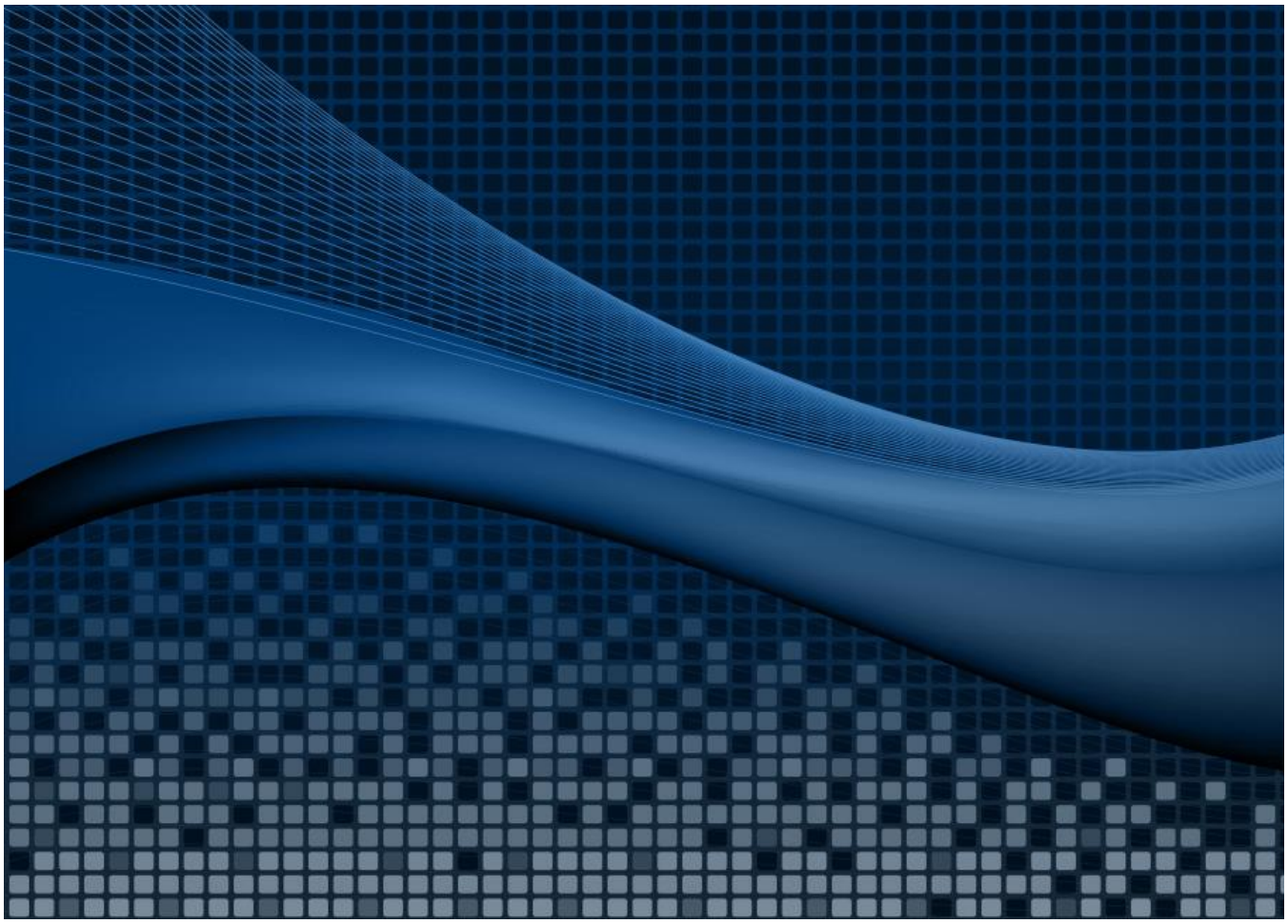
Union City/Newark Multi-Jurisdiction Hazard Mitigation Plan

Volume 2—Planning Partner Annexes



TETRA TECH

December 2016

Union City/Newark Multi-Jurisdiction Hazard Mitigation Plan

Volume 2—Planning Partner Annexes

December 2016

PREPARED FOR

City of Union City, CA
34009 Alvarado-Niles Road
Union City, CA 94587

City of Newark, CA
37101 Newark Boulevard
Newark, CA 94560

PREPARED BY

Tetra Tech
Rob Flaner, Project Manager
Phone (208) 939-4391
Email:rob.flaner@tetratech.com

1999 Harrison Street
Suite 500
Oakland, CA 94612
Phone: (510) 302-6300
Fax: (510) 433-0830
tetratech.com

Tetra Tech Project #103S4503

CONTENTS

Addendum

Plan Reference Resource - Implementation

Appendices

1. INTRODUCTION

1.1 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 Union City/Newark Multi-Jurisdiction Hazard Mitigation Plan (HMP), 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:

- Planning partner cities
- Special districts.

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

1.2 THE PLANNING PARTNERSHIP

1.2.1 Initial Solicitation and Letters of Intent

The planning team solicited the participation of special districts at the outset of this project as part of the project Steering Committee. During the first Steering Committee meeting, special districts were asked by the Cities of Union City and Newark if they would like an opportunity to develop an annex for coverage under the HMP.

The interested special districts were provided with a list of planning partner expectations developed by the planning team and were informed of the obligations required for participation. Local governments wishing to join the planning effort were asked to provide the planning team with a "letter of intent to participate" that acknowledged and agreed to the planning partner expectations and designated a point of contact for their jurisdiction. Inclusive of cities and special districts, formal commitment was received from six planning partners by the planning team as identified in Table 2.

1.2.2 Planning Partner Expectations

The planning team developed the following list of planning partner expectations, which were confirmed at the first Steering Committee meeting held on June 10, 2016:

- Each partner will provide a "letter of intent to participate."
- Each partner will support and participate in the selection and function of the Steering Committee overseeing the development of the HMP. Support includes allowing this body to make decisions regarding plan development and scope on behalf of the partnership.
- Each partner will provide support for the public involvement strategy developed by the Steering Committee in the form of mailing lists, possible meeting space, and media outreach such as newsletters, newspapers or direct-mailed brochures.
- Each partner will participate in plan development activities such as:

  - Steering Committee meetings
  - Public meetings or open houses
  - Workshops and planning partner training sessions
  - Public review and comment periods prior to adoption.

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

- Each partner will be expected to perform a "consistency review" of all technical studies, plans, and ordinances specific to hazards identified within the planning area to determine the existence of plans, studies or ordinances not consistent with the equivalent documents reviewed in preparation of the HMP.
- Each partner will be expected to review the risk assessment and identify hazards and vulnerabilities specific to its jurisdiction. Contract resources will provide jurisdiction-specific mapping and technical consultation to aid in this task, but the determination of risk and vulnerability will be up to each planning partner.
- Each partner will be required to develop its own action plan that identifies each project, who will oversee the task, how it will be financed, and in what timeframe it is expected to occur.
- Each partner will be required to complete its normal pre-adoption process prior to submitting the HMP to its governing body for adoption. For example, if it is the community's normal process to submit a planning document to a planning commission prior to submittal to council for adoption, then that process must be followed for the adoption of this HMP.
- Each partner will be required to formally adopt the HMP.

By adopting this HMP, 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 for grants and compliance with DMA under the scope of this HMP. The full Planning Partner Expectation document is found in Appendix A of this volume.

1.2.3 Linkage Procedures

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

1.3 ANNEX-PREPARATION PROCESS

1.3.1 Templates

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

1.3.2 Workshop

Workshops were held for planning partners to learn about the templates and the overall planning process. Topics included the following:

- DMA
- HMP background
- The templates
- Risk ranking
- Developing your action plan
- Cost/benefit review.

Separate sessions were held for special districts and the individual cities in order to better address the needs of each type of partner. The sessions provided technical assistance and an overview of the template completion process. Attendance at this workshop was mandatory under the planning partner expectations established by the Steering Committee. There was 100-percent attendance of the partnership at these sessions.

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

- The risk assessment results developed for this plan
- Hazard maps for all hazards of concern
- Special district boundary maps that illustrated the sphere of influence for each special purpose district partner
- Hazard mitigation catalogs
- Federal funding and technical assistance catalogs.

1.3.3 Prioritization

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

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

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

1.3.4 Benefit/Cost Review

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

- 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.

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

1.3.5 Analysis of Mitigation Actions

Each planning partner reviewed its recommended actions to classify it 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.

1.4 COMPATIBILITY WITH PREVIOUSLY APPROVED PLANS

Of the six committed planning partners, three participated in the previous ABAG planning initiative. These HMPs identified over 300 mitigation initiatives. The progress made on these initiatives has been reviewed in the workbooks included in Appendix D of Volume 2 of this plan. Table 1 lists the jurisdictions with previously ABAG participation, the status of those plans, and the role this multi-jurisdictional plan will play in achieving compliance.

Table 1. Prior Plan Status

	Participation in Previous ABAG Plan?	Will Be Replaced by Multi-Jurisdictional Hazard Mitigation Plan? (Yes/No)	CRS Community (Yes/No)
City of Union City	Yes	Yes	No
City of Newark	Yes	Yes	No
Alameda County Water District	Yes	Yes	N/A

1.5 FINAL COVERAGE UNDER THE HAZARD MITIGATION PLAN

Of the six committed planning partners, five fully met the participation requirements specified by the Steering Committee. The principal requirement not met by the other partners was the completion of the jurisdictional

annex template following the workshops. Five of the six partners that attended the workshop subsequently submitted completed templates. Only those five jurisdictions are included in this Volume and will seek DMA compliance under this HMP. The remaining jurisdiction will need to follow the linkage procedures described in Appendix B of this Volume. Table 2 lists the jurisdictions that submitted letters of intent and their ultimate status in this HMP.

Table 2. Planning Partner Status

	Letter of Intent Date	Attended Workshop?	Completed Template?	Covered by This Plan?
Municipalities				
City of Union City	5/13/2016	Yes	Yes	Yes
City of Newark	5/13/2016	Yes	Yes	Yes
School Districts				
Newark Unified School District	6/20/2016	Yes	Yes	Yes
New Haven Unified School District	10/13/2016	Yes	No[a]	No[a]
Water and Sewer Districts				
Alameda County Water District	6/30/2016	Yes	Yes	Yes
Union Sanitary District	8/233/2016	Yes	Yes	Yes

a. New Haven Unified School District opted to link to the HMP at a later time to allow additional time for annex completion.

1.7 ACRONYMS AND ABBREVIATION

- **AB1420**—Assembly Bill 1420 Urban Water Management Planning Act
- **AB2140**—Assembly Bill 2140 General Plans: Safety Element
- **ABAG**—Association of Bay Area Governments
- **ACFD**—Alameda County Fire Department
- **ACWD**—Alameda County Water District
- **AFG**—Assistance to Firefighters Grant
- **ARES/RACES**—Amateur Radio Emergency Service/radio Amateur Civil Emergency Services
- **BAESIC**—Bay Area Emergency Security Information Collaborative
- **BGI**— Birch Grove Intermediate
- **BGP**— Birch Grove Primary
- **CalFire**—State of California Department of Forestry and Fire Protection
- **CalOES**—State of California Office of Emergency Services
- **CalWARN**—California Water/Wastewater Agency Response Network
- **CBC**—California Building Code
- **CBO**—Chief Business Official
- **CDBG**—Community Development Block Grants
- **CEMP**—Comprehensive Emergency Management Plan
- **CEQA**—California Environmental Quality Act
- **CERT**—Citizens Emergency Response Training
- **CFR**—Code of Federal Regulations
- **CIP**—Capital Improvement Plan
- **CLC**—California Labor Code
- **CRS**—Community Rating System
- **CUPA**—Certified Unified Program Agencies
- **CWOP**—Closed without Payment
- **DMA**—Disaster Mitigation Act
- **DR**—Major Disaster Declaration
- **EBDA**—East Bay Discharge Authority
- **EOC**—Emergency Operations Center
- **ERSO**— Emergency Response and Security Officer
- **ETS**—Engineering and Technology Services
- **FEMA**—Federal Emergency Management Agency
- **FIT**— Facility Inspection Tool
- **FMA**—Flood Mitigation Assistance
- **GHG**—Greenhouse gas
- **GIS**—Geographic Information System
- **HMA**—Hazard Mitigation Assistance
- **HMGP**—Hazard Mitigation Grant Program
- **HMP**—Hazard Mitigation Plan
- **HSGP**—Homeland Security Grant Program
- **MO&T**— Maintenance, Operations, and Transportation
- **NFIP**—National Flood Insurance Program
- **NJHS**— Newark Junior High School
- **NMHS**— Newark Memorial High School
- **NPDES**—National Pollution Discharge Elimination System
- **NUSD**—Newark Unified School District
- **O&M**—Operations and Maintenance
- **OMD**—Operations and Maintenance Department
- **PDM**—Pre-Disaster Mitigation Grant Program
- **PIO**—Public Information Officer
- **POC**—Point of Contact
- **PRV**—Pressure-reducing valve
- **SARC**—School Accountability Report Card
- **SFHA**—Special Flood Hazard Area
- **SSMP**—Sanitary Sewer Management Plan
- **TESA**—Tri-Cities Emergency Services Association
- **UASI**—Urban Area Security Initiative
- **USC**—United States Code
- **USGS**—U.S. Geological Survey
- **UWMP**—Urban Water Management Plan
- **WRD**—Water Resources Department
- **WR**—Water Resources

2. CITY OF UNION CITY

2.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact
Joan Malloy, Director
Economic and Community Development
34009 Alvarado-Niles Road
Union City, CA 94587
Telephone: 510-675-5327
e-mail Address: joanm@unioncity.org

Alternate Point of Contact
Travis Souza, Lieutenant
Police Department
34009 Alvarado-Niles Road
Union City, CA 94587
Telephone: 510-675-5262
e-mail Address: traviss@unioncity.org

2.2 JURISDICTION PROFILE

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

- Date of Incorporation—January 13, 1959

- Current Population— The California Department of Finance estimated population for Union City was 72,952 as of January 1, 2016.

- Population Growth— The California Department of Finance estimated an increase in population from 2015 (72,412) to 2016 (72,952) of 0.7%. The Bay Area Census reports the following **decennial** population statistics from 1990 through 2010. Using the estimated population from the California Department of Finance, the population growth percentage was determined for 2010 to 2015.

Year	Population (actual)	Percentage Increase from Previous Decade	Source
1990	53,762	37%	Bay Area Census
2000	66,869	24%	
2010	69,516	4%	
2015	72,412 (estimated)	4%	CA Department of Finance

- Location and Description— Union City is a city in the San Francisco Bay Area in Alameda County, California, along the east side of the bay. Union City is approximately 30 miles from San Francisco and 20 miles north of San Jose, and 395 miles north of Los Angeles. Along with Union City, the cities of Fremont and Newark make up the Tri-City Area in Southern Alameda County. To the north and west of Union City, is the larger city of Hayward. According to the U.S. Census Bureau, the city has a total area of 19 square miles, all land with no bay frontage. The city lies adjacent to baylands that are located within the city of Hayward. Of the 19 square miles, approximately half of the city is undeveloped hillside. The city has a mean elevation of 62 feet above sea level, with portions of the urbanized area only 20 feet

above sea level. The *Eden Landing Ecological Reserve* lies along to the west of the Union City, along the San Francisco Bay shoreline in the city of Hayward. The Reserve is approximately 6,400 acres of restored salt ponds, adjacent diked marshes, and transitional areas to uplands that are managed for resident and migratory waterbirds, tidal marsh habitats, plant species, migrating waterfowl, as well as shorebirds and mammals. The tidal marsh habitat also acts as a significant nursery habitat for species of anadromous fish such as salmon and steelhead. Dry Creek Pioneer Regional Park is located in Union City, and shares a contiguous border with sister park Garin Regional Park, located in Hayward. The parks are a part of the East Bay Regional Park District. The parks feature a Visitor Center, Dry Creek Garden, Meyers Cottage, Nature Study, the Garin Apple Festival, activities for school groups, picnicking, hiking, horseback riding, kite flying, equestrian trails, dog walking areas, and fishing from the Jordan Pond pier. Jordan Pond has naturally reproducing populations of largemouth bass, bluegill, and sunfish. The Park District also plants channel catfish in the pond once or twice a year.

- Brief History— in 1850, entrepreneurs John and William Horner built a settlement in the San Francisco Bay Area. The settlement was named Union City, after the Horner's' steamboat, "The Union". The settlement began to fill out during the Gold Rush, when disappointed gold miners discovered that Union City's fertile soil was ideal for farming.

  In December of 1850, about a half mile east of Union City, Henry Smith bought some land and founded the town of New Haven, named after his home town of New Haven, CT (Swenson, 2005). Union City merged with the nearby community of New Haven to form the town of Alvarado on the west side, named after the former Mexican governor, Juan Bautista Alvarado. Alvarado is a California Historical Landmark (OHP, 2016), the site of the first courthouse in Alameda County where county government began on June 6, 1853. The seat of government moved to San Leandro in 1856.

  Further east, the town of Decoto was founded in 1870. It became a railroad hub, with the transcontinental railroad running through it. In 1959, the rural communities of Alvarado, New Haven and Decoto, fearing the future loss of their identity, determined to fend off the encroachment of neighboring Hayward to the north, and Fremont to the south, and decided to unite and incorporate as a new city to be known as Union City (Union City, 1978). Over the next 50 years, many thriving industries grew around the area, including salt manufacturers, beet sugar factories and flourmills.

- Climate— the climate in Union City is described as Mediterranean, characterized by warm, dry summers and mild winters. The City gets approximately 15 inches of rain per year and the number of days per year with any measurable precipitation is 55. On average, there are 265 sunny days per year in Union City, California. There are 0 inches of snowfall per year in Union City. Intellicast.com reports that August has the warmest temperatures of the year with an average high of 79°F. December and January have the coolest temperatures of the year with an average low of 42°F. Union City experienced a record high of 107°F in June of 1961 and a record low of 21°F in December of 1990 (TWC, 2016).

- Governing Body Format— Union City is a general law city with a city council/city manager form of government. In a general law city, the city, mayor, or council must look to the state for the authority to pass local laws. The city council consists of five council members, including the mayor. Council members are elected for four-year staggered terms. The mayor is elected for a four-year term. Elections are held in November of even numbered years for the Mayor's seat and a Council Member seats. In alternate four-year cycles, elections for the other three Council Member seats are held. The City Manager is the chief executive officer of the City and is responsible for managing and coordinating all day-to-day operations and administration. Duties include personnel and labor relations, the preparation and administration of the city budget, intergovernmental relations and organizing and implementing the City Council's policies. The City Manager is hired by the City Council and serves as the council's chief advisor. The departments in Union City include: Finance, Economic & Community Development, Community & Recreation

Services, Public Works, City Manager's Office, and Police; Fire Services are provided under contract with the Alameda County Fire Department.

The City Council is responsible for adopting this plan, the City Manager is responsible for overseeing its implementation.

- Development Trends— The City of Union City is well known as an exceptional place to live and work, with a history of sustained economic growth and strategic long-term planning. It has a diverse, well-developed economy and is home to a highly-skilled labor force. Union City is central to the San Francisco Bay Area and lies at the north end of Silicon Valley.

  Union City has available commercial property in well-planned development areas that is affordable and has access to transportation using BART, freeways or bridges for employees living in the greater Bay Area. The Port of Oakland is in close proximity to the City, along with the Foreign Trade Zone, interstate highways, and three major international airports. The business climate is robust, including a vibrant biotechnology sector and facilities owned by major international corporations.

  The Union City General Plan's Economic Development Element describes the City's plan to promote intensification and redevelopment of existing community shopping centers and attract light industrial manufacturing uses to vacant parcels or redevelopment sites. The City coordinated the investment of $100 million into the expansion of the Station District. New development includes a 243-unit residential project, including 3,000 square feet of retail and amenity space, next to the existing BART station, which is itself under construction to link BART with passenger rail services. There are six primary business districts in the City: the Station District (encompassing Decoto Industrial Park, BART station, and the El Mercado, and Market Place shopping centers), the Central Technology Center (i.e., Central Bay Industrial Park), Alvarado Technology Center, Union Landing, the International Market Place (i.e., Four Corners), and the Mission Boulevard entryway corridor. It is the City's intention to transform these business districts to fulfill the economic goals of the City. There are additional business opportunities available for incoming commercial and industrial use, such as Union City Boulevard corridor, Alvarado Business Park, and the Greater Station District area, which includes lands around the BART station.

  Specific permit details regarding development during the previous plan performance period is available in Table 1-7.

2.3 CAPABILITY ASSESSMENT

2.3.1 Integration with the 2016 Planning Initiative

The following technical reports, plans, and regulatory mechanisms were reviewed to inform the 2016 Multi-Jurisdiction HMP for both Volume 1 and Volume 2 (Union City Annex). All of the below items were additionally reviewed as part of the full capability assessment for Union City.

- **Union City General Plan** – The General Plan, including the Land Use and Safety Elements, were reviewed for information regarding planning area composition and policies consistent with hazard mitigation for carry over as objectives.
- **Union City Municipal Code** – The Municipal Code was reviewed for relevant information regarding regulatory consistency with plan goals and objectives and opportunities for action plan integration.
- **Flood Damage Prevention Ordinance** – The Flood Damage Prevention Ordinance (Floodplain Combining District, Chapter 18.98 of the Municipal Code) was reviewed for compliance with the National Flood Insurance Program.
- **Capital Improvements Plan** – The Capital Improvements Plan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.

- **Technical Reports and Information** – Outside resources and references used to complete the Union City Annex are identified in Section 2.11 of this Annex.

2.3.2 Full Capability Assessment

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

Table 2-1. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Opportunity for Improvement?
Codes, Ordinances, & Requirements				
Building Code	Yes	No	Yes	Yes
***Comment**: 2016 California Building (Volumes 1 & 2), Residential, Electrical, Mechanical, Plumbing, Fire, and Green Building Standards Codes and California Codes - Administrative, Uniform Code for the Abatement of Dangerous Buildings, Uniform Housing, and Uniform Security Codes. Title 15, Ord. 822-16 to 832-16, 11/2016*				
Zoning Code	Yes	No	Yes	No
***Comment**: The City of Union City Zoning Ordinance. Ord. 670-06 § 3, 2006; Ord. 55-64 § 1.0, 1964, undergoes periodic review and revisions*				
Subdivisions	Yes	No	No	No
***Comment**: Subdivision Ordinance of the City (may be so cited and pleaded). Ord. 143-76 § 2, 1976, undergoes periodic review and revision*				
Stormwater Management	Yes	No	Yes	No
***Comment**: Storm Water Management and Discharge Control Ordinance of the City of Union City. Ord. 382-92, 1992*				
Post-Disaster Recovery	No	No	No	No
***Comment**:*				
Real Estate Disclosure	No	No	Yes	No
***Comment**: CA. State Civil Code 1102 requires full disclosure on natural hazard exposure of the sale/re-sale of any and all real property.*				
Growth Management	Yes	No	No	No
***Comment**: Hillside Area Plan and Hillside Combining Zoning District, Chapter 18.96 (Ord. 670-06 § 3, 2006; Ord. 454-95 § 2, 1995; Ord. 55.221-80 § 2, 1980)*				
Site Plan Review	Yes	No	No	No
***Comment**: Title 18, Chapter 18.76 Site Development Review, Ord. 670-06 § 3, 2006*				
Environmental Protection	Yes	No	Yes	No
***Comment**: Title 18, Chapter 18.104, Environmental Review, Ord. 670-06 § 3, 2006*				
Flood Damage Prevention	Yes	No	No	No
***Comment**: Title 18, Chapter 18.98 Floodplain Combining District, Ord. 757-11 § 1, 2011*				
Emergency Management	Yes	No	No	No
***Comment**: Title 2, Chapter 2.28 Emergency Organization, Ord. 31.3-72 § 1, 1972, undergoes periodic review and update*				
Climate Change	No	No	No	No
***Comment**: Climate Action Plan*				
Other:	Yes	No	No	No
***Comment**:*				

	Local Authority	Other Jurisdiction Authority	State Mandated	Opportunity for Improvement?
Planning Documents				
General Plan	Yes	No	Yes	Yes
Is the plan compliant with Assembly Bill 2140? Yes				
***Comment**: The Health and Safety, Environmental Sustainability, Land Use, and Natural and Historical Resources elements may integrate with hazard mitigation. Union City General Plan, Adopted February 12, 2002 City Council Resolution 2109-02. A 2040 revision to the General Plan is in progress beginning in 2014 – compliance with AB 2140 will be pursued in coordination with the General Plan update.*				
Capital Improvement Plan	Yes	No	No	Yes
What types of capital facilities does the plan address? City building renovations, fuel facility, surveillance system, generator replacement, kitchen-shower-restroom rehabilitation, gates and lighting, parks and recreation grounds renovations, streets and transportation improvements.				
How often is the plan updated? Every five years- currently FY 2015-16 – 2019-20 with biennial updates per the two-year budget cycle.				
***Comment**:*				
Floodplain or Watershed Plan	Yes	Yes	No	No
***Comment**: Alameda County Flood Control District as regional authority.*				
Stormwater Plan	No	No	Yes	No
***Comment**: While the City does not have a specific strategic plan related to stormwater management, Union City supports a clean water program including an industrial and illicit discharge inspection program. Additionally, Union City reviews storm water pollution prevention plans, conduct storm water event inspections of construction sites, and receive and investigate complaints about illicit discharges into public storm drain system.*				
Urban Water Management Plan	No	Yes	No	No
***Comment:** Alameda County Water District - UWMP, 2015 – Covers Union City, Newark, and Fremont*				
Habitat Conservation Plan	No	No	No	No
***Comment**:*				
Economic Development Plan	Yes	No	No	No
***Comment**: Economic Development Element – General Plan*				
Shoreline Management Plan	No	No	No	No
***Comment**: N/A*				
Community Wildfire Protection Plan	No	Yes	No	No
***Comment**: Alameda County Community Wildfire Protection Plan, 2015*				
Forest Management Plan	No	No	No	No
***Comment**: None Located*				
Climate Action Plan	Yes	No	Yes	Yes
***Comment**: Union City Climate Action Plan, November 2010.*				
Other: Terrorism Plan	No	Yes	No	No
***Comment**: Alameda County Countywide Terrorism Response Plan, Alameda County Bioterrorism Response Plan*				
Comprehensive Emergency Management Plan	Yes	Yes	Yes	Yes
***Comment**: Alameda County Emergency Operations Plan, December 2012, Union City Comprehensive Emergency Management Plan (CEMP) – identified need to update the CEMP*				
Threat & Hazard Identification & Risk Assessment (THIRA)	No	Yes	Yes	No
***Comment**: Bay Area UASI THIRA, 2015*				
Post-Disaster Recovery Plan	Yes	No	No	Yes
***Comment**: Union City Comprehensive Emergency Management Plan (CEMP), Volume 3, Recovery Concept of Operations*				

	Local Authority	Other Jurisdiction Authority	State Mandated	Opportunity for Improvement?
Continuity of Operations Plan	Yes	No	No	Yes
***Comment**: Union City Comprehensive Emergency Management Plan (CEMP), Continuity of Operations/Continuity of Government Functional Annex*				
Public Health Plan	No	Yes	No	No
***Comment**:* Alameda County Public Health *Department.* Strategic Plan *2008-2013*				
Other:	Yes	No	No	No
***Comment**: Hillside Area Plan – July 1995. Places strict regulations on hillside development. Any proposed development within the area must be approved by popular vote. The most recent vote was through Measure KK in 2014, where voters defeated a measure that would have allowed limited development of 63 acres of land in the hillside area.*				

Table 2-2. Fiscal Capability

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

Table 2-3. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Public Works Department, Engineering Division: City Engineer, Civil Engineers
Engineers or professionals trained in building or infrastructure construction practices	Yes	Public Works Department, Engineering Division: Principal Civil Engineer, Civil Engineers
Planners or engineers with an understanding of natural hazards	Yes	Public Works Department, Engineering Division, City Engineer, Civil Engineers
Staff with training in benefit/cost analysis	Yes	Administrative Services, Finance Division: Finance Specialist I, II, III
Surveyors	Yes	Public Works Department, Engineering Division, contract surveyor
Personnel skilled or trained in GIS applications	Yes	Web Manager – City Manager's Office
Scientist familiar with natural hazards in local area	Yes	Economic and Community Development, Environmental Programs Division, Environmental Programs Inspector (Professional Geologist)
Emergency manager	No	
Grant writers	Yes	Economic & Community Development, Public Works

Table 2-4. National Flood Insurance Program Compliance

Criteria	Response
What local department is responsible for floodplain management?	Economic & Community Development
Who is your floodplain administrator? (department/position)	Economic & Community Development Director
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	Adopted 1988; most recent amendment January 2011
When was the most recent Community Assistance Visit or Community Assistance Contact?	November 19, 2015 (CAC)
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Any Repetitive Loss or Severe Repetitive Loss properties in your jurisdiction?	No
Does your floodplain management staff need any assistance or training to support its floodplain management program? • If so, what type of assistance/training is needed?	Yes FEMA trainings would be beneficial to staff involved in floodplain management.
Does your jurisdiction participate in the Community Rating System (CRS)? • Is your jurisdiction interested in joining the CRS program?	No No – no identified current need for CRS participation due to limited floodplain.
How many Flood Insurance policies are in force in your jurisdiction?	181
What is the insurance in force?	$54,762,600
What is the premium in force?	$147,547
How many total loss claims have been filed in your jurisdiction?	25
How many claims were closed without payment/are still open?	6 CWOP
What were the total payments for losses?	$499,244.59

Table 2-5. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes. Communications and Marketing Manager.
Do you have personnel skilled or trained in website development?	Yes. GIS and Web Manager
Do you have hazard mitigation information available on your website?	Yes
• If yes, please briefly describe.	A Hazard Mitigation Questionnaire is posted in relation to developing the HMP. Also, the city website has an Emergency Preparedness page that is highlighted prominently.
Do you utilize social media for hazard mitigation education and outreach?	Yes
• If yes, please briefly describe.	City and Police Department Facebook pages and Twitter accounts, City Instagram account, Police Department Nixle account, Union City Patch, Next Door, and 8,000 residents on the City's GovDelivery email listserv.
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes

Criteria	Response
• If yes, please briefly describe.	Union City Community Emergency Response Team, Tri-Cities Emergency Services Association (TESA), ARES/RACES
Do you have any established warning systems for hazard events?	Yes
• If yes, please briefly describe.	Everbridge Emergency Alert System, Police Nixle, Code Red Alert System

Table 2-6. Community Classifications

	Participating?	Classification	Date Classified
Community Rating System	No	-	-
Building Code Effectiveness Grading Schedule	Yes	3	1998
Public Protection (Alameda County Fire Department)	Yes	2	2010
Storm Ready	No	-	-
Firewise	No	-	-

Table 2-7. Development and Permit Capabilities

Criteria	Response				
Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan?	No				
Is your jurisdiction expected to annex any areas during the performance period of this plan?	No				
Does your jurisdiction issue development permits?	Yes				
• If no, who does? If yes, which department?	Economic and Community Development				
How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?					
Type	2011	2012	2013	2014	2015
Single Family	2	4	0	1	47
Multi-Family	57	0	0	2	243
Other (commercial, mixed use, etc.)	0	2	2	5	1
Does your jurisdiction have the ability to track permits by hazard area?	No				
• If no, please provide a qualitative description of where development has occurred in terms of hazard risk areas.	Assessment of potential intersection with known hazard areas, such as flood zones and the hillside district, is conducted on a case-by-case basis prior to development. Any project found to be within a hazard area will be mitigated through strict adherence to current building codes and city regulations.				
Does your jurisdiction have a buildable lands inventory?	No				
• If no, please quantitatively describe the level of build-out in the jurisdiction.	Union City is largely built-out with development focused on infill.				
Are any areas targeted for development or major redevelopment in the next five year?	Yes				

Criteria	Response
• If yes, please describe.	Major redevelopment is currently underway in the Intermodal Station District around the BART station. To date, 595 high density residential units have been constructed in the Station District, including a 157-unit affordable housing development. An additional 350-unit apartment development is anticipated to be developed adjacent to the BART Station in the next five years. In a separate project on the west side of the City, a portion of the Turk Island landfill is projected to be redeveloped with 33 single-family homes. Two townhouse projects are also anticipated to be constructed over the next few years; one 36-unit project will be under construction shortly, and a second 63-unit project is anticipated to receive approval in early 2017.
• If yes, are any of these areas located in known hazard risk zones?	No.

2.4 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the HMP into local planning mechanisms.

2.4.1 Existing Integration

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

- **General Plan** – The City's General Plan integrates hazard mitigation through the consideration of hazards most likely to impact the City. Seismic, air quality, wildland and urban fires, flooding, and hazardous materials are considered in the Health and Safety Element. Climate change is discussed in the Environmental Sustainability Element, and the importance of biological resources, water resources, and open space preservation is described through the Natural and Historical Resources Element.
  The City updated the General Plan in conjunction with the 2016 Multi-jurisdiction HMP and, as a result, used information from the HMP to inform the General Plan Update.
- **Municipal Code** – The Union City Municipal Code – Title 2 Chapter 2.28, Emergency Organization - This section of the municipal code creates a Disaster Council and the positions of Director and Assistant Director of Emergency Services. The legislated purposes of this chapter are to ". . . provide for the effective mobilization of all of the resources of this City, both public and private, to meet any condition constituting a local emergency, state of emergency or state of war emergency and shall provide for the organization, powers and duties, services and staff of the emergency organization. Given that the City has overall responsibility for implementing the HMP, the creation of the Disaster Council and the authority of the City is directly aligned with the HMP's goal of establishing a coordinated approach to implementing the plan.

