



Union City/Newark Multi-Jurisdiction Hazard Mitigation Plan

Volume 2—Planning Partner Annexes



December 2016

DRAFT

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PREPARED FOR

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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 DRAFT 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.

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.

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 **Error! Reference source not found.**

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	8/23/2016	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 1-5. 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
<i>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</i>				
Zoning Code	Yes	No	Yes	No
<i>Comment: The City of Union City Zoning Ordinance. Ord. 670-06 § 3, 2006; Ord. 55-64 § 1.0, 1964, undergoes periodic review and revisions</i>				
Subdivisions	Yes	No	No	No
<i>Comment: Subdivision Ordinance of the City (may be so cited and pleaded). Ord. 143-76 § 2, 1976, undergoes periodic review and revision</i>				
Stormwater Management	Yes	No	Yes	No
<i>Comment: Storm Water Management and Discharge Control Ordinance of the City of Union City. Ord. 382-92, 1992</i>				
Post-Disaster Recovery	No	No	No	No
<i>Comment:</i>				
Real Estate Disclosure	No	No	Yes	No
<i>Comment: CA. State Civil Code 1102 requires full disclosure on natural hazard exposure of the sale/re-sale of any and all real property.</i>				
Growth Management	Yes	No	No	No
<i>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)</i>				
Site Plan Review	Yes	No	No	No
<i>Comment: Title 18, Chapter 18.76 Site Development Review, Ord. 670-06 § 3, 2006</i>				
Environmental Protection	Yes	No	Yes	No
<i>Comment: Title 18, Chapter 18.104, Environmental Review, Ord. 670-06 § 3, 2006</i>				
Flood Damage Prevention	Yes	No	No	No
<i>Comment: Title 18, Chapter 18.98 Floodplain Combining District, Ord. 757-11 § 1, 2011</i>				
Emergency Management	Yes	No	No	No
<i>Comment: Title 2, Chapter 2.28 Emergency Organization, Ord. 31.3-72 § 1, 1972, undergoes periodic review and update</i>				
Climate Change	No	No	No	No
<i>Comment: Climate Action Plan</i>				
Other:	Yes	No	No	No
<i>Comment:</i>				

	Local Authority	Other Jurisdiction Authority	State Mandated	Opportunity for Improvement?
Planning Documents				
General Plan	Yes	No	Yes	Yes
<i>Is the plan compliant with Assembly Bill 2140? Yes</i>				
<i>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.</i>				
Capital Improvement Plan	Yes	No	No	Yes
<i>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.</i>				
<i>How often is the plan updated? Every five years- currently FY 2015-16 – 2019-20 with biennial updates per the two-year budget cycle.</i>				
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 <i>Comment: Union City Comprehensive Emergency Management Plan (CEMP), Continuity of Operations/Continuity of Government Functional Annex</i>	Yes	No	No	Yes
Public Health Plan <i>Comment: Alameda County Public Health Department. Strategic Plan 2008-2013</i>	No	Yes	No	No
Other: <i>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.</i>	Yes	No	No	No

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
Does your floodplain management staff need any assistance or training to support its floodplain management program?	Yes
<ul style="list-style-type: none"> If so, what type of assistance/training is needed? 	FEMA trainings would be beneficial to staff involved in floodplain management.
Does your jurisdiction participate in the Community Rating System (CRS)?	No
<ul style="list-style-type: none"> Is your jurisdiction interested in joining the CRS program? 	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
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> If yes, please briefly describe. 	Union City Community Emergency Response Team, Tri-Cities Emergency Services Association (TESA), ARES/RACES

Criteria	Response
Do you have any established warning systems for hazard events?	Yes
<ul style="list-style-type: none"> 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	-
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				
<ul style="list-style-type: none"> 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				
<ul style="list-style-type: none"> 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				
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> If yes, please describe. 	<p>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.</p> <p>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.</p> <p>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.</p>
<ul style="list-style-type: none"> 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 goal of 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.

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.

2.7 HAZARD RISK RANKING

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

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe Weather	33	Medium
3	Flood	18	Medium
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 A 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.

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.						
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.						

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
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
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).						

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
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.						
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.						

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
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						
Existing	Earthquake	1,3,8,9,10	Public Works	Medium	Local Budget, PDM, HMGP	Short

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
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
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.						

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
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
UC-23	3	Medium	Low	Yes	No	Yes	Medium	Medium

Action #	# of Objectives Met	Benefits	Costs	Do Benefits Equal or Exceed Costs?	Is Project Grant-Eligible?	Can Project Be Funded Under Existing Programs/Budgets?	Implementation Priority ^a	Grant Priority ^a
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	Low	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, 7, 8, 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, 7, 8, 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.

2.10 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, Fremont 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 Newark 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 “NewPark 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 (Union City Annex). All of the below items were additionally reviewed as part of the full capability assessment for Union City.

