically dedicated to climate change adaptation, implementation of such measures are carried forward on an as feasible basis for city projects.	
Local authority over sectors likely to be negative impacted	Medium
Comment: The city has authority over local public streets and related infrastructure.	

Criterion	Jurisdiction Rating ^a
Public Capacity	
Local residents' knowledge of and understanding of climate risk	Medium
<i>Comment:</i> Local residents are well-informed and aware of local, regional, state-wide, and greater issues relating to climate change.	
Local residents' support of adaptation efforts	Medium
<i>Comment:</i> Local residents are generally supportive of measures to address climate change.	
Local residents' capacity to adapt to climate impacts	Low
<i>Comment:</i> This is not known at this time.	
Local economy's current capacity to adapt to climate impacts	Low
<i>Comment:</i> This is not known at this time.	
Local ecosystems' capacity to adapt to climate impacts	Low
<i>Comment:</i> This is not known at this time.	
a. High = Capacity exists and is in use; Medium = Capacity may exist but is not used or could use some improvement;	
Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.	

3.6 INTEGRATION REVIEW

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

3.6.1 Existing Integration

Some level of integration of content from the 2018 Tri-Valley local hazard mitigation plan has already been established in the following local plans and programs:

- **General Plan**—Includes policies related to flooding, geotechnical concerns, wildfire, and other hazards which were updated following the completion of the 2018 HMP
- **Capital Improvement Plan**—Includes infrastructure that incorporates climate change adaptation strategies. Additional projects were considered following the completion of the 2018 HMP.
- **Climate Action Plan 2.0**—Increases resilience to climate change through resilience actions and greenhouse gas mitigation actions, includes information on risks to climate change.
- **Emergency Operations Plan**—Addresses operational needs and procedures during an emergency. Trainings and exercised focused on the identified hazards that were called out in the 2018 HMP.
- **Pleasanton Municipal Code**—The Pleasanton Municipal Code includes development requirements that can address hazard mitigation.

3.6.2 Opportunities for Future Integration

The capability assessment presented in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if

they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Capital Improvement Program**—Incorporate hazard mitigation projects consistent with other adopted plans and programs.
- **Pleasanton General Plan**—Enhance to address hazard mitigation policies, including climate adaptation and resiliency as required by State law
- **Climate Action Plan**—Enhance to increase local resiliency to climate change
- **Emergency Operations Plan**—Update to better address operational needs and procedures during an emergency
- **Pleasanton Municipal Code**—The Pleasanton Municipal Code includes development requirements that can address hazard mitigation, including site plan review completed with entitlements such as Design Review and Planned Unit Development review. Continue to look for opportunities to further integrate hazard mitigation goals and objectives into the Municipal Code.
- **Continuity of Operations Plan**—Plan to ensure that agencies are able to perform essential functions during emergencies.
- **Continuity of Government Plan**—Plan to ensure that government continues its essential functions during emergencies
- **Post Disaster Recovery Plan**—Develop plan and policies for rebuilding and recovery after disasters

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan presented in this annex.

3.7 RISK ASSESSMENT

3.7.1 Jurisdiction-Specific Natural Hazard Event History

Table 3-11 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 3-11. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Severe Weather & Flood	EM-3591	December 31, 2022- January 4, 2023	The Bay Area experienced repeated atmospheric river events resulting in numerous shallow landslides, downed trees, and localized flooding. Damage Estimate: TBD
COVID-19 Pandemic	DR-4482	January 20, 2020 - ongoing	Staffing interruptions
President's Day Winter Storm	DR-4308	02/15/2017	Localized Flooding Impacts Damage Estimate: N/A
Drought	N/A	2013-2016	N/A
Severe Winter Storms, Flooding	DR-1155	11/17/1996	N/A
Loma Prieta Earthquake	DR-845	10/17/1989	N/A

3.7.2 Hazard Risk Ranking

Table 3-12 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property and the economy. Based on local knowledge and assessments per the Livermore-Pleasanton Fire Department’s incident report between January 1, 2020, through December 31, 2022, Pleasanton has increased the wildfire hazard to a high ranking. Mitigation actions target hazards with high and medium rankings.

Table 3-12. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Earthquake	36	High
2	Wildfire	36	High
3	Severe Weather	33	Medium
4	Landslide	22	Medium
5	Dam Failure	18	Medium
6	Flood	15	Low
7	Drought	9	Low

3.7.3 Jurisdiction-Specific Vulnerabilities

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

Repetitive Loss Properties

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 1
- Number of FEMA-identified Severe-Repetitive-Loss Properties: 0
- Number of Repetitive-Loss Properties or Severe-Repetitive-Loss Properties that have been mitigated: N/A
- No severe repetitive losses occurred.

Other Noted Vulnerabilities

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

3.8 STATUS OF PREVIOUS PLAN ACTIONS

Table 3-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 3-13. Status of Previous Plan Actions

Action Item from Previous Plan	Status of Action	New Action #
Action P-1—Where appropriate, support retrofitting or relocation of structures in high hazard areas, prioritizing structures that have experienced repetitive losses. <i>Comment:</i> This is an ongoing effort.	Carried over to updated plan	PLE-1
Action P-2—Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including the City's General Plan. <i>Comment:</i> An update to the Safety Element of the General Plan will be completed upon adoption of the updated Hazard Mitigation Plan.	Carried over to updated plan	PLE-2
Action P-3—Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan. <i>Comment:</i> This is an ongoing effort.	Carried over to updated plan	PLE-3
Action P-4—Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements: <ul style="list-style-type: none">• Enforce the flood damage prevention ordinance.• Participate in floodplain identification and mapping updates.• Provide public assistance/information on floodplain requirements and impacts. <i>Comment:</i> This is an ongoing effort.	Carried over to updated plan	PLE-4
Action P-5—Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following: update and implementation of the Climate Action Plan and update the General Plan to address recent legislation and establish policies related to climate change adaptability. <i>Comment:</i> The City adopted an update to its Climate Action Plan in February 2022 (CAP 2.0) and will implement the CAP on an ongoing basis.	Carried over to updated plan	PLE-5
Action P-6—Tie public education on defensible space and a comprehensive defensible space ordinance to a field program of enforcement. <i>Comment:</i> This is an ongoing effort.	Carried over to updated plan	PLE-7
Action P-7—Prohibit construction of habitable structures within at least 50 feet of an identified active fault trace where the fault has been specifically located in site-specific geologic studies. <i>Comment:</i> The City has and will continue to prohibit construction of habitable structures within at least 50 feet of an active fault.	Carried over to updated plan	PLE-8
Action P-8—Prohibit new development of sites with structures intended for human occupancy in any landslide-prone areas unless the landslide risk can be eliminated. Permit development in landslide prone areas only when sites can be shown to be stable during adverse conditions such as saturated soils, ground shaking, and during grading of the site for roads, installation of infrastructure, and creation of building pads. Engineering studies shall demonstrate that structures in landslide prone areas would sustain no more damage due to slope instabilities than damage sustained by a similar building in the Pleasanton Planning Area constructed to current CBC standards and located on soils with a low susceptibility to failure when exposed to moderate ground shaking. <i>Comment:</i> The City has and will continue to prohibit new development of sites with structures in landslide-prone areas unless the landslide risk can be eliminated.	Carried over to updated plan	PLE-9
Action P-9—Require fire mitigation measures in new and existing developments that reduce the fire threat to the structure and occupants. Require development outside the five-minute travel time and in Special Fire Protection Areas to provide effective fire prevention measures. <i>Comment:</i> The City has and will continue to require fire mitigation in new and existing developments that reduce the fire threat to the structure and occupants.	Carried over to updated plan	PLE-10

Action Item from Previous Plan	Status of Action	New Action #
Action P-10—Continue to conduct public meetings and issue press releases regarding Del Valle Dam evacuation. <i>Comment:</i> Hazard information outreach will be done for all natural hazards. It is not reasonable for the city to only focus on the dam inundation hazard. A new action has been included for community education and outreach for natural hazards.	Removed; no longer feasible	
Action P-11—Encourage replacing aboveground electric and phone wires and other structures with underground facilities and use the planning-approval process to ensure that, on a case-by-case basis, all new phone and electrical lines are installed underground. <i>Comment:</i> The City has and will continue to encourage replacement of aboveground electric and phone wires with underground facilities.	Carried over to updated plan	PLE-13

3.9 HAZARD MITIGATION ACTION PLAN

Table 3-14 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 3-15 identifies the priority for each action. Table 3-16 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 3-14. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timelinea
Action PLE-1 —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
<i>Hazards Mitigated:</i> Dam Failure, Earthquake, Flood, Landslide, Severe Weather, Wildfire						
Existing	4, 5, 6, 8, 10, 12	City of Pleasanton Community Development Department, Engineering Department	Livermore-Pleasanton Fire Department	High	HMGP, BRIC, FMA	Short-term
Action PLE-2 —Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including the City's General Plan.						
<i>Hazards Mitigated:</i> Dam Failure, Drought, Earthquake, Flood, Landslide, Severe Weather, Wildfire						
Both	1, 2, 6, 8, 10, 11	City of Pleasanton Community Development Department, Engineering Department	Livermore-Pleasanton Fire Department	Low	Staff Time, General Funds	Ongoing
Action PLE-3 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan with ongoing participation and cooperation among planning partners.						
<i>Hazards Mitigated:</i> Dam Failure, Drought, Earthquake, Flood, Landslide, Severe Weather, Wildfire						
Both	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	City of Pleasanton – All Departments	Livermore-Pleasanton Fire Department	Low	Staff Time, General Funds	Short-term
Action PLE-4 —Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:						
<ul style="list-style-type: none"> • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts. 						
<i>Hazards Mitigated:</i> Flood, Dam Failure						
Both	1, 4, 6, 9	City of Pleasanton, Engineering Department	Livermore-Pleasanton Fire Department, Zone 7	Low	Staff Time, General Funds	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline
Action PLE-5 —Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following: continue implementation of the CAP 2.0 and update the General Plan to address recent legislation and establish policies related to climate change adaptability.						
<i>Hazards Mitigated:</i> Dam failure, Drought, Flood, Landslide, Severe Weather, Wildfire	Both 1, 2, 5, 7, 8, 9, 10, 12	City of Pleasanton-All Departments	Adjacent Cities/County	Low	Staff Time, General Funds	Short-term
Action PLE-6 —Purchase generators for critical facilities and infrastructure that lack adequate backup power.						
<i>Hazards Mitigated:</i> Earthquake, Severe Weather	Existing 8, 10	OSD	None	Medium	OSD Operational Budget	Ongoing
Action PLE-7 —Tie public education on defensible space and a comprehensive defensible space ordinance to a field program of enforcement.						
<i>Hazards Mitigated:</i> Wildfire	Both 1, 2, 5, 6, 11, 12	Livermore-Pleasanton Fire Department	City of Pleasanton	Medium	Staff Time, General Funds	Ongoing
Action PLE-8 —Prohibit construction of habitable structures within at least 50 feet of an identified active fault trace where the fault has been specifically located in site-specific geologic studies.						
<i>Hazards Mitigated:</i> Landslide, Earthquake	New 2, 4, 5, 6, 11	City of Pleasanton Community Development Department, Engineering Department	None	Low	General Funds, Staff time	Ongoing
Action PLE-9 —Prohibit new development of sites with structures intended for human occupancy in any landslide-prone areas unless the landslide risk can be eliminated. Permit development in landslide prone areas only when sites can be shown to be stable during adverse conditions such as saturated soils, ground shaking, and during grading of the site for roads, installation of infrastructure, and creation of building pads. Engineering studies shall demonstrate that structures in landslide prone areas would sustain no more damage due to slope instabilities than damage sustained by a similar building in the Pleasanton Planning Area constructed to current CBC standards and located on soils with a low susceptibility to failure when exposed to moderate ground shaking.						
<i>Hazards Mitigated:</i> Landslide, Earthquake	Both 2, 4, 5, 6, 11	City of Pleasanton Community Development Department, Engineering Department	None	Low	General Fund, Staff Time	Ongoing
Action PLE-10 —Require fire mitigation measures in new and existing developments that reduce the fire threat to the structure and occupants. Require development outside the five-minute travel time and in Special Fire Protection Areas to provide effective fire prevention measures.						
<i>Hazards Mitigated:</i> Wildfire	Both 2, 3, 7	Livermore-Pleasanton Fire Department	City of Pleasanton	Medium	General Fund, Private Development Investment	Ongoing
Action PLE-11 —Provide information to the community about natural hazards, their impacts, and measures both the city and community members may take to mitigate the impacts. Outreach may include notices on the city website, social media channels, print media, and other forms of education and awareness.						
<i>Hazards Mitigated:</i> Earthquake, Wildfire, Severe Weather, Landslide, Dam Failure, Flood, Drought	Both 1, 3, 7, 9	City of Pleasanton Public Information Officer with department wide input	Livermore-Pleasanton Fire Department	Low	General Funds	Ongoing

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action PLE-12 —Substantial Damage Response/Management Plan—Explore the feasibility of developing the plan. Develop the plan if deemed feasible.						
Both	1, 4, 5, 6, 8, 10	Engineering Department	None	Low	General Funds, California Adaptation Grant Program	Short-term
Action PLE-13 —Encourage replacing aboveground electric and phone wires and other structures with underground facilities and use the planning-approval process to ensure that, on a case-by-case basis, all new phone and electrical lines are installed underground.						
Both	4, 8	Engineering Department	City of Pleasanton Community Development Department	Low	General Funds, Possible PG&E Underground Fund	Ongoing
Action PLE-14 — Explore the feasibility of identifying socially vulnerable populations at the census block level. If deemed feasible, develop the dataset for future planning efforts.						
Both	1, 9, 10, 12	City of Pleasanton Community Development Department		Low	General Funds, Staff Time	Short-term

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

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

Table 3-15. Mitigation Action Priority

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

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

Table 3-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
High-Risk Hazards								
Earthquake	8, 9	1	11		6			2, 3, 14
Wildfire	10	1, 13	7, 11	7			5	2, 3, 5, 7, 14
Medium-Risk Hazards								
Severe Weather		1, 12, 13	11		6, 12		5	2, 3, 5, 12, 14
Landslide	8, 9	1, 13	11				5	2, 3, 5, 14
Low-Risk Hazards								
Dam Failure	4	1, 4, 13	4, 11				5	2, 3, 5, 14
Flood	4	1, 4, 12, 13	4, 11		12		5	2, 3, 5, 12, 14
Drought			11				5	2, 3, 5, 14

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

3.10 PUBLIC OUTREACH

Table 3-17 lists public outreach activities for this jurisdiction.

Table 3-17. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
CRS Program Outreach – Flood Mailers, Display in Permit Center, Library and OSD building	09/2022	5
City Website	Continuous	Unknown

3.11 INFORMATION SOURCES USED FOR THIS ANNEX

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

- **City of Pleasanton Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **City of Pleasanton Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
- **City of Pleasanton General Plan**—The General Plan was reviewed to identify applicable policies that promote hazard mitigation.
- **City of Pleasanton Climate Action Plan**—The Climate Action Plan was reviewed to ascertain approaches to achieving climate change resilience.

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- **Current State Law**—State law (e.g., SB 379, SB 1241) was reviewed regarding recent requirements that relate to hazards and hazard mitigation.
- **State Office Department of Planning and Research, General Plan Guidelines**—The Guidelines were reviewed to identify new approaches to integrating hazard planning into General Plans.

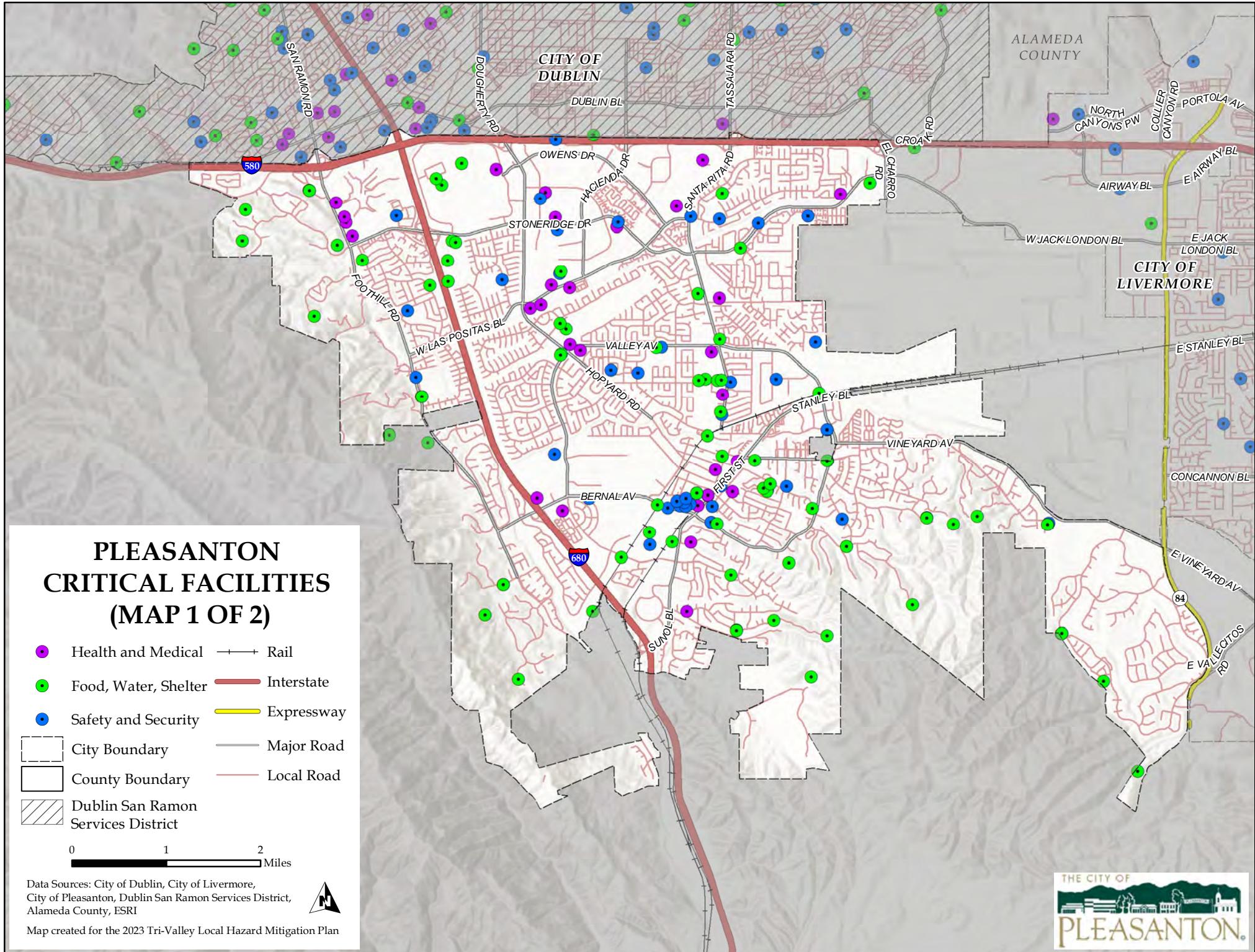
PLEASANTON CRITICAL FACILITIES (MAP 1 OF 2)

- Health and Medical  Rail 
- Food, Water, Shelter  Interstate 
- Safety and Security  Expressway 
-  City Boundary  Major Road
-  County Boundary  Local Road
-  Dublin San Ramon Services District

0 1 2 Miles

Data Sources: City of Dublin, City of Livermore, City of Pleasanton, Dublin San Ramon Services District, Alameda County, ESRI

Map created for the 2023 Tri-Valley Local Hazard Mitigation Plan



PLEASANTON CRITICAL FACILITIES (MAP 2 OF 2)

- Communications
- Energy
- Transportation
- Hazardous Materials
- +— Rail
- +— Interstate
- +— Expressway
- +— Major Road
- +— Local Road

City Boundary

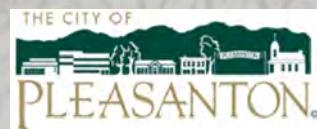
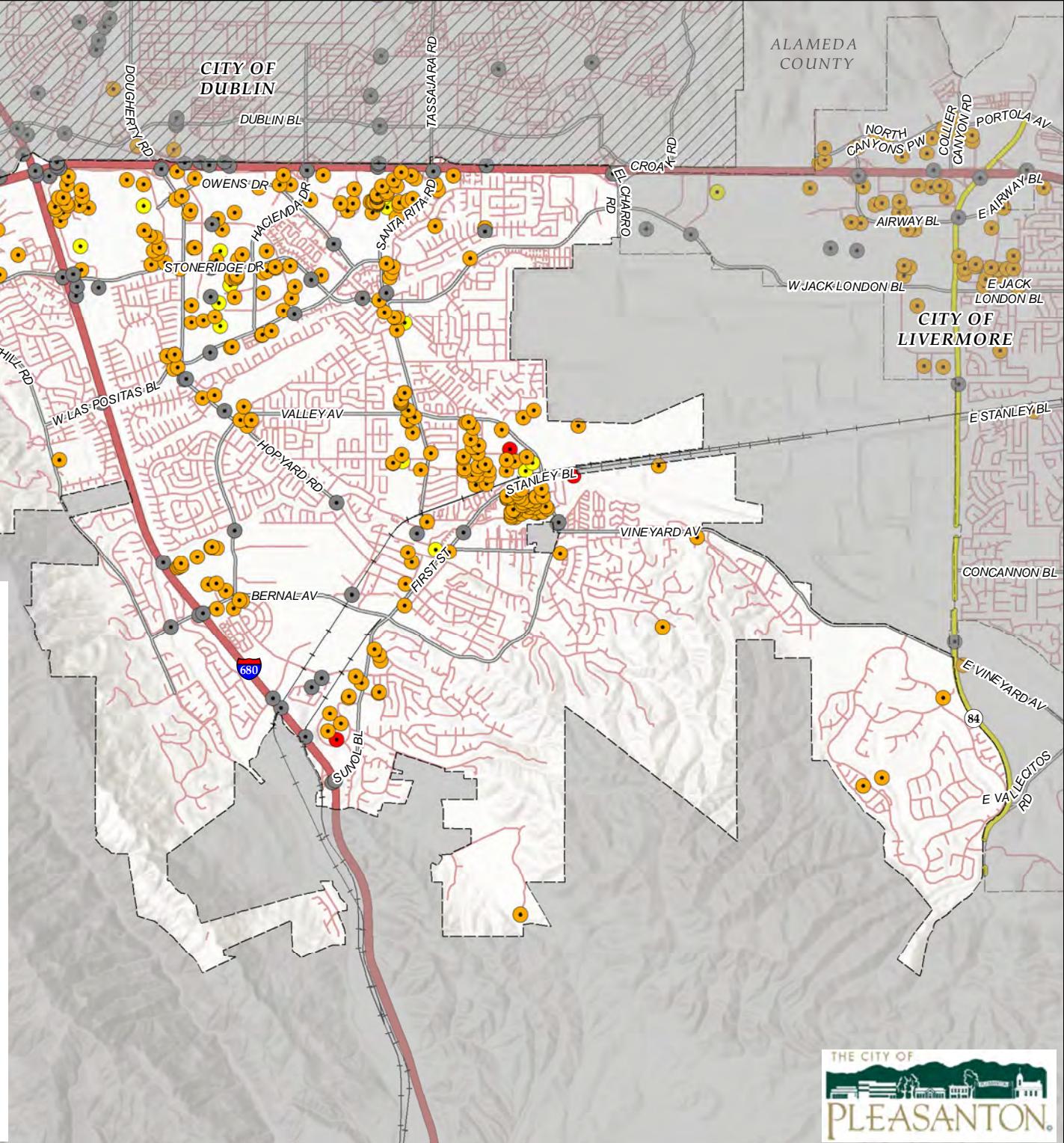
County Boundary