2.4.2 Opportunities for Future Integration

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

- **General Plan, Safety Element** — include the HMP in the Health and Safety Element by direct reference to fulfill AB 2140, and utilize the risk assessment results to update future versions of the General Plan. The City anticipates that this will be fulfilled upon completion of the 2040 General Plan Update.
- **Public Outreach** — develop a program that addresses hazard mitigation as part of a targeted outreach program, expanding on what the City already has in the plan.
- **Climate Action Plan** — the implementation of the Climate Action Plan is consistent with the HMP's goals for mitigating natural hazards, in that it works to reduce greenhouse gas (GHG) emissions throughout the community, implement alternative fuel use, adopt a Green Building Ordinance for new construction, and implement a 75 percent waste diversion rate to slow the impacts of climate change, risks of increased sea levels, reduced snow packs, decreasing air quality, shifts in climate patterns and increased frequency of extreme weather events.

2.5 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 2-7 lists all past occurrences of natural hazards within the jurisdiction.

Table 2-8. Natural Hazard Events

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment/Description of Damages
Severe Weather (Extreme Heat)	N/A	June 2016	CDC issues suggestions to East Bay residents, including Union City, to stay hydrated during hot weather.
Earthquake	N/A	June 2014	USGS reported a magnitude 3.0 earthquake less than a mile northeast of Union City.
Freeze	N/A	12/2013	Freeze warning issued throughout Bay area – Union City experienced low temperatures below freezing.
Landslide	DR-1203	2/1998	Shallow landslides turned into debris flows on many of the hillslopes near Union City in the East Bay hills of the San Francisco Bay area during a storm.
Flood	DR-1155	1/1997	Dry Creek flooded at Mission Blvd. (State Highway 238) causing damage to the adjacent properties in the nearby Decoto neighborhood.
Earthquake	DR-845	10/1989	Loma Prieta – the city did not experience major damage, however, it is believed that the population experienced minor impacts from the earthquake
Flood	DR-47	12/1955	After three days of rain, Alameda Creek rose 20 feet as it passed by Niles. A 50-foot breach in a levee allowed waters to enter Alvarado up to four feet deep in places. A total of 15 square miles of the area was flooded.

2.6 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

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

Other noted vulnerabilities include:

- The Station District is a current redevelopment initiative located on a former industrial site with highly contaminated soils.
- The Seven Hills neighborhood, east of Mission Boulevard has one means of ingress/egress – Appian Way. A Hayward fault earthquake event has the potential to sever this access point, thus isolating residents. A similar risk exists for the Masonic home complex.
- Multiple gas pipelines cross the city and have the potential to rupture during a seismic event.

2.7 HAZARD RISK RANKING

Table 2-9 presents the ranking of the hazards of concern.

Table 2-9. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe Weather	33	Medium
3	Flood	18	Medium
4	Wildfire	18	Medium
5	Dam Failure	18	Medium
6	Landslide	12	Low
7	Drought	3	Low

2.8 STATUS OF PREVIOUS PLAN INITIATIVES

The status of previous actions from the 2011 ABAG HMP for the city of Union City can be found in Appendix D of this Volume.

2.9 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 2-10 lists the actions that make up the Union City hazard mitigation action plan. Table 2-11 identifies the priority for each action. Table 2-12 summarizes the mitigation actions by hazard of concern and the six mitigation types.

Table 2-10. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action UC-1— Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.						

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New and existing	All	1, 3, 8, 9, 10, 12	Economic and Community Development	High	PDM, HMGP, Local Budget (local match)	Dependent on Funding
Action UC-2— Continue to support the Planning Area-wide actions identified in this plan.						
New and existing	All	All	City Manager's Office	Low	Local Budget	Ongoing
Action UC-3— Actively participate in the plan maintenance strategy identified in this plan.						
New and existing	All	All	City Manager's Office	Low	Local Budget	Ongoing
Action UC-4— Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.						
New and existing	All	All	Public Works Economic and Community Development	Low	Local Budget	Ongoing
Action UC-5— Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.						
New and existing	Flood	1, 3, 5, 7, 9, 10, 11, 12	Economic and Community Development	Low	Local Budget	Ongoing
Action UC-6— Integrate the hazard mitigation plan into other plans, programs, or resources that dictate land use or redevelopment.						
New and existing	All	All	Economic and Community Development	Low	Local Budget	Ongoing
Action UC-7— Seek City Council approval and funding for a full-time Emergency Manager job classification.						
New	All	4,5	City Manager's Office	Medium	Local Budget	Short
Action UC-8— Update the citywide Continuity of Operations/Continuity of Government (COO/COG) Plan from the Comprehensive Emergency Management Plan (CEMP), and implement required COO/COG actions. Carry over of previous action Govt. b-5.						
Existing	All	1,4,5,6,9	City Manager's Office	High	Local Budget	Long
Action UC-9— Based on EOC staffing capabilities assessment, ensure that mandated training is provided to all employees in SEMS, FEMA ICS-100, ICS-200, IS-700, and IS-800; and ensure that employee training records are securely maintained.						
Existing	All	1,4,5,6,9	City Manager's Office	Low	Local Budget	Ongoing
Action UC-10— Based on EOC staffing capabilities assessment, ensure that mandated training is provided to employees who require advanced knowledge and application of the ICS, such as primary and alternate EOC Section Chiefs and senior field personnel, to include at least ICS-300, ICS-400, and the FEMA Professional Development Series; and ensure that employee training records are securely maintained.						
Existing	All	1,4,5,6,9	Economic and Community Development	Medium	Local Budget	Ongoing
Action UC-11— Based on EOC staffing capabilities assessment, ensure that all Police Department staff who may be assigned the role of incident commander at an emergency/disaster scene have received Incident Commander training; and ensure that employee training records are securely maintained.						
Existing	All	1,4,5,6,9	Police Department	Medium	Local Budget	Ongoing

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action UC-12—Monitor local availability of upcoming training opportunities for city staff regarding incident staffing, disaster response, and recovery.						
New	All	1,4,5,6,9	City Manager's Office	Medium	Local Budget	Ongoing
Action UC-13— Conduct EOC tabletop exercise(s) to evaluate capabilities and train employees in their assigned EOC role(s).						
N/A	All	1,4,5,6,9	City Manager's Office	Medium	Local Budget, UASI, HSGP	Long
Action UC-14— Develop and exercise a Disaster Debris Management Plan.						
New	Dam failure, Earthquake, Flood, Severe weather, Wildfire	1, 3, 5,8, 9	Public Works Department City Manager's Office	Medium	Local Budget, HSGP, UASI	Long
Action UC-15— Enhance public education and awareness of natural and manmade hazards in the community and public understanding of disaster preparedness, including foreign language translations.						
New	All	1,4,5,7	City Manager's Office	Medium	Local Budget, UASI	Ongoing
Action UC-16—Ensure all property address signage meets current Building and Fire Code standards.						
Existing	Earthquake, Fire, Flood	1,3,9,10,12	Alameda County Fire Department	Low	Local Budget	Ongoing
Action UC-17— Develop improved capabilities to incorporate GIS technology by all departments into services provided to the public and for use during emergency/disaster incidents.						
Existing	Dam Failure, Earthquake, Flood, Wildfire, Landslide	1,3,4	City Manager's Office	Medium	Local Budget, PDM	Long
Action UC-18— Conduct a test of emergency communications and information systems interoperability, to establish baseline capabilities for employee call-back, communications between the EOC and incident command, and communications with the Operational Area and Mutual Aid resources.						
Existing	All	1,3,4,7	City Manager's Office	Medium	Local Budget, UASI, HSGP	Long
Action UC-19— Implement Fire Department field inspection system using portable computers for engine company inspections and Fire Prevention inspections, to integrate inspections, re-inspections, invoicing, permits, CUPA and business license data.						
New	Wildfire	3,10	City Manager's Office	High	Grants, including AFG	Long
Action UC-20— Review, revise, and update the Comprehensive Emergency Management Plan (CEMP) – ACFD contract requirement						
Existing	All	4,5	Alameda County Fire Department (contract)	Low	Local Budget	Ongoing
Action UC-21— Conduct a gap analysis of the Union City Emergency/Disaster preparedness and response program, to include a comprehensive review of employee training requirements and needs, plans and procedures, EOC equipment and staffing capabilities, and related analyses.						
New	All	4,5,6	City Manager's Office	Medium	Local Budget, HSGP	Ongoing
Action UC-22— Conduct a seismic and functional assessment of the CERT trailer behind Fire Station #31, for use as the designated Alternate EOC site.						
Existing	Earthquake	1,3,10	Public Works	Medium	Local Budget, PDM, HMGP	Ongoing
Action UC-23—Train appropriate staff in FEMA's Hazards-US GIS extension and Benefit/Cost Analysis Tool for use in potential grant applications and post-disaster property assessments.						
Existing	All	4,6,9	Public Works	Low	Local Budget	Short
Action UC-24— Acquire handheld GPS trackers to develop an urban tree inventory for monitoring the health of trees and identifying potentially dangerous dead or dying trees.						

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New	Drought, Wildfire, Severe Weather	1,4,12	Public Works	Medium	Local Budget, PDM, CalFIRE	Short
Action UC-25— Develop a long-term urban forest management plan to address adverse future impacts on the City's natural resources.						
New	Drought, Severe Weather, Wildfire, Landslide	1,3,4,12	Public Works	Medium	Local Budget, CalFIRE	Long
Action UC-26—Develop and maintain a landscape design manual to provide general guidance and education to the public on water efficiency in landscaping and to serve as a resource for water efficient landscape design and installation, including lists of recommended site appropriate native and drought-tolerant plant species.						
New	Drought	1,3,10,12	Economic and Community Development	Low	Local Budget,	Long
Action UC-27—Integrate climate change and natural hazards planning in to current city plan revisions and future planning initiatives.						
New and Existing	All	1,3,10,12	Economic and Community Development	Low	Local Budget	Ongoing
Action UC-28—Work with ACWD to design and install seismically resilient backbone pipeline through liquefiable soils in Union City						
Existing	Earthquake	1, 3, 5, 9	ACWD (primary), Public Works	Medium	Local Budget, HMGP, PDM	Long
Action UC-29—Acquire emergency generators for the City's critical facilities, specifically Fire Station 31, the Senior Center, and Corporation Yard.						
Existing	Earthquake, Severe Weather, Wildfire	1,3,8,9,10	Public Works	Medium	Local Budget, PDM, HMGP	Long
Action UC-30—Conduct a comprehensive structural seismic analysis of the City's facilities. Carry over of previous action Govt. a-2.						
Existing	Earthquake	1,3,9,10	Public Works	Medium	Local Budget, PDM, HMGP	Long
Action UC-31—Establish a Broadband-WiFi10g network in the Station District.						
New	Earthquake, Severe Weather	2,5,9	Public Works	High	Local Budget	Long
Action UC-32— Establish a Broadband-WiFi10g network backbone infrastructure along major thoroughfares throughout the City.						
New	Earthquake, Severe Weather	2,5,9	Public Works	High	Local Budget	Long
Action UC-33—Conduct a Feasibly Study to review necessary improvements required to make Mark Green Sports Center a base camp for recovering families after crisis						
Existing	Dam Failure, Earthquake, Flood, Wildfire	1,3,9,10	Public Works	Low	Local Budget	Short
Action UC-34—Conduct a Feasibility Study to identify temporary morgue facilities.						
Existing	Dam Failure, Earthquake, Flood, Wildfire	1,3,9,10	Public Works	Low	Local Budget	Short
Action UC-35—Conduct a Feasibility Study to review the highway overpass bridge of Alvarado Niles Road over I-880 , for any seismic upgrades						
Existing	Earthquake	1,3,8,9,10	Public Works	Medium	Local Budget, PDM, HMGP	Short
Action UC-36—Coordinate with the city of Hayward to conduct a Feasibility Study to review any seismic upgrades for the I-880 overpass over Whipple Road						

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Existing	Earthquake	1,3,8,9,10	Public Works	Medium	Local Budget, PDM, HMGP	Short
Action UC-37—Construct grade separations on the Niles Subdivision and the Oakland Subdivision in the Decoto neighborhood, and on the Coast Subdivision on Union City Boulevard, Smith Street, Dyer Street, and Alvarado Boulevard.						
Existing	Earthquake	1,3,8,9,10	Public Works	High	Local Budget	Long
Action UC-38—Acquire two Mobile Emergency Operations Centers						
New	All	5	Police Department	High	Local Budget, UASI, HSGP	Long
Action UC-39—Acquire two 4-wheel drive emergency response vehicles capable of supporting emergency/disaster workers with enhanced safety when traveling into and out of disaster zones or dangerous locations.						
New	All	5	Police Department	High	Local Budget, UASI, HSGP	Long
Action UC-40—Acquire four radio charging stations for spare radios.						
New	All	5	Police Department	Low	Local Budget	Short
Action UC-41—Acquire two Mobile Ultra High Frequency (UHF) Base Units to communicate with deployed field radios.						
New	All	5	Police Department	Low	Local Budget	Short
Action UC-42—Acquire 100 portable beds/cots for use to support sheltering/mass care operations during a disaster.						
New	All	5	Police Department	Medium	Local Budget, HSGP	Short
Action UC-43—Acquire four satellite phone.						
New	All	5	Police Department	Low	Local Budget	Short
Action UC-44—Acquire two rescue boats						
New	Flood, Dam Failure	5	Police Department	Medium	Local Budget, HSGP	Long
Action UC-45—Establish redundant, offsite copies of crucial information and all City data to be able to maintain basic network functions.						
New	Earthquake, Severe Weather	3,9	Information Technology	High	Local Budget, HSGP	Long
Action UC-46—Establish a fully redundant data center with no outage if the main building fails.						
New	Earthquake, Severe Weather	3,9	Information Technology	High	Local Budget, HSGP	Long
Action UC-47—Acquire offsite battery backups to carry energy load until generators start.						
New	Earthquake, Severe Weather	1,3,9	Information Technology	Medium	Local Budget, PDM, HMGP	Short
Action UC-48— Develop unmanned aerial vehicle (UAV) capability for hazard mitigation surveys and post-disaster damage assessments; and develop policies, procedures and staff training guidelines for UAV use.						
New	Dam Failure, Flood, Earthquake, Wildfire	4,9	Police Department	Medium	Local Budget, PDM, HMGP	Long
Action UC-49— Develop multi-cultural training presentations and handouts in multiple languages, to expand participation in the Community Emergency Response Team (CERT) program.						
Existing	All	1,4,5,7	City Manager's Office	Medium	Local Budget, Fire Department contract	Long
Action UC-50—Establish a central paging system for all City locations to be expanded for SMS/cell phone alerts during major disasters.						
New	Earthquake, Flood, Dam Failure	3,5,6	Information Technology	High	Local Budget, HSGP	Long
Action UC-51— Establish a high speed link from all City facilities back to City Hall						
New	Earthquake, Severe Weather	9	Information Technology	High	Local Budget	Long

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action UC-52— Establish a second location in the City to provide internet/email/external connections, as a backup to the existing City Hall systems that perform this function.						
New	Earthquake, Severe Weather	9	Information Technology	Medium	Local Budget	Long
Action UC-53— Establish a portable unit or fixed location for use as a community preparedness training site, volunteer coordination point, and disaster first responder work station center with access to the City's computer network, to supplement the Emergency Operations Center.						
New	All	1,4,5,6,9	Information Technology	Medium	Local Budget, HSGP	Long
Action UC-54— Expansion of central lock system to all off sites and all doors.						
New	Earthquake, Severe Weather	3,91	Information Technology	Medium	Local Budget, HSGP	Long

Table 2-11. Mitigation Strategy Priority Schedule

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

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority[a]	Grant Priority[a]
UC-23	3	Medium	Low	Yes	No	Yes	Medium	Medium
UC-24	3	Medium	Medium	Yes	Yes	No	Medium	Medium
UC-25	4	Medium	Medium	Yes	Yes	No	Medium	Medium
UC-26	4	Low	Low	Yes	No	Yes	Low	Low
UC-27	4	Medium	Low	Yes	No	Yes	Medium	Low
UC-28	4	High	High	Yes	Yes	No	Medium	High
UC-29	5	High	Medium	Yes	Yes	No	High	High
UC-30	4	High	Medium	Yes	Yes	No	High	High
UC-31	3	High	High	No	No	Yes	High	Low
UC-32	3	High	High	No	No	No	High	Low
UC-33	4	High	Low	Yes	Yes	Yes	High	Medium
UC-34	4	High	Low	Yes	Yes	No	High	Medium
UC-35	5	High	Medium	Yes	Yes	No	High	High
UC-36	5	High	Medium	Yes	Yes	No	High	High
UC-37	5	High	High	Yes	Yes	No	Medium	High
UC-38	1	High	High	Yes	Yes	No	Low	High
UC-39	1	High	High	Yes	Yes	No	Medium	High
UC-40	1	High	Low	Yes	No	Yes	High	Low
UC-41	1	High	Low	Yes	No	Yes	High	Low
UC-42	1	High	Medium	Yes	Yes	Yes	Medium	Medium
UC-43	1	High	Low	Yes	No	Yes	High	Low
UC-44	1	High	Medium	Yes	Yes	No	Low	Medium
UC-45	2	High	High	Yes	Yes	No	High	High
UC-46	2	High	High	Yes	Yes	No	Medium	High
UC-47	3	High	Medium	Yes	Yes	No	Medium	High
UC-48	2	Medium	Medium	Yes	Yes	Yes	Medium	Medium
UC-49	4	Medium	Medium	Yes	No	Yes	Medium	Medium
UC-50	3	High	High	Yes	Yes	No	Medium	High
UC-51	1	Medium	High	No	No	No	Low	Low
UC-52	1	Medium	Medium	Yes	No	No	Medium	Low
UC-53	5	Medium	Medium	Yes	Yes	Yes	Medium	Medium
UC-54	2	Medium	Medium	Yes	Yes	Yes	Medium	Medium

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

Table 2-12. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type[a]					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	2, 3, 4, 5, 6, 14, 17, 27	1,5, 23, 33, 34, 47	2, 3, 4, 5, 15, 49, 50		2, 4, 7, 8, 9, 10, 11, 12, 13, 18, 21, 38, 39, 40, 41, 42, 43, 48	
Drought	2, 3, 6, 17, 27	1, 23	2, 3, 15, 49	24, 25, 26	2, 78, 9, 10, 11, 12, 13, 18, 21, 38, 39, 40, 41, 42, 43	
Earthquake	2, 3, 6, 14, 16, 17, 27	1, 16, 22, 29, 30, 33, 34, 45, 46, 47, 51, 52, 53, 54	2, 3, 15, 49, 50		2, 78, 9, 10, 11, 12, 13, 21, 38, 39, 40, 41, 42, 43, 48	28, 31, 32, 35, 36, 37
Flood	2, 3, 4, 5, 6, 16, 17, 27	1, 4, 5, 16, 23, 33, 34, 47	2, 3, 4 , 5, 15, 49, 50	4, 5, 25	2, 4, 5, 7, 8, 9, 10, 11, 12, 13, 18, 21, 38, 39, 40, 41, 42, 43, 48	
Landslide	2, 3, 6, 17, 27	1, 23, 47	2,3, 15, 49, 50		2, 7, 8, 9, 10, 11, 12, 13, 18, 21, 38, 39, 40, 41, 42, 43	
Severe Weather	2, 3, 4, 6, 14, 17, 27	1, 23, 29, 45, 46, 47, 51, 52, 53, 54	2, 3, 4, 15, 49, 50	4, 24, 25	2, 4, 7, 8, 9, 10, 11, 12, 13, 18, 21, 38, 39, 40, 41, 42, 43	31, 32
Wildfire	2, 3, 6, 14, 16, 17, 19, 27	1, 16, 19, 23, 29, 33, 34, 47	2,3, 15, 49, 50	24, 25	2, 4, 7, 8, 9, 10, 11, 12, 13, 18, 19, 21, 38, 39, 40, 41, 42, 43	

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

2.9.1 Jurisdictional Process for Integration into Planning Mechanisms

Implementation of Union City's mitigation action plan will enhance and expand the future integration opportunities identified as part of the 2016 initiative. Local, regional, state and federal stakeholders were involved in, and consulted with, during the planning process. This coordination is expected to continue through City activities, midterm progress reporting, implementation coordination, and continued public engagement. Union City identified twelve actions that have been recommended for integration in this HMP. As the plan is implemented, all City agencies will use information from this plan as the best available science and data on natural hazards impacting the City of Union City.

2.10 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

Hiring or engaging a knowledgeable and experienced Emergency Manager would result in significantly greater understanding of the risks and vulnerabilities facing the community, and would provide needed ongoing support for completion of mitigation actions identified in the HMP and emergency response plans.

2.11 RESOURCES

Bay Area Census, 2010, http://www.bayareacensus.ca.gov/cities/UnionCity.htm, Union City

California Department of Finance (DOF), 2016, Population Estimates for Cities, Counties, and the State – January 1, 2015 and 2016

California Office of Historic Preservation (OHP), 2016, http://ohp.parks.ca.gov/ListedResources/Detail/503, Site of First County Courthouse

Swenson, T. 2005, http://museumoflocalhistory.org/wordpress2/wp-content/uploads/2014/10/UCcollection.pdf, Union City History Collection

The Weather Company (TWC), 2016, http://www.intellicast.com/Local/History.aspx?location=USCA1177, Historic Average: Union City

Union City, 1978, Looking Back: Early Glimpses of Union City

Union City, 2016, http://www.ci.union-city.ca.us/about-us/facts-and-figures, Facts and Figures

3. CITY OF NEWARK

3.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact
Terrence Grindall, Assistant City Manager
37101 Newark Blvd
Newark, CA 94560
Telephone: 510-578-4200
e-mail Address: terrence.grindall@newark.org

Alternate Point of Contact
Soren Fajeau, Public Works Director
37101 Newark Boulevard
Newark, CA 94560
Telephone: 510-578-4589
e-mail Address: soren.fajeau@newark.org

3.2 JURISDICTION PROFILE

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

- Date of Incorporation— The City incorporated on September 9, 1955.
- Current Population—44,733 as of January 1, 2016 (DOF 2016).
- Population Growth— The California Department of Finance estimated an increase in population from 2015 (44,284) to 2016 (44,733) of 1.0%. The Bay Area Census reports the following **decennial** population statistics from 1950 through 2010. Using the estimated population from the California Department of Finance, the population growth percentage was determined for 2010 to 2015.

Year	Population (actual)	Percentage Increase from Previous Decade	Source
1990	37,861	18%	Bay Area Census
2000	42,471	12%	
2010	42,573	0.24%	
2015	44,284 (estimated)	4%	CA Department of Finance

- Location and Description— Newark is a city in Alameda County, California, situated on the southeast edge of the San Francisco Bay. It is located 35 miles south of San Francisco, 30 miles south of Oakland, 20 miles north of San Jose, and 395 miles north of Los Angeles. Newark is an enclave, surrounded by the city of Fremont. The three cities of Newark, Fremont, and Union City make up the "Tri-City" area. The western edge of Newark lies near the southern end of the San Francisco Bay. State Route 84 runs along the northwest border of the city, and continues as the Dumbarton Bridge to cross the San Francisco Bay to reach Menlo Park. Interstate 880 serves as the eastern boundary of the city with Fremont. The U.S. Census Bureau reports the city has a total area of 13.9 square miles, of which, 13.88 square miles is land and 0.02 square miles is water. The city has a mean elevation of 20 feet above sea level. Newark is bordered by the Don Edwards San Francisco Bay National Wildlife Habitat, hosting the largest *wetland* restoration project on the west coast of the U.S. Historically the Tri-City Area (Newark, Freemont and

Union City) was overlaid with tidal marshes, sloughs, ponds, willow groves, and creeks. Most of these historical features no longer exist due to development of a creek and storm drain network and present-day watershed boundaries. Development has also resulted in the culverting and channelization of many creeks, and the filling of portions of the bay and tidal marsh lands or diking of tidal marsh lands for salt evaporators or farming. Some of these marshlands have been, or are now being, restored (OMCC, date unknown).

- Brief History— The San Francisco Bay region was once home to the Muwekma Ohlone Tribe. The first European settlement was Mission San José, founded on June 11, 1797, by the Franciscan order. It was the fourteenth Spanish mission established in California in what is currently the City of Fremont. In the mid-1850's European settlers established landings and warehouses along the east bay, and ranchers purchased property to start businesses. An Englishman bought an interest in a swamp reclamation project and hired Mr. J. Barr Robertson, a Scotsman, to oversee his interests. Mr. Robertson was a director of the California Land Investment Co., Ltd., London, England, and eventually bought out the interest in the land from the Englishman. Mr. Robertson named the land 'Newark' after the castle "Newark" in Port Glasgow, Scotland.

  In the late 1870's, Alfred Davis, a San Francisco capitalist, and Jim Fair, a Comstock millionaire completed the South Pacific Coast Railroad from Dumbarton Point south all the way to Santa Cruz. Soon, a railroad station, roundhouse, and railroad shop buildings were being erected in the center of Newark. Eventually, the railroad was extended north from Newark to Alameda, providing direct ferry service to San Francisco. The completion of the railroad precipitated additional development in Newark.

  Hotels and stores were soon erected, along with some of the first manufacturing industries, including a railroad car building firm, and a foundry which later manufactured Wedgewood stoves. The production of salt, which had been underway in the Newark area since the 1850s was also a major enterprise. Acquisitions and mergers of salt production companies throughout the Bay area ultimately resulted in formation of the Arden Salt Company, predecessor to Leslie Salt Company and the current Cargill Salt.

  In the early 1950s, subdivisions began sprouting throughout Southern Alameda County and talk of incorporation was in the air. In 1953, a group representing six communities commissioned a study to incorporate six communities into one city. Leaders in Newark decided to go it alone and withdrew from the venture after rejecting an industrial zoning for the entire town. The Newark Chamber of Commerce began its own movement toward incorporation of Newark. In September 1955, this effort paid off with the incorporation of Newark as the first new city in Alameda County in 47 years (Newark, date unknown).

- Climate— The climate in Newark is described as Mediterranean, characterized by warm, dry summers and mild winters. U.S. Climate Data reports the average annual high temperature in Newark is 68.7 Fahrenheit (°F), with an average annual low of 50.9°F. The average annual precipitation – rainfall – is 15.11 inches. July has the warmest temperatures of the year with an average high of 79°F. December and January have the coolest temperatures of the year with an average low of 42°F. Newark experienced a record high of 107°F in June of 1961 and a record low of 21°F in December of 1990.

- Governing Body Format— The City of Newark is a general law city with a council-manager system of government. The city, mayor or council must look to the state for the authority to pass local laws. The Newark City Council is composed of five Council Members. Four of the Council Members are elected to staggered four-year terms; the Mayor who also serves as the fifth Council Member is elected to serve a

two-year term. There is an election in November of even numbered years for the Mayor's seat and two Council Member seats. Various City Commissions and Committees serve in an advisory capacity to the City Council. The City Manager is the administrator of the city. The City Council provides political leadership and makes policy while the City Manager directs city departments, carrying out that policy. The City Manager was appointed by the City Council and cannot be removed from office without a majority vote of the Council. The City Manager achieves the direction of the City Council and City policy through the city departments: Community Development, Finance, Human Resources, Police, Public Works, Recreation and Community Services, and Fire protection services provided under contract with the Alameda County Fire Department. The City Council is responsible for adopting the plan, the City Manager is responsible for overseeing its implementation.

- Development Trends— Newark, one of Alameda County's smallest cities, is at the center of a housing boom in the east bay area. In the previous 15 years, just four homes were built in the city.[1] Currently, in at least five sites 1,659 homes, townhomes, or condominiums are in the process of being built or approved for building.
  Newark is a diverse community at the gateway to some of the world's most affluent markets. Newark is in the direct growth path converging from the north and south, within close proximity to skilled workforce and universities. Newark is strategically located within the region and has available land zoned for industrial use, making the City a prime site for the new growth industries. The Greater Newpark Masterplan serves as a long-term vision for the transformation of the mall area that will support the ongoing mall renovation, catalyze and guide new investment, and serve as the framework for future implementing measures. Possible development includes revitalizing the properties that surround the mall with hotels, retail, and mixed use development; the possible creation of a "New Park Commons" for public events such as farmers markets, craft fairs, and concerts; and the transformation of the Mall Loop Road into "New Park Boulevard" a vibrant corridor marked by dynamic retail, jobs, and housing. Several business ventures are in review, such as the Newpark Mall with two hotels and a restaurant, and a new hotel on John Muir Drive.

3.3 CAPABILITY ASSESSMENT

3.3.1 Integration with the 2016 Planning Initiative

The following technical reports, plans, and regulatory mechanisms were reviewed to inform the 2016 Multi-Jurisdiction HMP for both Volume 1 and Volume 2 (Newark Annex). All of the below items were additionally reviewed as part of the full capability assessment for Newark.

- **Newark General Plan** – The General Plan, including the Land Use and Environmental Hazards Elements, were reviewed for information regarding planning area composition and policies consistent with hazard mitigation for carry over as objectives.
- **Newark Municipal Code** – The Municipal Code was reviewed for relevant information regarding regulatory consistency with plan goals and objectives
- **Flood Damage Prevention Ordinance** – The Flood Damage Prevention Ordinance was reviewed for compliance with the National Flood Insurance Program.
- **Capital Improvements Plan** – The Capital Improvements Plan was reviewed to identify cross-planning initiatives for inclusion as mitigation projects.

[1] East Bay Times http://www.eastbaytimes.com/breaking-news/ci_27986946/newark-projects-244-new-homes-continue-housing-boom

- **Technical Reports and Information** – Outside resources and references used to complete this annex identified in Section 3.12 of this Annex.

