Requests for a copy or alternate format of this document should be referred to the Livermore Emergency Manager.

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INTRODUCTION

Presented is the 2018 City of Livermore Emergency Operations Plan. This plan is the foundation for disaster response and recovery operations for the City of Livermore and may be used as a reference and guidance document. This plan outlines how the City of Livermore government complies with and implements the requirements of the California Emergency Services Act to protect the lives and property of the community of the City of Livermore.

This plan establishes the emergency organization, specifies policies and general procedures, and provides for coordination of the responsibilities of the City of Livermore as a member of the Alameda Operational Area with other member organizations, in all phases of an emergency or disaster. This plan builds upon previous efforts to enhance the City's emergency and disaster preparedness, response, and recovery capabilities and includes the critical elements of the Incident Command System, the Standardized Emergency Management System (SEMS), the National Incident Management System (NIMS), and the National Response Framework.

This Emergency Operations Plan (also referred to as EOP in this document) is an extension of the State of California Emergency Plan and its concepts may be used to coordinate localized emergencies as well as catastrophic disasters. The plan is flexible enough to use in all emergencies and will facilitate response and short-term recovery activities. This plan promotes coordination so that the City's capabilities can adapt to a changing response environment and to the needs of supporting organizations. City employees will be trained on the plan and participate in exercises periodically, to test and validate the plan, and identify both capability gaps and areas for improvement. The plan will be revised as necessary to meet changing conditions.

The City Council of the City of Livermore gives its full support to this plan and urges all officials, employees, and residents, individually and collectively, to do their share in the total emergency preparedness, response, and recovery efforts of the City of Livermore. This Emergency Operations Plan becomes effective upon approval and resolution of the City Council of the City of Livermore.

PLAN CONCURRENCE

The following officials concur with the City of Livermore's Emergency Operations Plan. Their signature indicates they have reviewed the plan, and that they will carry out the responsibilities designated in its contents.

Title	Signature	Date
1. Mayor, on behalf of City Council		2/12/18
2. City Manager		2/12/18
3. City Attorney		2/12/18
4. Administrative Services Director		2/12/18
5. Community Development Director		2/12/18
6. Library Services Director / Public Information Officer		2/12/18
7. Livermore-Pleasanton Fire Chief		2/12/18
8. Livermore Police Chief		2/12/18
9. Office of Innovation and Economic Development Director		2/12/18
10. Public Works Director		2/12/18

PLAN DEVELOPMENT AND MAINTENANCE

The City of Livermore EOP is developed under the authority conveyed to the Emergency Services Council in accordance with the *California Emergency Services Act, Article 10 – Local Disaster Councils, § 8610*, which directs the creation of plans, powers, and rules and regulations for dealing with local emergencies. The *City of Livermore Municipal Code, Chapter 2.56, Section 2.56.080 – Emergency Plan* also directs the development of the city's emergency plan, providing for "the effective mobilization of all of the resources of the city, both public and private, to meet any condition constituting a local emergency, state of emergency, or state of war emergency, and shall provide for the organization, powers and duties, services and staff of the emergency organization."

Based on the Federal Emergency Management Agency's (FEMA) *Comprehensive Preparedness Guide 101 (CPG 101), Version 2.0*, the EOP was developed with input from each City department according to the department's designated responsibility in the City's emergency response organization. Departments are responsible to review and revise their procedures annually to revise information as needed (changes to emergency operations center assignments, relevant emergency operations procedures, etc.). Departmental revisions should be submitted to the Livermore Emergency Manager, who will coordinate EOP revisions and ensure revisions are documented in the record of revisions table. Revisions to the plan will be distributed to the departments and agencies shown on the plan distribution list. This EOP is subject to various review and approval

processes, whereas the appendices and various annexes are not. Major changes to the EOP will be submitted to the City Manager for approval or recommendation for review by City Council.

The Emergency Operations Plan was submitted to the City Council for review and approval. The plan was officially adopted through resolution by the City Council. The EOP was presented to the California Office of Emergency Services (Cal OES) for review.

DISTRIBUTION LIST

This distribution list names the departments or government agencies receiving copies of the City of Livermore EOP. The plan may be distributed in an electronic form or printed version.

Department or Agency	
Cal OES, Coastal Region	City of Livermore City Council
City Manager	City Attorney
Administrative Services Department	Community Development Department
Livermore – Pleasanton Fire Department	Livermore Public Library
Livermore Police Department	Office of Innovation and Economic Development
Public Works	Alameda Operational Area

The entire EOP (this Basic Plan, Appendices, and Annexes) will be made available for City employees in electronic format on the shared City network drive.

RECORD OF REVISIONS

This table documents the revisions made to the EOP. The Livermore Emergency Manager will be responsible for maintaining the official copy of the EOP.

Change #	**Description of Revision**	**Revision Date**	**Approved By**
001	Revised Plan Development	January 2018	City Council Resolution

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PLAN APPROVAL RESOLUTION

IN THE CITY COUNCIL OF THE CITY OF LIVERMORE, CALIFORNIA

A RESOLUTION ADOPTING THE EMERGENCY OPERATIONS PLAN FOR THE CITY OF LIVERMORE

The City of Livermore's current Emergency Operations Plan (known as the Comprehensive Emergency Management Plan) was last revised in October 2005. Since that time, many advancements and changes within the City, as well as the disaster response structure throughout the state and nation, have taken place.

Given that the preservation of life, property, and the environment is an inherent responsibility of local government and the fact that the City of Livermore may be subjected to multiple types of emergencies and disasters, and understanding the importance, the City Council has named Disaster Preparedness as one of its current priorities.

In support of that priority, and the goals within, the City of Livermore has developed an updated Emergency Operations Plan (EOP) to help coordinate resources to make the City and community safer and better prepared to deal with all hazards.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Livermore that the City hereby accepts and adopts the Emergency Operations Plan attached hereto as Exhibit A.

BE IT FURTHER RESOLVED by the City Council that the Emergency Operations Plan will be reviewed, revised, and re-promulgated every five years, or whenever substantial changes occur.

BE IT FURTHER RESOLVED by the City Council that changes to the annexes and appendices, and non-substantive changes to the Basic Plan, may be made without formal City Council approval.

On motion of Council Member Carling, seconded by Council Member Spedowfski, the foregoing resolution was passed and adopted on January 22, 2018, by the following vote:

AYES:	Council Members Carling, Spedowfski, Vice Mayor Woerner
NOES:	None
ABSENT:	Council Member Coomber, Mayor Marchand
ABSTAIN:	None

ATTEST:

Susan Neer
City Clerk

APPROVED AS TO FORM:

Catrina Fobian
Assistant City Attorney

Exhibit A – Emergency Operations Plan

RESOLUTION NO. 2018-009

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PLAN ORGANIZATION

There are three parts to the City of Livermore Emergency Operations Plan: the Basic Plan, Functional Annexes, and Appendices.

The Basic Plan

The Basic Plan describes administrative features, situation and assumptions, a concept of operations, recovery operations, and the emergency operations center. The Basic Plan outlines emergency services provided by City departments to carry out emergency operations during a major emergency or disaster; methods for how resources are obtained and mobilized; mutual aid programs; roles and responsibilities of each City department; and the coordination and management of incidents by the City in the emergency operations center. As described previously, the EOP Basic Plan is subject to various review and approval processes, whereas the appendices and various annexes are not.

Appendices

The appendices relate to information developed in support of the Emergency Operations Plan, such as specific terminology, contact information, resources, and SEMS and NIMS support documentation, which will be incorporated by reference and maintained separate from the basic plan. The appendices will be developed in the near future and do not require approval of the City Council.

Functional Annexes

The functional annexes describe discipline-specific goals, objectives, operational concepts, capabilities, organizational structures and related policies and procedures. Supporting plans and documents may be listed or attached to each functional annex. The annexes will be developed in the near future and do not require approval of the City Council.

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1.0 ADMINISTRATIVE FEATURES

1.1 PURPOSE AND SCOPE

The City of Livermore Emergency Operations Plan (EOP) addresses the City of Livermore's planned response to extraordinary situations associated with natural disasters and technological and human-caused incidents, including peacetime and national security operations. The primary objective of the EOP is to coordinate the personnel, facilities, and other resources of the City into an efficient organization capable of responding to any emergency. The EOP details the coordination of response services and support within the City and the City's relationships, obligations, and dependencies with other response organizations and specific statutory authorities. This plan is designed to be flexible enough so that the City's capabilities can adapt to a changing response environment and to the needs of supporting organizations.

The City of Livermore EOP embraces the FEMA whole community approach to emergency management and, in addition to City resources, recognizes the roles of special districts, nongovernmental organizations (NGOs), community-based organizations (CBOs), faith-based organizations (FBOs), private-sector businesses, educational organizations, and other stakeholders. Additionally, the EOP is intended to reflect the wide variety of support that may be required by residents, visitors, and businesses. Consideration for people with disabilities and access or functional needs will be given in all aspects of City emergency planning.

The EOP further provides an overview of the Emergency Operations Center (EOC) and the activation of the EOC by City departments to respond to major emergencies, disasters, or planned events.

1.2 CITY OF LIVERMORE EOP IMPLEMENTATION

The City of Livermore EOP is implemented as a result of one of the following conditions:

- On the order of the City Council, based upon recommendation from the City's Director of Emergency Services, if the Council is in session; or the Director of Emergency Services shall issue the proclamation if the Council is not in session, subject to ratification by the Council at the earliest practicable time (Municipal Code Chapter 2.56, Section 2.56.060 Director Powers and Duties).
- When the Governor has proclaimed a State of Emergency in an area that includes the City's jurisdiction.
- Automatically on the proclamation of a State of War Emergency as defined in California Emergency Services Act (Chapter 7, Division 1, Title 2, California Government Code).
- A Presidential Declaration of a National Emergency.
- Automatically on receipt of an attack warning or the observation of a nuclear detonation.

1.3 AUTHORITIES AND REFERENCES

The following documents provide emergency authorities and references for conducting and supporting emergency operations:

1.3.1 CITY OF LIVERMORE

- City of Livermore Resolution No. 2018-009 adopting the 2018 City of Livermore Emergency Operations Plan, Basic Plan, adopted January 22, 2018.
- City of Livermore, California, Municipal Code Chapter 2.56 Emergency Organization
- Resolution No.1995-157 accepting California Disaster and Civil Defense Mutual Aid Agreement by the City of Livermore, adopted June 12, 1995
- Resolution No. 3470 authorizing the Mutual Aid Operation Plan Agreement for Law Enforcement, adopted January 15, 1945
- Resolution No. 1985-126 adopting Workmen's Compensation Benefits for Disaster Service Workers, adopted June 10, 1985
- Resolution No.1995-157 adopting the Standardized Emergency Management System (SEMS), adopted June 12, 1995
- Resolution No. 2006-241 adopting the National Incident Management System (NIMS).

1.3.2 ALAMEDA COUNTY

- County of Alameda Administrative Code, Title 2, Chapter 2.118, "Civil Defense," June 30, 2002
- County of Alameda Resolution No. R-87-465, "Adopt Multihazard Functional Plan," October 1986, June 2, 1987
- County of Alameda Resolution No. 58748, "Adopting the California Master Mutual Aid Agreement," November 28, 1950
- County of Alameda, Agreement for Participation in Alameda County Operational Area Emergency Management Organization, January 24, 1995

1.3.3 STATE OF CALIFORNIA

- California Emergency Services Act, § 8550 et seq., Government Code
- State of California Emergency Plan (SEP), California Office of Emergency Services (Cal OES)
- California Disaster Assistance Act
- California Code of Regulations, Title 19
- State of Emergency Orders and Regulations (Regulations made in advance of a State of Emergency - Standby Orders)
- State of War Emergency Orders and Regulations (Regulations made in advance of a State of War Emergency - Standby Orders)
- California-Federal Emergency Operations Center Guidelines: Integrating Federal Disaster Response Assistance with California's Standardized Emergency Management System
- California Catastrophic Incident Base Plan: Concept of Operations
- Local Emergency Prevention Measures for County Health Official: California Health and Safety Code §101040
- Disaster Assistance Procedure Manual (Cal OES)
- California Disaster and Civil Defense Master Mutual Aid Agreement
- California Law Enforcement Mutual Aid Plan (December 2014)
- California Fire and Rescue Operations Plan

- California Public Health and Emergency Operations Manual, July 2011
- Standardized Emergency Management System Guidelines
- Standardized Emergency Management System Approved Course of Instruction

1.3.4 FEDERAL

- Homeland Security Presidential Directive (HSPD) 5, Management of Domestic Incidents
- Presidential Policy Directive (PPD) 8, National Preparedness
- U.S. Department of Homeland Security, National Incident Management System (NIMS)
- U.S. Department of Homeland Security, National Response Framework (NRF)
- Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (Public Law 93-288), as amended
- Code of Federal Regulations Title 44
- Americans With Disabilities Act (ADA), 1990
- ADA Amendment Act (ADAAA) 2008, Public Law 110-325
- Post-Katrina Emergency Reform Act, 2007
- The Pets Evacuation and Transportation Standards Act of 2006
- Rehabilitation Act (1973), Sections 501, 503, 504 and 508
- Older Americans Act (1965), Title III
- Emergency Management Assistance Compact (EMAC) (1996)
- Executive Order 13407, *Public Alert and Warning System*
- Emergency Management Mutual Aid Plan (EMMA), November 2012
- Developing and Maintaining Emergency Operations Plans, Comprehensive Preparedness Guide (CPG) 101, Version 2.0 (November 2010)
- A Whole Community Approach to Emergency Management: Principles, Themes and Pathways for Action (December 2011)
- Disability, Access and Functional Needs Emergency Management Planning Guidance (June 2015)

1.4 RELATIONSHIP TO OTHER PLANS AND REFERENCES

This EOP is the primary document used by the City to describe the conduct of emergency management during major emergencies and disasters. The EOP describes how emergency response and recovery activities will be conducted, and how support will be requested and coordinated, in the form of mutual aid and other resources, through existing mutual aid agreements or through the Alameda Operational Area (OA).