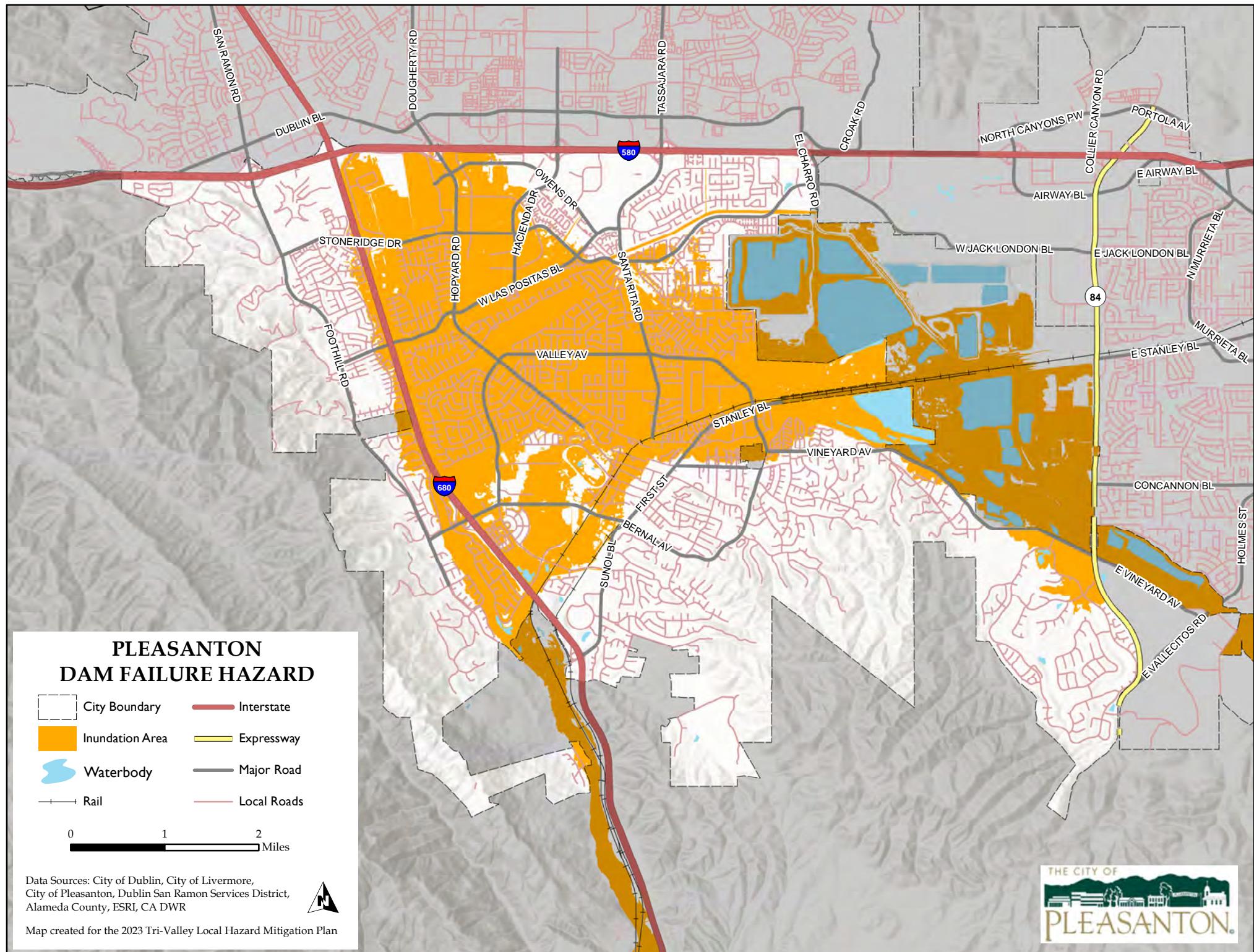
Dublin San Ramon Services District

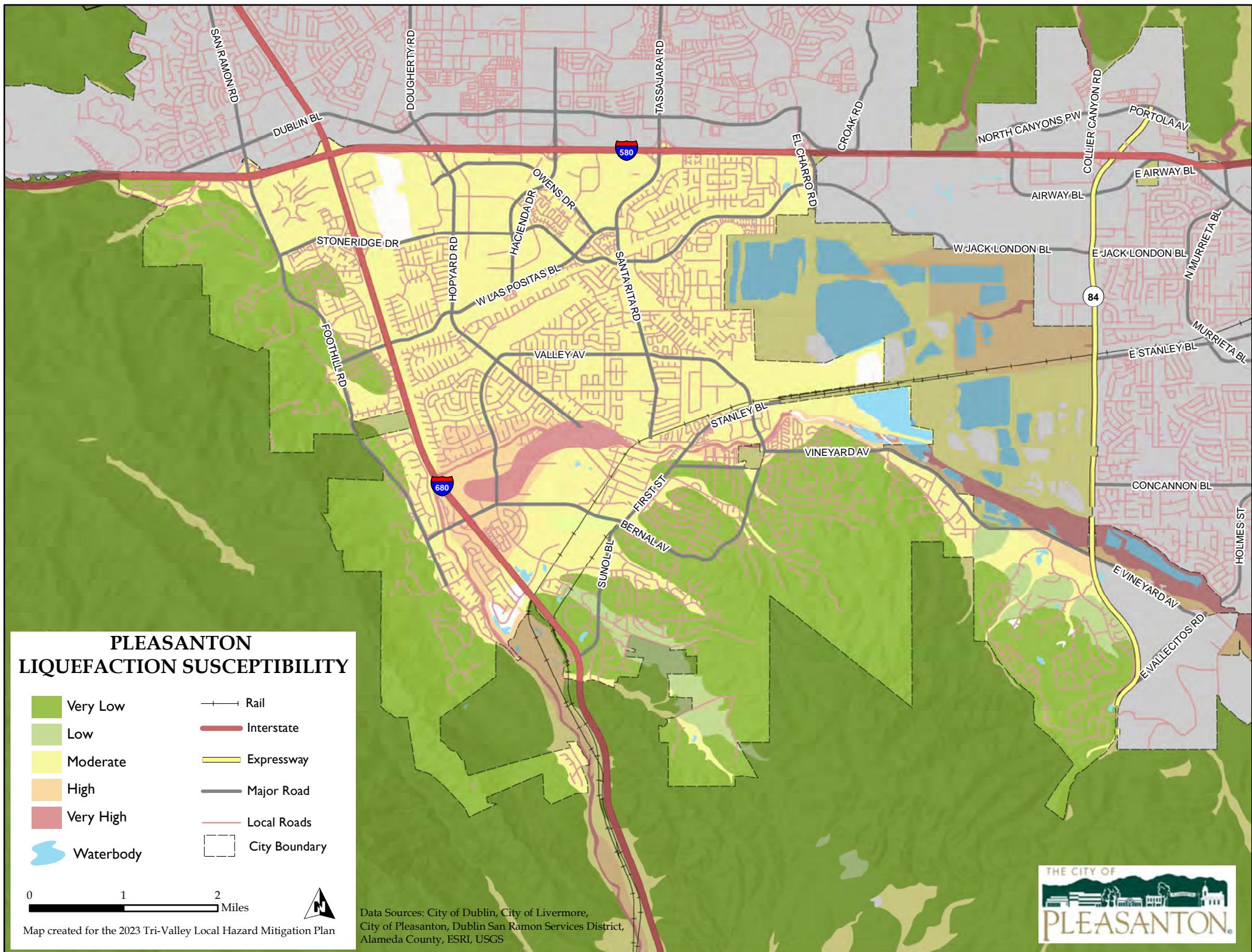
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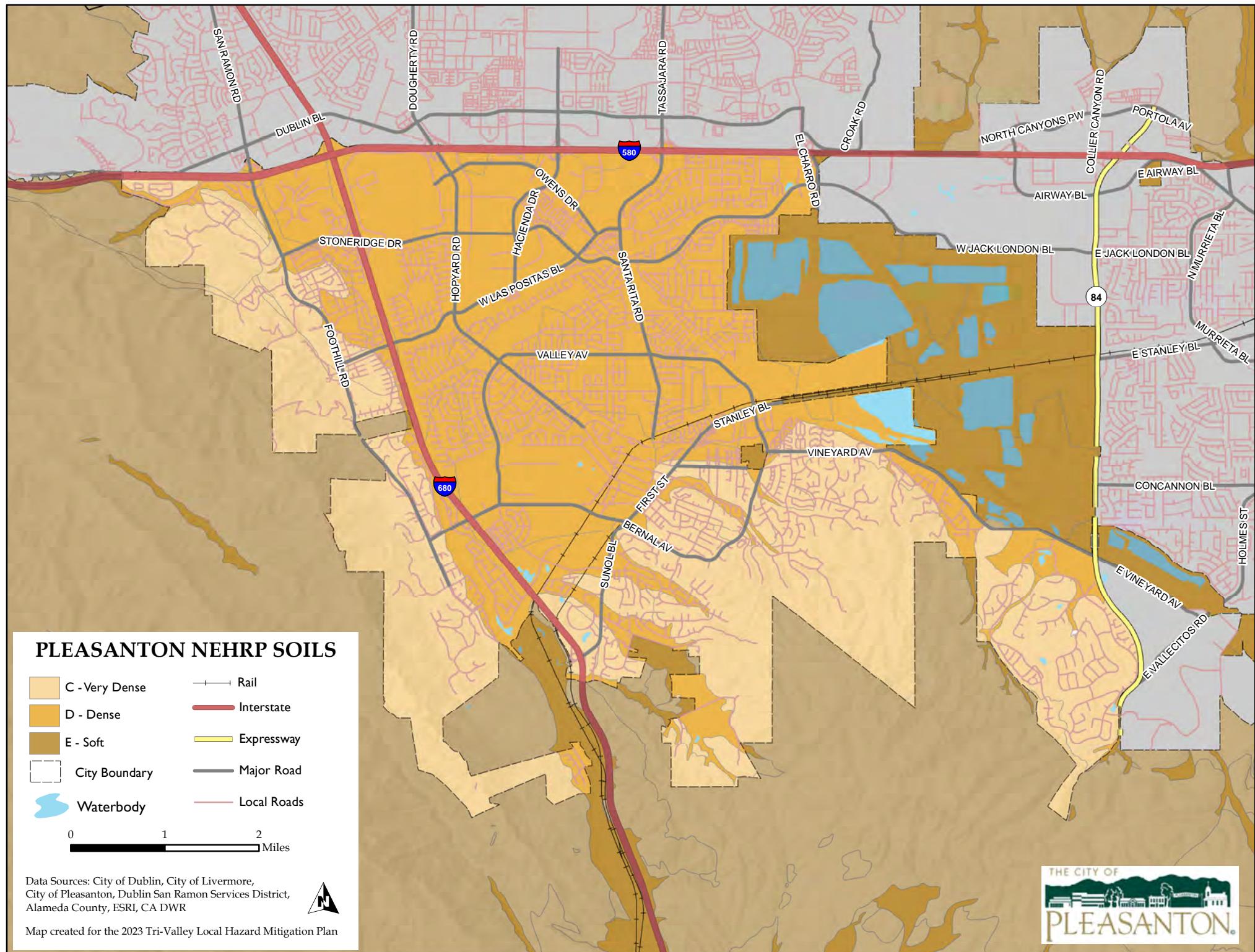
Data Sources: City of Dublin, City of Livermore, City of Pleasanton, Dublin San Ramon Services District, Alameda County, ESRI

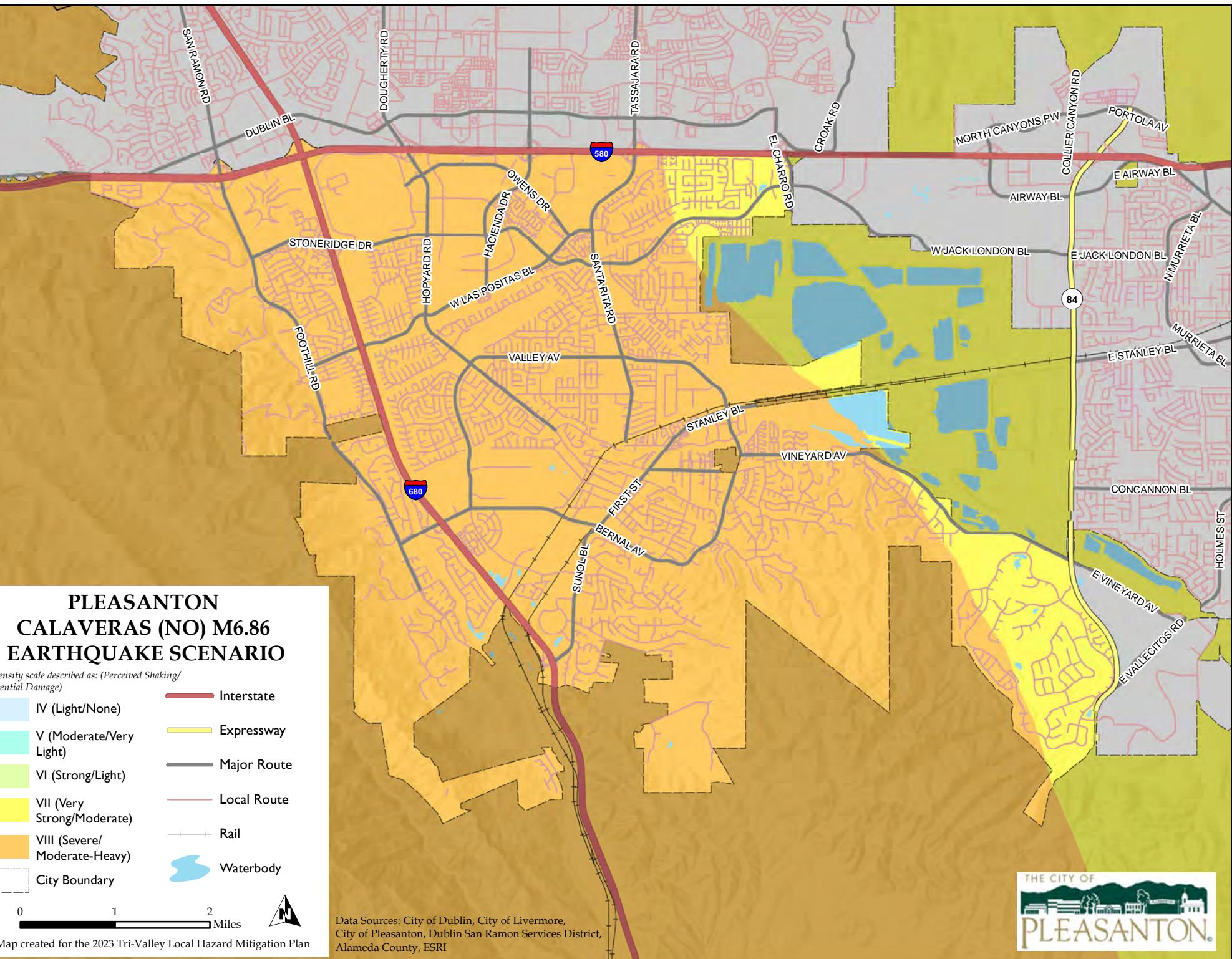
Map created for the 2023 Tri-Valley Local Hazard Mitigation Plan

