City of Albany
Local Hazard Mitigation Plan
2018-2022

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Executive Summary

Disasters can cause loss of life, damage buildings and infrastructure, and have devastating consequences for a community's economic, social, and environmental well-being. Hazard mitigation, actions taken to reduce or eliminate long-term risk to life, property and the environment from hazards, can significantly reduce these impacts. This Local Hazard Mitigation Plan (LHMP) provides a direction for reducing the potential for loss of life, property damage, and environmental degradation from natural disasters, while accelerating economic recovery from those disasters.

This Plan focuses on the protection of the community from risks associated with natural and human-caused hazards of greatest concern. A full range of hazards were considered during the planning process, and the following hazards were identified as having the greatest concern:

- **Earthquakes**
- **Infrastructure Failure** (Electrical Grid Failure, Energy Shortage, Natural Gas Pipeline Explosion, Freeway Damage, Water System Failure, and Information Technology Failure)
- **Severe Weather** (Damaging Winds and Extreme Temperatures)
- **Wildfire** (Wildland, Wildland-Urban Interface, and Urban Conflagrations)
- **Terrorism**
- **Sea Level Rise**
- **Hazardous Materials Release**
- **Flooding**
- **Landslide**
- **Public Health Epidemic**

In the Plan, each identified hazard is defined, and vulnerabilities and potential impacts are further analyzed. Hazards are ranked by probability of occurrence and risk to people, property, and the local and regional economy. Strategies for mitigating each hazard are identified, along with the responsible agency and timeline for implementation.

This Plan continues Albany's emphasis on hazard mitigation prior to disasters, including maintenance of infrastructure, strict code requirements, and community outreach and education.

Part I: The Planning Area

City Profile

The City of Albany, California is a city of 18,565 residents situated in the northwestern corner of Alameda County in the San Francisco Bay Area. It is bordered to the south and east by Berkeley, to the north by the Contra Costa cities of El Cerrito and Richmond, and to the west by the San Francisco Bay. The City has a total area of 5.5 square miles (14 km^2), of which 1.8 square miles (4.7 km^2) is land and 3.7 square miles (9.6 km^2) (67.28%) is water.

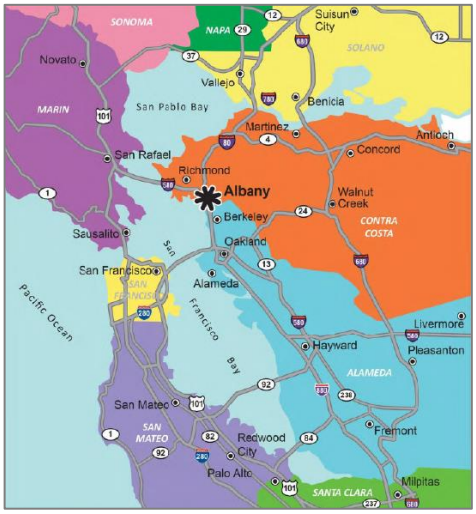


Image courtesy of the City of Albany General Plan

The City's motto, "Urban Village by the Bay," illustrates its dense urban environment and small-town ambiance. Albany is the 5th most densely populated city in the Bay Area, with 10,905 residents per square mile.[1] With its traditional urban street grid and mixed-use neighborhoods, Albany is also the 6th most walkable city in California, with a Walk Score of 82.

Albany is a mature, built-out city, with much of its development completed before the 1950s. Much of its character comes from the modest single-family bungalows from the '20s and '30s, known colloquially as "MacGregors" for their creator, each one unique. Much of the housing built after 1950 has been multi-family housing, including University Village, a large UC Berkeley student family housing development comprising 15% of the City's total housing stock, as well as several large condominium complexes located by the I-80 freeway that comprise an additional 11%. A little over half of Albany residents are renters.

Albany also has three commercial districts, including the charming pedestrian-oriented Solano Avenue shopping district. Both Solano and San Pablo Avenues offer a variety of restaurants and retail stores, as well as financial, legal, dental, and medical services. San Pablo Avenue hosts more auto-oriented businesses, including car dealerships and automotive services. Cleveland Avenue and Eastshore Highway, both situated along the I-80 corridor, contain a mix of light industrial businesses and larger retail establishments.

[1] ABAG. Sustainable Communities Strategy. Plan Bay Area 2040.

The City of Albany is a full-service municipality, providing:

- Full-service Police Department with patrol, investigation, and administrative services;
- All-risk Fire Department, including fire/rescue response, paramedic ambulance services, and hazardous materials response;
- Public Works Department managing sanitary sewer, storm drain, and public park maintenance and upgrades;
- Recreation and Community Services Department including adult programs, senior centers, and teen center programs;
- Community Development Department providing land use, transportation, and environmental planning, and building code and code enforcement services.

City facilities include the Civic Center Complex (City Hall, Fire Station, and Police Station), a Public Works Maintenance Center, a Community Center and Library, a Senior Center, several childcare centers, and various City parks and open spaces.

Other agencies with public service responsibility within the City of Albany include East Bay Municipal Utility District (EBMUD), which provides delivery of potable water and sewage treatment. Pacific Gas & Electric (PG&E) provides electricity and natural gas utility services. AT&T and Comcast provide communications utility services.

The Albany Unified School District provides K-12 education for Albany youth. The District operates one preschool, three elementary schools, one middle school, and one high school. There are private schools and childcare centers located within the City, including St. Mary's College High School.

In addition to the School District and City facilities, Albany has several large governmental facilities including the U.S. Department of Agriculture (USDA)'s Western Research Center, a State-operated Orientation Center for the Blind, and University Village, a housing development for UC Berkeley students.

Demographics

The 2010 Census reported that Albany's population was 18,539. The City's population grew very rapidly between 1910 and 1950 and then declined during the 1950s and 60s. Since 1970, Albany has seen modest growth, with the greatest increase occurring between 2000 and 2010. Some of this growth is attributable to the reconstruction of University Village student family housing between 1999 and 2008 and some is due to an increase in average

household size. By 2035, Albany is projecting a 10% increase in the number of households and a 17% increase in the number of jobs.

Albany has 7,401 households, out of which 2,909 (39.3%) have children under the age of 18 living in them. Residents are well-educated; 71.5% of residents over 25 are college graduates. The median household income in Albany is estimated at $72,479, which is lower than the regional median of $92,300. Approximately 18 percent of Albany's households earn less than $25,000 a year, and another 17 percent earn between $25,000 and $50,000 a year. About 36 percent of the City's households have incomes exceeding $100,000 a year. According to the American Community Survey, almost one-third of the City's homeowners and almost 48 percent of its renters spend more than 35 percent of their incomes on housing.

The median age in Albany has been increasing over the last 20 years. The median age was 36.3 in 2000 and 37.0 in 2010. The fastest growing age cohort in the City consists of "baby boomers" (persons born between 1946 and 1964). The number of Albany residents between 55 and 64 years old increased by 88 percent during 2000-2010 alone, growing from 1,204 in 2000 to 2,265 in 2010. The number of persons over 65 has remained stable, but it is expected to nearly double in the next 20 years based on projections from the Association of Bay Area Governments (ABAG).

Albany has become more diverse in the past two decades. The 2010 Census indicated the City was 55 percent White, 31 percent Asian, 7 percent multi-racial, 4 percent African-American, and 3 percent Other. About 10 percent of Albany's residents were Hispanic. The percentage of Asian residents increased from 19 percent of the City's population in 1990 to 31 percent in 2010. In 2010, nearly 40 percent of Albany's residents spoke a language other than English at home.

The 2000 Census indicated that 13.3 percent of Albany's population was living with a disability. Today, the American Community Survey indicates the percentage is 7.2 percent based on 2008-2012 sample data. This may be the result of changes in methodology and definitions rather than a decrease in the number of disabled persons.

Economy

Approximately 67 percent of the City's residents age 16 and over (roughly 9,800 residents) are considered to be in the labor force, and 9,500 residents are employed. In March 2015, the State Employment Development Department indicated that Albany had a 3.1 percent unemployment rate. This was the second-lowest rate in Alameda County, which had a 4.8 percent unemployment rate. Only about 15 percent of Albany's employed residents work

within Albany – 47 percent commute to another city in Alameda County and 37 percent commute to another county.

According to the most recent estimates from ABAG, Albany has approximately 5,070 jobs. This equates to a ratio of 0.69 jobs for every household in the city compared to a regional average of about 1.30. The data suggests that Albany is a housing "reservoir" for surrounding communities. Nearby cities, such as Berkeley and Emeryville, have more jobs than households and rely on Albany to some extent to meet their housing needs.

Commercial Storefronts on Solano Avenue
Photo courtesy of Doug Donaldson

Albany is home to several major employers and many small retail and service businesses. The largest employers include the Albany Unified School District, Target, the USDA Western Regional Research Center, and the Golden Gate Fields racetrack. The San Pablo and Solano Avenue corridors include restaurants, car dealerships, automotive service businesses, general merchandise stores, appliance stores, and other retailers. These areas also include banks and financial service companies, medical offices, dental offices, legal services, personal services, and other locally-oriented offices. The auto-oriented uses are located along San Pablo Avenue, while Solano Avenue includes smaller buildings in a pedestrian-oriented shopping environment. Another cluster of commercial uses exists along the Eastshore Highway south of Buchanan Street, including the Target department store, an auto dealership, and several construction suppliers. The City has a relatively small number of industrial uses that are generally located along Cleveland Avenue west of Interstate 80.

Critical Facilities and Infrastructure

Critical facilities and infrastructure are those that are essential to the health and welfare of the population. These become especially important after a hazard event. Critical facilities typically include police and fire stations, schools, and emergency operations centers. Critical infrastructure can include the roads and bridges that provide ingress and egress and allow emergency vehicles access to those in need and to the utilities that provide water, electricity, and communication services to the community.

For the purposes of this Plan, Critical Facilities are defined as follows:

> *Any facility, whether publicly or privately owned, which includes infrastructure that is vital to the City's ability to provide essential services and protect life and property. Damage to such infrastructure that may cause a short or long-term loss of a critical facility would likely result in a severe economic, health and welfare, life-sustainment or other catastrophic impact.*

Critical Facilities are listed below in the following categories:

1. **Primary Facilities:** Facilities that are essential to the ability to immediately respond to and mitigate the impacts of hazards. This includes emergency operations centers needed for disaster response before, during, and after hazard events, facilities that house critical information technology and communication infrastructure, and vehicle and equipment storage facilities.

2. **Secondary Facilities:** Facilities that are essential in the recovery process of a hazard, such as facilities that can provide food and shelter. This includes educational facilities and community gathering places.

3. **Priority Response Facilities:** Facilities that need early warning to enable them to prepare for and respond to the impacts of hazards. This includes facilities with vulnerable populations such as educational and medical facilities, as well as large multi-family buildings.

4. **Vulnerable Facilities:** Facilities with structures that are particularly vulnerable to hazards. This includes facilities that by the nature of their operations produce, manufacture, or store materials that create an exposure to secondary hazards of concern, such as highly volatile, flammable, explosive, toxic, and/or water-reactive materials.

5. **Critical Infrastructure and Utilities:** Public and private utilities and infrastructure vital to maintaining or restoring normal services to areas damaged by hazard events, such infrastructure for energy, communications, drinking water, wastewater, and stormwater, as well as major road and rail systems.

Some facilities may fall in multiple categories.

Primary Facilities

- Civic Center Complex
    - Emergency Operations Center (EOC)
    - Fire Station
    - Police Station
    - City Hall
- Public Works Center
- Community Center Emergency Operations Center

City of Albany Emergency Operations Center

Secondary Facilities

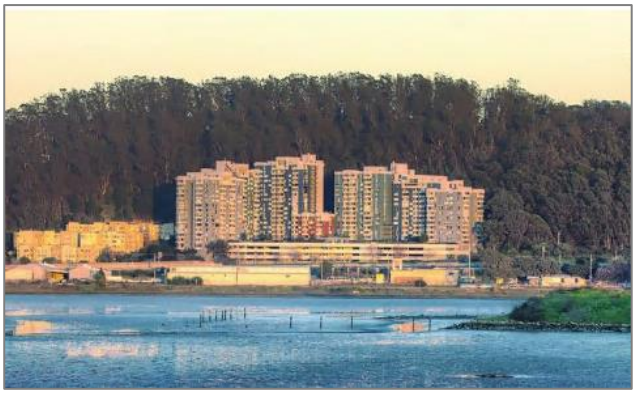
- Community Center & Library
- Senior Center
- Teen Center
- Albany High School
- Albany Middle School
- Ocean View Elementary
- Cornell Elementary
- Marin Elementary
- St. Mary's College High School
- Sutter East Bay Medical Offices
- YMCA
- Safeway Grocery Store
- Sprouts Grocery Store
- Target
- CVS Pharmacy
- Golden Gate Fields Parking Lot

Vulnerable Facilities

- Veteran's Memorial Building
- USDA Laboratory
- Large Multi-Family Buildings Located on Kains, Adams, Brighton, and Pierce
- Single and Multi-Family Homes on Albany Hill

Priority Response Facilities

- City Child Care Centers (Ocean View & Memorial Parks)
- Community Center & Library
- Senior Center
- Teen Center
- AUSD Children's Center
- Albany High School
- Albany Middle School
- Ocean View Elementary
- Cornell Elementary
- Marin Elementary
- St. Mary's College High School
- Orientation Center for the Blind
- University Village Student Housing
- Belmont Village Senior Housing


Residential Towers on West Side of Albany Hill
Photo courtesy of Doug Donaldson

Critical Infrastructure and Utilities

Responsible Agency	Vulnerable Infrastructure in Albany
City of Albany	• City facilities • City streets • Storm drains • Sanitary sewer collection system connected to EBMUD wastewater treatment system • Creeks, open channels and creek culverts in right-of-way and on City property • Street lights and traffic signals, and conduits supplied from the PG&E system
EBMUD	• Potable and fire suppression water supply system consisting of pipelines and hydrants owned by the East Bay Municipal Utility District • Sanitary sewer transmission pipeline (EBMUD wastewater interceptor)
PG&E	• Electricity distribution system, including utility poles and substations owned by the Pacific Gas and Electric Company • Natural gas distribution system, including main and lateral pipelines
AT&T, Comcast and other providers	• Telecommunications aerial and underground conduits • Telecommunications antennae • Fiber optic cabling
Kinder Morgan Corporation	• Aviation fuel pipeline
Union Pacific	• Railroad tracks
Caltrans	• I-80, I-580, and San Pablo Avenue (SR 123)

Part II: The Planning Process

Planning Background

Hazard Mitigation is defined as a way to reduce or alleviate the loss of life, personal injury, and property damage that can result from a disaster through long and short-term strategies. Hazard mitigation is most effective when a long-term plan is developed *before* a disaster occurs. A hazard mitigation plan identifies the hazards a community or region faces, assesses their vulnerability to the hazards and identifies specific actions that can be taken to reduce the risk from the hazards. It involves strategies such as planning, programs, projects, and other activities that can mitigate the impacts of hazards. The responsibility for hazard mitigation lies with many, including private property owners, business and industry, and local, state, and federal government.

The federal Disaster Mitigation Act (DMA) of 2000 (Public Law 106-390) requires state and local governments to develop hazard mitigation plans as a condition for federal disaster grant assistance. Prior to 2000, federal disaster funding focused on disaster relief and recovery, with limited funding for hazard mitigation planning. However, the DMA has increased the emphasis on planning for disasters before they occur.

The DMA encourages state and local authorities to work together on pre-disaster planning and promotes sustainable practices as a form of disaster resistance. "Sustainable hazard mitigation" includes the sound management of natural resources and the recognition that hazards and mitigation must be understood in the largest possible social and economic context. Please refer to Appendix B of this document for a more detailed analysis of the regulatory context for this Plan.

All citizens and businesses of the City of Albany are the beneficiaries of this hazard mitigation plan. The plan reduces risk for those who live in, work in, and visit the City. It provides viable planning frameworks for all foreseeable hazards that may impact the City of Albany. Participation in development of the plan by key stakeholders in the City helped ensure that outcomes will be mutually beneficial. The resources and background information in the plan are applicable countywide, and the plan's goals and recommendations can lay groundwork for the development and implementation of local mitigation activities and partnerships.

Different from the Emergency Operations Plan, this hazard mitigation plan is essential for the City of Albany when preparing for future uncertainties and events. Though the effect of hazardous events cannot be eliminated or anticipated fully, this hazard mitigation plan lays

out the ways in which the City of Albany can further understand and reduce extreme consequences of potential hazards and disasters.

Previous Planning Initiatives

In 2005, the Association of Bay Area Governments (ABAG) prepared a multi-jurisdictional Local Hazard Mitigation Plan for the San Francisco Bay Area. Cities or counties were permitted to adopt this multi-jurisdictional plan in lieu of preparing a Local Hazard Mitigation Plan themselves. However, they were required to participate in the development of the plan by submitting annexes describing local conditions. The City of Albany participated in the ABAG plan as an annex. FEMA does not require that the jurisdictions discuss progress in the local mitigation efforts from the ABAG annex because the mitigation actions were generic and applied to all the annexes in the ABAG plan. Therefore, the actions in this plan are jurisdiction-specific and are determined by the current risk assessment.

The ABAG multi-jurisdictional Local Hazard Mitigation Plan was incorporated into the Environmental Hazards element of the City's General Plan. It was used to address the protection of life and property from natural and manmade hazards, including earthquakes, flooding, and wildfire. It was also used to address emergency preparedness.

This plan has been revised from its original form as an ABAG annex to reflect changes in priorities and policies, including the Climate Action Plan adopted in 2010, the General Plan adopted in 2016, and the Council Strategic Plan adopted in 2017. Scientific findings on climate change, an increase in natural disasters in the Bay Area, and a new City Council and political climate have all contributed to revisions of the ABAG annex. Moreover, this plan has been updated to reflect new development in the City of Albany, including the large multi-family housing development University Village (a priority response facility). Development has not occurred in any specific areas of hazard concern.

Planning Objectives

This Hazard Mitigation Plan identifies resources, information, and strategies for reducing risk from natural hazards and will help guide and coordinate mitigation activities throughout the City. The plan was developed to meet the following goals:

1. Meet or exceed requirements of the DMA
2. Enable the City to continue using federal grant funding to reduce risk through mitigation
3. Meet the needs of all state and federal requirements
4. Create a risk assessment that focuses on hazards of concern for the City of Albany

Albany aims to be a resilient community that can survive, recover from, and thrive after a disaster, while maintaining its unique character and way of life. Albany envisions a community in which the people, buildings, and infrastructure are resilient to disasters, City government provides critical services in the immediate aftermath of a devastating event of any kind, and basic government and commercial functions resume within thirty days of a damaging earthquake or other significant event. For many years, the City has pursued initiatives to identify and mitigate Albany's hazard vulnerabilities.

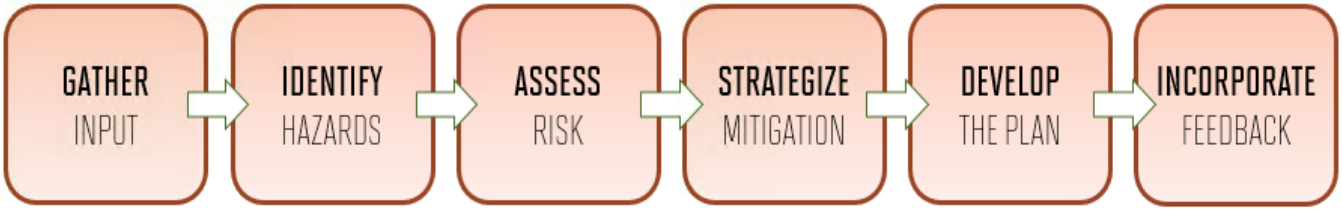
This plan has four objectives for reducing disaster risk in Albany:

1. Reduce the potential for loss of life, injury and economic damage to Albany residents and businesses from hazards such as earthquakes, infrastructure failure, severe weather, wildfires, terrorism, sea level rise, hazardous materials releases, floods, landslides, public health epidemics, and their secondary impacts.
2. Increase the ability of the city government to serve the community during and after hazard events by mitigating risk to key city functions such as response, recovery and rebuilding.
3. Protect Albany's unique character and values from being compromised by hazard events.
4. Encourage mitigation activities to increase the disaster resilience of institutions, private companies, and lifeline systems that are essential to Albany's functioning.

Plan Creation

This Plan was prepared by staff from the City's Community Development Department. The Community Development Department works closely with staff from other City departments on hazard mitigation strategies in a variety of contexts, including high level planning, special event management, and response to hazardous incidents. In addition, City staff has utilized guidance from ABAG, Governor's Office of Emergency Services (CalOES), and FEMA. Plan preparation has consisted of community outreach, hazard and risk assessments, and the development of hazard mitigation goals. The City's ABAG annex and plans prepared by neighboring communities were also considered during the planning process. See Appendix A for a list of all existing plans, studies, reports, and technical information incorporated into this document.

The planning process consisted of the following steps:



The planning team included:

Project Managers

- **Jeff Bond** — Community Development Director
- **Claire Griffing** — Sustainability & Resilience Manager

Subject Matter Experts

- **Lance Calkins** — Fire Chief
- **Mike McQuiston** — Chief of Police
- **Barry Miller** — Barry Miller Consulting
- **Yoon Kim** — Four Twenty Seven, Inc.
- **Community Emergency Response Team (CERT)**
- **Albany Sustainability Committee**

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- **Fanny Yang** — CivicSpark Fellow
- **Sophie Gabel-Scheinbaum** — Planning Intern

Researchers

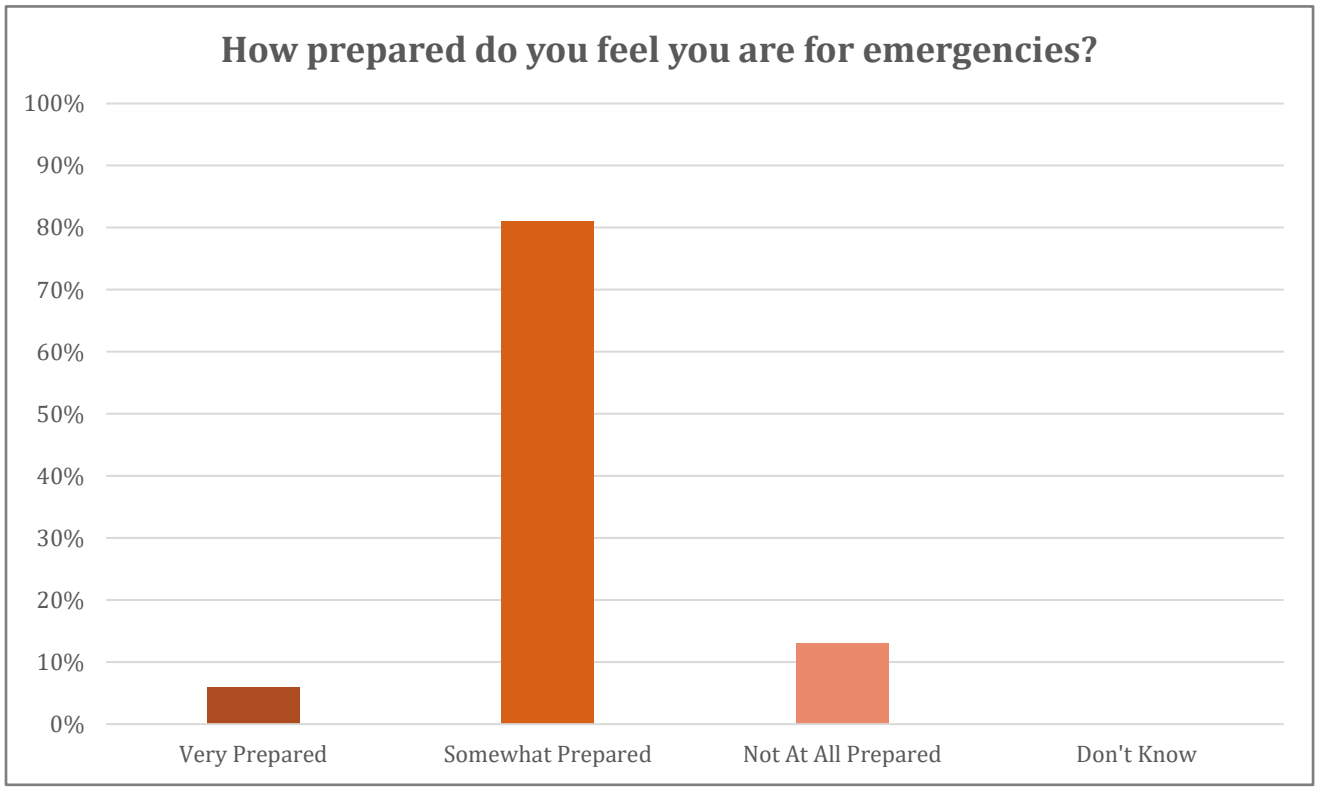
- **Josh Friedkin** — EDSET Intern
- **Russell Trutane** — EDSET Intern

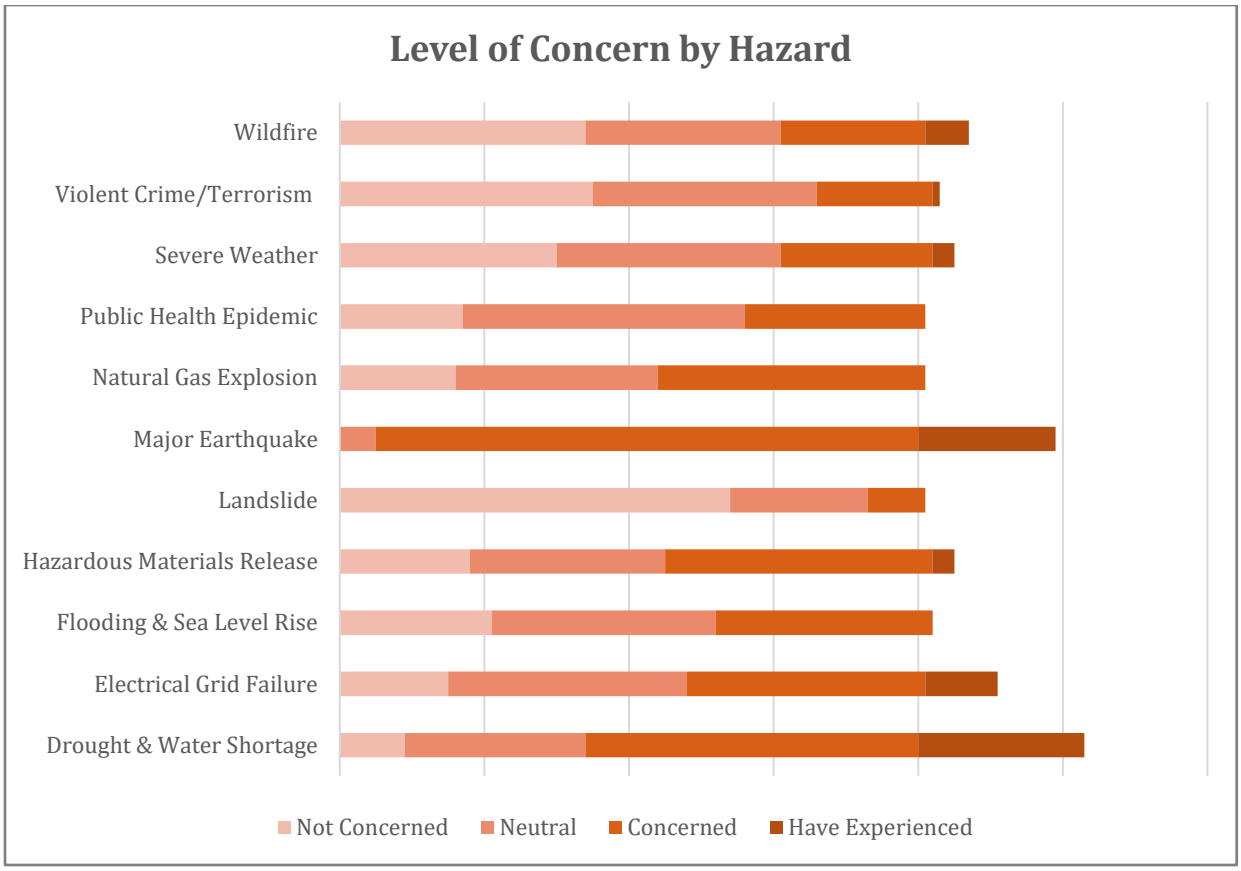
For a detailed list of internal planning meetings, including individuals present at each meeting, see Appendix C.