At the same time, this EOP is not a stand-alone document. Its purpose is to support the emergency plans and procedures of the City's departments. This plan is designed to be flexible enough that it can adapt to a changing response environment and to the needs of supporting and requesting organizations. The following are some of the City plans and guidelines that this EOP will support and complement:

- Tri-Valley Local Hazard Mitigation Plan (cities of Livermore, Pleasanton, and Dublin), 2018
- City of Livermore General Plan, 2003 – 2025

- Livermore Police Department Policy Manual
- Livermore / Pleasanton Joint Police Department Special Weapons and Tactics (SWAT) Operations Manual
- Livermore Injury and Illness Prevention Program
- Livermore Sanitation Contingency Plan
- Water Resources Division Facility Emergency Plan and FAST Guide
- Spill Prevention, Control, and Countermeasure Plan
- Power Outage Contingency Plan (Water/Wastewater)
- Livermore Water Reclamation Plant Contingency Plan
- Sanitary Overflow Emergency Response Plan
- First Responder Operations (FRO) Hazardous Substances Plan
- Hazardous Materials and Waste Management Contingency Program
- Water/Wastewater Agency Response Network (WARN)
- South County Airport Pilots Association (SCAPA) Disaster Airlift Response Plan, for South County Airport E-16, March 20, 2012
- Livermore Airport Staff Disaster Reporting Procedures
- Livermore Airport Disaster Operations Checklist
- Livermore Human Resources Department Disaster Service Worker Form
- Livermore Draft Emergency Volunteer Center (EVC) Policy
- Livermore Public Library Emergency Manual
- Livermore-Pleasanton Fire Department Joint Powers Authority Agreement
- Office of State Fire Marshall Operational Guidelines and General Orders
- Livermore – Pleasanton Fire Department and Alameda County Fire Department Automatic Mutual Aid Agreement for Exchange of Fire Protection, Rescue, and Emergency Medical Services
- Agreement Between the City of Livermore and Alameda County Fire Department for Regional Emergency Communications Center and Fire Dispatch Services
- Livermore-Pleasanton Fire Department Administrative Manual / Rules and Regulations

1.5 STANDARD OPERATING PROCEDURES/GUIDELINES

Departments, agencies and organizations that have responsibilities in this plan may have prepared organizational and/or position-specific Standard Operating Procedures (SOPs) or Standard Operating Guidelines (SOGs) detailing personnel assignments, policies, notification rosters, resource lists, and specific steps for accomplishing the functions assigned in this EOP. Emergency response personnel for the City of Livermore should be acquainted with these SOPs/SOGs, and receive periodic training on the policies and procedures contained within the SOPs/SOGs in support of this EOP.

1.6 REQUIREMENTS OF THE AMERICANS WITH DISABILITIES ACT

Title I of the Americans with Disabilities Act (ADA), signed into law on July 26, 1990 by President George H. W. Bush, is a broad civil rights law that prohibits discrimination against people with disabilities. Title I guarantees that people with disabilities have the same opportunities as everyone else to participate in the mainstream of American life. The ADA defines a disability as a physical or

mental impairment that substantially limits one or more major life activities, a person who has a history or record of such an impairment, or a person who is perceived by others as having such an impairment. The ADA does not specifically name all of the impairments that are covered. The ADA was modeled after the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, religion, sex, or national origin, and Section 504 of the Rehabilitation Act of 1973, which is a federal law designed to protect the rights of individuals with disabilities in programs and activities that receive federal financial assistance.

On September 25, 2008, President George W. Bush signed an updated version of the ADA, known as the ADA Amendments Act (ADAAA) Title II, which went into effect January 1, 2009. Unlike section 504 of the Rehabilitation Act of 1973, which only covers programs receiving federal financial assistance, Title II applies to state and local government entities, and, in subtitle A, protects qualified individuals with disabilities from discrimination on the basis of disability in services, programs, and activities provided by state and local government entities. The law was intended to clarify the scope of the definition of disability under the ADA and make it easier for people with disabilities to seek protection under the law.

The U.S. Equal Employment Opportunity Commission states an employer is required to make a reasonable accommodation to the known disability of a qualified applicant or employee if it would not impose an undue hardship on the operation of the employer's business. Reasonable accommodations are adjustments or modifications provided by an employer to enable people with disabilities to enjoy equal employment opportunities. Accommodations vary depending upon the needs of the individual applicant or employee. Not all people with disabilities (or even all people with the same disability) will require the same accommodation. For example:

- A sign language interpreter may need to be provided for a deaf applicant during the job interview.
- Regularly scheduled breaks for an employee with diabetes may need to be allowed during the workday to monitor blood sugar and insulin levels.
- Someone may need to read information posted on a bulletin board for a blind employee.
- An employee with cancer may need personal leave hours to have radiation or chemotherapy treatments.

State and local governments are required by ADA Title II to make their programs and services accessible to persons with disabilities. This requirement includes physical access at government facilities, programs, and events, and governmental policies to ensure that all people with disabilities can take part in, and benefit from, the programs and services of state and local governments. In addition, governmental entities must ensure effective communication – including the provision of necessary auxiliary aids and services – so that individuals with disabilities can participate in civic life. The Americans with Disabilities Act Title III Regulations cover non-discrimination on the basis of disability in public accommodations and commercial facilities (as amended by the final rules published on August 11, 2016, and December 2, 2016).

The City of Livermore complies with the ADA and does not deny access to services at any time on the basis of race, color, national origin, sex, age, or handicap. During a major emergency or disaster, initial priorities will be on lifesaving operations, alerting the public, evacuations, and stabilization of the incident. While the City of Livermore integrates people with disabilities into the general population,

there is an understanding that additional assistance and time must be considered for the needs of individuals with disabilities. The City will ensure that individuals with disabilities are not separated from service animals and assistive devices, and that they will receive disability-related assistance throughout emergencies and disasters.
The City's planning efforts for people with disabilities include:

- TTD/TTY contact and captioned cable alert for the hearing-impaired
- Flashing lights in some facilities to indicate closure
- Public address systems in some buildings to make verbal announcements
- ADA compliant access to City facilities

1.6.1 ACCESS AND FUNCTIONAL NEEDS POPULATIONS

Assembly Bill 2311, which added California Government Code section 8593.3 (effective January 1, 2017) requires each county and city to integrate access and functional needs in its emergency response plan at the next revision to the plan. Specifically, the county or city must address how it will serve the access and functional needs community in communications, evacuations, and sheltering during an emergency. Government Code section 8593.3 further defines people with access and functional needs as individuals who have developmental or intellectual disabilities, physical disabilities, chronic conditions, injuries, or limited or no English proficiency, older adults, children, people living in institutionalized settings, or those who are low income, homeless, or transportation disadvantaged, including, but not limited to, those who are dependent on public transit or those who are pregnant.

Individuals with access and functional needs, including those with or without disabilities, can be accommodated by the City with actions, services, equipment, accommodations, and modifications including physical, architectural, programmatic, and communications modifications.
FEMA has embraced a whole community approach to emergency management requiring the state and local governments to implement solutions that serve the entire community and leverage the resources that the entire community has. For example:

- Resources such as accessible vans or buses with a wheelchair lift can be used for people who need accessible transportation
- Resources such as American Sign Language (ASL) interpreters and Computer Assisted Real-Time Transcription (CART) service can assist people who are deaf or hard of hearing

1.7 ANIMAL CARE CONSIDERATIONS

Livermore Municipal Code, Chapter 6.04 Animal Control Regulations (Sections 6.04.010 through 6.14.120), give authority to the Livermore Police Department to enforce the laws regarding animals, respond to animal complaints, and investigate reports of the neglect or abuse of animals. Animal Control Officers may impound sick or injured pets or wildlife, quarantine biting animals and pick up and dispose of dead animals. These duties (and many more) help keep people, pets and wildlife safe in the city of Livermore.

The Pets Evacuation and Transportation Standards Act of 2006 (PETS Act) Public Law 109–308, October 6, 2006, directs that state and local emergency preparedness plans address the needs of people with pets and service animals after a major disaster, including the rescue, care and sheltering of animals.

The PETS Act amends the Stafford Act, and requires evacuation plans to take into account the needs of individuals with household pets and service animals, prior to, during, and after a major disaster or emergency.

When a local government's resources are overwhelmed, the state helps to mitigate the disaster. In large emergency situations, a state's resources can be overwhelmed, and a request is made to the President indicating that the emergency requires a federal response. The PETS Act is operational when a federal disaster declaration has been made. The declaration serves as a trigger that provides for reimbursement for allowable, documented services utilized in the emergency event. FEMA developed a disaster assistance policy titled "Eligible Costs Related to Pet Evacuations and Sheltering," (DAP 9523.19), which provides specific guidelines on expenses that are or are not reimbursable to states that expend resources on various aspects of responding to a disaster. (American Veterinary Medical Foundation) https://www.avma.org/KB/Resources/Reference/disaster/Pages/PETS-Act-FAQ.aspx.

States and local municipalities, as well as non-profit organizations and private companies, are the key stakeholders in implementing the PETS Act. The PETS Act works through reimbursing states and counties for work done in association with disaster mitigation. In addition, non-profit organizations and private companies (NGOs) work closely with states and municipalities to provide many necessary services. It is vital that these groups are aware of the details about the types of services they could provide in order to be reimbursed by the state or local government. The reimbursement process can be streamlined by having pre-event agreements in place between these entities.

The Livermore Police Department Animal Control has officers that will lead the effort to comply with the PETS Act. East County Animal Shelter is located in the nearby city of Dublin. Animal Control officers and shelter attendants will provide for the coordination of evacuation and sheltering of household and service pets in the event of a disaster. City of Livermore Animal Control is located at the Police Department, 1110 South Livermore Avenue, Livermore (925) 371-4987. East County Animal Shelter is located at 4595 Gleason Drive, Dublin (925) 803-7040.

1.8 WHOLE COMMUNITY CONCEPT

The National Preparedness Goal, 2015, describes the nation's approach to preparing for the threats and hazards that pose the greatest risk to the security of the United States. The goal regards national preparedness as the shared responsibility of the entire community, including individuals and families, people with disabilities or access and functional needs, businesses, faith-based and community organizations, nonprofit groups, schools and academia, media outlets, and all levels of government, including state, local, tribal, territorial, and federal agencies. Disaster preparedness is a partnership between all levels of government and the communities they serve. By creating a partnership, everyone can keep the nation safe from harm and resilient when struck by hazards, such as natural disasters, acts of terrorism, and pandemics

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2.0 SITUATION AND ASSUMPTIONS

2.1 HAZARD ANALYSIS AND SUMMARIES

This section of the EOP provides an overview of potential hazards and threats for the City of Livermore. A hazard analysis is conducted and a summary is provided for the natural, technological and human caused hazards that could occur in the city. Each potential hazard is assessed at its worst in order to properly plan an efficient response and to implement preparedness and mitigation measures. The purpose of the analysis is to prioritize the level of risk and describe the nature of the situation that could result if the hazard were to occur.

2.2 CITY GENERAL DESCRIPTION

The city of Livermore is situated in the Livermore Valley, in eastern Alameda County which is located in the nine-county Bay Area. The Livermore Valley is surrounded to the north, south and east by rolling hills and to the west by the Cities of Dublin and Pleasanton. Interstate 580 (I-580) runs east-west through Livermore bisecting the northern portion of the city. According to the U.S. Census Bureau, the city has a total area of 25.2 square miles (65.2 km²), over 99% of it land. The U.S. Census Bureau population estimate for Livermore as of July 1, 2016, was 89,115. U.S. Climate Data reports the elevation of the city of Livermore is 479 feet with a longitude of -121.769 and latitude of 37.6922.