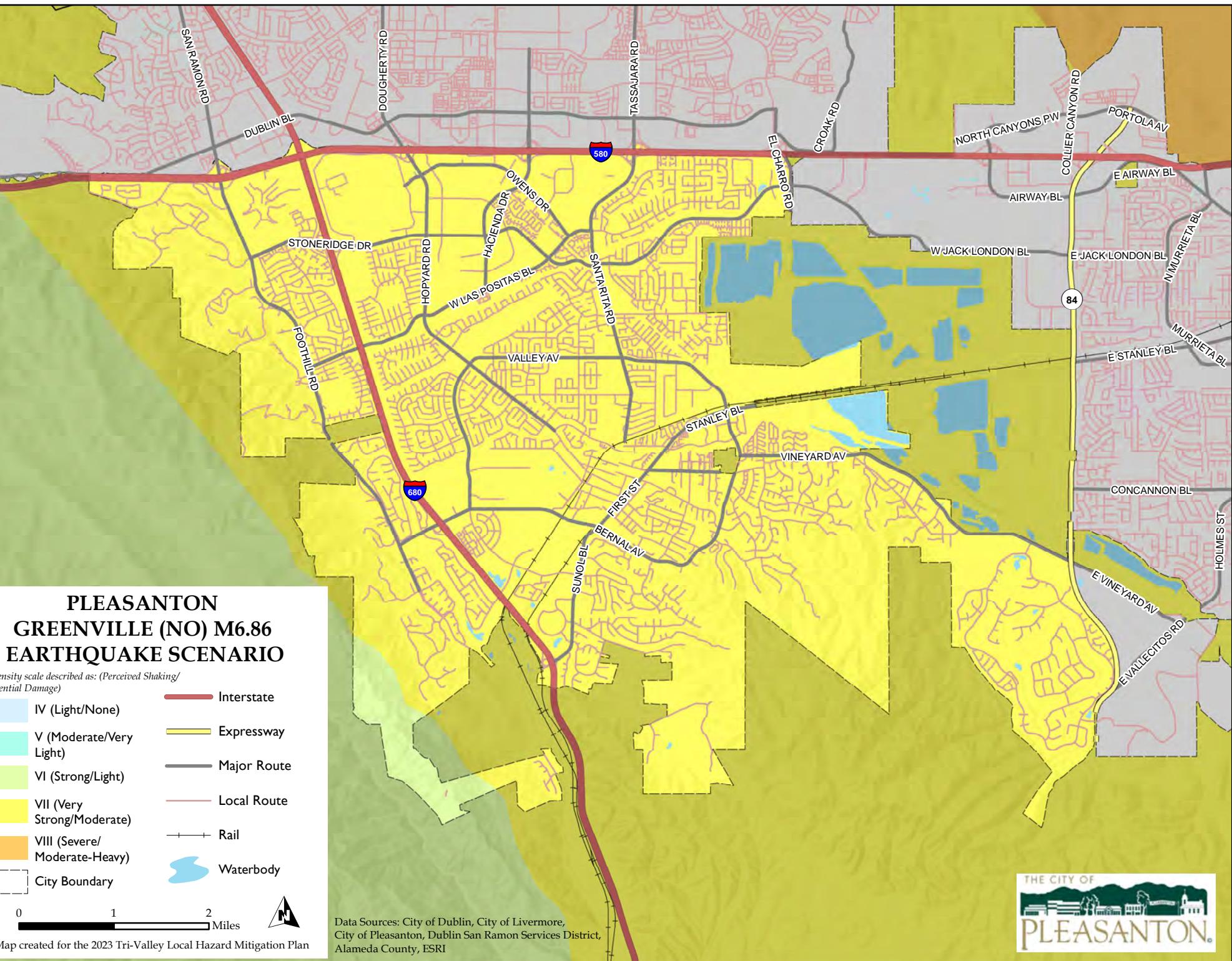


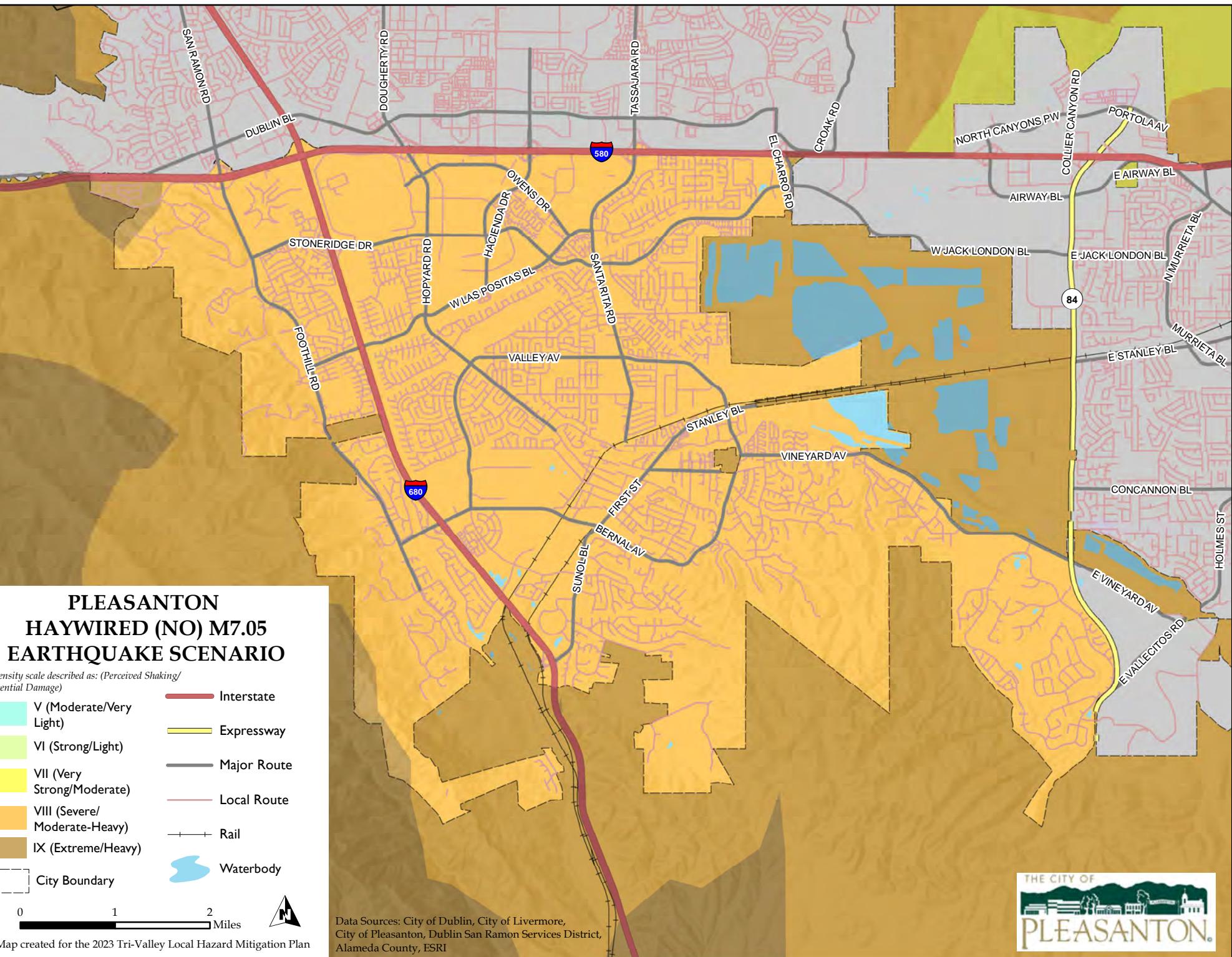


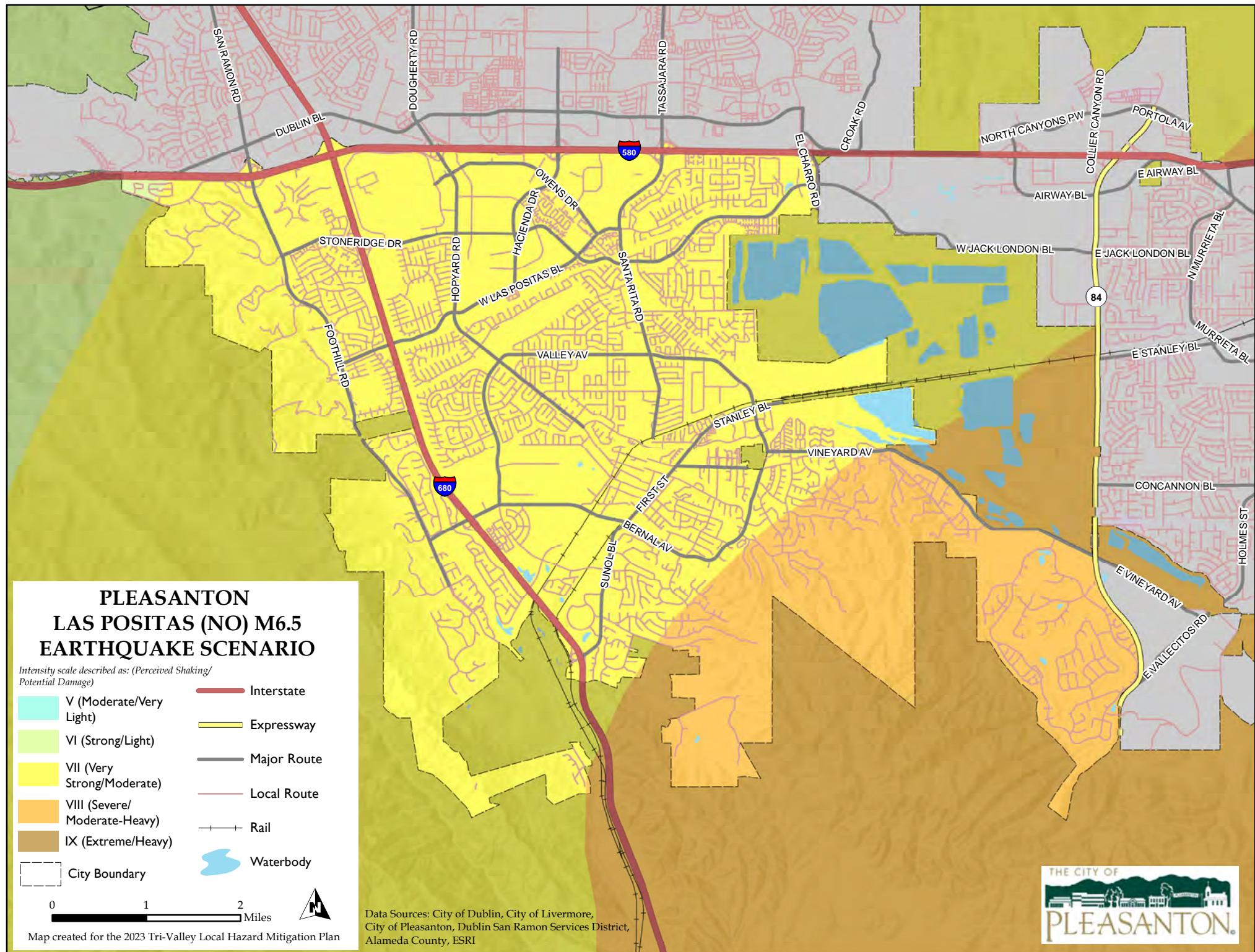


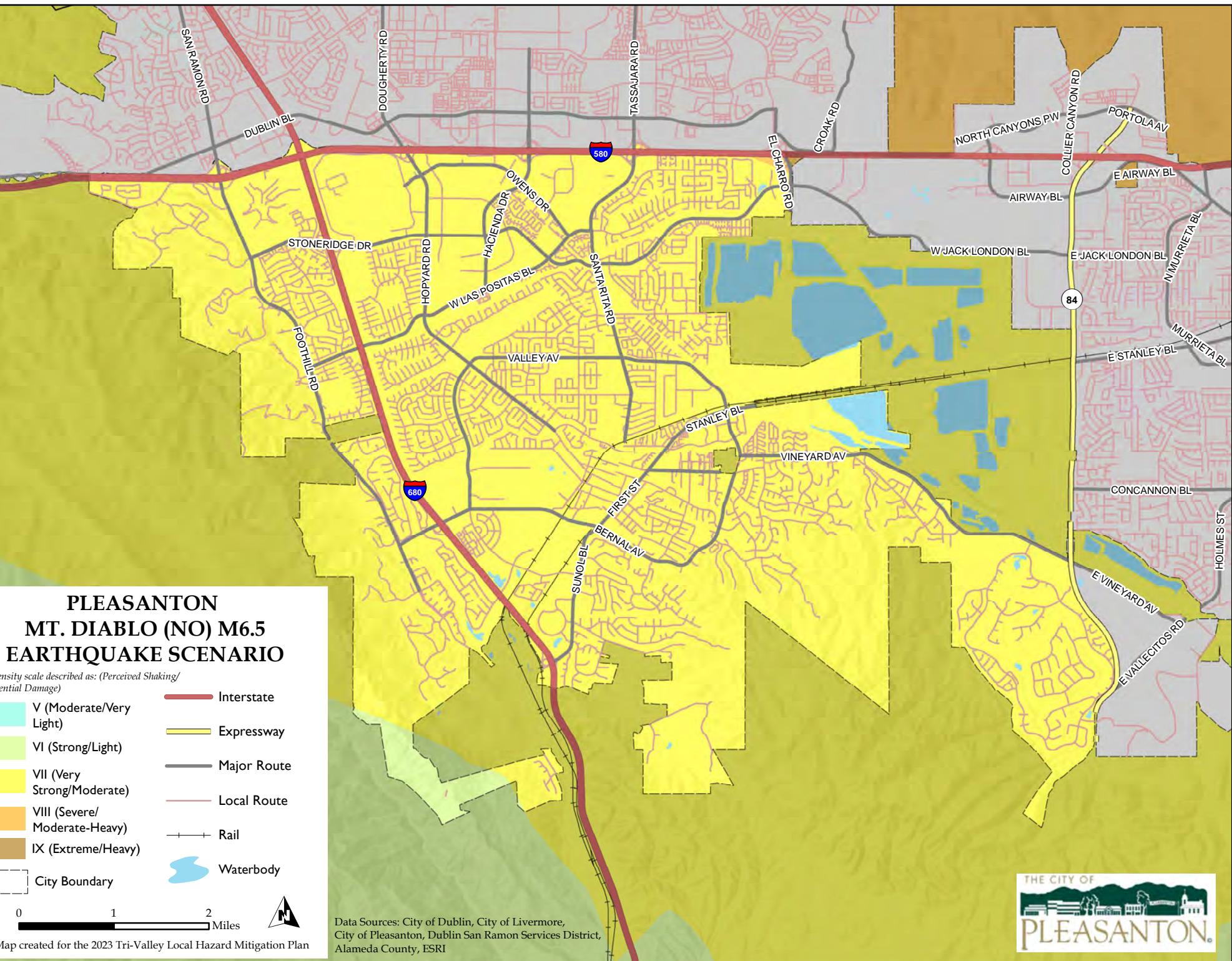


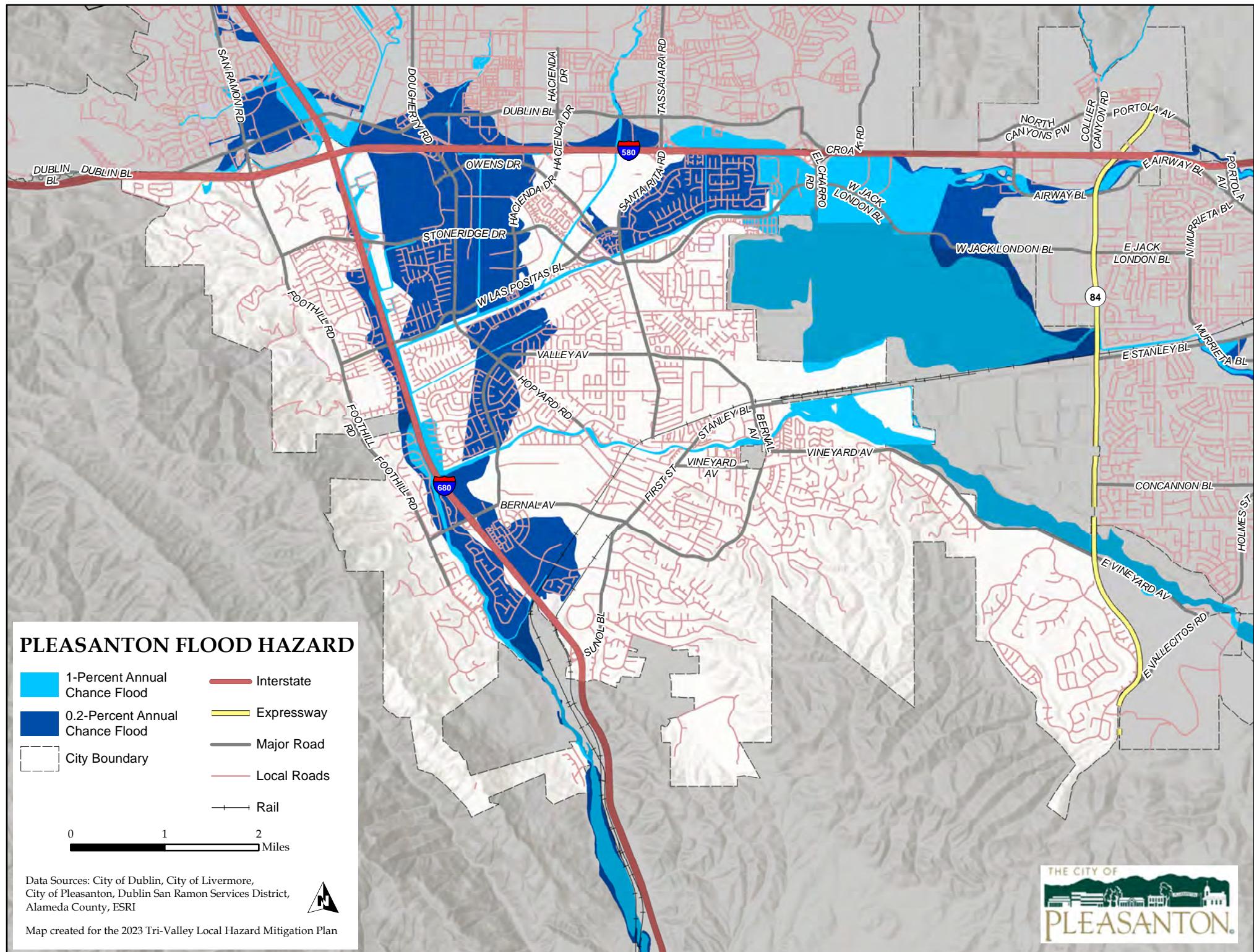


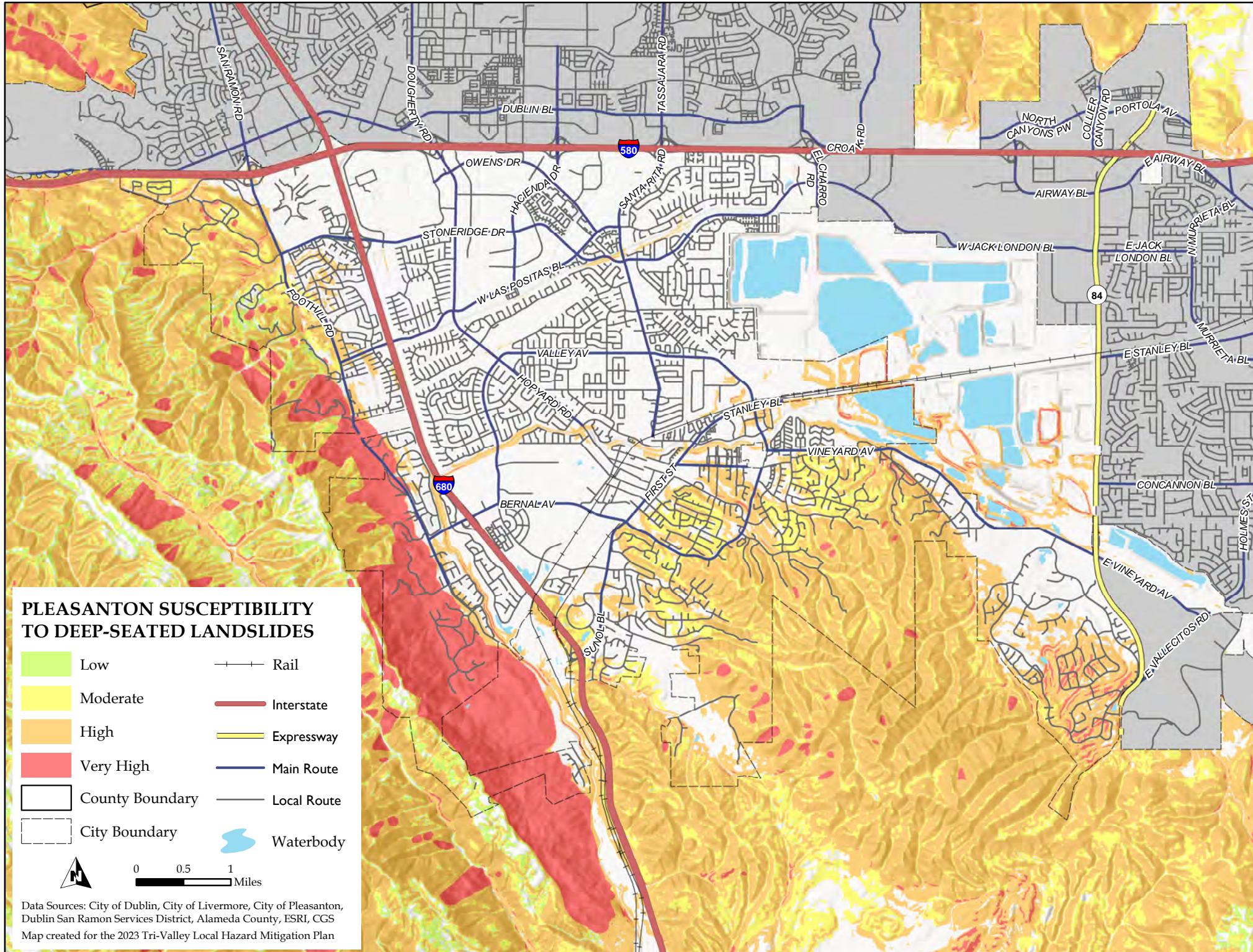


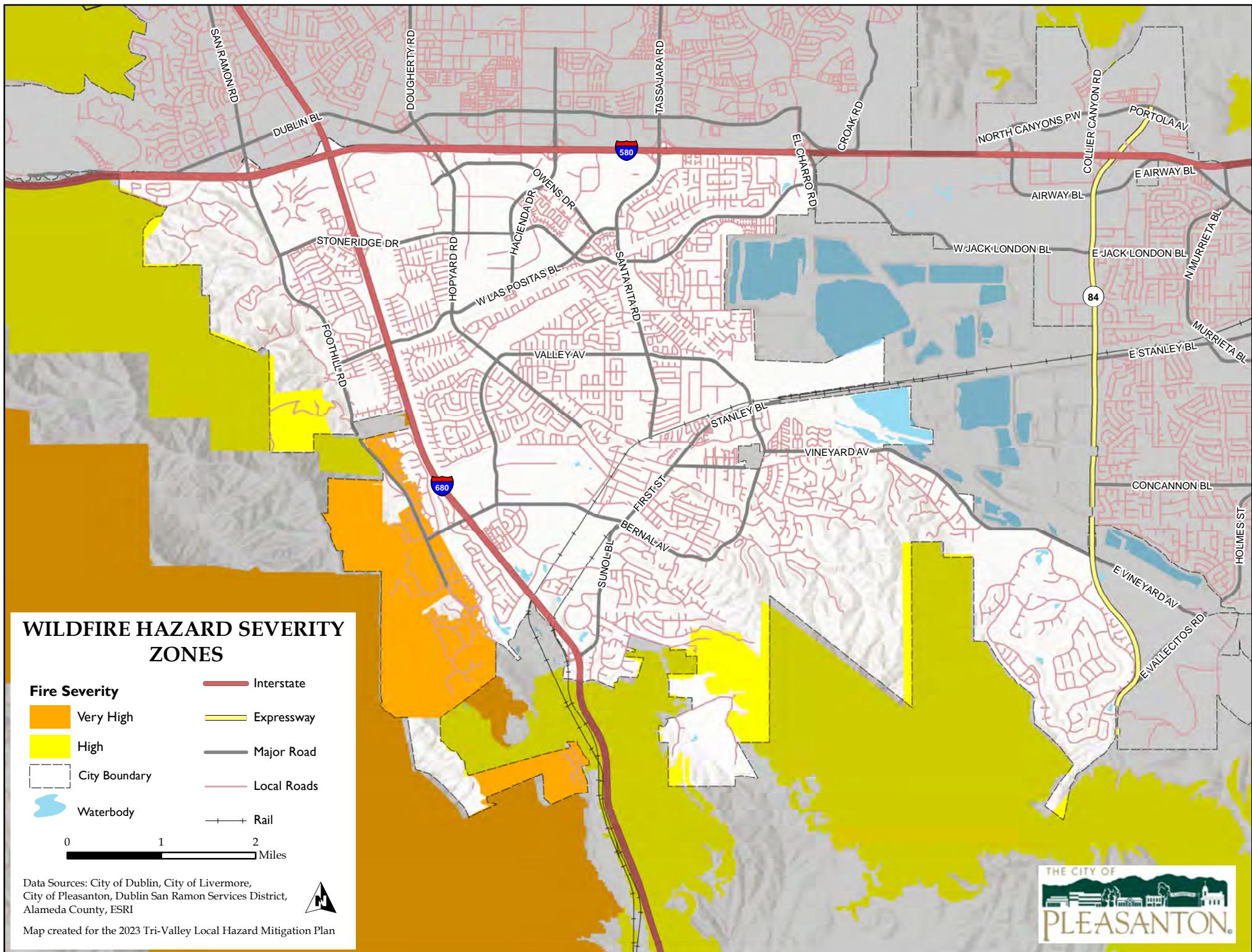












4. DUBLIN SAN RAMON SERVICES DISTRICT

4.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

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Alternate Point of Contact

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This annex was developed by the local hazard mitigation planning team, whose members are listed in Table 4-1.

Table 4-1. Local Hazard Mitigation Planning Team Members

Name	Title
Jason Ching, P.E.	Senior Engineer, Capital Improvement Program Administrator
Dave Peters	Environmental Health and Safety Program Administrator
Aaron Johnson	GIS Analyst
Roper Macaraeg	Engineering/GIS Technician II
Lea Blevins	Public Affairs Specialist

4.2 JURISDICTION PROFILE

4.2.1 Overview

The Dublin San Ramon Services District is a special district created in 1953 to provide water and sewer service to an unincorporated area of Contra Costa County and Alameda County. The name of the District was originally the Parks Community Service District and eventually became Dublin San Ramon Services District. The unincorporated area of Contra Costa County eventually became part of the city of San Ramon, and the unincorporated area of Alameda County eventually became part of the city of Dublin. The District's service area expanded throughout the years to include the Dougherty Valley area of San Ramon in Contra Costa County; the entirety of the city of Dublin in Alameda County, and the sites of the Wastewater Treatment Plant and Dedicated Land Disposal in the city of Pleasanton in Alameda County.

The District's primary potable water sources include the State Water Project (Oroville Reservoir and the South Bay Aqueduct), local groundwater, and local runoff impounded at Lake Del Valle. All potable water is purchased wholesale from Zone 7 Water Agency.

The District's primary recycled water source is wastewater recovered at the District's Wastewater Treatment Plant in Pleasanton, California and a small supply of wastewater from Central Contra Costa Sanitation District customers (via diversion structure) in San Ramon, California.

A five-member elected Board of Directors governs the District. The Board assumes responsibility for adoption of this plan, the General Manager will oversee its implementation.

4.2.2 Service Area

The District serves 26,237 potable water accounts, 473 recycled water accounts and 25,301 single family residential wastewater tax roll assessments (excludes commercial, industrial and institutional accounts), with a current staff of 131. Funding comes primarily through water, recycled water and wastewater capacity charges for new development, rate charges and revenue bonds.

The District distributes drinking water to approximately 100,400 people and provides wastewater collection and treatment for approximately 168,600 people in Dublin, southern San Ramon and the city of Pleasanton. Since 1999 the District produced and distributed recycled water for landscape irrigation and construction to the cities of Dublin and San Ramon. The District distributes 8.69 million gallons per day of potable water, 5.16 million gallons per day of recycled water and treats an average of 11.23 million gallons of day of wastewater. The District's service area has reached its expected limits and is approximately 26 square miles.

4.2.3 Assets

Table 4-2 summarizes the assets of the District and their value.

Table 4-2. Special Purpose District Assets

Asset	Value
Property	
203 acres of land	\$71,000,000
Critical Infrastructure and Equipment	
339 miles of potable water pipe and 3610 hydrants	\$853,841,000
17 potable water pump stations	\$19,808,000
72 miles of recycled water pipe and 24 hydrants	\$144,251,000
5 recycled water pump stations	\$4,044,000
223 miles of wastewater pipes	\$588,540,000
2 sanitary sewer lift stations	\$2,028,000
14 potable water reservoirs capable of storing 25 million gallons	\$39,276,000
4 recycled water reservoirs capable of storing 11 million gallons	\$23,623,075
Wastewater Treatment Plant capable of processing 17 million gallons per day	\$157,059,000
Recycled Water Plant capable of producing 16.2 million gallons per day	\$19,398,430
4 Operational Potable Water Turnout Delivery Facilities (Intertied with Zone 7 Water Agency) – Turnouts 2, 4 and 5 are in-service, Turnout 1 is out-of-service, Turnout 3 is decommissioned, and Turnout 6 is planned.	\$2,033,000
6 Emergency Interconnect Facilities (3 interties with EBMUD, 2 interties with City of Pleasanton, 1 intertie with City of Livermore)	\$831,000
Total:	\$202,944,505

Asset	Value
Critical Facilities	
Administrative Building – District Office (Headquarters)	\$8,635,000
Administrative Building – Field Operations Facility	\$5,994,000
Total:	\$14,629,000

4.3 CURRENT TRENDS

The City of Dublin has consistently been listed as one of the fastest growing cities in the State. Since 2010, the City has witnessed significant population growth from 46,036 residents to 72,932 residents in 2022. While the City expects to see continued growth in population as new residential and mixed-use developments are planned and constructed in the Downtown and Eastern Dublin, population growth is expected to slow as the City approaches an estimated build-out population level of 83,595.

The District anticipates increased demand for potable water and recycled water; and increased flows of wastewater to be treated as additional development occurs in eastern Dublin.

4.4 CHANGES IN PRIORITIES

The District's mitigation priorities have remained the same since the last mitigation plan update.

4.5 CAPABILITY ASSESSMENT

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

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

- An assessment of planning and regulatory capabilities is presented in Table 4-3.
- An assessment of fiscal capabilities is presented in Table 4-4.
- An assessment of administrative and technical capabilities is presented in Table 4-5.
- An assessment of education and outreach capabilities is presented in Table 4-6.
- Classifications under various community mitigation programs are presented in Table 4-7.
- The community's adaptive capacity for the impacts of climate change is presented in Table 4-8.

No assessment of NFIP compliance was made for the District, as special purpose districts are not eligible to participate in the NFIP.

Table 4-3. Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update	Comment
District Code of the Dublin San Ramon Services District (District Code)	Adopted 11/2/2010; Effective 12/1/2010; Last Updated 11/16/2021 (District Ordinance #352)	The District Code is modified with new ordinances adopted by the Board from time to time as needed.
Dublin San Ramon Services District Standard Procedures, Specifications and Drawings	Adopted 1/22/2020; Last Updated 10/25/2021	The Standard Specs contain the required specifications for DSRSD infrastructure and equipment. The Standard Specs are update as needed by DSRSD staff.
Dublin San Ramon Services District Emergency Response Plan	9/15/2020	This policy is P300-20-3, and it designates the District Emergency Manager and authorizes that person to manage emergency operations.
Dublin San Ramon Services District Risk Management for District Agreements with Contractors and Consultants	9/18/2018	This is policy P100-18-2, and it determines the risk management system that provides for the required types of insurance, limits of coverage and other provisions for agreements with contractors and consultants who do business with the District.
Dublin San Ramon Services District Construction Project Acceptance by the General Manager	8/7/2018	This is policy P200-18-1, and it allows the General Manager to accept construction projects.
Dublin San Ramon Services District Green Business Policy	7/17/2007	This is policy P200-07-1, and it includes directions for environmental compliance, pollution prevention, energy conservation and solid waste reduction.
Dublin San Ramon Services District Water Recycling Policy	7/7/2020	This is policy P300-20-2, and it includes directions for provision of Recycled Water service both within and outside the District.
Dublin San Ramon Services District Water Resiliency Policy	4/20/2021	This is policy P300-21-1 and it includes guidance for addressing water supply challenges.
Dublin San Ramon Services District Infrastructure Responsibilities and Funding Policy	1/19/2010	This is policy P600-15-3, and it defines responsibility for major and non-major infrastructure planning design and construction.
Dublin San Ramon Services District Security Policy	4/6/2010	This is policy P700-14-2, and its intent is to ensure security of District facilities to provide safe and reliable water and wastewater services.
Dublin San Ramon Services District Safety Programs	8/16/2016	This is policy P700-16-1, and its intent is to provide a safe work environment for all employees; regular, part-time, limited-term, interns, temporary, contract, consultant, and elected officials.
Dublin San Ramon Services District Recycled Water Use Guidelines and Requirements	8/16/2016	These guidelines contain DSRSD regulations and guidelines for the design, installation, operation and maintenance of on-site recycled water facilities for irrigation and water features, transport and use of recycled water for dust control and surface cleaning; and use of recycled water in dual-plumbed buildings and industrial facilities.
Dublin San Ramon Services District Capital Improvement Program	6/1/2021	This is a ten-year Capital Plan for fiscal years ending 2022 through 2031 and a two-year Budget for fiscal years ending 2022 and 2023. The District's CIP defines the projects to: 1) protect human health and the environment, 2) maintain and rehabilitate existing assets, 3) respond to regulatory requirements, 4) accommodate planned future growth.

Plan, Study or Program	Date of Most Recent Update	Comment
Dublin San Ramon Services District Asset Management Plan	Continuously updated	The District maintains a Computerized Maintenance and Management System, which inventories all the District assets, their date of installation and asset condition information. The District maintains rehabilitation and replacement models for the sewer collection system, water system and wastewater treatment plant. These models identify critical assets and indicate when they should be replaced.
Dublin San Ramon Services District Geographic Information System	Continuously updated	The District maintains a Geographic Information System that maps the location of the District's infrastructure as aligned with the local transportation system (streets, highways); water features (creeks, canals, streams); and fault lines. This system assists the District in determining the infrastructure most vulnerable to hazards such as flooding or earthquakes.
Dublin San Ramon Services District Urban Water Management Plan	June 2021	The District develops a water supply plan every five years to evaluate supply conditions for the next 20 years, including planning conditions critical for California, as climate change has impacted rainfall and snowfall, and development occurrence continues to increase, thus requiring more supply across the State.

Planning and regulatory capabilities will be expanded and improved upon by implementing Action DSRSD-2, listed in the Hazard Mitigation Action Plan.

Table 4-4. Fiscal Capability

Financial Resource	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
<i>If yes, specify:</i> The District has three separate enterprises, which includes the following: Water (distribution of potable and recycled water to Dublin and the Dougherty Valley area of San Ramon), Local Sewer (collection of wastewater through underground sewer systems in Dublin and southern San Ramon), and Regional Sewer (treats wastewater from Dublin, southern San Ramon, and Pleasanton to recover water and energy for safe disposal in the San Francisco Bay.)	
Incur Debt through General Obligation Bonds	Yes
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	Yes

The District could expand its fiscal authority by seeking authority to incur debt through special tax bonds or private activity bonds or withholding public expenditures in hazard-prone areas. However, the City has not identified a need for any of these actions at this time.

The District would consider exploring ways to better collaborate with the City of Dublin on joint grant opportunities related to water or pursue grant opportunities itself for projects that may exceed the District's current budget.

Table 4-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices	Yes
<i>If Yes, Department /Position:</i> Engineering / Assistant-Associate Engineer, Engineering / Senior Engineer	
Engineers or professionals trained in building or infrastructure construction practices	Yes
<i>If Yes, Department /Position:</i> Engineering / Assistant-Associate Engineer, Engineering / Senior Engineer	
Planners or engineers with an understanding of natural hazards	No
<i>If Yes, Department /Position:</i> Engineering / Assistant-Associate Engineer, Engineering / Senior Engineer	
Staff with training in benefit/cost analysis	Yes
<i>If Yes, Department /Position:</i> Engineering / Assistant-Associate Engineer, Engineering / Senior Engineer, Engineering / Administrative Analyst, Operations / Administrative Analyst II	
Surveyors	No
<i>If Yes, Department /Position:</i> No Licensed Surveyors on Staff, Engineering / Assistant -Associate Engineer familiar with Surveying Principles and Property Rights Issues.	
Personnel skilled or trained in GIS applications	Yes
<i>If Yes, Department /Position:</i> Engineering / GIS Analyst, Engineering / Engineering/GIS Technician II	
Scientist familiar with natural hazards in local area	No
<i>If Yes, Department /Position:</i>	
Emergency manager	No
<i>If Yes, Department /Position:</i> Emergency Management is currently a combined effort between the Engineering Department, Operations Support Services Division, and the Office of the General Manager.	
Grant writers	Yes
<i>If Yes, Department /Position:</i> Engineering-Operations / Administrative Analyst II	

Administrative and technical capabilities will be expanded and improved upon by implementing Action DSRSD-3, listed in the Hazard Mitigation Action Plan.

Table 4-6. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Yes
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	Yes
<i>If yes, briefly describe:</i> The District has an “Emergency” button and a “Report a Problem” link on the home webpage which opens a portal of information for emergencies, including contact information for reporting information to both the Wastewater Treatment Plant, and our On-call Water Distribution and Sewer Operators. The previous Tri Valley Hazard Mitigation Plan (2018) is also on the District’s “Plans and Studies” website page. https://www.dsrsd.com/about-us/library/plans-studies	
Do you use social media for hazard mitigation education and outreach?	Yes
<i>If yes, briefly describe:</i> The District communicates hazard mitigation education via social media, mailers, bill inserts, and on our website. Most of the District’s outreach in recent years has been drought, wildfire, and pandemic focused.	
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
<i>If yes, briefly describe:</i> DSRSD has a program called the “Citizens Water Academy” for ratepayers and those who live in the DSRSD service area. The Citizens Water Academy covers critical water issues for DSRSD, including water supply and resiliency, District investment in infrastructure, facilities, and Board office. The Citizens Water Academy was previously offered in 2018, 2020, and 2022 and has approximately 10 to 20 persons participating each year.	

Criterion	Response
Do you have any other programs in place that could be used to communicate hazard-related information? <i>If yes, briefly describe:</i> The District previously offered tours of the Regional Wastewater Treatment Plant in Pleasanton to interested members of the public. The tours were suspended in 2020 due to the Covid-19 pandemic but were offered once again in October 2022. The tours show the public their investment in critical infrastructure, and touch on important water cycle topics such as water re-use and drought.	Yes
Do you have any established warning systems for hazard events? <i>If yes, briefly describe:</i>	No

Education and outreach capabilities will be expanded and improved upon by implementing Action DSRSD-4, listed in the Hazard Mitigation Action Plan.

DSRSD will be exploring additional ways to partner with the City of Dublin in emergency preparedness outreach, such as an emergency supplies check list, during times of potential water disruption.

Table 4-7. Community Classifications

	Participating?	ID Number	Classification	Date Classified
DUNS #	Yes	083786962	N/A	N/A
StormReady	No	N/A	N/A	N/A
Firewise	No	N/A	N/A	N/A

Table 4-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts	Medium
<i>Comment:</i> Urban Water Management Plan contains section on drought relating to climate change. Alternative water supply analysis done in 2022. The District is currently preparing an Energy Master Plan process which will be completed in 2023. The Energy Master Plan will develop recommendations to reduce energy consumption, increase energy production and/or reduce greenhouse gas emissions	
Jurisdiction-level monitoring of climate change impacts	Low
<i>Comment:</i>	
Technical resources to assess proposed strategies for feasibility and externalities	Medium
<i>Comment:</i> The District is currently preparing an Energy Master Plan process which will be completed in 2023. The Energy Master Plan will develop recommendations to reduce energy consumption, increase energy production and/or reduce greenhouse gas emissions.	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Medium
<i>Comment:</i> The District is currently preparing an Energy Master Plan process which will be completed in 2023. The Energy Master Plan will develop recommendations to reduce energy consumption, increase energy production and/or reduce greenhouse gas emissions.	
Capital planning and land use decisions informed by potential climate impacts	Medium
<i>Comment:</i> The District is currently preparing an Energy Master Plan process which will be completed in 2023. The Energy Master Plan will develop recommendations to reduce energy consumption, increase energy production and/or reduce greenhouse gas emissions.	
Participation in regional groups addressing climate risks	Medium
<i>Comment:</i> Operations Manager is member of Alameda County Coastal Hazards Adaptation Resiliency Group.	

Criterion	Jurisdiction Rating ^a
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Low
Comment: District has no formal policy or jurisdiction regarding climate change impacts. The District is currently preparing an Energy Master Plan process which will be completed in 2023 and may address some climate change impacts to District Operations. The Energy Master Plan will also establish a District energy policy, including policies on greenhouse gas emissions	
Identified strategies for greenhouse gas mitigation efforts	Medium
Comment: District does not have a policy for greenhouse gas mitigation, however, District projects and purchases meet applicable greenhouse gas requirements, and the District secures necessary permits from the California Air Resources Board and Bay Area Air Quality Management District for projects, where applicable. The District is currently preparing an Energy Master Plan process which will be completed in 2023. The Energy Master Plan will develop recommendations to reduce energy consumption, increase energy production and/or reduce greenhouse gas emissions.	
Identified strategies for adaptation to impacts	Medium
Comment: District's Urban Water Management Plan considers effect of Climate Change on Water Supply. The District is currently preparing an Energy Master Plan process which will be completed in 2023. The Energy Master Plan will develop recommendations to reduce energy consumption, increase energy production and/or reduce greenhouse gas emissions.	
Champions for climate action in local government departments	Medium
Comment: District has a Green Business Policy (2007) which directs staff to support the District Mission of providing high quality water in a socially and environmentally responsible manner. The District is currently preparing an Energy Master Plan process which will be completed in 2023. The Energy Master Plan will develop recommendations to reduce energy consumption, increase energy production and/or reduce greenhouse gas emissions.	
Political support for implementing climate change adaptation strategies	Medium
Comment: District Board of Directors does not yet have a policy regarding climate change adaption strategies. The District is currently preparing an Energy Master Plan process which will be completed in 2023. The Energy Master Plan will also establish a District energy policy, including policies on greenhouse gas emissions	
Financial resources devoted to climate change adaptation	Low
Comment: The District Operations and Capital Improvement Program budgets currently do not currently set aside special funds for climate change adaptation, however, they may in the future or for future projects. Any new capital projects recommended through Energy Master Plan will be incorporated into the District's future Capital Improvement Program.	
Local authority over sectors likely to be negative impacted	Low
Comment: District operates potable water facilities in Moderate Fire Hazard Severity Zones in Dublin and San Ramon. District typically has design jurisdiction over potable water facilities per the California Water Code.	
Public Capacity	
Local residents' knowledge of and understanding of climate risk	Medium
Comment: District performs extensive outreach to inform residents of climate risks, especially relating to drought.	
Local residents' support of adaptation efforts	Medium
Comment: Residents comply with voluntary water restrictions.	
Local residents' capacity to adapt to climate impacts	Medium
Comment: District provides low-flow shower heads for customers. Free recycled water fill station use is high, but some residents may not be able to purchase the totes to carry the water. Residents visit the district-owned garden to find examples of xeriscaping for their own landscapes.	
Local economy's current capacity to adapt to climate impacts	High
Comment: Large irrigation use customers have been transferred to recycled water to reduce potable water consumption.	
Local ecosystems' capacity to adapt to climate impacts	Unsure
Comment: District does not have understanding of the local ecosystem's capacity to adapt to climate impacts.	

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

4.6 INTEGRATION REVIEW

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

4.6.1 Existing Integration

Some level of integration of content from the 2018 Tri-Valley local hazard mitigation plan has already been established in the following local plans and programs:

- **Dublin San Ramon Services District Water Resiliency Policy**—Last updated April 20, 2021. This is policy P300-21-1. During its last review, District staff included consideration of water demands during water supply disruptions such as droughts and strategies to meet the water demands in the service area during the periods of disruption. The updated policy considered findings from the 2018 HMP.
- **Dublin San Ramon Services District Recycled Water Use Guidelines and Requirements**—Last updated August 16, 2016. The District has always regarded recycled water as a valuable replacement for potable water now used as outdoor irrigation. The implementation of recycled water irrigation programs thus helps mitigate shortages of potable water whether caused by drought or other natural disasters.
- **Dublin San Ramon Services District Capital Improvement Program**—Last updated June 1, 2021. This is a ten-year Capital Plan for fiscal years ending 2022 through 2031 and a two-year budget for fiscal years ending 2022 and 2023. The District’s CIP defines the projects to: 1) protect human health and the environment, 2) maintain and rehabilitate existing assets, 3) respond to regulatory requirements, 4) accommodate planned future growth. Pertinent projects in the CIP program that deal with public health issues of wastewater collection and treatment and water supply were reviewed for facility reliability, diversifying the District’s potable water supply and the prospects of extending potable water supply by creating and using additional recycled water. Consideration of changes in the CIP occurred following the completion of the 2018 HMP.
- **Dublin San Ramon Services District Urban Water Management Plan**—Last updated June 15, 2021. This is a twenty-year plan which assesses the availability and reliability of the District’s water supplies and current and projected water use to help ensure reliable water service under different conditions. The California Water Code requires the District to assess its water system and facilities, calculate how much water its customers use and how much it can supply, and identify how it would respond to drought or other water supply shortages. The Urban Water Management Plan is updated by the District every five years. As a result of the 2018 HMP, the District updated its plan in 2021 and considered findings and data in the HMP.

4.6.2 Opportunities for Future Integration

The capability assessment presented in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- **Dublin San Ramon Services District Standard Procedures, Specifications and Drawings**—Last updated October 2021. The Standard Specs contain the required specifications for DSRSD infrastructure and equipment. The Standard Specs will be reviewed and updated with a strategy of rehabilitating or rebuilding District facilities as quickly as necessary following damage during a disaster.
- **Dublin San Ramon Services District Emergency Response Plan**—Last updated September 2020. This policy will be reviewed and updated with a strategy to coordinate response to a disaster with other entities. This will mitigate damage to specific facilities as much as possible and minimize harmful effects to public health from future disasters. DSRSD and City of Dublin are planning a joint EOC exercise in the fall of 2023.
- **Dublin San Ramon Services District Asset Management Plan**—Future plan. This plan will include provisions for prioritizing the rehabilitation of District facilities that are disabled by various hazards. The goal will be to maintain public health during and after an emergency.