3.3.2 Full Capability Assessment

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

Table 3-1. Legal and Regulatory Capability

	Local Authority	Other Jurisdiction Authority	State Mandated	Opportunity for Improvement?
Codes, Ordinances, & Requirements				
Building Code	Yes	No	Yes	Yes
***Comment**: The Newark Security Code and 2013 California Building, Residential, Mechanical, Electrical, Plumbing, Referenced Standards, Historical Building, Energy, and Green Building Standards Codes, as adopted by the 2013 California Building Standards Commission, were adopted by reference by Newark City in January 2013. Title 15, Ordinance No. 471, § 1, 11-14-2013.*				
Zoning Code	Yes	No	No	Yes
***Comment**: Title 17 Zoning, Ord. 92 § 1.3, 1965*				
Subdivisions	Yes	No	No	No
***Comment**: Title 16 Subdivisions, Ord. 143 Art. I § 1, 197; The Subdivisions section of the Municipal Code is updated periodically to account for changes in priorities and development.*				
Stormwater Management	Yes	No	Yes	No
***Comment**: Title 8, Chapter 8.36, Ord. 284 (part), 1992*				
Post-Disaster Recovery	No	No	No	No
***Comment**: None Located*				
Real Estate Disclosure	No	No	Yes	No
***Comment**: CA. State Civil Code 1102 requires full disclosure on natural hazard exposure of the sale/re-sale of any and all real property.*				
Growth Management	No	No	No	No
***Comment**: None Located*				
Site Plan Review	Yes	No	No	No
***Comment**: Title 17, Chapter 17.18.150, Application Review Ord. No. 439, § 3, 1-14-2010*				
Environmental Protection	Yes	No	Yes	No
***Comment**: Title 13, Chapter 13.04.040 - Permit—Application.* Ord. 136 § 4(1), 1973				
Flood Damage Prevention	Yes	No	No	No
***Comment**: Title 15, Chapter 40, Ord. No. 435, § 1, 6-25-2009*				
Emergency Management	Yes	No	No	No
***Comment**: Title 2 Administration and Personnel, Chapter 2.16 Disaster Council, Ord. 44.3 § 1, 1972*				
Climate Change	No	No	No	No
***Comment**:*				
Other:	No	No	No	No
***Comment**:*				

	Local Authority	Other Jurisdiction Authority	State Mandated	Opportunity for Improvement?
Planning Documents				
General Plan	Yes	No	Yes	Yes
Is the plan equipped to provide linkage to this mitigation plan? Yes *Is the plan AB2140 compliant? No* ***Comment**: Newark General Plan, December 12, 2013. Safety, housing, and environmental elements may integrate with hazard mitigation. AB 2140 compliance will be pursued as an action for this HMP.*				
Capital Improvement Plan	Yes	No	No	Yes
What types of capital facilities does the plan address? Construction/repairs to City facilities, street and park construction, rehabilitation projects, major acquisitions, i.e. new computer systems, equipment not part of a department's operating budget, feasibility studies, and some major equipment replacement purchases. *How often is the plan updated? Every two years* ***Comment**: Biennial Capital Improvement Plan, 2015 – 2017*				
Floodplain or Watershed Plan	No	No	No	No
***Comment**:*				
Stormwater Plan	Yes	No	Yes	No
***Comment**: City of Newark Stormwater Program; managed in accordance with National Pollution Discharge Elimination System (NPDES). Permit requirements enforced by the San Francisco Regional Water Quality Control Board.*				
Urban Water Management Plan	No	Yes	No	No
***Comment:** Alameda County Water District - UWMP, 2015 – Covers Union City, Newark, and Fremont*				
Habitat Conservation Plan	No	No	No	No
***Comment**:*				
Economic Development Plan	Yes	No	No	No
***Comment**: Economic Development Plan included as an element of the General Plan , 2013*				
Shoreline Management Plan	No	No	No	No
***Comment**: N/A*				
Community Wildfire Protection Plan	No	Yes	No	No
***Comment**: Alameda County Community Wildfire Protection Plan, 2015*				
Forest Management Plan	No	No	No	No
***Comment**: None Located*				
Climate Action Plan	Yes	No	Yes	Yes
***Comment**: City of Newark Climate Action Plan, January 2010*				
Other: Terrorism Plan	No	Yes	No	No
***Comment**: Alameda County Countywide Terrorism Response Plan, Alameda County Bioterrorism Response Plan*				
Comprehensive Emergency Management Plan	No	Yes	No	No
***Comment**: Alameda County Emergency Operations Plan, December 2012*				
Threat & Hazard Identification & Risk Assessment	No	Yes	No	No
***Comment**: Bay Area UASI THIRA, 2015*				
Post-Disaster Recovery Plan	No	No	No	Yes
***Comment**:*				
Continuity of Operations Plan	No	No	No	Yes
***Comment**:*				
Public Health Plan	No	Yes	No	No
***Comment**: Alameda County Public Health Department. Strategic Plan 2008-2013*				

Table 3-2. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Community Development Block Grants	Yes: Urban County CDBG Grant through Alameda County
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	Yes
Incur Debt through Private Activity Bonds	Yes
Withhold Public Expenditures in Hazard-Prone Areas	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Other	Yes – Emergency reserve policy for use during/immediately after disaster events

Table 3-3. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Community Development/Planning
Engineers or professionals trained in building or infrastructure construction practices	Yes	Public Works/Community Development/Planning
Planners or engineers with an understanding of natural hazards	Yes	Community Development/Planning
Staff with training in benefit/cost analysis	Yes	Finance Department
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	Public Works/Director
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Alameda County Fire Department,/Contract Emergency Manager
Grant writers	Yes	Community Development

Table 3-4. National Flood Insurance Program Compliance

Criteria	Response
What local department is responsible for floodplain management?	Building Inspection Division
Who is your floodplain administrator? (department/position)	Building Official
Are any certified floodplain managers on staff in your jurisdiction?	No
What is the date of adoption of your flood damage prevention ordinance?	6-25-2009
When was the most recent Community Assistance Visit or Community Assistance Contact?	Unknown
Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?	No
Do your flood hazard maps adequately address the flood risk within your jurisdiction?	Yes
Does your floodplain management staff need any assistance or training to support its floodplain management program?	No
Does your jurisdiction participate in the Community Rating System (CRS)?	No
Any Repetitive Loss or Severe Repetitive Loss properties in your jurisdiction?	No
How many Flood Insurance policies are in force in your jurisdiction?	152
What is the insurance in force?	$48,684,800
What is the premium in force?	90,133

Criteria	Response
How many total loss claims have been filed in your jurisdiction?	1
How many claims were closed without payment/are still open?	1 CWOP

Table 3-5. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	City Manager delegates public information responsibilities
Do you have personnel skilled or trained in website development?	Yes – Chief Information Officer
Do you have hazard mitigation information available on your website? • If yes, please briefly describe.	No
Do you utilize social media for hazard mitigation education and outreach? • If yes, please briefly describe.	Yes City Radio Station, City Cable Television Channel, Twitter, Facebook, Police Facebook, Police Nixle, Newark Patch
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes. Planning Commission reviews/approves planning applications and makes recommendations on land use issues; Senior Advisory Council makes recommendations for programs/plans that impact older Newark residents
Do you have any other programs already in place that could be used to communicate hazard-related information? • If yes, please briefly describe.	Yes Community Emergency Response Team, Prepare Now.org - Community Preparedness, Alameda County Fire Department
Do you have any established warning systems for hazard events?	Emergency Alert System, Police Nixle

Table 3-6. Community Classifications

Hazard	Participating?	Classification	Date Classified
Community Rating System	No		-
Building Code Effectiveness Grading Schedule	No		-
Public Protection (Alameda County Fire Department)	Yes	2	2010
Storm Ready	No		-
Firewise	No		-

Table 3-7. Development and Permit Capabilities

Criteria	Response				
Has your jurisdiction annexed any land since the development of the previous hazard mitigation plan?	No				
Is your jurisdiction expected to annex any areas during the performance period of this plan?	No				
Does your jurisdiction issue development permits?	Yes				
• If no, who does? If yes, which department?	Community Development				
How many building permits were issued in your jurisdiction since the development of the previous hazard mitigation plan?					
Type	2011	2012	2013	2014	2015
Single Family	0	75	92	130	190
Multi-Family	0	0	0	0	0
Other (commercial, mixed use, etc.)	2	7	8	13	11
Does your jurisdiction have the ability to track permits by hazard area?	Yes				

Criteria	Response
• Please provide a qualitative description of where development has occurred in terms of hazard risk areas.	The City of Newark does not have any development in flood hazard risk areas due to proactive practices that prohibit any development in the SFHA. Any development that will potentially occur within a hazard risk area such as liquefaction is mitigated prior to development.
Does your jurisdiction have a buildable lands inventory?	No
• If no, please quantitatively describe the level of build-out in the jurisdiction.	City is largely built out, except for the Area 3 and 4 Specific Plan area and the Dumbarton Transit Oriented development Specific Plan Area. These areas are already zoned for their appropriate use
Are any areas targeted for development or major redevelopment in the next five year?	Yes
• If yes, please describe.	Area 3 and 4 Specific Plan area and the Dumbarton Transit Oriented development Specific Plan Area.
• If yes, are any of these areas located in known hazard risk zones?	Small portions of the specific plans are in special flood hazard areas, however no development is allowed in those sections.

3.4 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the HMP into local planning mechanisms.

3.4.1 Existing Integration

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

- General Plan, Environmental Hazards Element –The Environmental Hazards Element (which combines the state-mandated general planning elements of safety and noise) integrates hazard mitigation through the consideration of hazards most likely to impact the City. The Environmental Hazards Element describes the Newark HMP Annex (ABAG HMP) to prepare for and mitigate the effects of ground shaking, liquefaction, dam failure, and drought. Through the development of a solid general plan foundation, the City of Newark recognizes decisions directly influence public health, protect residents from exposure to hazards, and create a greater sense of civic engagement and mental well-being. The requirements of this section are directly in alignment with the HMP's goal of identifying natural hazards and of identifying strategies to mitigate them.
- The City of Newark Stormwater Program includes illicit discharge incident response and enforcement, storm drain maintenance, public outreach and education, and stormwater controls for businesses and development. The program provides guidelines to Newark City staff to ensure compliance with the National Pollutant Discharge Elimination System (NPDES) and the City's stormwater ordinance and water quality regulations. This strengthens the City's resiliency to flood and severe storm events by reducing the probability of stormwater runoff.
- The City of Newark maintains compliance with the most recent California Building Code (CBC)/International Building Code through regular adoption and update.

3.4.2 Opportunities for Future Integration

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

- General Plan, Environmental Hazards Element – the revision to the 2013 General Plan Environmental Hazards Element can include the HMP by direct reference to fulfill AB 2140, and use the risk assessment results to further update the General Plan.
- Climate Action Plan – the Climate Action Plan provides the City with an opportunity to directly reference the HMP during subsequent updates of the plan, and integrate hazard mitigation with existing goals and objectives. Since the Climate Action Plan provides guidance for minimizing the impact of human activity on the environment, integration of hazard mitigation relating to air quality, land use, and other factors is a fitting and strategic next step.
- Public Outreach — develop a program that addresses hazard mitigation as part of a targeted outreach program, expanding on what the City already has in the plan.
- The City of Newark maintains a comprehensive CIP, which guides capital improvement projects over a two-year period. The development of the HMP and selection of necessary mitigation actions enable the City to ensure consistency between the HMP, the current CIP, and future versions of the CIP. The HMP may also identify new possible funding sources for capital improvement projects.
- California Building Code Adoption - By maintaining compliance with triennial CBC, vulnerability to hazards does not increase, even if exposure increases.
- Zoning Code Update – Mitigation can be integrated into future zoning code updates to inform appropriate use of property within the city.

3.5 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 3-7 lists all past occurrences of natural hazards within the jurisdiction.

Table 3-8. Natural Hazard Events

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Weather/ High Wind	-	4/2016	High winds caused trees to fall. Three people were injured.
Severe Weather/ High Wind	-	2014	High winds caused trees to fall. Minor debris management required to address resulting tree debris.
Severe Weather/ High Wind	-	2013	High winds caused trees to fall. Minor debris management required to address resulting tree debris.
Severe Weather/ High Wind	-	2009	High winds caused trees to fall. Minor debris management required to address resulting tree debris.
Severe Weather/ High Wind	-	2006	High winds caused trees to fall. Minor debris management required to address resulting tree debris.
Severe Weather/Freeze	DR-894	2/1991	Newark experienced extremely cold temperatures during a regional occurrence of freeze.
Earthquake	DR-845	10/1989	Loma Prieta – Newark residents experienced minor property damage.

3.6 JURISDICTION-SPECIFIC VULNERABILITIES

Repetitive loss records are as follows:

- Number of FEMA-identified Repetitive-Loss Properties: 0

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

Other noted vulnerabilities include:

- Areas of Newark are likely to experience future flooding impacts and effects of climate change.
- A neighborhood experiences high groundwater effects under building foundations as a result of heavy rains
- Two publically owned eucalyptus groves pose w wildfire threat to the community. The Shirley Sisk grove is located at the intersection of Newark and Jarvis. A smaller, unnamed grove is located in southwest Newark around the intersection of Cedar and Newpark.
- Multiple gas pipelines run through the city in close proximity to residential properties and schools, potentially exposing critical facilities and residents to the pipeline failure hazard due to technological failure or as a secondary hazard to a natural event.

3.7 HAZARD RISK RANKING

Table 3-8 presents the ranking of the hazards of concern.

Table 3-9. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe Weather	33	Medium
3	Flood[a]	18	Medium
4	Wildfire	27	Medium
5	Dam Failure	18	Medium
6	Landslide	10	Low
7	Drought	3	Low

a. Flood hazard increased due to local knowledge and potential future impacts on the city as a result of climate change.

3.8 STATUS OF PREVIOUS PLAN INITIATIVES

The status of previous actions from the 2011 ABAG HMP for the City of Newark can be found in Appendix D of this Volume.

3.9 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 3-10 lists the actions that make up the City of Newark hazard mitigation action plan. Table 3-11 identifies the priority for each action. Table 3-12 summarizes the mitigation actions by hazard of concern and the six mitigation types.

Table 3-11. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action N-1— Where appropriate, support retrofitting, purchase, or relocation of structures in hazard-prone areas to prevent future structure damage. Give priority to properties with exposure to repetitive losses.						

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New and existing	All	1, 3, 8, 9, 10, 12	Community Development	High	PDM, HMGP, Local Budget (local match)	Long
Action N-2— Continue to support the Planning Area-wide actions identified in this plan.						
New and existing	All	All	City Manager's Office	Low	Local Budget	Ongoing
Action N-3— Actively participate in the plan maintenance strategy identified in this plan.						
New and existing	All	All	City Manager's Office	Low	Local Budget	Ongoing
Action N-4— Consider participation in incentive-based programs such as the Community Rating System, Tree City, and StormReady.						
New and existing	All	All	Community Development	Low	Local Budget	Ongoing
Action N-5— Maintain good standing under the National Flood Insurance Program by implementing programs that meet or exceed the minimum NFIP requirements. Such programs include enforcing an adopted flood damage prevention ordinance, participating in floodplain mapping updates, and providing public assistance and information on floodplain requirements and impacts.						
New and existing	Flood	1, 3, 5, 7, 9, 10, 11, 12	Building Inspection Division	Low	Local Budget	Ongoing
Action N-6— Integrate the HMP into other plans, programs, or resources that dictate land use or redevelopment.						
New and existing	All	All	Community Development	Low	Local Budget	Ongoing
Action N-7—Adopt the 2016 California Building Code.						
New	All	1, 2, 3, 9, 10, 11, 12	Community Development	Low	Local Budget	Short
Action N-8—Update the city zoning code, including considerations for hazard mitigation.						
New	All	1, 2, 3, 9, 10, 11, 12	Community Development	Low	Local Budget	Short
Action N-9—Include elements of the HMP to inform future updates to the Newark Climate Action Plan.						
Existing	All	1, 2, 3, 9, 10, 11, 12	Community Development	Medium	Local Budget	Short
Action N-10—Complete Railroad overcrossing at Central Avenue to prevent isolation during seismic event.						
Existing	Earthquake	1,3,8,10	Community Development	High	Local Budget, HMGP, PDM	Long
Action N-11—Replace Eucalyptus groves with non-hazardous tree species.						
Existing	Severe Weather, Wildfire	1,12	Public Works	High	Local Budget, PDM, HMGP	Long
Action N-12—Conduct storm drainage improvements along Lindsay Tract Street						
Existing	Dam Failure, Flood	1,3,8,12	Public Works	High	Local Budget, PDM, HMGP	Long
Action N-13—Retrofit police administration building to essential services/critical facility standards.						
Existing	Earthquake	1,3,9	Building Department	High	Local Budget, PDM, HMGP	Long
Action N-14—Retrofit Administration Building and Library to current seismic standards.						
Existing	Earthquake	1,3,9	Building Department	High	Local Budget, PDM, HMGP	Long
Action N-15—Relocate current Emergency Operations Center (EOC) and update critical EOC equipment.						

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
New	All	1,3,9	City Manager's Office	High	Local Budget, HSGP, EOC Grant Program	Long
Action N-16—Develop a comprehensive post disaster recovery plan.						
New	All	1,3,5,9	ACFD (contract)	Medium	Local Budget, HSGP, UASI	Short
Action N-17—Develop a comprehensive Continuity of Operations (COOP) Plan for Administration and templates for individual department COOP development.						
New	Earthquake, Wildfire, Flood, Severe Weather	1,3,5,9	ACFD (Contract)	Medium	Local Budget, HSGP	Short
Action N-18—Retrofit and update the Fire Station Training Facility (Station 27).						
Existing	Earthquake	1,3.5,9	ACFD (Contract), Public Works	High	Local Budget, PDM, HMGP	Long
Action N-19—Develop a jurisdiction-wide tree inventory and long-term tree management plan including an outreach initiative encouraging Newark residents to conduct tree maintenance on private property.						
New	Severe Weather, Wildfire	1,2,4,5,7,11	Public Works	High	Local Budget, CalFIRE, PDM	Long
Action N-20— Developed a phased approach to citywide tree inspection and pruning.						
Existing	Severe Weather, Wildfire	1,3,8,12	Public Works	High	Local Budget, PDM, HMGP	Long
Action N-21—Develop a comprehensive public outreach campaign that informs residents of pipeline risks in the community and provides safety information on how to identify potential pipeline failure hazards.						
New	Human-Caused (Pipeline Failure)	4,7	City Manager's Office	Low	Local Budget	Ongoing

Table 3-12. Mitigation Strategy Priority Schedule

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

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

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

Table 3-13. Analysis of Mitigation Actions

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

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

3.9.1 Jurisdictional Process for Integration into Planning Mechanisms

Implementation of Newark's mitigation action plan will enhance and expand the future integration opportunities identified as part of the 2016 initiative. Local, regional, state and federal stakeholders were involved in, and consulted with, during the planning process. This coordination is expected to continue through City activities, midterm progress reporting, implementation coordination, and continued public engagement. Newark identified eight actions that have been recommended for integration in this HMP. As the plan is implemented, all City agencies will use information from this plan as the best available science and data on natural hazards impacting the City of Newark.

3.10 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

Regional Sea-level rise adaption strategy identifying capital improvements (such as levee enhancement/ certification) to protect against flood associated with rising sea levels. Once capital needs are identified funding to complete the improvements will be needed.

3.11 ADDITIONAL COMMENTS

Future updates of HMP should be accomplished as a multi-jurisdictional approach within the Operational Area.

Additional coordination is needed with PG&E and the Public Utilities Commission for the relocation or decommission of Line 2403-12. The coordination would include a Feasibility Study to evaluate potential solution, followed by implementation of the solution.

Newark Police Department and other police and fire agencies are now joining with Alameda County in the AC Alert system as our emergency notification system. This system is capable of communicating with groups of people in defined geographic areas to distribute from local to mass notifications of emergency events. The system uses a database of telephone numbers and associated addresses, which, when tied into GIS mapping, can be used to deliver recorded emergency notifications.

3.12 RESOURCES

De Benedetti, C. East Bay Times http://www.eastbaytimes.com/breaking-news/ci_27986946/newark-projects-244-new-homes-continue-housing-boom, Newark: Projects with 244 new homes continue housing boom

Oakland Museum of California Creek and Watershed Information (OMCC), no date, http://explore.museumca.org/creeks/, Guide to San Francisco Bay Creeks

Newark, no date, http://www.ci.newark.ca.us/visitors/history/,The History of Newark California

4. ALAMEDA COUNTY WATER DISTRICT

4.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact
Steve Peterson
Manager of Operations and Maintenance
43885 S. Grimmer Blvd.
Fremont, CA 94538
Telephone: (510) 668-6501
e-mail Address: steve.peterson@acwd.com

Alternate Point of Contact
Jake Reed
Emergency Response Officer
43885 S. Grimmer Blvd.
Fremont, CA 94538
Telephone: (510)504-0230
e-mail Address: jacob.reed@acwd.com

4.2 JURISDICTION PROFILE

4.2.1 Overview

The Alameda County Water District (ACWD) is a California special district serving as the retail drinking water purveyor to the cities of Fremont, Newark, and Union City. The ACWD service area encompasses an area of approximately 105 square miles.

ACWD was established in 1914 under the California County Water District Act of 1913. At the time it was formed, ACWD's core mission objectives were to protect the Niles Cone groundwater basin, conserve the waters of the Alameda Creek Watershed, and develop supplemental water supplies, primarily for agricultural use customers. Today, the District provides water service to a population of over 347,000 people with nearly 82,000 accounts. Approximately 70-percent of supplies are used by residential customers, with the balance (approximately 30-percent) utilized by commercial, industrial, institutional and large landscape customers. Total distribution system water use (including non-revenue system losses) was approximately 38,400 Acre-Feet in fiscal year 2014-2015, or an average of over 34 million gallons per day.

The ACWD 2015–2020 Urban Water Management Plan outlines the projected service area population growth for the next 25 years along with the relative anticipated water productions demands for this period. It is projected that ACWD will see an approximate 2.6-percent service population increase occurring by the year 2020 with a nearly 21-percent increase by the year 2040. Water production demands for the same period are projected to increase approximately 37.2-percent by 2020 with a 42.4-percent increase in demands by 2040. It should be noted that the notable increase expected from current 2015 demands to 2020 is reflective of the fact that ACWD, along with the balance of the State, has seen significant decreases in demands for the last 3 years due to the extreme California drought and relative mandatory use restrictions.

The District is governed by an elected five-member Board of Directors who holds responsibility for the adoption of this plan. The District's General Manager reports to the Board and will oversee the implementation of the plan. ACWD is currently staffed with 230 full-time employees. The current (2015-2016) annual operating and capital budget totals approximately $122.5 Million with funding sources being comprised primarily from water rates

revenue, followed by property tax proceeds, development fees, and some revenue bond proceeds which are allocated to finance some current critical capital projects.

4.2.2 Assets

Table 4-1 summarizes the critical assets of the district and their value.

Table 4-1. Critical Assets and Values

Asset	Value[a]
Property	
570 acres of land	$102,600,000
Critical Infrastructure and Equipment	
Total length of pipes 900 miles ($1.19 million per mile x 900 miles)	$1,069,200,000
7 Stationary Generators, 5 Portable Generators, and 4 Portable Booster Pumps	$4,035,000
Total:	**$1,073,235,000**
Critical Facilities	
4 Brackish-Water Well Sites with 6 production wells	$ 2,750,000
14 Booster Pump Stations (including stations located at reservoir sites)	$23,150,000
9 Takeoffs from San Francisco Water Department Bay Division Pipelines	$1,050,000
5 Groundwater Management Facilities (2 fabric dams and 3 fish screen facilities)	$11,600,000
2 Groundwater Treatment Facilities (PT Blending Facility and Newark Desalination Facility)	$22,000,000
2 Surface Water Treatment Plants with 6 facility structures	$39,100,000
Headquarters Facility with 4 shop and administration buildings	$28,045,000
6 Water Storage Reservoirs	$35,500,000
7 Water Storage Tanks	$19,500,000
18 Pressure Regulator Stations	$2,100,000
2 Well-Fields with 16 production wells	$3,600,000
Palm Ave. Warehouse	$3,000,000
Emergency Hayward Fault Crossing Equipment (hoses, hose reels, pipe repair parts)	$1,220,000
Total:	**$192,615,000**
Combined Total:	**$1,368,450,000**

a. Value calculated are replacement values.

4.3 INTEGRATION WITH THE 2016 PLANNING INITIATIVE

The following technical reports, plans, and regulatory mechanisms were reviewed to inform the 2016 Multi-Jurisdiction Hazard Mitigation Plan for both Volume 1 and Volume 2 (Alameda County Water District Annex). All of the below items were additionally reviewed as part of the full capability assessment for the Alameda County Water District.

- **ACWD Capital Improvement Program (CIP)**—The District's Plan for upgrading critical facilities and infrastructure. This program is reviewed annually. New capital projects are added and information about existing projects (scope, purpose, justification, cost, environmental and regulatory compliance, etc.) are updated and prioritized based on a number of factors including available funding and resources available, regulatory requirements, employee health and safety, water supply reliability (water supply, production,

distribution), environmental stewardship, and strategic initiatives. It was reviewed for projects pursuant to the goals and objectives of the HMP.

- **ACWD Bi-Annual Capital Budget**—The biannual capital budget is prepared every two years with a mid-cycle update when adjustments to capital projects are made, e.g., additional funding, as necessary. Capital projects originally included in the long-range 25-year Capital Improvement Program are included in the bi-annual capital budget for implementation. Budget was reviewed for projects pursuant to the goals and objectives of the HMP.
- **2015-2020 Urban Water Management Plan**—Reviewed for data and information that was incorporated into the Drought profile in Volume I. Additionally used to inform discussion of anticipated service area trends for the ACWD annex.
- **2014 ACWD Integrated Resources Plan (IRP) Review**—The IRP ensures a stable source of water supply for the District. It was reviewed for recommendations and projects pursuant to the goals and objectives of the HMP.
- **2011-2020 ACWD Engineering Report**—Used to inform the development of the CIP. The report was reviewed for vulnerabilities and projects pursuant to the goals and objectives of this HMP.
- **2011 IRP Technical Memorandum 19 (a)**: **Catastrophic Loss of Supply 5 year outage**—A post-earthquake catastrophic loss study. The study was reviewed to assist in determining jurisdiction-specific vulnerabilities.
- **2008 ACWD Seismic Vulnerability Study (Eidenger Report)**—The study involved a vulnerability assessment of the District's distribution system. It was reviewed for recommendations and projects pursuant to the goals and objectives of the HMP.
- **2003 ACWD Security Vulnerability Assessment**—Assessment that determined critical facilities and provided a security plan for them. Plan was reviewed for recommendations and projects pursuant to the goals and objectives of this HMP.
- **1997 ACWD Reservoir and Tank Vulnerability Study**—Assessment of the District's reservoirs and tanks to seismic vulnerabilities. Report was reviewed for projects pursuant to the goals and objectives of the HMP.
- **1997 Uniform Building Code –** Maps in document are used to reference and locate known active fault or near-source zones within ACWD's service area.

4.4 PLANNING AND REGULATORY CAPABILITIES

The following existing codes, ordinances, policies or plans are applicable to this HMP:

- Regulatory:
  - 2015 CA Emergency Services Act, Article 9.5, 8607 Public Water Systems, (e)(1)
  - 2009 CA water conservation act.
  - 2002 Public Health Security and Bioterrorism Preparedness and Response Act
  - 2009 AB1420 – Urban Water Management Planning Act
- Planning Capability:
  - 2012 ACWD Emergency Response Plan
  - ACWD Damage Assessment Team
  - ACWD Business Continuity Plan – Information Technology
  - ACWD Business Continuity Plan (in-progress)
  - ACWD Capital Improvement Program
- Associations and Networks:

- Alameda County Emergency Manager Association
- Bay Area Emergency and Security Information Collaborative (BAESIC)
- Bay Area Water Multiagency Coordination Group
- California Utilities Emergency Association
- California Water/Wastewater Agency Response Network (CalWARN).

4.5 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

An assessment of fiscal capabilities is presented in Table 4-2. An assessment of administrative and technical capabilities is presented in Table 4-3.

Table 4-2. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	Yes
User Fees for Water, Sewer, Gas or Electric Service	Yes
Incur Debt through General Obligation Bonds	No
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	Yes
Development Impact Fees for Homebuyers or Developers	Yes
Revenue Bonds	Yes
Line of Credit	In progress

Table 4-3. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	ACWD/ETS/ 2 Engineers, 4 Technicians
Engineers or professionals trained in building or infrastructure construction practices	Yes	ACWD / ETS/ 17 Engineers
Planners or engineers with an understanding of natural hazards	Yes	ACWD / O&M, ETS / 17 Engineers, 1 ERSO
Staff with training in benefit/cost analysis	Yes	ACWD / ETS / 15 Engineers
Surveyors	Yes	Contract support
Personnel skilled or trained in GIS applications	Yes	ACWD / ETS / 2 Technicians
Scientist familiar with natural hazards in local area	Yes	ACWD / WR / 2 Technicians
Emergency manager	Yes	ACWD / O&M / ERSO
Grant writers	Yes	Contract Support
Other	Yes	Damage Assessment Teams

4.6 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in Table 4**Error! Reference source not found.**-4.

Table 4-4. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes - PIO

Criteria	Response
Do you have personnel skilled or trained in website development?	Yes
Do you have hazard mitigation information available on your website?	Yes
• If yes, please briefly describe.	* We provided public outreach on the development of the ACWD's 2016 HMP in collaboration with the Cities of Newark and Union City. * We provide detailed emergency preparedness information and FAQs related to emergency household water supply for the general public.
Do you utilize social media for hazard mitigation education and outreach?	Yes, Facebook, Twitter, and YouTube.
• If yes, please briefly describe.	We utilize social media and our district website.
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes, we are a Special District with elected officials.
• If yes, please briefly specify.	We have an elected board of five members.
Do you have any other programs already in place that could be used to communicate hazard-related information?	We have a community outreach program. We have a newsletter that is sent bi-monthly to customers.
• If yes, please briefly describe.	The program provides information at local events.
Do you have any established warning systems for hazard events?	Yes
• If yes, please briefly describe.	Reverse Alert Notification System (RANS), ACWD website emergency notification.

4.7 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the HMP into existing plans and programs.

4.7.1 Existing Integration

The District's annex to the 2011 hazard mitigation plan indicated that the District would integrate the hazard mitigation plan into other plans and programs via the Capital Improvement Plan (CIP), making the District's annex available to other jurisdictions, such as Alameda County, for inclusion in the safety elements of local comprehensive plans, and through the natural hazard related components of the California Environmental Quality Act (CEQA). Over the performance period of the prior plan the District did integrate and include natural hazard mitigation actions, as appropriate, into the CIP and has completed or is in the process of completing many of these actions. The District did not directly provide its annexes to any jurisdictions, however, the annex was publically available on the Association of Bay Area Governments (ABAG) website. The District actively complies with all CEQA regulations and considers natural hazard impacts as appropriate.

4.7.2 Opportunities for Future Integration

The District will continue to integrate the HMP into existing plans and programs by including mitigation actions in the CIP and vice versa, making the District's annex available to any jurisdiction who may wish to use it in the development of the safety element of their comprehensive plan, and through the CEQA process, as appropriate. In addition, the District has identified the following opportunities for integration:

- ACWD Business Continuity Plan (in-progress)—Once completed, this plan will identify the methods and processes in place to continue functioning and operating after a major disaster. Additionally, this plan will identify the shortcomings and gaps in our current post-disaster capabilities to provide business support for maintaining water supply (and repair) operations. The plan will be developed utilizing information in the HMP, as appropriate.

- Emergency Response Plan—The results of the risk assessment and other information provided in the HMP will be used to inform the update of the District's Emergency Response Plan, as appropriate.
- Damage Assessment Program—The District's Damage Assessment Program will incorporate information from the HMP and will be expanded to address all appropriate hazards.
- Annual presentation to the District Board—The District will keep mitigation activities in the forefront by annually reporting on the status of mitigation actions.

4.8 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 4-5 lists all past occurrences of natural hazards within the jurisdiction.

Table 4-5. Natural Hazard Events

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Drought	N/A	2014 - present	Surcharge was activated; restrictions on water use were put in place; Water source adjustments were made
Severe Storm, Flood	N/A	2014-2015	Winter precipitation caused localized flooding in Vallecitos Channel. Flooding impacted property owners near the channel. Also resulted in erosion damage to embankment on Avalon-Tank site.
Severe Storms, Flooding, Landslides, and Mudslides	DR-1646	2006	N/A
Severe Storms, Flooding, Mudslides, and Landslides	DR-1628	2006	N/A
Severe Winter Storms and Flooding	DR-1203	1998	Significant landslide damage around several facilities.
Severe Storms, Flooding, Mud and Landslides	DR-1155	1997	N/A
Severe Winter Storms, Flooding Landslides, Mud Flow	DR-1046	1995	N/A
Severe Winter Storms, Flooding, Landslides, Mud Flows	DR-1044	1995	N/A
Oakland Hills Fire	DR-919	1991	N/A
Severe Freeze	DR-894	1991	N/A
Loma Prieta Earthquake	DR-845	1989	District facilities did not suffer significant damage; however, there may have been an increase in leaks following the event. Resources were also deployed for post-event inspections.
Severe Storms and Flooding	DR-758	1986	N/A
Coastal Storms, Floods, Slides and Tornadoes	DR-677	1983	N/A
Severe Storms, Flood, Mudslides and High Tide	DR-651	1982	N/A
Drought	EM-3023	1977	N/A
Forest and Brush Fires	DR-295	1970	N/A

Note: ACWD does not currently have a repository where information pertaining to natural hazard impacts are recorded. It is assumed that all major disaster declarations in Alameda County impacted the District to some extent. Additional details are provided as available. The District has identified an action to capture impacts from natural hazard events (See ACWD-4).

4.9 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities for the jurisdiction include:

- **Dam failure**—A substantial number of District assets are located in dam failure inundation areas. A failure of a large upstream dam could have significant implications for the District's water supply. Additionally, a failure of one of the District owned and operated reservoirs, dams and/or tanks could have impacts on the District's water supply as well as impacts to structures located in inundation areas.
- **Drought**—Prolonged drought threatens the water supply sources for the District and may impact District operations as well as those of its customers.
- **Earthquake**—The District's distribution system crosses the Hayward fault. Reinforcement for these crossings are underway. A significant portion of the District's pipelines are located in high liquefaction susceptibility areas, which may result in a significant number of leaks and breaks after an event. Some District facilities were constructed before modern seismic codes were in place. Additionally, an earthquake could cause significant disruption to the District's water supply resulting in catastrophic loss of supply.
  In addition to high liquefaction areas, a number of the District's critical facilities in the Fremont area are vulnerable to effects of the Mission Fault. The Mission Fault acts as 10-kilometer long transferring strain between the Hayward and Calaveras Faults. Microseismicity was recorded in the area between 1969 and 1991, and magnitude 3.0 earthquakes have been documented.
- **Flood**—Flood risk to District assets are minimal. Only one district facility was determined to be located in the 1 percent annual chance flood hazard area and modelling of the facility resulted in no damages. Secondary impacts resulting from flood, such as reduced access to portions of the systems or a hazardous material release may impact District operations. Additionally, a District managed Channel has been known to cause localized flood issues for neighboring property owners. The adjustment of management protocol for this flooding reduces the water supply reliability for the District, potentially impacting or exacerbating the impacts other hazards of concern.
- **Landslide**—Several district facilities are located in high and moderate landslide risk areas. Landslides impacting these facilities have the potential to disrupt service provision and impact adjacent properties.
- **Severe weather**—Not all District facilities have backup power sources, such as generators. Power loss resulting from high winds, lightning strikes, fallen trees or other sources may disrupt service provision in the District.
- **Wildfire**—A number of District assets are located in high wildfire risk areas. These assets have generally been constructed using fire safe construction methods and defensible space.
- **Other Hazards**—Cyanobacteria (toxic algae) is a naturally occurring substance that is found in many waterways and lakes throughout the state of California, including some of the District's raw water supplies. Toxic algae occurs in surface-based raw water sources due to the bacteria's photosynthetic needs and properties. The National Center for Biotechnology Information identifies a need for both increased monitoring data for toxins in drinking water and epidemiological studies on adverse health effects in exposed populations to clarify the extent of the health risk. Such monitoring and studies should be pursued through coordination with public health focused agencies and organizations.

4.11 HAZARD RISK RANKING

Table 4-6 presents the ranking of the hazards of concern.

Table 4-6. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)[a]	Category
1	Earthquake	54 (3 x 18)	High
2	Drought[b,c]	33 (3 x 11)	High
3	Severe weather[b,c]	27 (3 x 9)	Medium
4	Landslide	24 (3 x 8)	Medium
5	Wildfire	22 (2 x 11)	Medium
6	Dam failure	18 (1 x 18)	Low
7	Flood	12 (2 x 6)	Low

a. The City of Fremont Hazard Mitigation Plan was reviewed to estimate population exposure for the entire planning area.
b. The entire service area's population is exposed to the hazard; however, injuries and fatalities are not likely. The impacts to the population are rated as medium.
c. All ACWD facilities are exposed to the hazard; however, damage caused to facilities resulting from the drought hazard are not likely to be significant. The property exposure is rated as low.