The climate of the East Alameda County region is characterized as Mediterranean with cool, winter rainfall and warm, dry summers. The rainy season extends from October to April, with relatively dry conditions for the remainder of the year. The average annual high temperature in Livermore is 72.8°F and average annual low temperature is 47.8°F. The average temperature in Livermore is 60.3°F. The average annual rainfall in Livermore is 15.31 inches. (US. Climate Data, 2017).

The California Association of Local Agency Formation Commissions reports the City of Livermore was incorporated on April 1, 1876. Livermore operates under the Council-Manager form of government with four Council Members and a Mayor. Council Members serve four-year terms and the Mayor serves a two-year term. The Mayor and Council Members are elected at-large. The City Council is the legislative body and makes laws and policy decisions through the enactment of ordinances and resolutions. The City Council appoints a City Manager who is responsible for implementing adopted City policies; assists in the development of ordinances, resolutions and policies; serves as liaison with local and regional intergovernmental groups; provides public information through various media; builds community engagement; plans official City events; and manages various citywide projects. The City provides its own public services through the eight departments, and 14 divisions.

The Livermore Valley Chamber of Commerce provides a brief history of the city of Livermore as an important hub connecting the San Francisco Bay Area and California's Central Valley: "Livermore, incorporated in 1876, is the oldest city in the Livermore Valley. William Mendenhall is credited as the city's founder. He helped spur the opening of the railroad through town in 1869 which transformed the area into an agricultural center. The prosperous city had an extensive mercantile and wine industry in the late 19th century. This scenic ranching community took on a dual personality when a surplus naval base was transformed into the internationally renowned Lawrence Livermore National Laboratory in

1952. The city welcomed Sandia National Laboratory in 1956. These labs helped swell the city's population from 4,000 residents in 1950 to 40,000 in 1970."

Livermore has an award-winning downtown area that offers boutique shopping and unique dining. Livermore is also home to the San Francisco Premium Outlets, which is the state's largest outlet center with more than 170 luxury retail stores. Livermore has a distinctive cultural arts identity with several cultural arts organizations and assets, including a symphony orchestra, an opera company, dance companies, Shakespeare Festival, chamber music series, and the Bankhead Performing Arts Center. Livermore is one of California's oldest wine regions: Spanish missionaries planted the first wine grapes in Livermore in the 1760s. The Livermore Valley's rich soil, climate, and geography played a pivotal role in shaping California's wine industry, and the valley now has more than 50 wineries.

Livermore also has a variety of activities such as boating, hiking, cycling, and running for those that love the outdoors. The Annual Livermore Rodeo, and Wine Festival are some of the many events that take place in Livermore. Livermore has various modes of transportation for commuters, such as the Wheels Bus service, bicycle paths to and from surrounding Bay Area cities, and the ACE train as a mode of transportation.

The Innovation & Economic Development Department has provided a list of the top ten employers in the city of Livermore:

Figure 1: Livermore's Top Ten Employers

Employers	Number of Employees
Lawrence Livermore National Laboratory	6,500
Valley Care Health System – Lifestyle Rx Fitness Center	1,420
Sandia National Laboratories	1,400
Livermore Valley Joint Unified School District	1,286
Gillig	1.000
Kaiser Permanente	990
Lam Research	734
Form Factor	650
Wente	600-700
U.S. Foods	500-600

Exhibit 1: City of Livermore Map

Google Map, July 2017

2.3 HAZARDS AND VULNERABILITIES

The city of Livermore and its people are vulnerable to a wide range of hazards that threaten people, homes, critical facilities, infrastructure, utilities, and the environment. A hazard represents an event or physical condition that has the potential to cause fatalities, injuries, property damage, infrastructure damage, agricultural losses, damage to the environment, interruption of business, or other types of harm or loss. Vulnerability indicates the level of exposure of human life and property to damage from natural and human caused hazards. The criteria and methods used to evaluate the probability of hazards occurring and potential severity to the city of Livermore are as follows.

- Determine the natural and human caused hazards facing the community.
- Estimate the probability of occurrence: likely, possible, or unlikely?
- Estimate the threat to lives and property: high, average, or low?
- Determine the disaster rating: multiply probability x severity of threat for the total rating score.

Figure 2: Severity Rating Table

HAZARD INCIDENT TYPE	Probability of Occurrence			Hazard Severity			RATING TOTAL (Probability x Severity)
	Likely	Possible	Unlikely	High	Average	Low	
	10	5	1	10	5	1	
Earthquakes and Geologic Hazards	5			10			50
Flooding	10			5			50
Wildland and Urban Fires	10			5			50
Landslides	5			5			25
Dam Failure Inundation	1			10			10
Hazardous Materials	10			1			10
Agricultural Emergency and Drought	5			1			5
Cyber Attack	1			5			5
Energy Disruption	1			5			5
Mass Casualty Transportation Incident	5			1			5
Severe Weather	5			1			5
Terrorist Attack	1			5			5
Public Health Emergencies	1			1			1
Civil Unrest and Riots	1			1			1
Pipeline Hazards	1			1			1

Source: Alameda County Emergency Operations Plan, 2012

Earthquakes, flooding, wildland and urban fires, landslides and dam failure inundation represent the events that may result in significant disaster losses. The hazards and vulnerabilities within the city and bordering areas are summarized below.

Additional information on these hazards is available in the recently developed Tri-Valley Hazard Mitigation Plan.

2.3.1 EARTHQUAKES AND GEOLOGIC HAZARDS

Earthquakes are usually caused by sudden movement along tectonic plates or along a fault plane. Livermore is located in a high seismic risk zone within the Livermore 7.5-Minute Quadrangle. A quadrangle is a local physiographic feature used in mapping. The Livermore 7.5-Minute Quadrangle (quadrangle) covers approximately 60 square miles of land primarily in Alameda County. About one square mile of the quadrangle lies in the northwest portion of Contra Costa County.

The California Geological Survey (CGS) 2008 Seismic Hazard Zone Report (SHZR 114) for the Livermore 7.5-Minute Quadrangle states “the Livermore Quadrangle lies within the San Andreas Fault system, which constitutes one of Earth’s major crustal plate boundaries, separating the North American and Pacific tectonic plates. The two plates are moving past each other in a right lateral sense at the rate of about 4.8 centimeters per year (Petersen and others, 1996). At the latitude of the San Francisco Bay

area, about three-fourths of this relative movement is accommodated by shearing distributed across a broad, complex belt of major northwest-trending faults that include the San Andreas, Hayward, and Calaveras, as well as many parallel secondary faults such as the Greenville, Green Valley, and San Ramon-Concord. Furthermore, differential strike-slip movement among these faults locally generates additional thrust faulting, folding, and related structures throughout the belt, including the area covered by the Livermore Quadrangle. From the Livermore and Amador Valley region north through the Diablo Range, this intense zone of deformation is referred to by Unruh and Sawyer (1997) as the Mt. Diablo fold and thrust belt."

Most of the Livermore and Amador Valley floors fall within the Livermore quadrangle. Livermore Valley is bordered on the north, east, and south by the Diablo Range and is linked to the west with the Amador Valley. The city of Livermore is located in Livermore Valley, while the cities of Dublin and Pleasanton are located in Amador Valley. The basin in between the valleys is bound on the east by the Greenville Fault and on the west by the Calaveras Fault. To the southwest the basin is bounded by the Las Positas Fault and on the southwest by hills above the northeast-dipping Verona Thrust Fault. The CGS Seismic Hazard Report states "previous investigators (DWR, 1974) and Carpenter and others, 1984) show evidence of a buried, northwest-striking fault, referred to as the Livermore Fault, which bisects central Livermore Valley (Sawyer, 1999)."

2.3.1.1 EARTHQUAKE MEASUREMENT

There are two scales that are used to measure the severity and intensity of an earthquake. The Modified Mercalli Intensity (MMI) scale measures the ground shaking intensity in terms of acceleration, velocity, and displacement. The Moment Magnitude (Mw) scale measures the severity of the earthquake by the amount of energy released at the source of the earthquake. The Mw scale, based on the concept of seismic moment, is uniformly applicable to all sizes of earthquakes. The extent of damage from an earthquake is determined by the magnitude of the earthquake, distance from the epicenter, and characteristics of surface geology. An approximate correlation between the Moment Magnitude (Mw) and the Modified Mercalli Intensity (MMI) scale and its effects are shown below.

Figure 3: Severity (Mw) and Intensity (MMI) Comparison

Magnitude (Mw)	MMI Scale: Intensity	Abbreviated MMI Scale: Effects	
1.0 – 3.0	I	I. Not felt except by a very few under especially favorable conditions.	
3.0 – 3.9	II – III	II. Felt only by a few persons at rest, especially on upper floors of buildings.	III. Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize it as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck.
4.0 – 4.9	IV – V	IV. Felt indoors by many, outdoors by few during the day. At night, some awakened. Dishes, windows, doors disturbed; walls make cracking sound. Sensation like heavy truck striking building.	V. Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.

		Standing motor cars rocked noticeably.	
5.0 – 5.9	VI – VII	VI. Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.	VII. Damage negligible in buildings of good design and construction; slight to moderate in well-built ordinary structures; considerable damage in poorly built or badly designed structures; some chimneys broken.
6.0 – 6.9	VIII – IX	VIII. Damage slight in specially designed structures; considerable damage in ordinary substantial buildings with partial collapse. Damage great in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, walls. Heavy furniture overturned.	IX. Damage considerable in specially designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
7.0 and higher	X - XI	X. Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.	XI. Few, if any (masonry) structures remain standing. Bridges destroyed. Rails bent greatly.
XII		XII. Damage total. Lines of sight and level are distorted. Objects thrown into the air.	

Source: US Geological Survey (USGS): http://earthquake.usgs.gov/learn/topics/mag_vs_int.php

The earthquakes that struck north of Livermore on January 24, 1980 (M_s 5.8) and January 26, 1980 (M_s 5.2), caused surface faulting in the Greenville and Las Positas fault zones.

2.3.1.2 GEOLOGIC HAZARDS

Seismic events are the highest threat and source of loss to the city of Livermore. The following geologic hazards are associated with earthquakes and may be caused by seismic activity, causing additional damage.

GROUND SHAKING

Ground shaking caused by a strong earthquake is the most important seismic hazard that can be expected anywhere in the city of Livermore and larger East Bay area of San Francisco. The amount of earthquake shaking at a site is associated with the earthquake magnitude; the type of earthquake fault; the distance from the site and the earthquake source; the geology of the site; and how the earthquake waves decrease or increase as they travel from their source to the site in question. Shaking from the earthquake intensifies with a greater magnitude and closer distance to the epicenter. Softer soils and topographic ridges can also amplify seismic ground motions.

The shaking of the ground is caused by the sudden breaking and movement of tectonic plates (large sections of the earth's rocky outermost crust). Movements within the Earth's crust cause stress to build up at points of weakness, and can cause deformation of rocks in the earth's crust. Stored energy builds up and when the stress finally exceeds the strength of the rock, the rock fractures along a fault, often at a zone of

existing weakness within the rock. The stored energy is suddenly released as an earthquake. Intense vibrations, or seismic waves, radiate outward from the initial point of rupture, or focus, where the earthquake begins. These seismic waves are what makes the ground shake and can travel large distances in all directions. Near the focus, the waves can be very large, making them extremely destructive. The epicenter is the point on the Earth's surface located directly above the focus of an earthquake.

SURFACE FAULT RUPTURE

Surface fault rupture is displacement along a fault that reaches the earth's surface during slip, typically from shallow earthquakes with an epicenter less than 20 km deep. Surface rupture is an offset of the ground surface when fault rupture extends to the Earth's surface. Fault rupture almost always follows pre-existing faults, which are zones of weakness. Any structure built across the fault is at risk of being torn apart as the two sides of the fault slip past each other. Normal and reverse surface fault ruptures have vertical motion while strike-slip surface fault ruptures produce lateral offsets. Many earthquake surface ruptures are combinations of both. Structures that span a surface fault are likely to suffer great damage.

LIQUEFACTION

Soil liquefaction is a phenomenon in which the strength and stiffness of a soil is reduced by earthquake shaking or other rapid loading. The vast majority of liquefaction hazards are associated with sandy soils and soils of low plasticity, such as silt. The composition of the soil must be saturated or nearly saturated to be susceptible to liquefaction. Liquefaction can result in the settling and compacting of unconsolidated sediment in the event of a major earthquake. Liquefaction may increase as the ground acceleration and duration of shaking increase. Liquefaction is more likely to occur in sand dune areas, as is quake-triggered ground failure. According to the State of California Seismic Hazard Zones Map – Livermore Quadrangle, most of the city is not susceptible to liquefaction, with only small bands of ground with liquefaction potential across the northern and southern areas of the city.

GROUND FAILURE

According to the U.S. Geological Survey, ground failure is the term used to describe zones of ground cracking, fissuring, and localized horizontal and vertical permanent ground displacement that can form by a variety of mechanisms on gently sloping valley floors. Ground failure may be caused by surface rupture along faults, secondary movement on shallow faults, shaking induced compaction of natural deposits in sedimentary basins and river valleys, and liquefaction of loose, sandy sediment.