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan presented in this annex.

4.7 RISK ASSESSMENT

4.7.1 Jurisdiction-Specific Natural Hazard Event History

Table 4-9 lists past occurrences of natural hazards for which specific damage was recorded in this jurisdiction. Other hazard events that broadly affected the entire planning area, including this jurisdiction, are listed in the risk assessments in Volume 1 of this hazard mitigation plan.

Table 4-9. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Severe Weather & Flood	EM-3591	December 31, 2022- January 4, 2023	The Bay Area was hit by repeated atmospheric river events resulting in numerous shallow landslides, downed trees, and localized flooding. Damage Estimate: TBD
COVID-19 Pandemic	DR-4482	January 20, 2020 - ongoing	Staffing disruptions
Severe winter storm	DR-4308	Feb. 7 thru Feb. 21, 2017	Per FEMA Disaster Designation 4308, this storm and resultant mudslides caused damage in the affected area. DSRSD monitored potential flooding and disruption to operations at the wastewater treatment plant.
Severe winter storm	DR-4305	Jan 22, 2017	Per FEMA Disaster Designation 4305, this storm and resultant mudslides caused damage in the affected area. DSRSD monitored potential flooding and disruption to operations at the wastewater treatment plant.
Severe winter storm	DR-4301	Jan 3 thru Jan 7, 2017	Per FEMA Disaster Designation 4301, this storm and resultant mudslides caused damage in the affected area. DSRSD monitored potential flooding and disruption to operations at the wastewater treatment plant.
Severe Drought	N/A	2014 thru 2016	This drought required water conservation and severe water restrictions. DSRSD suffered severe loss of revenue. Landscaping including turf and trees in the DSRSD area died or were removed.

Type of Event	FEMA Disaster #	Date	Damage Assessment
Severe winter storm	N/A	February 6, 2015	This storm brought 0.96 inches of rain in 13 hours, with wind gusts of 32 mph. DSRSD monitored potential flooding and disruption to wastewater treatment plant operations.
Severe winter storm	N/A	December 30-31, 2014	This storm brought 0 inches of rain over 19 hrs. with wind gusts of 43 mph. DSRSD monitored potential flooding and disruption to wastewater treatment plant operations.
Severe winter storm	N/A	December 2, 2014	This storm brought 1.41 inches of rain over 16 hrs. with wind gusts of 23 mph. DSRSD monitored potential flooding and disruption to wastewater treatment plant operations.
Severe winter storm	N/A	October 13, 2009	Per 6-hour rainfall intensity, this storm was a 17-year storm. DSRSD monitored potential flooding and disruption to operations at the wastewater treatment plant.
Severe winter storm	N/A	January 3-5, 2008	Per 6-hour rainfall intensity, this storm was a 12-year storm. DSRSD monitored potential flooding and disruption to operations at the wastewater treatment plant.
Drought	N/A	September 2007	N/A

4.7.2 Hazard Risk Ranking

Table 4-10 presents a local ranking of all hazards of concern for which this hazard mitigation plan provides complete risk assessments. As described in detail in Volume 1, the ranking process involves an assessment of the likelihood of occurrence for each hazard, along with its potential impacts on people, property and district operations. Mitigation actions target hazards with high and medium rankings.

Table 4-10. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
1	Earthquake	36	High
2	Severe Weather	33	Medium
3	Landslide	28	Medium
4	Flood	15	Low
5	Wildfire	10	Low
6	Drought	9	Low
7	Dam Failure	2	Low

4.7.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. No additional jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources.

4.8 STATUS OF PREVIOUS PLAN ACTIONS

Table 4-11 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 4-11. Status of Previous Plan Actions

Action Item from Previous Plan	Status of Action	New Action #
Action DSRSD-1—Where appropriate, support retrofitting or relocation of structures in high hazard areas, prioritizing Wastewater Treatment Plant structures and other structures which have experienced repetitive losses. Comment: Upgrade projects at the Wastewater Treatment Plant go through a preliminary design process with consulting engineers where hazards are evaluated prior to final design. Mitigation efforts are identified in a preliminary design report and then implemented in the final design of the project. The last and current major upgrade project at the treatment plant is the \$17M Primary Sedimentation Basin Upgrade (CIP 17-P004) project. Engineering staff and consultants evaluated seismic and other geologic hazards and completed a seismic design for the project. The Primary Sedimentation Basin Upgrade project was essentially completed in 2022.	Carried over to updated plan	DSRSD-1
Action DSRSD-2—Integrate the hazard mitigation plan into other plans, ordinances and programs within the District. Comment: The District completed both an Urban Water Management Plan and an Emergency Response Plan in 2021 where hazard issues and mitigation were discussed. Additionally, hazard mitigation impacts the District's Capital Improvement Plan, which is on a 2-year cycle and is due to be updated in mid-2023. The Capital Improvement Plan is a list of the District's projects in the near and far term, and it includes an analysis of projects based on age, condition, risk and environmental hazards.	Carried over to updated plan	DSRSD-2
Action DSRSD-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. Comment: The District operates an asset management system which can capture pertinent data relating to significant events. Data from the asset management system is used to update the two-year CIP and plan other projects. The asset management system can track damage estimates, photos of damage, loss or property, etc.	Carried over to updated plan	DSRSD-3
Action DSRSD-4—Support the Tri-Valley area –wide initiatives identified in Volume I of the hazard mitigation plan. Comment: The District has supported the Tri-Valley Hazard Mitigation Plan the last five years. The Tri-Valley Hazard Mitigation Plan is currently on the District's website and the District is participating in a five-year update of the plan. The plan can be found on the District's website under Plans & Studies, which is a depository of District water and wastewater master and strategic plans, as well as other plans the District creates or participates in. See https://www.dsrsd.com/about-us/library/plans-studies	Carried over to updated plan	DSRSD-4
Action DSRSD-5—Actively participate in the plan maintenance protocols outlined in Volume 1 of the hazard mitigation plan. Comment: The District is participating in the 2020 five-year plan update of the plan.	Carried over to updated plan	DSRSD-5
Action DSRSD-6—Complete Potable Water Emergency Interties with East Bay Municipal Utility District, City of Pleasanton and City of Livermore. Comment: The District has 6 emergency interties with other local water municipalities. There is one (1) intertie with EBMUD in Dougherty Valley San Ramon, two (2) interties with EBMUD in western Dublin, two (2) interties with City of Pleasanton in southern Dublin, and one (1) intertie with City of Livermore in eastern Dublin. Completed in 2022.	Completed	
Action DSRSD-7—Retrofit DSRSD Pumping Stations for Portable Emergency Power. Comment: District is currently retrofitting 6 pump stations, installed 2 new standby generators, purchased 5 portable generators, and installed 8 new 24-hour UPS systems at critical reservoirs and SCADA sites. The project was completed in 2022. Additional upgrade projects are being considered for the CIP.	Completed	DSRSD-6
Action DSRSD-8—Stockpile Necessary Treating Chemical and Repair Equipment for Local Shortages. Comment: The District currently stockpiles fuel (both white fuel and red fuel Diesel, Gasoline) and our necessary treatment chemicals at the Wastewater Treatment Plant. The District's fuel supply can be used for emergency standby generators at the plant, standby generators at local administrative offices (District Office, Wastewater Treatment Plant Building A – Main Office, Field Operations Facility), and in our water distribution and wastewater collection systems. The District has a diesel fuel contract for same-day fuel deliveries. Water distribution chemicals (i.e., chlorine and ammonia) are stored on-site at some of the District's potable water reservoirs and pump stations. The District is currently exploring the option of getting an emergency diesel fuel contract.	Carried over to updated plan	DSRSD-7
Action DSRSD-9—Require subdivision water mains to be “looped” to maintain water supplies after landslides and earthquakes Comment: Subdivision “looping” is required per DSRSD Standard Procedures, Specifications, and Drawings – II-A3. Looping. Potable water lines shall be looped if the unconnected reach totals 1,200 feet for 8-10" water mains, and 1,500 feet for 12" or larger water mains.	Carried over to updated plan	DSRSD-8

Action Item from Previous Plan	Status of Action	New Action #
Action DSRSD-10—Map and Assess DSRSD Facilities Vulnerable to Landslides. <i>Comment:</i> The three cities the District serves (Dublin, San Ramon, and Pleasanton where the Wastewater Treatment Plant and Field Operations Facility are located) each maintain engineering reports and mapping for Geologic Hazard Abatement Districts, or GHADs. The District maintains GIS layers for topographical and seismic data in the service area. Completed in 2022.	Completed	

4.9 HAZARD MITIGATION ACTION PLAN

Table 4-12 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 4-13 identifies the priority for each action. Table 4-14 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 4-12. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action DSRSD-1 —Where appropriate, support retrofitting or relocation of structures in high hazard areas, prioritizing Wastewater Treatment Plant structures and other structures which have experienced repetitive losses.						
<i>Hazards Mitigated:</i> Earthquake, Severe Weather, Landslide, Flood, Wildfire, Dam Failure						
Existing	4, 6, 8, 10, 11, 12	DSRSD - Engineering	N/A	High	HMGP, BRIC, FMA	Ongoing
Action DSRSD-2 —Integrate the hazard mitigation plan into other plans, ordinances and programs within the District.						
<i>Hazards Mitigated:</i> Earthquake, Severe Weather, Landslide, Flood, Wildfire, Drought, Dam Failure						
Both	1, 2, 6, 8, 10, 11	DSRSD – Planning Division	N/A	Low	Staff Time, General Funds	Short-term
Action DSRSD-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.						
<i>Hazards Mitigated:</i> Earthquake, Severe Weather, Landslide, Flood, Wildfire, Drought, Dam Failure						
Existing	1, 9	DSRSD – Emergency Management	N/A	Medium	Staff Time, General Funds	Short-term
Action DSRSD-4 —Actively participate in the plan maintenance protocols outlined in Volume 1 of the hazard mitigation plan with ongoing participation and cooperation among planning partners.						
<i>Hazards Mitigated:</i> Earthquake, Severe Weather, Landslide, Flood, Wildfire, Drought, Dam Failure						
Both	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	DSRSD Lead Contact for Plan	Any Supporting Departments	Low	Staff Time, General Funds	Short-term
Action DSRSD-5 —Stockpile Necessary Treating Chemical and Repair Equipment for Local Shortages.						
<i>Hazards Mitigated:</i> Earthquake, Severe Weather, Landslide, Flood, Wildfire, Drought, Dam Failure						
Both	1, 4, 6, 8, 10, 11	DSRSD – Field Operations	N/A	Low	HMGP, Staff Time, General Funds	Ongoing
Action DSRSD-6 —Require subdivision water mains to be “looped” to maintain water supplies after landslides and earthquakes						
<i>Hazards Mitigated:</i> Earthquake, Severe Weather, Landslide, Wildfire						
Existing	1, 4, 6, 8, 10, 11	DSRSD - Engineering	Any Supporting Departments	Medium	Staff Time, General Funds	Ongoing

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

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

Table 4-13. Mitigation Action Priority

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

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

Table 4-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
High-Risk Hazards								
Earthquake	2, 4, 6	1	5		5, 6			3, 5
Medium-Risk Hazards								
Severe Weather	2, 4, 6	1	5		5, 6			3, 5
Landslide	2, 4, 6	1	5		5, 6			3, 5
Low-Risk Hazards								
Flood	2, 4, 6	1	5		5			3, 5
Wildfire	2, 4, 6	1	5		5, 6			3, 5
Drought	2, 4, 6		5		5			3, 5
Dam Failure	2, 4, 5, 7	1	4		6			3, 4, 6

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

4.10 PUBLIC OUTREACH

Table 4-15 lists public outreach activities for this jurisdiction.

Table 4-15. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Website		
Video: Prepare for an Emergency	11/12/2019	Unknown
Water Safety for Reopening Businesses	9/8/2020	Unknown
Wildfire & PG&E PSPS Events due to High Fire Danger	October 2019	Unknown
Webpage on PSPS Events and Biennial Report article on emergency generators	Spring 2021	Unknown
Posters and Signs, TV, Radio		
Dublin High School Magazine: Climate Change and the Drought	November 2020 - August 2022	2,000+
East Bay Times: Severe Drought, Limit Watering to Twice a Week	November 2020 - August 2022	10,000+

Local Outreach Activity	Date	Number of People Involved
Buses: Severe Drought, Limit Watering to Twice a Week (4 weeks of ads on back of 18 buses)	November 2020 - August 2022	50,000+
Local TV spot: Water – Save Some for Tomorrow	November 2020 - August 2022	50,000+
Radio Ads (Two:30 second radio commercials on KKIQ airing 60 times a week for 8 weeks)	November 2020 - August 2022	50,000+
Movie Theatre Ads (:30 second commercials at Regal Cinema in Dublin and Vine Cinema in Livermore)	November 2020 - August 2022	50,000+
San Ramon City Center – Electronic Kiosk: Drought	8/1/2022	Unknown
District Office (7051 Dublin Boulevard Drought Sign	June 2022	
Dublin Boulevard & Fallon Road “Severe Drought – Irrigate no more than 3 days/week” Sign	June 2022	Unknown
Amador Valley Parkway, Dougherty Hills Dog Park “Severe Drought – Irrigate no more than 3 days/week” Sign	June 2022	Unknown
Mail, Printed		
Public Safety Power Shut-Off Flyer/Letter	11/13/2019	24,000
Another Dry Year Postcard-Drought Restrictions	6/2/2022	24,000
Dublin Chamber of Commerce Newsletter Insert: Water Shortage Emergency and Conservation Tips for Business	10/25/2021 & 6/7/2022	Unknown
Postcard: Severe Drought: Irrigation Restrictions	5/11/2022	17,000
Postcard: You & Me Need to Save More Water	6/13/2022	17,000
Postcard: We Can Help You Save Water	7/15/2022	17,000
Postcard: State Reporting – You May be in Violation of Drought Water Use Restrictions	7/15/2022	On-going
Bill Inserts, Printed		
Rain/Shine: Conservation, Sweep Instead of Hose	4/11/2018	17,000
Triclosan/Fats Oils and Grease	11/13/2019	17,000
Trash Wipes, Not Pipes	5/19/2019	17,000
Prescription Drug Drop	2/28/2019	17,000
Frozen Pipes/Fats Oils and Grease	12/3/2020	17,000
Mow No More – Save Water	3/17/2020	17,000
What Can YOU Do? Save Water	4/13/2021	17,000
Prescription Drug Drop/Irrigation Tips	2/8/2022	17,000
Events		
Gardening Workshop	8/18/2018	80
Gardening by Number	2/27/2020	Unknown
Gardening with Native Plants Webinar	2/19/2021	Unknown
Dublin Chamber of Commerce Event, Conservation and District Office Open House	4/27/2022	100
Covid-19 Pandemic Response		
Flyer: Flushing Your Water System: Reopening After COVID Shutdown	5/12/2020	10,000
Magnet: COVID Symptoms and procedures	7/13/2020	110
Social Media: Here for You 24/7, Be Essential, Your Water is Safe and Reliable	2020	Unknown

4.11 INFORMATION SOURCES USED FOR THIS ANNEX

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

- **DSRSD Emergency Response Plan, July 2021**—The emergency response plan was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **DSRSD Standard Procedures, Specifications and Drawings, June 2021**—Standard procedures were reviewed for the full capability assessment.
- **DSRSD District at a Glance Fact Sheet, January 2022**—The fact sheet was reviewed for the full capability assessment.
- **DSRSD Urban Water Management Plan, June 2021**—The urban management water plan was reviewed for the full capability assessment and for identifying opportunities for action plan integration.

The following outside resources and references were reviewed:

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

Tri-Valley Local Hazard Mitigation Plan

Appendix A. Planning Partner Expectations

A. PLANNING PARTNER EXPECTATIONS

The federal Disaster Mitigation Act (DMA) of 2000 (Public Law 106-390), commonly known as the 2000 Stafford Act amendments, was approved by Congress on October 10, 2000. This act required state and local governments to develop hazard mitigation plans as a condition for federal grant assistance. Among other things, this legislation reinforces the importance of pre-disaster infrastructure mitigation planning to reduce disaster losses nationwide. DMA 2000 is aimed primarily at the control and streamlining of the administration of federal disaster relief and programs to promote mitigation activities. Prior to 2000, federal legislation provided funding for disaster relief, recovery, and some hazard mitigation planning. The DMA improves upon the planning process by emphasizing the importance of communities planning for disasters before they occur.

The Disaster Mitigation Act defines a “local government” as:

Any county, municipality, city, town, 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.

Any local government wishing to pursue funding afforded under FEMA Hazard Mitigation Grant Programs must have an approved hazard mitigation plan in order to be eligible to apply for these funds.

One of the goals of the multi-jurisdictional approach to hazard mitigation planning is to achieve compliance with the DMA for all participating members in the planning effort. DMA compliance must be certified for each member in order to maintain eligibility for the benefits under the DMA. Whether a planning process generates 10 individual plans or one large plan that has a chapter for each partner jurisdiction, the following items must be addressed by each planning partner to achieve DMA compliance:

- **Participate in the process.** It must be documented in the plan that each planning partner “participated” in the process that generated the plan. There is flexibility in defining “participation.” Participation can vary based on the type of planning partner (i.e., City vs. a Special Purpose District). However, the level of participation must be defined and the extent for which this level of participation has been met for each partner must be contained in the plan context.
- **Consistency Review.** Review existing documents pertinent to each jurisdiction to identify policies or recommendations that are not consistent with documents reviewed in producing the “parent” plan or that have policies and recommendations that complement the hazard mitigation initiatives selected (i.e.: comp plans, basin plans or hazard specific plans).
- **Action Review.** For plan updates, review the strategies from the prior action plan to determine those that have been accomplished and how they were accomplished; and why those that have not been accomplished were not completed.

- **Update Localized Risk Assessment.** Personalize the risk assessment for each jurisdiction by removing hazards not associated with the defined jurisdictional area or redefining vulnerability based on a hazard's impact to a jurisdiction. This phase will include:
 - A ranking of the risk
 - A description of the number and type of structures at risk
 - An estimate of the potential dollar losses to vulnerable structures
 - A general description of land uses and development trends within the community, so that mitigation options can be considered in future land use decisions.
- **Capability assessment.** Each planning partner must identify and review their individual regulatory, technical and financial capabilities with regards to the implementation of hazard mitigation actions.
- **Personalize mitigation recommendations.** Identify and prioritize mitigation recommendations specific to each jurisdiction's defined area.
- **Create an Action Plan.**
- **Incorporate Public Participation.** Each jurisdiction must present the plan to the public for comment at least once, within two weeks prior to adoption.
- **Plan must be adopted by each jurisdiction.**

One of the benefits to multi-jurisdictional planning is the ability to pool resources. This means more than monetary resources. Resources such as staff time, meeting locations, media resources, and technical expertise will all need to be utilized to generate a successful plan. In addition, these resources can be pooled such that decisions can be made by a peer group applying to the whole and thus reducing the individual level of effort of each planning partner. This will be accomplished by the formation of a steering committee made up of planning partners and other "stakeholders" within the planning area. The size and makeup of this steering committee will be determined by the planning partnership. This body will assume the decision-making responsibilities on behalf of the entire partnership. This will streamline the planning process by reducing the number of meetings that will need to be attended by each planning partner. The assembled Steering Committee for this effort will meet monthly on an as needed basis as determined by the planning team, and will provide guidance and decision making during all phases of the plan's development.

With the above participation requirements in mind, each partner is expected to aid this process by being prepared to develop its section of the plan. To be an eligible planning partner in this effort, each Planning Partner shall provide the following:

- A "Letter of Intent to participate" or resolution to participate submitted to the Planning Team (see Exhibit A).
- Designate a lead point of contact for this effort. This designee will be listed as the hazard mitigation point of contact for your jurisdiction in the plan.
- Support and participate in the selection and function of the Steering Committee selected to oversee the development of this plan.
- Provide support in the form of a mailing list, a possible meeting space, and public information materials, such as newsletters, newspapers or direct mailed brochures, required to implement the public involvement strategy developed by the Steering Committee.

E. Participate in the process. There will be many opportunities as this plan evolves to participate. Opportunities such as:

- a. Steering Committee meetings
- b. Public meetings or open houses
- c. Workshops/ Planning Partner specific training sessions
- d. Public review and comment periods prior to adoption

At each and every one of these opportunities, attendance will be recorded. Attendance records will be used to document participation for each planning partner. No thresholds will be established as minimum levels of participation. However, each planning partner should attempt to attend all possible meetings and events.

F. There will be one **mandatory** workshop that all planning partners will be required to attend. This workshop will cover the proper completion of the jurisdictional annex template, which is the basis for each partner's jurisdictional chapter in the plan. Failure to have a representative at this workshop will disqualify the planning partner from participation in this effort. The schedule for this workshop will be such that all committed planning partners will be able to attend.

G. After participation in the mandatory template workshop, each partner will be required to complete a template and provide it to the planning team in the time frame established by the Steering Committee. Failure to complete your template in the required time frame may lead to disqualification from the partnership.

H. Each partner will be expected to perform a "consistency review" of all technical studies, plans, ordinances specific to hazards to determine the existence of any not consistent with the same such documents reviewed in the preparation of the parent plan.

I. Each partner will be expected to review the risk assessment and identify hazards and vulnerabilities specific to its jurisdiction. Contract resources will provide the jurisdiction specific mapping and technical consultation to aid in this task, but the determination of risk and vulnerability will be up to each partner.

J. Each partner will be expected to review and determine if the mitigation recommendations chosen in the parent plan will meet the needs of its jurisdiction. Projects within each jurisdiction consistent with the parent plan recommendations will need to be identified and prioritized, and reviewed to determine their benefits vs. costs.

K. 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.

L. Each partner will be required to sponsor at least one public meeting to present the draft plan to its constituents at least 2 weeks prior to adoption.

M. Each partner will be required to formally adopt the plan.

Templates and instructions to aid in the compilation of this information will be provided to all committed planning partners. Each partner will be expected to complete their templates in a timely manner and according to the timeline specified by the Steering Committee.

**** Note**: Once this plan is completed, and DMA compliance has been determined for each partner, maintaining that eligibility will be dependent upon each partner implementing the plan implementation-maintenance protocol identified in the plan. At a minimum, this means completing the ongoing plan maintenance protocol identified in the plan. Partners that do not participate in this plan maintenance strategy may be deemed ineligible by the partnership, and thus lose their DMA eligibility.**

Exhibit A.
Example Letter of Intent to Participate

Tri-Valley Multi-Jurisdiction Hazard Mitigation Planning Partnership

Name

Address

City, State Zip

Dear Tri-Valley Planning Team,

As the Federal Emergency Management Agency's (FEMA) local hazard mitigation plan requirements under 44 CFR §201.6 identify criteria for multi-jurisdictional mitigation plans including the participation and collaboration of regional planning and mitigation partners, this letter of commitment is submitted to confirm the participation of <insert agency name> as a Planning Partner in the *Tri-Valley Local Hazard Mitigation Plan*.

As a condition of participation, <insert agency name> agrees to meet the requirements for mitigation plans identified in 44 CFR §201.6, and to provide timely cooperation and participation to produce a FEMA-approved hazard mitigation plan.

<insert agency name> understands that it must engage in the following planning processes, as detailed in FEMA's *Local Multi-Hazard Mitigation Planning Guidance* dated March 1, 2013. Planning processes include, but are not limited to the following:

- Review of existing 2018 Tri-Valley Local Hazard Mitigation Plan
- Identification of local hazards, risk assessment, and vulnerability analysis
- Participation in the formulation of mitigation goals and actions
- Participation in community engagement and public outreach in the development of the plan
- Timely response to requests for information by the coordinating agency and consultants, and adherence to established deadlines
- Formal adoption of the hazard mitigation plan by the planning partner jurisdiction's governing body
- Tracking and monthly submission of personnel hours spent on the hazard mitigation planning effort

Sincerely,

Name _____

Title _____

Tri-Valley Local Hazard Mitigation Plan

Appendix B. Annex Instructions and Templates

INSTRUCTIONS FOR COMPLETING MUNICIPAL ANNEX TEMPLATE

Jurisdictional annex templates for the *Tri-Valley Local Hazard Mitigation Plan* update will be completed in three phases. **This document provides instructions for completing all phases of the template for municipalities.**

The target timeline for completion is as follows:

- **Phase 1**—Team, Profile, Trends, and Previous Plan Status
 - **Deploy:** June 8, 2022
 - **Due:** June 24, 2022 by close of business
- **Phase 2**—Capability Assessment, Integration Review, and Information Sources
 - **Deploy:** July 8, 2022
 - **Due:** July 29, 2022 by close of business
- **Phase 3**—Risk Assessment, Action Plan, Information Sources, Future Needs, and Additional Comments
 - **Deploy:** August 15, 2022
 - **Mandatory Phase 3 Workshops:** Targeted for the week of August 22. One workshop will be scheduled that will meet the availability of all planning partners.
 - **Due:** September 23, 2022 by close of business.

Please direct any questions and return your completed Phase 1 template in electronic format to:

Megan Brotherton
Tetra Tech
Phone: (808) 339-9119
E-mail: megan.brotherton@tetratech.com

A Note About Formatting

The template for the annex is a Microsoft Word document in a format that will be used in the final plan. Partners are asked to use this template so that a uniform product will be completed for each partner.

Content should be entered directly into the template rather than creating text in another document and pasting it into the template. Text from another source may alter the formatting of the document.

The section and table numbering in the document will be updated when completed annexes are combined into the final document. Please do not adjust any of the numbering.

For planning partners who participated in the 2018 planning effort, relevant information has been brought over to the 2022 template. Fields that require attention have been highlighted using the following color coding:

- **Blue:** Text has been brought over from the 2018 Plan and should be reviewed and updated as needed.
- **Green:** This is a new field that will require information that was not included in 2018.

Un-highlight each field that you update so that reviewers will know an edit has been made.

New planning partners will need to complete the template in its entirety.

PHASE 1 INSTRUCTIONS**CHAPTER TITLE**

In the chapter title at the top of Page 1, type in the complete official name of your municipality (e.g., City of Smithburg, West County). Do not change the chapter number. Revise only the jurisdiction name. If your jurisdiction's name has already been entered, verify that wording and spelling are correct; revise as needed.

LOCAL HAZARD MITIGATION PLANNING TEAM**Points of Contact**

Provide the name, title, mailing address, telephone number, and e-mail address for the primary point of contact for your jurisdiction. This should be the person responsible for monitoring, evaluating and updating the annex for your jurisdiction. This person should also be the principle liaison between your jurisdiction and the Steering Committee overseeing development of this plan.

In addition, designate an alternate point of contact. This would be a person to contact should the primary point of contact be unavailable or no longer employed by the jurisdiction.

Note: Both of these contacts should match the contacts that were designated in your jurisdiction's letter of intent to participate in this planning process. If you have changed the primary or secondary contact, let the planning team know by inserting a comment into the document.

Participating Planning Team

Populate Table 1-1 with the names of staff from your jurisdiction who participated in preparing this annex or otherwise contributed to the planning process for this hazard mitigation plan.

Who Should Be on the Local Mitigation Planning Team

The Local Hazard Mitigation Planning Team is responsible for developing your jurisdiction's annex to the hazard mitigation plan. Team membership should represent agencies with authority to regulate development and enforce local ordinances or regulatory standards, such as building/fire code enforcement, emergency management, emergency services, floodplain management, parks and recreation, planning/ community development, public information, public works/ engineering, stormwater management, transportation, or infrastructure.

JURISDICTION PROFILE

Provide information specific to your jurisdiction as indicated, in a style similar to the examples provided below. This should be information that will not be provided in the overall mitigation plan document.

If Municipal (incorporated city) GIS data files are available, please send with your completed Phase 1. The files should include GIS data for facilities such as city halls, public works buildings, community centers, city police stations, city fire stations.

Location and Features

Describe the community's location, size and prominent features, in a statement similar to the example below:

EXAMPLE: The City of Jones is in the northwest portion of Smith County, along the Pacific Coast in northern California. It is almost 150 miles northeast of San Francisco. The city's total area is 4.2 square miles, with boundaries generally extending north-south from State Highway 111 to the Johnson River and east-west from Coast Road to East Frank Avenue. The City of Allen is to the north, unincorporated county is to the west, the City of Bethany is to the south, and the Pacific Ocean is to the west.