4.12 STATUS OF PREVIOUS PLAN INITIATIVES

The status of previous actions from the 2011 ABAG HMP for the Alameda County Water District can be found in Appendix D of this Volume.

4.13 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 4-7 lists the actions that make up the Alameda County Water District hazard mitigation action plan. Table 4-8 identifies the priority for each action. Table 4-9 summarizes the mitigation actions by hazard of concern and the six mitigation types.

Table 4-7. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met[a]	Lead Agency[b]	Estimated Cost[c]	Sources of Funding[d]	Timeline[e]
ACWD-1—Revise and update the Alameda County Water District Business Continuity Plan. Use and integrate information from the 2016 HMP, as appropriate.						
Existing	All hazards	1, 9	OMD	Low	Operating Budget	Short term
ACWD-2—Ensure appropriate staff have a baseline understanding of FEMA's Benefit Cost Analysis Tool by completing the online or other available training.						
New	All hazards	1, 10	ETS / OMD	Low	Operating Budget	Short term
ACWD-3—Revise and update the Alameda County Water District Emergency Response Plan. Use and integrate information from the 2016 HMP, as appropriate.						
.Existing	All hazards	1, 4	OMD	Low	Operating Budget	Short term
ACWD-4—Develop and maintain a database that tracks natural hazard events that impact the District and captures damages to District assets, service disruption and other perishable data (e.g. high water marks, preliminary damage estimates, damage photos) to support future mitigation efforts including the implementation and maintenance of the HMP). If feasible, review historic incident reports and jobs for information related to past hazard events.						

Applies to new or existing assets	Hazards Mitigated	Objectives Met[a]	Lead Agency[b]	Estimated Cost[c]	Sources of Funding[d]	Timeline[e]
New and Existing	All hazards	4	OMD	Low	Operating Budget	Short term/ on-going
ACWD-5—Create a SharePoint site for District staff where Emergency Response and plans and information are housed.						
Existing	All hazards	1, 4	OMD	Low	Operating Budget	Short term
ACWD-6—Reevaluate standby generator needs and purchase and install as needed, such as at the desalinization plant and aquifer reclamation production wells.						
Existing	Earthquake, Flood, Severe weather	1, 9	ETS / OMD	High	Capital Budget, HMGP, PDM	Short term
ACWD-7— Purchase a portable building to relocate staff currently housed at the softening building, which does not meet modern seismic codes and standards.						
New and Existing	Earthquake	1, 9, 10	ETS	High	Capital Budget	Short term
ACWD-8—Complete the distribution system reinforcements currently underway at the Hayward fault crossing (Middlefield Reservoir I/O pipeline and fault crossing emergency response hose).						
Existing	Earthquake	1, 3, 9	ETS / OMD	Medium	Capital Budget, HMGP, PDM	Short term
ACWD-9—Design and install a seismically resilient backbone pipeline through liquefiable soils, primarily in Union City.						
New	Earthquake	1, 3, 5, 9	ETS	Medium	Capital Budget, HMGP, PDM	Short term
ACWD-10—Install emergency isolation valves into the distribution system with remote operation capability, as appropriate.						
Existing	Earthquake	1, 3, 9	OMD/ETS	Medium	Capital Budget, HMGP, PDM	Long term
ACWD-11—Retrofit and/or update District tanks and reservoirs to improve seismic resilience, including reservoir roof at the following: Alameda, Decoto, Middlefield, and Patterson.						
Existing	Earthquake	1, 3, 9	ETS	Medium	Capital Budget, HMGP, PDM	Long term
ACWD-12—Consider the purchase and installation of alternative emergency power backup systems, such as solar-based systems at the Whitfield Reservoir.						
Existing	Earthquake, Severe Weather, Flood, Wildfire	1, 9, 12	ETS	Medium	Capital Budget, HMGP, PDM	Long term
ACWD-13—Conduct channel betterments on the Vallecitos Channel to decrease erosion, meet habitat protection standards and otherwise support and enhance natural and beneficial functions, including groundwater recharge.						
Existing	Flood, Drought	1, 9	ETS	High	Capital Budget, HMA	Long term
ACWD-14—Repair diversion capability through the Kaiser embankment to ensure post disaster groundwater recharge capabilities and to protect the natural and beneficial functions of the Kaiser Ponds.						
Existing	Drought, Earthquake	1, 9	ETS	Medium	Capital Budget, HMA	Short term
ACWD-15—As needed, review, update and enhance intertie agreements with the City of Hayward and the City of Milpitas.						
Existing	All hazards	1, 3, 5, 9	OMD	Low	Operating Budget	On-going
ACWD-16—Acquire land or easement and erect a relay tower for emergency communications.						
New	All hazards	1, 3, 9	ETS	High	Capital Budget	Short term
ACWD-17—Consider identifying a sister jurisdiction and develop a protocol for exchanging post event Shakecast information.						
New and Existing	Earthquake	1, 5, 9	OMD	Low	Operating Budget	Short term
ACWD-18—Study water supply reliability alternatives including recycled water, and Lake Del Valle and Los Vaqueros reservoir storage expansion projects to improve water supply capabilities from catastrophic losses of supply.						

Applies to new or existing assets	Hazards Mitigated	Objectives Met[a]	Lead Agency[b]	Estimated Cost[c]	Sources of Funding[d]	Timeline[e]
New	Drought	1, 9, 12	WRD	Medium	Operating Budget	Short term
ACWD-19—Continue to participate in local emergency response trainings and exercises.						
New and Existing	All hazards	1, 5, 7	OMD	Low	Operating Budget	On-going
ACWD-20—Ensure appropriate staff is trained to support District functions when the Emergency Operations Center is activated.						
Existing	All hazards	1, 7	OMD	Low	Operating Budget	Short term
ACWD-21—Continue to train and exercise District damage assessment team.						
Existing	Dam failure, Earthquake, Landslide, Flood, Severe weather, Wildfire	1, 7	OMD	Low	Operating Budget	On-going
ACWD-22—Continue to integrate the capital improvement program with the HMP.						
Existing	All hazards	1, 3, 9, 10, 12	ETS / OMD	Low	Operating Budget	On-going
ACWD-23—Continue to prioritize and implement distribution system replacement to identified critical consumers and/or vulnerable areas.						
Existing	Earthquake	1, 3, 5, 9	ETS	Medium	Capital Budget, Possibly HMGP, PDM	Long term
ACWD-24—Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.						
Existing	All Hazards	1, 3	ETS	High	HMA	Long-term
ACWD-25— Actively participate in the plan maintenance protocols outlined in Volume I of the HMP.						
New and Existing	All hazards	1, 5	OMD	Low	Operating Budget	On-going
ACWD-26— Consider a post-disaster recovery plan and coordinate with Tri Cities on their debris management plans.						
Existing	Dam failure, Earthquake, Flood, Severe weather, Wildfire	1, 3, 5, 9	OMD	Medium	Operating Budget	Long term
ACWD-27—Continue existing vegetation management program to minimize risk of wildfire and landslides.						
Existing	Landslide, Wildfire	1, 5	OMD	Low	Operating Budget	On-going
ACWD-28—Annually present the HMP progress report to the Districts' Board of Directors and post a video of the meeting to the District's YouTube channel.						
Existing	All hazards	1, 4, 7	OMD	Low	Operating Budget	On-going
ACWD-29—Continue implementing a comprehensive demand management program.						
Existing	Drought	1, 2, 4, 5, 7	WRD	Low	Operating Budget	On-going
ACWD-30—Review the City of Fremont's HMP and coordinate with Fremont's Emergency Planner to further develop HMP.						
New and Existing	All hazards	1, 4, 5, 6	OMD	Low	Operating Budget	Short term
ACWD-31— Improve slope stability at the Avalon Tank site.						
Existing	Landslide	1, 9	ETS	Medium	Capital Budget, HMA	Long term
ACWD-32— Develop and calibrate the District's "all pipes" distribution system hydraulic model.						
Existing	Drought, Earthquake	1, 4, 9	ETS / OMD / WRD	Medium	Operating Budget	Short term
ACWD-33—Enhance booster pumping to the upper zones, for example PR-1 or Seven Hills.						
New and Existing	Earthquake	1, 9	ETS	Medium	Capital Budget, Possibly HMGP, PDM	Short term
ACWD-34—Complete a redesign of blending facility to allow low production and neat chemical feed.						

Applies to new or existing assets	Hazards Mitigated	Objectives Met[a]	Lead Agency[b]	Estimated Cost[c]	Sources of Funding[d]	Timeline[e]
Existing	Drought, Earthquake	1, 3, 12	ETS	High	Capital Budget, Possibly HMGP, PDM	Long term
ACWD-35—Evaluation and preliminary design of an intertie with San Francisco Inter-Bay Pipeline 1, 2 and/or 5.						
New and Existing	Drought, Earthquake	1, 9, 5	ETS/OMD/WRD	High	Operating Budget	Long term
ACWD-36—Complete desalinization facility reliability enhancements as indicated in the Integrated Resources Plan.						
Existing	Drought	1, 3, 12	ETS/OMD	High	Capital Budget, Possibly HMA	Long term

a. See the addendum to this volume for a list of objectives.
b. ETS—Engineering & Technology Services; OMD—Operations & Maintenance Department; WRD—Water Resources Department.
c. Costs are not based on dollar thresholds. See the addendum to this volume for an explanation of cost categories.
d. Grant Program Acronyms are as follows: HMA—Hazard Mitigation Assistance; HMGP—Hazard Mitigation Grant Program; PDM—Pre-Disaster Mitigation; FMA—Flood Mitigation Assistance.
e. Short term—within the performance period of this plan (5-years); Long term—5 years or longer; On-going—currently being funded and implemented under existing programs.

Table 4-8. Mitigation Strategy Priority Schedule

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

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?[a]	Implementation Priority[b]	Grant Priority[b]
ACWD-23	4	High	Medium	Yes	Possibly	Yes	Medium	High
ACWD-24	2	High	High	Yes	Yes	No	Low	High
ACWD-25	2	Low	Low	Yes	No	Yes	High	Low
ACWD-26	4	Low	Medium	No	No	Yes	Low	Low
ACWD-27	2	Medium	Low	Yes	No	Yes	High	Low
ACWD-28	3	Low	Low	Yes	No	Yes	High	Low
ACWD-29	5	Low	Low	Yes	No	Yes	High	Low
ACWD-30	4	Low	Low	Yes	No	Yes	High	Low
ACWD-31	2	High	Medium	Yes	Yes	Yes	Medium	High
ACWD-32	3	Medium	Medium	Yes	No	Yes	High	Low
ACWD-33	2	Medium	Medium	Yes	Possibly	Yes	High	Medium
ACWD-34	3	Medium	High	No	Possibly	Yes	Medium	Medium
ACWD-35	3	Medium	High	No	No	Yes	Medium	Low
ACWD-36	3	Medium	High	No	Possibly	Yes	Medium	Medium

a. Currently included in 25-year capital improvement plan or able to be funded by operating budget.
b. See the addendum to this volume for explanation of priorities.

Table 4-9. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type[a]					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam failure	2, 4, 15, 22, 25, 30	24	5, 21, 25, 28		1, 3, 5, 16, 19, 20, 21	
Drought	2, 4, 15, 22, 25, 30, 32, 36	24	5, 25, 28, 29	13, 18	1, 3, 5, 16, 17, 19, 20, 34, 35	14
Earthquake	2, 4, 15, 22, 23, 25, 30, 32	7, 8, 9, 10, 11, 24	5, 21, 25, 28		1, 3, 5, 6, 12, 16, 17, 19, 20, 33, 34, 35	14
Flood	2, 4, 15, 22, 25, 30	24	5, 21, 25, 28	13	1, 3, 5, 6, 12, 16, 19, 20, 21	
Landslide	2, 4, 15, 22, 25, 30	24	5, 21, 25, 28	27	1, 3, 5, 16, 19, 20, 21	31
Severe weather	2, 4, 15, 22, 25, 30	24	5, 21, 25, 28		1, 3, 5, 6, 12, 16, 19, 20, 21	
Wildfire	2, 4, 15, 22, 25, 30	24	5, 21, 25, 28	27	1, 3, 5, 12, 16, 19, 20, 21	

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

4.13.1 Jurisdictional Process for Integration into Planning Mechanisms

Implementation of ACWD's mitigation action plan will enhance and expand the future integration opportunities identified as part of the 2016 initiative. Local, regional, state and federal stakeholders were involved in, and

consulted with, during the planning process. This coordination is expected to continue through District activities, midterm progress reporting, implementation coordination, and continued public engagement. ACWD identified seven actions that have been recommended for integration in this HMP. As the plan is implemented, all ACWD departments will use information from this plan as the best available science and data on natural hazards impacting the District.

4.14 ADDITIONAL COMMENTS

The development of this annex was a District-wide effort District staff members were fully engaged with the process through all phases of plan development:

- **Participation in Steering Committee and District Workshop**—The district was part of the HMP Steering Committee and participated in Steering committee meetings on 08/10/16, 09/14/16, 10/12/16, and a District Annex Workshop on 10/11/16.
- **Public Outreach**—During the development of this Annex the District provided public outreach to encourage the public to provide input. The district provided Annex information on the District website. Also the district participated in Newark Days on 09/18/16 and in the Union City Art and Wine Festival on 10/08/16 and provided public outreach at those events.
- **Action Item Development**— A two-day workshop was held with appropriate District staff to review the draft annex and to development a comprehensive list of mitigation actions. District staff in attendance at this workshop included: Steve Peterson, Toni Lyons, Jacob Reed, Patricia Dustman, and Thomas Niesar. These representatives included all lead agencies identified for District actions.

4.15 ADDITIONAL RESOURCES

City of Fremont. 2016. Local Hazard Mitigation Plan. Accessed online at: https://www.fremont.gov/DocumentCenter/View/30910

City of Fremont. 2008. Housing Background Report. Accessed online at: https://fremont.gov/DocumentCenter/Home/View/2908

National Center for Biotechnology Information. 2005. Health risk assessment of cyanobacterial (blue-green algal) toxins in drinking water. Accessed online at: https://www.ncbi.nlm.nih.gov/pubmed/16705800

5. UNION SANITARY DISTRICT

5.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact
Michael Marzano, Safety Program Manager
5072 Benson Rd
Union City, CA 94587
Telephone: 510-477-7531
e-mail Address: mikema@unionsanitary.ca.gov

Alternate Point of Contact
Karoline Terrazas,
Training & Emergency Response Programs Manager
5072 Benson Rd.
Union City, CA 94587
Telephone: 510-477-7547
e-mail Address: karolinet@unionsanitary.ca.gov

5.2 JURISDICTION PROFILE

5.2.1 Overview

Union Sanitary District is an independent special district which provides wastewater collection, treatment and disposal services to the residents and businesses of the cities of Newark, Union City and Fremont in Southern Alameda County, California. As an independent special district, Union Sanitary District was voted into existence by the citizens served and is sanctioned under California law to perform specific local government functions within certain boundaries. The District was formed in 1918 and reorganized under the Sanitary District Act of 1923.

The District derives its authority in the California Health & Safety Code (Sections 6400-6830). The District is governed by an elected Board of 5 Directors which are accountable to the public and employs 137 staff. The District recovers the cost of their service delivery through rates imposed on users of the services. The District service area is 60.2 square miles with over 347,000 residents and over 3,000 commercial or industrial customers. The number of customers continues to grow within the boundaries of the communities. With the current residential construction we anticipate an increase in service demand during the 5 year plan performance period. The District maintains 793 miles of gravity flow pipeline, 32 miles of pressurized force main pipeline, 5 pump stations, 3 lift stations and one waste water treatment plant. The system treats an average of 22 million gallons a day and discharges to San Francisco Bay.

The elected Board of Directors assumes responsibility for the adoption of this plan and the General Manager will oversee the plan implementation.

5.2.2 Assets

Table 5-1 summarizes the critical assets of the district and their value. The values are passed on the property insurance schedule and estimated replacement costs as of 2016.

Table 5-1. Union Sanitary District Assets

Asset	Value
Property	
46 acres of land - 7 parcels all within 10 feet of sea level	$12,236,000
Critical Infrastructure and Equipment	
Sewer Force Main, pressurized transport pipeline, 25 miles $8 million/mile	$200,000,000
East Bay Dischargers Authority force main, 7 miles $9 million/mile	$63,000,000
Sewer collection system, 793 miles of gravity flow pipeline	$
Total:	**$263,000,000**
Critical Facilities	
Alvarado Treatment Plant	$205,029,831
Alvarado Pump Station	$3,844,241
East Bay Dischargers Authority Pump Station	$14,932,627
Newark Pump Station	$14,339,366
Irvington Pump Station	$8,384,282
Irvington Storage Basin	$6,304,349
Cherry Street Pump Station	$288,438
Fremont Lift Station	$431,250
Boyce Lift Station	$8,280,029
Paseo Padre Lift Station	$486,492
Total:	**$262,320,905**

5.3 INTEGRATION WITH THE 2016 PLANNING INITIATIVE

The following technical reports, plans, and regulatory mechanisms were reviewed to inform the 2016 Multi-Jurisdiction Hazard Mitigation Plan for Volume II Union Sanitary District Annex. All of the below items were additionally reviewed as part of the full capability assessment for Union Sanitary District.

- District-Wide Master Plan May 1994 – This plan provided a baseline for how hazard vulnerabilities were addressed in the past and if any mitigation was considered
- CIP 20 year plan 2017 - Reviewed planned projects that include identification or mitigation of potential vulnerabilities
- Special Projects Fund list for fiscal Year 2016 – fiscal Year 2017
- USD Preliminary Study of the Effect of Sea Level Rise on District Infrastructure June 2013 – Reviewed this study to identify potential hazard vulnerability for District facilities and critical infrastructure.
- East Bay Dischargers Authority Sea Level Rise Adaptation Planning Project August 2015 - Reviewed this study to identify potential hazard vulnerability for District critical infrastructure maintained by East Bay Dischargers Authority.
- USD Seismic Vulnerability Assessment April 2016 – This assessment was phase one to look at the vulnerability of USD's major pipelines and structures with respect to a significant seismic event, and discuss how these seismic vulnerabilities can be mitigated. USD management determined that protecting loss of life during the seismic event and restoring a minimal level of service shortly following a seismic event should be the primary targets of seismic mitigation efforts. Consequently, this assessment rates structures and pipeline sections based on seismic vulnerability and relative importance to inform a targeted mitigation plan. This information was critical in the development of the Hazard Mitigation Action Plan.

- USD Detailed Seismic Assessments & Conceptual Strengthening Schemes April 2016 – This report was phase two and provides details that are used in concert with the Phase one assessment. This report provides detailed conceptual strengthening schemes and cost analysis that are in line with the findings of the phase one assessment. The detail of this report helped determine mitigation costs and the cost benefit analysis. Phase three of the Seismic Vulnerability Assessment is just being started and will provide additional mitigation information for hazards identified in earlier assessments.

5.4 PLANNING AND REGULATORY CAPABILITIES

The following existing codes, ordinances, policies or plans are applicable to this HMP:

Regulatory

- National Pollutant Discharge Elimination System permit requirements
- State Water Resource Control ,
- State Waste Water Discharge Requirements
- District –Wide Master Plan May 1994
- CIP 20 year plan 2017
- USD Preliminary Study of the Effect of Sea Level Rise on District Infrastructure June 2013
- East Bay Dischargers Authority Sea Level Rise Adaptation Planning Project August 2015
- USD Seismic Vulnerability Assessment April 2016
- USD Detailed Seismic Assessments & Conceptual Strengthening Schemes April 2016
-

Planning Capability

- USD policy 1100 Emergency Response Procedure
- Sanitary Sewer Management Plan (SSMP)
- Union Sanitary District Standard Specifications and Details 2006
- Forcemain Facility Emergency Response Plan 2006

5.5 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

An assessment of fiscal capabilities is presented in Table 5-2. An assessment of administrative and technical capabilities is presented in Table 5-3.

Table 5-2. Fiscal Capability

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

Table 5-3. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes	Technical Services, Capital Improvement Project Team, Engineer
Engineers or professionals trained in building or infrastructure construction practices	Yes	Technical Services, Capital Improvement Project Team, Engineer
Planners or engineers with an understanding of natural hazards	Yes	Technical Services, Capital Improvement Project Team, Engineer
Staff with training in benefit/cost analysis	Yes	Technical Services, Capital Improvement Project Team, Engineer
Surveyors	No	
Personnel skilled or trained in GIS applications	Yes	Technical Services, Capital Improvement Project Team, Engineering Tech
Scientist familiar with natural hazards in local area	No	
Emergency manager	No	
Grant writers	No	
Other	No	

5.6 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in Table 1-4.

Table 5-6. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes, Communications & Intergovernmental Relations Coordinator
Do you have personnel skilled or trained in website development?	Yes, Information Technology Administrator
Do you have hazard mitigation information available on your website?	Yes,
• If yes, please briefly describe.	Link to the HMP website
Do you utilize social media for hazard mitigation education and outreach?	Yes
• If yes, please briefly describe.	We post meeting notices and survey links
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes
• If yes, please briefly specify.	We have an elected board of directors that represent the local community
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
• If yes, please briefly describe.	We publish a newsletter that is mailed to all citizens in the community
Do you have any established warning systems for hazard events?	No
• If yes, please briefly describe.	

5.7 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the HMP into existing plans and programs.

5.7.1 Existing Integration

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

- USD Seismic Vulnerability Assessment April 2016
- USD Detailed Seismic Assessments & Conceptual Strengthening Schemes April 2016

5.7.2 Opportunities for Future Integration

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

- District-Wide Master Plan May 1994
- CIP 20 year plan July 2016
- USD Preliminary Study of the Effect of Sea Level Rise on District Infrastructure June 2013
- East Bay Dischargers Authority Sea Level Rise Adaptation Planning Project August 2015
- Phase three of the Seismic Vulnerability Assessment 2017 (in process)
- City of Fremont Local Hazard Mitigation Plan
- County of Alameda Local Hazard Mitigation Plan

5.8 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

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

Table 5-5. Natural Hazard Events

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Drought	-	2014-2016	Reduced liquid flow through our systems with increased solids management in the treatment process
Drought, Earthquake (Ground shift, liquefaction)	-	10/2015	Ground shift caused pipe movement opening pipe joint causing liquefaction and damage to water infrastructure $2,209,000
Drought (Ground Shift)	-	1/2008	Ground shift near wetland area caused pipeline movement and opening of pipe joints causing sewage leak $94,213
Drought (Ground Shift)	-	10/2007	Ground shift near wetland area caused pipeline movement and opening of pipe joints causing sewage leak $150,991
Severe Storm	-	09/2006	Storm water erosion under pipe. Risk of sewage dumped into Alameda Creek and SF Bay $355,583
Loma Prieta Earthquake	DR-845	10/1989	District experienced some minor impacts as a result of the Loma Prieta Earthquake.

5.9 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities the jurisdiction include:

- All critical infrastructure is built along the San Francisco Bay wetlands with a very high water table. Areas are very susceptible to damage from earthquakes and sea level rise. Most of the facilities are in or next to sensitive wetland areas.

5.10 HAZARD RISK RANKING

Table 5-6 presents the ranking of the hazards of concern.

Table 5-6. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	51	High
1	Drought	30	High
2	Flood	22	Medium
2	Severe Weather	20	Medium
3	Dam Failure	16	Low
4	Landslide	0	Low
5	Wildfire	0	Low

5.11 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 5-7 lists the actions that make up the Union Sanitary District hazard mitigation action plan. Table 5-8 identifies the priority for each action. Table 5-9 summarizes the mitigation actions by hazard of concern and the six mitigation types.

Table 5-7. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action #USD001—Build a new facilities maintenance shop – facility will meet seismic standards and built on a raised foundation to accommodate hazards of sea level rise and flooding						
Existing	All Hazards	1,3,9,10,12	USD, CIP Team	8,700,000	CIP Fund	Short
Action #USD002—Equalization Storage Basin at Alvarado. Basin will temporarily hold waste water if discharge through the East Bay Dischargers Authority (EBDA) system is interrupted. This prevents discharge of treated waste into Alameda Creek.						
New	Earthquake, Flood	1,3,9,10,12	USD, CIP Team	5,600,000	CIP Fund, HMA	Short
Action #USD003—Build Digester No. 7. With decreased liquid flow and increased solids management, increased digester operations are required to properly treat solid waste which will also generate additional bio-gas for co-generation of electricity.						
New	Drought	1,3,9,10,12	USD, CIP Team	10,000,000	CIP Fund	Short
Action #USD004—Rebuild East Aeration Tank Roof – The tank concrete roof has been identified as seismically unstable and has a weakened load capacity. Loss of this structure reduces our treatment capacity by 20%.						
Existing	Earthquake	1,3,9,10	USD, CIP Team	3,300,000	CIP Fund, HMA	Short
Action #USD005—Seismic upgrade of Primary Clarifier 1-4 - The roof structure over the clarifiers has been identified as seismically unstable. Loss of this structure would reduce our treatment capacity by approximately 85 percent.						
Existing	Earthquake	1,3,9,10	USD, CIP Team	4,650,000	CIP Fund, HMA	Short
Action #USD006—Upgrade Standby Power Generation System - Replace the current 6 standby diesel generators for the treatment plant with newer more reliable generators that produce fewer emissions.						
Existing	Earthquake	1,3,9,10	USD, CIP Team	11,950,000	CIP Fund, HMA	Short

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action #USD007—Emergency back-up data communications – provide redundant data communications for monitoring and operation of USD wastewater pumping and treatment equipment at the treatment plant and pump stations.						
New	All Hazards	1,3,9,10	USD, IT Team	600,000	Special Project Fund	Short Term
Action #USD008—Integrate the HMP into other plans and programs (e.g. CIP, District-Wide Master Plan)						
Existing	All Hazards	1,3,4,7,9,11,12	USD, General Manager	Low	General Fund	Continual
Action #USD009—Develop and implement a program and process to capture historical and perishable data after any event to support future mitigation efforts.						
New	All Hazards	1,3,4,9,11	USD, General Manager	Low	General Fund	Short Term
Action #USD010—Participate in the HMP maintenance and updating outlined in Volume I of this HMP.						
New	All Hazards	1,4,5,6,	USD, General Manager	Low	General Fund	Continual
Action #USD011—Improve Public Information and Public Outreach to include Hazard Mitigation Programs. Includes newsletter and educational video.						
Existing	All Hazards	1,4,5,6,7	USD, Outreach Rep. and PIO	$105,000	General Fund	2018
Action #USD012—Seismic Retrofit of Concrete Structures - This is an ongoing project of improving concrete structures as we have other repairs or improvements of the structure. Planned actions and estimates are from our documented seismic assessments						
Existing	Earthquake	1,3,9,10	USD, CIP Team	$23,000,000	CIP Fund, HMA	Continual
Action #USD013—Newark Pump Station Emergency Outfall – Establish an outfall from the Newark pump station to the SF bay. This will allow discharge of wastewater if the forcemain to the treatment plant is damaged or the treatment plant is damaged and prevent wastewater backup into communities and wetland areas causing a public health concern.						
New	Earthquake	1,3,5,9,	USD, CIP Team	Medium	CIP Fund, HMA	Long Term
Action #USD014—Forcemain Alameda creek crossing ground stabilization – The soil around the forcemain near Alameda creek has been identified as very unstable. This will stabilize the soil and forcemain pipeline to prevent sewage leakage into Alameda creek and the wetland areas						
Existing	Earthquake, Flood, Dam Failure, Severe Weather	1,3,9	USD, CIP Team	Medium	CIP Fund, HMA	Long Term
Action #USD015—Forcemain lining – Forcemain is constructed of segmented concrete pipe. This project will line the pipeline to prevent leakage at joints if the pipeline moves or settles. Much of this pipeline is within protected wetland areas.						
Existing	Earthquake	1,3,9,12	USD, CIP Team	$53,000,000	CIP Fund, HMA	Long Term
Action #USD016—Admin Seismic Upgrade – This building was identified to be critical to life safety and restoring basic service. The building has seismic deficiencies and is vulnerable to damage from a seismic event.						
Existing	Earthquake	1,3,9,10,12	USD, CIP Team	$7,500,000	CIP Fund, HMA	Long Term
Action #USD017—Control Building Seismic Upgrade - This building was identified to be critical to life safety and restoring basic service. The building has seismic deficiencies and is vulnerable to damage from a seismic event.						
Existing	Earthquake	1,3,9,10,12	USD, CIP Team	$2,800,000	CIP Fund, HMA	Long Term
Action #USD018— Field Ops Building Seismic Upgrade – This building was identified to be critical to life safety and restoring basic service. The building has seismic deficiencies and is vulnerable to damage from a seismic event.						
Existing	Earthquake	1,3,9,10,12	USD, CIP Team	$3,100,000	CIP Fund, HMA	Long Term

Table 5-8. Mitigation Strategy Priority Schedule

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/ Budgets?	Implementation Priority[a]	Grant Priority[a]
USD001	5	Medium	Medium	Yes	Yes	Yes	Medium	Medium
USD002	5	Medium	Medium	Yes	Yes	Yes	High	Medium
USD003	5	Medium	Medium	Yes	Yes	Yes	High	Medium
USD004	4	High	Medium	Yes	Yes	Yes	High	High
USD005	4	Medium	Medium	Yes	Yes	Yes	High	Medium
USD006	4	Medium	Medium	Yes	Yes	Yes	Medium	Medium
USD007	4	Medium	Medium	Yes	Yes	Yes	High	Medium
USD008	7	High	Low	Yes	No	Yes	High	Medium
USD009	5	Medium	Low	Yes	No	Yes	High	Medium
USD010	4	Low	Low	Yes	No	Yes	High	Low
USD011	5	Low	Low	Yes	Yes	Yes	High	Low
USD012	4	Medium	Low	Yes	Yes	Yes	Low	Medium
USD013	4	Low	Medium	No	Yes	No	Low	Low
USD014	3	Medium	Medium	Yes	Yes	Yes	Medium	Medium
USD015	4	High	High	Yes	Yes	No	Low	High
USD016	5	High	Medium	Yes	Yes	No	Medium	High
USD017	5	High	Medium	Yes	Yes	No	Medium	High
USD018	5	High	Medium	Yes	Yes	No	Medium	High

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

Table 5-9. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type[a]					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	USD008	USD014	USD011	USD014		USD014
Drought	USD008	USD003	USD011	USD003	USD003	
Earthquake	USD008	USD001, USD004, USD005, USD006, USD012, USD014, USD015, USD016, USD017, USD018	USD011	USD002, USD003, USD004, USD005, USD006, USD007, USD011, USD012 USD013, USD014, USD015	USD002, USD003, USD004, USD005, USD006, USD007, USD016, USD017, USD018	USD001, USD013, USD014, USD015,

Hazard Type	Action Addressing Hazard, by Mitigation Type[a]					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Flood	USD008	USD001, USD002, USD014	USD011	USD002, USD014	USD002	USD014
Landslide	USD008					
Severe Weather	USD008	USD001, USD002, USD014	USD011	USD002	USD002	USD014
Wildfire	USD008					

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

5.11.1 Jurisdictional Process for Integration into Planning Mechanisms

Implementation of USD's mitigation action plan will enhance and expand the future integration opportunities identified as part of the 2016 initiative. Local, regional, state and federal stakeholders were involved in, and consulted with, during the planning process. This coordination is expected to continue through District activities, midterm progress reporting, implementation coordination, and continued public engagement. USD identified two actions that have been recommended for integration in this HMP. As the plan is implemented, all USD departments will use information from this plan as the best available science and data on natural hazards impacting the District.

5.12 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

The District-Wide Master Plan is being redone to address the changes in the community, the environment and the regulations that work to protect them. As we look at protecting the environment from the waste products produced in the communities we serve, we must also find new ways to treat the waste to protect the public health as well as the environment. Because of the geographic location of our facilities, updated studies on the identified hazards are helpful as we plan the mitigation actions. The knowledge of the effects from climate change and earthquakes is improving constantly. The more information we can collect be better prepared we can be.

5.13 ADDITIONAL COMMENTS

Our service area extends beyond the cities of Union City and Newark and includes the City of Fremont. We reviewed the City of Fremont 2016 Local Hazard Mitigation Plan to ensure that we have addressed vulnerabilities and hazards identified in that plan.

We have a staff member whose job is Outreach Representative. This person does outreach through community events, classroom lessons and tours of our facilities. We are increasing the program and including additional personal hazard mitigation as one of the topics.

5.14 RESOURCES

City of Fremont 2016 Local Hazard Mitigation Plan

County of Alameda 2016 Local Hazard Mitigation Plan January 2016

USACE, 2011. *Sea-Level Change Considerations for Civil Works Programs.* US Army Corps of Engineers, EC 1165-2-212.

East Bay Dischargers Authority Sea Level Rise Adaptation Planning Project August 2015

6. NEWARK UNIFIED SCHOOL DISTRICT

6.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact
Vince Belloni
Director of Maintenance, Operations and Transportation
37370 Birch St Bldg. B
Newark, CA 94560
Telephone: 510-818-4277
e-mail Address: vbelloni@newarkunified.org

Alternate Point of Contact
Bryan Richards
Chief Business Official
5715 Musick Ave
Newark, CA 94560
Telephone: 510-818-4114
e-mail Address: brichards@newarkunified.org

6.2 JURISDICTION PROFILE

6.2.1 Overview

The Newark Unified School District is located in Alameda County in the San Francisco Bay Area. The district covers approximately eight square miles, including the east bay community of Newark. The City of Newark is a bedroom community of more than 40,000 people, situated on the southeastern edge of the San Francisco Bay, directly off of Interstate 880 and Highway 84.