Public Involvement

Public participation in the planning process helps ensure that diverse points of view about the City's needs are considered and addressed. The City of Albany Sustainability Committee, an advisory body with open public meetings, assisted with the preparation of this Local Hazard Mitigation Plan. The Committee reviewed the initial planning process, discussed potential hazards, and assisted in designing a community survey to gather more input. The online survey was designed to determine the community's level of emergency preparedness and concern for potential hazards and was distributed to the community through various media outlets. The survey was administered on March 21, 2017 and closed on April 21, 2017. A copy of the survey questions and aggregated results is included in Appendix E. Community feedback was incorporated into the Plan as it was developed.

Sample Community Survey Results





The Albany City Council reviewed the draft Local Hazard Mitigation Plan at public meetings on October 2, 2017 and again on January 8, 2018. City Council meetings are the most widely publicized and attended community meetings. These meetings were publicized to the community through the local newspaper, e-newsletter, social media, and relevant electronic mailing lists. Direct mail invitations were sent to relevant City staff in nearby jurisdictions. Neighboring communities, local and regional agencies involved in hazard mitigation, agencies with authority to regulate development, businesses, academia, and other private and nonprofit interests were invited to be involved in the planning of this document. Appendix F includes public meeting notices issued to the community as well as a direct mail invitation and mailing list of private and nonprofit interests that were invited to engage in the planning process. Though a number of neighboring communities and outside interests were invited to participate, none provided input.

Plan Adoption

The City of Albany City Council passed Resolution 2018-2 on January 8, 2018, formally adopting this plan. The plan was approved by the California Governor's Office of Emergency Services on August 2, 2018, and by FEMA on August 20, 2018.

Part III: Hazard Analysis

Potential Hazards

The City of Albany considered the full range of natural hazards that could impact the City and then ranked the hazards that present the greatest concern based on previous incidents, Sustainability Committee discussions, and results from the community survey. The process incorporated review of the California State Enhanced Hazard Mitigation Plan and the ABAG Hazard Mitigation Plan. Also considered were local, state and federal information on the frequency, magnitude and costs associated with hazards that have impacted or could impact the City. Based on the review, this plan addresses the following natural hazards of concern:

- Earthquake
- Severe Weather
- Wildfire
- Flooding
- Landslide

While DMA regulations do not require consideration of human-caused hazards, the City staff chose to include the following hazards in the plan based on the initial risk assessment and community input:

- Infrastructure Failure
- Terrorism
- Sea Level Rise
- Hazardous Materials Release
- Public Health Epidemic

The risks associated with each hazard of concern identified for the City of Albany are described below. Each section describes the hazard and potential vulnerabilities.

Earthquakes

Earthquakes are the most concerning hazard in Albany because they have the potential for widespread damage, are impossible to predict, and are associated with other hazards such as liquefaction and fires.

Hazard Profile

The tectonic plates that make up the earth's crust are in continual movement. This movement causes strain to build at the plate boundaries, or faults. Strain accumulates until the plates can no longer sustain it, at which point there is an energy release. This energy release expresses itself as tectonic creep, fault ruptures, ground shaking and, more generally, earthquakes. Fault rupture or displacement is a sudden shifting of the ground along the trace of an earthquake fault, while ground shaking is the movement of the ground caused by the passage of seismic waves through the earth's outer crust during an earthquake.

Major earthquakes result when collisions of the plates occur at shallow depths or involve larger plates or longer faults, and usually have their epicenters on or near a fault. Earthquakes are common in California because the state's coastline is at the boundary of two tectonic plates. The coastline is part of the Circum-Pacific seismic belt, which extends the length of the western edge of the Western hemisphere, and is where over 80 percent of the world's earthquakes occur.

Probability of Occurrence

Albany is located in the seismically active San Francisco Bay Area, which lies within the San Andreas fault system, the largest one in California and the one with potential for the strongest earthquakes. In a report published in 2015, the US Geological Survey estimated that there was a 72 percent probability that a magnitude 6.7 or greater earthquake will occur in the Bay Area between 2015 and 2045.[2] The table below illustrates large earthquake probability within the next 30 years by fault line.

[2] Field, E.H., and 2014 Working Group on California Earthquake Probabilities. (2015). UCERF3: A new earthquake forecast for California's complex fault system: U.S. Geological Survey 2015–3009. Retrieved from http://dx.doi.org/10.3133/fs20153009

Magnitude 6.7+ Earthquake Likelihood 2015-2045	
San Andreas (Mendocino to San Benito County)	33%
Hayward	28%
Calaveras	24%
Hunting Creek, Berryessa, Green Valley, Concord	24%
Maacama	23%
Rodgers Creek	15%
San Gregorio	5%
Greenville	6%
Mt. Diablo	3%
West Napa	2%

Source: USGS Uniform Earthquake Rupture Forecast, Version 3 (2013)

Although there are no major earthquake faults in Albany, there are major earthquake faults sufficiently close that would cause serious damage:

- The Hayward Fault is located 1.6 miles east of the City and is the closest active fault to Albany. The last major earthquake on this fault was a Magnitude 6.8 event in 1868. The California Division of Mines and Geology considers this fault capable of producing a magnitude 7.1 earthquake.
- The San Andreas Fault is located approximately 17 miles west of the City and extends from the Mendocino coast south to Baja California. This fault system produced the catastrophic San Francisco earthquake of 1906 (magnitude 8.2) and was also associated with the Loma Prieta earthquake of 1989 (magnitude 7.1).
- The Calaveras Fault is located 17 miles southeast of the City and the Concord-Green Valley Fault is located 15 miles east. Both of these faults are capable of producing earthquakes of magnitude 6.8-6.9.

Map of Bay Area Fault Lines

Image courtesy of the City of Albany General Plan

Previous Events

The Bay Area has experienced significant well-documented earthquakes. There have been six earthquake-related declared disasters in the Bay Area since 1950, shown in the table below.

Previous Seismic Events Affecting the Bay Area

Disaster	Date	Counties Declared	Damage
M6.0 South Napa earthquake	August 24, 2014	Napa and Solano Counties	$362 million - $1 billion in damage
Tsunami resulting from M8.9 Honshu, Japan earthquake	March 11, 2011	Del Norte, Monterey, Santa Cruz	$39 million in damage
M5.2 Napa earthquake	September 3, 2000	Napa County	$15-70 million in estimated damage
M7.1 Loma Prieta earthquake	October 17, 1989	Alameda, Monterey, San Benito, San Mateo, Santa Clara, Santa Cruz, San Francisco, Contra Costa, Marin, Solano	$5.9 billion in damage, 23,408 homes damaged, 3,530 businesses damaged, 1,018 homes destroyed, 366 businesses destroyed
M6.2 Morgan Hill earthquake	April 24, 1984	Santa Clara County	$7.265 million in damage to public, business, and private sectors
Tsunami warning resulting from Good Friday earthquake in Alaska	March 27, 1964	Marin County	No damage

Source: State of California Hazard Mitigation Plan, Appendix M; Governor's Office of Emergency Services

Secondary Hazards

Earthquakes can cause large and sometimes disastrous secondary effects. For example, unless properly secured, materials can fall from their storage location. At a minimum, broken glass and fallen items can cause additional hazards, and in worst-case scenarios, hazardous materials can be released.

Post-Seismic Slip

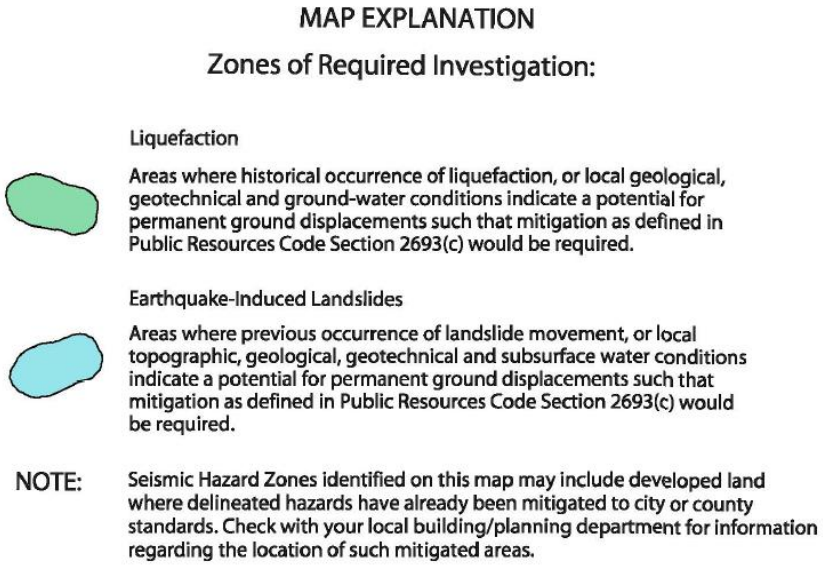
Following an earthquake, sections of the fault can continue to slip, for up to a year after the initial shaking. "Post-seismic slip" or "after-slip" can be difficult to manage, according to ABAG, "as infrastructure may need to be continually re-straightened, complicating restoration of systems that cross the fault."[3] The City could also, under this scenario, issue building permits to reconstruct earthquake-damaged buildings which then are further damaged following additional quakes.

[3] Association of Bay Area Governments. (2014). Cascading Failures: Earthquake Threats to Transportation and Utilities. Retrieved from https://abag.ca.gov/abag/events/agendas/e011515a-Item%2008,%20Attachment%201%20Cascading%20Failures%20Abbreviated%20Report.pdf

Liquefaction

Liquefaction happens during an earthquake when the ground shakes and the soil transforms into a fluid state which can damage the structural foundations of buildings. Liquefaction generally occurs in soft, unconsolidated sedimentary soils. A program called the National Earthquake Hazard Reduction Program (NEHRP) creates maps based on soil characteristics to help identify locations subject to liquefaction. NEHRP Soils B and C typically can sustain ground shaking without much effect, dependent on the earthquake magnitude. The areas that are commonly most affected by ground shaking have NEHRP Soils D, E and F. In general, these areas are most susceptible to liquefaction.

Image courtesy of California Department of Conservation's Geological Survey



The underlying soil on which a building is constructed is part of the structural system that supports the building. Geotechnical analysis of soils is a standard requirement as part of the design of all but the simplest and lightest-weight residential structures. Soil surveys from the U.S. Department of Agriculture[4] indicate that there are four basic soil-mapping units in Albany.

- Near the Bay, soils are classified as Urban Land Tierra, with moderate to high shrink-swell and moderate corrosivity.
- East of this area is a band of Urban Land Clearlake soil. These soils are typically very deep and poorly drained.
- A third mapping unit, Millsholm silt loam, exists on Albany Hill and in the northwestern part of the City. These soils are very deep and well-drained, with high shrink-swell potential.
- The northeastern part of the City is characterized by Tierra Loam soils. These soils are potentially productive but may be moderately corrosive. They also have high shrink-swell potential.

[4] U.S. Department of Agriculture. (2017). Natural Resources Conservation Service Web Soil Survey. Retrieved from https://websoilsurvey.nrcs.usda.gov/app/

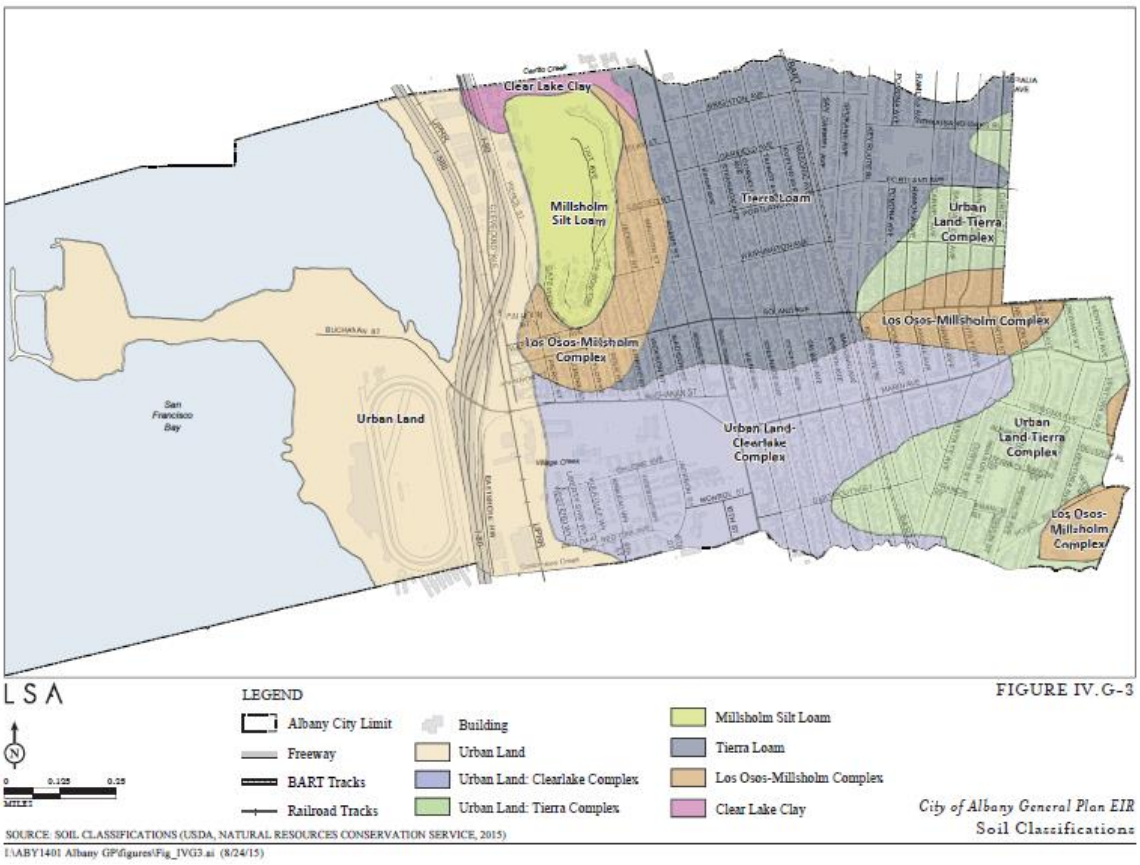


Image courtesy of the City of Albany General Plan

Landslides

Landsliding is the rapid down-slope movement of soil, rock and rock debris, and can be triggered by both an earthquake and by heavy rains.

Tsunamis and Seiches

Tsunamis or seiches are waves created by undersea fault movement or by a coastal or submerged landslide. Since tsunamis have high velocities, the damage from a particular level of inundation is far greater than in a normal flood event.

Tsunamis can result from off-shore earthquakes within the Bay Area or from distant events. It is most common for tsunamis to be generated by offshore subduction faults such as those in Washington, Alaska, Japan, and South America. Tsunami waves generated at those far-off sites can travel across the ocean and can reach the California coast with several hours of warning time. Local tsunamis can also be generated from offshore strike-slip faults. Because of their close proximity, we would have little warning time. However, the Bay Area faults that pass through portions of the Pacific coastline or under portions of the Bay are not likely to produce significant tsunamis because they move side to side, rather than up and down, which is the displacement needed to create significant tsunamis.

They may have slight vertical displacements, or could cause small underwater landslides, but overall there is a minimal risk of any significant tsunami occurring in the Bay Area from a local fault. The greatest risk to the Bay Area is from tsunamis generated by earthquakes elsewhere in the Pacific. Though the Bay Area has experienced tsunamis, it has not experienced significant tsunami damage, primarily because tsunami originating in the Pacific Ocean would lose much of its energy passing through Golden Gate. While a tsunami entering the Bay through the Golden Gate would dissipate quickly as the Bay becomes wider and shallower, low-lying areas along the shoreline, including tidal flats, marshlands, and landfilled areas, would be vulnerable. The California Geological Survey has designated the entire area west of I-80 as being at risk of inundation.

Seiches are standing waves in enclosed or partially enclosed bodies of water, such as lakes and bays. They may be caused by earthquakes, high winds, or tides. Due to the geometry and dimensions of San Francisco Bay, they are considered a negligible hazard to Albany.

Fires

Earthquakes can increase fire danger from damaged gas connections, appliances with pilot lights, or damaged electrical equipment. Fire following earthquake is especially challenging because there are often multiple ignitions at once (overwhelming fire crews), typical water supply for fighting fire may be reduced or unavailable, and maneuvering fire crews to the ignition can be difficult if streets are damaged or blocked by debris. Areas of liquefaction are more vulnerable to fire because of the greater potential for underground gas mains to break due to the ground displacements, and because the water lines in the area may also be damaged – preventing the ability to fight a fire with regular water resources. Areas that are largely wood frame or shingle roof may be less prone to earthquake damage, but are a heightened risk for the spread of fires. There is added concern in areas with hazardous materials with the potential for explosion, or with the potential to produce toxic smoke. Industrial facilities and labs are a high concern because of the hazardous and flammable materials they store at their facilities.

Vulnerability

Severity

The potential severity of an earthquake in Albany is high. Ground shaking is commonly characterized using the Modified Mercalli Intensity (MMI) scale, which illustrates the intensity of ground shaking at a particular location by considering the effects on people, objects, and buildings. The MMI scale describes shaking intensity on a scale of 1-12. MMI values less than 5 don't typically cause significant damage; MMI values greater than 10 have not been recorded. There is 10% chance of MMI 9 shaking in Albany over the next ten years, as demonstrated in the graphic below.

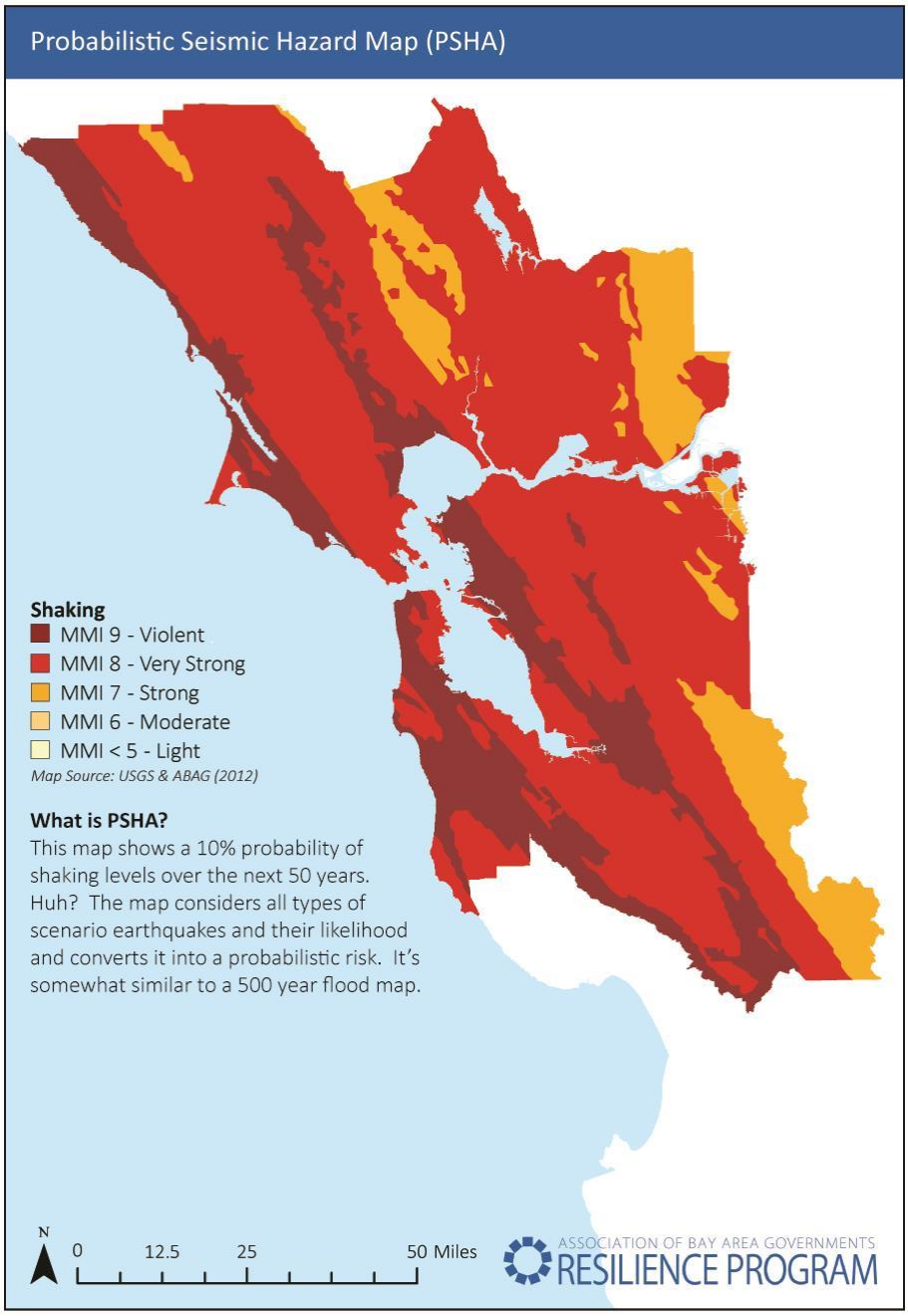


Image courtesy of the ABAG Resilience Program

The impact of an earthquake on structures and infrastructure is largely a function of weaknesses in the design of buildings, strength of ground shaking, and liquefaction of soils in which the soils weaken and lose their ability to ground motion waves as a unit, thereby allowing structure elements of a building to move in different directions as the ground waves flow through. The following table illustrates potential damage to structures based on shaking intensity.

MMI Intensity & Potential Structure Damage				
Intensity	**Building Contents**	**Masonry Buildings**	**Multi-Family Wood-Frame Buildings**	**1&2 Story Wood-Frame Buildings**
MMI 6	Some things thrown from shelves, pictures shifted, water thrown from pools.	Some walls and parapets of poorly constructed buildings crack.	Some drywall cracks.	Some chimneys are damaged, some drywall cracks. Some slab foundations, patios, and garage floors slightly crack.
MMI 7	Many things thrown from walls and shelves. Furniture is shifted.	Poorly constructed buildings are damaged and some well-constructed buildings crack. Cornices and unbraced parapets fall.	Plaster cracks, particularly at inside corners of buildings. Some soft-story buildings strain at the first floor level. Some partitions deform.	Many chimneys are broken and some collapse, damaging roofs, interiors, and porches. Weak foundations can be damaged.
MMI 8	Nearly everything thrown down from shelves, cabinets, and walls. Furniture overturned.	Poorly constructed buildings suffer partial or full collapse. Some well constructed buildings are damaged. Unreinforced walls fall.	Soft-story buildings are displaced out of plumb and partially collapse. Loose partition walls are damaged and may fail. Some pipes break.	Houses shift if they are not bolted to the foundation, or are displaced and partially collapse if cripple walls are not braced. Structural elements such as beams, joists, and foundations are damaged. Some pipes break.
MMI 9	Only very well anchored contents remain in place.	Poorly constructed buildings collapse. Well constructed buildings are heavily damaged. Retrofitted buildings damaged.	Soft-story buildings partially or completely collapse. Some well constructed buildings are damaged.	Poorly constructed buildings are heavily damaged, some partially collapse. Some well constructed buildings are damaged.
MMI 10	Only very well anchored contents remain in place.	Retrofitted buildings are heavily damaged, and some partially collapse.	Many well constructed buildings are damaged.	Well constructed buildings are damaged.

Source: ABAG Modified Mercalli Intensity Scale

Population

The entire population of the City of Albany is potentially exposed to direct and indirect impacts from earthquakes. The degree of exposure is dependent on many factors, including the age and construction type of the structures people live in, and the soil type that their homes are constructed on. Whether directly or indirectly impacted, the entire population will have to deal with the consequences of earthquakes to some degree.

Property

Even in well-constructed building, casualties can result from falling objects and debris. Disruption of communications, electrical power supplies, and gas, sewer, and water lines should be expected.

Soft Story Building in Albany
Photo courtesy of City of Albany General Plan

ABAG estimates a potential loss of 159,000 housing units in Bay Area communities after a large earthquake. This would have disastrous effects on local and regional economies. It also means that recovery, repair, and rebuilding time for each household would be very lengthy due to the number of homes that would need repairs or replacement. Soft story apartment buildings are particularly at risk in the City.

Economy

Business interruption could keep people from working, and school closures could further limit the ability of people to return to work and impact school calendars for months. Roadway damage and loss of utilities could affect populations that suffered no direct damage from an earthquake itself.

Critical Facilities

The City maintains critical public facilities such as City Hall, the police station, and the fire station in a manner that promotes resilience to earthquakes. Facilities known to be vulnerable to earthquakes include Ocean View Elementary School, Marin Elementary School, and the County Veteran's Memorial Building. Damage to critical infrastructure such as roadways, water and power systems, and telecommunications infrastructure could pose added difficulties when responding to an earthquake.

Mitigation & Response

There is currently no reliable way to predict when an earthquake will occur. Technology exists, however, that detects low energy waves at the beginning of a major earthquake. The low energy waves travel faster than the actual ground motion, giving brief advance alarm of imminent danger. The warning time is very short but could allow people to move away from a hazardous location. These warning systems are operational, but funding has not been allocated to make them available to City facilities or to the public.

Although it is not possible to eliminate all the risks associated with earthquakes, the City can reduce risks by employing available tools, such as geotechnical studies, and appropriate land-use decisions and adequate building codes.

With each major earthquake comes new understanding of the way in which buildings respond to them. Advances in the technology associated with testing systems, design and seismic modeling software, structural connections, structural forms, and seismic force resisting systems have accelerated dramatically. Structures can be constructed or retrofitted to have the strength and redundancy to withstand expected ground shaking of severe earthquakes. In addition, structures can safely be built or retrofitted on soils vulnerable to liquefaction.

Local Capabilities

Current local capabilities include geotechnical studies and fault maps provided by the USDA and the California Department of Conservation, as well as adequate building codes and appropriate land-use decisions. The City ensures that critical facilities such as City Hall, public schools, the police station, and the fire station are designed and maintained in a manner that guarantees their resilience to earthquakes. Moreover, the City provides free waivers for earthquake retrofit projects on single-family homes and will continue to do so as a mitigation incentive. To improve on earthquake planning and policy capabilities, the City's Community Development Department plans to prepare a comprehensive soft-story retrofit ordinance.

The Fire Department currently provides earthquake safety training to staff and community members. The Department will continue to provide this training while focusing on increasing City-wide earthquake awareness and preparedness as part of its Community Emergency Response Team (CERT) program.

Infrastructure Failure

Critical infrastructure generally refers to infrastructure that is necessary to provide vital government services and individual functions. It can include both buildings and physical facilities such as power and communication lines, roads, transit lines, storm drains, potable waterlines, and sanitary sewer collection systems. Key infrastructure assets are owned, operated, and maintained by different public agencies and utility companies. Below is an analysis of five potential failures of critical infrastructure that could affect Albany:

- Electrical Grid Failure
- Energy Shortage
- Natural Gas Pipeline Explosion
- Freeway Damage
- Water System Failure
- Information Technology Failure

Electrical Grid Failure

Hazard Profile

An electrical grid is an interconnected network for delivering electricity from producers to consumers. It consists of generator stations that produce electrical power, high voltage transmission lines that carry power from distant sources to demand centers, and distribution lines that connect individual customers. PG&E currently manages the generation and transmission of electrical power in Albany. East Bay Community Energy plans to enroll all electrical accounts in Albany in their Community Choice Aggregation program in 2018. The program will focus more on local renewable power generation. PG&E will continue to manage energy transmission, distribution, and repair and will provide electricity for customers that "opt out" of the East Bay Community Energy program.

When any component of the electrical grid fails, all or a portion of Albany can be without power for hours, days, or sometimes even weeks. A loss of electrical power can interfere with communication, sanitation, lighting, cooking, refrigeration, and transportation systems. An electrical grid failure for a longer period can cause fuel shortages and compromise other necessary supplies such as food and medication.

Mitigation & Response

The potential for a loss of power means that emergency and critical uses should have dedicated emergency power sources. The electrical system is vulnerable to many different hazards. In storm events, downed trees can damage overhead lines. In earthquakes, overhead lines are not typically damaged, but electrical substation components can be

destroyed by strong shaking and often require more extensive and time intensive repairs to return to service.

PG&E provides electricity and natural gas to 15 million people in northern and central California. They have a staff of 20,000 prepared to respond to restore electrical services after disasters and storms. They also have a well-established priority system for restoring power to emergency services before other community needs. PG&E has assessed the seismic vulnerability of its system and has taken steps to improve its functionality after an earthquake, such as replacing bushings on high voltage lines, anchoring substation equipment, and replacing old gas lines with more flexible alternatives.