SUBSIDENCE

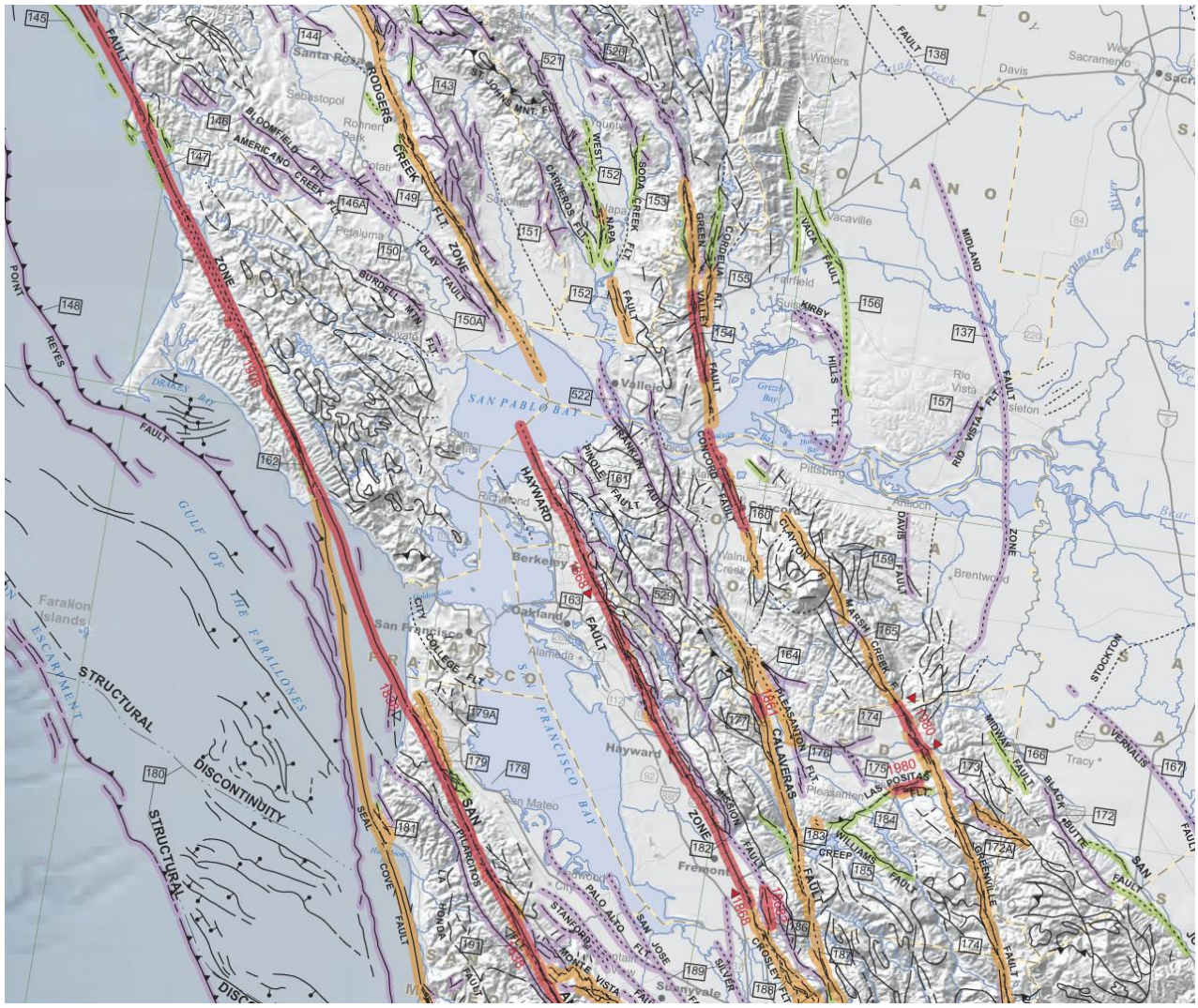
Land subsidence is defined as the lowering of the land surface. Many different factors can cause the land surface to subside, such as a sinkhole, underground mine collapse, or a major earthquake. Land subsidence can occur in various ways during an earthquake. Movement that occurs along faults can be horizontal or vertical or have a component of both. As a result, a large area of land can subside drastically during an earthquake. Land subsidence can also be caused during liquefaction. Liquefaction can result in the settling and compacting of unconsolidated sediment in an event of a major earthquake. This can result in the lowering of the land surface.

Stronger construction standards have been adopted in the Uniform Building Code, and consequently new construction in the city of Livermore must comply with more stringent engineering and construction requirements. Existing buildings that may be subject to seismic hazards must also comply

with new requirements of the unreinforced masonry building law (Government Code § 8875), i.e., seismic retrofitting of unreinforced masonry buildings.

The United States Geological Survey (USGS) 2014 Working Group on California Earthquake Probabilities updated the 30-year earthquake forecast for California. The group concluded that there is a 72-percent probability (or likelihood) of at least one earthquake of magnitude 6.7 or greater striking somewhere in the San Francisco Bay region before 2043. Earthquakes this large are capable of causing widespread damage; therefore, communities in the region should take simple steps to help reduce injuries, damage, and disruption, as well as accelerate recovery from these earthquakes.

Exhibit 2: Bay Area Earthquake Faults



CA Department of Conservation, Fault Activity Map, Livermore, CA
http://www.quake.ca.gov/gmaps/FAM/faultactivitymap.html

A major earthquake with ground shaking and failure can cause significant social disruption and damage to buildings and infrastructure in the city of Livermore. The extent of damage from an earthquake is determined by the magnitude of the earthquake, distance from the epicenter, and characteristics of

surface geology. Earthquakes can cause structural damage, injury, and loss of life, as well as damage to infrastructure networks, such as water, power, gas, communication, and transportation. A significant earthquake could occur and exceed the response capabilities of the City of Livermore. Response and disaster relief support would be required from other counties, private organizations, and from the state and federal governments.

2.3.2 FLOODING AND STORMS

Floods are the most common and widespread of all natural disasters in the United States. Most communities in California and across the nation can experience some kind of flooding after spring rains, heavy thunderstorms, or winter snow thaws. Street flooding, or stormwater runoff, often occurs due to storm drains that cannot contain the amount of water necessary, higher than normal amounts of rainfall, or inadequate design of the street flood control system. Often the storm drains get clogged with debris, which causes localized flooding. Typically, low lying areas, both coastal and inland, are subject to flood conditions. Urban development in floodplain areas is often subject to seasonal inundation. Stormwater runoff, when exceeding the capabilities of the physical channel characteristics of a stream, results in the natural flooding of a localized area, inundating vehicles and causing considerable damage to residential and industrial properties located near stream and drainage channels.

Most flooding within the city of Livermore is caused by heavy rainfall and subsequent runoff volumes that overcome the existing storm drainage system. Factors that directly affect the amount of flood runoff include the amount of rain, the intensity and distribution, soil moisture content, seasonal variation in vegetation, and water-resistance of the surface due to urbanization. In Livermore, flooding is more severe when previous rainfall has resulted in saturated ground conditions.

A search of the NOAA National Centers for Environmental Information Storm Events Database for events recorded in Alameda County from 1950 through 2017 provided the following information on the history of reported flooding in Livermore. https://www.ncdc.noaa.gov/stormevents/

Figure 4: Flooding History

Date	Event	Cause	Local Effect	Regional Effect
02-21-22-2017	Flooding	Rain	Collier Canyon Creek flooding with parking lot under water, businesses flooded, several people rescued from their vehicles near Las Positas College.	Presidential Major Disaster Declaration
12-02-2014	Flood	Rain	Flooding blocked two right lanes of Westbound Interstate 580 before North Livermore Avenue.	None
02-03-1998	Flash Flood	Rain	Levee Breached along Arroyo Mocha (a dry Creek) and caused $250,000 dollars in damage to roads and property.	None

The City participates in the FEMA National Flood Insurance Program (NFIP). FEMA, in coordination with the City of Livermore, has identified flood hazards within the city. These hazards include 100-year flood areas in some areas of the city of Livermore. The magnitude of flooding that is used as the standard for

floodplain management in the United States is a flood with a probability of occurrence of 1 percent in any given year. This flood is also known as the 100-year flood or the base flood. The most readily available sources of information regarding the 100-year flood, as well as the 500-year flood, are Flood Insurance Rate Maps prepared by FEMA. These maps are used to support the National Flood Insurance Program. The following are some of the programs and activities in which the City participates to ensure everyone's safety and reduce the impact of flooding on private and public structures:

- NFIP, which makes federally backed flood insurance available to property owners
- Community Rating System (CRS), a voluntary program aimed to encourage community floodplain management. All participating property owners benefit from reduced flood insurance rates to reflect the reduced flood risk. Currently, Livermore residents within the Special Flood Hazard Area receive a 10% discount and everyone else receives a 5% discount. Flood insurance covers direct losses caused by surface flooding, including:
    - A river flowing over its banks
    - A lake or ocean storm
    - Local drainage problems

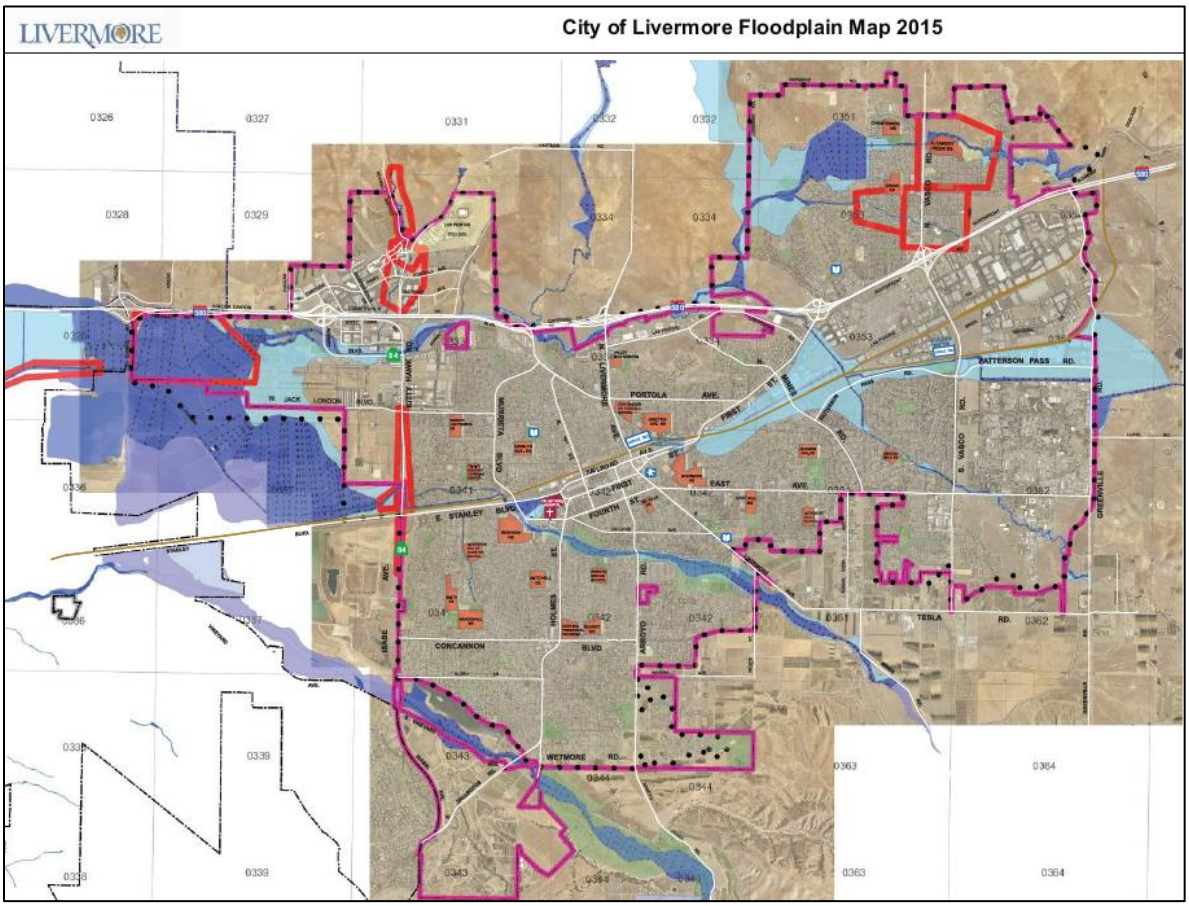


Exhibit 3: Livermore 100-Year Flood Zones

City of Livermore Information Technologies, GIS Division.
http://www.cityoflivermore.net/civicax/filebank/documents/14107 /

2.3.3 WILDLAND AND URBAN FIRES

Wildland fires are those fires of any size that burn in woodland, brushland and grassland areas. Livermore experiences long, dry summers with high wildland fire hazards. The combination of winds, temperatures, humidity levels, and fuel moisture content are the factors that contribute to the wildfire hazard risk. Wind is the most critical factor for wildland fire. Steep slopes also contribute to fire hazard by intensifying the effects of wind, and making fire suppression difficult. The city has highly flammable vegetation, warm and dry summers, and rugged topography, all of which can create a situation resulting in a wildland fire. The California Department of Forestry and Fire Protection (CAL FIRE) has developed a Fire Hazard Severity scale which utilizes fuel loading (vegetation), fire weather (winds, temperatures, humidity levels and fuel moisture contents) and topography (degree of slope), to evaluate and designate potential fire hazards in wildland areas. According to CAL FIRE maps, the wildland fire hazard is moderate in the city of Livermore.