In 1964, voters approved the formation of the Newark Unified School District. The district staff of 760 serves about 6,000 students at eight elementary schools, one junior high school, one continuation school, one alternative school and one comprehensive high school. All of the schools maintain a shared commitment to providing students with a world class education based on a strong liberal arts foundation centered on the district's core values.

There are five Newark citizens who are elected to serve overlapping terms as Board members. They are elected at-large by the registered voters in Newark. The Board functions as the legislative body of the school district and establishes policies by which the school district is operated. Programs and policies are governed according to laws and regulations as set by the Constitution of the State of California, State Education Code and California Administrative Code, Title 5. The Board is responsible for adopting this plan, the Maintenance-Operations-Transportation-Facilities Director will oversee its implementation.

The state provides the majority of K–12 funding for Newark Unified. California's public schools receive funding from three sources: the state (58.4%), property taxes and other local sources (37.5%), and the federal government (4.1%). The proportion of funding from each source varies across school districts.

6.2.2 Assets

Table 6-1 summarizes the critical assets of the district and their value.

Table 6-1. Special District Assets

Asset	Value
Property	
Bridgepoint High School: 1.22_ acres of land	$13,402,942
Bridgepoint High School: Personal Property Replacement Cost	$1,876,392
Total:	**$15,279,334**
Property	
Central Kitchen and Corporation Yard: .93 Acres	$4,930,473
Central Kitchen and Corporation Yard: Personal Property Replacement Cost	$1,802,429
Total:	**$**6,732,902
Property	
Central Kitchen and Corporation Yard: .93 Acres	$4,930,473
Central Kitchen and Corporation Yard: Personal Property Replacement Cost	$1,802,429
Total:	**$**6,732,902
Property	
District Office: .45 Acres	$4,930,797
Critical Infrastructure and Equipment	
District Office: Personal Property Replacement Cost	$737,796
Total:	**$**5,641,593
Property	
Musick Elementary School: 1.15 Acres	$11,536,760
Musick Elementary School:: Personal Property Replacement Cost	$2,336,618
Total:	**$**13,873,378
Property	
Graham Elementary School: .1.34 Acres	$12,947,356
Graham Elementary School: Personal Property Replacement Cost	$1,766,753
Total:	**$**14,714,109
Critical Facilities	**n/a**
Property	
Snow Elementary School: .1.05 Acres	$10,347,407
Snow Elementary School: Personal Property Replacement Cost	$1,352,990
Total:	**$**11,700,397
Property	
Bunker Elementary School: .1.02 Acres	$10,677,793
Bunker Elementary School: Personal Property Replacement Cost	$1,440,038
Total:	**$**12,117,831
Property	
Kennedy Elementary School: .1.0 Acres	$9,866,608
23 Vehicles, 5 Buses	1.75M

Asset	Value
Kennedy Elementary School: Personal Property Replacement Cost	$1,287,755
Total:	**$**11,154,363
Property	
Lincoln Elementary School: .1.0 Acres	$9,009,902
Lincoln Elementary School: Personal Property Replacement Cost	$1,165,999
Total:	**$**10,265,901
Property	
Milani Elementary School: .1.04 Acres	$10,582,792
Milani Elementary School: Personal Property Replacement Cost	$1,409,430
Total:	**$**11,992,222
Property	
Milani Child Care: 11 Acres	$962,899
Milani Child Care : Personal Property Replacement Cost	$134,350
Total:	**$**1,097,249
Property	
Newark Junior High School: 3.35 Acres	$34,722,520
Newark Junior High School: Personal Property Replacement Cost	$3,514,255
Total:	**$**38,236,775
Property	
Newark Memorial High School: .7.83 Acres	$80,859,355
Critical Infrastructure and Equipment	
Milani Elementary School: Personal Property Replacement Cost	$9,844,289
Total:	**$**90,703,824
Property	
Schilling Elementary School: .1.28 acres	$13,108,514
Schilling Elementary School: Personal Property Replacement Cost	$1,726,982
Total:	**$**14,835,496
Property	
Whiteford Pre-School: ..23 acres	$2,421,661
Schilling Elementary School: Personal Property Replacement Cost	$338,905
Total:	**$**2,760,566

6.3 INTEGRATION WITH THE 2016 PLANNING INITIATIVE

The following technical reports, plans, and regulatory mechanisms were reviewed to inform the 2016 Multi-Jurisdiction Hazard Mitigation Plan for Volume II (Newark Unified School District). All of the below items were additionally reviewed as part of the full capability assessment for Newark Unified School District.

- Key information on critical assets was obtained from the District's insurance provider, Keenan Insurance to provide information on the critical facilities identified, in aggregate, in this annex.
- Newark Unified School District Strategic Plan was reviewed for information on service trends and jurisdictional overview: (http://www.nusd.ca.schoolloop.com/cms/page_view?d=x&piid=&vpid=1231079269956)

6.4 PLANNING AND REGULATORY CAPABILITIES

The following existing codes, ordinances, policies or plans are applicable to this HMP:

Regulatory

- BP/AR 0450 – Comprehensive Safety Plan, Healthy School Act of 2000 (HSA),Williams Amendment, SARC, IIPP, CLC Section 6401.7, FIT, California Code Of Regulations Title 8, Section 1509,3203
- BP/AR 3514 – Environmental Safety, EC 32280-32289, Safety Plans,
- AR 3514.1 – Hazardous Substances, EC 35256, EC 49341, Hazard Communications Standard (Cal/OSHA-California Code of Regulations, Title 8, Section 5194
- BP/AR 3516 – Emergencies and Disaster Preparedness Plan, EC 32280-32289, Safety Plans, GC 3100 Public employees as disaster service workers, EC Americans with Disabilities Act of 1990,42 U.S.C. Sec. 12101
- AR 3516.3 – Earthquake Emergency Procedure System, EC 32280-33289, Safety Plans, GC 3100 Public employees as disaster service workers
- BP 4119.41/4219.41/4319.41 – Employees with Infectious Disease, EC 46406

Planning Capability

- CEC Section 35295 requires public and private schools to develop school disaster plans so that the students and staff will act instinctively and correctly when a disaster strikes. The SB 187 Comprehensive District Wide School Safety Plan (Emergency Management Plan) is designed to provide administrators with a resource for protecting students and staff and school facilities, as well as to describe the responsibilities of staff members for a wide range of emergency and disaster situations that may occur.
- Design site landscaping that encourages drought-resistant, rodent-resistant, and fire-resistant plants to reduce water use, prevent erosion of soils, improve habitat, lessen fire danger, and minimize degradation of resources

6.5 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

An assessment of fiscal capabilities is presented in Table 6-2. An assessment of administrative and technical capabilities is presented in Table 6-3.

Table 6-2. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes
Authority to Levy Taxes for Specific Purposes	No
User Fees for Water, Sewer, Gas or Electric Service	No
Incur Debt through General Obligation Bonds	Yes
Incur Debt through Special Tax Bonds	No
Incur Debt through Private Activity Bonds	No
State-Sponsored Grant Programs	Yes

Financial Resources	Accessible or Eligible to Use?
Development Impact Fees for Homebuyers or Developers	Yes
Other	No

Table 6-3. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	No	
Engineers or professionals trained in building or infrastructure construction practices	No	
Planners or engineers with an understanding of natural hazards	No	
Staff with training in benefit/cost analysis	Yes	Chief Business Official
Surveyors	No	
Personnel skilled or trained in GIS applications	No	
Scientist familiar with natural hazards in local area	No	
Emergency manager	Yes	Superintendent / CBO / Director MO&T
Grant writers	No	
Other	No	

6.6 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in Table 1-4.

Table 6-4. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	No
Do you have personnel skilled or trained in website development?	No, but we have staff than can update and operate the current website.
Do you have hazard mitigation information available on your website?	No
• If yes, please briefly describe.	
Do you utilize social media for hazard mitigation education and outreach?	No
• If yes, please briefly describe.	
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
• If yes, please briefly specify.	
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
• If yes, please briefly describe.	We have the ability to do an all call the parents of each school in the District, or District-wide.
Do you have any established warning systems for hazard events?	Yes
• If yes, please briefly describe.	See Board Policy for details.

6.7 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the HMP into existing plans and programs.

6.7.1 Existing Integration

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

- Mitigation is not currently integrated in district plans and programs.

6.7.2 Opportunities for Future Integration

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

- NUSD will be integrating hazard mitigation into local planning, creating a more streamlined governmental process increasing efficiency and avoiding conflicting outcomes. Planners and emergency managers should work together to collectively benefit the community. Placing the Plan on the district website will also help fulfil Goals 2, 4, 5, Objective #7.

6.8 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

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

Table 6-5. Natural Hazard Events

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Severe Storms	DR-1646	5/6/2006	Information not Available
Severe Storms	DR-1628	3/2/2006	Information not Available
Severe Storms	DR-1203	9/2/1998	Information Not available
Severe Storms	DR-1155	4/1/1997	Information not available
Severe Storms	DR-1046	12/3/1995	Information not available
Earthquake	N/A	Since 1931	There have been 3,729 earthquakes within a 30 miles radius in Newark since 1931

6.9 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities the jurisdiction include:

- We have creeks that run beside our school sites.
- Many district facilities reside within the identified dam failure inundation areas
- School operations are subject to disruption due to prolonged power interruption.
- One of our school sites BGI does not have a true street exit but a dead end, this would cause a problem during a disaster event
- BGP site has a very large SFPUC waterway that runs through the middle of the site. In a disaster if the piping failed, it would cause a massive sink hole and extreme damage

6.10 HAZARD RISK RANKING

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

Table 6-6. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe Weather	51	High
3	Flood	27	Medium
4	Dam Failure	18	Medium
5	Drought	3	Low
6	Landslide	0	No Impacts
7	Wildfire	0	No impacts

6.11 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 6-7 lists the actions that make up the Newark Unified School District hazard mitigation action plan. Table 6-8 identifies the priority for each action. Table 6-9 summarizes the mitigation actions by hazard of concern and the six mitigation types.

Table 6-7. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
NUSD #1— Actively participate in the plan maintenance protocols outlined in Volume 1 of the HMP.						
New and Existing	All hazards	1,4	Lead Contact Department for Plan	Low	Staff Time, General Funds	Short-term
NUSD #2— Integrate the HMP into other plans and programs that support infrastructure investments choices, such as the capital improvement program.						
New and Existing	All Hazards	1,4	Board	Low	Staff Time, General Funds	On-going
NUSD #3— New Emergency generator for NMHS, NJHS, and District Office Technology Rm						
Existing	All Hazards	1,9	Board	High	General fund, FEMA HMA grant funding	On-going
NUSD #4— Add railroad Crossing exit to BGI school site						
Existing	Earthquake	8,7,5	Board	High	General Fund	On-going
NUSD #5— Pipe all creeks underground that run beside the school sites						
New and Existing	Flood, Dam Failure, Severe Weather	12,5	Board	High	General Fund, FEMA HMA grant Funding	On-going
NUSD-#6—Continue to participate in local emergency response trainings and exercises.						
New and Existing	All hazards	1, 5, 7	Board	Low	General Fund	On-going
NUSD-#7—Ensure appropriate staff is trained to support District functions when the Emergency Operations Center is activated.						
Existing	All hazards	1, 7	Board	Low	General Fund	Short term
NUSD #8—Where appropriate, support retro-fitting, purchase or relocation of district facilities located in high hazard areas and prioritize those structures that have experienced repetitive losses.						
Existing	All Hazards	1, 3	Board	High	FEMA HMA Grant funding	Long-term

Table 6-8. Mitigation Strategy Priority Schedule

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

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

Table 6-9. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type[a]					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam failure	1,2	3,5,8			3,6,7	5
Drought	1,2	3,8			3,6,7	
Earthquake	1,2	3,8			3,6,7	4
Flood	1,2	3,5,8			3,6,7	5
Landslide	*No Exposure*					
Severe Weather	1,2	3,5,8			3,6,7	5
Wildfire	*No Exposure*					

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

6.11.1 Jurisdictional Process for Integration into Planning Mechanisms

Implementation of NUSD's mitigation action plan will enhance and expand the future integration opportunities identified as part of the 2016 initiative. Local, regional, state and federal stakeholders were involved in, and consulted with, during the planning process. This coordination is expected to continue through District activities, midterm progress reporting, implementation coordination, and continued public engagement. NUSD identified one action that is recommended for integration in this HMP. As the plan is implemented, all NUSD departments will use information from this plan as the best available science and data on natural hazards impacting the District.

6.12 RESOURCES

http://www.cde.ca.gov/ls/ss/vp/safeschlplanning.asp

http://www.leginfo.ca.gov/cgi-bin/displaycode?section=edc&group=32001-33000&file=32280-32289

http://pubs.cde.ca.gov/tcsii/ch8/safeplngschlreview.aspx

http://www.nusd.ca.schoolloop.com/cms/page_view?d=x&piid=&vpid=1231079204430

http://www.gamutonline.net/district/newark/DisplayPolicy/1010169/

http://www.leginfo.ca.gov/cgi-bin/calawquery?codesection=edc

http://www.homefacts.com/earthquakes/California/Alameda-County/Newark.html

ADDENDUM: ANNEX REVIEW GUIDE

The following sections provide more information on interpreting and understanding the implementation related information provided in the mitigation action plan, priority schedule and analysis of mitigation actions.

ACTION PLAN TABLE

Information pertaining to the columns listed in Table 1-7 are listed in notes below the table and/or in the sections below.

Hazard Mitigation Plan Goals and Objectives

Goals

1. Protect the public's health and safety and minimize the damage to essential services, structures, property, and infrastructure as a result of hazards.
2. Promote hazard mitigation as an integrated public policy and as a standard business practice.
3. Encourage the development and implementation of long-term, cost effective, and environmentally sound mitigation projects.
4. Build and support local capacity to enable the public to prepare, respond, and recover from the impact of natural hazards.
5. Provide increased safety through the provision of adequate infrastructure, public education, and outreach programs.
6. Incorporate elements of hazard mitigation into cross functional planning and regulatory initiatives.
7. Retrofit, purchase, or relocate structures in high hazard areas, especially those known to be repetitively damaged.

Objectives

Objective Number	Objective Statement	Goals for which it can be applied
1	Advance community resilience through preparation, adoption, and implementation of state, regional and local multi-hazard mitigation plans and projects	1, 2, 3, 4, 5, 6, 7
2	Create financial and regulatory incentives to motivate stakeholders such as homeowners, private sector businesses, and nonprofit community organizations to mitigate hazards and risk	1, 3, 7
3	Incorporate risk reduction considerations in new and updated infrastructure and development plans to reduce the impacts of hazards	1, 5, 7
4	Develop and provide updated information about threats, hazards, vulnerabilities, and mitigation strategies to state, regional, and local agencies, as well as private sector groups	2, 4, 5
5	Establish and maintain partnerships among all levels of government, private sector, community groups, and institutions of higher learning that improve and implement methods to protect life and property	1, 2, 4, 5
6	Improve the quality and effectiveness of local hazard mitigation planning through effective training and guidance that strengthens linkages between the Union City/Newark hazard mitigation plan, general plan safety elements, and SHMP	2, 6

Objective Number	Objective Statement	Goals for which it can be applied
7	Promote and enhance outreach and education efforts by state, regional and local agencies with hazard mitigation plans and programs to actively encourage engagement of stakeholder groups such as homeowners, private sector businesses, and nonprofit community organizations	1, 2, 4, 5
8	Improve transportation conditions through infrastructure and program improvements to provide better access for response personnel and provide residents with a means of egress during a disaster	1, 4, 5
9	Support the protection of vital records, and strengthening or replacement of buildings, infrastructure, and lifelines to minimize post-disaster disruption and facilitate short-term and long-term recovery	1, 4, 5
10	Maximize the likelihood that structures are modified, as necessary, over time to meet life safety standards	1, 5, 7
11	Research, develop, and promote adoption of cost-effective building and development laws, regulations, and ordinances exceeding the minimum levels needed for life safety	2, 5
12	Incorporate considerations for future conditions and impacts of climate change into programmatic, regulatory, and development priorities	2, 3, 6, 7

Estimated Cost

Cost ratings are generally determined as follows:

- **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.

Timeline

Timeline is generally established as follows:

- **Short Term**—to be completed in 1 to 5 years
- **Long Term**—to be completed in greater than 5 years
- **Ongoing**—currently being funded and implemented under existing programs.

PRIORITY SCHEDULE (TABLE 1-8)

Information pertaining to the columns listed in Table 1-8 are listed in notes below the table and/or in the sections below.

Benefit/Cost Review

A qualitative review of the apparent benefits versus the apparent cost of each project was performed. Parameters were established for assigning subjective ratings (high, medium, and low) to costs and benefits as follows:

- **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.

It should be noted that for many of the strategies identified in this action plan, funding might be sought under FEMA's HMGP or PDM programs. Both of these programs require detailed benefit/cost analysis as part of the application process. These analyses will be performed on projects at the time of application preparation.

Implementation Priority

- **High Priority**—An initiative that meets multiple objectives, has benefits that exceed cost, has funding secured, or is an ongoing project and meets eligibility requirements for a grant program. High priority actions can be completed in the short term (1 to 5 years).
- **Medium Priority**—An action that meets multiple objectives, that has benefits that exceed costs, and for which funding has not been secured but that is eligible for funding. Action can be completed in the short term, once funding is secured. Medium priority projects will become high priority projects once funding is secured.
- **Low Priority**—An action that will mitigate the risk of a hazard, that has benefits that do not exceed the costs or are difficult to quantify, for which funding has not been secured, that is not eligible for grant funding, and for which the time line for completion is long term (1 to 10 years). Low priority actions may be eligible for grant funding from other programs that have not yet been identified. Low priority projects are "blue-sky" projects. Financing is unknown, and they can be completed over a long term.

Grant Funding Priority

- **High Priority**—An action that has been identified as meeting grant eligibility requirements, assessed to have high benefits, is listed as high or medium priority, and where local funding options are unavailable or where dedicated funds could be used for projects that are not eligible for grant funding.
- **Medium Priority**—An action that has been identified as meeting grant eligibility requirements, assessed to have medium or low benefits, is listed as medium or low priority, and where local funding options are unavailable.

- **Low Priority**—An action that has not been identified as meeting grant eligibility requirements or has low benefits.

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

ANALYSIS OF MITIGATION INITIATIVES (TABLE 1-9)

Each planning partner reviewed its recommended initiatives to classify each initiative 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.

ACRONYMS

FMA: Flood Mitigation Assistance

HMA: Hazard Mitigation Assistance

HMGP: Hazard Mitigation Grant Program

HMP: Hazard Mitigation Plan

PDM: Pre-Disaster Mitigation

Union City/Newark Multi-Jurisdiction Hazard Mitigation Plan

Appendix A – Planning Partner Expectations

PLANNING PARTNER EXPECTATIONS

ACHIEVING DMA COMPLIANCE FOR ALL PLANNING PARTNERS

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

- ✓ **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 of existing documents pertinent to each jurisdiction to identify policies or recommendations that are not consistent with those documents reviewed in producing the "parent" plan or have policies and recommendations that complement the hazard mitigation initiatives selected (i.e.: comp plans, basin plans or hazard specific plans).
- ✓ **Action Review.** For plan updates, a review of the strategies from your prior action plan to determine those that have been accomplished and how they were accomplished; and why those that have not been accomplished were not completed.
- ✓ **Update Localized Risk Assessment.** Personalize the Risk Assessment for each jurisdiction by removing hazards not associated with the defined jurisdictional area or redefining vulnerability based on a hazard's impact to a jurisdiction. This phase will include:
    - A ranking of the risk
    - A description of the number and type of structures at risk
    - An estimate of the potential dollar losses to vulnerable structures
    - A general description of land uses and development trends within the community, so that mitigation options can be considered in future land use decisions.
- ✓ **Capability assessment.** Each planning partner must identify and review their individual regulatory, technical and financial capabilities with regards to the implementation of hazard mitigation actions.
- ✓ **Personalize mitigation recommendations.** Identify and prioritize mitigation recommendations specific to the each jurisdiction's defined area.
- ✓ **Create an Action Plan.**
- ✓ **Incorporate Public Participation.** Each jurisdiction must present the Plan to the public for comment at least once, within two weeks prior to adoption.
- ✓ **Plan must be adopted by each jurisdiction.**

One of the benefits to multi-jurisdictional planning is the ability to pool resources. This means more than monetary resources. Resources such as staff time, meeting locations, media resources, technical expertise will all need to be utilized to generate a successful plan. In addition, these resources can be pooled such

that decisions can be made by a peer group applying to the whole and thus reducing the individual level of effort of each planning partner. This will be accomplished by the formation of a steering committee made up of planning partners and other "stakeholders" within the planning area. The size and makeup of this steering committee will be determined by the planning partnership. This body will assume the decision making responsibilities on behalf of the entire partnership. This will streamline the planning process by reducing the number of meetings that will need to be attended by each planning partner. The assembled Steering Committee for this effort will meet monthly on an as needed basis as determined by the planning team, and will provide guidance and decision making during all phases of the plan's development.

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

A. A "Letter of Intent to participate" or Resolution to participate to the Planning Team (see exhibit A).

B. 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.

C. Support and participate in the selection and function of the Steering Committee selected to oversee the development of this plan.

D. Provide support in the form of mailing list, possible meeting space, and public information materials, such as newsletters, newspapers or direct mailed brochures, required to implement the public involvement strategy developed by the Steering Committee.

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 their template and provide it to the planning team in the time frame established by the Steering Committee. Failure to complete your template in the required time frame may lead to disqualification from the partnership.

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 on-going plan maintenance protocol identified in the plan. Partners that do not participate in this plan maintenance strategy may be deemed ineligible by the partnership, and thus lose their DMA eligibility.**

Eligible entities that do not wish to participate in the 2016 multi-jurisdictional planning process or fail to meet the requirements contained in this document may choose to link to the plan in pursuit of future adoption after the completion of the 2016 effort.

Exhibit A

Example Letter of Intent to Participate

Union City/Newark Multi-Jurisdiction Hazard Mitigation Planning Partnership

C/O Jessica Cerutti, Tetra Tech, Inc.

1999 Harrison Street, Suite 500.

Oakland, CA 94612

Dear Union City/Newark Planning Team,

Please be advised that the _____ (***insert district name***) is committed to participating in the update to the Union City/Newark Multi-Jurisdiction Hazard Mitigation Plan. As the jurisdictional representative tasked with this planning effort, I certify that we will commit all necessary resources in order to meet Partnership expectations as outlined in the "Planning Partners expectations" document provided by the planning team, in order to obtain Disaster Mitigation Act (DMA) compliance for our jurisdiction.

Mr./Ms. _____ will be our jurisdiction's point of contact for this process and they can be reached at ***(insert: address, phone number and e-mail address)***.

Sincerely,

Name _____

Title _____

Exhibit B

Planning Team Contact information

Name	Representing	Address	Phone	e-mail
Andrew Block	Union City	34009 Alvarado-Niles Rd Union City, CA 94587	(510) 675-5319	andyb@unioncity.org
Joan Malloy	Union City	34650 7th St Union City, CA 94587	(510) 675-5337	joanm@unioncity.org
Terrence Grindall	Newark	37101 Newark Blvd Newark, CA 94560	(510) 578-4208	terrence.grindall@newark.org
Rob Flaner	Tetra Tech, Inc.	90 S. Blackwood Ave Eagle, ID 83616	(208) 939-4391	rob.flaner@tetratech.com
Jessica Cerutti	Tetra Tech, Inc.	1999 Harrison St., Ste. 500 Oakland, CA 94612	(415) 841-2869	jessica.cerutti@tetratech.com
Stephen Veith	Tetra Tech, Inc.	1020 SW Taylor St., Ste. 530 Portland, Oregon 97205	(503) 223-5388	stephen.veith@tetratech.com

Exhibit C

Overview of HAZUS

Overview of HAZUS-MH (Multi-Hazard)

HAZUS-MH, is a nationally applicable standardized methodology and software program that contains models for estimating potential losses from earthquakes, floods, and hurricane winds. HAZUS-MH was developed by the Federal Emergency Management Agency (FEMA) under contract with the National Institute of Building Sciences (NIBS). NIBS maintains committees of wind, flood, earthquake and software experts to provide technical oversight and guidance to HAZUS-MH development. Loss estimates produced by HAZUS-MH are based on current scientific and engineering knowledge of the effects of hurricane winds, floods, and earthquakes. Estimating losses is essential to decision-making at all levels of government, providing a basis for developing mitigation plans and policies, emergency preparedness, and response and recovery planning.

HAZUS-MH uses state-of-the-art geographic information system (GIS) software to map and display hazard data and the results of damage and economic loss estimates for buildings and infrastructure. It also allows users to estimate the impacts of hurricane winds, floods, and earthquakes on populations. The latest release, HAZUS-MH MR1, is an updated version of HAZUS-MH that incorporates many new features which improve both the speed and functionality of the models. For information on software and hardware requirements to run HAZUS-MH MR1, see HAZUS-MH Hardware and Software Requirements.

HAZUS-MH Analysis Levels

HAZUS-MH provides for three levels of analysis:

- A Level 1 analysis yields a rough estimate based on the nationwide database and is a great way to begin the risk assessment process and prioritize high-risk communities.
- A Level 2 analysis requires the input of additional or refined data and hazard maps that will produce more accurate risk and loss estimates. Assistance from local emergency management personnel, city planners, GIS professionals, and others may be necessary for this level of analysis.
- A Level 3 analysis yields the most accurate estimate of loss and typically requires the involvement of technical experts such as structural and geotechnical engineers who can modify loss parameters based on to the specific conditions of a community. This level analysis will allow users to supply their own techniques to study special conditions such as dam breaks and tsunamis. Engineering and other expertise is needed at this level.

Three data input tools have been developed to support data collection. The Inventory Collection Tool (InCAST) helps users collect and manage local building data for more refined analyses than are possible with the national level data sets that come with HAZUS. InCAST has expanded capabilities for multi-hazard data collection. HAZUS-MH includes an enhanced Building Inventory Tool (BIT) allows users to

import building data and is most useful when handling large datasets, such as tax assessor records. The Flood Information Tool (FIT) helps users manipulate flood data into the format required by the HAZUS flood model. All Three tools are included in the HAZUS-MH MR1 Application DVD.

HAZUS-MH Models

The **HAZUS-MH Hurricane Wind Model** gives users in the Atlantic and Gulf Coast regions and Hawaii the ability to estimate potential damage and loss to residential, commercial, and industrial buildings. It also allows users to estimate direct economic loss, post-storm shelter needs and building debris. In the future, the model will include the capability to estimate wind effects in island territories, storm surge, indirect economic losses, casualties, and impacts to utility and transportation lifelines and agriculture. Loss models for other severe wind hazards will be included in the future. Details about the Hurricane Wind Model.

The **HAZUS-MH Flood Model** is capable of assessing riverine and coastal flooding. It estimates potential damage to all classes of buildings, essential facilities, transportation and utility lifelines, vehicles, and agricultural crops. The model addresses building debris generation and shelter requirements. Direct losses are estimated based on physical damage to structures, contents, and building interiors. The effects of flood warning are taken into account, as are flow velocity effects. Details about the Flood Model.

The **HAZUS-MH Earthquake Model**, The HAZUS earthquake model provides loss estimates of damage and loss to buildings, essential facilities, transportation and utility lifelines, and population based on scenario or probabilistic earthquakes. The model addresses debris generation, fire-following, casualties, and shelter requirements. Direct losses are estimated based on physical damage to structures, contents, inventory, and building interiors. The earthquake model also includes the Advanced Engineering Building Module for single- and group-building mitigation analysis. Details about the Earthquake Model.

The updated earthquake model released with HAZUS-MH includes:

- The (September 2002) National Hazard Maps
- Project ‘02 attenuation functions
- Updated historical earthquake catalog (magnitude 5 or greater)
- Advanced Engineering Building Module for single and group building mitigation analysis

Additionally, HAZUS-MH can perform multi-hazard analysis by providing access to the average annualized loss and probabilistic results from the hurricane wind, flood, and earthquake models and combining them to provide integrated multi-hazard reports and graphs. HAZUS-MH also contains a third-party model integration capability that provides access and operational capability to a wide range of natural, man-made, and technological hazard models (nuclear and conventional blast, radiological, chemical, and biological) that will supplement the natural hazard loss estimation capability (hurricane wind, flood, and earthquake) in HAZUS-MH.

Appendix B – Linkage Procedures

PROCEDURES FOR LINKING TO HAZARD MITIGATION PLAN

The federal Disaster Mitigation Act broadly defines local government to encompass more than city and county governments. The DMA's definition of local government also includes local jurisdictional authorities such as schools or special purpose districts. The benefits of the DMA extend to these governments if the planning requirements are met. Not all eligible local governments in the Planning Area for the Union City/ Newark Multi-Jurisdiction Hazard Mitigation Plan (HMP) (see Section 3.4 in Volume 1 of this Plan) are currently covered by approved, adopted local hazard mitigation plans. Some or all of these local governments may wish to develop and adopt DMA-compliant plans to gain eligibility for relevant grant programs.

In order to promote the wise use of resources, enhance communication and collaboration among local governments, and encourage regional consistency, the Planning Partnership has developed linkage procedures that define requirements for completing a DMA-compliant annex to this plan. This linkage procedure will substantially reduce the level of effort for linking jurisdictions in plan development, as many of the components of the HMP development process will be used to support annex development. No currently non-DMA compliant jurisdiction within the defined planning area is obligated to link to this plan. These jurisdictions can choose to not seek compliance or to develop their own "complete" plan that addresses all required elements for such plans.

Eligible jurisdictions located in the planning area may link to this plan at any point during the plan's performance period (5 years after final approval). Eligibility will be determined by the following factors:

- The linking jurisdiction is a local government as defined by the Disaster Mitigation Act.
- The boundaries or service area of the linking jurisdiction is completely contained within the boundaries of the planning area established during the 2016 HMP development process.
- The linking jurisdiction's critical facilities were included in the critical facility and infrastructure risk assessment completed during the 2016 plan development process.

It is expected that linking jurisdictions will complete the following requirements and submit a completed annex to the lead agency (Union City Economic and Community Development) for review within six months of submitting a letter of intent to link to the HMP:

- The eligible jurisdiction requests a "Linkage Package" by contacting the Point of Contact (POC) for the plan:

  Andy Block
  Environmental Programs Manager, Union City Economic and Community Development
  Phone: 510-675-5358-
  -Email: andrewb@unioncity.org

- The POC will provide a linkage procedure package that includes linkage information and a linkage tool-kit:

  - Linkage Information

    - Procedures for linking to the Hazard Mitigation Plan (HMP)
    - Expectations for linking jurisdictions
    - A sample "letter of intent" to link to the HMP
    - A copy of Section 201.6 of 44 CFR, which defines the federal requirements for a local natural hazard mitigation plan.

  - Linkage Tool-Kit

    - Copy of the approved HMP
    - A special purpose district template that will form the basis of the annex
    - Instructions for completing the annex
    - Facility-specific results of the critical facility risk assessment (for official use only)
    - A catalog of mitigation alternatives
    - A sample resolution for plan adoption

- The linking jurisdiction will be required to review the HMP, which includes the following key components for the planning area:

  - Guiding principle, goals and objectives
  - The planning area risk assessment
  - Comprehensive review of alternatives
  - Action prioritization scheme
  - Plan maintenance procedures.

  Once this review is complete, the linking jurisdiction will submit a letter of intent to link to the HMP and complete its annex using the template and instructions provided by the POC.

- The development of the new jurisdiction's annex must not be completed by one individual in isolation. The jurisdiction must develop, implement and describe a public involvement strategy and a methodology to identify and vet jurisdiction-specific actions. The original plan development involved public outreach and engagement activities that are described in Chapter 3, Volume 1 of the HMP. Since linking jurisdictions were not explicitly covered by these strategies, they will have to initiate new strategies and describe them in their annex. For consistency, linking jurisdictions are encouraged to develop and implement strategies similar to those described in this plan; however, it is recognized that linking jurisdictions may have fewer staff and resources available to support such efforts than was available during the 2016 planning effort. At a minimum, a linking jurisdiction must develop and implement a strategy that meets the minimum requirements outlined in the DMA.
- The methodology to identify actions should include a comprehensive range of specific mitigation actions and projects being considered to reduce the effects of each hazard and a description of the process by which chosen actions were identified. As part of this process, linking jurisdictions should coordinate the selection of actions amongst the jurisdiction's various departments.
- Once its public involvement strategy and template are completed, the new jurisdiction will submit the completed package to the POC for a pre-adoption review to ensure conformance with the plan format and linkage procedure requirements.
- The POC will review for the following:

  - Documentation of public involvement and action plan development strategies
  - Conformance of template entries with guidelines outlined in instructions
  - Chosen actions are consistent with guiding principle, goals, objectives and mitigation catalog of the HMP.

  - A designated point of contact
  - A completed FEMA plan review crosswalk.