Jones is home to the University of Arbor, Bickerson Manufacturing, and the western portion of Soosoo National Park. Significant geographic features include the Watery River, which flows southwest across the city, Lake Splash in the city's northwest corner, and the foothills of the Craggy Mountains on the east side.

History

Describe the community's history, focusing on economy and development, and note its year of incorporation, in a statement similar to the example below:

EXAMPLE: The City of Jones was incorporated in 1858. The area was settled during the gold rush in the 1850s as a supply center for miners. As the gold rush died down, timber and fishing became the area's major economic resources. By 1913, the Jones Teachers College, a predecessor to today's University of Arbor, was founded. Recently, the presence of the college has come to shape Jones' population into a young and educated demographic. In 1981 the City developed the Jones Marsh and Wildlife Sanctuary, an environmentally friendly sewage treatment enhancement system.

With numerous annexations since its original incorporation, the city's area has almost doubled. Today it features a commercial core in the center of the city, with mostly residential areas to the north and south, the university to the west and the national park on the east.

Governance

Describe the community's key governance elements and staffing, in a statement similar to the example below:

EXAMPLE: The City of Jones is governed by a five-member city council. The City consists of six departments: Finance, Environmental Services, Community Development, Public Works, Police, and the City Manager's Office. The City has 13 commissions and task forces, which report to the City Council. The City currently employs a total of 155 employees (full-time equivalent).

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

CURRENT TRENDS

Population

Provide the most current population estimate for your jurisdiction based on an official means of tracking (e.g., the U.S. Census or state agency that develops population estimates). Describe the current estimate and recent population trends in a statement similar to the example below.

EXAMPLE: According to California Department of Finance, the population of Jones as of July 2020 was 17,280. Since 2010, the population has grown at an average annual rate of 1.2 percent, though that rate is declining, with an annual average of only 0.8 percent since 2015.

Development

In the highlighted text that says “Describe trends in general,” provide a brief description of your jurisdiction’s recent development trends in a statement similar to the example below:

EXAMPLE: Anticipated future development for Jones is low to moderate, consisting primarily of residential growth. Recent development has been mostly infill. There has been a focus on affordable housing and a push for more secondary mother-in-law units. Future growth in the City will be managed as identified in the City’s 2018 general plan. City actions, such as those relating to land use, annexations, zoning, subdivision and design review, redevelopment, and capital improvements, must be consistent with the plan.

Complete the table titled “Recent and Expected Future Development Trends.” Note:

- The portion of the table requesting the number of permits by year is specifically looking for development permits for new construction. If your jurisdiction does not have the ability to differentiate between permit types, list the total number of permits and indicate “N/A” (not applicable) for the permit sub-types.
- If your jurisdiction does not have the ability to track permits by hazard area, delete the bullet list of hazard areas and insert a qualitative description of where development has occurred.

STATUS OF PREVIOUS PLAN ACTIONS

Note that this section only applies to jurisdictions that are conducting updates to previously approved hazard mitigation plans. If your jurisdiction has not previously participated in an approved plan, enter an “X” in the box at the beginning of this section and do not complete the section. We will remove this section from your final annex.

Also note that this section will be further back in the final annex than the rest of the Phase 1 content. Some Phase 2 sections will be included before it.

All action items identified in prior mitigation plans must be reconciled in this update. Action items must all be marked as ONE of the options below; select the appropriate status from the dropdown list and provide information as follows:

- **Completed**—If an action has been completed since the prior plan was prepared, select “Completed” and provide a date of completion in the comment section. If an action has been initiated and is an ongoing program (e.g. annual outreach event), you may mark it as completed and note that it is

ongoing in the comments. If an action addresses an ongoing program you would like to continue to include in your action plan, see the “Carried Over to Plan Update” bullet below.

- **Removed**—If action items are to be removed because they are no longer feasible, a reason must be given. Lack of funding does not mean that it is no longer feasible, unless the sole source of funding for an action is no longer available. **Place a comment in the comment section explaining why the action is no longer feasible or barriers that prevented the action from being implemented (e.g., “Action no longer considered feasible due to lack of political support.”)** If the wording and/or intent of a previously identified action is unclear, this can be a reason for removal. A change in community priorities may also be a reason for removal and should be discussed in the comments.
- **Carried Over to Plan Update**—If an action is in progress, is ongoing, or has not been initiated and you would like to carry it over to the plan update, select “Carried Over to Updated Plan.” Selecting this option indicates that the action will be included in the mitigation action plan for this update. If you are carrying over an action to the update, **include a comment describing any action that has been taken or why the action was not taken** (specifically, any barriers or obstacles that prevented the action from moving forward or slowed progress). Leave the last column, “New Action #,” blank at this point. This will be filled in after completing the updated action plan in Phase 3.

Ensure that you have provided **a status and a comment for each action.**

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, all action items from your jurisdiction’s previous hazard mitigation plan that are marked as “Carried Over to Plan Update” will need to be included in the action plan.

PUBLIC OUTREACH

Note that this section is part of the Phase 3 annex, but documentation can begin in Phase 1 if applicable.

FEMA requirements for public outreach will be met by the overall hazard mitigation plan engagement efforts and are included in the main part of the plan. These may include public meetings, a StoryMap website, surveys, etc. If individual jurisdictions want to have a more robust outreach for their local community, the public outreach table in each annex may be used to memorialize those local efforts.

This table should record local public outreach efforts made by your jurisdiction to inform the community of the plan update process. Examples may include local surveys on hazard awareness/preparedness, social media blasts, press releases, and outreach to local groups (CERT, senior citizen organizations, etc.) **This section is optional.**

THIS COMPLETES PHASE 1

PHASE 2 INSTRUCTIONS

CAPABILITY ASSESSMENT

Note that it is unlikely that one person will be able to complete all sections of the capability assessment alone. The primary preparer will likely need to reach out to other departments within the local government for information. It may be beneficial to provide these individuals with background information about this planning process, as input from them will be needed again during Phase 3 of the annex development.

Planning and Regulatory Capability

In the table titled “Planning and Regulatory Capability,” indicate “Yes” or “No” for each listed code, ordinance, requirement or planning document in each of the following columns:

- **Local Authority**—Select “Yes” if your jurisdiction has prepared or adopted the identified item; otherwise, select “No.” If yes, then enter the code, ordinance number, or plan name and its date of adoption in the comments column. *Note: If you select yes, be sure to provide a comment with the appropriate code, ordinance or plan and date of adoption.*
- **Other Jurisdiction Authority**—Select “Yes” if another agency (e.g., a state agency or special purpose district) enforces or administers the identified item in a way that may impact your jurisdiction or if any state or federal regulations or laws would prohibit local implementation of the identified item; otherwise, select “No.” *Note: If you select yes, be sure to provide a comment indicating the other agency and its relevant authority.*
- **State Mandated**—Select “Yes” if state laws or other requirements enable or require the listed item to be implemented at the local level; otherwise, select “No.” *Note: If you select yes, be sure to provide a comment describing the relevant state mandate.*
- **Integration Opportunity**—Select “Yes” if there are obvious ways that the code, ordinance or plan can be coordinated with the hazard mitigation plan. Consider the following:
 - If you selected “Yes” in the Local Authority column for this item, then select “Yes” for integration opportunity if any of the following are true:
 - The item already addresses hazards and their impacts and should be updated to reflect new information about risk from this hazard mitigation plan
 - The item does not address hazards and their impacts but is due for an update in the next 5 years and could be updated in a way that does address hazards and impacts
 - The item identifies projects for implementation and these could be reviewed to determine if they can be modified to help address hazard mitigation goals
 - The item identifies projects for implementation and some of these should be considered for inclusion in the hazard mitigation action plan for your jurisdiction
 - If you selected “No” in the Local Authority column for this item, then select “Yes” for integration opportunity if your jurisdiction will develop the item over the next 5 years
- **Comments**—Enter the code number and adoption date for any local code indicated as being in place; provide other comments as appropriate to describe capabilities for each entry. **DO NOT OVERLOOK THIS STEP**

For the categories “General Plan” and “Capital Improvement Plan,” answer the specific questions shown, in addition to completing the four columns indicating level of capability.

Development and Permit Capability

Complete the table titled “Development and Permitting Capabilities.”

Fiscal Capability

Complete the table titled “Fiscal Capability” by indicating whether each of the listed financial resources is accessible to your jurisdiction. Select “Yes” if the resource is fully accessible to your jurisdiction. Select “No” if there are limitations or prerequisites that may hinder your use of this resource.

Administrative and Technical Capability

Complete the table titled “Administrative and Technical Capability” by indicating whether your jurisdiction has access to each of the listed personnel resources. Select “Yes” or “No” in the column labeled “Available?”. If yes, then enter the department and position title. If you have contract support with these capabilities, you can still select “Yes.” Indicate in the department row that this resource is provided through contract.

Education and Outreach Capability

Complete the table titled “Education and Outreach.”

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, review all the above capability assessment tables and consider including actions to provide a capability that your jurisdiction does not currently have, update a capability that your jurisdiction does have, or implement an action that is recommended in an existing plan or program.

National Flood Insurance Program Compliance

Complete the table titled “National Flood Insurance Program Compliance.”

Community Classifications

Complete the table titled “Community Classifications” to indicate your jurisdiction’s participation in various national programs related to natural hazard mitigation. For each program select “Yes” or “No” in the second column to indicate whether your jurisdiction participates. If yes, then enter your jurisdiction’s identification number in the program in the third column, the classification that your jurisdiction has currently earned under the program in the fourth column and the date on which that classification was issued in the fifth column. Enter “N/A” in the third, fourth, and fifth columns if your jurisdiction is not participating. If you do not know your current identification number or classification, information is available at the following websites:

- **FIPS Code**— <https://www.census.gov/geographies/reference-files/2018/demo/popest/2018-fips.html>
- **DUNS #**— <https://www.dnb.com/duns-number.html>
- **Community Rating System**— <https://www.fema.gov/floodplain-management/community-rating-system>
- **Building Code Effectiveness Grading Schedule**— <https://www.isomitigation.com/bcegs/iso-s-building-code-effectiveness-grading-schedule-bcegs.html>
- **Public Protection Classification**— <https://www.isomitigation.com/ppc/>
- **Storm Ready**— <https://www.weather.gov/stormready/communities>
- **Firewise**— <http://www.firewise.org/usa-recognition-program/map-of-active-participants.aspx>
- **Tsunami Ready**— <https://www.weather.gov/tsunamiready/communities>

Adaptive Capacity for Climate Change

Consider climate change impact concerns such as the following:

- Reduced snowpack
- Increased wildfires
- Sea level rise
- Inland flooding
- Threats to sensitive species
- Loss in agricultural productivity
- Public health and safety.

With those impacts in mind, complete the table titled “Adaptive Capacity for Climate Change” by indicating your jurisdiction’s capacity for each listed criterion as follows:

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

This is a subjective assessment, but providing a few words of explanation is useful. It is highly recommended that you complete this table with an internal planning team after reviewing the results of the other capability assessment tables.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, review all the adaptive capacity criteria and consider including actions to improve the rating for those rated medium or low, to make use of the capacity for those rated high, or to acquire additional information for those rated unsure.

INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as general planning and capital facilities planning, and that relevant information from those sources is used in hazard mitigation. FEMA recommends integration as follows:

- Integrate hazard mitigation plan goals with community objectives (e.g. incorporate the goals for risk reduction and safety into the policies of other plans).
- Use the risk assessment to inform plans and policies (e.g. incorporate risk assessment findings into land use plans, site plan review, emergency operations plans).
- Implement mitigation actions through existing mechanisms (e.g. include mitigation projects in the capital improvement plan).
- Think about mitigation before and after a disaster (e.g. build recovery planning on existing mitigation plans and goals).

After reviewing the plans, programs and ordinances identified in the capability assessment tables, identify all plans and programs that have already been integrated with the hazard mitigation plan, and those that offer opportunities for future integration. The simplest way to do this is to review the Planning and Regulatory Capabilities table to see which items were marked as “Yes” under the Integration Opportunity column.

Existing Integration

In the bullet list, list items for which you entered “Yes” under the Integration Opportunity column of the “Planning and Regulatory Capability” table because the plan or ordinance already addresses potential impacts or includes specific projects that should be included as action items in the mitigation action plan. Consider listing items marked as Completed in the “Status of Previous Plan Actions” table if they were indicated as being ongoing actions. Provide a brief description of how the plan or ordinance is integrated. Examples are as follows:

- **Capital Improvement Plan**—The capital improvement plan includes projects that can help mitigate potential hazards. The City will act to ensure consistency between the hazard mitigation plan and the current and future capital improvement plans. The hazard mitigation plan may identify new possible funding sources for capital improvement projects and may result in modifications to proposed projects based on results of the risk assessment.
- **Building Code and Fire Code**—The City’s adoption of the 2016 California building and fire codes incorporated local modifications to account for the climatic, topographic and geographic conditions that exist in the City.

- **General Plan**—The general plan includes a Safety Element to protect the community from unreasonable risk by establishing policies and actions to avoid or minimize the following hazards:
 - Geologic and seismic hazards
 - Fire hazards
 - Hazardous materials
 - Flood control
 - Impacts from climate change.
- **Climate Action Plan**—The City's Climate Action Plan includes projects for reducing greenhouse gas emissions and adapting to likely impacts of climate change. These projects were reviewed to identify cross-planning initiatives that serve both adaptation and mitigation objectives.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, any plans that fall into the “Existing Integration” category should be reviewed and elements from them should be included in the action plan as appropriate.

Opportunities for Future Integration

List any remaining items that say “Yes” in the Integration Opportunity column in the Planning and Regulatory Capabilities table and explain the process by which integration could occur. Examples follow:

- **Zoning Code**—The City is conducting a comprehensive update to its zoning code. Additional mitigation and abatement measures will be considered for incorporation into the code.
- **Capital Improvement Projects**—Capital improvement project proposals may take into consideration hazard mitigation potential as a means of evaluating project prioritization.
- **Post-Disaster Recovery Plan**—The City does not have a recovery plan and intends to develop one as a mitigation planning action during the next five years. The plan will build on the goals and objectives identified in the hazard mitigation plan.

After you have accounted for all items marked as “Yes” under the Integration Opportunity column, consider other programs you may have in place in your jurisdiction that include routine consideration and management of hazard risk. Examples of such programs may include: tree pruning programs, right-of-way mowing programs, erosion control or stream maintenance programs, etc. Add any such programs to the integration discussion and provide a brief description of how these programs manage (or could be adapted to manage) risk from hazards.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, an action to integrate any identified “Opportunities for Future Integration” should be considered for inclusion in the action plan.

PUBLIC OUTREACH

Note that this section is part of the Phase 3 annex, but documentation can begin in Phases 1 and 2 if applicable.

FEMA requirements for public outreach will be met by the overall hazard mitigation plan engagement efforts and are included in the main part of the plan. These may include public meetings, a StoryMap, surveys, etc. If individual jurisdictions want to have a more robust outreach for their local community, the public outreach table in each annex may be used to memorialize those local efforts.

This table should record local public outreach efforts made by your jurisdiction to inform the community of the plan update process. Examples may include local surveys on hazard awareness/preparedness, social media blasts, press releases, and outreach to local groups (CERT, senior citizen organizations, etc.) **This section is optional.**

INFORMATION SOURCES USED FOR THIS ANNEX

Note that this section will ultimately describe all information sources used to develop this annex, but that only the sources used for Phases 1 and 2 will be listed at this point. Additional sources will be added with the preparation of the Phase 3 annex.

This section should describe what resources you used to complete the annex and how you used them. Several items are started for you, but be sure to update and enhance any descriptions. Providing this information is a requirement to pass the state and FEMA review process.

THIS COMPLETES PHASE 2

PHASE 3 INSTRUCTIONS

RISK ASSESSMENT

Jurisdiction-Specific Natural Hazard Event History

In the table titled “Past Natural Hazard Events,” list in chronological order (most recent first) any natural hazard event that has caused damage to your jurisdiction. Include the date of the event and the estimated dollar amount of damage it caused. If a dollar amount is unknown, write a brief description of the impact and damage. You are welcome to include any events, but special attention should be made to include major storms and federally declared disasters. Refer to the table below that lists hazard events in the planning area as recognized by the federal government.

Table 1. Presidential Disaster Declarations for the Planning Area

We recommend including most large-scale disasters, unless you know that there were no impacts on your jurisdiction. Specifically, we recommend that you include these events if you have damage estimate information or can provide a brief description of impacts that occurred within your community. In addition to these events, refer to the NOAA storm events database included in the toolkit. We recommend conducting a search for the name of your jurisdiction in order to identify events with known impacts. Other potential sources of damage information include the following

- Preliminary damage estimates your jurisdiction filed with the county or state
- Insurance claims data
- Newspaper archives
- Emergency management documents (general plan safety element, emergency response plan, etc.)
- Resident input.

If you do not have estimates for costs of damage caused, enter “Not Available” in the “Damage Assessment” column or list a brief description of the damage rather than a dollar value (e.g., Main Street closed as a result of flooding, downed trees and residential damage). Note that tracking such damage is a valid and useful mitigation action if your jurisdiction does not currently track such information.

Hazard Risk Ranking

Risk ranking identifies which hazards pose the greatest risk to the community, based on how likely it is for each hazard to occur (this is called the community’s exposure) and how great an impact each hazard will have if it does occur (this is called the community’s vulnerability). Every jurisdiction has differing degrees of risk exposure and vulnerability and therefore needs to rank risk for its own area. The risk ranking for each jurisdiction has been calculated in the “Loss Matrix” spreadsheet included in the annex preparation toolkit. These rankings are based on scores for each hazard calculated from the hazard’s probability of occurrence and its potential impact on people, property and the economy.

The results for your jurisdiction have already been entered into the “Hazard Risk Ranking” table in your Phase 3 annex template. The hazard with the highest risk rating is listed at the top of table and was given a rank of 1; the hazard with the second highest rating is listed second with a rank of 2; and so on. Two hazards with equal risk ranking scores were given the same rank. Hazards were assigned to “High,” Medium,” or “Low” risk categories based on the risk ranking score. If you wish to review the calculations in detail, the appendix at the end of these instructions describes the calculation methodology that the spreadsheet uses.

Review the hazard risk ranking information that is included in your annex. If these results differ from what you know based on substantiated data and documentation, you may alter the ranking and risk categories based on this knowledge. If you do so, indicate the reason for the change in your template. For example:

“Drought was ranked as low; however, the jurisdiction’s economy is heavily reliant on water-using industries, such as agriculture or manufacturing, so this hazard should be ranked as medium.”

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, you will need to have at least one mitigation action for each hazard ranked as “high” or “medium.”

Jurisdiction-Specific Vulnerabilities

Repetitive Loss Properties

A repetitive loss property is any property for which FEMA has paid two or more flood insurance claims in excess of \$1,000 in any rolling 10-year period since 1978. In the space provided, the following information has been included in your annex based on data provided by FEMA:

- The number of any FEMA-identified repetitive-loss properties in your jurisdiction.
- The number of any FEMA-identified severe-repetitive-loss properties in your jurisdiction.
- The number (if any) of repetitive-loss or severe-repetitive-loss properties in your jurisdiction that have been mitigated. Mitigated for this exercise means that flood protection has been provided to the structure.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, if your jurisdiction has any repetitive loss properties, you should strongly consider including a mitigation action that addresses mitigating these properties.

Other Noted Vulnerabilities

Review the results of the risk assessment included in the toolkit, your jurisdiction's natural events history, and any relevant public comments/input, then develop a few sentences that discuss specific hazard vulnerabilities. You do not need to develop a sentence for every hazard, but identify a few issues you would like to highlight. Also list any known hazard vulnerabilities in your jurisdiction that may not be apparent from the risk assessment and other information provided.

Spending some time thinking about the results of the risk assessment and other noted vulnerabilities will be a big help in the development of your hazard mitigation action plan. The following are examples of vulnerabilities you could identify through this exercise:

- About 45 percent of the population lives in the 0.2 percent annual chance flood hazard area, where flood insurance is generally not required.
- A magnitude 7.5 earthquake on the Smithburg Fault is estimated to produce nearly 1 million tons of structure debris.
- Over the past 10 years, the jurisdiction has experienced more than \$6 million in damage from severe storm events.
- More than 50 buildings are located in areas that would be permanently inundated with 12 inches of sea level rise.
- The results of the public survey indicated that 40 percent of Smithburg residents would not be able to be self-sufficient for 5 days following a major event.
- An urban drainage issue at a specific location results in localized flooding every time it rains.
- One area of the community frequently loses power due to a lack of tree maintenance.

- A critical facility, such as a police station, is not equipped with a generator.
- A neighborhood has the potential to have ingress and egress cut off as the result of a flood or earthquake (e.g. a bridge is the only access).
- Substantial number of buildings in one area of the community are unreinforced masonry or soft-story construction.
- An area along the river is eroding and threatening public and/or private property.
- A large visitor population that may not be aware of tsunami risk.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, consider including actions to address the jurisdiction-specific vulnerabilities listed in this section.

HAZARD MITIGATION ACTION PLAN

Hazard Mitigation Action Plan Matrix

The hazard mitigation action plan is the heart of your jurisdictional annex. This is where you will identify the actions your jurisdiction would like to pursue with this plan.

Select Recommended Actions

All of the work that you have done thus far should provide you with ideas for actions. Throughout these instructions, green boxes labeled “Hazard Mitigation Action Plan Input” have indicated information that needs to be considered in the selection of mitigation actions. The following sections describe how to consider these and other information sources to develop a list of potential actions.

Be sure to consider the following factors in your selection of actions:

- Select actions that are consistent with the overall purpose, goals, and objectives of the hazard mitigation plan.
- Identify actions where benefits exceed costs.
- Include any action that your jurisdiction has committed to pursuing, regardless of grant eligibility.
- Know what is and is not grant-eligible under various federal grant programs (see the fact sheet on FEMA hazard mitigation grant programs in the annex preparation toolkit and the table below).

Table 2. Federal Hazard Mitigation Grant Program Eligibility by Action Type

Eligible Activities	HMGP (Hazard Mitigation Grant Program)	BRIC (Building Resilient Infrastructure and Communities)	FMA (Flood Mitigation Assistance)
Mitigation Projects			
Property Acquisition and Structure Demolition	✓	✓	✓
Property Acquisition and Structure Relocation	✓	✓	✓
Structure Elevation	✓	✓	✓
Mitigation Reconstruction	✓	✓	✓
Dry Floodproofing of Historic Residential Structures	✓	✓	✓
Dry Floodproofing of Non-residential Structures	✓	✓	✓
Generators	✓	✓	
Localized Flood Risk Reduction Projects	✓	✓	✓
Non-Localized Flood Risk Reduction Projects	✓	✓	
Structural Retrofitting of Existing Buildings	✓	✓	✓
Non-structural Retrofitting of Existing Buildings and Facilities	✓	✓	✓
Safe Room Construction	✓	✓	
Wind Retrofit for One- and Two-Family Residences	✓	✓	
Infrastructure Retrofit	✓	✓	✓
Soil Stabilization	✓	✓	✓
Wildland fire Mitigation	✓	✓	
Post-Disaster Code Enforcement	✓		
Advance Assistance	✓		
5 Percent Initiative Projects*	✓		
Aquifer and Storage Recovery**	✓	✓	✓
Flood Diversion and Storage**	✓	✓	✓
Floodplain and Stream Restoration**	✓	✓	✓
Green Infrastructure**	✓	✓	✓
Miscellaneous/Other**	✓	✓	✓
Hazard Mitigation Planning	✓	✓	✓
Technical Assistance			✓
Management Costs	✓	✓	✓

* FEMA allows increasing the 5% initiative amount under the Hazard Mitigation Grant Program up to 10% for a presidential major disaster declaration. The additional 5% initiative funding can be used for activities that promote disaster-resistant codes for all hazards. As a condition of the award, either a disaster-resistant building code must be adopted or an improved Building Code Effectiveness Grading Schedule is required.

** Indicates that any proposed action will be evaluated on its own merit against program requirements. Eligible projects will be approved provided funding is available.

Material Previously Developed for This Annex

Capability Assessment Section—Planning and Regulatory Capability Table, Fiscal Capability Table, Administrative and Technical Capability Table, Education and Outreach Table, and Community Classification Table

Review these tables and consider the following:

- For any capability that you do not currently have, consider whether your jurisdiction should have this capability. If so, consider including an action to develop/acquire the capability.
- For any capability that you do currently have, consider whether this capability can be leveraged to increase or improve hazard mitigation in the jurisdiction.
- If any capabilities listed in the Planning and Regulatory Capabilities table have not been updated in more than 10 years, consider an action to review and update the capability and, as appropriate, incorporate hazard mitigation principles or information obtained in the risk assessment.
- Consider including actions that are identified in other plans and programs (capital improvement plans, strategic plans, etc.) as actions in this plan.

Capability Assessment Section—National Flood Insurance Program Compliance table

Review the table and consider the following:

- If you have no certified floodplain managers and you have flood risk, consider adding an action to provide key staff members with training to obtain certification.
- If your flood damage prevention was last updated in or before 2004, you should identify an action to update your ordinance to ensure it is compliant with current NFIP requirements.
- If you have any outstanding NFIP compliance issues, be sure to add an action to address them.
- If flood hazard maps do not adequately address the flood risk within your jurisdiction, consider actions to request new mapping or conduct studies.
- If you wish to begin to participate in CRS or you already to participate and would like to improve your classification, consider this as an action.
- If the number of flood insurance policies in your jurisdiction is low relative to the number of structures in the floodplain, consider an action that will promote flood insurance in your jurisdiction.

Capability Assessment Section—Adaptive Capacity for Climate Change Table

Consider your responses to this section:

- For criteria that you listed as medium or low, think of ways you could improve this rating (see adaptive capacity portion of the mitigation best practices catalog).
- For criteria you listed as high, think about how you can leverage this capacity to improve or enhance mitigation or continue to improve this capacity.
- For criteria that you were unable to provide responses for, consider ways you could improve your understanding of this capacity (see mitigation best practices and adaptive capacity catalog).

Integration Review Section

Review the items you identified in this section and consider an action that specifically says what the plan, code, ordinance etc. is and how it will be integrated. For items that address land use, include them in the prepopulated action in your template that reads as follows:

“Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including _____.”

Risk Ranking Section

You must identify at least one mitigation action that is clearly defined and actionable (i.e. not a preparedness or response action) for every hazard that is categorized in the risk ranking as “high” or “medium” risk.

Jurisdiction-Specific Vulnerabilities Section

Review the vulnerability issues that you identified in this section and consider actions to address them (see mitigation best practices catalog). Two examples are shown in the table below.

Table 3. Example Actions to Address Jurisdiction-Specific Vulnerabilities

Noted Vulnerability	Example Mitigation Action
About 45 percent of the population lives in the 0.2 percent annual chance flood hazard area where flood insurance is generally not required.	Implement an annual public information initiative that targets residents in the 0.2 percent annual chance flood hazard area. Provide information on the availability of relatively low cost flood insurance policies.
An urban drainage issue results in localized flooding every time it rains.	Replace undersized culverts that are contributing to localized flooding. Priority areas include: <ul style="list-style-type: none"> • The corner of Main Street and 1st Street • Old Oak subdivision.

Status of Previous Plan Actions Section

If your jurisdiction participated in a previous hazard mitigation plan, be sure to include any actions that were identified as “carry over” actions. After including any action previous plan action in the updated action plan, be sure to return to the “Status of Previous Plan Actions” table and enter the new action number in the final column for that previous plan action.

Other Sources

Mitigation Best Practices Catalog

A catalog that includes best practices identified by FEMA and other agencies, as well as recommendations from the steering committee and other stakeholders, is included in your toolkit. Review the catalog and identify actions your jurisdiction should consider for its action plan.

Public Input

Review input received during the process, specifically the public survey results included in your toolkit.

Common Actions for All Partners

The following six actions have been prepopulated in your annex template; **these six actions should be included in every annex and should not be removed:**

- Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas, prioritizing those structures that have experienced repetitive losses and/or are located in high or medium ranked hazard.
- Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions within the community.
- Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.
- Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:
 - Enforce the flood damage prevention ordinance.
 - Participate in floodplain identification and mapping updates.
 - Provide public assistance/information on floodplain requirements and impacts.
- Identify and pursue strategies to increase adaptive capacity to climate change.
- Purchase generators for critical facilities and infrastructure that lack adequate back-up power.

In addition, the core planning team recommends that every planning partner strongly consider the following actions:

- 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.
- Support the planning-area-wide initiatives identified in Volume I of the hazard mitigation plan.
- Develop a post-disaster recovery plan and a debris management plan.
- Develop and/or update plans that support or enhance continuity of operations following disasters.