Energy Shortage

Hazard Profile

Although California has one of the lowest rates of per capita energy consumption in the country (mainly because of mild climates and energy efficiency initiatives), it still has the second highest total energy demand in the country due to its large population. As such, California imports more electricity than any other state. Over half of electricity consumption in California is fueled by natural gas, 14 % comes from hydroelectric power, 11% comes from renewable resources, and a small percentage is generated using nuclear power. A glitch in any one of these systems (such as failure of a high-pressure transmission line of natural gas or a drought that decreases the amount of electricity available from a hydroelectric plant), could result in an energy shortage.

Previous Events

California has periodically experienced energy shortages that resulted in a disruption of services and/or rolling blackouts. For example, in 2000 and 2001, the state suffered a series of rolling blackouts because of several factors, including deregulation of electric utilities and a drought in the Pacific Northwest. In 2005, approximately 500,000 people were left without power when a transmission line failed. In September 2011, a minor short circuit during a repair of a substation in Arizona left 1.4 million people in the San Diego area without power. As recently as the summer of 2016, Southern California residents were being asked to conserve electricity because power plants were at risk of running out of natural gas fuel and triggering rolling blackouts.

Mitigation & Response

The City remains susceptible to energy supply disruptions that can occur as rolling blackouts where customers temporarily lose power. The threat of such disruptions has lessened since the state of California implemented emergency technology and energy conservation programs and adopted measures to mitigate energy market manipulation and reduce distribution bottlenecks. The City of Albany is working to encourage the generation

of local, renewable energy sources as part of its Climate Action Plan. Even so, as the City relies on energy as a critical infrastructure for its activities, any unplanned or rolling blackout could have a significant impact on the City's operations and its level of productivity.

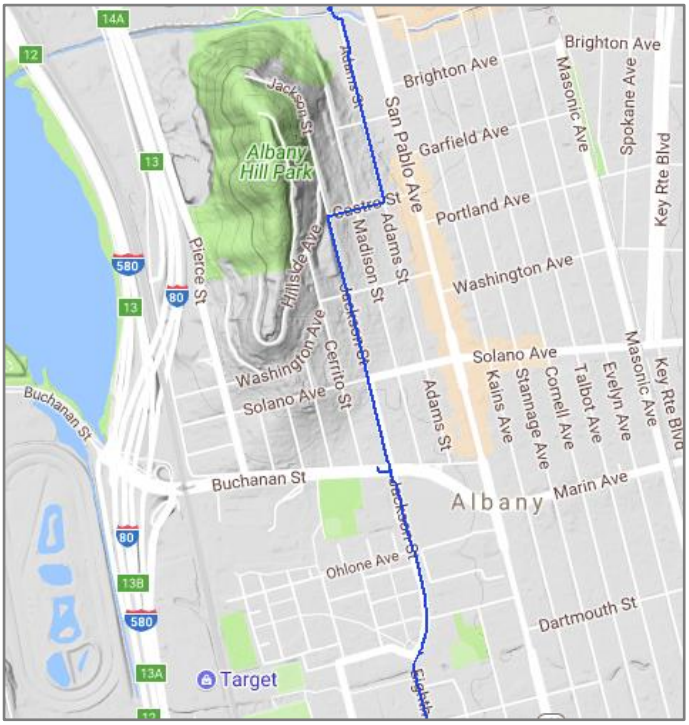
Natural Gas Pipeline Failure

Hazard Profile

A high-pressure natural gas transmission line runs along a north-south alignment through University Village and along the east side of Albany Hill. There is an aviation fuel pipeline that runs along the Union Pacific Railroad tracks from Richmond to the Oakland Airport. These pipes are made of high-pressure welded steel that were installed primarily in the 1960s (although a few segments were installed in the 1950s). Each pipeline has automatic, remote control, and other manual valves along its length. The flow can be shut down within minutes if necessary.

Smaller high-pressure natural gas lines are subject to damage and disruption in areas with soil failure (i.e. landslides or liquefaction). If ignited, broken lines can create fires until the fuel supply is exhausted. The repair of damaged underground lines will take time. It took about 30 days to repair damaged lines in the San Francisco Marina following the Loma Prieta earthquake.

Map of PG&E High-Pressure Gas Line



Map courtesy of Pacific Gas & Electric

Previous Events

A 30-inch diameter steel natural gas pipeline owned by Pacific Gas & Electric exploded on September 9, 2010 in a residential neighborhood in San Bruno, California, a city 25 miles southwest of Albany. The explosion and resulting fire leveled 35 houses and damaged many more. The resulting death toll was eight people.

The United States Geological Survey registered the explosion and resulting shock wave as a magnitude 1.1 earthquake. First responders initially believed that it was an earthquake or a large aircraft accident, and it took crews nearly an hour to determine it was a gas pipeline explosion. It took 60 to 90 minutes to shut off the gas after the explosion. The

explosion compromised a water main and required firefighters to truck in water from outside sources.

Mitigation & Response

As a consequence of the San Bruno pipeline rupture, the National Transportation Safety Board (NTSB) has issued a number of recommendations to state and federal administrations and institutions to improve the safety of pipeline networks and to upgrade the integrity management program and emergency response system. As a result, PG&E has begun improving its network by automating shutoff valves, updating its emergency response plan to reflect industry best practices, and implementing data management systems intended to ensure that its pipeline records are traceable, verifiable, and complete.

Additionally, PG&E has created a First Responders Safety website that provides secure access to maps and information about their high-pressure natural gas transmission lines, natural gas storage facilities, valve and regulator locations, and the current size and pressure within the pipes. PG&E also provides access to an electronic version of their Gas Emergency Response Plan.

Freeway Damage

Hazard Profile

Two major freeways, I-80 and I-580, come together along the western edge of Albany. Both freeways experience high volumes of traffic and are vulnerable to damage or collapse. In the case of freeway damage, I-80 traffic would be rerouted to San Pablo Avenue (State Routes 123), which would have significant impacts on the City.

Buchanan Street Off-Ramp at Interstate 80
Photo courtesy of Doug Donaldson

Previous Events

In 1982, a gasoline tanker was involved in an accident in the Caldecott Tunnel between Oakland and Orinda that killed seven people and required the tunnel to be closed for many months. A 2007 gasoline tanker collision caused the collapse of a portion of the MacArthur Maze, a large freeway interchange which splits Bay Bridge traffic onto I-80, I-580, and I-880.

Mitigation & Response

The risk of a transportation related accident is mitigated by the many federal and state safety precautions and regulations and by the fact that accidents are likely to be detected and reported quickly. The California Department of Transportation (Caltrans) regulates the transportation on State highways, with enforcement by the California Highway Patrol. In the event of an accident on Interstate 80/580, the Albany Fire Department would be the first responders and Caltrans would assume responsibility for the subsequent repair. To alleviate congestion caused by the MacArthur Maze closure in 2007, the State expedited repairs, Caltrans set up detours, and Bay Area Rapid Transit (BART) increased capacity, and public transit was free the day after the crash.

Water System Failure

Hazard Profile

Albany's water supply system is a system of water collection, treatment, storage, and distribution systems operated by the East Bay Municipal Utility District (EBMUD). EBMUD has the responsibility of providing potable water treatment and delivery to individual properties. EBMUD also maintains the City's network of fire hydrants. EBMUD draws its water from the Sierra Nevada mountains, using a series of reservoirs and pipelines. If there is an interruption to this imported water source, EBMUD would rely on local storage until repairs were made to restore the transmission supply. Typically, a failure in one part of the system can be isolated without disrupting the entire network. If there is a large system failure, Albany residents and businesses could be without direct access to water for an amount of time.

Secondary Hazards

EBMUD has studied the impacts of earthquake shaking, liquefaction, landslides, and fault rupture on most of its infrastructure and is upgrading its infrastructure region-wide. A large earthquake, however, could severely impact the quality or volume of water service to the City.

Mitigation & Response

EBMUD conveys the City's sanitary sewage outflow from a large "Intersector" pipe running to their treatment plan at the base of the Bay Bridge. The City of Albany maintains lower sewer laterals from individual properties and sewer mains that ultimately connect to the EBMUD line. Unlike many cities, Albany's sewer system is entirely gravity flow and does not require pump stations.

Information Technology Failure

Hazard Profile

Information technology (IT) is defined as the technology involving the development, maintenance, and use of computer systems, software, and networks for the processing and distribution of data. IT provides the communication path and services between users, processes, applications, services, and the internet.

Overhead Utilities in Albany
Photo courtesy of City of Albany General Plan

The most common cause of IT failures are natural disasters that physically damage devices and/or components that make up the network infrastructure. Heavy winds, floodwaters, wildfires, and seismic activity can all create physical disturbances that have the power to do significant damage to communications equipment.

When IT networks fail, the impact has the ability to wipe out access to standard mobile or landline telecommunications in addition to internet and satellite-based emergency messaging devices. Communication during and immediately after a hazard situation is a critical component of response and recovery because it connects affected people with first responders, support systems, and friends and family members. Reliable and accessible communication and information systems are also key to a community's resilience.

Previous Events

Though the City of Albany has never experienced documented IT failure, this hazard has occurred in nearby Napa, Sonoma, Lake, and Mendocino Counties. In October 2017, the North Bay was devastated by wildfires that caused severe damage to cellphone towers. Across the four counties, 77 cellular service sites were destroyed or damaged due to poles falling or fiber cables melting from the heat of the blazes.[5] As a result, tens of thousands of people went without cellphone or internet service. Residents reported problems receiving alerts about the fires, contacting emergency services for assistance, and getting in touch with friends and family members. The North Bay's primary cellular service providers, AT&T and Comcast, responded to the hazard by deploying network disaster recovery teams. These teams worked closely with first responders to assist those in need, created free Wi-Fi hotspots in evacuation centers, and moved temporary cell towers into Santa Rosa and surrounding cities.

[5] Smith, Dakota and Resmovits, Joy. (October 2017). Damaged cell towers create communication problems in Northern California fire zone. *Los Angeles Times*. Retrieved from http://www.latimes.com/local/california/la-northern-california-fires-live-damaged-cell-towers-create-1507667633-htmlstory.html

Mitigation & Response

IT networks in the City of Albany are maintained by their respective proprietors. Albany's IT Department is responsible for the City's private server, while major telecommunications companies AT&T and Comcast, in partnership with PG&E, maintain utility lines and cellular towers that provide communication paths to City residents and businesses.

In the event that telephone or internet services fail during a hazard, the City's emergency personnel are equipped with a secondary radio system that act as an alternative form of communication. AT&T, Comcast, and PG&E have all adopted hazard preparedness policies and practice disaster readiness drills and simulations regularly.

As part of the Capital Improvement Plan, City staff is working to establish a disaster recovery location that will serve as a secondary site for the City's network data if the connection to the primary site at City Hall becomes inaccessible. Additionally, the City's private servers are backed up nightly to ensure data will be available for re-store if data is corrupted or lost to the storage server during a hazard. The City's IT Department is also in the process of developing a security system to prevent and combat cyberattacks and other threats.

Severe Weather

Hazard Profile

Meteorologists generally define severe weather as any dangerous meteorological phenomena that poses risks to life, property, or requires the intervention of authorities. Types of severe weather phenomena vary, depending on the latitude, altitude, topography, and atmospheric conditions.

Two types of severe weather events typically impact the City of Albany: damaging winds and extreme temperatures. Flooding issues associated with severe weather are discussed in the Flooding Section of this document. There have been two recorded tornado/funnel cloud events within the City since 1950. However, these were F0-rated events that caused no damage in the City. California ranks 32nd among states regarding frequency of tornadoes, 44th regarding frequency of tornados per square mile, 36th for injuries, and 31st for cost of damage. The state has no reported deaths from tornadoes.

Damaging Winds

The severe weather events in the City of Albany are often related to high winds associated with winter storms and thunderstorms. The City can expect to experience exposure to some type of severe weather event at least annually. Damaging winds are classified as

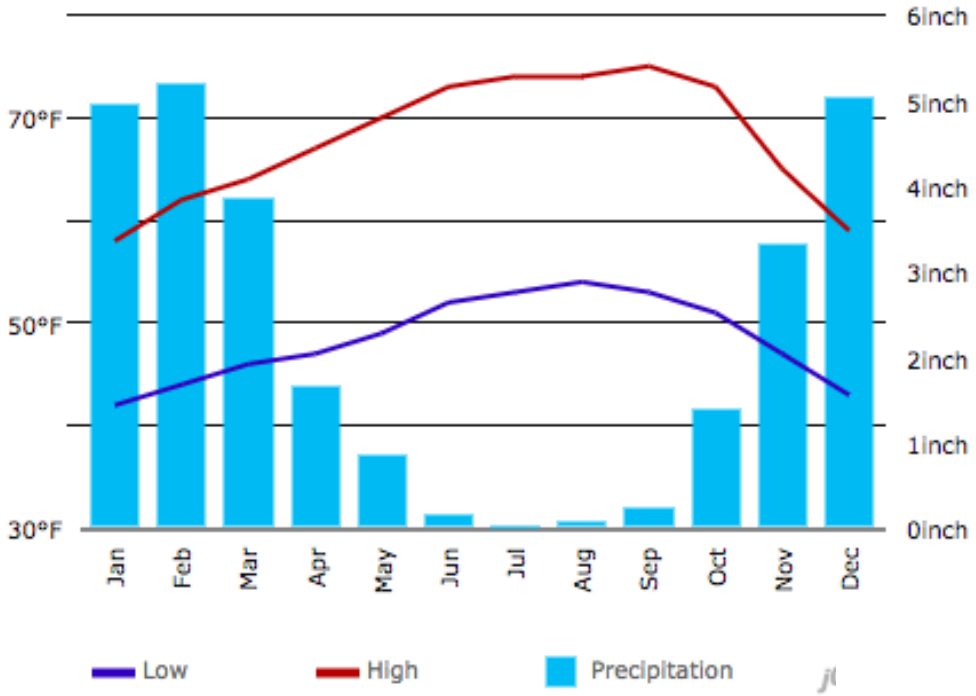
those exceeding 60 miles per hour (mph). Damage from such winds accounts for half of all severe weather reports in the lower 48 states and is more common than damage from tornadoes. Wind speeds can produce a damage path extending for hundreds of miles. While the City has not recorded any damaging windstorm events, on November 22, 2013, two people were killed in Oakland and thousands of homes and businesses lost power when wind speeds reached up to 65 mph in the East Bay Area.[6]

Extreme Temperatures

Extreme temperature includes both heat and cold events, which can have a significant impact on human health and primary and secondary effects on infrastructure (e.g., burst pipes and power failure). What constitutes "extreme cold" or "extreme heat" can vary across different areas of the country, based on what the population is accustomed to. Fatalities can result from extreme temperatures, as they can push the human body beyond its limits (hyperthermia and hypothermia).

The range of extreme temperatures is relative to the average temperature in an area. Albany's average temperature and precipitation is illustrated in the graph below.

Albany Average Annual Temperatures and Precipitation



Source: U.S. Climate Data

[6] Alexander, Kurtis. (November 2013). 2 killed in windstorm; thousands without power. *SFGate*. Retrieved from https://www.sfgate.com/bayarea/article/2-killed-in-windstorm-thousands-without-power-5001276.php

Extreme Heat

There is no universal definition of extreme heat because the term is relative to the usual weather in a particular area. According to FEMA, a heat wave is an extended period of extreme heat of three or more consecutive days with temperatures that hover 10 degrees or more above the average high temperature for the region. According to NOAA, extreme heat is the number one weather-related cause of death in the U.S. On average; more than 1,500 people die each year from excessive heat. This number is greater than the 30-year mean annual number of deaths due to tornadoes, flooding, hurricanes and lightning combined.

From 1970-2000, Albany experienced a daily average temperature of about 58.3 °F, an average maximum temperature of 66.8 °F and an average minimum temperature of 49.7 °F. According to Climate Change models, temperatures in the Bay Area are tending toward warmer average temperatures – which translate to more extreme temperatures. Temperatures in the Bay Area are expected to increase between three degrees (in a low emission scenario) and six degrees Fahrenheit (in a high emission scenario). By 2100, average temperatures in the San Francisco Bay Area will increase by 11°F. Additional heat waves will disproportionally impact the elderly, children, and the low-income members of our community. Historically, Albany averaged less than one day per year exceeding 90° F. This number could climb exponentially after mid-century. This increase is of particular concern because most homes in Albany do not have air conditioning.

Extreme heat is exacerbated in urbanized areas because of the urban heat island effect, in which cities retain heat as solar radiation is absorbed by surfaces such as roads and buildings and the lack of vegetation reduces the cooling effects of trees and other plants.

Although heat waves do not cause as much economic damage as other types of severe weather, they are extremely dangerous to humans and animals. According to the United States National Weather Service, the average total number of heat-related fatalities each year is higher than the combined total fatalities for floods, tornadoes, lightning strikes, and hurricanes.

Extreme heat events can create or provoke secondary hazards including, but not limited to, dust storms, droughts, wildfires, water shortages and power outages. This could result in a broad and far-reaching set of impacts throughout a local area or entire region. Impacts could include significant loss of life and illness; economic costs in transportation, agriculture, production, energy and infrastructure; and losses of ecosystems, wildlife habitats and water resources.

Extreme Cold

Extreme cold events are when temperatures drop well below normal in an area. In Albany, which is relatively unaccustomed to winter weather, near freezing temperatures are considered "extreme cold."

Exposure to cold temperatures, whether indoors or outside, can lead to serious or life-threatening health problems such as hypothermia, cold stress, frostbite or freezing of the exposed extremities such as fingers, toes, nose and ear lobes. Hypothermia occurs when the core body temperature is less than 95ºF. If people exposed to excessive cold are unable to generate enough heat to maintain a normal core body temperature of 98.6ºF, their vital organs can malfunction. When brain function deteriorates, people with hypothermia are less likely to perceive the need to seek shelter. Extreme cold also can cause emergencies in susceptible populations, such as those without shelter, those who are stranded, or those who live in a home that is poorly insulated or without heat. Infants and the elderly are particularly at risk, but anyone can be affected.[7]

Warning Time

Meteorologists can often predict the likelihood of a severe storm and other changes in weather, and therefore are able to give several days of warning time. However, meteorologists cannot predict the exact time of onset or severity of the storm. Some storms may come on more quickly and provide only a few hours of warning time.

Secondary Hazards

The most significant secondary hazards associated with severe local storms are floods, falling and downed trees, landslides, and downed power lines. Rapidly melting snow combined with heavy rain can overwhelm both natural and man-made drainage systems, causing overflow and property destruction. Landslides occur when the soil on slopes becomes oversaturated and fails.

Extreme heat can help create the conditions for drought and can exacerbate the impacts of drought by putting additional stress on available water supplies. It can also contribute to the spread of wildfires.

Previous Events

Albany has experienced extreme weather of varying intensity. During a cold wave in December 2013, there were seven weather-related deaths reported in the Bay Area, all of homeless individuals. A heat wave in September of 2017 claimed six lives in the region.

[7] Centers of Disease Control and Prevention, 2005.

Climate Change Impacts

Climate change presents a significant challenge for risk management associated with severe weather. The frequency of severe weather events has increased steadily over the last century. The number of weather-related disasters during the 1990s was four times that of the 1950s and cost 14 times more in economic losses. Historical data shows that the probability for severe weather events increases in a warmer climate (see figure below). The changing hydrograph caused by climate change could have a significant impact on the intensity, duration, and frequency of storm events. All of these impacts could have significant economic consequences.

As greenhouse gas emissions increase, temperatures are expected to increase globally, placing growing stress on human health, water resources, energy systems, and other citywide assets. Albany's climate is no exception and temperatures are projected to increase throughout the City with daily maximum temperatures increasing by about 8°F by the end of the century under the high emissions scenario. The impact of climate change on precipitation events is less clear, but the pattern of precipitation is expected to become more variable with extreme events increasing in intensity. Projections of annual totals show no clear signal of significant directional change.

Vulnerability

Population

A lack of data separating severe weather damage from flooding and landslide damage prevented a detailed analysis for exposure and vulnerability. However, it can be assumed that the entire city is exposed to severe weather events to some extent. Certain areas are more exposed due to geographic location and local weather patterns. Populations living at higher elevations with large stands of trees or power lines may be more susceptible to wind damage, while populations close to creeks are at risk for possible flooding. Power outages can be life threatening to those dependent on electricity for life support. Isolation of these populations is of significant concern. These populations face isolation and exposure during severe weather events and could suffer more secondary effects of the hazard.

According to the Centers for Disease Control and Prevention, populations most at risk to extreme cold and heat events include those age 65 or older (who are less able to withstand temperatures extremes due to their age, potential health conditions, and limited mobility to access shelters), infants and children up to four years of age, pregnant women, the homeless and low-income persons who do not have access to shelters with proper heating and cooling, people who are overweight, and people with mental illnesses, disabilities and chronic diseases. The general public is also at risk, especially those who may overexert

during work or exercise during extreme heat events or experience hypothermia during extreme cold events.

Property

The most common problems associated with severe storms are immobility and loss of utilities. Fatalities are uncommon, but can occur. Roads may become impassable due to flooding, downed trees, ice or snow, or a landslide. Power lines may be downed due to high winds, and services such as water or phone may not be able to operate without power. Windstorms can be a problem in the City and have been known to cause damage to utilities. The wind speed predicted in wind warnings issued by the National Weather Service is for a one-minute average; gusts may be 25 to 30 percent higher. Tornadoes are potentially the most dangerous storm, but they are not common in the City. If a major tornado were to strike within the City, damage could be widespread. Businesses could be forced to close for an extended period or permanently, fatalities could be high, many people could be homeless for an extended period, and routine services such as power or telecommunications could be disrupted. In addition, buildings may be damaged or destroyed.

Environment

Natural habitats such as streams and trees are exposed to the elements during a severe storm and risk major damage and destruction. Prolonged rains can saturate soils and lead to slope failure. Flooding events caused by severe weather or snowmelt can produce creek channel erosion. Storm surges can erode waterfront areas and redistribute sediment loads. Drought and extreme heat can be particularly damaging to sensitive habitats in Albany, and effect Albany's five creeks and riparian ecosystems, including the endangered steelhead trout.

Critical Facilities

Incapacity and loss of roads are the primary transportation failures resulting from severe weather, mostly associated with secondary hazards. High winds can cause significant damage to trees and power lines, blocking roads with debris, incapacitating transportation, and disrupting ingress and egress. Loss of electricity and land-line phone connection would leave certain populations isolated because residents would be unable to call for assistance.

Mitigation & Response

All future development will be affected by severe storms. The ability to withstand impacts lies in consistent enforcement of codes and regulations for new construction. The City's Human Services Division provides resources for populations vulnerable to extreme weather, and City facilities are available as cooling centers during extreme heat events.

The City of Albany has prioritized climate mitigation efforts due in part to the potential increase in extreme weather events. The City's Climate Action Plan, adopted in 2010, aims to reduce greenhouse gas emissions by 25% by 2020. Longer term goals of 60% reductions by 2035 and net zero emissions by 2050 are included in the City's General Plan.

Local Capabilities

Current local capabilities include guidance written into the City's General Plan, Climate Action Plan, and urban forestry program. For example, the City's Urban Forester aims to plant and maintain trees that provide shade in the summer and obstruct cold winds in the winter.

The Human Services Division currently assists vulnerable members of the community, including seniors, people with disabilities, and people without housing by providing access to the Community Center and the Senior Center, which act as shelters and warming and cooling centers during severe weather events. The Human Services Division will work with the County to publicize and expand the capacity of this program.

Severe weather advisories are publicized by the County and other agencies. The City can utilize electronic media and its emergency notification system. The Public Information Officer will work with the Human Services Division to expand targeted outreach.

Wildfire

Hazard Profile

For the purposes of this Plan, fires are characterized into three categories:

- **Wildland Fires** occur on wilderness land
- **Wildland-Urban Interface Fires** occur where the built environment and natural areas are intermixed
- **Urban Conflagrations** occur within a developed area and pose a direct risk to development

Wildland Fire

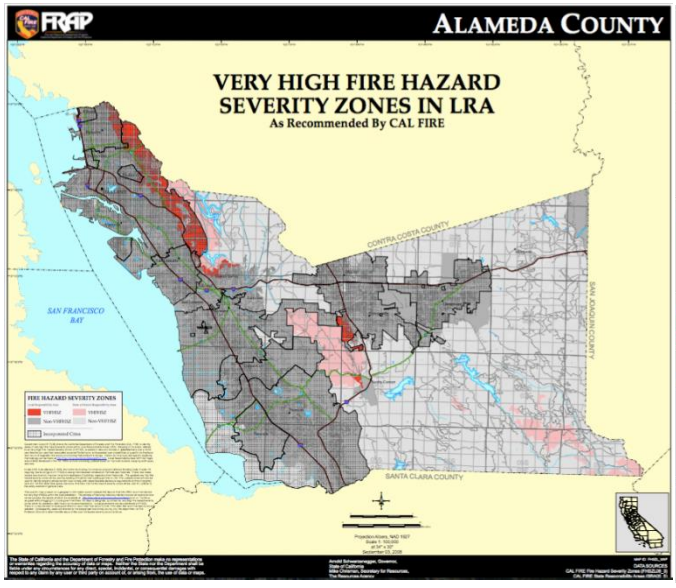
A wildfire is an uncontrolled fire spreading through vegetative fuels, posing danger and destruction to property and lives. While some wildfires start by natural causes such as lightning, most are preventable. Albany is subject to hot and dry fall seasons, high winds, dense development and small areas of flammable vegetation. The time of the year of high wildfire danger is from May to October, when temperatures are higher and humidity is lower. The closer to the end of this "fire season," the more critical the danger is, as vegetation becomes increasingly dry.

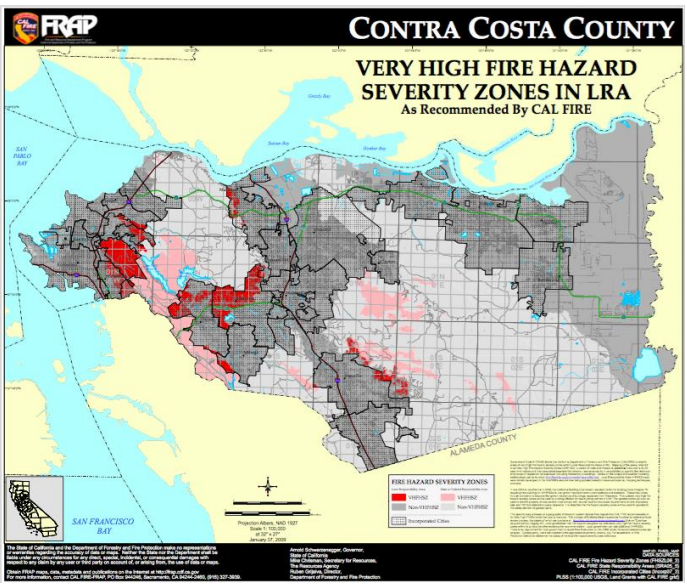
The highly urbanized portions of the City have relatively low wildfire risk exposure. There is, however, the potential for fire hazard throughout the Albany waterfront and on Albany Hill, much of which is covered by a non-native eucalyptus forest that is at risk for wildfires. Albany Hill is also home to many private residential developments that may be affected in the event of a wildfire, including single-family and multi-family homes on the east side of the hill and high-rise residential towers on the northwest side of the hill. The Albany Bulb and Plateau, along the waterfront, and areas along the I-80 and I-580 freeways are also prone to brush fires during the dry season.

Mixed Density Housing on the East Side of Albany Hill
Photo courtesy of City of Albany General Plan

Wildland-Urban Interface Fires

The Wildland-Urban Interface (WUI) is defined as the line, area, or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels. It describes an area within or adjacent to private and public property where mitigation actions can prevent damage or loss from wildfire. Wildfires can occur in undeveloped areas and spread to urban areas where structures and other human development are more concentrated. The wildland-urban interface is an especially hazardous area because it combines a resident population with large areas of combustible material (including structures), and is often characterized by sub-standard water supplies. Near Albany, Kensington and areas of the Berkeley Hills have been designated by CAL FIRE as "Very High Fire Hazard Severity" zones.