Risk to life and property is greatest in the wildland-urban interface, where areas with vegetation adjoin urbanized areas (high density residential, commercial and industrial). Livermore has not had a wildland urban interface fire as of yet, although a few residential homes are in the area of open wildland along North Canyons Parkway and Holdener Park.

Fires can result in death, injury, economic loss and significant public investment in firefighting efforts. Woodlands and other natural vegetation can be destroyed, resulting in a loss of timber, wildlife habitat, scenic quality and recreational resources. Soil erosion, sedimentation of fisheries and reservoirs, and downstream flooding can also result.

Wildland fires can cause flooding and erosion, and can completely destroy ground cover. If heavy rains follow a major fire, flash floods, heavy erosion, landslides and mudflows can occur. These cascading effects can have ruinous impacts on people, structures, infrastructure, and agriculture. A shake roof is a particular hazard, as is the poor control of flammable growth around structures. During times of strong winds, fire danger is particularly high.

CAL FIRE reported the following wildfires over ten acres that have been recorded near Livermore in recent years:

- August 22, 2015—Burned 2,700 acres off Tesla Road near Corral Hollow between Livermore and Tracy. This fire took four days to contain with 18 fire personnel, five fire engines, and one fire tender of fire resources.
- June 25, 2015—Burned 53 acres off Tesla Road, southeast of Livermore.
- October 4, 2013—Burned 150 acres along Highland Road near Livermore.
- July 6, 2013, Fallon Fire—Burned 38 acres off Fallon Road and Camino Tassajara near Dublin. The fire was contained within one day by Alameda County Fire Department.
- June 8, 2013, Vasco Fire—Burned 240 acres off North Vasco Road, north of Livermore. The fire was contained within one day.

The Livermore-Pleasanton Fire Department Fire Annual Reports from 2013 through 2016 show the number of vegetation fires out of total fires annually. Types of fires include natural vegetation fire (the highest percent of fires), outside fires, crop fires, structure fires, fire in a mobile property used as a fixed structure, and mobile property.

Figure 5: Percent Fire Calls for Service

Livermore-Pleasanton Fire Department				
Year	Total Fire Calls	% Fire Calls of Total Calls	# Vegetation Fires	Total Service Calls
2016	445	3%	< 200	13,673
2015	427	3%	111	12,660
2014	373	3%	88	12,085
2013	441	4%	Unknown	11,701

As a result of the Oakland Hills fire of 1991, the Bates Bill (AB337; Government Code Section 51175) was passed in 1992 requiring CAL FIRE to work with local governments to identify high fire hazard severity zones within local responsibility areas throughout each county in the state.

2.3.3.1 URBAN FIRES

Structure fire is always a concern in populated residential and commercial areas, especially if the water lines supplying water for fire suppression were damaged by some large-scale event. Major urban fires are typically associated with large or high-density commercial, industrial, and residential developments. There are a few warehouse buildings and industrial facilities in the city that have the potential for this type of incident, although the probability of an urban conflagration is not likely. Specific conditions which can increase the probability of such an event include adverse weather conditions, large quantities of combustible fuel and limited water supply. Fire sprinkler systems and fire main installations must meet all requirements of the California Building and Fire Codes and Livermore Ordinance 1985 for large family dwellings and commercial businesses. Compliance is evaluated through the inspection and permit process by the Livermore-Pleasanton Fire Department (LPFD) Fire Marshall's Office.

The LPFD actively enforces codes and ordinances to ensure a reasonable degree of fire safety exists in facilities and occupancies to minimize the threat to life and property. This activity is ongoing and conducted daily. Comprehensive pre-emergency planning, fire protection engineering, and training programs are currently in place and are designed to ensure the Department's ability to meet future service demands. Some of the more successful programs which contribute to the success of fire prevention activities are:

- International Building Code prohibition of combustible roof covering materials
- California Building and Fire Codes
- Livermore Ordinance 1985 (sprinkler and fire main installations)
- Construction and maintenance of community and private fuel modification zones
- Fire prevention education programs
- Building and occupancy inspections in commercial and multi-family occupancies, construction, and high-rise buildings
- Identification and issuance of fire code violation notices
- Plan reviews and plan checks

- Fire prevention training and fire code updates for suppression personnel
- Fire extinguisher training and emergency evacuation planning for businesses in the city
- Meetings with major businesses for ongoing and future fire prevention projects

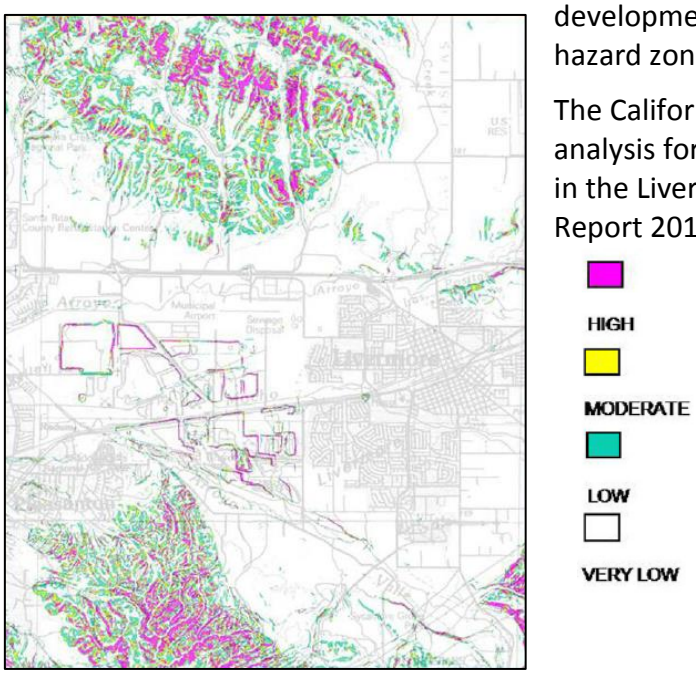
2.3.4 LANDSLIDES

A landslide is the movement of rock and soil that may take place gradually over a small area or rapidly over a huge area. Landslides may be initiated by an earthquake or by removal or absence of soil-retaining vegetation, from causes such as wildland fires or changes in agricultural practices. Removal of material at the base of slopes may result in unstable conditions.

Most of the northwest corner of the city is susceptible to landslides, with the majority of slopes considered marginally susceptible to most susceptible to slope failure. In addition, isolated upland areas in the northeast, central, and southeast portions of the city are considered prone to slope failure. Expansive soils are surface deposits rich in clays that expand when wet and shrink when dried. When expansive soils are present on a slope, they can promote down-slope creep of the entire thickness of surficial deposits present on the slope (in some cases to depths of more than ten feet).

In Livermore, development is restricted in areas prone to landslides or slope instability, or with slopes of 20 percent grade or greater. No building site or greenhouse, in whole or in part, may be located on a pre-development slope of more than 20 percent. No building may be located on a site that requires an access road over a natural slope of more than 25 percent. Cultivated agriculture may not be conducted on a slope, prior to topographical alteration, of more than 20 percent.

The Seismic Hazards Mapping Act requires the State Department of Conservation, Division of Mines and Geology to prepare statewide earthquake-induced landslide hazard maps, and establishes specific development criteria for projects situated in such seismic hazard zones.



The California Geological Survey conducted a slope stability analysis for earthquake-induced landslide hazard potential in the Livermore Valley. U.S. Geological Survey Open File Report 2012 – 1171, entitled *California Geological Survey Zones of Required Investigation for Earthquake Induced Landslides, Livermore Valley, California*, presents a landslide hazard potential map of the Livermore Quadrangle. The hazard areas are rated from very low to high.

Exhibit 4: Earthquake Induced Landslide Areas

2.3.5 DAM FAILURE INUNDATION

A dam failure is the inadvertent and uncontrolled release or surge of impounded water from a dam's reservoir, generally caused by a compromise of a dam's structure. Potential causes of a dam failure can be attributed to deficiencies in the original design of a dam, the quality of construction, the maintenance of a dam and operation of the appurtenances while a dam is in operation, and acts of nature, including precipitation in excess of the design, flood, and damage from earthquakes.

A notable source of failure is internal erosion caused by seepage, which generally occurs around hydraulic structures, through animal burrows, around roots, and between cracks in a dam's structure and foundation. Water over-topping a dam's crest is a common cause of failure in earthen dams.

Portions of the city are located within the dam failure inundation hazard areas for Lake Del Valle and the Patterson Reservoir. The dam inundation area for the Del Valle Dam is 98.97 square miles. Del Valle Dam, owned and operated by the California Department of Water Resources (DWR) is a California state-size dam, defined as being more than 25 feet in height and holding back more than 15 acre-feet of water, or being more than six feet in height and holding back more than 50 acre-feet of water. The Patterson Reservoir is also a state-size dam owned and operated by DWR. The inundation area is 3.08 square miles. Per the Cal OES, 2015, the Del Valle Dam is an earthen dam owned by the California DWR. It was built in 1968 and has a capacity of 77,100 acre/feet. The Patterson Reservoir is also an earthen dam owned by the DWR and built in 1962, with a capacity of 104 acre/feet.

Exhibit 5: Del Valle Dam and Patterson Reservoir Inundation Areas

County of Alameda Local Hazard Mitigation Plan, 2016

The DWR Division of Safety of Dams (DSOD) has several programs to ensure the safety of dams. Senate Bill 1049 (Chapter 741, Statutes of 2003) provides for funding of the dam safety program through the combination of dam application fees and annual fees. For proposed dams, safety is initially accomplished through site inspections of geologic conditions, subsurface exploration, and the thorough review of the plans and specifications prepared by the owner to ensure that the dam is designed to meet minimum requirements. DSOD oversees the construction of all new dams and

inspects each dam on an annual basis to ensure the dam is safe, performing as intended, and is not developing problems. The DSOD also performs in-depth instrumentation reviews of the dam surveillance network data. The DSOD periodically reviews the stability of dams and their major appurtenances in light of improved design approaches and requirements, as well as new findings regarding earthquake hazards and hydrologic estimates in California.

The DSOD works closely with dam owners to identify and correct potential problems before they become more serious. When notified of a potentially unsafe condition, the DSOD will inspect the dam and, depending on the circumstances, may initiate or require a follow-up investigation. When unsafe conditions develop, the DSOD works with owners and their consultants to address and remediate the condition in a timely manner. The DSOD may impose a reservoir restriction limiting the water surface to a level that is judged safe to minimize risk. Further, the dam owner may be directed to implement its emergency action plan (EAP) or develop one in coordination with local authorities. Individual EAPs are required to include warning and notification procedures that typically involve the Cal OES Warning Center, Sheriff's Office in the affected county, and local affected jurisdictions.

Government Code Section 8589.5 requires dam owners to submit copies of inundation maps to the Governor's Office of Emergency Services. Copies of these maps are also provided to the appropriate public safety agency of any city and county likely to be affected if a potential problem were to exist.

2.3.6 HAZARDOUS MATERIALS AND WASTE

The California Health and Safety Code, Division 20, Chapter 6.11, requires an agency to be certified by the California Secretary of Environmental Protection to implement the Unified Hazardous Waste and Hazardous Materials Management Regulatory Program. The Livermore – Pleasanton Fire Department serves as the Certified Unified Program Agency (CUPA) in the cities of Pleasanton and Livermore. The Fire Prevention Branch implements all of the Unified Program elements, which include:

- Underground Storage Tanks
- Hazardous Materials Business Plan
- California Accidental Release Prevention Program
- Hazardous Waste Generator
- Tiered Permitting (on-site treatment of hazardous waste)
- Above Ground Petroleum Tanks

The LPFD provides a Unified Program with the Fire Code program, which means that businesses receive one inspection, one permit and one fee for the combined programs. Alameda County Department of Environmental Health is the CUPA for several cities in the county and also coordinates the activities with the other CUPAs that operate in the county.

There are several sources of potential hazardous material incidents in Livermore: commercial transport vehicles; rail car; airborne industrial chemical release; fuel pipeline; fixed facility; and clandestine dumping. One of the primary hazards faced by the city would be some type of emergency related to the release of a hazardous material. Because of the number of commercial businesses/industries that use, manufacture, store, or transport these types of materials within the city, the likelihood of such an event occurring has increased. The LPFD plans and trains for industrial emergencies and coordinates

with the businesses that manufacture, use, or store these materials for management of incidents involving hazardous substances and for patients exposed to such substances.