The specifics of all these common actions should be adjusted as needed for the particulars of each community.

Complete the Table

Complete the table titled “Hazard Mitigation Action Plan Matrix” for all the actions you have identified and would like to include in the plan:

- Enter the action number (see box on next page) and description. **If the action is carried over from your previous hazard mitigation plan, return to the “Status of Previous Plan Actions” table you completed in Phase 1 and enter the new action number in the column labeled “New Action #.”**
- Indicate whether the action mitigates hazards for new assets, existing assets, or both.
- Identify the specific hazards the action will mitigate (note: you must list each hazard by name; simply indicating “all hazards” is not deemed acceptable).
- Identify by number the mitigation plan objectives that the action addresses (see toolkit).

- Indicate who will be the lead in administering the action. This will most likely be a department within your jurisdiction (e.g. planning or public works). If you wish to indicate more than one department as responsible for the action, clearly identify one as the lead agency and list the others in the “supporting agency” column.
- Enter an estimated cost in dollars if known; otherwise, enter “High,” “Medium,” or “Low,” as determined for the prioritization process described in the following section.
- Identify funding sources for the action. If it is a grant, include the grant-providing agency as well as funding sources for any required cost share. Refer to your fiscal capability assessment to identify possible sources of funding and refer to the table on page 16 of these instructions for project eligibility for FEMA’s hazard mitigation assistance grant programs.
- Indicate the time line as “short-term” (1 to 5 years) or “long-term” (5 years or greater) or “ongoing” (a continual program)

Action Numbering

Actions are to be numbered using the letter code for your jurisdiction shown below, followed by a hyphen and the action’s sequential number:

- City of Dublin—DUB-1, DUB-2...
- City of Livermore—LIV-1, LIV-2...
- City of Pleasanton—PLE-1, PLE-2...
- Dublin San Ramon Services District—DSR-1, DSR-2...

Mitigation Action Priority

Complete the information in the table titled “Mitigation Action Priority” as follows:

- Action #**—Enter the action number from the Hazard Mitigation Action Plan Matrix table. Use number only; omit jurisdiction code (i.e., use “3” not “XXX-3”).
- # of Objectives Met**—Enter the number of objectives the action will meet.
- Benefits**—Select “High,” “Medium” or “Low” as follows:
 - High—Action will provide an immediate reduction of risk exposure for life and property.
 - Medium—Action will have a long-term impact on the reduction of risk exposure for life and property, or action will provide an immediate reduction in the risk exposure for property.
 - Low—Long-term benefits of the action are difficult to quantify in the short term.
- Cost**—Select “High,” “Medium” or “Low” as follows:
 - High—Existing funding will not cover the cost of the action; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).
 - Medium—The action could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the action would have to be spread over multiple years.
 - Low—The action could be funded under the existing budget. The action is part of or can be part of an ongoing existing program.
- Do Benefits Exceed the Cost?**—Select “Yes” or “No.” This is a qualitative assessment. Select “Yes” if the benefit rating (high, medium or low) is the same as or higher than the cost rating (high benefit/high cost; high benefit/medium cost; medium benefit/low cost; etc.). Select “No” if the benefit rating is lower than the cost rating (medium benefit/high cost, low benefit/medium cost; etc.)

- **Is the Action Grant-Eligible?**—Select “Yes” or “No.” Refer to the fact sheet on FEMA hazard mitigation grant programs in the annex preparation toolkit and the table on page 16 of these instructions.
- **Can Action Be Funded Under Existing Program Budgets?**—Select “Yes” or “No.” In other words, is this action currently budgeted for, or would it require a new budget authorization or funding from another source such as grants?
- **Implementation Priority**—Select “High,” “Medium” or “Low” as follows:
 - High Priority—An action that meets multiple objectives, has benefits that exceed costs, and has a secured source of funding. Action can be completed in the short term (1 to 5 years).
 - Medium Priority—An action that meets multiple objectives, has benefits that exceed costs, and is eligible for funding though no funding has yet been secured for it. Action can be completed in the short term (1 to 5 years), once funding is secured. Medium-priority actions become high-priority actions once funding is secured.
 - Low Priority—An action that will mitigate the risk of a hazard, has benefits that do not exceed the costs or are difficult to quantify, has no secured source of funding, and is not eligible for any known grant funding. Action can be completed in the long term (1 to 10 years). Low-priority actions may be eligible for grant funding from programs that have not yet been identified.
- **Grant Pursuit Priority**—Select “High,” “Medium” or “Low” as follows:
 - High Priority—An action that meets identified grant eligibility requirements, has high benefits, and is listed as high or medium implementation priority; local funding options are unavailable or available local funds could be used instead for actions that are not eligible for grant funding.
 - Medium Priority—An action that meets identified grant eligibility requirements, has medium or low benefits, and is listed as medium or low implementation priority; local funding options are unavailable.
 - Low Priority—An action that has not been identified as meeting any grant eligibility requirements.

Actions identified as high-grant-pursuit priority actions should be closely reviewed for consideration when grant funding opportunities arise.

Note: If a jurisdiction wishes to identify an action as high priority that is outside of the prioritization scheme for high priorities, a note indicating so should be inserted and a rationale should be provided.

Analysis of Mitigation Actions

In the table titled “Analysis of Mitigation Actions,” for each combination of hazard type and mitigation type, enter the numbers of all recommended actions that address that hazard type and can be categorized as that mitigation type. Use number only; omit jurisdiction code (i.e., use “3” not “XXX-3”). The mitigation types are as follows:

- **Prevention**—Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
- **Property Protection**—Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.

- **Public Education & Awareness**—Actions to inform residents and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
- **Natural Resource Protection**—Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, wetland restoration and preservation, and green infrastructure.
- **Emergency Services**—Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
- **Structural Projects**—Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.
- **Climate Resilience**—Actions that incorporate methods to mitigate and/or adapt to the impacts of climate change. Includes aquifer storage and recovery activities, incorporating future conditions projections in project design or planning, or actions that specifically address jurisdiction-specific climate change risks, such as sea-level rise or urban heat island effect.
- **Community Capacity Building**—Actions that increase or enhance local capabilities to adjust to potential damage, to take advantage of opportunities, or to respond to consequences. Includes staff training, memorandums of understanding, development of plans and studies, and monitoring programs.

This exercise demonstrates that the jurisdiction has selected a comprehensive range of actions. This table must show at least one action to address each “high” and “medium” ranked hazard. Planning partners should aim to identify at least one action for each mitigation type, but this is not required.

An example of a completed “Analysis of Mitigation Actions” table is provided below. Note that an action can be more than one mitigation type.

Hazard Type	Action Addressing Hazard, by Mitigation Type							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
High-Risk Hazards								
Dam Failure	2, 3, 4, 5, 6	1, 6	4, 6		8, 11			3, 4, 8, 9, 10
Drought	2	1	4					3, 4, 8, 9, 10
Medium-Risk Hazards								
Earthquake	2, 3, 4, 5, 7	1, 7	4		8, 11			3, 4, 8, 9
Flooding	2, 3, 4, 5, 6, 7	1, 6, 7	4, 6	9	8, 11	6		3, 4, 8, 9, 10
Landslide	2, 3, 4, 5, 7	1, 7	4		8, 11			3, 4, 8, 9, 10
Low-Risk Hazards								
Severe Weather	2, 3, 4, 5, 7	1, 7, 9	4		8, 9, 11		8, 7	3, 4, 8, 9, 10
Wildfire	2, 3, 4, 5, 7	1, 7, 9	4, 9	9	8, 11			3, 4, 8, 9, 10

PUBLIC OUTREACH

FEMA requirements for public outreach will be met by the overall hazard mitigation plan engagement efforts and are included in the main part of the plan. These may include public meetings, a StoryMap website, surveys, etc. If individual jurisdictions want to have a more robust outreach for their local community, the public outreach table in each annex may be used to memorialize those local efforts.

This table should record local public outreach efforts made by your jurisdiction to inform the community of the plan update process. Examples may include local surveys on hazard awareness/preparedness, social media blasts, press releases, and outreach to local groups (CERT, senior citizen organizations, etc.) **This section is optional.**

INFORMATION SOURCES USED FOR THIS ANNEX

This section should describe what resources you used to complete the annex and how you used them. The sources used for Phases 1 and 2 should have been entered previously. List any additional sources used for the preparation of the Phase 3 annex. Review to ensure that all materials used in all three phases are identified. Providing this information is a requirement to pass the state and FEMA review process.

FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

In this section, identify any future studies, analyses, reports, or surveys your jurisdiction needs to better understand its vulnerability to identified or currently unidentified risks. These could be needs based on federal or state agency mandates. **This section is optional.**

ADDITIONAL COMMENTS

Use this section to add any additional information pertinent to hazard mitigation and your jurisdiction not covered in this template. **This section is optional.**

THIS COMPLETES PHASE 3

APPENDIX— Risk Ranking Calculation Methodology

The instructions below describe the methodology for how risk rankings were derived in the “Loss Matrix” spreadsheet provided with the annex preparation toolkit. The risk-ranking for each hazard assessed its probability of occurrence and its potential impact on people, property, and the economy. Refer to the Loss Matrix spreadsheet in order to follow along.

Probability of Occurrence

A probability factor is assigned based on how often a hazard is likely to occur. The probability of occurrence of a hazard event is generally based on past hazard events in an area, although weight can be given to expected future probability of occurrence based on established return intervals and changing climate conditions. For example, if your jurisdiction has experienced two damaging floods in the last 25 years, the probability of occurrence is high for flooding and scores a 3 under this category. If your jurisdiction has experienced no damage from landslides in the last 100 years, your probability of occurrence for landslide is low, and scores a 1 under this category. Each hazard was assigned a probability factor as follows:

- High—Hazard event is likely to occur within 25 years (Probability Factor = 3)
- Medium—Hazard event is likely to occur within 100 years (Probability Factor = 2)
- Low—Hazard event is not likely to occur within 100 years (Probability Factor = 1)
- None—There is no exposure to the hazard and no probability of occurrence (Probability Factor = 0)

Potential Impacts of Each Hazard

The impact of each hazard is divided into three categories: impacts on people, impacts on property, and impacts on the economy. These categories are also assigned weighted values. Impact on people was assigned a weighting factor of 3, impact on property was assigned a weighting factor of 2 and impact on the economy was assigned a weighting factor of 1.

Impact factors for each category (people, property, economy) are described below:

- **People**—Values are assigned based on the percentage of the total *population exposed* to the hazard event. The degree of impact on individuals will vary and is not measurable, so the calculation assumes for simplicity and consistency that all people exposed to a hazard because they live in a hazard zone will be equally impacted when a hazard event occurs. Impact factors were assigned as follows:
 - High—25 percent or more of the population is exposed to a hazard (Impact Factor = 3)
 - Medium—10 percent to 24 percent of the population is exposed to a hazard (Impact Factor = 2)
 - Low—9 percent or less of the population is exposed to the hazard (Impact Factor = 1)
 - No impact—None of the population is exposed to a hazard (Impact Factor = 0)
- **Property**—Values are assigned based on the percentage of the total *property value exposed* to the hazard event:
 - High—25 percent or more of the total replacement value is exposed to a hazard (Impact Factor = 3)
 - Medium—10 percent to 24 percent of the total replacement value is exposed to a hazard (Impact Factor = 2)
 - Low—9 percent or less of the total replacement value is exposed to the hazard (Impact Factor = 1)

- No impact—None of the total replacement value is exposed to a hazard (Impact Factor = 0)
- **Economy**—Values were assigned based on the percentage of the total **property value vulnerable** to the hazard event. Values represent estimates of the loss from a major event of each hazard in comparison to the total replacement value of the property exposed to the hazard. For some hazards, such as wildland fire and landslide, vulnerability may be considered to be the same or a portion of exposure due to the lack of loss estimation tools specific to those hazards.
 - High—Estimated loss from the hazard is 10 percent or more of the total replacement value (Impact Factor = 3)
 - Medium—Estimated loss from the hazard is 5 percent to 9 percent of the total replacement value (Impact Factor = 2)
 - Low—Estimated loss from the hazard is 4 percent or less of the total replacement value (Impact Factor = 1)
 - No impact—No loss is estimated from the hazard (Impact Factor = 0).

Impacts on People

The percent of the total population exposed to each hazard of concern with a defined extent and location (e.g. floodplain) can be found in the loss estimate matrix in the **green highlighted column**. For those hazards that do not have a defined extent and location the entire population or a portion of the population is considered to be exposed, depending on the hazard. For the drought hazard, it is common for jurisdictions to list “low” or “none,” because all people in the planning area would be exposed to drought, but impacts to the health and safety of individuals are expected to be minimal.

Impacts on Property

The percent of the total value exposed to each hazard of concern with a defined extent and location (e.g. floodplain) can be found in the loss estimate matrix in the **blue highlighted column**. For those hazards that do not have a defined extent and location (e.g. severe weather) the entire building stock is generally considered to be exposed. For the drought hazard, it is common for jurisdictions to list “low” or “none,” because all structures in the planning area would be exposed to drought, but impacts to structures are expected to be minimal.

Impacts on the Economy

The loss estimates for each hazard of concern that was modeled (i.e. dam failure, flood, earthquake) can be found in the loss estimate matrix in the **purple highlighted column**. For those hazards that have a defined extent and location, but do not have modelled loss results, loss estimates can be the same as exposure or a portion thereof. For example, a large percentage of the building stock may be exposed to landslide or wildland fire risk, but it would not be expected that one event that resulted in loss to all exposed structures would occur. For those hazards that do not have a defined extent and location, exposure is based on the hazard type.

Risk Rating for Each Hazard

A risk rating for each hazard was determined by multiplying the assigned probability factor by the sum of the weighted impact factors for people, property and the economy:

$$\text{Risk Rating} = \text{Probability Factor} \times \text{Weighted Impact Factor} \{ \text{people} + \text{property} + \text{economy} \}$$

This is the number that is shown in the risk ranking table in your template. Generally, score of 30 or greater receive a “high” rating, score between 15 and 30 receive a “medium” rating, and score of less than 15 receives a “low” rating.

1. ENTER JURISDICTION NAME

1.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Enter POC name, Enter POC title
Enter POC street address
Enter POC city, state, Zip
Enter POC phone #
Enter POC email address

Alternate Point of Contact

Enter POC name, Enter POC title
Enter POC street address
Enter POC city, state, Zip
Enter POC phone #
Enter POC email address

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

Table 1-1. Local Hazard Mitigation Planning Team Members

Name	Title
Enter team member name	Enter team member title
Enter team member name	Enter team member title
Enter team member name	Enter team member title
Enter team member name	Enter team member title
Enter team member name	Enter team member title
Enter team member name	Enter team member title
Enter team member name	Enter team member title

1.2 JURISDICTION PROFILE

1.2.1 Location and Features

Enter text

1.2.2 History

Enter text

1.2.3 Governance

Enter text

The Enter text assumes responsibility for the adoption of this plan; Enter text will oversee its implementation.

1.3 CURRENT TRENDS

1.3.1 Population

Enter text

1.3.2 Development

Enter text

Identifying previous and future development trends is achieved through a comprehensive review of permitting since completion of the previous plan and in anticipation of future development. Tracking previous and future growth in potential hazard areas provides an overview of increased exposure to a hazard within a community. Table 1-2 summarizes development trends in the performance period since the preparation of the previous hazard mitigation plan, as well as expected future development trends.

Table 1-2. Recent and Expected Future Development Trends

Criterion	Response																														
Has your jurisdiction annexed any land since the preparation of the previous hazard mitigation plan? <i>If yes, give the estimated area annexed and estimated number of parcels or structures.</i>	Select Enter information on size of recent annexation																														
Is your jurisdiction expected to annex any areas during the performance period of this plan? <i>If yes, describe land areas and dominant uses.</i> <i>If yes, who currently has permitting authority over these areas?</i>	Select Enter description of planned annexation area Enter name of agency with current permitting authority in area planned for annexation.																														
Are any areas targeted for development or major redevelopment in the next five years? <i>If yes, briefly describe, including whether any of the areas are in known hazard risk areas</i>	Select Enter description of planned area of development.																														
How many permits for new construction were issued in your jurisdiction since the preparation of the previous hazard mitigation plan?	<table border="1"> <thead> <tr> <th></th> <th>2017</th> <th>2018</th> <th>2019</th> <th>2020</th> <th>2021</th> </tr> </thead> <tbody> <tr> <td>Single Family</td> <td>Enter #</td> <td>Enter #</td> <td>Enter #</td> <td>Enter #</td> <td>Enter #</td> </tr> <tr> <td>Multi-Family</td> <td>Enter #</td> <td>Enter #</td> <td>Enter #</td> <td>Enter #</td> <td>Enter #</td> </tr> <tr> <td>Other</td> <td>Enter #</td> <td>Enter #</td> <td>Enter #</td> <td>Enter #</td> <td>Enter #</td> </tr> <tr> <td>Total</td> <td>Enter #</td> <td>Enter #</td> <td>Enter #</td> <td>Enter #</td> <td>Enter #</td> </tr> </tbody> </table>		2017	2018	2019	2020	2021	Single Family	Enter #	Multi-Family	Enter #	Other	Enter #	Total	Enter #																
	2017	2018	2019	2020	2021																										
Single Family	Enter #	Enter #	Enter #	Enter #	Enter #																										
Multi-Family	Enter #	Enter #	Enter #	Enter #	Enter #																										
Other	Enter #	Enter #	Enter #	Enter #	Enter #																										
Total	Enter #	Enter #	Enter #	Enter #	Enter #																										
Provide the number of new-construction permits for each hazard area or provide a qualitative description of where development has occurred.	<ul style="list-style-type: none"> Special Flood Hazard Areas: Enter # Landslide: Enter # High Liquefaction Areas: Enter # Tsunami Inundation Area: Enter # Wildfire Risk Areas: Enter # 																														
Describe the level of buildout in the jurisdiction, based on your jurisdiction's buildable lands inventory. If no such inventory exists, provide a qualitative description.	Enter data or description to explain level of buildout																														

1.4 CAPABILITY ASSESSMENT

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

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

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

Table 1-3. Planning and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Codes, Ordinances, & Requirements				
Building Code	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include code or ordinance number and adoption date if applicable				
Zoning Code	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include code or ordinance number and adoption date if applicable				
Subdivisions	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include code or ordinance number and adoption date if applicable				
Stormwater Management	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include code or ordinance number and adoption date if applicable				
Post-Disaster Recovery	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include code or ordinance number and adoption date if applicable				
Real Estate Disclosure	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include code or ordinance number and adoption date if applicable				
Growth Management	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include code or ordinance number and adoption date if applicable				
Site Plan Review	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include code or ordinance number and adoption date if applicable				
Environmental Protection	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include code or ordinance number and adoption date if applicable				
Flood Damage Prevention	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include code or ordinance number and adoption date if applicable				
Emergency Management	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include code or ordinance number and adoption date if applicable				
Climate Change	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include code or ordinance number and adoption date if applicable				
Other	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include code or ordinance number and adoption date if applicable				
Planning Documents				
General Plan	Select	Select	Select	Select
<i>Is the plan compliant with Assembly Bill 2140?</i> Select				
<i>Comment:</i> Enter comment, if any; include plan adoption date if applicable				
Capital Improvement Plan	Select	Select	Select	Select
<i>How often is the plan updated?</i> Enter text				
<i>Comment:</i> Enter comment, if any; include plan adoption date if applicable				
Disaster Debris Management Plan	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include plan adoption date if applicable				
Floodplain or Watershed Plan	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include plan adoption date if applicable				
Stormwater Plan	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include plan adoption date if applicable				
Urban Water Management Plan	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include plan adoption date if applicable				
Habitat Conservation Plan	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include plan adoption date if applicable				
Economic Development Plan	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include plan adoption date if applicable				

	Local Authority	Other Jurisdiction Authority	State Mandated	Integration Opportunity?
Shoreline Management Plan	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include plan adoption date if applicable				
Community Wildfire Protection Plan	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include plan adoption date if applicable				
Forest Management Plan	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include plan adoption date if applicable				
Climate Action Plan	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include plan adoption date if applicable				
Comprehensive Emergency Management Plan	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include plan adoption date if applicable				
Threat & Hazard Identification & Risk Assessment (THIRA)	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include plan adoption date if applicable				
Post-Disaster Recovery Plan	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include plan adoption date if applicable				
Continuity of Operations Plan	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include plan adoption date if applicable				
Public Health Plan	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include plan adoption date if applicable				
Other	Select	Select	Select	Select
<i>Comment:</i> Enter comment, if any; include plan adoption date if applicable				

Table 1-4. Development and Permitting Capability

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

Table 1-5. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Select
Capital Improvements Project Funding	Select
Authority to Levy Taxes for Specific Purposes	Select
User Fees for Water, Sewer, Gas or Electric Service	Select
<i>If yes, specify:</i> Enter response	
Incur Debt through General Obligation Bonds	Select
Incur Debt through Special Tax Bonds	Select
Incur Debt through Private Activity Bonds	Select
Withhold Public Expenditures in Hazard-Prone Areas	Select
State-Sponsored Grant Programs	Select
Development Impact Fees for Homebuyers or Developers	Select
Other	Select
<i>If yes, specify:</i> Enter response	

Table 1-6. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices	Select
<i>If Yes, Department /Position:</i> Enter response	
Engineers or professionals trained in building or infrastructure construction practices	Select
<i>If Yes, Department /Position:</i> Enter response	
Planners or engineers with an understanding of natural hazards	Select
<i>If Yes, Department /Position:</i> Enter response	
Staff with training in benefit/cost analysis	Select
<i>If Yes, Department /Position:</i> Enter response	
Surveyors	Select
<i>If Yes, Department /Position:</i> Enter response	
Personnel skilled or trained in GIS applications	Select
<i>If Yes, Department /Position:</i> Enter response	
Scientist familiar with natural hazards in local area	Select
<i>If Yes, Department /Position:</i> Enter response	
Emergency manager	Select
<i>If Yes, Department /Position:</i> Enter response	
Grant writers	Select
<i>If Yes, Department /Position:</i> Enter response	
Other	Select
<i>If Yes, Department /Position:</i> Enter response	

Table 1-7. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Select
Do you have personnel skilled or trained in website development?	Select
Do you have hazard mitigation information available on your website?	Select
<i>If yes, briefly describe:</i> Enter response	
Do you use social media for hazard mitigation education and outreach?	Select
<i>If yes, briefly describe:</i> Enter response	
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Select
<i>If yes, briefly describe:</i> Enter response	
Do you have any other programs in place that could be used to communicate hazard-related information?	Select
<i>If yes, briefly describe:</i> Enter response	
Do you have any established warning systems for hazard events?	Select
<i>If yes, briefly describe:</i> Enter response	

Table 1-8. National Flood Insurance Program Compliance

Criterion	Response
What local department is responsible for floodplain management?	Enter response
Who is your floodplain administrator? (department/position)	Enter response
Are any certified floodplain managers on staff in your jurisdiction?	Select
What is the date that your flood damage prevention ordinance was last amended?	Enter date

Criterion	Response
Does your floodplain management program exceed minimum requirements? <i>If yes, in what ways?</i> Enter response	Select
When was the most recent Community Assistance Visit or Community Assistance Contact?	Enter date
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed? <i>If yes, state what they are.</i> Enter response	Select
Are any RiskMAP projects currently underway in your jurisdiction? <i>If yes, state what they are.</i> Enter response	Select
Do your flood hazard maps adequately address the flood risk within your jurisdiction? <i>If no, state why.</i> Enter response	Select
Does your floodplain management staff need any assistance or training to support its floodplain management program? <i>If yes, what type of assistance/training is needed?</i> Enter response	Select
Does your jurisdiction participate in the Community Rating System (CRS)? <i>If yes, is your jurisdiction interested in improving its CRS Classification?</i> Select <i>If no, is your jurisdiction interested in joining the CRS program?</i> Select	Select
How many flood insurance policies are in force in your jurisdiction? ^a <i>What is the insurance in force?</i> Enter value in \$ <i>What is the premium in force?</i> Enter value in \$	Enter number
How many total loss claims have been filed in your jurisdiction? ^a <i>How many claims are still open or were closed without payment?</i> Enter number <i>What were the total payments for losses?</i> Enter value in \$	Enter number

a. According to FEMA statistics as of [Enter date](#)

Table 1-9. Community Classifications

	Participating?	ID Number	Classification	Date Classified
FIPS Code	Select	Enter response	Enter response	Enter date
DUNS #	Select	Enter response	Enter response	Enter date
Community Rating System	Select	Enter response	Enter response	Enter date
Building Code Effectiveness Grading Schedule	Select	Enter response	Enter response	Enter date
Public Protection	Select	Enter response	Enter response	Enter date
StormReady	Select	Enter response	Enter response	Enter date
Firewise	Select	Enter response	Enter response	Enter date
TsunamiReady	Select	Enter response	Enter response	Enter date

Table 1-10. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts	Select
<i>Comment:</i> Enter comment	
Jurisdiction-level monitoring of climate change impacts	Select
<i>Comment:</i> Enter comment	

Criterion	Jurisdiction Rating ^a
Technical resources to assess proposed strategies for feasibility and externalities	Select
<i>Comment:</i> Enter comment	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Select
<i>Comment:</i> Enter comment	
Capital planning and land use decisions informed by potential climate impacts	Select
<i>Comment:</i> Enter comment	
Participation in regional groups addressing climate risks	Select
<i>Comment:</i> Enter comment	
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Select
<i>Comment:</i> Enter comment	
Identified strategies for greenhouse gas mitigation efforts	Select
<i>Comment:</i> Enter comment	
Identified strategies for adaptation to impacts	Select
<i>Comment:</i> Enter comment	
Champions for climate action in local government departments	Select
<i>Comment:</i> Enter comment	
Political support for implementing climate change adaptation strategies	Select
<i>Comment:</i> Enter comment	
Financial resources devoted to climate change adaptation	Select
<i>Comment:</i> Enter comment	
Local authority over sectors likely to be negative impacted	Select
<i>Comment:</i> Enter comment	
Public Capacity	
Local residents' knowledge of and understanding of climate risk	Select
<i>Comment:</i> Enter comment	
Local residents' support of adaptation efforts	Select
<i>Comment:</i> Enter comment	
Local residents' capacity to adapt to climate impacts	Select
<i>Comment:</i> Enter comment	
Local economy's current capacity to adapt to climate impacts	Select
<i>Comment:</i> Enter comment	
Local ecosystems' capacity to adapt to climate impacts	Select
<i>Comment:</i> Enter comment	

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

1.5 INTEGRATION REVIEW

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

mitigation plan will document the progress of hazard mitigation actions related to integration and identify new opportunities for integration.

1.5.1 Existing Integration

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

- [Enter name](#)—Enter description

1.5.2 Opportunities for Future Integration

The capability assessment presented in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- [Enter name](#)—Enter description

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan presented in this annex.

1.6 RISK ASSESSMENT

1.6.1 Jurisdiction-Specific Natural Hazard Event History

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

Table 1-11. Past Natural Hazard Events

Type of Event	FEMA Disaster #	Date	Damage Assessment
Enter hazard type.	Enter #	Enter date	Describe damage
Enter hazard type.	Enter #	Enter date	Describe damage
Enter hazard type.	Enter #	Enter date	Describe damage

Type of Event	FEMA Disaster #	Date	Damage Assessment
Enter hazard type.	Enter #	Enter date	Describe damage
Enter hazard type.	Enter #	Enter date	Describe damage
Enter hazard type.	Enter #	Enter date	Describe damage
Enter hazard type.	Enter #	Enter date	Describe damage
Enter hazard type.	Enter #	Enter date	Describe damage
Enter hazard type.	Enter #	Enter date	Describe damage
Enter hazard type.	Enter #	Enter date	Describe damage
Enter hazard type.	Enter #	Enter date	Describe damage
Enter hazard type.	Enter #	Enter date	Describe damage
Enter hazard type.	Enter #	Enter date	Describe damage
Enter hazard type.	Enter #	Enter date	Describe damage
Enter hazard type.	Enter #	Enter date	Describe damage
Enter hazard type.	Enter #	Enter date	Describe damage
Enter hazard type.	Enter #	Enter date	Describe damage
Enter hazard type.	Enter #	Enter date	Describe damage
Enter hazard type.	Enter #	Enter date	Describe damage

1.6.2 Hazard Risk Ranking

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

Table 1-12. Hazard Risk Ranking

Rank	Hazard	Risk Ranking Score	Risk Category
Enter #	Enter hazard type.	Enter #	Select
Enter #	Enter hazard type.	Enter #	Select
Enter #	Enter hazard type.	Enter #	Select
Enter #	Enter hazard type.	Enter #	Select
Enter #	Enter hazard type.	Enter #	Select
Enter #	Enter hazard type.	Enter #	Select
Enter #	Enter hazard type.	Enter #	Select
Enter #	Enter hazard type.	Enter #	Select
Enter #	Enter hazard type.	Enter #	Select
Enter #	Enter hazard type.	Enter #	Select
Enter #	Enter hazard type.	Enter #	Select
Enter #	Enter hazard type.	Enter #	Select

1.6.3 Jurisdiction-Specific Vulnerabilities

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

Repetitive Loss Properties

Repetitive loss records are as follows:

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

Other Noted Vulnerabilities

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

- Enter description
- Enter description
- Enter description
- Enter description

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

1.7 STATUS OF PREVIOUS PLAN ACTIONS

If your jurisdiction has no previous hazard mitigation plan, please click the box at right to check it and do not complete this section.