Urban Conflagration

Urban conflagration, or a large disastrous fire in an urban area, is a major hazard that can occur due to a number of causes – wildfires, earthquakes, gas leaks, chemical explosions, large structure fires, or arson. The urban fire conflagration that followed the 1906 San Francisco earthquake did more damage than the earthquake itself. Although the threat of an urban conflagration has been reduced through improvements in building design, construction materials, and fire protection systems, they still remain a threat, especially in a densely urban area such as Albany. Fire hazards in industrial buildings also pose a threat.

Previous Events

There are no recorded incidents of loss of life from wildfires in the City of Albany, and structure fire fatalities are very rare. Albany experiences few fires, typically small home or brush fires that are extinguished quickly. City fire fighters have been deployed to dozens of large wildland fires over the past decade.

2008 Albany Hill Fire
Photo courtesy of Doug Donaldson

On November 15, 2008, strong dry northeast winds whipped up a fire in a forested area on the west side of Albany Hill above a large apartment complex (555 Pierce Street). Recent heavy rains and a prompt response by the Albany and Berkeley fire departments limited the blaze to 2 acres (8,100 m^2), with no structures burned.

The October 1991 Oakland/Berkeley Hills Tunnel Fire occurred close to Albany and resulted in 25 lives lost and approximately 3,000 residential units destroyed. The estimated private property loss was $1.7 billion at the time, according to the Insurance Information Institute. City of Albany fire fighters were among the first responders. The Valley Fire in Lake County in 2015 was caused by faulty wiring of a hot tub and spread across 118 miles, consuming over 2,000 structures. Four people were killed in the blaze.

The 2017 California wildfire season was the most destructive on record. Early 2017 experienced significant rainfall, stimulating vegetation growth which subsequently dehydrated during the dry summer and fall. The October 2017 Northern California wildfires, also known as the Northern California firestorm, were a series of 250 wildfires

that started burning across the state of California, beginning in early October during severe fire weather conditions. These fires included the Tubbs Fire (which grew to become the most destructive wildfire in the history of California), the Atlas Fire, and the Nuns Fire in Napa, Sonoma, and Solano Counties. The fires destroyed at least 8,900 structures and killed 44 people. They also compromised air quality throughout the Bay Area, particularly for vulnerable populations. The Tubbs fire resulted in an urban conflagration that destroyed more than 2,800 structures within in the City of Santa Rosa. Five percent of the City's housing stock was destroyed.

Secondary Hazards

Fires can increase an area's risk of landslide and flooding. Fire season in the Bay Area is late summer to fall. When all supporting vegetation is burned away, hillsides become destabilized and prone to erosion. The charred surface of the earth is hard and absorbs less water. When winter rains come, this leads to increased runoff, erosion and landslides in hilly areas. Erosion and land slippage subsequent to fires can lead to temporary or permanent displacement and property damage or loss, making it a secondary hazard that must be mitigated immediately after a fire.

Climate Change Impacts

While wildfires may occur at any time of year and in any climate, the risk of wildfire increases greatly with increased drought and heat. Fire season is being extended as rainfall patterns change and drought conditions continue. California's future climate of frequent drought and higher heat increases Albany's wildfire risk.

Vulnerability

Population

Smoke and air pollution from nearby wildfires can be a health hazard, especially for sensitive populations such as children, the elderly, and those with respiratory and cardiovascular diseases. Public health impacts associated with wildfire include difficulty breathing, odor, and reduction in visibility. Recent wildfires in Napa and Sonoma Counties resulted in air quality warnings in Albany.

Property

Especially vulnerable building and land-use types include high-rise buildings, multi-family dwellings, and high-density residential neighborhoods. Homes on Albany Hill are at higher risk for wildfire. Other vulnerable structures include schools and large commercial buildings, buildings constructed before current fire and building codes, and institutions that house people of limited mobility such as Belmont Village and the Orientation Center for the Blind.

Critical Facilities

All critical facilities in Albany are potentially vulnerable to structure fires. A fire in the UDSA laboratories could cause exposure to secondary hazards from chemicals and biological agents.

Environment

The impacts of a fire are felt long after the fire is extinguished. Wildland and Wildland-Urban Interface fires can damage natural environments, such as recreational areas, and can cause lasting impacts to slopes and soils. When all supporting vegetation is burned away, hillsides become destabilized and prone to erosion. The burnt surface soils are harder and absorb less water. When winter rains come, this leads to increased runoff, erosion, and landslides in hilly areas.

Mitigation & Response

While fires are not entirely preventable, it is possible to create conditions that reduce the chances of fire and that facilitate efficient response in case fire breaks out. When a fire does ignite, quick response from firefighters and an adequate supply of water are essential in minimizing damage. Building codes have been strengthened over time to include additional safety features, such as flexible utility connections, leak detection systems, more advanced sprinkler systems, more stringent ventilation requirements and spill notification systems.

The Fire Department conducts fire inspections annually on all commercial and multi-family properties, manages pre-fire planning activities, and supervises routine brush clearing on Albany Hill and the waterfront.

Preparedness Training by the Albany Fire Department
Photo courtesy of City of Albany General Plan

Local Capabilities

Current local capabilities include requirements for vegetation management and weed abatement on private property written into the City's Municipal Code. These requirements aim to maintain "defensible space" free of combustible materials within a 30-foot zone around each home. The City also maintains a master plan for vegetation management and fuel reduction on Albany Hill that details specific fire reduction strategies for each vegetation type. The master plan calls for gradual thinning of Albany Hill's eucalyptus forest and its slow conversion to less fire-prone, more ecologically diverse habitat.

The Fire Department works closely with the Community Development Department in the review of proposed development projects and specifies appropriate measures for new development to ensure that sufficient fire protection can be provided. The City has also adopted parking limits and curb restrictions to ensure adequate access for emergency vehicles.

To improve and expand on current local capabilities, the Fire Department will advocate to ensure that peak load water supply and water pressure is sufficient to respond to local fire emergencies. The Community Development Department will develop an ordinance to enforce vegetation management on private property on Albany Hill to minimize the risk of structure fires and threats to nearby properties. The Fire Department will also continue to provide outreach and training regarding fire prevention and safety through the CERT program. This program will be included in the City's annual budget process.

Terrorism

Hazard Profile

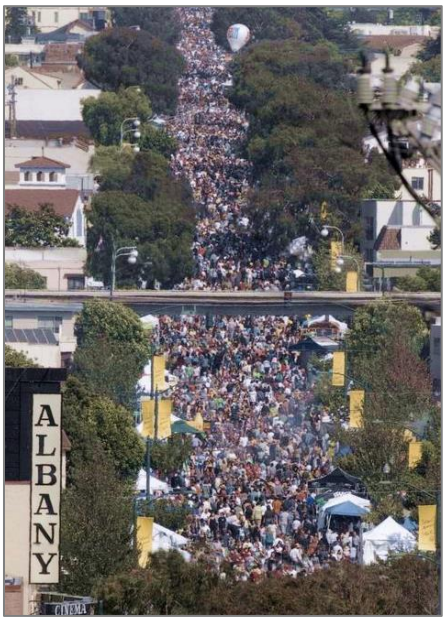
Terrorism is the use of fear for intimidation, typically for political goals. Terrorism is a crime where the threat of violence is often as effective as the commission of the violent act itself. Terrorism affects us through fear, physical injuries, economic losses, psychological trauma, and erosion of faith in governments. It can manifest itself through threats, bombings, hijackings, kidnappings, arson, assassinations, and/or disruption of "lifeline systems" and other critical infrastructure. Terrorism can include the use of chemical, biological, radiological, nuclear, and explosive weapons, making mitigation, response, and recovery issues particularly challenging.

Previous Events

There are no recorded incidents of terrorism in Albany.

Vulnerability

Although most likely not a high-profile target, the City of Albany, given its geographic proximity to Oakland and San Francisco, could be affected by a terrorist attack. Vulnerable sites include those that are essential to the functioning of the City, that contain critical assets, or which would cause significant impacts if attacked. Federal institutions located in Albany such as the USDA Western Research Center and events that draw large crowds such as the Solano Stroll are potential targets for terrorist attacks. The City is also at risk of Cyberterrorism, the use of computer network tools to disrupt or destroy critical government telecommunications capabilities, which can create fear by causing confusion and uncertainty.



Solano Stroll in Albany

Mitigation & Response

The federal government plays a significant role in terrorism response on a national level, but local governments, along with counties and the state, have primary responsibility for first response and protecting the health and safety of its citizens. The nature of terrorism and the many forms it can take makes mitigation, response, and recovery issues difficult. Buildings and other structures constructed to resist earthquakes and fires usually have qualities that also limit damage from blasts and resist fire spread and spread of noxious fumes in the event of a terrorist attack.

The City currently works to incorporate mitigation measures into the planning and implementation of events that draw large crowds, such as the Solano Stroll. Temporary barrier systems such as K-rails are placed strategically to mitigate the potential for injury caused by vehicular intrusion into event spaces. Critical public safety response routes are determined to reduce the impact and consequences of a hazardous incident. Emergency medical stations equipped with first aid and life support equipment are also set up and maintained throughout the event.

Local law enforcement, emergency medical services, and fire agencies will be the first units to respond to a terrorist incident. Local health care agencies will be required to provide treatment to victims and, in cases of nuclear, chemical, or biological attacks, rapidly identify the substance used in the attack. Citizens will inevitably look to local and state officials and the media for information regarding what has occurred and the actions that are being taken/will be taken to respond to this type of incident.

Sea Level Rise

Hazard Profile

Over the next century, Albany's waterfront will be impacted by the effects of climate change, particularly rising sea levels. Sea levels are rising because of higher atmospheric and oceanic temperatures across the globe. Sea level rise is expected to continue throughout the century, threatening coastal resources; however, projections are complicated by the potential for a substantial acceleration of glacial ice melt resulting in rapid sea level rise, which is not currently accounted for in many global scenarios.[8] The Bay Area is especially exposed to the impacts of sea level rise because of the large number of assets located on the coast. In Albany, the area most exposed to sea level rise is located along the shoreline; however, sea level rise alone is not projected to impact important emergency assets throughout the 21st century.

Considered the best available science, the National Research Council (NRC) identified likely sea level rise estimates for the west coast of the United States.[9] These values are accompanied by ranges of possible sea levels based on low and high emissions scenarios and ice melt scenarios. The table below summarizes the projections applicable to Alameda County: six inches of sea level rise by 2030 (range: 2-12 in), 11 inches by 2050 (range: 5-24 in), and 36 inches by 2100 (range: 17-66 in) relative to the year 2000.

Sea Level Rise Estimates Relative to the Year 2000

Year	Projections	Ranges
2030	6 ± 2 in	2 to 12 in
2050	11 ± 4 in*	5 to 24 in
2100	36 ± 10 in	17 to 66 in

Source: NRC[4]

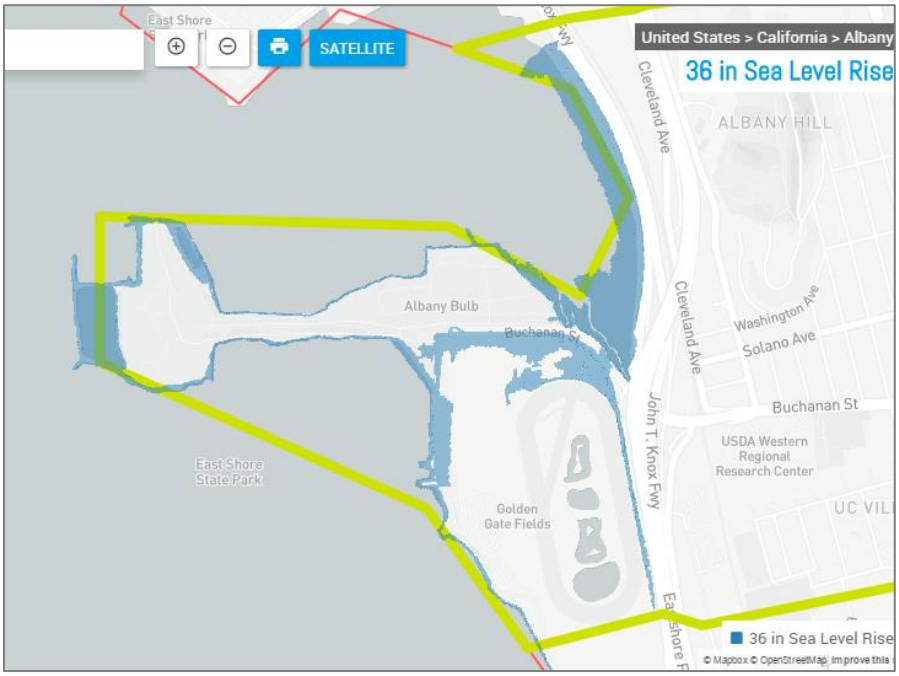
These projections characterize the estimated timeline for permanent increases in water levels. However, these water levels may occur sooner on a temporary basis under a number of different circumstances given the combination of permanent sea level rise and temporary extreme tides resulting from the additive impact of high tides and storm surge. For example, water levels could reach the equivalent of 49 inches of inundation by 2050 in the event of a 50-year storm – a storm that has a two percent chance of occurring in a given year – even though that level of sea level rise is not projected to occur by the end of the

[8] M. K. Buchanan, R. E. Kopp, M. Oppenheimer, and C. Tebaldi. (2016). Allowances for evolving coastal flood risk under uncertain local sea-level rise. *Climatic Change.* DOI: 10.1007/s10584-016-1664-7

[9] National Research Council. (2012). Sea-Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future. *The National Academies Press.* DOI: 10.17226/13389

century.[10] See the figure below for a map of areas inundated by 36 inches of sea level rise and the following table for a list of assets exposed to sea level rise.

Projected Sea Level Rise in Albany by the End of the Century (36 Inches)



Source: City of Albany Draft Adaptation Plan

Note: The area shaded in blue indicates the area inundated by 36 inches of sea level rise.

Vulnerability

It will be important for Albany to consider the local implications of regional sea level rise, such as delivery of food, water, and resources, access to transportation infrastructure, and consequences for public health.

Critical Facilities

Albany's emergency assets are not affected by foreseeable sea level rise or extreme tides throughout the 21st century, but other important City assets are affected. Thirty-six inches of sea level rise is likely by the end of the century and at this level, water will flood the perimeter of Albany Bulb and the Golden Gate Fields parking facilities and road access. See the table below for a list of assets exposed to sea level rise. Even in the worst-case scenario of water levels reaching 72 inches in the event of likely sea level rise combined with a 50-year storm, water levels only inundate Buchanan Street along the water and the parking for

[10] AECOM and Brian Fulfrost & Associates. (2015). Adapting to Rising Tides: Alameda County Shoreline Vulnerability Assessment Final Report. Retrieved from http://www.adaptingtorisingtides.org/wp-content/uploads/2015/09/ALA-Report_FINAL_2015.05.26sm_REPORT.pdf

Golden Gate Fields and Tom Bates Regional Sports Complex, although some small areas of the eastbound I-580 freeway north of Buchanan Street may experience flooding.

List of Assets Exposed to Sea Level Rise Flooding

Asset Type	Area	Impact	12 in.	24 in.	36 in.	48 in.	72 in.
Highway I-80	Albany Shoreline	H				X	X
Wastewater Treatment Plant	Oakland	H				X	X
Bay Bridge Access	Oakland	H		X	X	X	X
Albany Bulb & Waterfront	Northwest	M			X	X	X
Golden Gate Fields	Albany Shoreline	M				X	X
Buchanan Street	Albany Shoreline	M			X	X	X
I-580E offramp to I-80W	Northwest	M					X
Highway I-580	Oakland	M				X	X
Highway I-880	Oakland	M			X	X	X

Source: Albany Local Asset Data, OpenStreet Maps, and AECOM and Brian Fulfrost & Associates as represented on Vizonomy

Given the unlikely direct impact to Albany's emergency assets from sea level rise, the greater threat may be regional risks from sea level rise. With 48 inches of inundation, which is likely by the end of the century when combined with average yearly storm surge, water begins to threaten westbound access to the Bay Bridge. In the worst-case scenario, with predicted end-of-century sea level rise compounded by glacial melting and/or King Tides and storm surge, there is the possibility that parts of the Bay Area may experience sea level rise related flooding of up to 72 inches or more. At this level, numerous important regional assets are in the projected impact area, including the East Bay Municipal Utility District (EBMUD) wastewater treatment plant and access to the Bay Bridge and the Union Pacific railroad. This would threaten water quality, sewer service, transportation, and cargo shipment throughout the area. Flooded areas will also include the I-880 freeway at intervals from Oakland to Milpitas, with the most significant inundation occurring in Oakland and San Leandro. This includes projected flooding of the I-880/I-580 interchange. These conditions may likely result by the end of the century from a combination of sea level rise and storm surge, such as 36 inches of sea level rise combined with a 50-year storm surge or 48 inches of sea level rise combined with a 5-year storm surge.

Mitigation & Response

Due to the climate action impacts and projections regarding flooding, wave action, and increased sea levels, the City of Albany has developed several strategies and policies to address issues along the City waterfront. Future waterfront trails and other shoreline improvements are being designed to anticipate the possible effects of rising sea levels. At the same time, engineered revetments (armored stone) and other measures are being considered to make the shoreline more resilient. These improvements provide the added benefit of stabilizing landfill and protecting water quality.

Hazardous Material Release

Hazard Profile

A hazardous material is any element or compound that, because of handling, storing, processing, or packaging, may have detrimental effects on the public (especially emergency personnel) and/or the environment. Hazardous materials range from familiar substances such as waste oil and cleaning solvents, to highly toxic industrial compounds, and include toxic metals, gases, flammable and explosive liquids and solids, corrosive materials, radioactive materials and infectious biological waste. Although such substances are usually associated with industry, they are also found at gas stations, dry cleaners, medical offices, public buildings, and many retail and office uses. Hazardous materials are also used by most households, in the form of cleaning solvents, paint, motor oil, pesticides, and common household chemicals. Hazardous materials are shipped daily on highways, railroads, waterways, and pipelines in or near Albany. Releases of hazardous materials can occur during transport and from fixed facilities. A release of hazardous materials in the City of Albany could occur by:

- An accident on a City street or on Interstate 80/580
- Train derailment
- An aircraft accident
- A ruptured high-pressure natural gas or petroleum pipeline
- A fire in a nearby industrial facility
- A spill from a vessel in San Francisco Bay
- Illegal dumping into the sewer or storm-drain system or into the creeks
- Contaminated groundwater plumes or soils
- Demolition or remodeling of older buildings containing asbestos, lead-based paint, or other hazardous building materials

History has shown that when accidents and emergencies involve hazardous materials, they are extremely complex to mitigate. Transportation-related releases are especially troublesome because they can occur anywhere, including close to human populations, critical facilities, or sensitive environmental areas.

Previous Events

Hazardous materials incidents from spills from commercial/recreational vessels in the Bay have impacted the San Francisco Bay Area in the past. On November 7, 2007, the container ship Cosco Busan struck the Delta Tower of the San Francisco Bay Bridge during a thick fog. Over 53,569 gallons of heavy fuel oil spilled into the San Francisco Bay and affected birds,

marine mammals, fish, and humans. Oil from this spill washed up on the Albany shoreline. More recently, staff has arranged for the disposal of small amounts of hazardous materials that have washed up on the Albany waterfront. In 2011, an uncontrolled release of 1,600 gallons of diesel on the UC Berkeley campus resulted in diesel entering the stormwater system, and discharging into Strawberry Creek.

Secondary Hazards

Hazardous materials incidents can be caused by or exacerbated by other hazards, such as earthquakes, floods, windstorms, and winter storms.

Vulnerability

Population

The severity of a hazardous materials incident depends on the nature and amount of the hazardous material and the time and location of the incident. Explosions and accidents can cause physical damage, while releases in the air can affect human health and safety. A hazardous materials release could expose the community to toxic vapors and cause irritation, burns, and/or suffocation.

Critical Facilities

While hazardous materials could be released anywhere in the City, the most vulnerable areas are located on the western edge of the City by the train tracks and freeways.

Environment

Hazardous materials can threaten the viability of wildlife in Albany's open spaces, creeks, and the bay. This includes potential damage to plants, animals, wildlife habitat, air and water quality, and loss of biodiversity.

Mitigation & Response

The risk of a transportation related accident is mitigated by the many federal and state safety precautions and regulations and by the fact that accidents on freeways or railroads are likely to be detected and reported quickly. The California Department of Transportation (Caltrans) regulates the transport of hazardous materials on State highways, with enforcement by the California Highway Patrol. Local agencies have the authority to restrict the use of local roads for hazardous materials transport, as well as the time of transit, if not unduly restrictive to commerce. Generally, selection of transportation routes should minimize the time and distance that hazardous materials are in transit, avoid residential neighborhoods and environmentally sensitive areas, avoid periods and areas of traffic congestion, minimize use of local roads and provide for adequate emergency response services. In the event of a spill or another accidental release on Interstate 80/580, the Albany Fire Department would be the first responders and Caltrans would assume

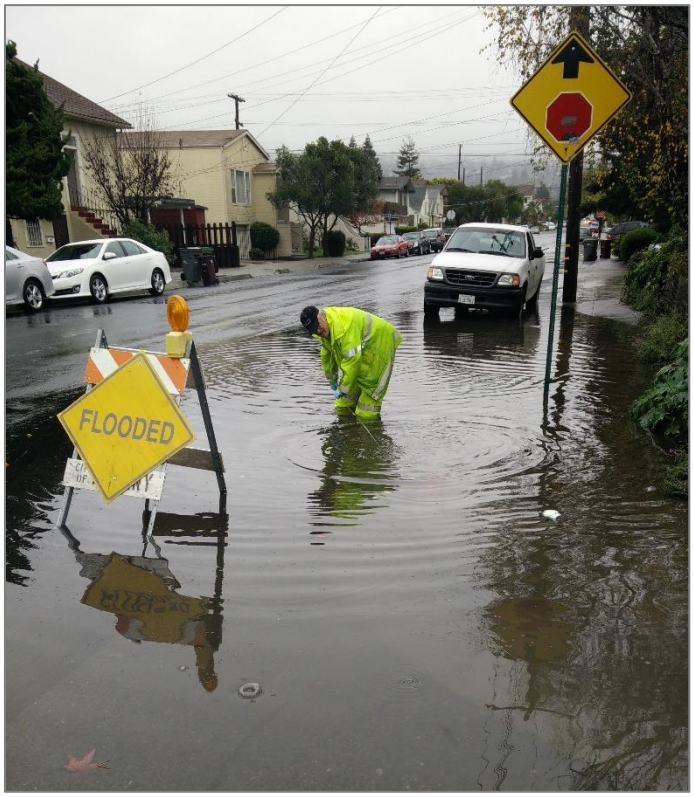
responsibility for the subsequent cleanup.

Flooding

Hazard Profile

The primary water courses in the City of Albany have the potential to flood at irregular intervals, generally in response to a succession of intense winter rainstorms. Storm patterns of warm moist air usually occur between early November and late March. A series of such weather events can cause severe flooding in the City. Major regional roadways and highways could be blocked, preventing critical access for many residents and critical functions. Additionally, it is possible that blockage caused by floating debris along the stream course could push water out of the projected floodplain and into to neighboring streets and roads.

Currently, relatively small areas of Albany along local creeks and San Francisco Bay are subject to periodic flooding. Due to the sequential pattern of meteorological conditions needed to cause serious flooding, it is unusual for a flood to occur without warning. Warning times for floods can be between 24 and 48 hours.



Flooding on Albany roadway
Photo courtesy of City of Albany General Plan

Previous Events

In recent history, there have been isolated areas that have suffered property damage due to flooding:

- The 1000th block of Curtis and Neilson Streets reported to the City that drainage problems had become chronic during wet weather months. The City mitigated this situation in 2007-2008 with the construction of improved storm drains.

- In extreme rain conditions, chronic flooding out of Codornices Creek has been reported along Eastshore Highway and the Union Pacific railroad tracks. The Union Pacific Railroad mitigated the situation with the construction of larger culverts underneath their tracks.

Secondary Hazards

Climate Change

Climate change is expected to exacerbate flooding through storms and more intense periods of rainfall. Sea level rise also has the potential to increase coastal flooding. Predictions are that global climate change will increase the elevation of San Francisco Bay, and that the frequency and extent of short term, temporary coastal floods will increase. Eventually, permanent daily tidal inundation will be reached. With Albany's older stormwater drainage system, processing the water from the predicted higher tides and larger storms could lead to significant increases in both coastal and urban flooding and flood damage, as higher water levels in tidal creeks and flood control channels will reduce capacity to discharge rainfall runoff. While some creeks already flood when rainstorms coincide with high tides, rising sea levels will cause flooding during smaller, more frequent rainfall events.

Seismically-Related Flood Hazards

A number of flood hazards are specifically associated with earthquakes, including tsunamis, seiches, and dam or tank failure.

While Albany would not be prone to flooding from dam failure, the City could be impacted by the failure of East Bay Municipal Utility District's (EBMUD) Berryman Reservoir. The Reservoir is a large underground tank located near Codornices Park in the North Berkeley Hills. Tank failure would cause water to flow west in the area between Cedar and Virginia Streets through Berkeley, and then north along the Eastshore Highway through the western part of Albany to the Codornices Creek channel. The risk has been reduced by the replacement of the former reservoir with a steel tank as part of EBMUD's seismic improvement program.

Vulnerability

Population

Individuals and families living along the projected floodplain as well as businesses residing along the projected floodplain are of extra concern for this hazard.

Property

FEMA National Flood Insurance Program

The National Flood Insurance Program (NFIP) makes federally-backed flood insurance available to homeowners, renters, and business owners in participating communities. For most participating communities, FEMA has prepared a detailed Flood Insurance Study (FIS). The study estimates water surface elevations for floods of various magnitudes, including the 1-percent annual chance flood (the 100-year flood) and the 0.2-percent annual chance flood (the 500-year flood). Base flood elevations and the boundaries of the 100- and 500-year floodplains are shown on Flood Insurance Rate Maps (FIRMs), which are the principle tool for identifying the extent and location of the flood hazard.