A hazardous material is any substance that is flammable, combustible, corrosive, poisonous, toxic, explosive or radioactive. Hazardous materials require special care in handling and storage due to the harm they pose to public health, safety and the environment. The LPFD and Alameda County Department of Environmental Health regulate and inspect the facilities that use, store, or produce hazardous materials to ensure the facilities are in compliance with state and federal regulations. The significance of the problems to the environment, property, or human health is dependent on the type, location and quantity of the material released. Livermore's level of exposure to hazardous materials can be understood by examining the city's types of businesses, commercial traffic routes, and highway exposure.

The Lawrence Livermore National Laboratory (LLNL) is located in the city of Livermore. LLNL's defining responsibility is ensuring the safety, security and reliability of the nation's nuclear deterrent. The LLNL's science and engineering are being applied to achieve breakthroughs for counter-terrorism and nonproliferation, defense and intelligence, energy and environmental security. The missions of the LLNL include biosecurity, counter-terrorism, defense, energy, intelligence, nonproliferation, science, and weapons. Sandia National Laboratories, also located in Livermore, serves as a contractor for the U.S. Department of Energy's National Nuclear Security Administration and supports numerous federal, state, and local government agencies, companies, and organizations. Sandia National Laboratories mission areas include nuclear weapons, defense systems and assessments, energy and climate, and global security. There are hazardous materials on site at both locations within the city of Livermore.

Although hazardous material incidents can happen almost anywhere, certain areas are at higher risk. Businesses and facilities that are near roadways frequently used for transporting hazardous materials and industrial facilities that use, store, or dispose of such materials all have an increased potential for major incidents, as do cities crossed by certain railways, waterways, airways and pipelines. Hazardous materials are transported through the city via highways and pipelines. Public facilities and numerous businesses located in the city store and use reportable quantities of hazardous materials.
The Hazardous Materials Business Plan Program is conducted by the LPFD. Any business or industry that has hazardous materials equal to 55 gallons for liquids, 500 lbs. for solids, or 200 cubic feet at normal temperature and pressure for gases must submit a hazardous materials business plan to the CUPA on an annual basis. Certain materials are exempt from the program, such as oxygen, nitrogen and/or nitrous oxide in certain quantities used by a doctor, dentist, veterinarian or pharmacist; a total of 275 gallons of lubricating oils (i.e. hydraulic fluids, crankcase oils, grease, or transmission fluid) is exempt if the amount of any single type of oil onsite does not exceed 55 gallons. As part of the Business Plan program, businesses must also prepare a site map, develop an emergency response plan, and implement a training program for employees.

The Hazardous Materials Business Plan (HMBP) program's purpose is to prevent or minimize damage to public health, safety, and the environment, from a release or threatened release of hazardous materials. It also satisfies community right-to-know laws. The LPFD Hazardous Materials program also provides information regarding the proper management of hazardous materials and wastes for the owners of underground storage tanks, generators of hazardous wastes and businesses handling hazardous materials. The thresholds and requirements addressed in the program meet the

requirements of the state law for HMBPs, but depending on the type, some materials may also be subject to other programs regulated by the LPFD, including Fire Code requirements and Hazardous Waste Generator requirements. In addition, programs regulated by other agencies may also be applicable, such as OSHA, air quality, and waste water discharge.

2.3.7 AGRICULTURAL EMERGENCY AND DROUGHT

Alameda County encompasses 738 square miles with more than 200,000 acres designated for agricultural purposes, most of which is on land located in the Tri-Valley region of Eastern Alameda County. The Tri-Valley refers to the Amador, Livermore and San Ramon Valleys along the I-580 and I-680 highway corridors and includes the cities of Dublin, Livermore and Pleasanton and unincorporated county areas.

The Tri-Valley has a rich agricultural heritage. Spanish missionaries planted the first wine grapes in the Livermore Valley in the 1760s. In the 1840s, California pioneers looking for outstanding vineyard sites began planting grapes in the region. Robert Livermore planted the first commercial vines in the 1840s. Pioneer winemakers C. H. Wente, James Concannon, and Charles Wetmore recognized the area's winegrowing potential and founded their wineries in the early 1880s. Today more than 5,000 acres are planted in wine grapes with more than 50 wineries located in the region.

While wine grapes are the main crop grown in Alameda County, fruit and nut crops that include olives, pistachios, walnuts and persimmons are also grown in eastern Alameda County. The region is also home to cattle ranches owned and operated for generations by local families (Alameda County Board of Supervisors District 1, Agricultural Resources, 2017).

2.3.7.1 INSECT-RELATED EMERGENCIES

An agricultural emergency typically originates from insect infestation. Insect infestation occurs when an undesirable type of insect inhabits an area in a manner that causes serious harm to crops, livestock, or poultry, wildland trees, plants, or animals, or humans.

Countless insects live on, in, and around plants, animals, and humans in all environments. Many are harmless, while others can cause tremendous damage and can carry and spread disease to plants, animals, and people. Insects that can cause severe damage to wine grapes or contamination to the juice of wine grapes if populations reach high densities include ants, banded grape bug, brown marmorated stink bug, climbing cutworm, European red mite, fruit flies, gall makers on leaves, grape berry moth, grape cane gall maker, grape cane girdler, grape perineum mite, grape flea beetle, grape leafhopper, grape mealybug, grape phylloxera, grape root borer, grape rootworm, hornworm, Japanese beetle, multicolored Asian lady beetle, leafhopper, rose chafer, spotted win Drosophila, thrips, two-spotted spider mite, yellow-jackets, and other wasps. California winegrowers have dealt with Pierce's disease for over a century. Pierce's disease is a bacterium spread by the glassy-winged sharpshooter that feeds on infected vegetation and then injects the bacterium into the sap of nearby grapevines.

Insect infestation can also cause the quarantine of agricultural stock, such as grapes and citrus, to limit the movement of these crops. This requires inspection and certification of these commodities by the local Agricultural Commissioner prior to movement from the infested area.

Livermore and the entire Tri-Valley area is vulnerable to insect infestation. The climate makes it possible for insects to reproduce with little natural hindrance to their proliferation. If a given insect is particularly hazardous to crops, or forestry, it can cause fire hazards and cost millions of dollars in lost revenue and eradication and replacement. The city of Livermore has an urban growth boundary (UGB) around the entire city, designed to protect agriculture and habitat.

2.3.7.2 DROUGHT

Drought is an extended period of years when a region is deficient in its water supply, or consistently receives below average precipitation. Drought patterns in the West are related to large-scale climate patterns in the Pacific and Atlantic oceans, such as the El Niño–Southern Oscillation in the Pacific, and the Atlantic Multidecadal Oscillation in the Atlantic.

As these large-scale ocean climate patterns vary in relation to each other, drought conditions in the U.S. shift from region to region. Drought produces a variety of impacts that span many sectors of the economy such as reduced crops, rangeland, and forest productivity; increased fire hazard; reduced water levels; increased livestock and wildlife mortality; and rationing. These problems can result in reduced income for farmers and agribusiness, increased prices for food and lumber, unemployment, reduced tax revenues, increased crime, foreclosures on bank loans to farmers and businesses, and migration.

Droughts differ from typical emergency events such as floods or forest fires, in that they occur slowly over a multiyear period. Drought impacts increase with the length of a drought, as carry-over supplies in reservoirs are depleted and water levels in groundwater basins decline. Droughts can have long-term economic repercussions, especially when there is not enough rain for the successful growing of crops or the replenishment of water supplies.

After a five-year drought in California, Governor Brown lifted the drought emergency via executive order on April 7, 2017. The conservation measures implemented during the drought are still in force – Governor Brown had issued a statewide cut of 25% in urban water use. Per the U.S. Drought Monitor, the extreme to exceptional drought—the most severe levels—has lifted in the entire state. Drought conditions create extensive weakening of trees in forested areas, causing them to become highly vulnerable to disease and insect infestation. Trees will weaken and die, creating a severe fire hazard. Furthermore, wildland brush areas become increasingly dry presenting wildfire risk. Although a drought in and of itself is not a direct threat to property and life, the impact on the city's agricultural industry and home development can be monumental.

2.3.8 ENERGY DISRUPTION

An energy disruption lasting an extended duration and impacting a broad segment of the city's population may rise to the level of a major emergency or disaster. Such might be the case in an extended power outage, a disruption in natural gas delivery, or a loss of water supply. A short duration event involving a widespread loss of cellular, satellite, or telephone service may rise to the level of a major emergency if it involves the public's ability to access the 9-1-1 system. Depending on the type and extent of disruption and other conditions, such as weather, a utility failure can have a broad range of impacts. Although vulnerable, and people with disabilities and others with access and functional

needs are at highest risk from utility disruptions, all residents in the county would be significantly impacted by a widespread interruption of government, business, and private services.

It is important to recognize that different types of outages are possible so that plans may be made to handle them effectively. Electric power disruptions can be generally grouped into two categories: intentional and unintentional. Intentional disruptions include planned service for maintenance or upgrading. Unscheduled disruptions such as during a fire or accident demand site management, where customers have an agreement with their utility provider to curtail their demand for electricity during peak system loads. Load shedding, when the power system is under extreme stress due to heavy demand and/or failure of critical components, is sometimes necessary to intentionally interrupt the service to selected customers to prevent the entire system from collapsing. Unintentional disruptions include an accident by the utility, utility contractor, or others; malfunction or equipment failure due; equipment overload or reduced capability; storms or weather related causes; wildfire that damages transmission lines; or vandalism or intentional damage, including terrorism.

Utility failures of significant proportion typically arise from other hazard events such as floods or earthquakes, but may occur as standalone events, although Livermore has not had a history of standalone utility failures. Immediate objectives would focus on repairs necessary to restore power to areas of greatest need. All critical facilities would require standby generating equipment and emergency fuel supplies. Any long-standing energy disruption would also require additional public safety involvement to ensure the safety of the affected public.

2.3.9 MASS CASUALTY TRANSPORTATION INCIDENT

A mass casualty transportation incident is defined as an incident of air, rail, or highway passenger travel that results in mass casualties beyond the scope of the emergency medical services response. Highway accidents are typically excluded from consideration under this hazard because most accidents are handled by local emergency response services through mass casualty protocols without emergency management organization involvement. The primary freeway, Interstate 580, runs east west through Livermore. It is possible in a major vehicle accident in the Livermore area, emergency responder assistance could be delayed which could intensify the situation.

The Livermore Airport is owned by the City of Livermore and operates as a Division of the Public Works Department. Livermore Airport is categorized by law as a general aviation reliever airport owned. Reliever Airports may be publicly or privately-owned and are airports designated by the FAA to relieve congestion at Commercial Service Airports and to provide improved general aviation access to the overall community. Livermore Airport serves private, business and corporate tenants and customers. The Livermore Municipal Airport is home to 580 based aircraft and has a 4,000-foot asphalt runway with a parallel taxiway, a beacon, a lighted wind cone and a segmented circle. The grounds encompass 590 acres, with 392 hangars of various sizes and shapes, 249 tie-downs, and nine shelters. The Federal Aviation Agency reports Livermore Airport (identifier LVK) aircraft operations average 322 per day. Livermore Airport was the 12th busiest airport in California out of 53 Tower-controlled airports, and the 69th busiest in the United States out of 516 tower-controlled airports in 2014. Other airports nearest to Livermore include the U.S. Army Camp Parks Heliport, Oakland International Airport, Napa County Airport, San Francisco International Airport, Valley Care Medical Center Heliport, and a few other heliports in the county.

An incident at the Livermore Airport would likely be the crash of a light aircraft or helicopter. Although the incident would be traumatic for the immediate impact area, it is not expected that this would have a long-term impact on service operations of the City. A midair collision of a major airliner or crash in the city would be catastrophic. A large area would be affected with plane wreckage, burning fuel, destroyed buildings, and casualties beyond the capability of local fire and emergency medical services personnel. Media attention would be overwhelming. Any major air accident will involve coordination among federal, state, and local agencies to provide the necessary resources to manage such an event. Mass casualty transportation accidents typically require these agencies to establish a unified command post; disaster mortuary teams; set up medical aid stations; and develop a plan for moving patients and resources. The National Transportation Safety Board Aviation Accident Database reports 18 aircraft accidents with five fatalities in or near the city of Livermore over a period of 10 years, from 2007 to current.

The Altamont Corridor Express (ACE) has a train station located at 2500 Railroad Ave., Livermore, CA, and a station located at 575 S. Vasco Road, in eastern Livermore. These stations serve the area between San Jose Diridon Station and Stockton. A train accident or derailment occurring in Livermore could cause mass casualties.

There is a proposal to extend the Bay Area Rapid Transit (BART) train to Livermore which would extend the BART rail line by 5.5 miles along I-580 from the existing Dublin/Pleasanton Station to a new station in the vicinity of the Isabel Avenue interchange. The BART Board of Directors anticipate making a decision in the spring of 2018.