Table 1-13 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 1-13. Status of Previous Plan Actions

Action Item from Previous Plan	Status of Action	New Action #
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.

Action Item from Previous Plan	Status of Action	New Action #
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.

1.8 HAZARD MITIGATION ACTION PLAN

Table 1-14 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 1-15 identifies the priority for each action. Table 1-16 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 1-14. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action Jurisdiction Code-1 —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
<i>Hazards Mitigated:</i> Enter response	Existing	Enter response	Enter response	Enter response	High	HMGP, BRIC, FMA
Action Jurisdiction Code-2 —Integrate the hazard mitigation plan into other plans, ordinances and programs that dictate land use decisions in the community, including [_____]						
<i>Hazards Mitigated:</i> Enter response	Both	Enter response	Enter response	Enter response	Low	Staff Time, General Funds
Action Jurisdiction Code-3 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<i>Hazards Mitigated:</i> Enter response	Both	Enter response	Enter response	Enter response	Low	Staff Time, General Funds
Action Jurisdiction Code-4 —Continue to maintain good standing and compliance under the NFIP through implementation of floodplain management programs that, at a minimum, meet the NFIP requirements:						
<ul style="list-style-type: none"> • Enforce the flood damage prevention ordinance. • Participate in floodplain identification and mapping updates. • Provide public assistance/information on floodplain requirements and impacts. 						
<i>Hazards Mitigated:</i> Enter response	Both	Enter response	Enter response	Enter response	Low	Staff Time, General Funds

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
---------------------------------	----------------	-------------	----------------	----------------	--------------------	-----------------------

Action Jurisdiction Code-5—Identify and pursue strategies to increase adaptive capacity to climate change including but not limited to the following:

-
-
-

<u>Hazards Mitigated:</u>	Enter response	Enter response	Enter response	Low	Staff Time, General Funds	Short-term
Both	Enter response	Enter response	Enter response	Low	Staff Time, General Funds	Short-term

Action Jurisdiction Code-6—Purchase generators for critical facilities and infrastructure that lack adequate backup power, including [REDACTED].

Hazards Mitigated: Enter response Existing Enter response Enter response Enter response Select Enter response Select

Action Jurisdiction Code-Action #—Enter action description

Hazards Mitigated: Enter response | Enter response | Enter response | Enter response | Select | Enter response | Select

Action Jurisdiction Code Action #—Enter action description

Action: Completion Date: Review by: Enter action description: Hazards Mitigated: Enter response | Select | Enter response | Select | Enter response | Select | Enter response | Select

Action Jurisdiction Code-Action # Enter action description

Hazards Mitigated: Enter response

Select	Enter Response	Enter Response
Action: Jurisdiction Code Action #:	Enter action description	

Hazards Mitigated: Enter response

Select	Enter response	Enter response
Authoritative Communication	Enter response	Enter response

Action Jurisdiction Code-Action #—Enter action description
Hazards Mitigated: Enter response

Select	Enter response	Enter response
--------	----------------	----------------

Action Jurisdiction Code-Action #—Enter action description
Hazards Mitigated: Enter response

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

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

Table 1-15 Mitigation Action Priority

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Cost?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority ^a	Grant Pursuit Priority ^a
#	Enter #	Select	Select	Select	Select	Select	Select	Select
#	Enter #	Select	Select	Select	Select	Select	Select	Select
#	Enter #	Select	Select	Select	Select	Select	Select	Select
#	Enter #	Select	Select	Select	Select	Select	Select	Select
#	Enter #	Select	Select	Select	Select	Select	Select	Select
#	Enter #	Select	Select	Select	Select	Select	Select	Select

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

Table 1-16. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
High-Risk Hazards								
Enter hazard type.	List	List	List	List	List	List	List	List
Enter hazard type.	List	List	List	List	List	List	List	List
Enter hazard type.	List	List	List	List	List	List	List	List
Enter hazard type.	List	List	List	List	List	List	List	List
Medium-Risk Hazards								
Enter hazard type.	List	List	List	List	List	List	List	List
Enter hazard type.	List	List	List	List	List	List	List	List
Enter hazard type.	List	List	List	List	List	List	List	List
Enter hazard type.	List	List	List	List	List	List	List	List
Low-Risk Hazards								
Enter hazard type.	List	List	List	List	List	List	List	List
Enter hazard type.	List	List	List	List	List	List	List	List
Enter hazard type.	List	List	List	List	List	List	List	List

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

1.9 PUBLIC OUTREACH

Table 1-17 lists public outreach activities for this jurisdiction.

Table 1-17. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Enter activity description	Enter date	Enter #
Enter activity description	Enter date	Enter #
Enter activity description	Enter date	Enter #
Enter activity description	Enter date	Enter #

1.10 INFORMATION SOURCES USED FOR THIS ANNEX

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

- **Enter Jurisdiction Name Municipal Code**—The municipal code was reviewed for the full capability assessment and for identifying opportunities for action plan integration.
- **Enter Jurisdiction Name Flood Damage Prevention Ordinance**—The flood damage prevention ordinance was reviewed for compliance with the National Flood Insurance Program.
- [Enter document name](#)—Describe use of document

The following outside resources and references were reviewed:

- **Hazard Mitigation Plan Annex Development Toolkit**—The toolkit was used to support the identification of past hazard events and noted vulnerabilities, the risk ranking, and the development of the mitigation action plan.
- [Enter document name](#)—Describe use of document
- [Enter document name](#)—Describe use of document

1.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

[Enter text](#)

1.12 ADDITIONAL COMMENTS

[Enter text](#)

INSTRUCTIONS FOR COMPLETING SPECIAL-PURPOSE DISTRICT ANNEX TEMPLATE

Jurisdictional annex templates for the *Tri-Valley Local Hazard Mitigation Plan* update will be completed in three phases. **This document provides instructions for completing all phases of the template for special-purpose districts.**

The target timeline for completion is as follows:

- **Phase 1**—Team, Profile, Trends, and Previous Plan Status
 - **Deploy:** June 8, 2022
 - **Due:** June 24, 2022 by close of business
- **Phase 2**—Capability Assessment, Integration Review, and Information Sources
 - **Deploy:** July 8, 2022
 - **Due:** July 29, 2022 by close of business
- **Phase 3**—Risk Assessment, Action Plan, Information Sources, Future Needs, and Additional Comments
 - **Deploy:** August 15, 2022
 - **Mandatory Phase 3 Workshop:** Targeted for the week of August 22. One workshop will be scheduled that will meet the availability of all planning partners.
 - **Due:** September 23, 2022 by close of business

Please direct any questions and return your completed Phase 1 template in electronic format to:

Megan Brotherton
Tetra Tech
Phone: (808) 339-9119
E-mail: megan.brotherton@tetratech.com

A Note About Formatting

The template for the annex is a Microsoft Word document in a format that will be used in the final plan. Partners are asked to use this template so that a uniform product will be completed for each partner.

Content should be entered directly into the template rather than creating text in another document and pasting it into the template. Text from another source may alter the formatting of the document.

The section and table numbering in the document will be updated when completed annexes are combined into the final document. Please do not adjust any of the numbering.

For planning partners who participated in the 2018 planning effort, relevant information has been brought over to the 2022 template. Fields that require attention have been highlighted using the following color coding:

- **Blue:** Text has been brought over from the 2018 Plan and should be reviewed and updated as needed.
- **Green:** This is a new field that will require information that was not included in 2018.

Please un-highlight each field that you update so that reviewers will know an edit has been made.

New planning partners will need to complete the template in its entirety.

PHASE 1 INSTRUCTIONS**CHAPTER TITLE**

In the chapter title at the top of Page 1, type in the complete official name of your district (e.g. West County Fire Protection District #1, Johnsonville Flood Protection District). Do not change the chapter number. Revise only the jurisdiction name. If your jurisdiction's name has already been entered, verify that wording and spelling are correct; revise as needed.

LOCAL HAZARD MITIGATION PLANNING TEAM**Points of Contact**

Provide the name, title, mailing address, telephone number, and e-mail address for the primary point of contact for your jurisdiction. This should be the person responsible for monitoring, evaluating, and updating the annex for your jurisdiction. This person should also be the principle liaison between your jurisdiction and the Steering Committee overseeing development of this plan.

In addition, designate an alternate point of contact. This would be a person to contact should the primary point of contact be unavailable or no longer employed by the jurisdiction.

Note: Both of these contacts should match the contacts that were designated in your jurisdiction's letter of intent to participate in this planning process. If you have changed the primary or secondary contact, let the planning team know by inserting a comment into the document.

Participating Planning Team

Populate Table 1-1 with the names of staff from your jurisdiction who participated in preparing this annex or otherwise contributed to the planning process for this hazard mitigation plan.

JURISDICTION PROFILE**Overview**

Provide a brief summary description of the following:

- The purpose of the jurisdiction
- The date of inception
- The type of organization
- The number of employees
- Funding sources
- The type of governing body, and who has adoptive authority.

This should be information that is specific to your jurisdiction and will not be provided in the overall, planning area-wide mitigation plan document. Provide a statement similar to the example below:

EXAMPLE: *The Johnsonville Community Services District is a special district created in 1952 to provide water and sewer service. The District currently employs a staff of 21. Funding comes primarily through rates and revenue bonds. 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.*

Service Area

Provide a brief description of the following:

- Who the District's customers are and an approximation of how many are currently served
- The area served, in square miles
- The geographic extent of the service area

This should be information that is specific to your jurisdiction and will not be provided in the overall, planning area-wide mitigation plan document. Provide a statement similar to the example below:

EXAMPLE: *The Johnsonville Community Services District serves unincorporated areas of Jones County east of the City of Smithburg, including the communities of Johnsonville, Creeks Corner, Jones Hill, Fields Landing, King Salmon, and Freshwater. The current total service area is 3.3 square miles. As of April 30, 2020, the District serves 7,305 water connections and 6,108 sewer connections.*

Assets

List District-owned assets in the categories shown on the table (and described in the sections below). Include an approximate value for each asset and a subtotal value for identified assets in each category.

If District GIS data files are available, please send with your completed Phase 1. The files should include GIS data for the critical facilities and infrastructure that are identified in the assets table, including the name of the facility and what it is (e.g., “1.5MG water tank”).

Property

Provide an approximate value for any land owned by the District.

Equipment

List equipment owned by the District that is used in times of emergency or that, if incapacitated, could severely impact the service area (vehicles, generators, pumps, etc.). Provide an approximate replacement value for each item. Equipment of similar type may be listed as a single category (e.g., “3 diesel-powered generators”). For water and sewer districts, include mileage of pipeline under this category.

Critical Facilities

List District-owned facilities that are vital to maintain services to the service area. Include the address of each facility. Provide an approximate replacement value for each line. Critical facilities are generally defined as facilities owned by the District that are critical to District operations and to public health or safety and that are especially important following hazard events, including but not limited to the following:

- Structures or facilities that produce, use, or store hazardous materials (highly volatile, flammable, explosive, toxic and/or water-reactive materials)
- Hospitals, nursing homes, and housing facilities likely to contain occupants who may not be sufficiently mobile to avoid death or injury during a natural hazard event
- Mass gathering facilities that may be used as evacuation shelters (such as schools or community centers)
- Transportation infrastructure such as roads, bridges and airports that provide sources for evacuation before, during and after natural hazard events
- Police stations, fire stations, government facilities, vehicle equipment and storage facilities, and emergency operation centers that are needed for response activities before, during and after a natural hazard event
- Public utility facilities such as drinking water, stormwater, and wastewater systems that are vital to providing normal services to damaged areas before, during and after natural hazard events.

The table below shows an example of assets to be listed in this section.

Sample Completed Table – Special District Assets	
Asset	Value
Property	
11.5 Acres	\$5,750,000
Equipment	
Total length of pipe 40 miles (\$1.32 million per mile X 40 miles)	\$52,800,000
4 Emergency Generators	\$250,000
Total:	\$53,050,000
Critical Facilities	
Administrative Buildings – 357 S. Jones Street	\$2,750,000
Philips Pump Station – 111 Fifth Avenue N.	\$377,000
Total:	\$3,127,000

NOTE: Placeholders in the table of assets request **ADDRESSES** for critical facilities. These addresses will not be included in the final published annex, but are needed in order to perform risk mapping and risk analysis for the hazard mitigation plan. Include the addresses in the table if convenient. If not, then provide a separate document listing all critical facilities and addresses for use in development of the hazard mitigation plan.

CURRENT TRENDS

Provide a brief description of previous growth trends in the service area and anticipated future increase or decrease in services (if applicable). This should be information that is specific to your jurisdiction and will not be provided in the overall, planning area-wide mitigation plan document. Provide a statement similar to the example below:

EXAMPLE: *The Johnsonville Community Services District originally was formed to serve only the Johnsonville area. The District's service area expanded throughout the years to include the full area served today. Total customers have increased by 3 percent since 2010. Population in the service area is not projected to change significantly over the next 10 years, and the District has no plans to expand its service area.*

STATUS OF PREVIOUS PLAN ACTIONS

Note that this section applies only to jurisdictions that are conducting updates to previously approved hazard mitigation plans. If your jurisdiction has not previously participated in an approved plan, enter an "X" in the box at the beginning of this section and do not complete the section. We will remove this section from your final annex.

Also note that this section will be further back in the final annex than the rest of the Phase 1 content. Some Phase 2 sections will be included before it.

All action items identified in prior mitigation plans must be reconciled in this update. Action items must all be marked as ONE of the options below; select the appropriate status from the dropdown list and provide information as follows:

- **Completed**—If an action has been completed since the prior plan was prepared, select “Completed” and provide a date of completion in the comment section. If an action has been initiated and is an ongoing program (e.g. annual outreach event), you may mark it as completed and note that it is ongoing in the comments. If an action addresses an ongoing program you would like to continue to include in your action plan, see the “Carried Over to Plan Update” bullet below.
- **Removed**—If action items are to be removed because they are no longer feasible, a reason must be given. Lack of funding does not mean that it is no longer feasible, unless the sole source of funding for an action is no longer available. Place a comment in the comment section explaining why the action is no longer feasible or barriers that prevented the action from being implemented (e.g., “Action no longer considered feasible due to lack of political support.”). If the wording and/or intent of a previously identified action is unclear, this can be a reason for removal. A change in community priorities may also be a reason for removal and should be discussed in the comments.
- **Carried Over to Plan Update**—If an action is in progress, is ongoing, or has not been initiated and you would like to carry it over to the plan update, select “Carried Over to Updated Plan.” Selecting this option indicates that the action will be included in the mitigation action plan for this update. If you are carrying over an action to the update, include a comment describing any action that has been taken or why the action was not taken (specifically, any barriers or obstacles that prevented the action from moving forward or slowed progress). Leave the last column, “New Action #,” blank at this point. This will be filled in after completing the updated action plan in Phase 3.

Ensure that you have provided a status and a comment for each action.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, all action items from your jurisdiction's previous hazard mitigation plan that are marked as “Carried Over to Plan Update” will need to be included in the action plan.

PUBLIC OUTREACH

Note that this section is part of the Phase 3 annex, but documentation can begin in Phase 1 if applicable.

FEMA requirements for public outreach will be met by the overall hazard mitigation plan engagement efforts and are included in the main part of the plan. These may include public meetings, a StoryMap website, surveys, etc. If individual jurisdictions want to have a more robust outreach for their local community, the public outreach table in each annex may be used to memorialize those local efforts.

This table should record local public outreach efforts made by your jurisdiction to inform the community of this hazard mitigation plan update process. Examples may include local surveys on hazard awareness/preparedness, social media blasts, press releases, and outreach to local groups (CERT, senior citizen organizations, etc.) **This section is optional.**

THIS COMPLETES PHASE 1

PHASE 2 INSTRUCTIONS**CAPABILITY ASSESSMENT**

Note that it is unlikely that one person will be able to complete all sections of the capability assessment alone. The primary preparer will likely need to reach out to other departments within the local government for information. It may be beneficial to provide these individuals with background information about this planning process, as input from them will be needed again during Phase 3 of the annex development.

Planning and Regulatory Capability

List any federal, state, local or district ordinances, plans, or policies that apply to your jurisdiction and relate to hazard mitigation. Provide the date of last update and any comments as appropriate. The table below shows an example of items to be listed in this section.

Sample Completed Table – Planning and Regulatory Capability		
Plan, Study or Program	Date of Most Recent Update	Comment
District Design Standards	2010	
Capital Improvement Program	Updated annually	covers 5 year timeframe
Emergency Operations Plan	2000	
Facility Maintenance Manual	1990	
State Building Code	2016	
Division of State Architects		Review of all building and site design features is required prior to construction

Fiscal Capability

Complete the table titled “Fiscal Capability” by indicating whether each of the listed financial resources is accessible to your jurisdiction. Select “Yes” if the resource is fully accessible to your jurisdiction. Select “No” if there are limitations or prerequisites that may hinder your use of this resource.

Administrative and Technical Capability

Complete the table titled “Administrative and Technical Capability” by indicating whether your jurisdiction has access to each of the listed personnel resources. Select “Yes” or “No” in the column labeled “Available?”. If yes, then enter the department and position title. If you have contract support with these capabilities, you can still answer “Yes.” Indicate in the department row that this resource is provided through contract.

Education and Outreach Capability

Complete the table titled “Education and Outreach.”

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, review all the above capability assessment tables and consider including actions to provide a capability that your jurisdiction does not currently have, update a capability that your jurisdiction does have, or implement an action that is recommended in an existing plan or program.

Community Classifications

Complete the table titled “Community Classifications” to indicate your jurisdiction’s participation in various national programs related to natural hazard mitigation. For each program select “Yes” or “No” in the second column to indicate whether your jurisdiction participates. If yes, then enter your jurisdiction’s identification number in the program in the third column, the classification that your jurisdiction has currently earned under the program in the fourth column and the date on which that classification was issued in the fifth column. Enter “N/A” in the third, fourth, and fifth columns if your jurisdiction is not participating. If you do not know your current identification number or classification, information is available at the following websites:

- **DUNS #**— <https://www.dnb.com/duns-number.html>
- **Public Protection Classification**— <https://www.isomitigation.com/ppc/>
- **Storm Ready**— <https://www.weather.gov/stormready/communities>
- **Firewise**— <http://www.firewise.org/usa-recognition-program/map-of-active-participants.aspx>
- **Tsunami Ready**— <https://www.weather.gov/tsunamiready/communities>

Adaptive Capacity for Climate Change

Consider climate change impact concerns such as the following:

- Reduced snowpack
- Increased wildfires
- Sea level rise
- Inland flooding
- Threats to sensitive species
- Loss in agricultural productivity
- Public health and safety.

With those impacts in mind, complete the table titled “Adaptive Capacity for Climate Change” by indicating your jurisdiction’s capacity for each listed criterion as follows:

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

This is a subjective assessment, but providing a few words of explanation is useful. It is highly recommended that you complete this table with an internal planning team after reviewing the results of the other capability assessment tables.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, review all the adaptive capacity criteria and consider including actions to improve the rating for those rated medium or low, to make use of the capacity for those rated high, or to acquire additional information for those rated unsure.

INTEGRATION REVIEW

For hazard mitigation planning, “integration” means that hazard mitigation information is used in other relevant planning mechanisms, such as capital facilities planning, and that relevant information from those sources is used in hazard mitigation. FEMA recommends integration as follows:

- Integrate hazard mitigation plan goals with community objectives (e.g. incorporate the goals for risk reduction and safety into the policies of other plans).
- Use the risk assessment to inform plans and policies (e.g. incorporate risk assessment findings into emergency operations plans).
- Implement mitigation actions through existing mechanisms (e.g. include mitigation projects in the capital improvement plan).
- Think about mitigation before and after a disaster (e.g. build recovery planning on existing mitigation plans and goals).

After reviewing the plans, programs and ordinances identified in the capability assessment tables, identify all plans and programs that have already been integrated with the hazard mitigation plan, and those that offer opportunities for future integration.

Existing Integration

In the bullet list, provide a brief description of integrated plans or ordinances and how each is integrated. Consider listing items marked as Completed in the “Status of Previous Plan Actions” table if they were indicated as being ongoing actions. Examples are as follows:

- **Capital Improvement Plan**—The capital improvement plan includes projects that can help mitigate potential hazards. The District will act to ensure consistency between the hazard mitigation plan and the current and future capital improvement plans. The hazard mitigation plan may identify new possible funding sources for capital improvement projects and may result in modifications to proposed projects based on results of the risk assessment.
- **Emergency Operations Plan**—The results of the risk assessment were used in the development of the emergency operations plan.

- **Facilities Plan**—The results of the risk assessment and mapped hazard areas are used in facility planning for the District. Potential sites are reviewed for hazard risks, and appropriate mitigation measures are considered in building and site design.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, any plans that fall into the “Existing Integration” category should be reviewed and elements from them should be included in the action plan as appropriate.

Opportunities for Future Integration

List any plans or programs that offer the potential for future integration and describe the process by which integration will occur. Examples follow:

- **Capital Improvement Projects**—Capital improvement project proposals may take into consideration hazard mitigation potential as a means of evaluating project prioritization.
- **Post-Disaster Recovery Plan**—The District does not have a recovery plan and intends to develop one as a mitigation planning action during the next five years. The plan will build on the mitigation goals and objectives identified in the mitigation plan.

Consider any programs you may have in place in your jurisdiction that include routine consideration and management of hazard risk. Examples of such programs may include: tree pruning programs, right-of-way mowing programs, erosion control or stream maintenance programs, etc. Add any such programs to the integration discussion and provide a brief description of how these programs manage (or could be adapted to manage) risk from hazards.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, an action to integrate any identified “Opportunities for Future Integration” should be considered for inclusion in the action plan.

PUBLIC OUTREACH

Note that this section is part of the Phase 3 annex, but documentation can begin in Phases 1 and 2 if applicable.

FEMA requirements for public outreach will be met by the overall hazard mitigation plan engagement efforts and are included in the main part of the plan. These may include public meetings, a StoryMap website, surveys, etc. If individual jurisdictions want to have a more robust outreach for their local community, the public outreach table in each annex may be used to memorialize those local efforts.

This table should record local public outreach efforts made by your jurisdiction to inform the community of this hazard mitigation plan update process. Examples may include local surveys on hazard awareness/preparedness, social media blasts, press releases, and outreach to local groups (CERT, senior citizen organizations, etc.) **This section is optional.**

INFORMATION SOURCES USED FOR THIS ANNEX

Note that this section will ultimately describe all information sources used to develop this annex, but that only the sources used for Phases 1 and 2 will be listed at this point. Additional sources will be added with the preparation of the Phase 3 annex.

This section should describe what resources you used to complete the annex and how you used them. Several items are started for you, but be sure to update and enhance any descriptions. Providing this information is a requirement to pass the state and FEMA review process.

THIS COMPLETES PHASE 2

PHASE 3 INSTRUCTIONS

RISK ASSESSMENT

Jurisdiction-Specific Natural Hazard Event History

In the table titled “Past Natural Hazard Events,” list in chronological order (most recent first) any natural hazard event that has caused damage to your jurisdiction. Include the date of the event and the estimated dollar amount of damage it caused. If a dollar amount is unknown, write a brief description of the impact and damage. You are welcome to include any events, but special attention should be made to include major storms and federally declared disasters. Refer to the table below that lists hazard events in the planning area as recognized by the federal government.

Table 1. Presidential Disaster Declarations for the Planning Area

We recommend including most large-scale disasters, unless you know that there were no impacts on your jurisdiction. Specifically, we recommend that you include these events if you have damage estimate information or can provide a brief description of impacts that occurred within your community. In addition to these events, refer to the NOAA storm events database included in the toolkit. We recommend conducting a search for the name of your jurisdiction in order to identify events with known impacts. Other potential sources of damage information include the following

- Preliminary damage estimates your jurisdiction filed with the county or state
- Insurance claims data
- Newspaper archives
- Emergency management documents (general plan safety element, emergency response plan, etc.)
- Resident input.

If you do not have estimates for costs of damage caused, enter “Not Available” in the “Damage Assessment” column or list a brief description of the damage rather than a dollar value (e.g., Main Street closed as a result of flooding, downed trees and residential damage). Note that tracking such damage is a valid and useful mitigation action if your jurisdiction does not currently track such information.

Hazard Risk Ranking

Risk ranking identifies which hazards pose the greatest risk to the community, based on how likely it is for each hazard to occur (this is called the community’s exposure) and how great an impact each hazard will have if it does occur (this is called the community’s vulnerability). Every jurisdiction has differing degrees of risk exposure and vulnerability and therefore needs to rank risk for its own area. Risk rankings for cities and counties are calculated in the “Loss Matrix” spreadsheet generated as part of the risk assessment (included in the annex preparation toolkit). These rankings are based on scores for each hazard calculated from the hazard’s probability of occurrence and its potential impact on people, property and district operations.

The risk ranking methodology used for cities is not usable for special-purpose districts because the risk-related mapping generally does not align with the boundaries of districts. To rank risk for your District, use the following procedure:

- Find the risk ranking scores in the Loss Matrix spreadsheet (on the “Risk Ranking Summary” tab) for the planning area overall and for any cities whose area overlaps that of your District.
- For each hazard, generate a risk ranking score for your District by calculating the average of the scores for those other jurisdictions.
- Rank the hazards based on those average scores:
 - Assign the rank of 1 to the hazard with the highest risk ranking score, the rank of 2 to the hazard with the second highest ranking score; and so on.
 - Assign the same rank to any two hazards with equal risk ranking scores
- If the resulting ranking differs from what you know based on substantiated data and documentation, alter the scores and ranking as needed based on this knowledge.

- Assign each hazard to the risk category of “High,” “Medium,” or “Low” based on the risk rating score:
 - Low for scores of 0 to 15
 - Medium for scores of 16 to 30
 - High for scores greater than 30

Enter the results of this analysis in the “Hazard Risk Ranking” table in the template; enter the hazards in order of ranking, with 1 at the top of the table.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, you will need to have at least one mitigation action for each hazard ranked as “high” or “medium.”

Jurisdiction-Specific Vulnerabilities

Review the results of the risk assessment included in the toolkit, your jurisdiction’s natural events history, and any relevant public comments/input, then develop a few sentences that discuss specific hazard vulnerabilities. You do not need to develop a sentence for every hazard, but identify a few issues you would like to highlight. Also list any known hazard vulnerabilities in your jurisdiction that may not be apparent from the risk assessment and other information provided.

Spending some time thinking about the results of the risk assessment and other noted vulnerabilities will be a big help in the development of your hazard mitigation action plan. The following are examples of vulnerabilities you could identify through this exercise:

- Over the past 10 years, the jurisdiction has experienced more than \$1 million in damage to critical assets from severe storm events.
- 17 critical assets are in areas that would be permanently inundated with 12 inches of sea level rise.
- One significant District asset is not equipped with a generator
- Four District buildings are unreinforced masonry or soft-story construction.
- An area along the river is eroding and threatening a District-owned treatment facility.

HAZARD MITIGATION ACTION PLAN INPUT

When preparing the hazard mitigation action plan in Phase 3, consider including actions to address the jurisdiction-specific vulnerabilities listed in this section.

HAZARD MITIGATION ACTION PLAN

Hazard Mitigation Action Plan Matrix

The hazard mitigation action plan is the heart of your jurisdictional annex. This is where you will identify the actions your jurisdiction would like to pursue with this plan.

Select Recommended Actions

All of the work that you have done thus far should provide you with ideas for actions. Throughout these instructions, green boxes labeled “Hazard Mitigation Action Plan Input” have indicated information that needs to be considered in the selection of mitigation actions. The following sections describe how to consider these and other information sources to develop a list of potential actions.