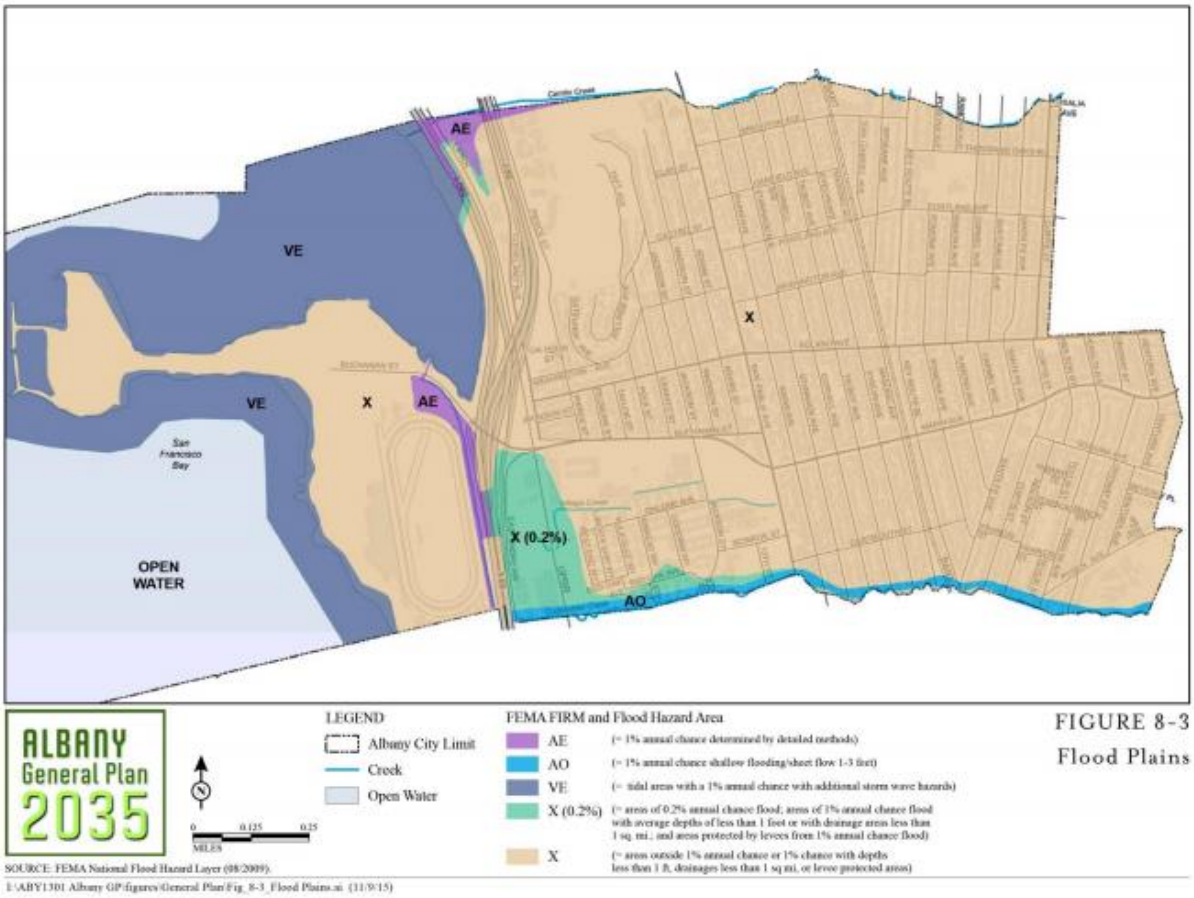


Image courtesy of the City of Albany General Plan

Specific areas of the City have been designated by FEMA as 100-year flood hazard areas, which means there is a one-percent chance of flooding in these areas in any given year. Based on current infrastructure, most of the flooding that could occur in the City is expected on the San Francisco Bay shoreline and around Codornices Creek and Cerrito Creek:

- The shoreline areas west of Interstate 80 (I-80) are FEMA-designated 100-year flood hazard areas (i.e. areas with a one percent chance of flooding during any given year), susceptible to coastal flooding with velocity hazard (wave action) at an elevation of nine feet. The westernmost region of the Albany Bulb has been designated Zone X, an area with a one percent chance flood with average depths of less than one foot, drainage areas less than one square mile, and/or an area protected by levees.
- The area along Codornices Creek is a FEMA-designated 100-year flood hazard zone (Zone AO – area of alluvial fan flooding to a depth of two feet). Flooding associated with the creek stretches from the City's eastern border for approximately 1.4 miles until the terminus at San Francisco Bay. The inundation zone includes the area two feet in elevation above the creek. Codornices Creek flows through a culvert under I-80 and is directed north adjacent to the highway. The area west of I-80 and east of Golden Gate Fields Race Track along the channel is also within the FEMA 100-year flood hazard zone. The area between approximately the Union Pacific Railroad and I-80 near the Cornices Creek is a FEMA-designated 500-year flood hazard zone (i.e. an area with a 0.2 percent chance of flooding during any given year).
- The area along Cerrito Creek is a FEMA-designated 100-year flood hazard zone (Zone AE – area subject to inundation by the one-percent-annual-chance flood event determined by detailed methods). This area encompasses the channel banks from Adams Street to approximately 0.5 miles to the east near the creek terminus at San Francisco Bay. This area is surrounded by a FEMA-designated 500-year flood hazard zone.

A repetitive loss property is an insurable property for which two or more claims of more than $1,000 were paid by NFIP within any rolling ten-year period. A severe repetitive loss property includes four or more claims of more than $5,000 paid by the NFIP. The City does not have any repetitive loss or severe repetitive loss properties.

Economy

While few businesses are at risk of flooding, the Golden Gate Fields racetrack could be inundated.

Critical Facilities

Although flooding is possible in Albany, emergency assets in the City are located outside the floodplain. A significant flood will principally affect transportation networks, potentially limiting access to Golden Gate Fields and the local highway and railways. This would compromise the ability for residents to get around or leave the City and for resources to be shipped into the area by rail or truck.

Mitigation & Response

The City has adopted flood damage prevention regulations to reduce potential risks. The Municipal Code identifies areas of flood hazard and requires that a Flood Zone Permit be obtained before any construction or other development occurs in these areas. Before issuing a permit to build in the FEMA mapped 1% areas, the City requires new buildings and those undergoing substantial improvements to be elevated to protect against damage by the 100-year flood. In addition, new construction must demonstrate that it does not aggravate existing flood problems or increase damage to other properties. The Code identifies methods of flood proofing and minimizing the potential for flood damage when a permit is issued.

Local Capabilities

Current local capabilities include floodplain maps provided by FEMA and flood damage prevention regulations detailed in the Municipal Code. In addition, the Public Works Department ensures that storm drain inlets and culverts are maintained and cleaned regularly.

The Community Development Department will continue to implement FEMA regulations that restrict development in floodplains. The Community Development Department will also collaborate with the Public Works Department to encourage the installation of green infrastructure for natural management of stormwater and storm-induced flooding. Funding for green infrastructure may be included in the City's annual budget process.

Landslides

Hazard Profile

A landslide occurs when masses of rock, earth, or debris move down a slope. They are most commonly caused by earthquakes or heavy sustained rainfall. Slope material that becomes saturated with water may develop into a debris flow or mud flow. The resulting slurry of rock and mud may pick up trees, houses and cars. They can flow rapidly, striking with little or no warning.

Landslides are caused by one or a combination of the following factors:

- Change in slope of terrain
- Increased load on the land
- Shocks and vibrations
- Change in water content
- Groundwater movement

- Frost action
- Weathering of rocks
- Removing or changing the type of vegetation covering slopes

Most sloping land has some landslide potential. The risks tend to be greatest where the land has characteristics that contribute to the risk of the downhill movement of material. The risk of landslide hazards is increased when a number of contributing factors are present, including:

- A slope greater than 33 percent
- A history of landslide activity or movement during the last 10,000 years
- Active earthquake faults
- Stream or wave activity, which has caused erosion, undercut a bank, or cut into a bank to cause the surrounding land to be unstable
- Water saturation
- The presence of an alluvial fan, indicating vulnerability to the flow of debris or sediments
- Weak, unconsolidated or shallow soils
- The presence of impermeable soils, such as silt or clay, which are mixed with granular soils such as sand and gravel
- Extensive grading and vegetation removal from fires or development activity

Given the geography of the City of Albany, there is only one specific area of concern related to the hazard of landslides and mass movement events. The area in blue on the below map, located on Albany Hill, highlights both the location and extent of land vulnerable to mass movements and potential landslides (See the Earthquake Section in reference to secondary hazards resulting from earthquake events).

MAP EXPLANATION

Zones of Required Investigation:

Liquefaction

Areas where historical occurrence of liquefaction, or local geological, geotechnical and ground-water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

Earthquake-Induced Landslides

Areas where previous occurrence of landslide movement, or local topographic, geological, geotechnical and subsurface water conditions indicate a potential for permanent ground displacements such that mitigation as defined in Public Resources Code Section 2693(c) would be required.

NOTE: Seismic Hazard Zones identified on this map may include developed land where delineated hazards have already been mitigated to city or county standards. Check with your local building/planning department for information regarding the location of such mitigated areas.

Image courtesy of California Department of Conservation's Geological Survey

Assessing the geology, vegetation, and amount of predicted precipitation for an area can help predict landslides. However, there is no practical warning system for individual

landslides. The current standard operating procedure is to monitor situations on a case-by-case basis. Generally accepted warning signs for landslide activity include:

- Springs, seeps, or saturated ground in areas that have not typically been wet before
- New cracks or unusual bulges in the ground, street pavements, or sidewalks
- Soil moving away from foundations
- Ancillary structures such as decks and patios tilting and/or moving relative to the house
- Tilting or cracking of concrete floors and foundations
- Broken water lines and other underground utilities
- Leaning telephone poles, trees, retaining walls, or fences
- Offset fence lines
- Sunken or down-dropped road beds
- Rapid increase in creek water levels, possibly accompanied by increased turbidity (soil content)
- Sudden decrease in creek water levels though rain is still falling or just recently stopped
- Sticking doors and windows, and visible open spaces indicating jambs and frames out of plumb

Previous Events

No significant landslides have been recorded in Albany, but extensive landslides have occurred 24 times in the Bay Area since 1950, approximately once every three years.

Climate Change Impacts

Climate change could change the behavior of winter storms. The regional models project fairly similar precipitation totals in the Bay Area, but the variability season to season may increase. If winters are compressed, with more rain falling in fewer months, or if individual years are more extreme, the chance of rainfall-induced landslides will increase. Additionally, if fires burn greater portions of landslide-vulnerable hillsides, removing vegetation and increasing storm runoff, the landslide probability will increase.

Vulnerability

Population

Localized areas of Albany Hill face risk from landslide, and a major slide could endanger lives of individuals and families living in these areas.

Property
Landslides also have the potential to destabilize the foundation of structures, which may result in monetary loss for residents.

Homes on Albany Hill
Photo courtesy of City of Albany General Plan

Economy
Landslides can block access to roads, which can isolate residents and businesses and delay commercial, public, and private transportation. This could result in economic losses for businesses.

Critical Infrastructure
There are no critical facilities located within the landslide zone. Other potential problems resulting from landslides include power and communication failures. Vegetation or poles on Albany Hill can be knocked over, resulting in possible losses to power and communication lines.

Environment
Environmental problems because of mass movements can be numerous. Landslides that fall into streams may significantly impact fish and wildlife habitat and affecting water quality. Hillsides that provide wildlife habitat can be lost for prolonged periods of time due to landslides.

Mitigation & Response
For private properties on Albany Hill, site-specific geotechnical analysis and mitigation measures will continue to be required when construction is proposed.

Local Capabilities

Current local capabilities include the California Department of Conservation map highlighting the location and extent of land vulnerable to potential landslides along with mitigation guidelines established in the Municipal Code. Specifically, the City's Residential Hillside Development District policy establishes standards and requirements for appropriate hillside development on Albany Hill that reduces the likelihood of earth movement on unstable terrain in order to protect the health and safety of the community. In addition, construction requirements include the submittal of General Conditions Report on any known soil and geological conditions regarding soil deposits, rock formations, faults, groundwater, and landslides in the vicinity of the project.

To improve local capabilities, site-specific geotechnical analysis and mitigation measures may be required if construction is proposed for private properties on Albany Hill. In addition, the Fire Department will provide training regarding landslide safety through the CERT program. The CERT program will be included in the City's annual budget process.

Public Health Epidemic

Hazard Profile

Biological threats can range from widespread pandemic and regional outbreaks to purposefully targeted bioterrorism. Viruses, bacteria, and toxins all pose as threats to our health; the number of outbreaks per year has more than tripled, with the number of new diseases per decade nearly quadrupling over the past 60 years. Globalization, more efficient modes of traveling, and climate change are all factors contributing to a growing number of disease vectors carrying pathogens around the world. This rapid spread of disease can affect humans and other species.

The World Health Organization defines pandemic as the worldwide spread of a new disease. Misinformation about vaccines, the absence of a clear plan for coordination among federal agencies such as the U.S. Agency for International Development and the Defense Department, and a need to improve public awareness about the threat posed by a biologic outbreak are among the factors that make the possibility of large and deadly pandemics increasingly likely. In addition, the risk of pandemic continues to be pushed forward as the anti-vaccine movement encourages parents to refuse vaccination of their children, resulting in higher risks of infection and dispersal of diseases.

Infectious diseases remain major causes of illness, disability, and death around the world. New infectious agents and diseases are being discovered regularly, and some diseases considered under control have reemerged in recent years.

While Albany has not directly experienced any pandemics or viral outbreaks, the City recognizes that the risk is present. Key naturally-occurring biological hazards of concern include Bird Flu, Ebola, Enterovirus, Influenza, Measles, Middle East Respiratory Syndrome, West Nile Virus, and Zika Virus.

Previous Events

Worldwide pandemics of influenza occur when a novel virus emerges to which the population has little immunity. The swine flue outbreak in 2009 and the measles outbreak in 2015 were also of concern. More recently, many states have experienced an increase in the hepatitis A virus, as well as mosquito-borne viruses such as Zika and West Nile.

Climate Change Impacts

According to the World Health Organization (WHO), changes in infectious disease transmission patterns are a likely major consequence of climate change. Some existing health threats will intensify and new health threats will emerge. Warmer average temperatures can mean longer warm seasons, earlier spring seasons, shorter and milder winters, and hotter summers. These conditions can be more hospitable for many carriers of vector-borne diseases. Additionally, an unstable climate, more extreme heat days, and air pollution all increase health risks. WHO estimates an additional 250,000 deaths per year will be caused by climate change between 2030 and 2050.

Vulnerability

Seasonal influenza is a yearly occurrence that kills primarily persons aged 65 and older and those of any age with certain chronic health conditions, and causes significant economic impact. Significant economic disruption can occur due to loss of employee work time and costs of treating or preventing spread of the flu and other illnesses.

Mitigation & Response

Protecting people from the human and economic costs associated with disease is a core public health function. The California Department of Public Health (CDPH) is the lead planning agency in the state, which coordinates the public health response to an epidemic or pandemic with local health departments, the healthcare community, the federal government, and other key partners. General communicable disease prevention strategies focus on increasing immunization against vaccine-preventable diseases, tuberculosis control, preventing infection with blood-borne pathogens, decreasing transmission of sexually transmitted diseases, and improving laboratory capacity.

Part IV: Risk Assessment

Risk assessment is the process of measuring the potential loss of life, personal injury, economic injury, and property damage resulting from natural hazards. It allows emergency management personnel to establish early response priorities by identifying potential hazards and vulnerable assets.

Risk Assessment Criteria

Risks were determined by evaluating the probability of occurrence of each hazard and the potential severity of impacts on people, property, and the local economy. Numerical impact factors were assigned to hazards based on the criteria in the table below.

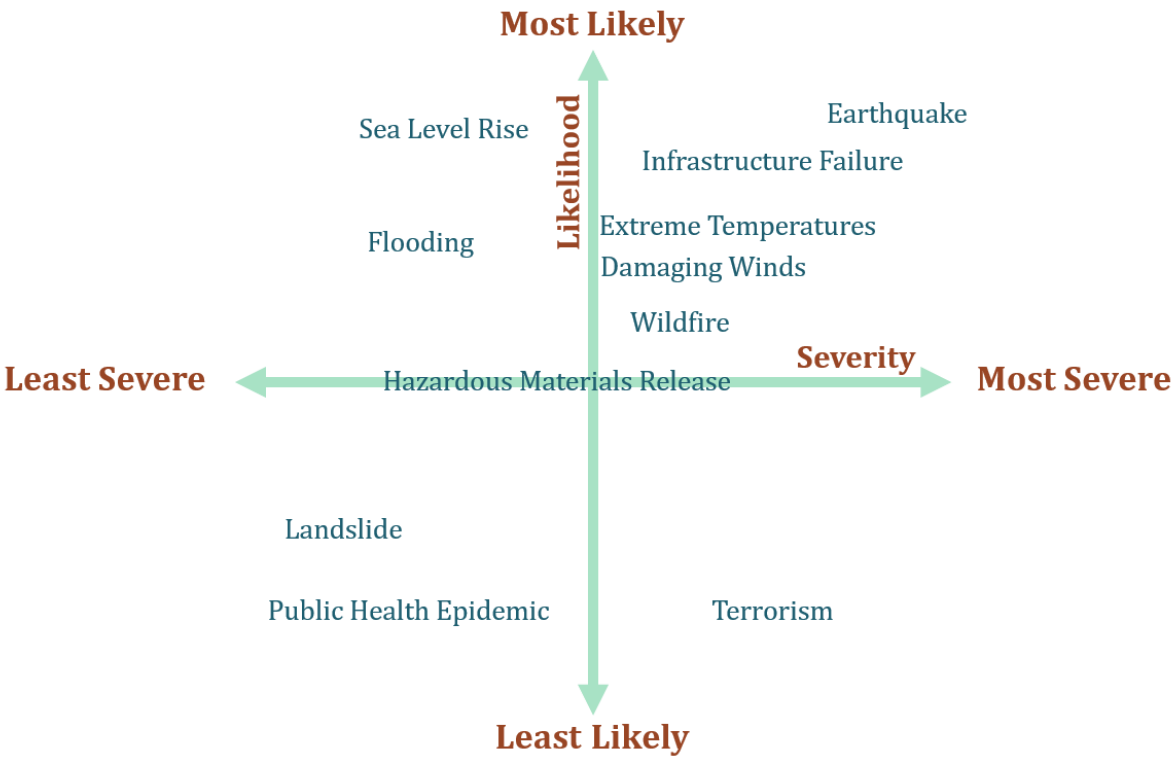
Impact	Level of Concern	Risk Factor	Criteria
Probability	High	3	Hazard event is likely to occur within 25 years
	Medium	2	Hazard event is likely to occur within 100 years
	Low	1	Hazard event is not likely to occur within 100 years
	No Impact	0	There is no probability of occurrence
Population	High	3	50%-100% of the population is exposed
	Medium	2	25%-49% of the population is exposed
	Low	1	1%-25% of the population is exposed
	No Impact	0	None of the population is exposed
Property	High	3	30%-100% of the total property is exposed
	Medium	2	15%-29% of the total property is exposed
	Low	1	1%-14% of the total property is exposed
	No Impact	0	No property is exposed
Economy	High	3	Hazard will have major impact on local and regional economy
	Medium	2	Hazard will have moderate impact on local and regional economy
	Low	1	Hazard will have minor impact on local economy
	No Impact	0	No impact on local economy

Hazard Risk Assessment & Ranking

The risk assessment below uses the criteria above to estimate risk. Hazards are then ranked by potential risk.

Hazard	Probability	Severity			Total	Ranking
		Population	Property	Economy		
Earthquake	3	3	3	3	12	**1**
Infrastructure Failure	3	3	2	2	10	**2**
Extreme Temperatures	2	2	3	1	8	**3**
Damaging Winds	2	2	3	1	8	**4**
Wildfire	2	1	2	2	7	**5**
Terrorism	1	3	1	2	7	**6**
Sea Level Rise	3	1	1	2	7	**7**
Hazardous Materials Release	2	2	0	2	6	**8**
Flooding	2	1	1	1	5	**9**
Landslide	1	1	1	1	4	**10**
Public Health Epidemic	1	2	0	0	3	**11**

The following is a visual representation of risk for each of the hazards identified.



Part V: Mitigation Strategies & Action Plan

Mitigation Strategies

The mitigation strategies outlined in the table below aim to achieve the following goals:

1. Educate the public on the risk from natural hazards and increase awareness, preparation mitigation, response, and recovery activities
2. Prevent (or discourage) new development in hazardous areas or ensure that if building occurs in high-risk areas it is done in such a way as to minimize risk
3. Ensure all structures meet minimum standards for life safety
4. Provide/improve flood protection with flood control structures and drainage maintenance plans
5. Strengthen codes and their enforcement so that new construction can withstand the impacts of natural hazards and lessen the impact of that development on the environment's ability to absorb the impact of natural hazards
6. Consider the impacts of natural hazards in all planning mechanisms that address current and future land uses within the City
7. Retrofit, acquire, or relocate identified high-risk structures, including those known to experience repetitive losses
8. Establish a partnership among all levels of government and the business community to improve and implement methods to protect property

Mitigation actions were prioritized by staff and stakeholders using FEMA's STAPLEE planning process. Seven key criteria were considered:

1. Social acceptance
2. Technical feasibility
3. Administrative capacity
4. Political support
5. Legal authority
6. Economic feasibility
7. Environmental benefit

This prioritization method helped staff develop mitigation measures that are realistic, well-supported, and cost-effective.

The following table identifies mitigation strategies for each hazard or for multiple hazards and establishes the responsible agency, implementation timeline, and funding source for each measure.

Hazard	Recommended Mitigation Action	Responsible Agency	Timeline	Funding
All Hazards	Maintain an active and effective City of Albany emergency response and recovery program that provides direction and identifies responsibilities following a disaster	City of Albany Fire Department	Ongoing	City of Albany Fire Department
	Develop and expand the CERT program and other local efforts to organize and train area residents, businesses, and City employees so they can assist themselves and others during the first 72 hours following a major disaster, and focus on assisting vulnerable populations	City of Albany Fire Department	2018	City of Albany Fire Department
	Update the Emergency Operations Plan to save lives and minimize damage to the community's most at-risk populations	City of Albany Fire Department	2018	City of Albany Fire Department
	Encourage residents and businesses to purchase and maintain emergency supplies	City of Albany Fire Department and Public Information Officer	2019	City of Albany Fire Department
	Advocate for local gas, electric, cable, water, sewer, and other utility providers to maintain and retrofit their facilities and ensure their ability to function or be quickly restored following a disaster	City of Albany Community Development Department, PG&E, EBMUD	2019	City of Albany Community Development Department
	Ensure that future development is sited, designed, and constructed to minimize risks associated with all hazards	City of Albany Community Development Department	Ongoing	City of Albany Community Development Department

	Advocate to keep Alta Bates Summit Medical Center open in Berkeley as an acute care hospital including emergency care	City of Albany City Council Subcommittee	Ongoing	City of Albany General Fund
	Continue to test and utilize emergency notification system and increase usership	City of Albany Fire Department and Public Information Officer	2019	City of Albany Fire Department
Public Health Epidemic	Perform periodic emergency preparedness exercises to improve readiness for disasters	City of Albany Fire Department, Alameda County Department of Public Health	2019 and 2021	City of Albany Fire Department
Earthquake	Ensure that critical public facilities such as City Hall, schools, the police station, and the fire station are designed and maintained in a manner that guarantees their resilience to earthquakes	City of Albany Public Works Department	Ongoing	City of Albany Public Works Department
	Continue to provide fee waivers for earthquake retrofit projects on single-family homes	City of Albany Community Development Department	Ongoing	City of Albany Community Development Department
	Prepare a comprehensive soft-story retrofit ordinance and consider the possibility of incentives	City of Albany Community Development Department	2018-2019	City of Albany Community Development Department
	Increase City-wide earthquake awareness and preparedness	City of Albany Fire Department and Public Information Officer	2018	City of Albany Fire Department
Electrical Grid Failure	Encourage energy resilience via the installation/use of alternative power sources such as microgrids or battery storage	City of Albany Sustainability Division and Public Works Department,	2021-2022	City of Albany Sustainability Division and Public Works Department

		PG&E, East Bay Community Energy		
Pipeline Failure	Perform frequent and rigorous inspections and testing of aviation fuel pipeline and high-pressure natural gas pipelines (both large and small) which run through the City	City of Albany Community Development Department, PG&E, Kinder Morgan	Ongoing	City of Albany Community Development Department
IT Failure	Develop preparedness strategies to reduce the impact of an IT failure	City of Albany Information Systems Division	Ongoing	City of Albany Information Systems Division
	Develop an IT system malfunction alert and notification procedure	City of Albany Information Systems Division	Ongoing	City of Albany Information Systems Division
	Develop data backup and data redundancy processes and policies for data systems, including testing to ensure backups are functional	City of Albany Information Systems Division	Ongoing	City of Albany Information Systems Division
Water System Failure	Continue to perform outreach regarding water conservation	City of Albany Sustainability Division, EBMUD	Ongoing	City of Albany Sustainability Division
Landslide	Monitor Albany Hill for evidence of vulnerability to landslides	City of Albany Public Works and Community Development Departments	Ongoing	City of Albany Public Works and Community Development Departments
Severe Weather	Develop targeted outreach materials to raise awareness about extreme weather risks and ensure that preparedness and response information is available in the primary non-English languages spoken in the community	City of Albany Human Services Division and Public Information Officer	2018-2019	City of Albany Human Services Division

	Continue to provide services to people that are homeless in Albany	City of Albany Human Services Division	Ongoing	City of Albany Human Services Division
	Work with the County to expand capacity and publicize warming and cooling centers	City of Albany Recreation & Community Services Department, Human Services Division, and Alameda County	Ongoing	City of Albany Recreation & Community Services Department and Human Services Division
	Consider implications of severe weather in developing urban forestry planning and maintenance program	City of Albany Urban Forestry Program	Ongoing	City of Albany Urban Forestry Program
	Encourage planting of appropriate shade trees	City of Albany Urban Forestry Program and PG&E	Ongoing	City of Albany Urban Forestry Program
Wildfire	Implement vegetation management and fuel reduction programs in the highest hazard areas on the Albany Bulb and Albany Hill, including areas adjacent to homes and areas of heavy recreational use	City of Albany Fire and Public Works Departments	2018-2019	City of Albany Fire and Public Works Departments
	Develop ordinance and staffing to enforce vegetation management on private property on Albany Hill to minimize the risk of structure fires and threats to nearby properties	City of Albany Community Development Department	2020	City of Albany Community Development Department
	Advocate to ensure that peak load water supply and water pressure is sufficient to respond to local fire emergencies	City of Albany Fire Department, EBMUD	2019	City of Albany Fire Department

Terrorism	Adopt best practices for public areas and events	City of Albany Police, Recreation & Community Services, Fire, and Community Development Departments	2018	City of Albany Police, Recreation & Community Services, Fire, and Community Development Departments
Sea Level Rise	Collaborate with East Bay cities and organizations such as the Bay Area Regional Collaborative (BARC) Adapting to Rising Tides (ART) working group to develop goals and strategies to address sea level rise	City of Albany Community Development Department, East Bay Cities, Bay Area Regional Collaborative (BARC)	2018-2019	City of Albany Community Development Department
	Continue to conduct long-term adaptation planning to protect the Albany shoreline from sea level rise, including the development of a comprehensive climate adaptation and resilience plan as part of the Climate Action Plan update	City of Albany Community Development Department	Ongoing	City of Albany Community Development Department
	Continue working toward planning and implementation of shoreline improvements to the Albany Neck & Bulb	City of Albany Community Development Department and East Bay Regional Park District	Ongoing	City of Albany Community Development Department
Hazardous Materials Release	Adopt a shelter in place procedure as a public protective action for chemical emergencies	City of Albany Fire Department and Public Information Officer	2019	City of Albany Fire Department

	Continue to work with Stopwaste.org, the Alameda County Waste Management Authority, the Alameda County Environmental Health Department, and state and federal agencies to ensure the safe storage, handling, and disposal of hazardous materials	City of Albany Public Works Department and Sustainability Division, Stopwaste.org, Alameda County Waste Management Authority, Alameda County Environmental Health Department	Ongoing	City of Albany Public Works Department and Sustainability Division
Flooding	Ensure storm drain inlets and culverts are maintained and cleaned regularly	City of Albany Public Works Department	Ongoing	City of Albany Public Works Department
	Implement FEMA regulations that restrict development in floodplains	City of Albany Community Development Department	Ongoing	City of Albany Community Development Department
	Encourage green infrastructure for natural management of stormwater and storm-induced flooding and preserve/restore natural features of the watershed for both new and existing development	City of Albany Public Works and Community Development Departments	Ongoing	City of Albany Public Works and Community Development Departments

Plan Implementation & Maintenance

Plan Implementation

The City commits to either implement, advocate for, and/or seek funding for each of the hazard mitigation strategies listed in the table above within the next five years. The City of Albany Community Development Department will take lead responsibility for monitoring the plan's progress and tracking the plan's implementation over time. Plan implementation and evaluation will be a shared responsibility among all City departments and other agencies identified as lead agencies in the mitigation action plan.

Incorporation into Other Planning Mechanisms

The effectiveness of the hazard mitigation plan depends on its implementation and incorporation of its action items into existing plans, policies, and programs.

This Local Hazard Mitigation Plan will be incorporated into the next amendment to the City's General Plan. Other planning processes and programs to be coordinated with the recommendations of the hazard mitigation plan include the following:

Planning Mechanism	Information from LHMP
General Plan	The plan will be incorporated into future updates to the City's General Plan
Municipal Code	Some mitigation measures will require amendments to the City's Municipal Code, including the preparation of a soft-story ordinance and other earthquake and flood-related development requirements
Emergency Operations Plan	The plan sets the foundation for the Emergency Operations Plan, which describes how the City will respond to and recover from all hazards
Capital Improvement Plan	Retrofits to City facilities will be included in the Capital Improvement Plan
Budget Process	Mitigation strategies that require budgeting beyond regular programmatic funding will be incorporated into the City's two-year budget cycle
Climate Mitigation & Adaptation Plan	Climate change impacts of extreme weather, wildfires, landslides, and public

	health epidemics will be incorporated into the City's 2019 Climate Mitigation & Adaptation Plan
City Council Strategic Plan	Mitigation strategies will be used to determine strategic priorities annually
Economic Development Plan	Mitigation strategies related to resilient business and economic prosperity will be incorporated into the implementation of the Economic Development Plan
CERT	The Fire Department will develop and expand the City's CERT program to organize and train area residents, businesses, and City employees so they can assist themselves and others during the first 72 hours following a major disaster

As information that may enhance this plan becomes available from other planning mechanisms, that information will be incorporated via the update process.