- Plans will be reviewed by the POC and submitted to California Governor's Office of Emergency Services (Cal OES) for review and approval.
- Cal OES will review plans for state compliance. Non-compliant plans are returned to the lead agency for correction. Compliant plans are forwarded to FEMA for review with annotation as to the adoption status.
- FEMA reviews the linking jurisdiction's plan in association with the approved plan to ensure DMA compliance. FEMA notifies the new jurisdiction of the results of review with copies to Cal OES and the approved plan lead agency.
- Linking jurisdiction corrects plan shortfalls (if necessary) and resubmits to Cal OES through the approved plan lead agency.
- For plans with no shortfalls from the FEMA review that have not been adopted, the new jurisdiction governing authority adopts the plan and forwards adoption resolution to FEMA with copies to lead agency and Cal OES.
- FEMA regional director notifies the new jurisdiction's governing authority of the plan's approval.

The new jurisdiction plan is then included with the Multi-Jurisdiction HMP and the linking jurisdiction is committed to participate in the ongoing plan maintenance strategy identified in Chapter 19, Volume 1 of the HMP.

Appendix C – Annex Instructions and Template

1. Instructions for Completing Special District Annex Template

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, etc.). Please do not change the chapter number. Revise only the jurisdiction name.

HAZARD MITIGATION PLAN POINT OF CONTACT

Please 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, please let the planning team know by inserting a comment into the document.

A Note About Formatting:

The template for the special district 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. Partners who do not have Microsoft Word capability may prepare the document in other formats, and the planning team will convert it to the Word format.

Content should be entered within the yellow, highlighted text that is currently in the template, rather than creating text in another document and pasting it into the template. Text from another source will alter the style and formatting of the document.

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

JURISDICTION PROFILE

Overview

Please provide a brief summary description of your jurisdiction. Please be sure to include:

- the purpose of the jurisdiction,
- the date of inception,
- the type of organization,
- the number of employees,
- the mode of operation (i.e., how operations are funded),
- a description of who the district's customers are,
- an overview of current service area trends, including an approximation of current users/subscribers,
- a summary description of service trends, including previous growth trends in service area, and anticipated future increase/decrese in services (if applicable),
- an approximation of area served in miles,
- a geographical decription of the service area, and
- the type of governing body, and who has adoptive authority.

Example Jurisdiction Narrative Profile:

The Johnsonville Community Services District is a special district created in 1952 to provide water and sewer service to the unincorporated area east of the City of Smithburg known as Johnsonville. The District's designated service area expanded throughout the years to include other unincorporated areas of Jones County: Creeks Corner, Jones Hill, Fields Landing, King Salmon, and Freshwater. A five-member elected Board of Directors governs the District. The Board assumes responsibility for the adoption of this plan; the General Manager will oversee its implementation. As of April 30, 2016, the District serves 7,305 water connections and 6,108 sewer connections, with a current staff of 21. Funding comes primarily through rates and revenue bonds.

Provide information similar to the example provided in the box above. This should be information that is specific to your jurisdiction and will not be provided in the overall, county-wide mitigation plan document.

ASSETS

Please provide an approximate value for the noted areas within the table. Include the sum total value for identified assets for each section in the "Total" line for the section.

Property

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

Critical Infrastructure and Equipment

List types of equipment an infrastructure owned by the District that are used in times of emergency or, if incapacitated, has the potential to severely impact the service area. Provide an approximate **aggregate replacement value** for each type. For water and sewer, include mileage of pipeline under this category.

Critical Facilities

List types of district structures vital to maintain services to the designated service area. Provide an approximate **aggregate replacement value** for each line. The Steering Committee has decided upon the following definition of Critical Facilities for this planning process:

> A structure or other improvement that, because of its function, size, service area, or uniqueness, has the potential to cause serious bodily harm, extensive property damage, or disruption of vital socioeconomic activities if it is destroyed or damaged, or if its functionality is impaired. Critical

facilities include, but are not limited to, health and safety facilities, utilities, government facilities, potential shelters, potential morgue facilities, transportation facilities, private facilities, and hazardous materials facilities.

Please use this definition as a guideline when selecting critical facilities.

SAMPLE COMPLETED TABLE – SPECIAL DISTRICT ASSETS	
Asset	Value
Property	
11.5 Acres	$5,750,000
Critical Infrastructure and 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	
2 Administrative Buildings	$2,750,000
4 Pump Station Buildings	$377,000
Total:	**$3,127,000**

BEGIN PHASE 2

INTEGRATION WITH THE 2016 PLANNING INITIATIVE

List any documents, plans, and regulatory mechanisms reviewed and included as part of the completion of you annex. For example, If a facility plan was used to provide the special district assets table, list the plan and provide a brief sentence on how it was used. If a comprehensive plan was reviewed to identify service trends, list the name of the plan and explain such. Documents do not have to be developed by the district, and can be part of a regional planning document. "None applicable" is ***NOT*** a possible answer for this section and the Annex will not pass CalOES/FEMA review without a minimum of 2 identified sources.

For example:

- District Facility Plan – reviewed for critical facilities and special district resources to be incorporated into the Special District Assets Table for this plan.
- Flood County Development Annual Report – reviewed to identify potential service trends increases over the next 5 years.

PLANNING AND REGULATORY CAPABILITIES

List any federal, state, local or district laws, ordinances, codes and policies that govern your jurisdiction that include elements related to hazard mitigation. Describe how these laws may support or conflict with the mitigation strategies of this plan. List any other plans, studies or other documents that address hazard mitigation issues for your jurisdiction. "None applicable" is ***NOT*** a possible answer for this section.

FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

Fiscal Capability

Complete the table titled "Fiscal Capability" to identify what financial resources (other than the Hazard Mitigation Grant Program and the Pre-Disaster Mitigation Grant Program) are available to your jurisdiction for implementing mitigation actions. Indicate whether each of the listed financial resources is accessible to your jurisdiction. Enter "Yes" if the resource is fully accessible to your jurisdiction. Enter "No" if there are limitations or prerequisites that may hinder your eligibility for this resource.

Administrative and Technical Capability

This section requires you to take inventory of the staff/personnel resources available to your jurisdiction to help with hazard mitigation planning and implementation of specific mitigation actions.

Complete the table titled "Administrative and Technical Capability" by indicating whether your jurisdiction has access to each of the listed personnel resources. Enter "Yes" or "No" in the column labeled "Available?". If yes, then enter the department and position title in the right-hand column.

Please note that if you have contract support staff with these capabilities you can still answer "Yes." Please just indicate contract support in the department column.

EDUCATION AND OUTREACH CAPABILITIES

Complete the table titled "Education and Outreach" to indicate your jurisdiction's capabilities and existing efforts regarding natural hazard mitigation education and outreach.

INTEGRATION WITH OTHER PLANNING INITIATIVES

After reviewing the plans, programs and ordinances identified in the above capability assessment, please identify those plans and programs where the goals and recommendations of the hazard mitigation plan have already been integrated and those plans and programs that offer opportunities for future integration. It is important to describe the process by which these plans and programs are or will be integrated. Generally speaking, FEMA recommends integration through:

- Integrating plan goals with community objectives (e.g. incorporating goals for risk reduction and safety into the policies of other plans)
- Using the risk assessment to inform plans and policies (e.g. incorporation into strategic plans)
- Implementing mitigation actions through existing mechanisms (e.g. including mitigation projects in the capital improvement plan)
- Thinking about mitigation pre- and post-disaster (e.g. building recovery planning on existing mitigation plans and goals).

BEGIN PHASE 3

JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Chronological List of Hazard Events

In the table titled "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. You are welcome to include any events, but special attention should be made to include major storms and federally declared disasters. Please refer to the SHELDUS data and Federal Disaster Declarations included in the tool kit, and the summary of natural hazard events within risk assessment of the overall hazard mitigation plan. Potential sources of damage information include:

- Preliminary damage estimates your jurisdiction filed with the county or state
- Insurance claims data
- Newspaper archives
- Other plans/documents that deal with emergency management (safety element of a comprehensive plan, emergency response plan, etc.)
- Resident input.

If you do not have estimates for dollars of damage caused, please list "Not Available" in the appropriate column. You may also provide a brief description of damages if desired. Please note that tracking such damages, is a valid and useful mitigation action if your jurisdiction does not currently track such information.

JURISDICTION-SPECIFIC NOTED VULNERABILITIES

Other Vulnerabilities

Please list any noted vulnerabilities in your jurisdiction related to hazard mitigation. This may include things such as the following:

- An urban drainage issue that results in localized flooding every time it rains.
- An area of the community that frequently loses power due to a lack of tree maintenance.
- A critical facility, such as a police station, that is not equipped with a generator.
- A neighborhood that has the potential to have ingress and egress cut off as the result of a hazard event, such as a flood or earthquake (e.g. bridge only access).
- Substantial number of buildings in one area of the community are unreinforced masonry.
- An area along the river is eroding and threatening public and/or private property.

HAZARD RISK RANKING

The risk ranking performed for the overall planning area is presented in the risk assessment section of the overall hazard mitigation plan. However, each jurisdiction has differing degrees of risk exposure and vulnerability and therefore needs to rank risk for its own area, using the same methodology as used for the overall planning area. The risk-ranking exercise assesses two variables for each hazard: its probability of occurrence; and its potential impact on people, property and the economy. The instructions below describe the methodology for how these rankings were derived.

Complete Risk Ranking in Template

Review the hazard risk ranking information that Tetra Tech has provided and complete the table titled "Hazard Risk Ranking" in your template. The hazard with the highest risk rating should be listed at the top of table titled "Hazard Risk Ranking" in your template and given a rank of 1; the hazard with the second highest rating should be listed second with a rank of 2; and so on. Two hazards with equal risk ratings should be given the same rank. After completing this, review the distribution of hazard scores and determine "High," Medium," and "Low" assignments for each hazard of concern. It is important to note, that this should be determined by the range of scores rather than assigning a certain number of hazards to each category.

It is also important to note that this exercise should not override your subjective assessment of relative risk based on your knowledge of the history of natural hazard events in your jurisdiction. If this risk ranking exercise generates results other that what you know based on substantiated data and documentation, you may alter the ranking based on this knowledge. If this is the case, please note this fact in your template. Remember, one of the purposes of this exercise is to support the selection and prioritization of actions in your plan. If you identify an action with a high priority that mitigates the risk of a hazard you have ranked low, that project may not be competitive in the grant arena.

Risk Ranking Methodology

The information that follows was completed for each jurisdiction using the Critical Facilities Results Matrices developed by Tetra Tech.

Note: When reviewing the risk ranking results, it is important to remember that this exercise is about categorizing hazards into broad levels of risk (e.g. high, medium, low). It is not an exercise in precision.

Determine Probability of Occurrence for Each Hazard

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 some weight can be given to expected future probability of occurrence based on established return intervals. 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.

In **Table 1**, list the probability of occurrence for each hazard as it pertains to your jurisdiction. Simply write, **"High," "Medium," "Low," or "None"** in the grey column in Table 1:

- 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—If there is no exposure to a hazard, there is no probability of occurrence (Probability Factor = 0)

Determine Potential Impacts of Each Hazard

The impact of each hazard was divided into three categories: impacts on people, impacts on property, and impacts on the economy/operations. These categories were 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/operations 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 or Operations**—Impact on operations is assessed based on estimates of ***how long it will take your jurisdiction to become 100-percent operable*** after a hazard event.

  - High = functional downtime of 365 days or more (Impact Factor = 3)
  - Medium = Functional downtime of 180 to 364 days (Impact Factor = 2)
  - Low = Functional downtime of 180 days or less (Impact Factor = 1)
  - No Impact = No functional downtime is estimated from the hazard (Impact Factor = 0)

The following sections provide information on completing the risk ranking for your jurisdiction.

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.** It may be necessary for you to make estimates based on looking at the hazard maps and the populations that you serve. For those hazards that do not have a defined extent and location (e.g. severe weather) the entire population is generally considered to be exposed. 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.

In the grey column in **Table 2,** please list the ***percentage of the total population exposed*** (e.g. 4.5 or 100). Remember, when you are estimating, the range limits are more important than the actual number (i.e. more than 25, between 25 and 10, and less than 10).

Impacts on Property

Estimate the impacts on property for your jurisdiction by reviewing the critical facility exposure estimates provided in the loss estimate information. Estimate the percentage of your total assets that are exposed to each hazard of concern (note: review your assets table in phase 1 of your annex). You may also wish to review the maps. 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.

In the grey column in **Table 4,** please list the ***percentage of the total value exposed*** (e.g. 4.5 or 100). Remember, when you are estimating, the range limits are more important than the actual number (i.e. more than 25, between 25 and 10, and less than 10).

Impacts on the Economy/Operations

The loss estimates for each critical facility that was impacted for each hazard of concern that was modeled (i.e. dam failure, flood, earthquake) can be found in the critical facility vulnerability results in the **yellow highlighted column.** For those hazards that do not have modelled results, use your subjective judgement and institutional knowledge.

In the grey column in **Table 6,** please list the ***functional downtime in days*** (e.g. 1 or 300). Remember, when you are estimating, the range limits are more important than the actual number (i.e. more than 365, between 354 and 180, and less than 180).

Determine Risk Rating for Each Hazard

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

Risk Rating = Probability Factor x Weighted Impact Factor {people + property + economy/operations}

The risk ranking results will be automatically tabulated for you for each hazard of concern in **Table 7.**

HAZARD MITIGATION ACTION PLAN

Action Plan Matrix

Identify the actions your jurisdiction would like to pursue with this plan. Refer to the mitigation catalog for mitigation options you might want to consider. 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 projects where benefits exceed costs.
- Include any project that your jurisdiction has committed to pursuing regardless of grant eligibility.
- Know what is and is not grant-eligible under the HMGP and PDM (see fact sheet provided). Listing HMGP or PDM as a potential funding source for an ineligible project will be a red flag when this plan goes through review. If you have projects that are not HMGP or PDM grant eligible, but do mitigate part or all of the hazard and may be eligible for other grant programs sponsored by other agencies, include them in this section.
- You should identify at least one action for your highest ranked risk, but hazard-specific projects for every hazard are not required. If you have not identified an earthquake related project, and an earthquake occurs that causes damage in your jurisdiction, you are not discounted from HMGP project grant eligibility.

Wording Your Action Descriptions:

Descriptions of your actions need not provide great detail. That will come when you apply for a project grant. Provide enough information to identify the project's scope and impact. The following are typical descriptions for an action plan action:

- **Action 1—**Address repetitive-loss properties. Through targeted mitigation relocate or retrofit the nine pump stations that have been repetitively damaged.
- **Action 2—**Perform a non-structural, seismic retrofit of the administrative building.
- **Action 3—**Develop a schedule to underground overhead powerlines.

Recommended Actions

We recommend that the following actions be included in every planning partners' annex. The specifics of these actions should be adjusted as needed for the particulars of each community.

- Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.
- Integrate the hazard mitigation plan into other plans and programs that support infrastructure investments choices, such as the capital improvement program.
- 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 County-wide initiatives identified in Volume I of the hazard mitigation plan.
- Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.
- Consider the development of a post-disaster recovery plan and a debris management plan.

Complete the Table

Complete the table titled "Hazard Mitigation Action Plan Matrix" for all the actions you have identified:

- Enter the action number and description .
- Indicate whether the action mitigates hazards for new or existing assets.
- Identify the specific hazards the action will mitigate.
- Identify by number the mitigation plan objectives that the action addresses (see Tool Kit).
- Indicate who will be the lead in administering the project. 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, please ensure that it is clear who the lead agency will be (i.e note with an *)
- 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 project. If it is a grant, include the funding sources for the cost share. Refer to your fiscal capability assessment to identify possible sources of funding.
- Indicate the time line as "short term" (1 to 5 years) or "long term" (5 years or greater) or on-going (a continual program)

Please see the table below for an example for the recommended initiatives above:

Example Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
EX-1—Where appropriate, support retro-fitting, purchase or relocation of structures located in high hazard areas and prioritize those structures that have experienced repetitive losses.						
Existing	All Hazards	4, 5, 7, 9, 10	Maintenance	High	HMGP, PDM, FMA, CDBG-DR	Short-term
EX-2— Integrate the hazard mitigation plan into other plans and programs that support infrastructure investments choices, such as the capital improvement program.						
New and Existing	All Hazards	2, 4,	Board	Low	Staff Time, General Funds	On-going
EX-3—Develop and implement a program to capture perishable data after significant events (e.g. high water marks, preliminary damage estimates, damage photos) to support future mitigation efforts including the implementation and maintenance of the hazard mitigation plan.						
Existing	All Hazards	1, 2, 4, 12	Emergency Management	Medium	Staff Time, General Funds	Short-term
EX-4—Support the County-wide initiatives identified in Volume I of the hazard mitigation plan.						
New and Existing	All Hazards	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12	Lead Contact Department for Plan	Low	Staff Time, General Funds	Short-term
EX-5—Actively participate in the plan maintenance protocols outlined in Volume I of the hazard mitigation plan.						
New and Existing	All Hazards	1, 4	Lead Contact Department for Plan	Low	Staff Time, General Funds	Short-term
EX-6—Develop a post-disaster recovery plan and a debris management plan.						
Existing	All Hazards	1, 2, 4, 9	Emergency Management	Medium	EMPG	Long-term
*Identified Lead Agency						

□ Prioritization of Mitigation Actions

Complete the information in the table titled "Mitigation Strategy Priority Schedule" as follows:

- **Action #**—Indicate the action number from the previous annex table (Hazard Mitigation Action Plan Matrix).
- **# of Objectives Met**—Enter the number of objectives the action will meet.
- **Benefits**—Enter "High," "Medium" or "Low" as follows:
  - High: Project will have an immediate impact on the reduction of risk exposure to life and property.
  - Medium: Project will have a long-term impact on the reduction of risk exposure to life and property, or project will provide an immediate reduction in the risk exposure to property.
  - Low: Long-term benefits of the project are difficult to quantify in the short term.
- **Costs**—Enter "High," "Medium" or "Low" as follows:
  - High: Would require an increase in revenue via an alternative source (i.e., bonds, grants, fee increases) to implement. Existing funding levels are not adequate to cover the costs of the proposed project.

- Medium: Could budget for under existing work-plan, but would require a reapportionment of the budget or a budget amendment, or the cost of the project would have to be spread over multiple years.
- Low: Possible to fund under existing budget. Project is or can be part of an existing ongoing program.

If you know the estimated cost of a project because it is part of an existing, ongoing program, indicate the amount.

- **Do Benefits Exceed the Cost?**—Enter "Yes" or "No." This is a qualitative assessment. Enter "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.). Enter "No" if the benefit rating is lower than the cost rating (medium benefit/high cost, low benefit/medium cost; etc.)
- **Is the Project Grant-Eligible?**—Enter "Yes" or "No." Refer to the fact sheet on HMGP and PDM.
- **Can Project Be Funded Under Existing Program Budgets?**—Enter "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**— Enter "High," "Medium" or "Low" as follows:

  - High Priority—An initiative that meets multiple objectives, has benefits that exceed cost, has funding secured or is an ongoing project and meets eligibility requirements for a grant program. High priority initiatives can be completed in the short term (1 to 5 years). The key factors for high priority initiatives are that they have funding secured and can be completed in the short term.
  - Medium Priority—An initiative that meets multiple objectives, that has benefits that exceed costs, and for which funding has not yet been secured, but is eligible for funding. Initiative can be completed in the short term, once funding is secured. Medium priority projects will become high priority projects once funding is secured. The key factors for medium priority initiatives are that they are eligible for funding, but do not yet have funding secured, and they can be completed within the short term.
  - Low Priority—An initiative that will mitigate the risk of a hazard, that has benefits that do not exceed the costs or are difficult to quantify, for which funding has not been secured, that is not eligible for grant funding, and for which the time line for completion is long term (1 to 10 years). Low priority initiatives may be eligible for grant funding from other programs that have not yet been identified. Low priority projects are generally "blue-sky" or "wish-list." projects. Financing is unknown, and they can be completed over a long term.

- **Grant Funding Priority**— Enter "High," "Medium" or "Low" as follows:

  - High Priority—An initiative that has been identified as meeting grant eligibility requirements, assessed to have high benefits, is listed as high or medium priority, and where local funding options are unavailable or where dedicated funds could be utilized for projects that are not eligible for grant funding.
  - Medium Priority—An initiative that has been identified as meeting grant eligibility requirements, assessed to have medium or low benefits, is listed as medium or low priority, and where local funding options are unavailable.
  - Low Priority—An initiative that has not been identified as meeting grant eligibility requirements, or has low benefits.

This prioritization is a simple way to determine that your identified actions meet one of the primary objectives of the Disaster Mitigation Act. It is not the detailed benefit/cost analysis required for HMGP/PDM project grants. The prioritization will identify any projects whose probable benefits will not exceed the probable costs. Those initiatives identified as high-priority grant funding initiatives should be closely reviewed for consideration when grant funding opportunities arise.

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

Please see the example below based off the recommended initiatives:

Table 1-9. Mitigation Strategy Priority Schedule

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

□ Analysis of Mitigation Actions

Complete the table titled "Analysis of Mitigation Actions" summarizing the mitigation actions by hazard of concern and the following six mitigation types:

- 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.

This exercise demonstrates that the jurisdiction has selected a comprehensive range of actions.

Please see the example below based off the recommended initiatives, but please note that these recommendations are heavy on the prevention spectrum and light in other areas. Planning partners should aim to identify at least one action in each category:

Analysis of Mitigation Actions						
	Action Addressing Hazard, by Mitigation Type[a]					
Hazard Type	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects
Dam Failure	EX-2, EX-3, EX-4, EX-5, EX-6	EX-1	EX-4		EX-6	
Drought	EX-2, EX-3, EX-4, EX-5, EX-6	EX-1	EX-4,		EX-6	
Earthquake	EX-2, EX-3, EX-4, EX-5, EX-6	EX-1	EX-4		EX-6	
Flood	EX-2, EX-3, EX-4, EX-5, EX-6	EX-1	EX-4		EX-6	
Landslide	EX-2, EX-3, EX-4, EX-5, EX-6	EX-1	EX-4		EX-6	
Severe weather	EX-2, EX-3, EX-4, EX-5, EX-6	EX-1	EX-4		EX-6	
Wildfire	EX-2, EX-3, EX-4, EX-5, EX-6	EX-1	EX-4		EX-6	

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. Please note that 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. Please note that this section is optional.

RESOURCES

Use this section to identify non-district resources used in the development of the annex, such as outside websites, news sources, or other reports. If no outside resources were used, this section may be deleted.

1. SPECIAL DISTRICT NAME

1.1 HAZARD MITIGATION PLAN POINT OF CONTACT

Primary Point of Contact
Name, Title
Street Address
City, State ZIP
Telephone: xxx-xxx-xxxx
e-mail Address: xxx@xxx.xxx

Alternate Point of Contact
Name, Title
Street Address
City, State ZIP
Telephone: xxx-xxx-xxxx
e-mail Address: xxx@xxx.xxx

1.2 JURISDICTION PROFILE

1.2.1 Overview

Insert Narrative Profile Information, per Instructions

1.2.2 Assets

Table 1-1 summarizes the critical assets of the district and their value.

Table 1-1. Special District Assets

Asset	Value
Property	
number acres of land	$_value_
Critical Infrastructure and Equipment	
description	$_value_
description	$_value_
description	$_value_
description	$_value_
description	$_value_
Total:	**$_value_**
Critical Facilities	
description	$_value_
description	$_value_
description	$_value_
description	$_value_
description	$_value_
description	$_value_
Total:	**$_value_**

1.3 INTEGRATION WITH THE 2016 PLANNING INITIATIVE

The following technical reports, plans, and regulatory mechanisms were reviewed to inform the 2016 Multi-Jurisdiction Hazard Mitigation Plan for both Volume I and Volume II (_insert district name_ Annex). All of the below items were additionally reviewed as part of the full capability assessment for _insert district name_.

- _name of code, document, policy or plan and how it was incorporated into this annex_
- _name of code, document, policy or plan and how it was incorporated into this annex_
- _name of code, document, policy or plan and how it was incorporated into this annex_
- _name of code, document, policy or plan and how it was incorporated into this annex_

1.4 PLANNING AND REGULATORY CAPABILITIES

The following existing codes, ordinances, policies or plans are applicable to this hazard mitigation plan:

Regulatory

- _name of code, ordinance, policy_
- _name of code, ordinance, policy _
- _name of code, ordinance, policy _
- _name of code, ordinance, policy _

Planning Capability

- _program or plan_
- _ program or plan_
- _ program or plan_
- _ program or plan_

1.5 FISCAL, ADMINISTRATIVE AND TECHNICAL CAPABILITIES

An assessment of fiscal capabilities is presented in Table 1-2. An assessment of administrative and technical capabilities is presented in Table 1-3.

Table 1-2. Fiscal Capability

Financial Resources	Accessible or Eligible to Use?
Capital Improvements Project Funding	Yes/No
Authority to Levy Taxes for Specific Purposes	Yes/No
User Fees for Water, Sewer, Gas or Electric Service	Yes/No
Incur Debt through General Obligation Bonds	Yes/No
Incur Debt through Special Tax Bonds	Yes/No
Incur Debt through Private Activity Bonds	Yes/No
State-Sponsored Grant Programs	Yes/No
Development Impact Fees for Homebuyers or Developers	Yes/No
Other	Yes/No (if yes, please specify)

Table 1-3. Administrative and Technical Capability

Staff/Personnel Resources	Available?	Department/Agency/Position
Planners or engineers with knowledge of land development and land management practices	Yes/No	Insert appropriate information
Engineers or professionals trained in building or infrastructure construction practices	Yes/No	Insert appropriate information
Planners or engineers with an understanding of natural hazards	Yes/No	Insert appropriate information
Staff with training in benefit/cost analysis	Yes/No	Insert appropriate information
Surveyors	Yes/No	Insert appropriate information
Personnel skilled or trained in GIS applications	Yes/No	Insert appropriate information
Scientist familiar with natural hazards in local area	Yes/No	Insert appropriate information
Emergency manager	Yes/No	Insert appropriate information
Grant writers	Yes/No	Insert appropriate information
Other	Yes/No	Insert appropriate information

1.6 EDUCATION AND OUTREACH CAPABILITIES

An assessment of education and outreach capabilities is presented in Table 1-4.

Table 1-6. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes/No (if yes, please specify)
Do you have personnel skilled or trained in website development?	Yes/No (if yes, please specify)
Do you have hazard mitigation information available on your website?	Yes/No
• If yes, please briefly describe.	Insert appropriate information
Do you utilize social media for hazard mitigation education and outreach?	Yes/No
• If yes, please briefly describe.	Insert appropriate information
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	Yes/No

Criteria	Response
• If yes, please briefly specify.	Insert appropriate information
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes/No
• If yes, please briefly describe.	Insert appropriate information
Do you have any established warning systems for hazard events?	Yes/No
• If yes, please briefly describe.	Insert appropriate information

1.7 INTEGRATION WITH OTHER PLANNING INITIATIVES

The following describe the jurisdiction's process for integrating the hazard mitigation plan into existing plans and programs.

1.7.1 Existing Integration

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

- Name of plan or program—Brief description of how the plan/program is currently integrated with the hazard mitigation plan
- Name of plan or program—Brief description of how the plan/program is currently integrated with the hazard mitigation plan

1.7.2 Opportunities for Future Integration

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

- Name of plan or program—Brief description of how the plan/program can be integrated with the hazard mitigation plan
- Name of plan or program— Brief description of how the plan/program can be integrated with the hazard mitigation plan

1.8 JURISDICTION-SPECIFIC NATURAL HAZARD EVENT HISTORY

Table 1-5 lists all past occurrences of natural hazards within the jurisdiction.

Table 1-5. Natural Hazard Events

Type of Event	FEMA Disaster # (if applicable)	Date	Preliminary Damage Assessment
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____
Insert event type	_____	Date	$_____

1.9 JURISDICTION-SPECIFIC VULNERABILITIES

Noted vulnerabilities the jurisdiction include:

- Insert as appropriate.

1.10 HAZARD RISK RANKING

Table 1-6 presents the ranking of the hazards of concern.

Table 1-6. Hazard Risk Ranking

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Insert hazard type	_____	High/Medium/Low
2	Insert hazard type	_____	High/Medium/Low
3	Insert hazard type	_____	High/Medium/Low
4	Insert hazard type	_____	High/Medium/Low
5	Insert hazard type	_____	High/Medium/Low
6	Insert hazard type	_____	High/Medium/Low
7	Insert hazard type	_____	High/Medium/Low
8	Insert hazard type	_____	High/Medium/Low
9	Insert hazard type	_____	High/Medium/Low

1.11 HAZARD MITIGATION ACTION PLAN AND EVALUATION OF RECOMMENDED ACTIONS

Table 1-7 lists the actions that make up the Special District Name hazard mitigation action plan. Table 1-8 identifies the priority for each action. Table 1-9 summarizes the mitigation actions by hazard of concern and the six mitigation types.

Table 1-7. Hazard Mitigation Action Plan Matrix

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
Action #—Description						
Action #—Description						
Action #—Description						
Action #—Description						
Action #—Description						
Action #—Description						
Action #—Description						
Action #—Description						
Action #—Description						
Action #—Description						
Action #—Description						

Table 1-8. Mitigation Strategy Priority Schedule

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

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

Table 1-9. Analysis of Mitigation Actions

Hazard Type	Action Addressing Hazard, by Mitigation Type[a]					
	1. Prevention	2. Property Protection	3. Public Education and Awareness	4. Natural Resource Protection	5. Emergency Services	6. Structural Projects

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

1.12 FUTURE NEEDS TO BETTER UNDERSTAND RISK/VULNERABILITY

Insert text, if any; otherwise, delete section

1.13 ADDITIONAL COMMENTS

Insert text, if any; otherwise, delete section

1.14 RESOURCES

Insert the author (if applicable), title, date, and link to any outside (non-jurisdictional) reports, data, website, or other resource used to develop this annex.