- **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 <i>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.</i>	Yes	No	Yes	Yes
Zoning Code <i>Comment: Title 17 Zoning, Ord. 92 § 1.3, 1965</i>	Yes	No	No	Yes
Subdivisions <i>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.</i>	Yes	No	No	No
Stormwater Management <i>Comment: Title 8, Chapter 8.36, Ord. 284 (part), 1992</i>	Yes	No	Yes	No
Post-Disaster Recovery <i>Comment: None Located</i>	No	No	No	No
Real Estate Disclosure <i>Comment: CA. State Civil Code 1102 requires full disclosure on natural hazard exposure of the sale/re-sale of any and all real property.</i>	No	No	Yes	No
Growth Management <i>Comment: None Located</i>	No	No	No	No
Site Plan Review <i>Comment: Title 17, Chapter 17.18.150, Application Review Ord. No. 439, § 3, 1-14-2010</i>	Yes	No	No	No
Environmental Protection <i>Comment: Title 13, Chapter 13.04.040 - Permit—Application. Ord. 136 § 4(1), 1973</i>	Yes	No	Yes	No
Flood Damage Prevention <i>Comment: Title 15, Chapter 40, Ord. No. 435, § 1, 6-25-2009</i>	Yes	No	No	No
Emergency Management <i>Comment: Title 2 Administration and Personnel, Chapter 2.16 Disaster Council, Ord. 44.3 § 1, 1972</i>	Yes	No	No	No
Climate Change <i>Comment:</i>	No	No	No	No
Other: <i>Comment:</i>	No	No	No	No

	Local Authority	Other Jurisdiction Authority	State Mandated	Opportunity for Improvement?
Planning Documents				
General Plan	Yes	No	Yes	Yes
<i>Is the plan equipped to provide linkage to this mitigation plan? Yes</i>				
<i>Is the plan AB2140 compliant? No</i>				
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
<i>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.</i>				
<i>How often is the plan updated? Every two years</i>				
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
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
How many total loss claims have been filed in your jurisdiction?	1

Criteria	Response
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	-
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? • If no, who does? If yes, which department?	Yes 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
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> If yes, please describe. 	Area 3 and 4 Specific Plan area and the Dumbarton Transit Oriented development Specific Plan Area.
<ul style="list-style-type: none"> 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.

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.

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 A 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.

Applies to new or existing assets	Hazards Mitigated	Objectives Met	Lead Agency	Estimated Cost	Sources of Funding	Timeline
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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.

3.10 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.

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 INCORPORATION OF EXISTING INFORMATION

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.

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 **Error! Reference source not found.**

Table 4-4. Education and Outreach

Criteria	Response
Do you have a Public Information Officer or Communications Office?	Yes - PIO
Do you have personnel skilled or trained in website development?	Yes

Criteria	Response
Do you have hazard mitigation information available on your website? <ul style="list-style-type: none"> If yes, please briefly describe. 	Yes <ul style="list-style-type: none"> * 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? <ul style="list-style-type: none"> If yes, please briefly describe. 	Yes, Facebook, Twitter, and YouTube. We utilize social media and our district website.
Do you have any citizen boards or commissions that address issues related to hazard mitigation? <ul style="list-style-type: none"> If yes, please briefly specify. 	Yes, we are a Special District with elected officials. 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? <ul style="list-style-type: none"> If yes, please briefly describe. 	We have a community outreach program. We have a newsletter that is sent bi-monthly to customers. The program provides information at local events.
Do you have any established warning systems for hazard events? <ul style="list-style-type: none"> If yes, please briefly describe. 	Yes 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.

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.

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 A 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.

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 desalination facility reliability enhancements as indicated in the Integrated Resources Plan.						
Existing	Drought	1, 3, 12	ETS/OMD	High	Capital Budget, Possibly HMA	Long term

- See the addendum to this annex for a list of objectives.
- ETS—Engineering & Technology Services; OMD—Operations & Maintenance Department; WRD—Water Resources Department.
- Costs are not based on dollar thresholds. See the addendum to this volume for an explanation of cost categories.
- Grant Program Acronyms are as follows: HMA—Hazard Mitigation Assistance; HMGP—Hazard Mitigation Grant Program; PDM—Pre-Disaster Mitigation; FMA—Flood Mitigation Assistance.
- 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 annex 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 annex for explanation of mitigation types.

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, Link to the HMP website
<ul style="list-style-type: none"> If yes, please briefly describe. 	
Do you utilize social media for hazard mitigation education and outreach?	Yes
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> 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
<ul style="list-style-type: none"> 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.

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.

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.

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.

5.12 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 INCORPORATION OF EXISTING INFORMATION

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
- Newark Unified School District Strategic Plan
(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
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
<ul style="list-style-type: none"> If yes, please briefly describe. 	
Do you utilize social media for hazard mitigation education and outreach?	No
<ul style="list-style-type: none"> If yes, please briefly describe. 	
Do you have any citizen boards or commissions that address issues related to hazard mitigation?	No
<ul style="list-style-type: none"> If yes, please briefly specify. 	
Do you have any other programs already in place that could be used to communicate hazard-related information?	Yes
<ul style="list-style-type: none"> If yes, please briefly describe. 	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
<ul style="list-style-type: none"> 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.

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.

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
1	Earthquake	54	High
2	Severe Weather	51	High
3	Flood	27	Medium

Rank	Hazard Type	Risk Rating Score (Probability x Impact)	Category
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	<i>No Exposure</i>					
Severe Weather	1,2	3,5,8			3,6,7	5
Wildfire	<i>No Exposure</i>					

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

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/safepngschlreview.aspx>

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

<http://www.gamutononline.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>