Plan Maintenance

It is important that the City of Albany Hazard Mitigation Plan remains an active and relevant document and that the City maintains its eligibility for applicable funding sources. The Plan maintenance process includes a schedule for monitoring and evaluating the plan's effectiveness. The City's Chief Resilience Officer will take lead responsibility for monitoring, evaluating, and updating the plan. The Chief Resilience Officer will meet with responsible departments to assess progress and update the plan annually and produce and submit a revised plan to CalOES for review every five years.

The City of Albany's Hazard Mitigation Plan will be reviewed and updated as circumstances change and as required by federal and state agencies. A progress report will be produced annually to allow for a comprehensive description of updates. Updates will be brought to City Council for review and public input.

This review will include the following:

- Summary of any hazard events that occurred and the impact these events have had on the City
- Review of mitigation action plan progress

- Analysis of implementation challenges
- Reevaluation of the action plan priorities and timelines
- Necessary amendments or additions to list of mitigation strategies
- Review of relevant plans and programs
- Ongoing community engagement

Community members will continue to be involved in the plan maintenance process. City staff will make the plan available on the City website, provide regular status updates in the City e-newsletter, and allow for public comment prior to drafting the annual progress report. Community members will be able to provide feedback at public meetings or by contacting the Chief Resilience Officer via phone or email. Contact information for the Chief Resilience Officer will be available on the City website. Community members can also participate in hazard preparedness training through the City's CERT program.

Albany Police & Fire Departments at a Community Event
Photo courtesy of Peggy McQuaid

Appendix A: Additional References

ABAG Resilience Program. (2010). Retrieved from http://resilience.abag.ca.gov/

The ABAG Resilience Program assists Bay Area local governments and residents in planning for earthquakes, the effects of climate change, and other hazards. This resource was used to consider the full range of natural hazards that could potentially impact the City of Albany.

ABAG Resilience Program. (2013). Modified Mercalli Intensity Scale. Retrieved from http://resilience.abag.ca.gov/shaking/mmipopup/

The ABAG Modified Mercalli Intensity Scale estimates the intensity of shaking from an earthquake at a specific location or over a specific area by considering its effects on people, objects, and buildings. It was used to illustrate shaking intensity and potential damage to structures in the City of Albany.

ABAG Resilience Program. (December 2016). Wildfire Maps and Information. Retrieved from http://resilience.abag.ca.gov/wildfires/

The ABAG's wildfire maps and information webpage details exposure and probability of wildfires in the Bay Area and was used to prepare the wildfire hazard profile for the City of Albany.

ABAG Resilience Program. (January 2017). Alameda County Earthquake Hazard. Retrieved from http://resilience.abag.ca.gov/earthquakes/alameda/

The ABAG's Alameda County earthquake hazard webpage provides information on previous earthquakes in the county and illustrates the most damaging earthquake scenarios that may occur. It was used to prepare the earthquake hazard profile for the City of Albany.

Center for Disease Control and Prevention. (July 2016). Climate Effects on Health. Retrieved from https://www.cdc.gov/climateandhealth/effects/default.htm

The Center for Disease Control and Prevention's climate and health webpage provides fact sheets and infographics on the impacts of severe weather, wildfires, and other climate-related hazards on human health and wellness. This information was used to prepare the public health epidemic hazard profile and the population vulnerability subsections of other hazard profiles for the City of Albany.

City of Alameda. (June 2016). Local Hazard Mitigation Plan. Retrieved from https://alamedaca.gov/sites/default/files/department-files/2016-07-21/localhazardmitigationplan061716final.pdf

The City of Alameda Local Hazard Mitigation Plan was used to prepare all hazard profiles for the City of Albany, particularly in the context of location, probability, extent, and previous occurrences of hazards of concern for the City of Albany.

City of Albany. (April 2010). Climate Action Plan. Retrieved from http://www.albanyca.org/home/showdocument?id=11490

The City's Climate Action Plan outlines a vision, goals, and policies to reduce community-wide greenhouse gas emissions by 25% by the year 2020. Because climate change impacts can cause or exacerbate many of Albany's hazards of concern, the mitigation strategies have been directly guided by the Climate Action Plan.

City of Albany. (April 2016). General Plan. Retrieved from http://www.albanyca.org/departments/planning-zoning/albany-2035-general-plan

The City of Albany General Plan expresses the community's goals, visions, and policies relative to future public and private land uses and guides decisions about future growth and development. Background information from the General Plan was used to prepare the LHMP's City profile and the Environmental Hazards Element of the General Plan was used to determine critical facilities and perform a hazard risk assessment.

City of Albany. (February 2017). City Council Strategic Plan Update. Retrieved from http://www.albanyca.org/home/showdocument?id=29346

The City Council Strategic Plan identifies key issues, develops Council direction, establishes priorities, and sets goals and objectives to best focus the City's limited resources and capacity. The plan's goals and objectives were used to help inform the LHMP's mitigation strategies.

City of Albany. (January 2007). Local Hazard Mitigation Plan Annex. Retrieved from https://abag.ca.gov/bayarea/eqmaps/mitigation/Albany-Annex.pdf

The ABAG annex highlights the specific hazards listed in the multi-jurisdictional Local Hazard Mitigation Plan that are relevant to the City of Albany. The annex evaluates hazard exposure relative to land use, public infrastructure, and critical facilities. This information was used to prepare the hazard analysis section of the LHMP, specifically in regard to location, extent, and pervious occurrences.

City of Berkeley. (June 2014). Local Hazard Mitigation Plan. Retrieved from https://www.cityofberkeley.info/uploadedFiles/Fire/Level_3_-_General/2014%20LHMP.pdf

The City of Berkeley Local Hazard Mitigation Plan was used to prepare all hazard profiles for the City of Albany.

City of Emeryville. (October 2017). Local Hazard Mitigation Plan Update. Retrieved from https://www.ci.emeryville.ca.us/DocumentCenter/View/10132/Local-Hazard-Mitigation-Plan-Update-2017_Draftrev101017?bidId=

The City of Emeryville Local Hazard Mitigation Plan was used to prepare the public health epidemic hazard profile for the City of Albany.

City of Oakland. (June 2016). Local Hazard Mitigation Plan Update. Retrieved from http://www2.oaklandnet.com/oakca1/groups/ceda/documents/report/oak058455.pdf

The City of Oakland Local Hazard Mitigation Plan was used to prepare all hazard profiles for the City of Albany.

Contra Costa County. (May 2011). Hazard Mitigation Plan Update Volume 2: Planning Partner Annexes. Retrieved from http://www.co.contra-costa.ca.us/DocumentCenter/View/6025\

The Contra Costa County Hazard Mitigation Plan Update was used to provide regulatory context (see Appendix B) and background information on the Disaster Mitigation Act of 2000. It was also used to prepare some hazard profiles for the City of Albany.

East Bay Municipal Utility District. (October 2016). Local Hazard Mitigation Plan. Retrieved from http://www.ebmud.com/index.php/download_file/force/4165/220/?Final_Draft_-_2016_LHMP.pdf

The East Bay Municipal Utility District's Local Hazard Mitigation Plan was used to prepare the water system failure hazard profile for the City of Albany.

FEMA. (January 2013). Mitigation Ideas: A Resource for Reducing Risk to Natural Hazards. Retrieved from https://www.fema.gov/media-library-data/20130726-1904-25045-2423/fema_mitigation_ideas_final_01252013.pdf

The Mitigation Ideas document provides a resource for communities to identify and evaluate a range of potential mitigation actions for reducing risk to natural disasters. It was used to help prepare mitigation strategies for each hazard in the City of Albany and establish responsible agencies and implementation timelines for each measure.

FEMA. (March 2013). Local Mitigation Planning Handbook. Retrieved from https://www.fema.gov/media-library-data/20130726-1910-25045-9160/fema_local_mitigation_handbook.pdf

The Local Mitigation Planning Handbook provides instruction for developing plans to meet grant funding requirements and offers practical approaches and examples for communities to engage in effective planning. It was used as guidance in establishing a planning process, creating a risk assessment, outlining mitigation strategies, and developing a strategy for Plan maintenance.

FEMA. (October 2011). Local Mitigation Plan Review Guide. Retrieved from https://www.fema.gov/media-library-data/20130726-1809-25045-7498/plan_review_guide_final_9_30_11.pdf

The Local Mitigation Plan Review Guide provides guidance for Federal and State officials responsible for reviewing plans in a fair and consistent manner. It was used in coordination with CalOES during the initial LHMP review process to ensure that the plan met mitigation planning regulations.

FEMA. (September 2003). Integrating Manmade Hazards into Mitigation Planning. Retrieved from https://www.fema.gov/media-library-data/20130726-1524-20490-3869/howto7.pdf

This tool provides guidance to incorporate terrorism and technological hazards into all aspects of emergency management planning. It was used to prepare the human-caused hazard profiles for the City of Albany.

Four Twenty Seven Climate Solutions. (February 2017). City of Albany Draft Adaptation Report. Retrieved from: http://www.albanyca.org/home/showdocument?id=30797

The City's Draft Adaptation Plan was developed to respond to SB 379 requirements and promote a consistent approach to incorporating adaptation and resilience into relevant local plans in Alameda County. It includes projections of sea level rise in Albany by the end of the century, which were used to help determine the extent of specific hazards in the LHMP.

Governor's Office of Emergency Services. (April 2018). State of California Multi-Hazard Mitigation Plan. Retrieved from http://www.caloes.ca.gov/HazardMitigationSite/Documents/016-2018%20SHMP_Public%20Review%20Draft_April%202018_ENTIRE%20PLAN.pdf

The State of California Multi-Hazard Mitigation Plan addresses the impacts of disasters caused by natural, technological, accidental, and human-caused hazards in California. It was used to help identify hazards in the City of Albany, assess vulnerabilities, and determine timelines.

SFGate. (December 2013). Record-low temperatures hit Bay Area. Retrieved from https://www.sfgate.com/bayarea/article/Record-low-temperatures-hit-Bay-Area-5037740.php

SFGate is an online source for news and entertainment in the Bay Area. The information in this article helped define the severe weather hazard profile and illustrated previous severe weather (extreme cold) events.

SFGate. (July 2006). That Was the Wave That Was/Bay Area's string of hot days is longest on record. Retrieved from https://www.sfgate.com/news/article/THAT-WAS-THE-WAVE-THAT-WAS-Bay-Area-s-string-of-2492288.php

The information in this article helped define the severe weather hazard profile and illustrated previous severe weather (extreme heat) events.

Vizonomy Climate Risk Terminal. (2018). Retrieved from http://climate.vizonomy.com/

Vizonomy's Climate Risk Terminal is a tool that aggregates data from NOAA's Digital Coast, specifically the data sets required to account for economic losses from sea level rise, to increase awareness of climate risk. It was used to help determine the City of Albany's vulnerabilities associated with sea level rise.

World Health Organization. (February 2018). Climate change and health. Retrieved from http://www.who.int/en/news-room/fact-sheets/detail/climate-change-and-health

The World Health Organization's climate change and health webpage provides information on the impacts of extreme heat, natural disasters, and variable rainfall patterns on human health. This information was used to prepare the public health epidemic hazard profile and the population vulnerability subsections of other hazard profiles for the City of Albany.

Appendix B: Regulatory Context

Laws and Ordinances

Existing laws, ordinances, and plans at the federal, state, and local levels can support or impact hazard mitigation initiatives identified in this plan. Hazard mitigation plans are required by 44CFR to include a review and incorporation, if appropriate, of existing plans, studies, reports, and technical information as part of the planning process (Section 201.6.b(3)). Pertinent federal and state laws are described below.

Federal

The Disaster Mitigation Act (DMA) is the current federal legislation addressing hazard mitigation planning. It emphasizes planning for disasters before they occur. It specifically addresses planning at the local level, requiring plans to be in place before Hazard Mitigation Grant Program funds are available to communities. This Plan is designed to meet the requirements of DMA, improving the City's eligibility for future hazard mitigation funds. The Federal Endangered Species Act (ESA) was enacted in 1973 to conserve species facing depletion or extinction and the ecosystems that support them. The act sets forth a process for determining which species are threatened and endangered and requires the conservation of the critical habitat in which those species live. The ESA provides broad protection for species of fish, wildlife, and plants that are listed as threatened or endangered. Provisions are made for listing species, recovery plans, and the designation of critical habitat for listed species. The ESA outlines procedures for federal agencies to follow when taking actions that may jeopardize listed species and contains exceptions and exemptions. It is the enabling legislation for the Convention on International Trade in Endangered Species of Wild Fauna and Flora. Criminal and civil penalties are provided for violations of the ESA and the Convention.

Federal agencies must seek to conserve endangered and threatened species and use their authorities in furtherance of the ESA's purposes. The ESA defines three fundamental terms:

- **Endangered** means that a species of fish, animal, or plant is "in danger of extinction throughout all or a significant portion of its range." (For salmon and other vertebrate species, this may include subspecies and distinct population segments.)
- **Threatened** means that a species "is likely to become endangered within the foreseeable future." Regulations may be less restrictive for threatened species than for endangered species.
- **Critical habitat** means "specific geographical areas that are…essential for the conservation and management of a listed species, whether occupied by the species or not."

Five sections of the ESA are of critical importance to understanding it:

- Section 4: **Listing of a Species**—The National Oceanic and Atmospheric Administration Fisheries Service (NOAA Fisheries) is responsible for listing marine species; the U.S. Fish and Wildlife Service is responsible for listing terrestrial and freshwater aquatic species. The agencies may initiate reviews for listings, or citizens may petition for them. A listing must be made "solely on the basis of the best scientific and commercial data available." After a listing has been proposed, agencies receive comment and conduct further scientific reviews for 12 to 18 months, after which they must decide if the listing is warranted. Economic impacts cannot be considered in this decision, but it may include an evaluation of the adequacy of local and state protections. Critical habitat for the species may be designated at the time of listing.
- Section 7: **Consultation**—Federal agencies must ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of a listed or proposed species or adversely modify its critical habitat. This includes private and public actions that require a federal permit. Once a final listing is made, non-federal actions are subject to the same review, termed a "consultation." If the listing agency finds that an action will "take" a species, it must propose mitigations or "reasonable and prudent" alternatives to the action; if the proponent rejects these, the action cannot proceed.
- Section 9: **Prohibition of Take**—It is unlawful to "take" an endangered species, including killing or injuring it or modifying its habitat in a way that interferes with essential behavioral patterns, including breeding, feeding or sheltering.
- Section 10: **Permitted Take**—Through voluntary agreements with the federal government that provide protections to an endangered species, a non-federal applicant may commit a take that would otherwise be prohibited as long as it is incidental to an otherwise lawful activity (such as developing land or building a road). These agreements often take the form of a "Habitat Conservation Plan."
- Section 11: **Citizen Lawsuits**—Civil actions initiated by any citizen can require the listing agency to enforce the ESA's prohibition of taking or to meet the requirements of the consultation process.

With the listing of salmon and trout species as threatened or endangered, the ESA has impacted most of the Pacific Coast states. Although some of these areas have been more impacted by the ESA than others due to the known presence of listed species, the entire region has been impacted by mandates, programs, and policies based on the presumption

of the presence of listed species. Most West Coast jurisdictions must now take into account the impact of their programs on habitat.

The Clean Water Act

The federal Clean Water Act (CWA) employs regulatory and non-regulatory tools to reduce direct pollutant discharges into waterways, finance municipal wastewater treatment facilities, and manage polluted runoff. These tools are employed to achieve the broader goal of restoring and maintaining the chemical, physical, and biological integrity of the nation's surface waters so that they can support "the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water."

Evolution of CWA programs over the last decade has included a shift from a program-by-program, source-by-source, pollutant-by-pollutant approach to more holistic watershed-based strategies. Under the watershed approach, equal emphasis is placed on protecting healthy waters and restoring impaired ones. A full array of issues is addressed – not just those subject to CWA regulatory authority. Involvement of stakeholder groups in the development and implementation of strategies for achieving and maintaining water quality and other environmental goals is a hallmark of this approach.

National Flood Insurance Program

The National Flood Insurance Program (NFIP) provides federally backed flood insurance in exchange for communities enacting floodplain regulations. Participation and good standing under NFIP are prerequisites to grant funding eligibility under the Robert T. Stafford Act. The city and most of the partner cities for this update participate in the NFIP and have adopted regulations that meet the NFIP requirements. At the time of the preparation of this update, all participating jurisdictions in the partnership were in good standing with NFIP requirements.

As part of its effort to comply with the requirements of the NFIP, Albany has adopted a number of floodplain management measures into the City Code. For example, a flood zone permit shall be obtained before construction or development begins within any area of special flood hazard. All new construction and substantial improvements shall be constructed with flood resistant materials as specified by FEMA and using methods and practices that minimize flood damage. Because Albany has abided by and enforced federal flood insurance program requirements since 1979, flood insurance claims have been low.

California General Planning Law

California state law (Cal. Gov. Code §65300 et seq.) requires that every county and city prepare and adopt a comprehensive long-range plan to serve as a guide for community

development. The general plan expresses the community's goals, visions, and policies relative to future public and private land uses. The general plan forms the basis for most local government land use decision-making. It must consist of an integrated and internally consistent set of goals, policies, and implementation measures. In 2016, the City Council adopted an undated General Plan.

California Environmental Quality Act

The California Environmental Quality Act (CEQA) was passed in 1970 to institute a statewide policy of environmental protection. CEQA requires state and local agencies in California to follow a protocol of analysis and public disclosure of the potential environmental impacts of public and private projects that result in a physical change to the environment.. CEQA makes environmental protection a mandatory part of every California state and local agency's decision-making process.

Assembly Bill 162: Flood Planning

This California State Assembly Bill, passed in 2007, requires cities and counties to address flood-related matters in the land use, conservation, and safety and housing elements of their general plans. The land use element must identify and annually review the areas covered by the general plan that are subject to flooding as identified in floodplain mapping by either FEMA or the California Department of Water Resources (DWR). Upon the next revision of the housing element, the conservation element of the general plan must identify rivers, creeks, streams, flood corridors, riparian habitat, and land that may accommodate floodwater for the purposes of groundwater recharge and storm water management. The safety element must identify information regarding flood hazards including:

- Flood hazard zones;
- Maps published by FEMA, DWR, the U.S. Army Corps of Engineers, the Central Valley Flood Protection Board, Cal EMA, etc.;
- Historical data on flooding;
- Existing and planned development in flood hazard zones. The general plan must establish goals, policies and objectives to protect from unreasonable flooding risks including:
    - Avoiding or minimizing the risks of flooding new development;
    - Evaluating whether new development should be located in flood hazard zones;
    - Identifying construction methods to minimize damage.

Assembly Bill 162 establishes procedures for the determination of available land suitable for urban development, which may exclude lands where FEMA or DWR has determined that the flood management infrastructure is not adequate to avoid the risk of flooding.

Assembly Bill 2140: General Plans: Safety Element

This bill provides that the state may allow for more than 75 percent of public assistance funding under the California Disaster Assistance Act only if the local agency is in a jurisdiction that has adopted a local hazard mitigation plan as part of the safety element of its general plan. The local hazard mitigation plan needs to include elements specified in the legislation. In addition, this bill requires Cal EMA to give federal mitigation funding preference to cities and counties that have adopted such plans. The intent of the bill is to encourage cities and counties to create and adopt hazard mitigation plans.

Assembly Bill 70: Flood Liability

This bill provides that a city or county may be required to contribute a fair and reasonable share to compensate for property damage caused by a flood to the extent that it has increased the state's exposure to liability for property damage by unreasonably approving new development in a previously undeveloped area that is protected by a state flood control project, unless the city or county meets specified requirements.

Assembly Bill 32: The California Global Warming Solutions Act

Assembly Bill 32 establishes a state goal of reducing greenhouse gas emissions to 1990 levels by 2020 (a reduction of approximately 25 percent from forecast emission levels) with further reductions to follow. The law requires the state Air Resources Board to do the following:

- Establish a program to track and report greenhouse gas emissions.
- Approve a scoping plan for achieving the maximum technologically feasible and cost-effective reductions from sources of greenhouse gas emissions.
- Adopt early reduction measures to begin moving forward.
- Adopt, implement and enforce regulations—including market mechanisms such as "cap and trade" programs—to ensure that the required reductions occur.

The Air Resources Board recently adopted a statewide greenhouse gas emissions limit and an emissions inventory, along with requirements to measure, track, and report greenhouse gas emissions by the industries it determined to be significant sources of greenhouse gas emissions.

Senate Bill 97: Guidelines for Greenhouse Gas Emissions

Senate Bill 97, enacted in 2007, amends the CEQA to clearly establish that greenhouse gas emissions and their effects are appropriate subjects for CEQA analysis. It directs the Governor's Office of Planning and Research to develop draft CEQA guidelines for the

mitigation of greenhouse gas emissions or their effects and directs the California Natural Resources Agency to certify and adopt the CEQA guidelines.

California State Building Code

California Code of Regulations Title 24 (CCR Title 24), also known as the California Building Standards Code, is a compilation of building standards from three sources:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes;
- Building standards that have been adopted and adapted from national model code standards to meet California conditions;
- Building standards authorized by the California legislature that constitute extensive additions not covered by the model codes, adopted to address particular California concerns.

The state Building Standards Commission is authorized by California Building Standards Law (Health and Safety Code Sections 18901 through 18949.6) to administer the processes related to the adoption, approval, publication, and implementation of California's building codes. These building codes serve as the basis for the design and construction of buildings in California. The national model code standards adopted into Title 24 apply to all occupancies in California except for modifications adopted by state agencies and local governing bodies. Since 1989, the Building Standards Commission has published new editions of Title 24 every three years.

Standardized Emergency Management System

CCR Title 19 establishes the Standardized Emergency Management System (SEMS) to standardize the response to emergencies involving multiple jurisdictions. SEMS is intended to be flexible and adaptable to the needs of all emergency responders in California. It requires emergency response agencies to use basic principles and components of emergency management. Local governments must use SEMS in order to be eligible for state funding of response-related personnel costs under CCR Title 19 (Sections 2920, 2925 and 2930). Individual agencies' roles and responsibilities contained in existing laws or the state emergency plan are not superseded by these regulations.

California State Hazard Mitigation Plan

Under the DMA, California must adopt a federally approved state multi-hazard mitigation plan in order to be eligible for certain disaster assistance and mitigation funding. The intent

of the California State Hazard Mitigation Plan is to reduce or prevent injury and damage from hazards through the following:

- Documenting statewide hazard mitigation planning in California;
- Describing strategies and priorities for future mitigation activities;
- Facilitating the integration of local and tribal hazard mitigation planning activities into statewide efforts;
- Meeting state and federal statutory and regulatory requirements.

The plan is an annex to the State Emergency Plan, and it identifies past and present mitigation activities, current policies and programs, and future mitigation strategies. The plan will be updated annually to reflect changing conditions and new information, especially information on local planning activities.

Governor's Executive Order S-13-08

Governor's Executive Order S-13-08 enhances the state's management of climate impacts from sea level rise, increased temperatures, shifting precipitation and extreme weather events. There are four key actions in the executive order:

- Initiate California's first statewide climate change adaptation strategy to assess expected climate change impacts, identify where California is most vulnerable, and recommend adaptation policies by early 2009. This effort will improve coordination within state government so that better planning can more effectively address climate impacts on human health, the environment, the state's water supply and the economy.
- Request that the National Academy of Science establish an expert panel to report on sea level rise impacts in California, to inform state planning and development efforts.
- Issue interim guidance to state agencies for how to plan for sea level rise in designated coastal and floodplain areas for new projects.
- Initiate a report on critical infrastructure projects vulnerable to sea level rise.

Appendix C: Internal Planning Meetings

Date	Purpose	Attendees
4/28/2016	Initial Project Meeting	Claire Griffing, Sustainability Coordinator Jeff Bond, Community Development Director Josh Friedkin, EDSET Intern
6/9/2016	Project Kick-Off Meeting	Claire Griffing, Sustainability Coordinator Jeff Bond, Community Development Director Lance Calkins, Fire Chief
6/20/2016	Initial Research Meeting	Claire Griffing, Sustainability Coordinator Sophie Gabel-Scheinbaum, Community Development Intern
6/24/2016	Research Meeting	Claire Griffing, Sustainability Coordinator Sophie Gabel-Scheinbaum, Community Development Intern
7/13/2016	LHMP Check-In Meeting	Claire Griffing, Sustainability Coordinator Jeff Bond, Community Development Director Sophie Gabel-Scheinbaum, Community Development Intern
7/14/2016	Vulnerability Assessment/Climate Adaptation Meeting	Claire Griffing, Sustainability Coordinator Sophie Gabel-Scheinbaum, Community Development Intern Yoon Kim, Four Twenty Seven, Inc. Debra Kaufman, Stopwaste
10/26/2016	Initial LHMP Onboarding Meeting	Claire Griffing, Sustainability Coordinator Fanny Yang, CivicSpark Fellow
10/31/2016	LHMP Check-In Meeting	Claire Griffing, Sustainability Coordinator

		Fanny Yang, CivicSpark Fellow
2/22/2017	Meeting to Review Draft Background Information	Claire Griffing, Sustainability Coordinator Fanny Yang, CivicSpark Fellow
3/28/2017	Meeting to Review Community Survey	Claire Griffing, Sustainability Coordinator Jeff Bond, Community Development Director Fanny Yang, CivicSpark Fellow
8/21/2017	Project Update and Transition Plan	Claire Griffing, Sustainability Coordinator Jeff Bond, Community Development Director Fanny Yang, CivicSpark Fellow
9/18/2017	Initial LHMP Onboarding Meeting	Claire Griffing, Sustainability Coordinator Chelsea Polevy, CivicSpark Fellow
9/25/2017	Meeting to Finalize Draft LHMP	Claire Griffing, Sustainability Coordinator Jeff Bond, Community Development Director Chelsea Polevy, CivicSpark Fellow
10/3/2017	Council Meeting Debrief and Next Steps	Claire Griffing, Sustainability Coordinator Jeff Bond, Community Development Director Chelsea Polevy, CivicSpark Fellow
10/6/2017	Research Meeting	Claire Griffing, Sustainability Coordinator Chelsea Polevy, CivicSpark Fellow Russell Trutane, EDSET Intern
10/20/2017	Public Safety Meeting	Claire Griffing, Sustainability Coordinator Mike McQuiston, Chief of Police Chelsea Polevy, CivicSpark Fellow

12/18/2017	Fire Department Draft Review Meeting	Claire Griffing, Sustainability Coordinator Lance Calkins, Fire Chief Chelsea Polevy, CivicSpark Fellow
12/22/2018	Information Systems Hazard Assessment Meeting	Claire Griffing, Sustainability Coordinator Chelsea Polevy, CivicSpark Fellow Victor Mba, Information Systems Analyst
1/2/2018	Police Department Draft Review Meeting	Claire Griffing, Sustainability Coordinator Mike McQuiston, Chief of Police Chelsea Polevy, CivicSpark Fellow
1/2/2018	Graphic Design Meeting	Claire Griffing, Sustainability Coordinator Chelsea Polevy, CivicSpark Fellow Doug Donaldson
1/2/2018	Final Draft Review Meeting	Claire Griffing, Sustainability Coordinator Jeff Bond, Community Development Director Chelsea Polevy, CivicSpark Fellow
1/9/2018	Council Meeting Debrief and Next Steps	Claire Griffing, Sustainability Coordinator Jeff Bond, Community Development Director Chelsea Polevy, CivicSpark Fellow

Appendix D: Community Meetings

Date	Meeting	Description
4/20/2016	Sustainability Committee Meeting	Initial discussion about LHMP planning process and Committee's role in public outreach for the plan
9/20/2016	Sustainability Committee Meeting	Update on LHMP progress
3/1/2017	Sustainability Committee Meeting	Review of Community Survey; identified hazards for inclusion in the survey and made edits to the survey design
5/3/2017	Sustainability Committee Meeting	Review of Community Survey responses
9/27/2017	CERT Training/Meeting	Presentation and review of draft plan
10/2/2017	City Council Work Session	Council review of draft plan (provided comments and edits)
1/8/2018	City Council Meeting	Final review of plan (provided comments and edits)

SUSTAINABILITY COMMITTEE
REGULAR MEETING

City Hall Council Chambers, 1000 San Pablo Avenue
Wednesday, April 20, 2016 – 7:30 p.m.

1. CALL TO ORDER

2. ROLL CALL

3. APPROVAL OF MINUTES

A. Approve minutes from March 16, 2016 meeting

4. PUBLIC COMMENT

For persons desiring to address the Commission/Committee/Board on an item that is not on the agenda please note that each speaker is limited to three (3) minutes. The Brown Act limits the Committee's ability to take and/or discuss items that are not on the agenda; therefore, such items are normally referred to staff for comment or to a future agenda.