Appendix D – Status of Previous Actions

Union City ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Ensure critical intersection traffic lights function following loss of power - Continue to implement battery back- up for 90% of signals is in place.	Pubic Works	Complete	100% Complete. 2013. Local budget.	Discontinue	Complete
Expedite the funding and retrofit of seismically deficient bridges and road structures - Seismically retrofit Decoto Road and Alameda Creek and Whipple Road at BART.	Public Works	Complete	100% Complete. 2012-2014. Federal transportation grant.	Discontinue	Complete
Retrofit or replace critical facilities that are shown to be vulnerable to damage in natural disasters - Civic Center earthquake retrofit.	Public Works	Complete	100% Complete. 2012. Local budget.	Discontinue	Complete
Retrofit or replace critical facilities that are shown to be vulnerable to damage in natural disasters - assessment of Fire Station 31.	Public Works	No progress	0% complete. Project was not included in biennial budget or Capital Improvement Plan so no action was taken.	Include in 2016 HMP	Included in 2016 HMP as Action Item UC-30: Conduct a comprehensive structural seismic analysis of the City's facilities.
Retrofit or replace critical facilities that are shown to be vulnerable to damage in natural disasters - assessment of Fire Station 32.	Public Works	No progress	0% complete. Project was not included in biennial budget or Capital Improvement Plan so no action was taken.	Include in 2016 HMP	Included in 2016 HMP as Action Item UC-30: Conduct a comprehensive structural seismic analysis of the City's facilities.
Develop a continuity of operations plan that includes back-up storage of vital records if normal operations are disrupted - Provide computer system continuity and build in a redundant computer network that is off-site from city hall and/or out of the area	Administrative Services	Partial progress	25% complete. Human Resources has scanned vital documents to LaserFiche; UC computer server tapes are not backed up so no redundancy exists. Delays due to significant time commitment for COO plan, high cost for offsite server backup, not in budget.	Include in 2016 HMP	Included in 2016 HMP as Action Item UC-8: Update the citywide Continuity of Operations/Continuity of Government (COO/COG) Plan from the Comprehensive Emergency Management Plan (CEMP), and implement required COO/COG actions.
Participate in developing and maintaining a system of interoperable communications for first responders from cities, counties, special districts, state and federal agencies - East Bay Regional Communications System Authority will create a new communication system to replace the patchwork of systems currently used in Contra Costa and Alameda Counties	City	Complete	100% Complete. 12/6/2012. Local budget.	Discontinue	Complete

Alameda County Water District ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Assess the vulnerability of critical facilities owned by infrastructure operators subject to damage in natural disasters or security threats, including fuel tanks and facilities owned outside of the Bay Area that can impact service delivery within the region. Note - Infrastructure agencies, departments, and districts are those that operate transportation and utility facilities and networks.	ACWD	Complete	Existing program, underfunded - Vulnerability assessment required under the "Public Health Security and Bioterrorism Preparedness and Response Act of 2002" (PL 107-188). Additional vulnerability studies voluntarily completed for risk from natural disasters. Status: Vulnerability assessed and identified hazards mitigated as part of specific, ongoing capital Improvement projects (tank or reservoir upgrads, pipeline replacements, etc.). Local CIP budget funding.	Discontinue	Action is considered to be complete.
Retrofit or replace critical lifeline infrastructure facilities and/or their backup facilities that are shown to be vulnerable to damage in natural disasters.	ACWD	In Progress	Existing program, underfunded - Capital Improvement Planning (CIP) efforts Status: CIP projects completed or ongoing and planned - (tank or reservoir upgrads, pipeline replacements, etc.). Local CIP budget funding.	Include in 2016 HMP	Several specific mitigation projects identified in the CIP have been included in the updated action plan (see ACWD-8, 9, 11 etc.). In addition CIP will continue to be integrated with hazard mitigation plan ACWD-22).
Pre-position emergency power generation capacity (or have rental/lease agreements for these generators) in critical buildings of cities, counties, and special districts to maintain continuity of government and services.	ACWD	In Progress	Existing program, underfunded - Existing emergency response plan elements, additional emergency power generation outlined in CIP Status: New dedicated emergency power generation facility 100% completed at critical water production facility - Local CIP budget funding. Replacement of several portable generators complete. Replacement/upgrade of existing dedicated emergency power generation facility at critical water production facilities needed.	Include in 2016 HMP	Included in action plan see ACWD-6.
Coordinate with other critical infrastructure facilities to establish plans for delivery of water and wastewater treatment chemicals.	ACWD	In Progress	Existing program, underfunded - Inter-Agency Collaborations - i.e. - Bay Area Security Information Collaborative (BASIC), Bay Area Water Supply and Conservation Agency (BAWSCA), Tri-City Emergency Services Association (TESA) Status: Limited progress. Need for coordinated, multi-agency backed universal contract language detailing priorities for water and wastewater chemical deliveries following emergency events to be placed in all procurement contracts	Discontinue	ACWD staff considers this to be CalOES responsibility.
Install specially-engineered pipelines in areas subject to faulting, liquefaction, earthquake-induced landsliding, or other earthquake hazard.	ACWD	In Progress	Existing program, underfunded - Included within seismic improvement plans resulting from 2008 seismic vulnerability study Status: Critical transmission pipeliine fault crossings retrofitted 100% complete - Bond funded. Distribution main pipeline replacement program planned.	Include in 2016 HMP	Several specific mitigation projects identified in the CIP have been included in the updated action plan (see ACWD-8, 23 etc.). In addition CIP will continue to be integrated with hazard mitigation plan ACWD-22).
Replace or retrofit water-retention structures that are determined to be structurally deficient, including levees, dams, reservoirs and tanks.	ACWD	In Progress	Existing program, underfunded - Included within Capital Improvement Planning (CIP) efforts Status: Water-retention structures upgraded or replaced (treated water storage tank(s), reservoir(s), levees) - CIP budget funding Additional upgrades/replacements planned	Include in 2016 HMP	Several specific mitigation projects identified in the CIP have been included in the update action plan (see ACWD-11, 14). In addition CIP will continue to be integrated with hazard mitigation plan (ACWD-22).
Install portable facilities (such as hoses, pumps, emergency generators, or other equipment) to allow pipelines to bypass failure zones such as fault rupture areas, areas of liquefaction, and other ground failure areas (using a priority scheme if funds are not available for installation at all needed locations).	ACWD	In Progress	Existing program, underfunded - Included within seismic improvement plans resulting from 2008 seismic vulnerability study Status: Fault crossing bypass facilities installed at all critical transmission pipeline locations. 100% complete Portable hose procured for crossings. 50% complete Bond funded. Additional pipeline bypass areas being evaluated for crossing installations.	Include in 2016 HMP	See ACWD-8.
Install earthquake-resistant connections when pipes enter and exit bridges and work with bridge owners to encourage retrofit of these structures.	ACWD	In Progress	Existing program, underfunded - Included within seismic improvement plans resulting from 2008 seismic vulnerability study Status: One pipeline retrofitted during fault crossing seismic retrofit projects. Bond funded. Total potential project work 10% complete	Include in 2016 HMP	Action was revised to be more consistent with District capabilities. See ACWD-10.
Improve monitoring of creek and watercourse flows to predict potential for flooding downstream by working cooperatively with land owners and the cities and counties in the watershed.	ACWD	In Progress	Existing program, underfunded - Existing program objective within groundwater supply and recharge management efforts Status: Improved stream gaging equipment installed within Alameda Creek Watershed in cooperation with USGS. 100% complete - local budget funded. Additional project currently in preliminary evaluation/study which would involve multiple stakeholder agencies and be designed to better predict potential flood events within the watershed.	Discontinue	ACWD staff are happy to support such efforts as needed, but primary responsibility for such actions does not fall within District's responsibilities.
Retrofit or replace critical facilities that are shown to be vulnerable to damage in natural disasters.	ACWD	In Progress	Existing underfunded program - Included within seismic improvement plans resulting from 2008 seismic vulnerability study Status: Retrofit / Replacement of critical facilities underway through CIP program See Status Notes for INFR a-1, b-5, b-6	Include in 2016 HMP	Many specific actions have been identified (see prior notes). Also see ACWD-24.

Alameda County Water District ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
When Installing micro and/or surveillance cameras around critical public assets tied to web-based software, and develop a surveillance protocol to monitor these cameras, investigate the possiblility of using the cameras for the secondary purpose of post-disaster damage assessment.	ACWD	In Progress	Existing underfunded program objective(s) within CIP physical security improvement project Status: Security / Surveillance cameras being installed around critical facilities/assets. Core web-based monitoring and recording capabilities through expandable software platform. Expansion to include additional facilities and assets planned. Local CIP budget funding	Discontinue	ACWD may continue to develop this program, but would like to keep actions identified in this plan focused on mitigation of natural hazards.
Identify and undertake cost-effective retrofit measures related to security on critical facilities (such as moving and redesigning air intake vents and installing blast-resistant features) when these buildings undergo major renovations related to other natural hazards.	ACWD	In Progress - SEE DESCRIBE NEXT STEP Note	Existing underfunded program objective(s) within CIP physical security improvement project Status: Projects underway to harden critical facilities (i.e. additional/replacement fencing, upgraded doors and electronic locks, etc.). Physical security improvement project activities expected to continue. Local CIP budget funding	Discontinue	ACWD may continue to develop this program, but would like to keep actions identified in this plan focused on mitigation of natural hazards. Actions related to this item are handled via security plans.
Prepare a basic Recovery Plan that outlines the major issues and tasks that are likely to be the key elements of community recovery, as well as integrate this planning into response planning (such as with continuity of operations plans).	ACWD	In Progress	Existing underfunded program - Included element/strategy within emergency response planning program Status: Continuity of Operations / Business Continuity Plan effort underway. Local budgeted funding.	Include in 2016 HMP	See ACWD-1, 3, 26.
Develop a continuity of operations plan that includes back-up storage of vital records, such as plans and back-up procedures to pay employees and vendors if normal finance department operations are disrupted, as well as other essential electronic files.	ACWD	In Progress - SEE DESCRIBE NEXT STEP Note	Existing underfunded program - Included element/strategy within emergency response planning program Status: Continuity of Operations / Business Continuity Plan effort underway. Local budgeted funding.	Include in 2016 HMP	See ACWD-1.
Plan for the emergency relocation of government-owned facilities critical to recovery, as well as any facilities with known structural deficiencies or in hazardous areas.	ACWD	In Progress - SEE DESCRIBE NEXT STEP Note	Existing underfunded program - Included element/strategy within emergency response planning program Status: Continuity of Operations / Business Continuity Plan effort underway. Local budgeted funding.	Include in 2016 HMP	See ACWD-1, 3, 26.
Develop a plan for short-term and intermediate-term sheltering of your employees.	ACWD	In Progress - SEE DESCRIBE NEXT STEP Note	Existing underfunded program - Included element/strategy within emergency response planning program Status: Continuity of Operations / Business Continuity Plan effort underway. Local budgeted funding.	Include in 2016 HMP	This will be considered in part of the continuity planning, See ACWD-1.
Develop and implement a program to control invasive and exotic species that contribute to fire and flooding hazards (such as eucalyptus, cattails, and cordgrass). This program could include vegetation removal, thinning, or replacement in hazard areas where there is a direct threat to structures.	State of California agencies	In Progress / Ongoing	ACWD / State Agencies including DWR, Water Resources Control Board Actively Looking for Funding Status: ACWD employs vegetation control to reduce fire risk to structures. ACWD has not worked with other agencies on the reduction of invasive species which may contribute to fire risk through damage to existing vegetation/trees	Include in 2016 HMP	Intent of action addressed in ACWD-13 and ACWD-27.
Develop and implement a comprehensive program for watershed management optimizing ecosystem health with water yield to balance water supply, flooding, fire, and erosion concerns.	ACWD	In Progress / Ongoing	Currently under study ACWD currently participates in multi-stakeholder groups with the objectives to achieve maximum optimizaation and protection of the the Alameda Creek Watershed. Additional program-related efforts are possible in the future.	Discontinue	This action is addressed in standard operating procedures and ACWD is committed to continuing these efforts.

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Accelerate retrofitting of privately-owned unreinforced masonry structures that have not been retrofitted, for example, by (a) actively working with owners to obtain structural analyses of their buildings, (b) helping owners obtain retrofit funding, (c) adopting a mandatory (rather than voluntary) retrofit program, and/or (d) applying penalties to owners who show inadequate efforts to upgrade these buildings.	Building Inspection	Complete	Existing program - URM survey completed. City does not have any URM buildings covered by the State law.	Discontinue	Include as operational capability.
Actively notify private owners of historic or architecturally significant buildings of the availability of the local BORP-type program and encourage them to participate to ensure that appropriately qualified structural engineers are inspecting their buildings, thus reducing the likelihood that the buildings will be inappropriately evaluated following a disaster.	Building Inspection	No Progress	Not yet considered	Discontinue	No longer economically feasible
Adopt and amend as needed updated versions of the California Building and Fire Codes so that optimal fire-protection standards are used in construction and renovation projects of private buildings.	Building Inspection and Fire Department	N/A	Existing program - The current editions of both the California Fire Code and California Building Code have been adopted.	N/A	N/A
Adopt one or more of the following strategies as incentives to encourage retrofitting of privately owned seismically vulnerable commercial and industrial buildings: (a) waivers or reductions of permit fees, (b) below-market loans, (c) local tax breaks, (d) grants to cover the cost of retrofitting or of a structural analysis, (e) land use (such as parking requirement waivers) and procedural incentives, or (f) technical assistance.	Building Inspection	N/A	Not yet considered and not cost effective	N/A	N/A
Adopt the 2010 International Existing Building Code or the latest applicable standard for the design of voluntary or mandatory retrofit of privately-owned seismically vulnerable buildings.	Building Inspection	Complete	Existing program - City has adopted Chapter 34 of the California Building Code which addresses seismic alterations and/or repairs to existing buildings	Discontinue	Include as operational capability.
Adopt the 2010 International Existing Building Code or the latest applicable standard for the design of voluntary or mandatory soft-story building retrofits for use in city/county building department regulations. In addition, allow use of changes to that standard recommended by SEAOC for the 2012 IEBC.	Building Inspection	Complete	Existing program - City has adopted Chapter 34 of the California Building Code which addresses seismic alterations and/or repairs to existing buildings	Discontinue	Include as operational capability.
Allow private building owners to participate in a BORP-type program as described above, but not actively encourage them to do so.	Building Inspection	No Progress	Not yet considered - City would entertain any resonable proposal from building owners.	Discontinue	Not a viable mitigation action
Apply floodplain management regulations for private development in the floodplain and floodway.	Building Inspection, Floodplain Administrator, and Engineering	Complete	Existing program	Discontinue	Include as operational capability.
As funding becomes available, encourage private business owners to participate in acquisition and relocation programs for areas within floodways.	Building Inspection	Complete	Not yet considered - A limited number of existing commercial buildings located in flood hazard zones	Discontinue	No acquisitions needed in Newark

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
As required by State law, require private owners to inform all existing tenants that they may need to be prepared to work elsewhere following an earthquake even if the building has been retrofitted, because it has probably been retrofitted to a life-safety standard, not to a standard that will allow occupancy following major earthquakes.	Building Inspection	Complete	Existing program - URM survey completed. City does not have any URM buildings covered by the State law.	Discontinue	Include as operational capability.
Balance the needs for private commercial and industrial development against the risk from potential flood- related hazards.	Building Inspection, Floodplain Administrator, and Engineering	Complete	Existing program	Discontinue	Include as operational capability.
Conduct an inventory of privately-owned existing or suspected soft-story commercial or industrial structures as a first step in establishing voluntary or mandatory programs for retrofitting these buildings.	Building Inspection	Complete	Existing program underfunded - Lack of staffing has precluded City from completing survey	Discontinue	Include as operational capability.
Conduct appropriate employee training and support continued education to ensure enforcement of construction standards for private development.	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Conduct periodic fire-safety inspections of all privately-owned commercial and industrial buildings.	Fire Department	Complete	Existing program	Discontinue	Include as operational capability.
Continue to actively implement existing State law that requires cities and counties to maintain lists of the addresses of unreinforced masonry buildings and inform private property owners that they own this type of hazardous structure.	Building Inspection	Complete	Existing program - URM survey completed. City does not have any URM buildings covered by the State law.	Discontinue	Include as operational capability.
Continue to require that all new privately-owned commercial and industrial buildings be constructed in compliance with requirements of the most recently adopted version of the California Building Code.	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Create a mechanism to enforce provisions of the California Building and Fire Codes and other local codes that require the installation of smoke detectors and fire-extinguishing systems on existing privately-owned buildings by making installation a condition of (a) finalizing a permit for any work valued at over a fixed amount and/or (b) on any building over 75 feet in height, and/or (b) as a condition for the transfer of property.	Building Inspection and Fire Department	Complete	Existing program - The current editions of both the California Fire Code and California Building Code have been adopted and are enforced. However, no standards have been adopted for transfer of property.	Discontinue	Include as operational capability.
Create incentives for private owners of historic or architecturally significant commercial and industrial buildings to undertake mitigation to levels that will minimize the likelihood that these buildings will need to be demolished after a disaster, particularly if those alterations conform to the federal Secretary of the Interior's Guidelines for Rehabilitation.	Building Inspection	No Progress	Not yet considered and not cost effective	Discontinue	Not economically feasible
Develop a "Maintain-a-Drain" campaign, similar to that of the City of Oakland, encouraging private businesses and residents to keep storm drains in their neighborhood free of debris.	Maintenance	Complete	Existing program - Public education provided when ever possible	Discontinue	Include as operational capability.
Develop and enforce a repair and reconstruction ordinance to ensure that damaged buildings are repaired in an appropriate and timely manner and retrofitted concurrently. This repair and reconstruction ordinance should apply to all public and private buildings, and also apply to repair of all damage, regardless of cause. See http://quake.abag.ca.gov/recovery/info-repairord.	Building Inspection and Code Enforcement	Complete	Existing program - City's nuisance abatement ordinance allows City to force some property owners to repair damaged structures. City will evaluate modifying existing ordinance to be more enclusive.	Discontinue	Include as operational capability.

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Develop printed materials, utilize existing materials (such as developed by FEMA and the American Red Cross), conduct workshops, and/or provide outreach encouraging private businesses' employees to have family disaster plans that include drop-cover-hold earthquake drills, fire and storm evacuation procedures, and shelter-in-place emergency guidelines.	Fire Department	Complete	Existing program underfunded	Discontinue	Activities maintained through contract with ACFD
Distribute appropriate materials related to disaster mitigation and preparedness to private business owners. Appropriate materials are (1) culturally appropriate and (2) suitable for special needs populations.	City Information Officer	Complete	Existing program - Public education provided when ever possible	Discontinue	Include as operational capability.
Distribute appropriate materials related to disaster mitigation and preparedness to residents. Appropriate materials are (1) culturally appropriate and (2) suitable for special needs populations.	City Information Officer	No Progress	Not yet considered	Discontinue	Previous Action too vague for wording. Discontinue in lieu of ACFD contract public outreach support.
Encourage joint meetings of security and operations personnel at major private employers to develop innovative ways for these personnel to work together to increase safety and security.	Police Department	No Progress	Vague action	Discontinue	Vague and inactionable project
Encourage private business owners to participate in building elevation programs within flood hazard areas.	Building Inspection, Floodplain Administrator, and Engineering	Complete	Existing program - City has a flood ordinance that is compliant with FEMA requirements	Discontinue	Include as operational capability.
Encourage private businesses and laboratories handling hazardous materials or pathogens increase security to a level high enough to create a deterrent to crime and terrorism, including active implementation of "cradle-to-grave" tracking systems.	Fire Department	Complete	Existing - Required on all new projects	Discontinue	Include as operational capability.
Ensure that city/county-initiated fire-preventive vegetation-management techniques and practices for creek sides and high-slope areas do not contribute to the landslide and erosion hazard.	Fire Department and Maintenance	Complete	Existing program	Discontinue	Include as operational capability.
Ensure that new private development pays its fair share of improvements to the storm drainage system necessary to accommodate increased flows from the development, or does not increase runoff by draining water to pervious areas or detention facilities.	Building Inspection, Floodplain Administrator, and Engineering	Complete	Existing program	Discontinue	Include as operational capability.
Establish preservation-sensitive measures for the repair and reoccupancy of historically significant privately-owned structures, including requirements for temporary shoring or stabilization where needed, arrangements for consulting with preservationists and expedited permit procedures for suitable repair or rebuilding of historically or architecturally valuable structures.	Building Inspection	N/A	Existing Program	N/A	N/A

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Institute a program to encourage owners of private buildings to participate in a program similar to San Francisco's Building Occupancy Resumption Program (BORP). This program permits owners of private buildings to hire qualified structural engineers to create building-specific post-disaster inspection plans and allows these engineers to become automatically deputized as City/County inspectors for these buildings in the event of an earthquake or other disaster.	Building Inspection	Complete	Existing program - City follows standard state post earthquake inspection procedures but has not yet considered automatically deputizing engineers.	Discontinue	Include as operational capability.
Inventory non-ductile concrete, tilt-up concrete, and other privately-owned structurally vulnerable buildings.	Building Inspection		Existing program underfunded		Inventory not completed
Make use of the materials developed by others (such as found on ABAG's web site at http://quake.abag.ca.gov/business) to increase mitigation activities related to earthquakes by groups other than your own agency. ABAG plans to continue to improve the quality of those materials over time.	Building Inspection	N/A	Not yet considered - Building Inspection will review material for possible use	Existing Program	N/A
Provide information to private business on locations for obtaining sandbags and deliver those sandbags to those various locations throughout a city and/or county.	Maintenance	Complete	Existing program	Discontinue	Include as operational capability.
Provide information to private business owners and their employees on the availability of interactive hazard maps on ABAG's web site.	Building Inspection		Existing program underfunded - Maps are available at City office.		
Provide sandbags and plastic sheeting to private businesses in anticipation of rainstorms, and deliver those materials to vulnerable populations upon request.	Maintenance	Complete	Existing program	Discontinue	Include as operational capability.
Provide technical assistance in seismically strengthening privately-owned soft-story structures.			Not yet considered		
Require engineered plan sets for voluntary or mandatory soft-story seismic retrofits by private owners until a standard plan set and construction details become available.	Building Inspection	Complete	Existing program - City requires engineered design of all two story structures.	Discontinue	Include as operational capability.
Require private owners to inform all existing tenants (and prospective tenants prior to signing a lease agreement) that they work in an unreinforced masonry building and the standard to which it may have been retrofitted.	Building Inspection	Complete	Existing program - URM survey completed. City does not have any URM buildings covered by the State law.	Discontinue	Include as operational capability.
Sponsor the formation and training of Community Emergency Response Teams (CERT) training for other than your own employees through partnerships with local private businesses. [Note – these programs go by a variety of names in various cities and areas.]		Complete	Existing program	Discontinue	Include as operational capability.
To reduce flood risk, thereby reducing the cost of flood insurance to private property owners, work to qualify for the highest-feasible rating under the Community Rating System of the National Flood Insurance Program.	Building Inspection, Floodplain Administrator, and Engineering	Complete	Existing program	Discontinue	Include as operational capability.
Use the soft-story inventory to require private owners to inform all existing tenants (and prospective tenants prior to signing a lease agreement) that they may work in this type of building.	Building Inspection	Complete	Existing program underfunded - Lack of staffing has precluded City from completing survey	Discontinue	Include as operational capability.

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Work to educate building owners, local government staff, engineers, and contractors on privately-owned soft-story retrofit procedures and incentives using materials such as those developed by ABAG and the City of San Jose (see http://quake.abag.ca.gov/eqhouse.html.)	Building Inspection		Not yet considered		
Work cooperatively with the American Red Cross, cities, counties, and non-profits to set up memoranda of understanding for use of education facilities as emergency shelters following disasters.	Recreation Department	Complete	Existing program	Discontinue	Include as operational capability.
Work with CalEMA and the Division of the State Architect to ensure that there will be an adequate group of Safety Assessment Program (SAP) inspectors trained and deployed by CalEMA to schools for postdisaster inspection. In addition, if a school district is uncomfortable with delays in inspection due to too few SAP inspectors available in catastrophic disasters, formalized arrangements can also be created with those inspectors certified by the Division of the State Architect as construction inspectors to report to the district, assess damage, and determine if the buildings can be reoccupied.	CALBO	Complete	Existing program	Discontinue	Include as operational capability.
Adopt and enforce land-use policies that reduce sprawl, preserve open space, and create compact, walkable urban communities.	Planning Department	Complete	Existing program	Discontinue	Include as operational capability.
Balance the need for the smooth flow of storm waters versus the need to maintain wildlife habitat by developing and implementing a comprehensive Streambed Vegetation Management Plan that ensures the efficacy of flood control efforts, mitigates wildfires and maintains the viability of living rivers.	Engineering	Complete	Existing program	Discontinue	Include as operational capability.
Comply with applicable performance standards of any National Pollutant Discharge Elimination System municipal stormwater permit that seeks to manage increases in stormwater run-off flows from new development and redevelopment construction projects.	Engineering	Complete	Existing program	Discontinue	Include as operational capability.
Continue to enforce and/or comply with State mandated requirements, such as the California Environmental Quality Act and environmental regulations to ensure that urban development is conducted in a way to minimize air pollution. For example, air pollution levels can lead to global warming, and then to drought, increased vegetation susceptibility to disease (such as pine bark beetle infestations), and associated increased fire hazard.	Engineering	Complete	Existing program	Discontinue	Include as operational capability.
Continue to enforce State-mandated requirements, such as the California Environmental Quality Act, to ensure that mitigation activities for hazards, such as seismic retrofits and vegetation clearance programs for fire threat, are conducted in a way that reduces environmental degradation such as air quality impacts, noise during construction, and loss of sensitive habitats and species, while respecting the community value of historic preservation.	Building Inspection and Public Works	Complete	Existing program	Discontinue	Include as operational capability.

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Encourage regulatory agencies to work collaboratively with safety professionals to develop creative mitigation strategies that effectively balance environmental and safety needs, particularly to meet critical wildfire, flood, and earthquake safety levels.			Not yet considered		
Enforce and/or comply with the grading, erosion, and sedimentation requirements by prohibiting the discharge of concentrated stormwater flows by other than approved methods that seek to minimize associated pollution.	Engineering and Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Enforce provisions under creek protection, stormwater management, and discharge control ordinances designed to keep watercourses free of obstructions and to protect drainage facilities to conform to the Regional Water Quality Control Board's Best Management practices.	Engineering	Complete	Existing program	Discontinue	Include as operational capability.
Explore ways to require that hazardous materials stored in the flood zone be elevated or otherwise protected from flood waters.	Building Inspection and Fire Department	Complete	Existing program	Discontinue	Include as operational capability.
Help educate the public, schools, other jurisdictions, professional associations, business and industry about reducing global warming pollution.	Public Works		Existing program underfunded		
Increase recycling rates in local government operations and in the community.	City Administration	Complete	Existing program	Discontinue	Include as operational capability.
Increase the average fuel efficiency of municipal fleet vehicles; reduce the number of vehicles; launch an employee education program including anti-idling messages; convert diesel vehicles to bio-diesel.	Maintenance		Existing program underfunded		
Inventory global warming emissions in your own local government's operations and in the community, set reduction targets and create an action plan.	Public Works	Complete	Existing program	Discontinue	Include as operational capability.
Maintain healthy urban forests; promote tree planting to increase shading and to absorb CO2.	Maintenance	Complete	Existing program	Discontinue	Include as operational capability.
Make energy efficiency a priority through building code improvements, retrofitting city facilities with energy efficient lighting and urging employees to conserve energy and save money.	Public Works	Complete	Existing program	Discontinue	Include as operational capability.
Practice and promote sustainable building practices using the U.S. Green Building Council's LEED program or a similar system.	Engineering		Existing program underfunded		
Promote transportation options such as bicycle trails, commute trip reduction programs, incentives for car pooling and public transit.	Engineering	Complete	Existing program	Discontinue	Include as operational capability.
Provide information on hazardous waste disposal and/or drop off locations.	Fire Department	Complete	Existing program	Discontinue	Include as operational capability.
Purchase only Energy Star equipment and appliances for local government use.	Public Works		Existing program underfunded		

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Stay informed of scientific information compiled by regional and state sources on the subject of rising sea levels and global warming, especially on additional actions that local governments can take to mitigate this hazard including special design and engineering of government-owned facilities in low-lying areas, such as wastewater treatment plants, ports, and airports.	Public Works	Complete	Existing program	Discontinue	Include as operational capability.
When remodeling existing government and infrastructure buildings and facilities, remove asbestos to speed up clean up of buildings so that they can be reoccupied more quickly.	Engineering	Complete	Existing program	Discontinue	Include as operational capability.
As a secondary focus, assess the vulnerability of non-critical facilities to damage in natural disasters based on occupancy and structural type, make recommendations on priorities for structural improvements or occupancy reductions, and identify potential funding mechanisms.	Engineeering		Existing program underfunded		
As new flood-control projects are completed, request that FEMA revise its flood-insurance rate maps and digital Geographic Information System (GIS) data to reflect flood risks as accurately as possible.	Floodplain Administrator	Complete	Existing program	Discontinue	Include as operational capability.
Assess the vulnerability of critical facilities (such as city halls, fire stations, operations and communications headquarters, community service centers, seaports, and airports) to damage in natural disasters and make recommendations for appropriate mitigation.	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Clarify to workers in critical facilities and emergency personnel, as well as to elected officials and the public, the extent to which the facilities are expected to perform only at a life safety level (allowing for the safe evacuation of personnel) or are expected to remain functional following an earthquake.	Public Works	N/A	Existing program	N/A	N/A
Comply with all applicable building and fire codes, as well as other regulations (such as state requirements for fault, landslide, and liquefaction investigations in particular mapped areas) when constructing or significantly remodeling government-owned facilities.	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Conduct and/or promote attendance at local or regional hazard conferences and workshops for elected officials and staff to educate them on the critical need for programs in mitigating earthquake, wildfire, flood, and landslide hazards.			Not yet considered and not cost effective		
Conduct comprehensive programs to identify and mitigate problems with facility contents, architectural components, and equipment that will prevent critical buildings from being functional after major natural disasters. Such contents and equipment includes computers and servers, phones, files, and other tools used by staff to conduct daily business.	Information Services	Complete	Existing program	Discontinue	Include as operational capability.
Conduct periodic tests of the alerting and warning system.			Not yet considered		

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Continue to participate not only in general mutual-aid agreements, but also in agreements with adjoining jurisdictions for cooperative response to fires, floods, earthquakes, and other disasters.	Fire Department and Administration	Complete	Existing program	Discontinue	Include as operational capability.
Cooperate with researchers working on governmentfunded projects to refine information on hazards, for example, by expediting the permit and approval process for installation of seismic arrays, gravity survey instruments, borehole drilling, fault trenching, landslide mapping, flood modeling, and/or damage data collection.	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Create and maintain an automated system of rain and flood gauges that is web enabled and publiclyaccessible. Work toward creating a coordinated regional system.			Not yet considered		
Develop a continuity of operations plan that includes back-up storage of vital records, such as plans and back-up procedures to pay employees and vendors if normal finance department operations are disrupted, as well as other essential electronic files.	Fire Department, Finance, Information systems	Complete	Existing program	Discontinue	Include as operational capability.
Develop a plan for short-term and intermediate-term sheltering of your employees.	Fire Department	Complete	Existing program	Discontinue	Include as operational capability.
Encourage joint meetings of security and operations personnel at critical facilities to develop innovative ways for these personnel to work together to increase safety and security.	Fire Department	Complete	Existing program	Discontinue	Include as operational capability.
Encourage staff to participate in efforts by professional organizations to mitigate earthquake and landslide disaster losses, such as the efforts of the Northern California Chapter of the Earthquake Engineering Research Institute, the East Bay- Peninsula Chapter of the International Code Council, the Structural Engineers Association of Northern California, and the American Society of Grading Officials.	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Encourage your employees to have a family disaster plan.	Fire Department	Complete	Existing program	Discontinue	Include as operational capability.
Ensure that any regulations imposed on private owned businesses related to repair and reconstruction (see "Economy Section") are enforced and imposed on local government's own buildings and structures.	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Ensure that fire, police, and other emergency personnel have adequate radios, breathing apparatuses, protective gear, and other equipment to respond to a major disaster.	Police and Fire Departments	Complete	Existing program	Discontinue	Include as operational capability.
Ensure that new government-owned facilities comply with and are subject to the same or more stringent regulations as imposed on privately-owned development.	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Establish a framework and process for pre-event planning for post-event recovery that specifies roles, priorities, and responsibilities of various departments within the local government organization, and that outlines a structure and process for policy-making involving elected officials and appointed advisory committees.	Fire Department	Complete	Existing program	Discontinue	Include as operational capability.

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Establish a goal for the resumption of local government services that may vary from function to function.	Fire Department	Complete	Existing program	Discontinue	Include as operational capability.
Expand or participate in expanding traditional disaster exercises involving city and county emergency personnel to include airport and port personnel, transit and infrastructure providers, hospitals, schools, park districts, and major employers.	Fire Department		Existing program underfunded		
Harden emergency response communications, including, for example, building redundant capacity into public safety alerting and/or answering points, replacing or hardening microwave and simulcast systems, adding digital encryption for programmable radios, and ensuring a plug-and-play capability for amateur radio.	Police and Fire Departments		Existing program underfunded		
Identify and undertake cost-effective retrofit measures related to security on critical facilities (such as moving and redesigning air intake vents and installing blast-resistant features) when these buildings undergo major renovations related to other natural hazards.			Not yet considered	Discontinue	Include as operational capability.
Improve coordination among cities, counties, and dam owners so that cities and counties can better plan for evacuation of areas that could be inundated if a dam failed, impacting their jurisdiction.	Floodplain Administrator		Under study		
Install alert and warning systems for rapid evacuation or shelter-in-place. Such systems include outdoor sirens and/or reverse-911 calling systems.			Not yet considered		
Maintain and update as necessary the local government's Standardized Emergency Management System (SEMS) Plan and the National Incident Management System (NIMS) Plan, and submit an appropriate NIMSCAST report.	Fire Department	Complete	Existing program	Discontinue	Include as operational capability.
Maintain the local government's emergency operations center in a fully functional state of readiness.	Public Works		Not yet considered - City does not have the financial ability to support such a program		
Offer CERT/NERT-type training to your employees.	Police and Fire Departments	Complete	Existing program	Discontinue	Include as operational capability.
Participate in developing and maintaining a system of interoperable communications for first responders from cities, counties, special districts, state, and federal agencies.	Police and Fire Departments	Complete	Existing program	Discontinue	Include as operational capability.
Participate in FEMA's National Flood Insurance Program.	Floodplain Administrator	Complete	Existing program	Discontinue	Include as operational capability.
Periodically assess the need for changes in staffing levels, as well as for additional or updated supplies, equipment, technologies, and in-service training classes.	Fire Department	Complete	Existing program	Discontinue	Include as operational capability.
Periodically assess the need for new or relocated fire or police stations and other emergency facilities.	Engineering	Complete	Existing program	Discontinue	Include as operational capability.
Place remote sensors in strategic locations for early warning of hazmat releases or use of weapons of mass destruction, understanding that the appropriate early warning strategy depends on the type of problem.			Not yet considered		

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Plan for the emergency relocation of government-owned facilities critical to recovery, as well as any facilities with known structural deficiencies or in hazardous areas.	Fire Department, Engineering, Building Inspection		Existing program underfunded		
Prepare a basic Recovery Plan that outlines the major issues and tasks that are likely to be the key elements of community recovery, as well as integrate this planning into response planning (such as with continuity of operations plans).	Fire Department	Complete	Existing program	Discontinue	Include as operational capability.
Prior to acquisition of property to be used as a critical facility, conduct a study to ensure the absence of significant structural hazards and hazards associated with the building site.	Engineering	Complete	Existing program	Discontinue	Include as operational capability.
Promote information sharing among overlapping and neighboring local governments, including cities, counties, and special districts, as well as utilities.	Police and Fire Departments	Complete	Existing program	Discontinue	Include as operational capability.
Purchase command vehicles for use as mobile command/EOC vehicles if current vehicles are unsuitable or inadequate.	Police and Fire Departments		Existing program underfunded		
Recognize that a multi-agency approach is needed to mitigate flooding by having flood control districts, cities, counties, and utilities meet at least annually to jointly discuss their capital improvement programs for most effectively reducing the threat of flooding. Work toward making this process more formal to insure that flooding is considered at existing joint-agency meetings.	Floodplain Administrator		Not yet considered and not cost effective		
Recognize that emergency services is more than the coordination of police and fire response; it also includes planning activities with providers of water, food, energy, transportation, financial, information, and public health services.	Police and Fire Departments	Complete	Existing program	Discontinue	Include as operational capability.
Regulate and enforce the location and design of street-address numbers on buildings and minimize the naming of short streets (that are actually driveways) to single homes.	Building Inspection and Engineering	Complete	Existing program	Discontinue	Include as operational capability.
Retrofit or replace critical facilities that are shown to be vulnerable to damage in natural disasters.	Public Works	N/A	Existing program underfunded - City Administration Building and Community Center should be evaluated for seismic since both were built in the 60s.	N/A	N/A
Review and update, as necessary, procedures pursuant to the State Dam Safety Act for the emergency evacuation of areas located below major water-storage facilities.	Floodplain Administrator		Under study		
Support and encourage planning and identification of facilities for the coordination of distribution of water, food, blankets, and other supplies, coordinating this effort with the American Red Cross.	Fire Department	Complete	Existing program	Discontinue	Include as operational capability.
When installing micro and/or surveillance cameras around critical public assets tied to web-based software, and develop a surveillance protocol to monitor these cameras, investigate the possibility of using the cameras for the secondary purpose of post-disaster damage assessment.			Not yet considered and not cost effective - Cameras have limited value in conveying potential damage.		