Be sure to consider the following factors in your selection of actions:

- Select actions that are consistent with the overall purpose, goals, and objectives of the hazard mitigation plan.
- Identify actions where benefits exceed costs.
- Include any action that your jurisdiction has committed to pursuing, regardless of grant eligibility.
- Know what is and is not grant-eligible under various federal grant programs (see the fact sheet on FEMA hazard mitigation grant programs in the toolkit and the table on the next page).

Material Previously Developed for This Annex

Capability Assessment Section—Planning and Regulatory Capability Table, Fiscal Capability Table, Administrative and Technical Capability Table, and Education and Outreach Table

Review these tables and consider the following:

- For any capability that you do not currently have, consider whether your jurisdiction should have this capability. If so, consider including an action to develop/acquire the capability.
- For any capability that you do currently have, consider whether this capability can be leveraged to increase or improve hazard mitigation in the jurisdiction.
- If any items listed in the Planning and Regulatory Capabilities table have not been updated in more than 10 years, consider an action to review and update the capability and, as appropriate, incorporate hazard mitigation principles or information obtained in the risk assessment.
- Consider including actions that are identified in other plans and programs (capital improvement plans, strategic plans, etc.) as actions in this plan.

Capability Assessment Section—Adaptive Capacity for Climate Change Table

Consider your responses to this section:

- For criteria that you listed as medium or low, think of ways you could improve this rating (see adaptive capacity portion of the mitigation best practices catalog).
- For criteria you listed as high, think about how you can leverage this capacity to improve or enhance mitigation or continue to improve this capacity.
- For criteria that you were unable to provide responses for, consider ways you could improve your understanding of this capacity (see mitigation best practices and adaptive capacity catalog).

Table 2. Federal Hazard Mitigation Grant Program Eligibility by Action Type

Eligible Activities	HMGP (Hazard Mitigation Grant Program)	BRIC (Building Resilient Infrastructure and Communities)	FMA (Flood Mitigation Assistance)
Mitigation Projects			
Property Acquisition and Structure Demolition	✓	✓	✓
Property Acquisition and Structure Relocation	✓	✓	✓
Structure Elevation	✓	✓	✓
Mitigation Reconstruction	✓	✓	✓
Dry Floodproofing of Non-residential Structures	✓	✓	✓
Generators	✓	✓	
Localized Flood Risk Reduction Projects	✓	✓	✓
Non-Localized Flood Risk Reduction Projects	✓	✓	
Structural Retrofitting of Existing Buildings	✓	✓	✓
Non-structural Retrofitting of Existing Buildings and Facilities	✓	✓	✓
Safe Room Construction	✓	✓	
Infrastructure Retrofit	✓	✓	✓
Soil Stabilization	✓	✓	✓
Wildfire Mitigation	✓	✓	
Post-Disaster Code Enforcement	✓		
Advance Assistance	✓		
5 Percent Initiative Projects*	✓		
Aquifer and Storage Recovery**	✓	✓	✓
Flood Diversion and Storage**	✓	✓	✓
Floodplain and Stream Restoration**	✓	✓	✓
Green Infrastructure**	✓	✓	✓
Miscellaneous/Other**	✓	✓	✓
Hazard Mitigation Planning	✓	✓	✓
Technical Assistance			✓
Management Costs	✓	✓	✓

* FEMA allows increasing the 5% initiative amount under the Hazard Mitigation Grant Program up to 10% for a presidential major disaster declaration. The additional 5% initiative funding can be used for activities that promote disaster-resistant codes for all hazards. As a condition of the award, either a disaster-resistant building code must be adopted or an improved Building Code Effectiveness Grading Schedule is required.

** Indicates that any proposed action will be evaluated on its own merit against program requirements. Eligible projects will be approved provided funding is available.

Integration Review Section

Review the items you identified in this section and consider an action that specifically says what the plan, code, ordinance etc. is and how it will be integrated.

Risk Ranking Section

You must identify at least one mitigation action that is clearly defined and actionable (i.e. not a preparedness or response action) for every hazard that is categorized in the risk ranking as “high” or “medium” risk.

Jurisdiction-Specific Vulnerabilities Section

Review the vulnerability issues that you identified in this section and consider actions to address them (see mitigation best practices catalog).

Status of Previous Plan Actions Section

If your jurisdiction participated in a previous hazard mitigation plan, be sure to include any actions that were identified as “carry over” actions.

Other Sources

Mitigation Best Practices Catalog

A catalog that includes best practices identified by FEMA and other agencies, as well as recommendations from the steering committee and other stakeholders, is included in your toolkit. Review the catalog and identify actions your jurisdiction should consider for its action plan.

Public Input

Review input received during the process, specifically the public survey results included in your toolkit.

Common Actions for All Partners

The following three actions have been prepopulated in your annex template; **these three actions should be included in every annex and should not be removed:**

- Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas, prioritizing those structures that have experienced repetitive losses and/or are located in high or medium ranked hazard.
- Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.
- Purchase generators for critical facilities and infrastructure that lack adequate back-up power.

In addition, the core planning team recommends that every planning partner strongly consider the following actions:

- Identify and pursue strategies to increase adaptive capacity to climate change.
- 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.
- Support the planning-area-wide initiatives identified in Volume I of the hazard mitigation plan.
- Develop a post-disaster recovery plan and a debris management plan.

- Develop and/or update plans that support or enhance continuity of operations following disasters.

The specifics of all these common actions should be adjusted as needed for the particulars of each community.

Complete the Table

Complete the table titled “Hazard Mitigation Action Plan Matrix” for all the actions you have identified and would like to include in the plan:

- Enter the action number (see box at right) and description. **If the action is carried over from your previous hazard mitigation plan, return to the “Status of Previous Plan Actions” table you completed in Phase 1 and enter the new action number in the column labeled “New Action #.”**
- Indicate whether the action mitigates hazards for new and/or existing assets.
- Identify the specific hazards the action will mitigate (note: you must list each hazard by name; simply indicating “all hazards” is not deemed acceptable).
- Identify by number the mitigation plan objectives that the action addresses (see toolkit).
- Indicate who will be the lead in administering the action. This will most likely be a department within your jurisdiction (e.g. planning or public works). If you wish to indicate more than one department as responsible for the action, clearly identify one as the lead agency and list the others in the “supporting agency” column.
- Enter an estimated cost in dollars if known; otherwise, enter “High,” “Medium,” or “Low,” as determined for the prioritization process described in the following section.
- Identify funding sources for the action. If it is a grant, include the grant-providing agency as well as funding sources for any required cost share. Refer to your fiscal capability assessment to identify possible sources of funding and refer to the table on page 16 of these instructions for project eligibility for FEMA’s hazard mitigation assistance grant programs.
- Indicate the time line as “short-term” (1 to 5 years) or “long-term” (5 years or greater) or “ongoing” (a continual program)

Action Numbering

Actions are to be numbered using the code for your jurisdiction shown below, followed by a hyphen and the action’s sequential number:

- Dublin San Ramon Services District—DSRSD-1, DSRSD-2...

Mitigation Action Priority

Complete the information in the table titled “Mitigation Action Priority” as follows:

- **Action #**—Enter the action number from the Hazard Mitigation Action Plan Matrix table. Use number only; omit jurisdiction code (i.e., use “3” not “XXX-3”).
- **# of Objectives Met**—Enter the number of objectives the action will meet.
- **Benefits**—Select “High,” “Medium” or “Low” as follows:
 - High—Action will provide an immediate reduction of risk exposure for life and property.
 - Medium—Action will have a long-term impact on the reduction of risk exposure for life and property, or action will provide an immediate reduction in the risk exposure for property.

- Low—Long-term benefits of the action are difficult to quantify in the short term.
- **Cost**—Select “High,” “Medium” or “Low” as follows:
 - High—Existing funding will not cover the cost of the action; implementation would require new revenue through an alternative source (for example, bonds, grants, and fee increases).
 - Medium—The action could be implemented with existing funding but would require a re-apportionment of the budget or a budget amendment, or the cost of the action would have to be spread over multiple years.
 - Low—The action could be funded under the existing budget. The action is part of or can be part of an ongoing existing program.
- **Do Benefits Exceed the Cost?**—Select “Yes” or “No.” This is a qualitative assessment. Select “Yes” if the benefit rating (high, medium or low) is the same as or higher than the cost rating (high benefit/high cost; high benefit/medium cost; medium benefit/low cost; etc.). Select “No” if the benefit rating is lower than the cost rating (medium benefit/high cost, low benefit/medium cost; etc.)
- **Is the Action Grant-Eligible?**—Select “Yes” or “No.” Refer to the fact sheet on FEMA hazard mitigation grant programs in the annex preparation toolkit and the table on page 16 of these instructions.
- **Can Action Be Funded Under Existing Program Budgets?**—Select “Yes” or “No.” In other words, is this action currently budgeted for, or would it require a new budget authorization or funding from another source such as grants?
- **Implementation Priority**—Select “High,” “Medium” or “Low” as follows:
 - High Priority—An action that meets multiple objectives, has benefits that exceed costs, and has a secured source of funding. Action can be completed in the short term (1 to 5 years).
 - Medium Priority—An action that meets multiple objectives, has benefits that exceed costs, and is eligible for funding though no funding has yet been secured for it. Action can be completed in the short term (1 to 5 years), once funding is secured. Medium-priority actions become high-priority actions once funding is secured.
 - Low Priority—An action that will mitigate the risk of a hazard, has benefits that do not exceed the costs or are difficult to quantify, has no secured source of funding, and is not eligible for any known grant funding. Action can be completed in the long term (1 to 10 years). Low-priority actions may be eligible for grant funding from programs that have not yet been identified.
- **Grant Pursuit Priority**—Select “High,” “Medium” or “Low” as follows:
 - High Priority—An action that meets identified grant eligibility requirements, has high benefits, and is listed as high or medium implementation priority; local funding options are unavailable or available local funds could be used instead for actions that are not eligible for grant funding.
 - Medium Priority—An action that meets identified grant eligibility requirements, has medium or low benefits, and is listed as medium or low implementation priority; local funding options are unavailable.
 - Low Priority—An action that has not been identified as meeting any grant eligibility requirements.

Actions identified as high-grant-pursuit priority actions should be closely reviewed for consideration when grant funding opportunities arise.

Note: If a jurisdiction wishes to identify an action as high priority that is outside of the prioritization scheme for high priorities, a note indicating so should be inserted and a rationale should be provided.

Analysis of Mitigation Actions

In the table titled “Analysis of Mitigation Actions,” for each combination of hazard type and mitigation type, enter the numbers of all recommended actions that address that hazard type and can be categorized as that mitigation type. Use number only; omit jurisdiction code (i.e., use “3” not “XXX-3”). The mitigation types are as follows:

- **Prevention**—Government, administrative or regulatory actions that influence the way land and buildings are developed to reduce hazard losses. Includes planning and zoning, floodplain laws, capital improvement programs, open space preservation, and stormwater management regulations.
- **Property Protection**—Modification of buildings or structures to protect them from a hazard or removal of structures from a hazard area. Includes acquisition, elevation, relocation, structural retrofit, storm shutters, and shatter-resistant glass.
- **Public Education & Awareness**—Actions to inform residents and elected officials about hazards and ways to mitigate them. Includes outreach projects, real estate disclosure, hazard information centers, and school-age and adult education.
- **Natural Resource Protection**—Actions that minimize hazard loss and preserve or restore the functions of natural systems. Includes sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, wetland restoration and preservation, and green infrastructure.
- **Emergency Services**—Actions that protect people and property during and immediately after a hazard event. Includes warning systems, emergency response services, and the protection of essential facilities.
- **Structural Projects**—Actions that involve the construction of structures to reduce the impact of a hazard. Includes dams, setback levees, floodwalls, retaining walls, and safe rooms.
- **Climate Resilience**—Actions that incorporate methods to mitigate and/or adapt to the impacts of climate change. Includes aquifer storage and recovery activities, incorporating future conditions projections in project design or planning, or actions that specifically address jurisdiction-specific climate change risks, such as sea-level rise or urban heat island effect.
- **Community Capacity Building**—Actions that increase or enhance local capabilities to adjust to potential damage, to take advantage of opportunities, or to respond to consequences. Includes staff training, memorandums of understanding, development of plans and studies, and monitoring programs.

This exercise demonstrates that the jurisdiction has selected a comprehensive range of actions. This table must show at least one action to address each “high” and “medium” ranked hazard. Planning partners should aim to identify at least one action for each mitigation type, but this is not required.

An example of a completed “Analysis of Mitigation Actions” table is provided below. Note that an action can be more than one mitigation type.

Hazard Type	Action Addressing Hazard, by Mitigation Type							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
High-Risk Hazards								
Dam Failure	2, 3, 4, 5, 6	1, 6	4, 6		8, 11			3, 4, 8, 9, 10
Drought	2	1	4					3, 4, 8, 9, 10
Medium-Risk Hazards								
Earthquake	2, 3, 4, 5, 7	1, 7	4		8, 11			3, 4, 8, 9
Flooding	2, 3, 4, 5, 6, 7	1, 6, 7	4, 6	9	8, 11	6		3, 4, 8, 9, 10
Landslide	2, 3, 4, 5, 7	1, 7	4		8, 11			3, 4, 8, 9, 10
Low-Risk Hazards								
Severe Weather	2, 3, 4, 5, 7	1, 7, 9	4		8, 9, 11		8, 7	3, 4, 8, 9, 10
Wildfire	2, 3, 4, 5, 7	1, 7, 9	4, 9	9	8, 11			3, 4, 8, 9, 10

PUBLIC OUTREACH

FEMA requirements for public outreach will be met by the overall hazard mitigation plan engagement efforts and are included in the main part of the plan. These may include public meetings, a StoryMap website, surveys, etc. If individual jurisdictions want to have a more robust outreach for their local community, the public outreach table in each annex may be used to memorialize those local efforts.

This table should record local public outreach efforts made by your jurisdiction to inform the community of this hazard mitigation plan update process. Examples may include local surveys on hazard awareness/preparedness, social media blasts, press releases, and outreach to local groups (CERT, senior citizen organizations, etc.) **This section is optional.**

INFORMATION SOURCES USED FOR THIS ANNEX

This section should describe what resources you used to complete the annex and how you used them. The sources used for Phases 1 and 2 should have been entered previously. List any additional sources used for the preparation of the Phase 3 annex. Review to ensure that all materials used in all three phases are identified. Providing this information is a requirement to pass the state and FEMA review process.

FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

In this section, identify any future studies, analyses, reports, or surveys your jurisdiction needs to better understand its vulnerability to identified or currently unidentified risks. These could be needs based on federal or state agency mandates. **This section is optional.**

ADDITIONAL COMMENTS

Use this section to add any additional information pertinent to hazard mitigation and your jurisdiction not covered in this template. **This section is optional.**

THIS COMPLETES PHASE 3

1. ENTER JURISDICTION NAME

1.1 LOCAL HAZARD MITIGATION PLANNING TEAM

Primary Point of Contact

Enter POC name, Enter POC title
Enter POC street address
Enter POC city, state, Zip
Enter POC phone #
Enter POC email address

Alternate Point of Contact

Enter POC name, Enter POC title
Enter POC street address
Enter POC city, state, Zip
Enter POC phone #
Enter POC email address

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

Table 1-1. Local Hazard Mitigation Planning Team Members

Name	Title
Enter team member name	Enter team member title
Enter team member name	Enter team member title
Enter team member name	Enter team member title
Enter team member name	Enter team member title
Enter team member name	Enter team member title
Enter team member name	Enter team member title
Enter team member name	Enter team member title

1.2 JURISDICTION PROFILE

1.2.1 Overview

Enter text

1.2.2 Service Area

Enter text

1.2.3 Assets

Table 1-2 summarizes the assets of the District and their value.

Table 1-2. Special Purpose District Assets

Asset	Value
Property Enter number acres of land	Enter value
Equipment	
Enter description	Enter value
Total:	<i>Enter value</i>
Critical Facilities	
Enter description, Enter address	Enter value
Enter description, Enter address	Enter value
Enter description, Enter address	Enter value
Enter description, Enter address	Enter value
Total:	<i>Enter value</i>

1.3 CURRENT TRENDS

Enter text

1.4 CAPABILITY ASSESSMENT

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

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

- An assessment of planning and regulatory capabilities is presented in Table 1-3.
- An assessment of fiscal capabilities is presented in Table 1-4.
- An assessment of administrative and technical capabilities is presented in Table 1-5.
- An assessment of education and outreach capabilities is presented in Table 1-6.
- Classifications under various community mitigation programs are presented in Table 1-7.
- The community’s adaptive capacity for the impacts of climate change is presented in Table 1-8.

Table 1-3. Planning and Regulatory Capability

Plan, Study or Program	Date of Most Recent Update	Comment
Enter item	Enter date	Enter comment
Enter item	Enter date	Enter comment
Enter item	Enter date	Enter comment
Enter item	Enter date	Enter comment
Enter item	Enter date	Enter comment

Table 1-4. Fiscal Capability

Financial Resource	Accessible or Eligible to Use?
Community Development Block Grants	Select
Capital Improvements Project Funding	Select
Authority to Levy Taxes for Specific Purposes	Select
User Fees for Water, Sewer, Gas or Electric Service	Select
<i>If yes, specify:</i> Enter response	
Incur Debt through General Obligation Bonds	Select
Incur Debt through Special Tax Bonds	Select
Incur Debt through Private Activity Bonds	Select
Withhold Public Expenditures in Hazard-Prone Areas	Select
State-Sponsored Grant Programs	Select
Development Impact Fees for Homebuyers or Developers	Select
Other	Select
<i>If yes, specify:</i> Enter response	

Table 1-5. Administrative and Technical Capability

Staff/Personnel Resource	Available?
Planners or engineers with knowledge of land development and land management practices	Select
<i>If Yes, Department /Position:</i> Enter response	
Engineers or professionals trained in building or infrastructure construction practices	Select
<i>If Yes, Department /Position:</i> Enter response	
Planners or engineers with an understanding of natural hazards	Select
<i>If Yes, Department /Position:</i> Enter response	
Staff with training in benefit/cost analysis	Select
<i>If Yes, Department /Position:</i> Enter response	
Surveyors	Select
<i>If Yes, Department /Position:</i> Enter response	
Personnel skilled or trained in GIS applications	Select
<i>If Yes, Department /Position:</i> Enter response	
Scientist familiar with natural hazards in local area	Select
<i>If Yes, Department /Position:</i> Enter response	
Emergency manager	Select
<i>If Yes, Department /Position:</i> Enter response	
Grant writers	Select
<i>If Yes, Department /Position:</i> Enter response	
Other	Select
<i>If Yes, Department /Position:</i> Enter response	

Table 1-6. Education and Outreach Capability

Criterion	Response
Do you have a public information officer or communications office?	Select
Do you have personnel skilled or trained in website development?	Select
Do you have hazard mitigation information available on your website?	Select
<i>If yes, briefly describe:</i> Enter response	
Do you use social media for hazard mitigation education and outreach?	Select
<i>If yes, briefly describe:</i> Enter response	
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Select
<i>If yes, briefly describe:</i> Enter response	
Do you have any other programs in place that could be used to communicate hazard-related information?	Select
<i>If yes, briefly describe:</i> Enter response	
Do you have any established warning systems for hazard events?	Select
<i>If yes, briefly describe:</i> Enter response	

Table 1-7. Community Classifications

	Participating?	ID Number	Classification	Date Classified
DUNS #	Select	Enter response	Enter response	Enter date
Public Protection	Select	Enter response	Enter response	Enter date
StormReady	Select	Enter response	Enter response	Enter date
Firewise	Select	Enter response	Enter response	Enter date

	Participating?	ID Number	Classification	Date Classified
TsunamiReady	Select	Enter response	Enter response	Enter date

Table 1-8. Adaptive Capacity for Climate Change

Criterion	Jurisdiction Rating ^a
Technical Capacity	
Jurisdiction-level understanding of potential climate change impacts	Select
<i>Comment:</i> Enter comment	
Jurisdiction-level monitoring of climate change impacts	Select
<i>Comment:</i> Enter comment	
Technical resources to assess proposed strategies for feasibility and externalities	Select
<i>Comment:</i> Enter comment	
Jurisdiction-level capacity for development of greenhouse gas emissions inventory	Select
<i>Comment:</i> Enter comment	
Capital planning and land use decisions informed by potential climate impacts	Select
<i>Comment:</i> Enter comment	
Participation in regional groups addressing climate risks	Select
<i>Comment:</i> Enter comment	
Implementation Capacity	
Clear authority/mandate to consider climate change impacts during public decision-making processes	Select
<i>Comment:</i> Enter comment	
Identified strategies for greenhouse gas mitigation efforts	Select
<i>Comment:</i> Enter comment	
Identified strategies for adaptation to impacts	Select
<i>Comment:</i> Enter comment	
Champions for climate action in local government departments	Select
<i>Comment:</i> Enter comment	
Political support for implementing climate change adaptation strategies	Select
<i>Comment:</i> Enter comment	
Financial resources devoted to climate change adaptation	Select
<i>Comment:</i> Enter comment	
Local authority over sectors likely to be negative impacted	Select
<i>Comment:</i> Enter comment	
Public Capacity	
Local residents' knowledge of and understanding of climate risk	Select
<i>Comment:</i> Enter comment	
Local residents' support of adaptation efforts	Select
<i>Comment:</i> Enter comment	
Local residents' capacity to adapt to climate impacts	Select
<i>Comment:</i> Enter comment	
Local economy's current capacity to adapt to climate impacts	Select
<i>Comment:</i> Enter comment	

Criterion	Jurisdiction Rating ^a
Local ecosystems' capacity to adapt to climate impacts <i>Comment:</i> Enter comment <p>a. High = Capacity exists and is in use; Medium = Capacity may exist but is not used or could use some improvement; Low = Capacity does not exist or could use substantial improvement; Unsure= Not enough information is known to assign a rating.</p>	Select

1.5 INTEGRATION REVIEW

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

1.5.1 Existing Integration

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

- [Enter name](#)—Enter description

1.5.2 Opportunities for Future Integration

The capability assessment presented in this annex indicates opportunities to integrate this mitigation plan with other jurisdictional planning/regulatory capabilities. Capabilities were identified as integration opportunities if they can support or enhance the actions identified in this plan or be supported or enhanced by components of this plan. The capability assessment identified the following plans and programs that do not currently integrate hazard mitigation information but provide opportunities to do so in the future:

- [Enter name](#)—Enter description

Taking action to integrate each of these programs with the hazard mitigation plan was considered as a mitigation action to include in the action plan presented in this annex.

1.6 RISK ASSESSMENT

1.6.1 Jurisdiction-Specific Natural Hazard Event History

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

Table 1-9. Past Natural Hazard Events

1.6.2 Hazard Risk Ranking

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

Table 1-10. Hazard Risk Ranking

1.6.3 Jurisdiction-Specific Vulnerabilities

Volume 1 of this hazard mitigation plan provides complete risk assessments for each identified hazard of concern. The following jurisdiction-specific issues have been identified based on a review of the results of the risk assessment, public involvement strategy, and other available resources:

- Enter description
- Enter description
- Enter description
- Enter description

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

1.7 STATUS OF PREVIOUS PLAN ACTIONS

If your jurisdiction has no previous hazard mitigation plan, please click the box at right to check it and do not complete this section.

Table 1-11 summarizes the actions that were recommended in the previous version of the hazard mitigation plan and their implementation status at the time this update was prepared.

Table 1-11. Status of Previous Plan Actions

Action Item from Previous Plan	Status of Action	New Action #
Enter action #—Enter action description Comment: Enter comment	Select	Number.
Enter action #—Enter action description Comment: Enter comment	Select	Number.
Enter action #—Enter action description Comment: Enter comment	Select	Number.
Enter action #—Enter action description Comment: Enter comment	Select	Number.
Enter action #—Enter action description Comment: Enter comment	Select	Number.
Enter action #—Enter action description Comment: Enter comment	Select	Number.
Enter action #—Enter action description Comment: Enter comment	Select	Number.
Enter action #—Enter action description Comment: Enter comment	Select	Number.
Enter action #—Enter action description Comment: Enter comment	Select	Number.
Enter action #—Enter action description Comment: Enter comment	Select	Number.
Enter action #—Enter action description Comment: Enter comment	Select	Number.
Enter action #—Enter action description Comment: Enter comment	Select	Number.

Action Item from Previous Plan	Status of Action	New Action #
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.
Enter action #—Enter action description <i>Comment:</i> Enter comment	Select	Number.

1.8 HAZARD MITIGATION ACTION PLAN

Table 1-12 lists the actions that make up the hazard mitigation action plan for this jurisdiction. Table 1-13 identifies the priority for each action. Table 1-14 summarizes the mitigation actions by hazard of concern and mitigation type.

Table 1-12. Hazard Mitigation Action Plan Matrix

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action Jurisdiction Code-1 —Where appropriate, support retrofitting, purchase or relocation of structures located in hazard areas, prioritizing those that have experienced repetitive losses and/or are located in high- or medium-risk hazard areas.						
<i>Hazards Mitigated:</i> Enter response Existing	Enter response	Enter response	Enter response	High	Grant funding	Short-term
Action Jurisdiction Code-2 —Actively participate in the plan maintenance protocols outlined in Volume 1 of this hazard mitigation plan.						
<i>Hazards Mitigated:</i> Enter response Both	Enter response	Enter response	Enter response	Low	Staff Time, General Funds	Short-term
Action Jurisdiction Code-3 —Purchase generators for critical facilities and infrastructure that lack adequate backup power, including _____.						
<i>Hazards Mitigated:</i> Enter response Existing	Enter response	Enter response	Enter response	Select	Enter response	Select
Action Jurisdiction Code-Action # —Enter action description						
<i>Hazards Mitigated:</i> Enter response Select	Enter response	Enter response	Enter response	Select	Enter response	Select
Action Jurisdiction Code-Action # —Enter action description						
<i>Hazards Mitigated:</i> Enter response Select	Enter response	Enter response	Enter response	Select	Enter response	Select
Action Jurisdiction Code-Action # —Enter action description						
<i>Hazards Mitigated:</i> Enter response Select	Enter response	Enter response	Enter response	Select	Enter response	Select
Action Jurisdiction Code-Action # —Enter action description						
<i>Hazards Mitigated:</i> Enter response Select	Enter response	Enter response	Enter response	Select	Enter response	Select
Action Jurisdiction Code-Action # —Enter action description						
<i>Hazards Mitigated:</i> Enter response Select	Enter response	Enter response	Enter response	Select	Enter response	Select

Benefits New or Existing Assets	Objectives Met	Lead Agency	Support Agency	Estimated Cost	Sources of Funding	Timeline ^a
Action Jurisdiction Code-Action # —Enter action description						
<i>Hazards Mitigated:</i> Enter response						
Select	Enter response	Enter response	Enter response	Select	Enter response	Select
Action Jurisdiction Code-Action # —Enter action description						
<i>Hazards Mitigated:</i> Enter response						
Select	Enter response	Enter response	Enter response	Select	Enter response	Select
a. Short-term = Completion within 5 years; Long-term = Completion within 10 years; Ongoing= Continuing new or existing program with no completion date						
Acronyms used here are defined at the beginning of this volume.						

Table 1-13. Mitigation Action Priority

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

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

Table 1-14. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
High-Risk Hazards								
Enter hazard type.	List	List	List	List	List	List	List	List
Enter hazard type.	List	List	List	List	List	List	List	List
Enter hazard type.	List	List	List	List	List	List	List	List
Enter hazard type.	List	List	List	List	List	List	List	List
Medium-Risk Hazards								
Enter hazard type.	List	List	List	List	List	List	List	List
Enter hazard type.	List	List	List	List	List	List	List	List
Enter hazard type.	List	List	List	List	List	List	List	List
Enter hazard type.	List	List	List	List	List	List	List	List

Hazard Type	Action Addressing Hazard, by Mitigation Type ^a							
	Prevention	Property Protection	Public Education & Awareness	Natural Resource Protection	Emergency Services	Structural Projects	Climate Resilience	Community Capacity Building
Low-Risk Hazards								
Enter hazard type.	List	List	List	List	List	List	List	List
Enter hazard type.	List	List	List	List	List	List	List	List
Enter hazard type.	List	List	List	List	List	List	List	List

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

1.9 PUBLIC OUTREACH

Table 1-15 lists public outreach activities for this jurisdiction.

Table 1-15. Local Public Outreach

Local Outreach Activity	Date	Number of People Involved
Enter activity description	Enter date	Enter #
Enter activity description	Enter date	Enter #
Enter activity description	Enter date	Enter #
Enter activity description	Enter date	Enter #

1.10 INFORMATION SOURCES USED FOR THIS ANNEX

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

- **Enter document name**—Describe use of document

The following outside resources and references were reviewed:

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

1.11 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

Enter text

1.12 ADDITIONAL COMMENTS

Enter text