5. ANNOUNCEMENTS/COMMUNICATIONS

- **New committee member introduction**
- **Alameda County Community Choice Energy (CCE) update**
- **Adaptation planning**

6. DISCUSSIONS AND POSSIBLE ACTION ON MATTERS RELATED TO THE FOLLOWING ITEMS:

A. Building Energy Assessment and Disclosure Ordinance
Recommendation: Discuss policy matrix and next steps.

B. Discuss CAP funding
Recommendation: Discuss Council feedback and next steps.

C. Resolution endorsing a Federal Carbon Fee and Dividend Policy
Recommendation: That Council pass the attached resolution.

D. Arts & Green Festival Subcommittee update
Recommendation: Information only. No action required.

E. Update on sustainable features of City Public Works facility
Recommendation: Provide feedback on plans.

7. FUTURE AGENDA ITEMS

(Commission/Committee/Board Member announcement of requests for future agenda items. No public comment will be taken on announcement of future agenda items).

Possible future agenda items:
- BayREN PACE Regional Collaborative Services Agreement (May)
- Update on green building reach codes (May)
- Discussion of ad hoc subcommittees (May)
- Parking study update (June)
- 2035/2050 targets – CAP 2.0, adaptation, consumption-based inventories
- UUT reform
- Schools subcommittee update

A. Next regular meeting – May 18, 2016

8. ADJOURNMENT

The Committee agenda is available for public inspection at the Albany Community Center/Library, Senior Center and City Hall. The agenda and supporting staff reports, if available, can be found on our web page at www.albanyca.org. Please note that if you provide your name and address when speaking before the Committee it will become part of the official public record, which will be posted on the Internet. Agenda related writings or documents provided to a majority of the Sustainability Committee regarding any item on this agenda will be made available for public inspection in the Community Development Department, 1000 San Pablo Avenue, Albany CA.

In compliance with the Americans with Disabilities Act (ADA), and State Law, if you need special assistance to participate in this meeting, please contact the City Administration Office 510-528-5710. Notification 48 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting (28 CFR 35.102.104 ADA Title II)". Upon request, we will provide written agenda materials in appropriate alternate formats, of disability related modification or accommodation, including auxiliary aids or services to enable individuals with disabilities to participate in public meetings. *Please deliver a written request, including your name, mailing address, phone number and brief description of the requested materials and preferred alternative format or auxiliary aid or service at least two (2) days before the meeting. Request should be sent to: City Clerk, 1000 San Pablo Avenue, Albany, CA 94706.*

SUSTAINABILITY COMMITTEE
REGULAR MEETING

City Hall Council Chambers, 1000 San Pablo Avenue
Tuesday, September 20, 2016 – 7:30 p.m.

1. CALL TO ORDER

2. ROLL CALL

3. APPROVAL OF MINUTES

A. Approve minutes from July 20, 2016 meeting

4. PUBLIC COMMENT

For persons desiring to address the Commission/Committee/Board on an item that is not on the agenda please note that each speaker is limited to three (3) minutes. The Brown Act limits the Committee's ability to take and/or discuss items that are not on the agenda; therefore, such items are normally referred to staff for comment or to a future agenda.

5. ANNOUNCEMENTS/COMMUNICATIONS

- **Update on items to Council**

6. DISCUSSIONS AND POSSIBLE ACTION ON MATTERS RELATED TO THE FOLLOWING ITEMS:

F. Alameda County Community Choice Energy (CCE) update
Recommendation: Information only. No action required.

G. Arts & Green Festival update
Recommendation: Information only. No action required.

H. Discuss Building Energy Assessment and Disclosure Ordinance
Recommendation: Review draft ordinance and provide input and recommendation to Council.

I. Update on green building reach codes
Recommendation: Information only. No action required.

J. CAP Implementation Subcommittee and pilot study update
Recommendation: Information only. No action required.

K. Schools Subcommittee update
Recommendation: Information only. No action required.

L. Discussion of committee role in recommending resolutions
Recommendation: Information only. No action required.

M. Consumption based inventory update
Recommendation: Information only. No action required.

7. FUTURE AGENDA ITEMS

(Commission/Committee/Board Member announcement of requests for future agenda items. No public comment will be taken on announcement of future agenda items).

Possible future agenda items:
- Parking study update
- 2035/2050 targets – CAP 2.0 and adaptation

B. Next regular meeting – Tuesday, October 18, 2016

Please note date change. Sustainability Committee meetings will now be held on the third Tuesday of the month.

8. ADJOURNMENT

The Committee agenda is available for public inspection at the Albany Community Center/Library, Senior Center and City Hall. The agenda and supporting staff reports, if available, can be found on our web page at www.albanyca.org. Please note that if you provide your name and address when speaking before the Committee it will become part of the official public record, which will be posted on the Internet. Agenda related writings or documents provided to a majority of the Sustainability Committee regarding any item on this agenda will be made available for public inspection in the Community Development Department, 1000 San Pablo Avenue, Albany CA.

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SUSTAINABILITY COMMITTEE
SPECIAL MEETING

City Hall Council Chambers, 1000 San Pablo Avenue
Wednesday, March 1, 2017 – 7:30 p.m.

PLEASE NOTE DATE CHANGE: SUSTAINABILITY COMMITTEE MEETINGS WILL NOW BE HELD ON THE FIRST WEDNESDAY OF THE MONTH

1. CALL TO ORDER

2. ROLL CALL

3. APPROVAL OF MINUTES

3-1. Approve minutes from February 1, 2017 meeting

4. PUBLIC COMMENT

For persons desiring to address the Commission/Committee/Board on an item that is not on the agenda please note that each speaker is limited to three (3) minutes. The Brown Act limits the Committee's ability to take and/or discuss items that are not on the agenda; therefore, such items are normally referred to staff for comment or to a future agenda.

5. ANNOUNCEMENTS/COMMUNICATIONS

5-1. BEADO update
5-2. East Bay Community Energy update
5-3. Update on green building reach codes
5-4. CAP 2.0 and Adaptation Plan update

6. DISCUSSIONS AND POSSIBLE ACTION ON MATTERS RELATED TO THE FOLLOWING ITEMS:

6-1. Discussion of 2017-2019 Work Plan
Recommendation: Adopt 2017-2019 Work Plan.

6-2. Discussion of Local Hazard Mitigation Plan
Recommendation: Provide input on local hazards.

6-3. Staff report on deep decarbonization and fuel switching
Recommendation: Information only. No action required.

6-4. Review of draft Parking Management Plan
Recommendation: Make recommendation to City Council to accept the report.

6-5. Report from Climate Action Subcommittee
Recommendation: Information only. No action required.

6-6. Report from Schools Subcommittee

Recommendation: Information only. No action required.

7. FUTURE AGENDA ITEMS

(Commission/Committee/Board Member announcement of requests for future agenda items. No public comment will be taken on announcement of future agenda items).

Possible future agenda items include:

- CAP 2.0 & Adaptation (April)
- Background on 2017/2018 and 2018/2019 budget process (April)
- Green infrastructure update

7-1. Next regular meeting – Wednesday, April 5, 2017

8. ADJOURNMENT

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SUSTAINABILITY COMMITTEE
SPECIAL MEETING

City Hall Council Chambers, 1000 San Pablo Avenue
Wednesday, May 3, 2017 – 7:30 p.m.

1. CALL TO ORDER

2. ROLL CALL

3. APPROVAL OF MINUTES

A. Approve minutes from March 1, 2017 meeting

4. PUBLIC COMMENT

For persons desiring to address the Commission/Committee/Board on an item that is not on the agenda please note that each speaker is limited to three (3) minutes. The Brown Act limits the Committee's ability to take and/or discuss items that are not on the agenda; therefore, such items are normally referred to staff for comment or to a future agenda.

5. ANNOUNCEMENTS/COMMUNICATIONS

5-1. East Bay Clean Energy Update
5-2. Update on Utility User Tax Restructuring Proposal (UUTr)
5-3. Climate Action Plan 2.0 Update
5-4. Update on Green Building Reach Codes
5-5. Council Action on 2017-2019 Work Plan

6. DISCUSSIONS AND POSSIBLE ACTION ON MATTERS RELATED TO THE FOLLOWING ITEMS:

6-7. Arts & Green Festival Update
Recommendation: Information only. No action required.

6-8. Discussion of Local Hazard Mitigation Plan Survey Results
Recommendation: Information only. No action required.

6-9. Report on Grant for Electric Vehicle Charging Stations
Recommendation: Provide recommendation to Council to approve grant application.

6-10. Report on Building Energy Assessment and Disclosure Ordinance (BEADO) Presentation to Realtor's Association
Recommendation: Information only. No action required.

6-11. Report from Climate Action Subcommittee
Recommendation: Information only. No action required.

6-12. Report from Schools Subcommittee
Recommendation: Information only. No action required.

6-13. Report on Proposed Park & Ride Lot Under I-80/Buchanan Intersection
Recommendation: Information only. No action required.

6-14. Information on Plan Bay Area 2040

Recommendation: Information only. No action required.

7. FUTURE AGENDA ITEMS

(Commission/Committee/Board Member announcement of requests for future agenda items. No public comment will be taken on announcement of future agenda items).

Possible future agenda items include:

- Fuel switching update (June)
- Background on 2017/2018 and 2018/2019 budget process (June)
- CAP 2.0 & Adaptation
- Green infrastructure update

B. Next regular meeting – Wednesday, June 7, 2017

8. ADJOURNMENT

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CITY OF ALBANY

CITY COUNCIL AGENDA
CITY COUNCIL CHAMBER, 1000 SAN PABLO AVENUE
MONDAY, OCTOBER 2, 2017

We, the members of the Albany City Council, recognize that many in our community are hurting and fearful as a result of the recent national election. Thus, we would like to take this opportunity to reaffirm that we welcome and value all of our diverse community members regardless of where they are from, who they love, how they worship, how they look, their abilities, or how they vote.

We invite the entire Albany community to join with us in creating a safe and welcoming city; one in
which we celebrate our differences and learn from each other; one in which we are proud to raise our children.

"Diversity is not about how we differ. Diversity is about embracing one another's uniqueness". Ola Joseph

7:30 p.m.

CALL TO ORDER

1. PLEDGE OF ALLEGIANCE

2. ROLL CALL

3. CEREMONIAL MATTERS

3-1. Proclamation in Honor of October 2017 as National Chiropractic Health Month

Staff recommendation: that the Council approve the proclamation in honor of October 2017 as National Chiropractic Health Month

4. REPORT ON ACTION TAKEN IN CLOSED SESSION, IF ANY

5. CONSENT CALENDAR

(Consent Calendar items are considered to be routine by the City Council and will be enacted by one motion. By approval of the Consent Calendar, the staff recommendations will be adopted unless otherwise modified by the City Council. There will be no separate discussion on these items unless a Council Member or a member of the audience requests removal of the items from the Consent Calendar.)

5-1. Minutes, September 18, 2017

Staff recommendation: Approve

5-2. Ratification of Payroll - Payroll Period: 9/29/17; Net Payroll: $291,692.28; Taxes, Benefits, Withholdings: $232,294.69; Total: $523,986.97

Staff recommendation: Ratify

5-3. Ratification of Bills, Claims and Demands - Ratification of bills, claims and demands against the City of Albany in the amount of: $459,753.09

Staff recommendation: Ratify

5-4. Request for Proposals for an Operational and Organizational Assessment of the City's Finance Department

Staff recommendation: that the Council:

Authorize the release of a Request for Proposals for an Operational and Organizational Assessment of the City's Finance Department; and

Designate the Mayor and Vice Mayor to serve on a consultant selection panel

5-5. Proposed Zoning Code Amendments to Section 20.16.020 "Residential Use Classifications" and Section 20.28 "Off-Street Parking and Loading Regulations" of the Albany Municipal Code

Staff recommendation: that the Council adopt Ordinance No. 2017-06 approving amendments to Section 20.16.020 "Residential Use Classifications" and Section 20.28 "Off-Street Parking and Loading Regulations" of the Albany Municipal Code- Second Reading - Pass to print

5-6. Proclamation in Honor of Freedom from Workplace Bullies Week

Staff recommendation: that the Council approve the proclamation in honor of freedom from workplace bullies week

5-7. Letter of Opposition: Senate Bill 523

Mayor McQuaid recommendation: that the Council authorize submittal of a letter of opposition to Senate Bill 523

5-8. Mayor McQuaid Request to use the City Council Chambers

Staff recommendation: that the Council approve the Mayor's Request to use the Council Chambers October 4th from 4 – 5PM

6. GOOD OF THE CITY/PUBLIC FORUM/ANNOUNCEMENTS

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7. COUNCIL MEMBER REPORTS ON STATE/REGIONAL LOCAL MEETINGS ATTENDED AND ANNOUNCEMENT OF FUTURE MEETINGS/CITY MANAGER REPORT/COMMENTS

(Council Member reports on State, regional, local bodies to which they are appointed by the City Council.)

7-1. Mayor McQuaid Report on Meetings Attended

8. PRESENTATION

9. PUBLIC HEARING

10. UNFINISHED BUSINESS

11. NEW BUSINESS

11-1. Resolution No. 2017-76 CIP Project No. 21000 - FY 2016-2020 Annual Street Rehabilitation Project amendment to include a street segment to be funded by the Road Repair and Accountability Act of 2017 (SB 1)

Staff recommendation: that the Council:

Adopt Resolution No. 2017-76 amending the FY17/18 budget of CIP Project No. 21000 – FY2016-2020 Annual Street Rehabilitation Project to include rehabilitation of Evelyn Street between Garfield Ave and Portland Ave and identifying funds in the expected amount of $106,000 from the newly established SB1 RMRA as the funding source for the work; and

Authorize a call for bids for the project

11-2. Local Hazard Mitigation Plan

Staff recommendation: that the Council review and comment on the draft Local Hazard Mitigation Plan

12. OTHER BUSINESS, ANNOUNCEMENT OF EVENTS/FUTURE AGENDA ITEMS

(Council and staff announcements: Council Member announcement of requests for future agenda items. No public comment will be taken on announcement of future agenda items).

12-1. Upcoming City Events
Bay Area Sunshares Workshop, Tuesday, October 3, 6 PM – South Berkeley Senior Center, 2939 Ellis Street, Berkeley

National Coffee with a Cop Day, Wednesday, October 4, 8:30 AM – Royal Ground Coffee

Friends of Albany Parks Clean-up Day, Saturday, October 7, 9AM - Tot Lot

Household Hazardous Waste Collection Event, Sunday, October 8, 9AM – Golden Gate Fields Parking lot – register online: www.stopwaste.org/HHW

Annual Albany Fire House Pancake Breakfast, Saturday, October 14, 8AM – Albany Fire Department

Energy Upgrade Workshop, Tuesday, October 17, 6PM - Community Center

Halloween Carnival, Friday, October 27, 6:30 PM, Community Center

12-2. Upcoming City Meetings

Economic Development Committee, Thursday, October 5, 5PM, City Hall Conference Room

Arts Committee, Monday, October 9, 7 PM, City Hall Council Chamber

Planning & Zoning Commission, Wednesdays, October 11 & 25, 7 PM, City Hall Council Chamber

Parks & Recreation Commission, Thursday, October 12, 7 PM, City Hall Council Chamber
City Council, Monday, October 16, 7:30 PM, City Hall Council Chamber

Community Media Access Committee, Monday, October 23, 6 PM, City Hall Council Chamber

Traffic & Safety Commission, Thursday, October 26, 7 PM, City Hall Council Chamber

13. ADJOURNMENT

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NOTICE

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CITY OF ALBANY

CITY COUNCIL AGENDA
CITY COUNCIL CHAMBER, 1000 SAN PABLO AVENUE
MONDAY, JANUARY 8, 2018

We, the members of the Albany City Council, recognize that many in our community are hurting and fearful as a result of the recent national election. Thus, we would like to take this opportunity to reaffirm that we welcome and value all of our diverse community members regardless of where they are from, who they love, how they worship, how they look, their abilities, or how they vote.

We invite the entire Albany community to join with us in creating a safe and welcoming city; one in
which we celebrate our differences and learn from each other; one in which we are proud to raise our children.

"Diversity is not about how we differ. Diversity is about embracing one another's uniqueness". Ola Joseph

7:30 p.m.

CALL TO ORDER

1. PLEDGE OF ALLEGIANCE

2. ROLL CALL

3. CEREMONIAL MATTERS

3-1. Certificate of Appreciation – Recognition of Council Member Pilch for his service as Vice Mayor

4. REPORT ON ACTION TAKEN IN CLOSED SESSION, IF ANY

5. CONSENT CALENDAR

(Consent Calendar items are considered to be routine by the City Council and will be enacted by one motion. By approval of the Consent Calendar, the staff recommendations will be adopted unless otherwise modified by the City Council. There will be no separate discussion on these items unless a Council Member or a member of the audience requests removal of the items from the Consent Calendar.)

5-1. Minutes, December 4, 2017
Staff recommendation: Approve

5-2. Ratification of Payroll - Payroll Period: 12/8/17; Net Payroll: $357,800.89; Taxes, Benefits, Withholdings: $402,313.36; Total: $760,114.25

Payroll Period: 12/21/17; Net Payroll: $333,055.40; Taxes, Benefits, Withholdings: $336,801.44; Total: $669,856.84

Staff recommendation: Ratify

5-3. City Council Member Appointments: Community Media Access Committee - Juan Mesa appointed by Council Member Pilch and Chloe Gray-Stapleton appointed by Vice Mayor Nason; Social & Economic Justice Commission – Nicole Daro appointed by Council Member Barnes.

Staff recommendation: Information only

5-4. Proclamation Designating January 2018 as Human Trafficking Awareness Month

Staff recommendation: that the Council adopt a Proclamation Designating January 2018 as Human Trafficking Awareness Month

5-5. Letters of Opposition – Restoring Internet Freedom Draft Order

Mayor McQuaid recommendation: that the Council note and file the letter as submitted

5-6. Letters of Opposition – HR38, Concealed Carry Reciprocity Act of 2017

Mayor McQuaid recommendation: that the Council note and file the letter as submitted

5-7. Letters of Support – Reauthorization of Funding for the Children's Health Insurance Program (CHIP)

Mayor McQuaid recommendation: that the Council authorize submittal of letters of support regarding the reauthorization of funding for the Children's Health Insurance Program to Senators Feinstein and Harris

5-8. Extension of Arts Committee 2016-2018 Public Art Projects Plan (PAPP)

Arts Committee recommendation: that the Council approve the request by the Arts Committee for an extension of the 2016-2018 Public Art Projects Plan until the end Fiscal Year 2019 and additional Art in Public Places funds in the amount of $750 to implement a Fall into Haiku program in the Fall of 2018

Staff recommendation: that the Council adopt Resolution No. 2018-6 to approve the extension of the Arts Committee Public Art Projects Plan until June 30, 2019 and allocate additional Art in Public Places funds in an amount not to exceed $750 for the implementation of a Fall into Haiku program in 2018

5-9. Second Amendment to Agreement for City Attorney Services

Mayor McQuaid recommendation: that the Council adopt Resolution No. 2018-10 approving the proposed Second Amendment to the Agreement for City Attorney Services between the City of Albany and the Law Offices of Craig Labadie ("Second Amendment") and authorize the Mayor to execute the Second Amendment on behalf of the City

5-10. Agreement with Matrix Consulting to conduct an Operational and Organizational Assessment of the City's Finance Department

Staff recommendation: that the Council adopt Resolution No. 2018-1, Authorizing the Interim City Manager to enter into an agreement with Matrix Consulting to conduct an Operational and Organizational Assessment for the City's Finance Department

5-11. CIP Project 22000 – Annual Sidewalk Rehabilitation, Extension of Consultant Services Contract No. 17-3 and Budget Adjustments

Staff recommendation: that Council adopt Resolution No. 2018-3:

Authorizing the Interim City Manager to extend design services (Contract No. C17-3) with Campbell CAD for an additional amount not to exceed $10,000 for a new total contract ceiling of $30,740 and extends the term of the contract by an additional six months
Approve adjustments to the project budget as detailed in Exhibit A – Budget Adjustments CIP No. 22000

5-12. CIP Project No. 21000 – Annual Pavement Rehabilitation, 2015 Project Closeout (C15-12) and Project Budget Adjustments

Staff recommendation: that the Council adopt Resolution 2018-8:

Accepting the improvements completed in the 2015 Pavement Rehabilitation Project (Contract No. C15-12) and authorizing the filing of the Notice of Completion with the County Recorder's Office; and

Authorizing the Interim City Manager to execute Change Order #5 in the amount of $184,519.72 to closeout Contract No. C15-12

Approve budget adjustments including an increase in the FY 15/16 project in the amount of $15,866 from the Measure F Storm Drain Fund (2006)

5-13. CIP Project No. 32000 – Annual Sewer Rehabilitation, FY15/16 Project Closeout (C16-7), Project Budget Adjustments and Authorization of Redesign and Construction

Staff recommendation: that the Council adopt Resolution No. 2018-4:

Accepting the improvements completed in the FY15/16 Sanitary Sewer Rehabilitation Project (Contract No. C16-7) and authorizing the filing of the Notice of Completion with the County Recorder's Office; and

Approve adjustments to the project budget as detailed in Exhibit B – Budget Adjustments CIP No. 32000; and

Authorize re-design and call for bids for the section of sewer along Key Route that was removed from the FY15/16 project

5-14. Mayor McQuaid Request to use the Community Center Hall Room

Staff recommendation: that the Council approve the Mayor's Request to use the Community Center Hall Room on Wednesday, March 7, 2018 for a community meeting focused on recognizing and preventing sexual assault and harassment

5-15. Resolution Authorizing Amendments to the Salary Schedule for Various Part-Time Unrepresented Employee Classifications to comply with State of California Minimum Wage Increase

Staff recommendation: that the Council adopt Resolution No. 2018-11 approving the new salary ranges

5-16. Project Charter with the Alameda County Transportation Commission for the San Pablo Avenue Corridor Project

Staff recommendation: that the Council adopt Resolution No. 2018-9 authorizing the Interim City Manager to enter into a Project Charter with the Alameda County Transportation Commission for the San Pablo Avenue Corridor Project

6. GOOD OF THE CITY/PUBLIC FORUM/ANNOUNCEMENTS

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7. COUNCIL MEMBER REPORTS ON STATE/REGIONAL LOCAL MEETINGS ATTENDED AND ANNOUNCEMENT OF FUTURE MEETINGS/CITY MANAGER REPORT/COMMENTS

(Council Member reports on State, regional, local bodies to which they are appointed by the City Council.)

7-1. Council Member Maass Report on Meetings Attended

8. PRESENTATION

9. PUBLIC HEARING

10. UNFINISHED BUSINESS

10-1. Local Hazard Mitigation Plan for 2018-2022

Staff recommendation: that the Council adopt Resolution No. 2018-2 Adopting the City of Albany Local Hazard Mitigation Plan for 2018-2022

10-2. Update on implementation of a non-binding Rent Review program

Staff recommendation: that the Council receive an update on the Request for Proposals for Rent Review Program Services, information on key elements of a rent review program, and direct staff to develop the first draft of a non-binding rent review program ordinance in coordination with the City's Social & Economic Justice Commission

11. NEW BUSINESS

11-1. Albany Loop – Proposed public art work on the Ohlone Greenway

Arts Committee recommendation: **t**hat the Council approve the Albany Loop public art work by Groundworks for installation on the Ohlone Greenway

Staff recommendation: that the Council adopt Resolution No. 2018-5, authorizing the Interim City Manager to enter into a contract agreement for the commission of artwork with Groundsworks, not to exceed $40,000, for the creation and installation of the Albany Loop public art work, on the Ohlone Greenway at the corner of Portland and San Gabriel Avenues

12. OTHER BUSINESS, ANNOUNCEMENT OF EVENTS/FUTURE AGENDA ITEMS

(Council and staff announcements: Council Member announcement of requests for future agenda items. No public comment will be taken on announcement of future agenda items).

12-1. Upcoming City Events

Martin Luther King Commit to Serve Expo, Monday, January 8 – Tuesday, January 16, 2018, Community Center

12-2. Upcoming City Meetings

Planning & Zoning Commission, Wednesday, January 10, 7 PM, City Hall Council Chamber

Parks & Recreation Commission, Thursday, January 11, 7 PM, City Hall Council Chamber

Arts Committee, Tuesday, January 16, 7 PM, City Hall Council Chamber
Sustainability Committee, Wednesday, January 17, 7:30 PM, City Hall Council Chamber

Community Media Access Committee, Monday, January 22, 6 PM, City Hall Council Chamber

12-3. The next Regular Meeting of the City Council will be held on Monday, January 22, 2018

13. ADJOURNMENT

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Appendix E: Community Survey

City of Albany Local Hazards Survey

Dear Community Members:

The City of Albany is seeking community input for our Local Hazard Mitigation Plan (LHMP). The purpose of the LHMP is to (1) be compliant with FEMA requirements and (2) identify the City's natural, environmental and man-made hazards and develop a risk assessment and mitigation plan for those hazards. This plan will result in better emergency management during an event as well as identify projects that could potentially reduce risks in the community. With a plan in place, we can prioritize projects and the City will continue to be eligible to obtain FEMA Hazard Mitigation Grant Funds if a disaster is declared.

This public opinion survey will help inform our mitigation planning process. Please note, all survey responses must be received by Friday, April 21, 2017. The draft plan will be presented at several public meetings for additional input.

Thank you for your participation in this important planning process!

1. Please select your level of concern for each of the following natural or man-made hazards. Please also indicate if you have experienced the hazard.

	1 - Not concerned	**2**	**3** - Somewhat concerned	**4**	**5** - Extremely concerned	Have experienced
Drought and water shortage	☐	☐	☐	☐	☐	☐
Electric grid failure	☐	☐	☐	☐	☐	☐
Flooding (including sea level rise)	☐	☐	☐	☐	☐	☐
Hazardous materials release (from stationary source, trail derailment, etc)	☐	☐	☐	☐	☐	☐
Landslide	☐	☐	☐	☐	☐	☐
Major earthquake	☐	☐	☐	☐	☐	☐
Natural gas explosion	☐	☐	☐	☐	☐	☐
Public health epidemic	☐	☐	☐	☐	☐	☐
Severe weather (extreme temperatures, high winds, etc)	☐	☐	☐	☐	☐	☐
Violent crime / Terrorism (armed attack, biological, cyber, etc)	☐	☐	☐	☐	☐	☐
Wildfire	☐	☐	☐	☐	☐	☐

Please list other hazards you are concerned about.

2. Have you experienced property damage as a result of the 2016-2017 winter storms?

- ◯ Yes
- ◯ No
- ◯ Don't know

3. If yes, what kind of damage did your property experience? Please check all that apply.

- [ ] Flooding/water damage
- [ ] Wind damage
- [ ] Tree or limb fell
- [ ] Utility infrastructure damage

Other (please specify)

City of Albany Local Hazards Survey

4. How prepared do you feel you are for emergencies?

◯ Very Prepared ◯ Somewhat Prepared ◯ Not At All Prepared ◯ Don't Know

5. How prepared do you think people in your neighborhood are for emergencies?

◯ Very Prepared ◯ Somewhat Prepared ◯ Not At All Prepared ◯ Don't Know

6. Which of the following items do you have stored at home? Please check all that apply.

- [ ] Flashlight
- [ ] Radio
- [ ] Bottled water
- [ ] Packaged food
- [ ] First Aid Kit
- [ ] Toiletries
- [ ] Important documents
- [ ] Extra clothing
- [ ] Blankets
- [ ] Pocket knife
- [ ] Other (please specify)

7. What are the barriers you face when preparing for local hazards? Please check all that apply.

- [ ] Cost
- [ ] Knowledge of how to prepare
- [ ] Limited access to emergency preparedness resources
- [ ] Time
- [ ] Storage space for supplies
- [ ] Level of concern
- [ ] Other (please specify)

City of Albany Local Hazards Survey

8. In an emergency event, where would you most likely go to seek safety, shelter, or resources in the case that your home becomes inaccessible? Please check up to two.