The nature of a mass casualty transportation accident will require local, state, and federal agencies to establish a unified command post; set up Field Treatment Sites and disaster support areas; and develop a plan for moving patients and resources. Casualty transportation resources will be in great demand; therefore, it is vital that casualties be transported on the basis of medical triage priorities. Patients may be airlifted or transported to hospitals outside the region. Patient tracking will begin at the incident scene or hospital receiving centers, using a Patient Tracking Tag which will be attached to the patient during triage operations. This tag will remain with the patient until the final medical treatment facility is reached.

Trucks and buses may be used to transport the evacuated casualties. Primarily, ambulances from unaffected areas will be needed for the transport of casualties from Field Treatment Sites to receiving facilities within and outside of the jurisdiction.

Livermore – Pleasanton Fire Department has personnel trained as Firefighter/Paramedics and Emergency Medical Technicians who can provide Advanced Life Support (ALS) and Basic Life Support (BLS). The Emergency Medical Services (EMS) system includes dispatch centers, fire departments, hospitals, private ambulance providers, and specialty centers for the emergency care of victims of major trauma, stroke, and certain types of heart attacks.

The Alameda County Emergency Medical Services (ALCO EMS) is a District within the Health Care Services Agency. ALCO EMS is recognized by the California Emergency Medical Services Authority as a Local EMS Agency, or LEMSA. LEMSAs have an oversight role, responsible for planning, implementing and evaluating local EMS systems per Division 2.5 of the California Health and Safety Code, and related chapters of Title 22 of the California Code of Regulations.

The ALCO EMS and the Regional Disaster Medical Health Specialist (RDMHS) will provide support and coordination functions with the Medical Health Operational Area Coordinator (MHOAC) in order to efficiently access and utilize all medical resources including transportation.

2.3.10 SEVERE WEATHER

Severe weather, described as excessive heat, strong winds, and tornados, can pose a risk to life and property in the city by creating conditions that disrupt essential systems such as public utilities, telecommunications, and transportation routes. Extreme weather may cause a variety of damage, depending on the type of weather and situation.

The California Environmental Health Tracking Program reported 622 heat-related deaths in California between the years of 2000 – 2011. The National Weather Service defines excessive heat warning criteria as two consecutive days (or longer) with daytime heat index values reaching 105 degrees, and nighttime heat index values at 80 degrees or higher for the entire night. Intellicast, 2017, reports the record high temperature in Livermore was 115° recorded in 1950. Extreme temperature can have severe impacts on human health and mortality, natural ecosystems, agriculture, and other economic sectors. Livermore will activate warming or cooling centers on an "as needed" basis during times of excessive weather conditions.

High winds can have a destructive impact, especially to trees, power lines, and utility services. Most incidents of high wind in the city of Livermore are the result of the Diablo Winds; a name occasionally used to describe the hot, dry offshore wind that blows from the direction of the Diablo Valley in Alameda County towards the ocean. While high impact winds can occur, they are not frequent in the city. A search of the NOAA National Centers for Environmental Information Storms Events Database recorded in Alameda County from 1950 through 2017, provided information of the history of reported severe weather in Livermore.

Figure 6: Strong Winds History

Date	Event	Magnitude	Local Effect	Regional Effect
02/26/2010	Strong Wind	45 Knots	Strong wind combined with brief heavy rain to cause trees, tree limbs and power lines to fall. At the height of the storm, around 1:30 p.m. PST, 4,350 customers were without power in San Francisco's East Bay. Property damage of $25,000.	A pacific storm brought brief heavy rain and strong wind to the San Francisco and Monterey Bay areas.
12/01/2011	Strong Wind	35 Knots	High winds were blamed for speeding a fire that destroyed two homes and damaged a third in North Livermore near May Nissen Park. The investigation on the cause of the fire stated high winds had a significant effect on this event. Property damage of $400,000.	Strong winds affected the San Francisco Bay and Monterey Bay area causing damage and one fatality.

Source: NOAA National Centers for Environmental Information https://www.ncdc.noaa.gov/stormevents/

The NOAA National Centers for Environmental Information Storms Events Database reports on tornados in Alameda County and Livermore. The Fujita scale (F-scale) is a scale for rating tornado intensity, based primarily on the damage tornadoes inflict on human-built structures and vegetation.

Figure 7: Tornado History

Location / County	Date	Time	Magnitude	Deaths	Injuries	Property Damage	Crop Damage
N/W of Livermore	03/29/1982	1725	F-0	0	0	$25 K	0
Alameda Co.	12/17/1992	1230	F-0	0	0	$0 K	0
Livermore	04/25/1994	1150	F-0	0	0	$50 K	0
TOTALS				0	0	$75 K	0

NOAA National Centers for Environmental Information https://www.ncdc.noaa.gov/stormevents/

2.3.11 TERRORIST ATTACK AND CYBERTERRORISM

Livermore is home to businesses and government agencies, transportation infrastructure, tourist attractions, historic sites, and cultural facilities that are vulnerable to a terrorist attack. Terrorism is a continuing threat throughout the world and within the United States.

A recent trend is for terrorists to pursue soft targets. Soft targets are open areas, i.e., shopping malls, hotels, concert or sports venues, transportation centers, and places where a number of people or tourists gather, that typically have less security. Terrorist attacks are becoming more frequent. ESRI Story Maps, 2017, reports worldwide from January through August 2017 there have been a total of 906 attacks, with 5,374 fatalities so far.

A variety of political, social, religious, cultural, and economic factors underlie terrorist activities. Terrorists typically target civilians with a goal of instilling fear to advance their agenda. The media interest generated by terrorist attacks makes this a high visibility threat. CNN U.S. Terrorist Attacks Fast Facts, August 14, 2017, reports since 1980 there have been nine notable terrorist attacks in the United States that killed 3,211 people.

Definition

The definition of terrorism by the Federal Bureau of Investigation is “the unlawful use of force or violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives.”

The definition of Weapons of Mass Destruction (Title 18 USC section 2332a) is: (1) Any weapon or device that is intended, or has the capability, to cause death or serious bodily injury to a significant number of people through the release, dissemination, or impact of toxic or poisonous chemicals or their precursors; a disease organism; or radiation or radioactivity; (2)(a) any explosive, incendiary, or poison gas, bomb, grenade, or rocket having a propellant charge of more than four ounces, or a missile having an explosive or incendiary charge of more than one quarter ounce, or mine or device similar to

the above; (b) poison gas; (c) any weapon involving a disease organism; or (d) any weapon that is designed to release radiation or radioactivity at a level dangerous to human life.

Weapon Types: weapons of mass destruction (WMD) typically used by terrorists are categorized by an acronym that lists the types of materials/weapons: CBRNE stands for chemical, biological, radiological, nuclear, and explosives – BNICE stands for biological, nuclear, incendiary, chemical, and explosives. The nature of each category of weapon is described briefly below:

Chemical: chemical weapons include blood and choking agents, nerve agents, blister agents, and toxic industrial chemicals.

Biological: biological weapons are defined as bacteria, viruses, or toxins used to produce illness or death in people, animals, or plants.

Radiological: radioactive weapons are typically in the form of a radioactive "dirty bomb" or a radiological dispersal device (RDD), made by combining radioactive material with conventional explosives to spread the radiological material.

Nuclear: nuclear weapons are typically in the form of a traditional fission device such as an atom bomb or a conventional explosion at a nuclear facility.

Explosives: explosive weapons include low explosives and high explosives. The effects include blast pressure, both positive and negative, fragmentation, and thermal. There are pipe bombs or bombs that can be easily concealed into a backpack, box, vehicles, or virtually any type of container, with numerous trigger mechanisms to set off the bomb. Bombings account for up to 50% of worldwide terrorist attack patterns.

Location

The city of Livermore is approximately 80 miles from the decommissioned Rancho Seco Nuclear Generating Station. The plant was closed by public vote on June 7, 1989. On October 23, 2009, the Nuclear Regulatory Commission released the majority of the site for unrestricted public use, while approximately 11 acres of land including a storage building for low-level radioactive waste and a dry-cask spent fuel storage facility remain under NRC licenses. There are no known businesses or educational facilities that have a nuclear reactor on their premises within the city.

Extent

As outlined in the National Security Strategy, there is no greater danger to the Nation than a terrorist attack with a weapon of mass destruction. Terrorist acts may cause casualties, extensive property damage, fires, flooding, and other subsequent hazards. Incidents generating significant mass casualties make preparedness and the mechanisms for effective response essential. In addition to large-scale attacks, a full range of terrorism tactics must be considered, including simple bombings, chemical or biological incidents, explosions and cyber-attacks, bomb threats, and the use of radiological and nuclear materials.

Cyberterrorism:

According to the U.S. Federal Bureau of Investigation, cyber terrorism is any "premeditated, politically motivated attack against information, computer systems, computer programs, and data which results in violence against non-combatant targets by sub-national groups or clandestine agents." As nations

and critical infrastructure become more dependent on computer networks for their operations, new vulnerabilities arise. A cyber terrorist attack is designed to cause physical violence or extreme financial harm. Possible cyber terrorist targets include the banking industry, military installations, power plants, air traffic control centers, and water systems, but could be against any facility that relies on computers, computer systems and programs for their operations.

The City of Livermore Police Department has anti-terrorism programs in place, which include continually gathering intelligence; monitoring events to assess credible threat potential; and issuing warnings to the participating agencies and to the citizenry. The Federal Bureau of Investigation is the lead federal agency for all terrorist activities within the United States, and coordinates this activity with the Livermore Police Department and Alameda County through the Northern California Regional Intelligence Center (NCRIC).

2.3.12 PUBLIC HEALTH EMERGENCY

Widespread public health emergencies, referred to as pandemics, occur when a disease, often a strain of influenza, emerges to which the population has little immunity. The 20th century saw three such pandemics, the most notable of which was the 1918 Spanish influenza pandemic that was responsible for 20-40 million deaths throughout the world.

Public health experts are always concerned about the risk of another pandemic where a disease spreads between and among species. Depending on the nature of such a disease, between 25 to 35 percent of the population could become ill. This level of disease activity would disrupt all aspects of society and severely affect the economy.

The Alameda County Health Care Services Agency (HCSA) is responsible for public health in Alameda County. The City of Livermore will coordinate with the HCSA during a public health emergency, whether in the city, or throughout the county or state. The HCSA Public Health Department will serve as the lead agency for a pandemic response and would work closely with each city to ensure that:

- Planning efforts are consistent throughout the county;
- Official information is provided to cities in a timely manner;
- Pharmaceutical distribution is conducted across the county.

In Livermore, both medical (medications, vaccines) and non-medical (school dismissal, isolation and/or quarantine) countermeasures will be implemented as deemed appropriate to mitigate the impact of the emergency on the public's health and safety. The City will, at the direction of the County Public Health Officer, implement the procedures and protocols as recommended. To ensure consistent planning efforts, federal, state, and county public health agencies use the World Health Organization (WHO) pandemic phases to guide their planning efforts.

The May 2017 WHO guidance document, *Pandemic Influenza Risk Management,* updates and replaces the WHO pandemic guidance document published in 2009. This revision of the guidance takes account of lessons learned from the influenza A (H1N1) 2009 pandemic and of other relevant developments. The 2009 version was revised in 2013, and the latest 2017 guidance also includes the revisions made in 2013.

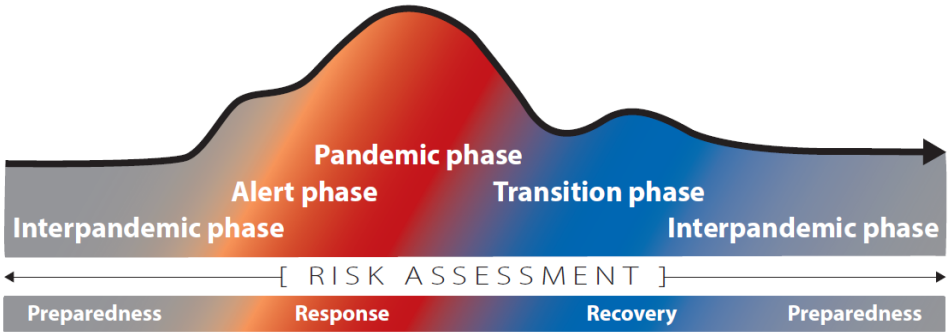
The new guidance stresses the importance of repeated risk assessments at all levels globally, by the WHO, and communicated through the revised phased system—as well as at national and local levels, by local officials, in order to plan and respond effectively and independently.

The new global phases are reduced from six phases to four– interpandemic, alert, pandemic and transition. These new phases describe the spread of the new influenza subtype around the world, taking into account the disease it causes. As pandemic viruses emerge, countries and regions face different risks at different times. For that reason, countries are strongly advised to develop their own national risk assessments based on local circumstances. National risk assessments should take into consideration the information provided by the global assessments produced by WHO. Risk management decisions by countries are, therefore, expected to be informed by global risk assessments but be based on local risk assessments.