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Work with major employers and agencies that handle hazardous materials to coordinate mitigation efforts for the possible release of these materials due to a natural disaster such as an earthquake, flood, fire, or landslide.	Fire Department	Complete	Existing program	Discontinue	Include as operational capability.
Designate locations for the distribution of antibiotics to large numbers of people should the need arise, as required to be included in each county's Strategic National Stockpile Plan. RESPONSIBLE AGENCIES: County Health Departments	Fire Department	Complete	Existing program - Fire prevention services and emergency preparation provided by Alameda County Fire Department	Discontinue	Include as operational capability.
Encourage these facility operators to create, maintain, and/or continue partnerships with local governments to develop response and business continuity plans for recovery. RESPONSIBLE AGENCIES: Cities, counties, and county health departments	City-wide	Complete	Existing program	Discontinue	Include as operational capability.
Encourage these facility operators to develop disaster mitigation plans. RESPONSIBLE AGENCIES: Cities, counties, and county health departments	City-wide	Complete	Existing program	Discontinue	Include as operational capability.
Ensure that you know the Metropolitan Medical Response System (MMRS) cities in your area. Fremont, Oakland, San Francisco, and San Jose (plus Sacramento and Stockton) are the MMRS cities in or near the Bay Area. MMRS cities are provided with additional federal funds for organizing, equipping, and training groups of local fire, rescue, medical, and other emergency management personnel to respond to a mass casualty event. (The coordination among public health, medical, emergency management, coroner, EMS, fire, and law enforcement is a model for all cities and counties.) RESPONSIBLE AGENCIES: Cities, counties, county health departments, and hospitals.	Fire Department	Complete	Existing program - Fire prevention services and emergency preparation provided by Alameda County Fire Department	Discontinue	Include as operational capability.
Identify these ancillary facilities in your community. These facilities are not regulated by OSHPD in the same way as hospitals. RESPONSIBLE AGENCIES: Cities, counties, and county health departments	City-wide	Complete	Existing program	Discontinue	Include as operational capability.
Know that National Disaster Medical System (NDMS) uniformed or non-uniformed personnel are within one to-four hours of your community. These federal resources include veterinary, mortuary, and medical personnel. Teams in or near the Bay Area are headquartered in the cities of Santa Clara and Sacramento. RESPONSIBLE AGENCIES: Cities, counties, county health departments, and hospitals	Fire Department	Complete	Existing program - Fire prevention services and emergency preparation provided by Alameda County Fire Department	Discontinue	Include as operational capability.
Plan for hazmat related-issues due to a natural or technological disaster. Hazmat teams should utilize the State of California Department of Health Services laboratory in Richmond for confirmation of biological agents and Lawrence Livermore National Laboratory or Sandia (both in Livermore) for confirmation of radiological agents. RESPONSIBLE AGENCIES: Cities, counties, county health departments, and hospitals.	Fire Department	Complete	Existing program - Fire prevention services and emergency preparation provided by Alameda County Fire Department	Discontinue	Include as operational capability.

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Adopt and amend as needed updated versions of the California Building and Fire Codes so that optimal fire-protection standards are used in construction and renovation projects of private buildings.	Building Inspection	Complete	Existing program - The current editions of both the California Fire Code and California Building Code have been adopted.	Discontinue	Include as operational capability.
Adopt one or more of the following strategies as incentives to encourage retrofitting of privately owned seismically vulnerable residential buildings: (a) waivers or reductions of permit fees, (b) belowmarket loans, (c) local tax breaks, (d) grants to cover the cost of retrofitting or of a structural analysis, (e) land use (such as parking requirement waivers) and procedural incentives, or (f) technical assistance.	Building Inspection	No Progress	Not cost effective	Discontinue	City does not have the financial ability to support such a program
Adopt the 2010 International Existing Building Code or the latest applicable standard for the design of voluntary or mandatory retrofit of privately-owned seismically vulnerable buildings.	Building Inspection	Complete	Existing program - City has adopted Chapter 34 of the California Building Code which addresses seismic alterations and/or repairs to existing buildings	Discontinue	Include as operational capability.
Adopt the 2010 International Existing Building Code or the latest applicable standard for the design of voluntary or mandatory soft-story building retrofits for use in city/county building department regulations. In addition, allow use of changes to that standard recommended by SEAOC for the 2012 IEBC.	Building Inspection	Complete	Existing program - City has adopted Chapter 34 of the California Building Code which addresses seismic alterations and/or repairs to existing buildings	Discontinue	Include as operational capability.
Apply floodplain management regulations for private development in the floodplain and floodway.	Building Inspection	Complete	Existing program - All new development must be situated above the BFE and all remodels must comply with FEMA standards.	Discontinue	Include as operational capability.
As funding opportunities become available, encourage home and apartment owners to participate in acquisition and relocation programs for areas within floodways.	Building Inspection		Not yet considered		
Assist in ensuring adequate hazard disclosure by working with real estate agents to improve enforcement of real estate disclosure requirements for residential properties with regard to seven official natural hazard zones: 1) Special Flood Hazard Areas (designated by FEMA), 2) Areas of Potential Flooding from dam failure inundation, 3) Very High Fire Hazard Severity Zones, 4) Wildland Fire Zones, 5) Earthquake Fault Zones (designated under the Alquist-Priolo Earthquake Fault Zoning Act), and the 6) Liquefaction and Landslide Hazard Zones (designated under the Seismic Hazard Mapping Act).		Complete	Existing program	Discontinue	Include as operational capability.
Balance the housing needs of residents against the risk from potential flood-related hazards.	Building Inspection	Complete	Existing program - All new development must be situated above the BFE	Discontinue	Include as operational capability.
Compile a list of privately-owned high-rise and high occupancy buildings which are deemed, due to their age or construction materials, to be particularly susceptible to fire hazards, and determine an expeditious timeline for the fire-safety inspection of all such structures.					

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Conduct an inventory of privately-owned existing or suspected soft-story residential structures as a first step in establishing voluntary or mandatory programs for retrofitting these buildings.	Building Inspection	N/A	Existing program underfunded	N/A	N/A
Conduct appropriate employee training and support continued education to ensure enforcement of building codes and construction standards, as well as identification of typical design inadequacies of housing and recommended improvements.	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Conduct demonstration projects on common existing housing types demonstrating structural and nonstructural mitigation techniques as community models for earthquake mitigation.					
Conduct periodic fire-safety inspections of all multifamily buildings, as required by State law.	Fire Department	Complete	Existing program	Discontinue	Include as operational capability.
Continue to require that all new housing be constructed in compliance with requirements of the most recently adopted version of the California Building Code.	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Create a mechanism to enforce provisions of the California Building and Fire Codes and other local codes that require the installation of smoke detectors and fire-extinguishing systems on existing residential buildings by making installation a condition of (a) finalizing a permit for any work valued at over a fixed amount and/or (b) on any building over 75 feet in height, and/or (b) as a condition for the transfer of property.	Building Inspection	N/A	Existing Program	N/A	N/A
Create a mechanism to require the bracing of water heaters and flexible couplings on gas appliances, and/or the bolting of homes to their foundations and trengthening of cripple walls to reduce fire ignitions due to earthquakes.	Building Inspection	Complete	Existing program - Mechanism exist for bracing water heaters but City does not have a seismic retrofit program	Discontinue	Include as operational capability.
Create incentives for private owners of historic or architecturally significant residential buildings to undertake mitigation to levels that will minimize the likelihood that these buildings will need to be demolished after a disaster, particularly if those alterations conform to the federal Secretary of the Interior's Guidelines for Rehabilitation.		N/A	Not yet considered	N/A	N/A
Develop a "Maintain-a-Drain" campaign, similar to that of the City of Oakland, encouraging private businesses and residents to keep storm drains in their neighborhood free of debris.		N/A	Existing program - Public education provided when ever possible	N/A	N/A
Develop a plan for interim housing for those displaced by working with the Regional Catastrophic Planning Grant Program (CPGP) that funded this effort in 2009. (Estimated completion is 2011.)	Recreation Department	Complete	Existing program	Discontinue	Include as operational capability.
Develop a plan for short-term sheltering of residents of your community in conjunction with the American Red Cross.	Recreation Department	Complete	Existing program	Discontinue	Include as operational capability.
Develop a program to provide at-cost NOAA weather radios to residents of flood hazard areas that request them, with priority to neighborhood watch captains and others trained in their use.			Not yet considered - Potential areas that could flood are minimal.		

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Develop a public education campaign on the cost, risk, and benefits of earthquake, flood, and other hazard insurance as compared to mitigation.			Not yet considered		
Develop and enforce a repair and reconstruction ordinance to ensure that damaged buildings are repaired in an appropriate and timely manner and retrofitted concurrently. This repair and reconstruction ordinance should apply to all public and private buildings, and also apply to repair of all damage, regardless of cause.	Building Inspection and Code Enforcement	Complete	Existing program - City's nuisance abatement ordinance allows City to force some property owners to repair damaged structures. City will evaluate modifying existing ordinance to be more enclusive.	Discontinue	Include as operational capability.
Develop printed materials, utilize existing materials (such as developed by FEMA and the American Red Cross), conduct workshops, and/or provide outreach encouraging residents to have family disaster plans that include drop-cover-hold earthquake drills, fire and storm evacuation procedures, and shelter-inplace emergency guidelines.	Fire Department	Complete	Existing program - underfunded	Discontinue	Include as operational capability.
Distribute appropriate materials related to disaster mitigation and preparedness to residents. Appropriate materials are (1) culturally appropriate and (2) suitable for special needs populations. For example, such materials are available on the ttp://www.preparenow.org website and from non-governmental organizations that work with these communities on an on-going basis.			Not yet considered		
Encourage home and apartment owners to participate in home elevation programs within flood hazard areas.	Building Inspection		Not yet considered and not cost effective		
Encourage local government building inspectors to take classes on a periodic basis (such as the FEMA developed training classes offered by ABAG) on retrofitting of single-family homes, including application of Plan Set A.	Building Inspection		Existing program underfunded		
Encourage owners of properties in a floodplain to consider purchasing flood insurance. For example, point out that most homeowners' insurance policies do not cover a property for flood damage.	Building Inspection	Complete	Existing program - Program based on federal standards for all property with a mortgage	Discontinue	Include as operational capability.
Encourage private retrofit contractors and home inspectors doing work in your area to take retrofit classes on a periodic basis (such as the FEMAdeveloped training classes offered by ABAG or additional classes that might be offered by the CALBO Training Institute) on retrofitting of inglefamily homes.	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Ensure that new private development pays its fair share of improvements to the storm drainage system necessary to accommodate increased flows from the development, or does not increase runoff by draining water to pervious areas or detention facilities.	Engineering and Community Development	Complete	Existing program- Currently have impact fees and require new developments to properly handle storm water runoff.	Discontinue	Include as operational capability.
Ensure that new subdivisions are designed to reduce or eliminate flood damage by requiring lots and rights of-way be laid out for the provision of approved sewer and drainage facilities, providing on-site detention facilities whenever practicable.	Engineering	Complete	Existing program	Discontinue	Include as operational capability.

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Establish preservation-sensitive measures for the repair and reoccupancy of historically significant privately-owned structures, including requirements for temporary shoring or stabilization where needed, arrangements for consulting with preservationists and expedited permit procedures for suitable repair or rebuilding of historically or architecturally valuable structures.	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Establish special funding mechanisms (such as Fire Hazard Abatement Districts or regional bond funding) to fund reduction in fire risk of existing properties through vegetation management that includes reduction of fuel loads, use of defensible space, and fuel breaks.	Fire Department, Maintenance	Complete	Existing program	Discontinue	City has a weed abatement program
Establish tool-lending libraries with common tools needed for retrofitting for use by homeowners with appropriate training.					
Include flood fighting technique session based on California Department of Water Resources training to the list of available public training classes offered by CERT.	Police Department, and Building Inspection		Not yet considered - Potential areas that could flood are minimal.		
Inform residents of comprehensive mitigation activities, including elevation of appliances above expected flood levels, use of fire-resistant roofing and defensible space in high wildfire threat and wildfire-urban- interface areas, structural retrofitting techniques for older homes, and use of intelligent grading practices through workshops, publications, and media announcements and events.			Not yet considered		
Inform shoreline-property owners of the possible long-term economic threat posed by rising sea levels.			Not yet considered		
Institute the neighborhood watch block captain and team programs outlined in the Citizen Corps program guide.	Police Department and Fire Department	Complete	Existing program	Discontinue	Include as operational capability.
Inventory non-ductile concrete, tilt-up concrete (such as converted lofts), and other privately owned potentially structurally vulnerable residential buildings.	Building Inspection	N/A	Existing program underfunded	N/A	N/A
Investigate and adopt appropriate financial, procedural, and land use incentives (such as parking waivers) for private owners of soft-story buildings to facilitate retrofit such as those described by ABAG (see http://quake.abag.ca.gov/fixit).	Building Inspection	No Progress	Not economically feasible	Discontinue	
Investigate and adopt appropriate financial, procedural, and land use incentives (such as parking waivers) for private owners of soft-story buildings to facilitate retrofit such as those described by ABAG (see http://quake.abag.ca.gov/fixit).	Building Inspection	N/A	Reference HSNG c-7	N/A	N/A
Make use of the materials on the ABAG web site at http://quake.abag.ca.gov/fixit and other web sites to increase residential mitigation activities related to earthquakes. (ABAG plans to continue to improve the quality of those materials over time.)	Building Inspection	Complete	Existing program - City will create links on website	Discontinue	Include as operational capability.
Provide public information on locations for obtaining sandbags and/or deliver those sandbags to those various locations throughout a city and/or county prior to and/or during the rainy season.	Maintenance	Complete	Existing program	Discontinue	Include as operational capability.

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Provide retrofit classes or workshops for homeowners in your community, or help promote utilization of subregional workshops in the South Bay, East Bay, Peninsula, and North Bay as such workshops become available through outreach using existing community education programs.	CalOES	No Progress	No workshops conducted	Discontinue	CalOES or Operational Area Initiative - not feasibile for solely Newark
Provide sandbags and plastic sheeting to residents in anticipation of rainstorms, and deliver those materials to vulnerable populations upon request.	Maintenance	Complete	Existing program	Discontinue	Include as operational capability.
Require engineered plan sets for seismic retrofitting of heavy two-story homes with living areas over garages, as well as for split level homes (that is, homes not covered by Plan Set A), until standard plan sets and construction details become available.	Building Inspection	Complete	Existing program - City requires engineered design of all two story dwellings.	Discontinue	Include as operational capability.
Require engineered plan sets for voluntary or mandatory soft-story seismic retrofits by private owners until a standard plan set and construction details become available.	Building Inspection	N/A	Existing Program	N/A	N/A
Require fire sprinklers in all new or substantially remodeled multifamily housing, regardless of distance from a fire station.	Building Inspection	Complete	Existing program - By ordinance fire sprinklers are required in all new dwellings	Discontinue	Include as operational capability.
Require fire sprinklers in new homes located more than 1.5 miles or a 5-minute response time from a fire station or in an identified high hazard wildlandurban- interface wildfire area.	Building Inspection	Complete	Existing program - By ordinance fire sprinklers are required in all new dwellings	Discontinue	Include as operational capability.
Require sprinklers in all mixed use development to protect residential uses from fires started in nonresidential areas.	Building Inspection	Complete	Existing program - By ordinance fire sprinklers are require in most all new construction	Discontinue	Include as operational capability.
Sponsor the formation and training of Community Emergency Response Teams (CERT) for residents in your community. [Note – these programs go by a variety of names in various cities and areas.]	Police Department	Complete	Existing program	Discontinue	Include as operational capability.
To reduce flood risk, thereby reducing the cost of flood insurance to private property owners, work to qualify for the highest-feasible rating under the Community Rating System of the National Flood Insurance Program.	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Train homeowners to locate and shut off gas valves if they smell or hear gas leaking.	Police and Fire Departments	Complete	Existing program - Included in CERT programs	Discontinue	Include as operational capability.
Use disaster anniversaries, such as April (the 1906 earthquake), September (9/11), and October (Loma Prieta earthquake and Oakland Hills fire), to remind the public of safety and security mitigation activities.			Not yet considered		
Use the soft-story inventory to require private owners to inform all existing and prospective tenants that they may need to be prepared to live elsewhere following an earthquake if the building has not been retrofitted.	Building Inspection	No Progress	Politically sensitive topic - not feasible due to controversial topic	Discontinue	N/A
Use the soft-story inventory to require private owners to inform all existing tenants (and prospective tenants prior to signing a lease agreement) that they may live in this type of building.	Building Inspection	No Progress	Politically sensitive topic - not feasible due to controversial topic	Discontinue	N/A

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Utilize or recommend adoption of a retrofit standard that includes standard plan sets and construction details for voluntary bolting of homes to their foundations and bracing of outside walls of crawl spaces (“cripple” walls), such as Plan Set A developed by a committee representing the East Bay-Peninsula-Monterey Chapters of the International Code Council (ICC), California Building Officials (CALBO), the Structural Engineers Association of Northern California (SEAONC), the Northern California Chapter of the Earthquake Engineering Research Institute (EERI-NC), and ABAG’s Earthquake Program.	Building Inspection	Complete	Existing program - Use standard plans developed by the City of San Leandro	Discontinue	Include as operational capability.
Assist, support, and/or encourage the U.S. Army Corp of Engineers, various Flood Control and Water Conservation Districts, and other responsible agencies to locate and maintain funding for the development of flood control projects that have high cost-benefit ratios (such as through the writing of letters of support and/or passing resolutions in support of these efforts).	Engineering and Floodplain Administrator	Complete	Existing program	Discontinue	Include as operational capability.
Clarify to workers in critical facilities and emergency personnel, as well as to elected officials and the public, the extent to which the facilities are expected to perform only at a life safety level (allowing for the safe evacuation of personnel) or are expected to remain functional following an earthquake.	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Comply with all applicable building and fire codes, as well as other regulations (such as state requirements for fault, landslide, and liquefaction investigations in particular mapped areas) when constructing or significantly remodeling infrastructure facilities.	Building Inspection	Complete	Existing program - All construction must meet current codes which included seismic resistance.	Discontinue	Include as operational capability.
Conduct a watershed analysis at least once every ten years unless there is a major development in the watershed or a major change in the Land Use Element of the General Plan of the cities or counties within the watershed.	Alameda County Flood Control District	Complete	Existing program - Task performed by an outside agency with input from City Floodplain Administrator	Discontinue	Include as operational capability.
Conduct a watershed analysis of runoff and drainage systems to predict areas of insufficient capacity in the storm drain and natural creek system.	Alameda County Flood Control District	Complete	Existing program - Task performed by an outside agency with input from City Floodplain Administrator	Discontinue	Include as operational capability; Newark Department not identified as lead.
Continue maintenance efforts to keep storm drains and creeks free of obstructions, while retaining vegetation in the channel (as appropriate) to allow for the free flow of water.	Engineering and Maintenance	Complete	Existing program	Discontinue	Include as operational capability.
Continue to repair and make structural improvements to storm drains, pipelines, and/or channels to enable them to perform to their design capacity in handling water flows as part of regular maintenance activities. (This strategy has the secondary benefit of addressing fuel, chemical, and cleaning product issues.)	Engineering and Maintenance	Complete	Existing program underfunded	Discontinue	Include as operational capability.

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Develop and distribute culturally appropriate materials related to disaster mitigation and preparedness, such as those on the http://www.preparenow.org website related to infrastructure issues.	Fire Department	Complete	Existing program - Fire prevention services and emergency preparation provided by Alameda County Fire Department	Discontinue	Include as operational capability.
Develop procedures for performing a watershed analysis to examine the impact of development on flooding potential downstream, including communities outside of the jurisdiction of proposed projects.	Engineering	Complete	Existing program	Discontinue	Include as operational capability.
Enforce provisions under creek protection, stormwater management, and discharge control ordinances designed to keep watercourses free of obstructions and to protect drainage facilities to conform with the Regional Water Quality Control Board's Best Management Practices.	Engineering, Maintenance, and Code Enforcement	Complete	Existing program	Discontinue	Include as operational capability.
Ensure adequate fire equipment road or fire road access to developed and open space areas.	Fire Department, Engineering, Building Inspection	Complete	Existing program - All new development must meet California Fire Code requirements	Discontinue	Include as operational capability.
Ensure that utility systems in new developments are constructed in ways that reduce or eliminate flood damage.	Engineering and Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Expedite the funding and retrofit of seismically deficient city- and county-owned bridges and road structures by working with Caltrans and other appropriate governmental agencies.	Engineering	Complete	Existing program - City currently owns and maintains the only bridge in Newark - overpass at Newark Blvd.	Discontinue	Include as operational capability.
Facilitate and/or coordinate the distribution of emergency preparedness or mitigation materials that are prepared by others, such as by making the use of the internet or other electronic means, or placing materials on community access channels or in city or utility newsletters, as appropriate.	Fire Department	Complete	Existing program - Fire prevention services and emergency preparation provided by Alameda County Fire Department	Discontinue	Include as operational capability.
Include “areas subject to high ground shaking, earthquake-induced ground failure, and surface fault rupture” in the list of criteria used for determining a replacement schedule for pipelines (along with importance, age, type of construction material, size, condition, and maintenance or repair history).	Engineering	Complete	Existing program - All applicable conditions are evaluated when designing pipe lines.	Discontinue	Include as operational capability.
Install specially-engineered pipelines in areas subject to faulting, liquefaction, earthquake-induced landsliding, or other earthquake hazard.	Engineering	Complete	Existing program - All applicable conditions are evaluated when designing pipe lines.	Discontinue	Include as operational capability.
Maintain fire roads and/or public right-of-way roads and keep them passable at all times.	Fire Department, Engineering, Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Provide materials to the public related to coping with disrupted storm drains, sewage lines, and wastewater treatment (such as materials developed by ABAG's Sewer Smart Program).	Fire Department	Complete	Existing program - Fire prevention services and emergency preparation provided by Alameda County Fire Department	Discontinue	Include as operational capability.

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Provide materials to the public related to coping with reductions in water supply or contamination of that supply BEYOND regulatory notification requirements.	Fire Department	Complete	Existing program - Fire prevention services and emergency preparation provided by Alameda County Fire Department	Discontinue	Include as operational capability.
Provide materials to the public related to family and personal planning for delays due to traffic or road closures, or due to transit system disruption caused by disasters.	Fire Department	Complete	Existing program - Fire prevention services and emergency preparation provided by Alameda County Fire Department	Discontinue	Include as operational capability.
Provide materials to the public related to planning for power outages.	Fire Department	Complete	Existing program - Fire prevention services and emergency preparation provided by Alameda County Fire Department	Discontinue	Include as operational capability.
Pursue funding for the design and construction of storm drainage projects to protect vulnerable properties, including property acquisitions, upstream storage such as detention basins, and channel widening with the associated right-of-way acquisitions, relocations, and environmental mitigations.	Alameda County Flood Control District	Complete	Existing program	Discontinue	Include as operational capability; Newark Department not identified as lead.
Replace or retrofit water-retention structures that are determined to be structurally deficient, including levees, dams, reservoirs and tanks.	Engineering		Existing program underfunded		
Sponsor the formation and training of Community Emergency Response Teams (CERT) for the employees of your agency. [Note – these programs go by a variety of names in various cities and areas.]	Police Department	Complete	Existing program	Discontinue	Include as operational capability.
Using criteria developed by EPA for asset management, inventory existing assets, the condition of those assets, and improvements needed to protect and maintain those assets. Capture this information in a Geographic Information System (GIS) and use it to select locations for creek monitoring gauges.	Engineering and Floodplain Administrator	Complete	Existing program underfunded - Flood control channels owner and operated by outside agency	Discontinue	Include as operational capability.
Work cooperatively with water agencies, flood control districts, Caltrans, and local transportation agencies to determine appropriate performance criteria for watershed analysis.	Engineering and Floodplain Administrator		Under study - When requested will provide assistance to Alameda County Flood Control District		
Consider imposing requirements similar to the Alquist-Priolo Earthquake Fault Zoning Act for structures without human occupancy if these buildings are still essential for the economic recovery of the community or region.	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Encourage new development near floodways to incorporate a buffer zone or setback from that floodway to allow for changes in stormwater flows in the watershed over time.	Engineering, Building Inspection and Floodplain Administrator	Complete	Existing program	Discontinue	Include as operational capability.

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Enforce and/or comply with the State-mandated requirement that site-specific geologic reports be prepared for development proposals within Alquist- Priolo Earthquake Fault Zones, and restrict the placement of structures for human occupancy. (This Act is intended to deal with the specific hazard of active faults that extend to the earth's surface, creating a surface rupture hazard.)	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Ensure that development proposed near faults with a history of complex surface rupture (multiple traces, warping, thrusting, etc.) has larger setbacks than the minimum fifty feet.	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Establish and enforce grading, erosion, and sedimentation ordinances by requiring, under certain conditions, grading permits and plans to control erosion and sedimentation prior to development approval.	Engineering, Building Insp. Floodplain Administrator	Complete	Existing program	Discontinue	Include as operational capability.
Establish and enforce provisions (under subdivision ordinances or other means) that geotechnical and soil- hazard investigations be conducted and filed to prevent grading from creating unstable slopes, and that any necessary corrective actions be taken prior to development approval.	Engineering, Building Insp. Floodplain Administrator	Complete	Existing program	Discontinue	Include as operational capability.
Establish and enforce provisions under the creek protection, storm water management, and discharge control ordinances designed to control erosion and sedimentation.	Engineering, Building Insp. Floodplain Administrator	Complete	Existing program	Discontinue	Include as operational capability.
Establish and enforce regulations concerning new construction (and major improvements to existing structures) within flood zones in order to be in compliance with federal equirements and, thus, be a participant in the Community Rating System of the National Flood Insurance Program.	Engineering, Building Inspection and Floodplain Administrator	Complete	Existing program	Discontinue	Include as operational capability.
Establish and enforce requirements for new development so that site-specific designs and source-control techniques are used to manage peak stormwater runoff flows and impacts from increased runoff volumes.	Engineering, Building Inspection and Floodplain Administrator	Complete	Existing program	Discontinue	Include as operational capability.
For purposes of creating an improved hazard mitigation plan for the region as a whole, ABAG, and Bay Area cities and counties, jointly request geographically defined repetitive flooding loss data from FEMA for their own jurisdictions.	Engineering, Building Inspection and Floodplain Administrator	Complete	Existing program	Discontinue	Include as operational capability.
Incorporate FEMA guidelines and suggested activities into local government plans and procedures for managing flood hazards.	Engineering, Building Inspection and Floodplain Administrator	Complete	Existing program	Discontinue	Include as operational capability.
Prioritize retrofit of infrastructure that serves urban areas (or urban services areas) over constructing new infrastructure to serve outlying areas.	Planning Department	Complete	Existing program - Conditions address whenever General Plan is updated	Discontinue	Include as operational capability.
Provide an institutional mechanism to ensure that development proposals adjacent to floodways and in floodplains are referred to flood control districts and wastewater agencies for review and comment (consistent with the NPDES program).	Engineering, Building Inspection and Floodplain Administrator	Complete	Existing program	Discontinue	Include as operational capability.

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Recognizing that some faults may be a hazard for surface rupture, even though they do not meet the strict criteria imposed by the Alquist-Priolo Earthquake Fault Zoning Act, identify and require geologic reports in areas adjacent to locally significant faults.	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Recognizing that the California Geological Survey has not completed earthquake-induced landslide and liquefaction mapping for much of the Bay Area, identify and require geologic reports in areas mapped by others as having significant liquefaction or landslide hazards.	Building Inspection	Complete	Existing program - Mapping complete for City	Discontinue	Include as operational capability.
Require that local government reviews of geologic and engineering studies are conducted by appropriately trained and credentialed personnel.	Building Inspection	Complete	Existing program	Discontinue	Include as operational capability.
Require that local government reviews of these investigations are conducted by appropriately trained and credentialed personnel.	Engineering, Building Insp. Floodplain Administrator	Complete	Existing program	Discontinue	Include as operational capability.
Strive to preserve existing buffers between development and existing users of large amounts of hazardous materials, such as major industry, due to the potential for catastrophic releases or fires due to an earthquake, accident, or terrorism. (Flooding might also result in release or spread of these materials; however, it is unlikely.) In areas where buffers do not exist or cannot be created, provide alternative mitigation.	Planning Department	Complete	Existing program - Conditions address whenever General Plan is updated	Discontinue	Include as operational capability.
Use hazard abatement districts as a funding mechanism to ensure that mitigation strategies are implemented and enforced over time.			Not yet considered		
Work to retrofit homes in older urban neighborhoods to provide safe housing close to job centers.	Planning Department	Complete	Existing program - Conditions address whenever General Plan is updated	Discontinue	Include as operational capability.
Work to retrofit older downtown areas and redevelopment districts to protect architectural diversity and promote disaster-resistance.	Planning Department	Complete	Existing program - Conditions address whenever General Plan is updated	Discontinue	Include as operational capability.
Work with non-profits and through other mechanisms to protect as open space those areas susceptible to extreme hazards (such as through land acquisition, zoning, and designation as priority conservation areas).	Planning Department	Complete	Existing program - Conditions address whenever General Plan is updated	Discontinue	Include as operational capability.
As an infrastructure operator, designate a backup Emergency Operations Center with redundant communications systems.	Fire and Police Departments	Complete	Existing program - City maintains two EOCs	Discontinue	Include as operational capability.
Develop (with the participation of paratransit providers, emergency responders, and publichealth professionals) plans and procedures for paratransit system response and recovery from disasters.	Fire Department	Complete	Existing program - Fire prevention services and emergency preparation provided by Alameda County Fire Department	Discontinue	Include as operational capability.

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Effectively utilize the Regional Transportation Management Center (TMC) in Oakland, the staffing of which is provided by Caltrans, the CHP and MTC. The TMC is designed to maximize safety and efficiency throughout the highway system. It includes the Emergency Resource Center (ERC) which was created specifically for primary planning and procedural disaster management. RESPONSIBLE AGENCY: MTC only.	Fire Department	Complete	Existing program - Fire prevention services and emergency preparation provided by Alameda County Fire Department	Discontinue	Include as operational capability.
Encourage communication between State Emergency Management Agency (CalEMA), FEMA, and utilities related to emergencies occurring outside of the Bay Area that can affect service delivery in the region.	Engineering	Complete	Existing program	Discontinue	Include as operational capability.
Encourage replacing above ground electric and phone wires and other structures with underground facilities, and use the planning-approval process to ensure that all new phone and electrical utility lines are installed underground.	Engineering	Complete	Existing program - Standard practice for all new developments plus City encourages PG&E to underground existing power lines	Discontinue	Include as operational capability.
Encourage the cooperation of utility system providers and cities, counties, and special districts, and PG&E to develop strong and effective mitigation strategies for infrastructure systems and facilities.	Engineering	Complete	Existing program	Discontinue	Included as operational capability.
Ensure that critical intersection traffic lights function following loss of power by installing battery back-ups, emergency generators, or lights powered by alternative energy sources such as solar. Proper functioning of these lights is essential for rapid evacuation, such as with hazmat releases resulting from natural disasters.	Engineering	Complete	Existing program	Discontinue	Include as operational capability.
Ensure that transit operators, private ambulance companies, cities, and/or counties have mechanisms in place for medical transport during and after disasters that take into consideration the potential for reduced capabilities of roads following these same disasters.	Fire Department	Complete	Existing program - Fire prevention services and emergency preparation provided by Alameda County Fire Department	Discontinue	Include as operational capability.
Establish plans for delivery of fuel to critical infrastructure providers.	Maintenance	Complete	Existing program	Discontinue	Include as operational capability.
Minimize the likelihood that power interruptions will adversely impact lifeline utility systems or critical facilities by ensuring that they have adequate back-up power.	Engineering and Maintenance		Existing program, underfunded - EOC, fire houses and dispatch have emergency back up power. Other City buildings do not.		
Pre-position emergency power generation capacity (or have rental/lease agreements for these generators) in critical buildings of cities, counties, and special districts to maintain continuity of government and services.	Maintenance	Complete	Existing program	Discontinue	Include as operational capability.
Recognize that heat emergencies produce the need for non-medical transport of people to cooling centers by ensuring that (1) transit operators have plans for non-medical transport of people during and after such emergencies including the use of paratransit and (2) cities, counties, and transit agencies have developed ways to communicate the plan to the public.	Fire Department	Complete	Existing program - Fire prevention services and emergency preparation provided by Alameda County Fire Department	Discontinue	Include as operational capability.

Newark ABAG Actions - 2010

2010 Mitigation Action	Responsible Agency	Status	Status Decription	Next Step	Describe Next Step
Retrofit or replace critical lifeline infrastructure facilities and/or their backup facilities that are shown to be vulnerable to damage in natural disasters.	Public Works		Existing program underfunded - City Administration Building and Community Center should be evaluated for seismic since both were built in the 60s.		
Support and encourage efforts of other (lifeline infrastructure) agencies as they plan for and arrange financing for seismic retrofits and other disaster mitigation strategies. (For example, a city might pass a resolution in support of a transit agency's retrofit program.)	City-wide	Complete	Existing Program	Discontinue	Included as operational capability.