- [ ] Family/friend's home
- [ ] Neighbor's home
- [ ] Public shelter
- [ ] City facilities
- [ ] Other (please specify)

9. How often do you interact with your neighbors?

◯ Never ◯ Rarely ◯ Sometimes ◯ Often ◯ All the time

10. In the case of an emergency, how would you prefer to receive communications from the City? You may check up to five.

- [ ] Alameda County emergency alert system (acalert.org)
- [ ] Cable access television (KALB)
- [ ] City e-newsletter
- [ ] City e-notification email feature
- [ ] City website (albanyca.org)
- [ ] Neighborhood block captains
- [ ] Community Emergency Response Team (CERT)
- [ ] Phone call to landline
- [ ] Cell phone texts
- [ ] Public meetings
- [ ] Radio
- [ ] School newsletter
- [ ] Facebook
- [ ] Twitter
- [ ] Nextdoor

11. Other than English, what language(s) would you prefer to receive emergency communications in?

City of Albany Local Hazards Survey

12. How would you describe your connection to Albany? Please check all that apply.

- [ ] I work in Albany
- [ ] I live in Albany
- [ ] I currently attend or have family members who attend school in Albany
- [ ] I own a business or property in Albany
- [ ] Other (please specify)

13. How did you hear about this survey?

- ◯ Email from friend or colleague
- ◯ Citizen Emergency Response Team (CERT) Program
- ◯ eNewsletter
- ◯ City website
- ◯ Word of mouth
- ◯ Other (please specify)

14. Please select an age range.

- ◯ Under 18 years
- ◯ 18 to 24 years
- ◯ 25 to 34 years
- ◯ 35 to 44 years
- ◯ 45 to 54 years
- ◯ 55 to 64 years
- ◯ 65 years or older

15. We are interested in how you might be able to assist during a disaster. Please check all affiliations that apply.

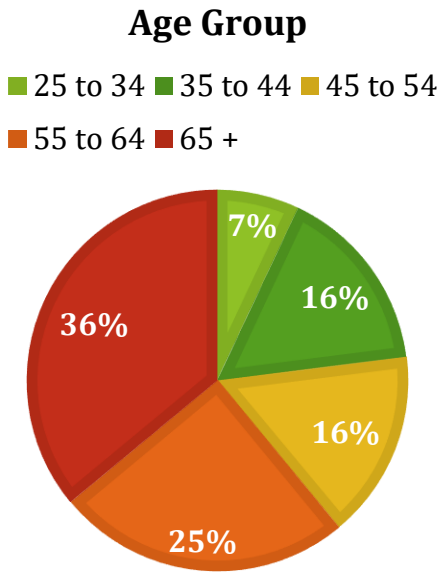
- ☐ Citizen Emergency Response Team (CERT) Program
- ☐ Public Safety Department Volunteers (Police or Fire)
- ☐ Public Employee
- ☐ Neighborhood Block Captain / Neighborhood Block Group
- ☐ Medical Professional

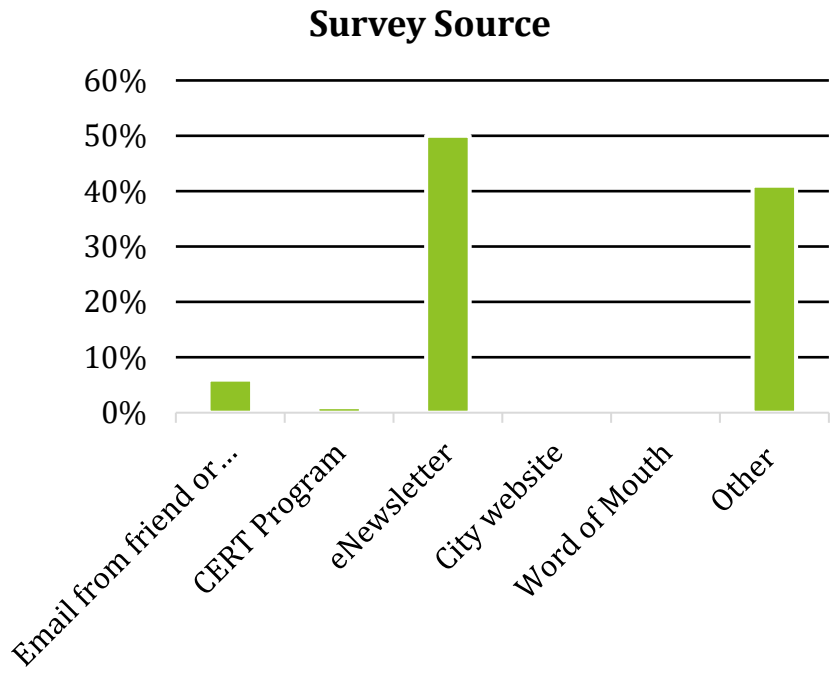
Please describe other ways you can assist.

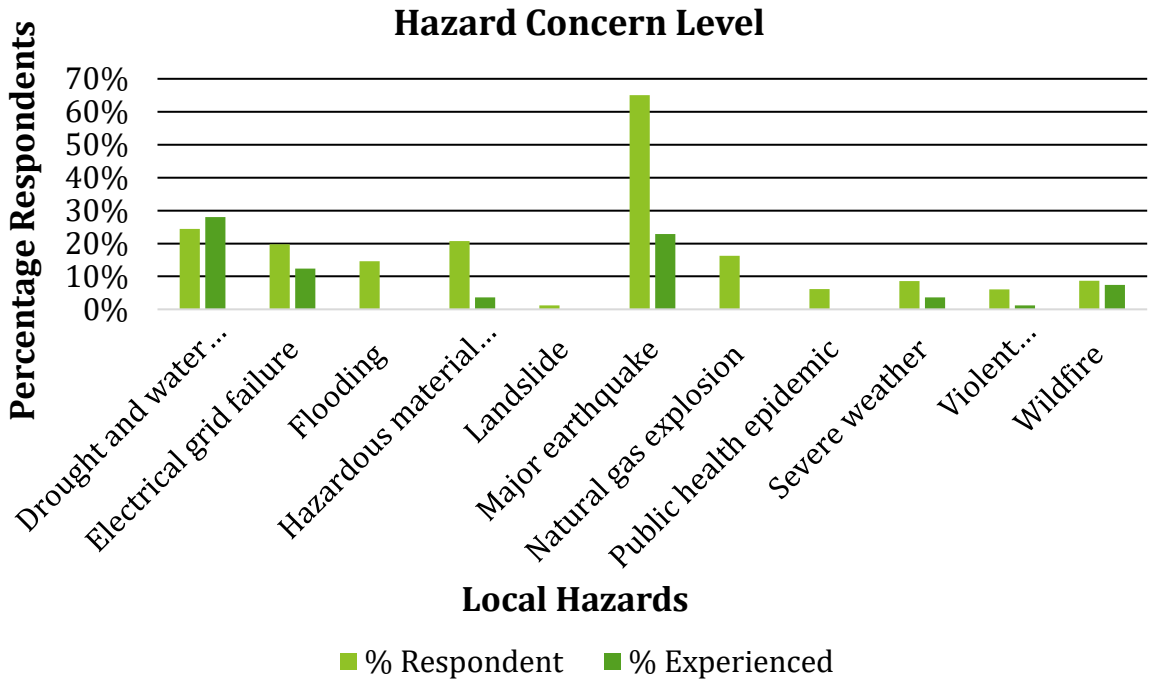
16. Please provide any additional comments or feedback you have below.

COMMUNITY SURVEY RESULTS

TOTAL RESPONSES: 84







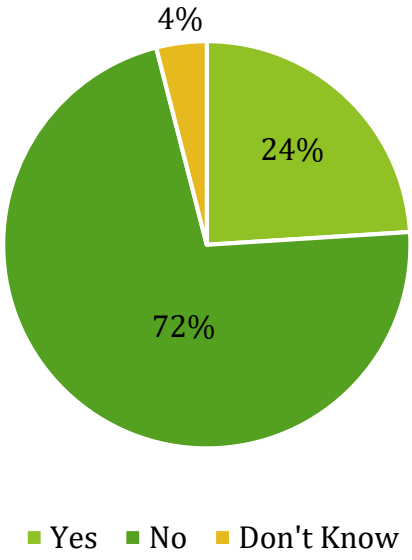
Most Concerned

1. Major earthquake
2. Drought and water shortage
3. Hazardous materials release
4. Electrical grid failure
5. Natural gas explosion

Least Concerned

1. Landslide
2. Wildfire
3. Violent crime/Terrorism
4. Flooding
5. Public health epidemic

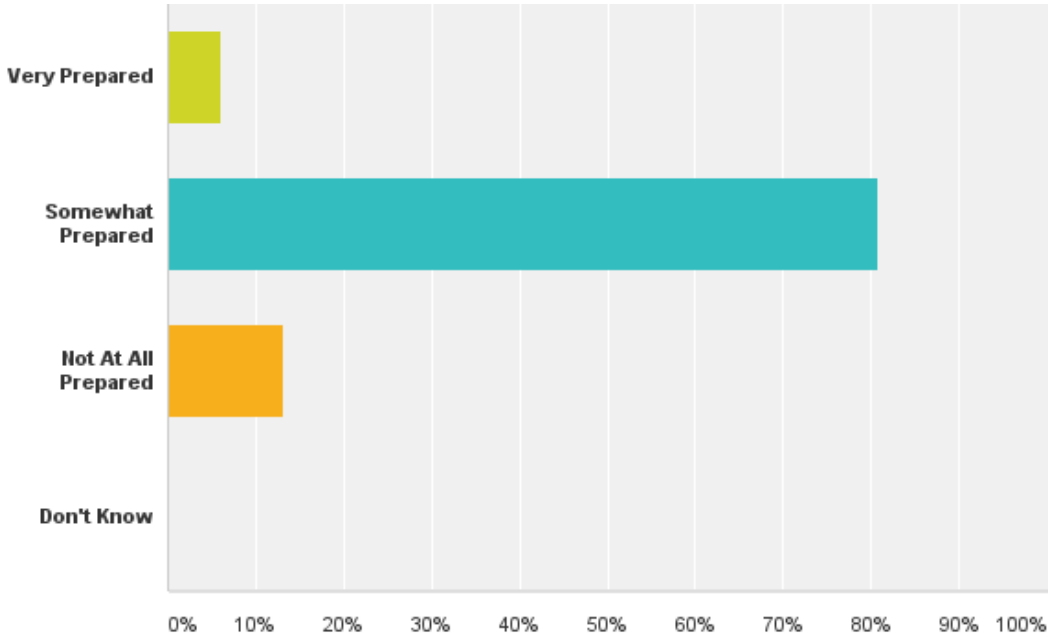
Have you experienced property damage as a result of the 2016-17 winter storms?



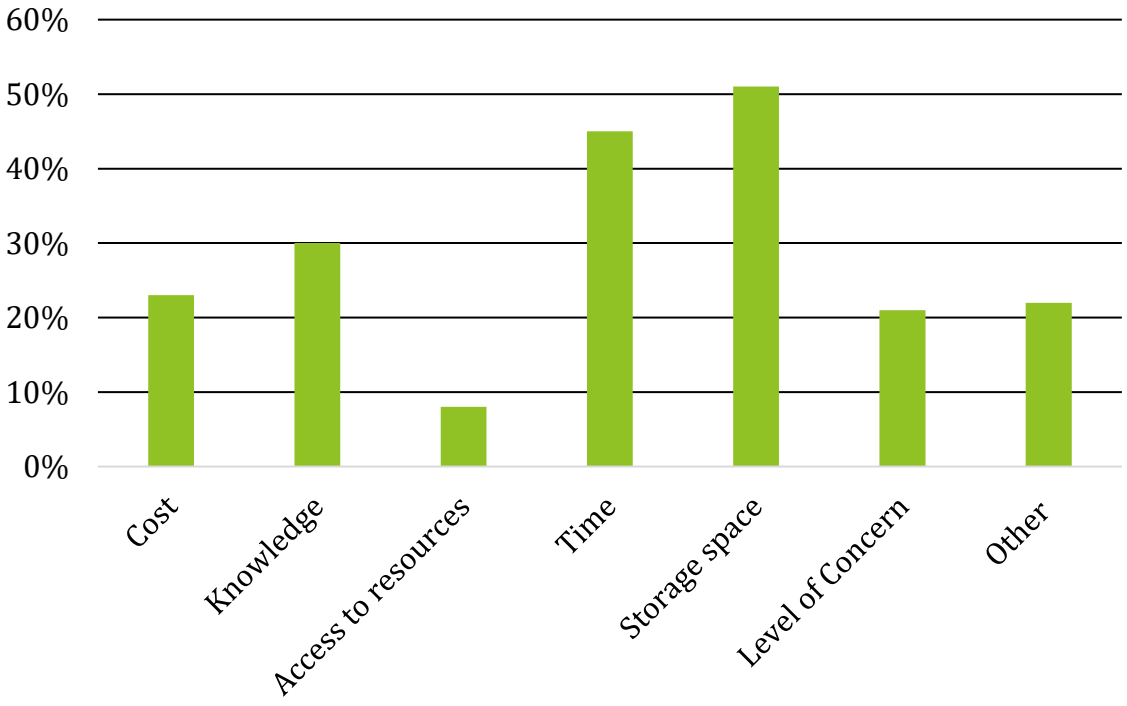
Types of property damage:

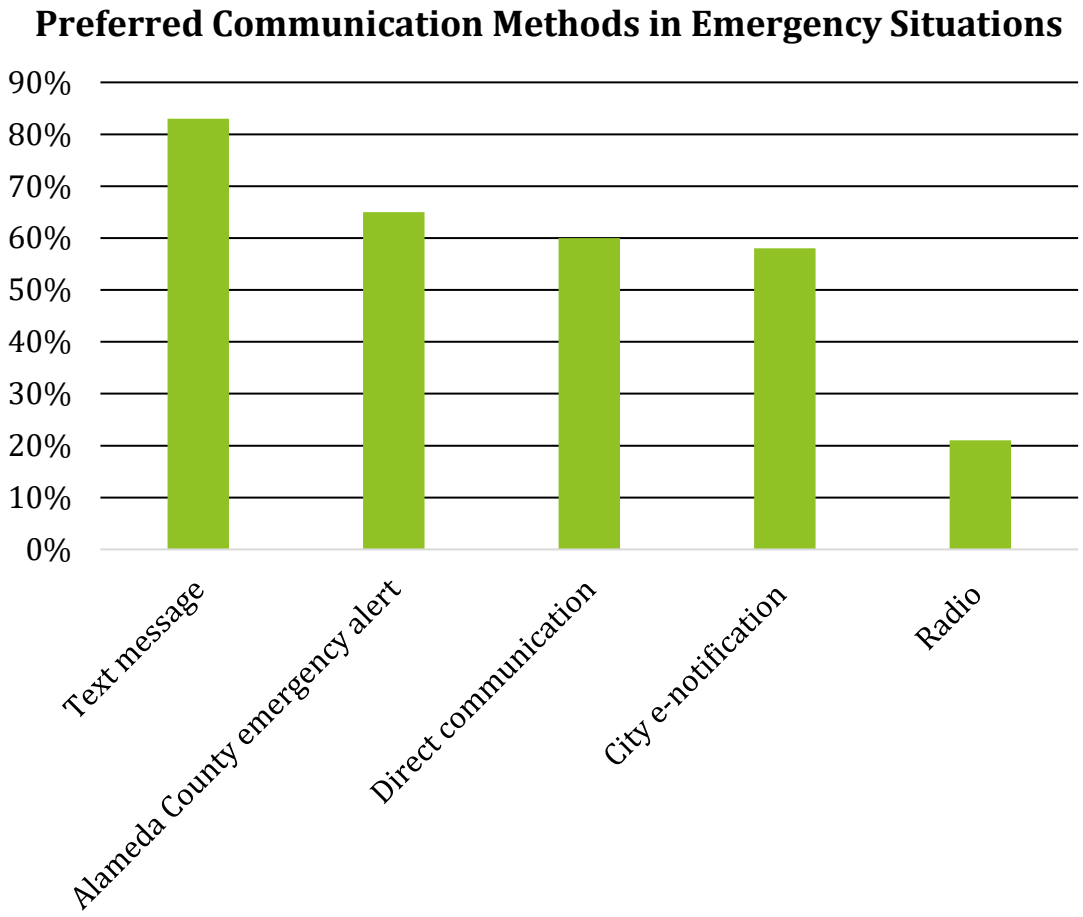
- Flood/water damage
- Wind damage
- Tree or limb fell
- Utility infrastructure damage

How prepared do you feel you are for emergencies?



Barriers Albanians Face When Preparing for Local Hazards




Preferred Communication Methods in Emergency Situations
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Text message
Alameda County emergency alert
Direct communication
City e-notification
Radio

Appendix F: Public Notices

Local Hazard Mitigation Plan

Date & Time: **Monday, October 2, 2017, 7:30 pm**
Meeting Location: **Albany City Hall – Council Chambers, 1000 San Pablo Avenue**

The Albany City Council will review a draft Local Hazard Mitigation Plan and discuss strategies to mitigate the impact of natural and human-caused disasters before they happen. Residents and business owners of Albany and surrounding communities are encouraged to attend.

The draft Hazard Mitigation Plan be found on our website: www.albanyca.org

Alameda County Congestion Managemen Agency
Attn: Diane Stark, Senior Planner
1133 Broadway
Oakland CA 94612

Contra Costa County
Comm. Dev. Dept. Planning
651 Pine St. – 4th Floor
Martinez CA 94553

City of El Cerrito
Planning Division
10890 San Pablo Ave.
El Cerrito CA 94530

City of Richmond
Planning Department
1401 Marina Way
Richmond CA 94804

City of Berkeley
Planning Dept.
2118 Milvia St. – 3rd Floor
Berkeley CA 94704

Campus Planning
300 A&E Building
University of California
Berkeley CA 94720

Alameda County Planning Dept.
399 Elmhurst
Hayward CA 94544

Albany Unified School District
Val Williams, Superintendent
904 Talbot Avenue
Albany CA 94706

AC Transit
Stephen Newhouse, Transp. Planner
1600 Franklin St.
Oakland CA 94612

East Bay Municipal Utility Distr.
Water Service Planning
375 11th St. MS 701
Oakland CA 94607

Contra Costa Transportation Authority
2999 Oak Road, Suite I 00
Walnut Creek CA 94597

Alameda County Clerk-Recorder
1106 Madison Street Rm 101
Oakland CA 94607

City of Berkeley
Office of Transportation
1947 Center Street
Berkeley, CA 94704

Friends of Five Creeks
Attn: Susan Shwartz
1236 Oxford Street
Berkeley, CA 94709

ABAG
101 Eighth Street
Oakland, CA 94607

Cal Trans, Department of Trans.
111 Grand A venue
P.O. Box 23660
Oakland, CA 94623

USDA
800 Buchanan Street
Albany, CA 94706

Bay Area Rapid Transit
P.O. Box 12688
Oakland, CA 94604

Village Manager
University Village Family Housing
1125 8 th Street
Albany, CA 94710

Governors Office of Planning and Research
State Clearinghouse and Planning
140010th Street, P.O. Box 3044
Sacramento, CA 95812

Alex Lantsberg
Research Department
N. Calif. Carpenters Regional Council
265 Hegenberger Rd., Suite 220
Oakland, CA 94621

Rodney McInnis, Regional Administrator
U.S. Dept. of Commerce
National Marine Fisheries Service
501 West Ocean Blvd., Suite 4200
Long Beach, CA 90802

Jolm Dalrymple
6 Indian Rock Path
Berkeley, CA

National Oceanic and Atmospheric Administration
1401 Constitution Avenue, NW
Room 5128
Washington, DC 20230

Weinberg, Roger & Rosenfeld
Attn: Richard Drury
1001 Marina Village Parkway, #200
Alameda, CA 94501

Alameda County Fish and Game
4985 Broder Blvd
Dublin, CA 94568

West County Times
1050 Marina Way S
Richmond, CA 94804
(510) 262-2740

2000670

ALBANY, CITY OF
COMMUNITY DEVELOPMENT
1000 SAN PABLO AVE.
ALBANY, CA 94706-2226

PROOF OF PUBLICATION

FILE NO. October 2 Hearing

In the matter of

West County Times

I am a citizen of the United States and a resident of the County aforesaid; I am over the age of eighteen years, and not a party to or interested in the above-entitled matter.

I am the Principal Legal Clerk of the West County Times, a newspaper of general circulation, printed and published at 2640 Shadelands Drive in the City of Walnut Creek, County of Contra Costa, 94598

And which newspaper has been adjudged a newspaper of general circulation by the Superior Court of the County of Contra Costa, State of California, under the date of August 29, 1978. Case Number 188884.

The notice, of which the annexed is a printed copy (set in type not smaller than nonpareil), has been published in each regular and entire issue of said newspaper and not in any supplement thereof on the following dates, to-wit:

09/29/2017

I certify (or declare) under the penalty of perjury that the foregoing is true and correct.

Executed at Walnut Creek, California.
On this 29th day of September, 2017.

Signature

Legal No. **0006034675**

City of Albany
Local Hazard Mitigation Plan

Date & Time: Monday, October 2, 2017, 7:30 pm
Meeting Location: Albany City Hall – Council Chambers, 1000 San Pablo Avenue

The Albany City Council will review a draft Local Hazard Mitigation Plan and discuss strategies to mitigate the impact of natural and human-caused disasters before they happen. Residents and business owners of Albany and surrounding communities are encouraged to attend.

The draft Hazard Mitigation Plan be found on our website: www.albanyca.org

WCT 6034675 September 29, 2017

ALBANY, CA

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- Facility Directory
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- E-Notification
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- − City News
  - Albany Hill Cross
  - Rent Review Board Feasibility Study
  - LimeBike in Albany

Our City »

City News

Font Size: Print

Local Hazard Mitigation Planning Process

Post Date: 09/29/2017 1:30 PM

The Albany City Council will review a draft Local Hazard Mitigation Plan and discuss strategies to mitigate the impact of natural and human-caused disasters before they happen at their regular meeting on Monday, October 2, 2017, 7:30 pm. Residents and business owners of Albany and surrounding communities are encouraged to attend and/or submit written feedback on the plan in advance of the meeting to cityhall@albanyca.org. The draft can be found here: http://albanyca.granicus.com/MetaViewer.php?view_id=&event_id=782&meta_id=99518

Return to full list >>

City of Albany

Get Involved in the Local Hazard Mitigation Planning Process!

Claire Griffing from City of Albany · 28 Sep

The Albany City Council will review a draft Local Hazard Mitigation Plan and discuss strategies to mitigate the impact of natural and human-caused disasters before they happen at their regular meeting on Monday, October 2, 2017, 7:30 pm. Residents and business owners of Albany and surrounding communities are encouraged to attend and/or submit written feedback on the plan in advance of the meeting to cityhall@albanyca.org. The draft can be found here: http://albanyca.granicus.com/MetaViewer....

28 Sep · Subscribers of City of Albany in General

REPLY

Appendix G: Acronyms

ABAG	Association of Bay Area Governments
ART	Adapting to Rising Tides
BARC	Bay Area Regional Collaborative
CalOES	California Office of Emergency Services
Caltrans	California Department of Transportation
CCR	California Code of Regulations
CDPH	California Department of Public Health
CEQA	California Environmental Quality Act
CWA	Clean Water Act
DMA	Disaster Mitigation Act
DWR	Department of Water Resources
EBMUD	Easy Bay Municipal Utility District
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRMs	Flood Insurance Rate Maps
FIS	Flood Insurance Study
IT	Information Technology
LHMP	Local Hazard Mitigation Plan
MMI	Modified Mercalli Intensity
NEHRP	National Earthquake Hazard Reduction Program
NFIP	National Flood Insurance Program
NOAA	National Oceanic and Atmospheric Administration
NRC	National Resource Council
NTSB	National Transportation Safety Board
PG&E	Pacific Gas & Electric
SEMS	Standardized Emergency Management System
WHO	World Health Organization
WUI	Wildland-Urban Interface

Appendix H: Approval Documents

RESOLUTION NO. 2018-2

A RESOLUTION OF THE ALBANY CITY COUNCIL ADOPTING THE CITY OF ALBANY LOCAL HAZARD MITIGATION PLAN FOR 2018-2022

WHEREAS, the Federal Disaster Mitigation Act (DMA) of 2000 (Public Law 106-390) requires state and local governments to develop hazard mitigation plans as a condition for federal disaster grant assistance; and

WHEREAS, the City of Albany seeks to comply with Federal regulations and enhance disaster resilience by reducing the potential loss of life, property, and natural resources from natural and human caused disasters and accelerating disaster recovery; and

WHEREAS, the plan was developed to meet or exceed requirements of the DMA, enable the City to continue using federal grant funding to reduce risk through mitigation, meet the needs of all state and federal requirements, incorporate community feedback, and create a risk assessment that focuses on hazards of concern for the City of Albany; and

WHEREAS, the plan identifies resources, information, and strategies for reducing risk from natural hazards and will help guide and coordinate mitigation activities throughout the City; and

WHEREAS, implementation of this plan will provide an opportunity to achieve the goals of protecting lives and reducing injury; increasing resilience of infrastructure and critical facilities; minimizing damage to property; encouraging the development and implementation of long-term, cost-effective, and environmentally sound mitigation projects; and building and supporting capacity to enable local government and the public to prepare for, respond to, and recover from the impact of natural hazards.

NOW, THEREFORE, BE IT RESOLVED, that the Albany City Council hereby adopt the Local Hazard Mitigation Plan for 2018-2022.

PEGGY MCQUAID, MAYOR

EDMUND G. BROWN JR.
GOVERNOR

MARK S. GHILARDUCCI
DIRECTOR

Cal OES
GOVERNOR'S OFFICE
OF EMERGENCY SERVICES

August 1, 2018

Ms. Juliette Hayes, Mitigation Division Director
Federal Emergency Management Agency, Region IX
1111 Broadway Street, Suite 1200
Oakland, California 94607

Subject: City of Albany Local Hazard Mitigation Plan

Dear Ms. Hayes:

The California Governor's Office of Emergency Services (Cal OES) is forwarding the Local Hazard Mitigation Plan for the City of Albany for formal review. Enclosed are the plan and CD containing the electronic documents.

If you have any questions, please contact me at (916) 845-8187, or Karen McCready-Hoover, Emergency Services Coordinator, Hazard Mitigation Planning Division, at (916) 845-8177.

Sincerely,

ADAM SUTKUS, Chief
Mitigation Planning Division

Enclosures

c: Claire Griffing, Sustainability Coordinator, City of Albany Community Development Department

3650 SCHRIEVER AVENUE • MATHER, CA 95655
MITIGATION PLANNING DIVISION
(916) 845-8177 • (916) 845-8397

U.S. Department of Homeland Security
1111 Broadway, Suite 1200
Oakland, CA. 94607-4052

FEMA

August 20, 2018

Claire Griffing
Sustainability Coordinator
Community Development Department
1000 San Pablo Ave.
Albany, CA 94706

Dear Ms. Griffing:

We have completed our final review of the *City of Albany Local Hazard Mitigation Plan 2018-2022*, officially adopted by the City of Albany on January 8, 2018, and found the plan to be in conformance with Title 44 Code of Federal Regulations (CFR) Part 201.6 *Local Mitigation Plans.*

The approval of this plan ensures the City of Albany's continued eligibility for project grants under FEMA's Hazard Mitigation Assistance programs, including the Hazard Mitigation Grant Program, Pre-Disaster Mitigation Program, and Flood Mitigation Assistance Program. All requests for funding, however, will be evaluated individually according to the specific eligibility, and other requirements of the particular program under which applications are submitted.

Also, approved hazard mitigation plans may be eligible for points under the National Flood Insurance Program's Community Rating System (CRS). Additional information regarding the CRS can be found at https://www.fema.gov/national-flood-insurance-program-community-rating-system or through your local floodplain manager.

FEMA's approval of the *City of Albany Local Hazard Mitigation Plan 2018-2022* is for a period of five years, effective starting the date of this letter. Prior to August 20, 2023, the City of Albany is required to review and revise its plan to reflect changes in development, progress in local mitigation efforts, and changes in priorities, and resubmit it for approval in order to continue to be eligible for mitigation project grant funding. The enclosed plan review tool provides additional recommendations to incorporate into the plan when the City of Albany undertakes its identified plan maintenance process.

If you have any questions regarding the planning or review processes, please contact Alison Kearns, Senior Community Planner, at (510) 627-7125 or by email at alison.kearns@fema.dhs.gov.

Sincerely,

FOV

Juliette Hayes
Director
Mitigation Division
FEMA, Region IX

Enclosure

cc: Jennifer Hogan, State Hazard Mitigation Officer, California Governor's Office of Emergency Services
Julie Norris, Mitigation and Dam Safety Branch Chief, California Governor's Office of Emergency Services