Another change in the phased risk assessment approach is the inclusion of the principles of emergency risk management for health, recognizing that these principles apply to all hazards, including pandemic influenza, and can be used for the management of any health emergency, making the most cost-effective use of resources.

The risk-based approach to pandemic influenza phases is represented in as a continuum, which also shows the phases in the context of preparedness, response and recovery, as part of an all-hazards approach to emergency risk management. One of the underlying principles of this guidance is to acknowledge that emergency risk management at country level needs to be sufficiently flexible to accommodate different consequences within individual countries, for example, different severities and different numbers of waves of illness.

Exhibit 6: The Continuum of Pandemic Phases



This continuum is according to a “global average” of cases, over time, based on continued risk assessment and consistent with the broader emergency risk management continuum.

Interpandemic phase: This is the period between influenza pandemics.

Alert phase: This is the phase when influenza caused by a new subtype has been identified in humans. Increased vigilance and careful risk assessment, at local, national and global levels, are characteristic of this phase. If the risk assessments indicate that the new virus is not developing into a pandemic strain, a de-escalation of activities towards those in the interpandemic phase may occur.

Pandemic phase: This is the period of global spread of human influenza caused by a new subtype based on global surveillance. Movement between the interpandemic, alert and pandemic phases may occur quickly or gradually as indicated by the global risk assessment, principally based on virological, epidemiological and clinical data.

Transition phase: As the assessed global risk reduces, de-escalation of global actions may occur, and reduction in response activities or movement towards recovery actions by countries may be appropriate, according to their own risk assessments.

Determination of a Public Health Emergency of International Concern: The responsibility of determining a Public Health Emergency of International Concern lies with the WHO Director-General under Article 12 of the International Health Regulations (2005). The determination leads to the communication of temporary recommendations.

Declaration of a pandemic: During the period of spread of human influenza caused by a new subtype, based on risk assessment and appropriate to the situation, the WHO Director-General may make a declaration of a pandemic.

Medical facilities in the city include Stanford Health Care – ValleyCare Medical Center, the VA Palo Alto Health Care System, and Kaiser Permanente Medical offices.

The City will coordinate with the Alameda County Public Health Division for all public health incidents. The City has participated in the Points of Dispensing (POD) program in Alameda County. A POD is a pre-identified location that can be utilized for distributing medications or vaccines to a large number of people in the event of a public health emergency. The City has designated personnel to work at the POD and they have received training by the Alameda County Medical Reserve Corps. Materials to set up the POD are stored in a cache located at LPFD Station 6. Vaccines are not included in the cache, but will be delivered to the POD if activated.

2.3.13 CIVIL UNREST AND RIOTS

Civil Unrest is an incident intended to disrupt community affairs and threaten the public safety. Civil Unrest includes riots, mob violence, and any unlawful demonstration resulting in police intervention and arrests. Civil unrest is generally associated with controversial political, judicial, and or economic issues and events. During a civil unrest incident that affects the city of Livermore, there are certain facilities that may be more at risk than others, for example facilities that host events that attract large numbers of people. These situations create significant traffic congestion and the potential for disruptive behavior. The overall risk of civil unrest in Livermore may lead to fire, destruction of property, disruption of power, injury to persons, and in the worst cases, loss of life.

A previous event occurred on August 18, 1984 at a cruising event called Livermore Cruise Night, with an estimated 10,000 – 12,000 people attending and 3,000 to 6,000 vehicles present. The event turned into a riot where 11 Livermore policemen, and at least six assisting officers were injured, costing $11,000 dollars in damage.

Jails and Prisons

The city jail is located at the Livermore Police Department and maintained and operated by police officers. It is mainly used as a holding facility while arrested persons are processed prior to being transferred to the County Sheriff's Santa Rita Jail.

Santa Rita Jail is a county jail located in Dublin, adjacent to the Camp Parks Reserve Forces Training Area, and operated by the Alameda County Sheriff's Office. The facility holds about 4000 inmates housed in one of eighteen modern housing units. It is considered a "mega-jail" and ranks as the third largest facility in California and the fifth largest in the nation. Santa Rita is accredited by the American Correctional Association. It is the only facility in California holding this prestigious award.

There have been outbreaks of violence at the Santa Rita Jail where authorities confine the inmates to their cells in a lockdown of the jail. These typically result from a fight or other type of violent act, where the officials choose to shut down the entire jail system –minimum and maximum security units. Authorities investigate such incidents to see if these outbreaks are indicative of larger racial or gang related tensions inside the jail.

The Federal Correctional Institution, Dublin (FCI Dublin) is located nearby in Dublin. It is a low-security United States federal prison for female inmates. The facility has an adjacent satellite prison camp housing minimum-security female offenders. Law enforcement is tasked with maintaining order in the facilities and preventing inmates from escaping into the community.

2.3.14 PIPELINE HAZARDS

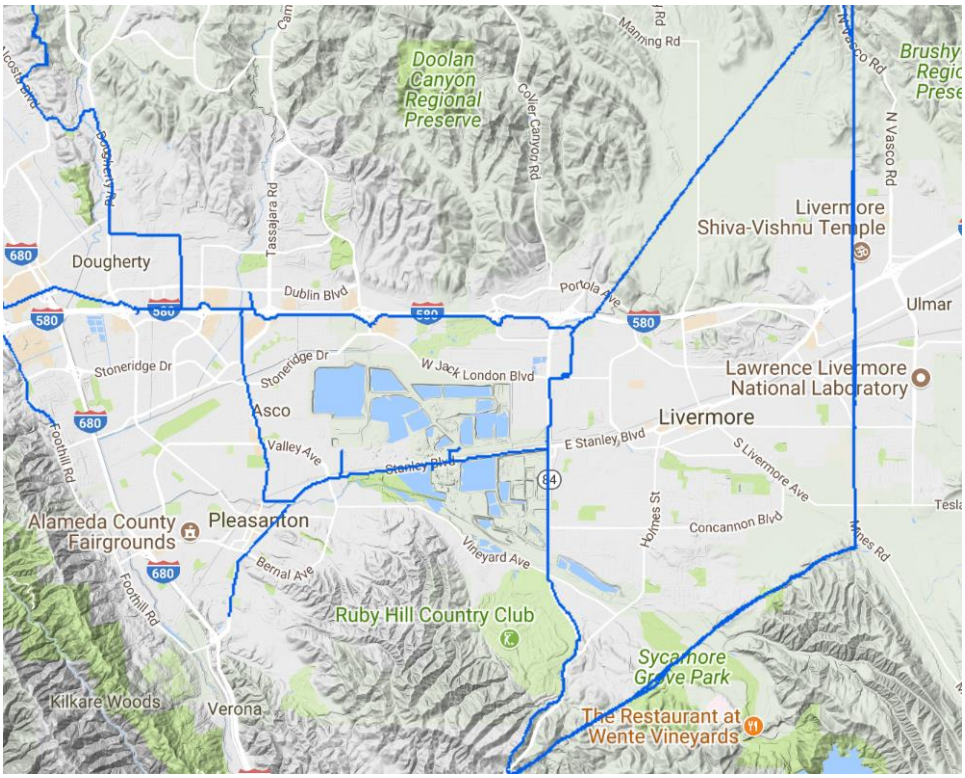
There are many pipeline distribution systems that transit the city of Livermore and throughout Alameda County, including systems for water, natural gas, and petroleum products. Virtually all natural gas, which accounts for about 28% of energy consumed annually, is transported by transmission pipelines. The gas transmission system is gradually deteriorating due to natural causes and the age of the system. Significant failure, including pipe breaks and explosions, can result in loss of life, injury, property damage, and environmental impacts. Causes of and contributors to pipeline failures include construction errors, material defects, internal and external corrosion, operational errors, control system malfunctions, outside force damage, subsidence, and seismicity. On September 20, 2010, the Mercury News reported that Pacific Gas and Electric Company (PG&E) released a list of the top 100 pipelines that it considered most at risk, including pipelines in Alameda County. The pipelines most at risk are designated for further study and long-range planning because of potential third-party damage, the potential for corrosion, and risks from ground movements and earthquakes. The pipelines are also being studied because of their age and the type of materials used to make them.

In February 2017, an Initial Study and Draft Mitigated Negative Declaration report was released, entitled: PG&E Gas Line 107 Retirement and Line 131 Valve Replacement Project. The report states "PG&E proposes to retire (permanently remove from service) a 13-mile portion of gas transmission pipeline 107 (L-107) in Alameda County (County) from south of Livermore to the eastern border of Fremont, California. The pipeline runs through public and private lands and contains 58 locations where ground-disturbing activities would take place to either remove the pipeline or abandon it in place. A previously abandoned section of pipeline 131 (L-131) would also be removed from a property where a section of L-107 is being removed. In addition, valve repair and replacement work would occur

at two locations on L-131 which runs parallel to L-107." The California Department of Fish and Wildlife (CDFW) is the lead agency under the California Environmental Quality Act (CEQA) for this pipeline retirement and valve replacement project.

The Initial Study and Draft Mitigated Negative Declaration report stated the first phase of work would begin in the spring of 2017 for replacement of the L-131 valves. The second phase, the L-107 retirements scope, was estimated to begin on April 15, 2017, with a valve repair restoration completion date in 2017, following valve construction. Demobilization and restoration activities for the retirement work were expected to be complete by October 15, 2017. At the time of the writing of this plan, it is unknown if the work was completed by the expected dates.

Exhibit 7: PG&E Natural Gas Transmission Pipeline System



PG&E Website August, 2017 https://www.pge.com/en_US/safety/how-the-system-works/natural-gas-system-overview/gas-transmission-pipeline/gas-transmission-pipelines.pag e

2.4 PLANNING ASSUMPTIONS

Below are assumptions for emergency planning that reflect situations that must be considered in order to achieve effective emergency operations in Livermore:

- The city of Livermore is susceptible to a number of hazards and risks that may result in a major emergency or catastrophic disaster
- An emergency may occur at any time with little or no warning and may exceed local capabilities
- City personnel are being trained to perform the roles in which they are assigned

- The City's EOC will be partially or fully activated to support operations during major emergencies or disasters
- City personnel may be unable or unavailable to report to work or as assigned
- Although non-essential City operations may be reduced or cancelled in order to prioritize resources, continuity of City government must continue
- Mutual aid and other outside assistance and support may be unavailable for extended periods of time
- Critical infrastructure such as communications, transportation, and utilities may be severely impacted and disrupted
- Residents, businesses, and other entities will need to be self-sufficient for one week or more
- Planning for resources and support will be needed to assist people with disabilities and others with access and functional needs
- The City of Livermore is a member agency of the Alameda OA and will coordinate with the OA to request or provide resources outside of existing mutual aid agreements
- OA members will commit their resources to a reasonable degree before requesting mutual aid assistance
- Federal and state response and recovery operations will be mutually coordinated to ensure effective mobilization of resources to and in support of the impacted jurisdictions

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3.0 CONCEPT OF OPERATIONS

3.1 PHASES OF EMERGENCY MANAGEMENT

Emergency management activities during peacetime and national security emergencies are often associated with the four federal emergency management phases indicated below. However, not every disaster necessarily includes all four phases. All departments of the City of Livermore typically have some responsibilities in all of the emergency phases, listed below.

- Preparedness Phase
- Response Phase
- Recovery Phase
- Mitigation Phase

3.1.1 PREPAREDNESS PHASE

The preparedness phase involves activities that are undertaken in advance of an emergency or disaster to develop operational capabilities and effective response strategies. Disaster plans, procedures, and resource listings are developed and revised to direct disaster response and resources. Pre- and post-incident disaster public preparedness and education programs are conducted to assist the public in being ready for an emergency or disaster. Planning activities may include conducting a hazard analysis, training response personnel, conducting outreach to the whole community, capability assessments, improving public information, maintaining communications systems to increase the readiness for a disaster, and other efforts, depending on the jurisdiction.

Increased readiness actions will be initiated when a warning is received or by an observation that an emergency situation may be arising. Actions to be accomplished include, but are not necessarily limited to the points listed below.

- Development of a critical facilities and available resources list
- Development of staffing and volunteer recruitment plans
- Pre-placement of supplies and staging of resources
- Testing of warning and communications systems

3.1.2 RESPONSE PHASE

The emergency response phase has three types of response actions taken in support of an emergency or disaster, pre-emergency response, emergency response, and sustained emergency response.

Pre-Emergency Response: When a disaster is inevitable, actions are precautionary and emphasize actions taken for the protection of life. Typical responses might be:

- Warning the population of the emergency and apprising them of safety measures to be taken
- Evacuating threatened populations to safe areas
- Advising the City Council and the Alameda OA of the impending emergency
- Identifying the need for and requesting mutual aid through the Alameda OA
- Requesting an emergency proclamation by the City Council

Emergency Response: During this phase, emphasis is placed on saving lives and property, controlling the situation and minimizing the effects of the disaster. Immediate response is accomplished in Livermore by timely and effective deployment of City departments that respond to emergencies. The primary departments that initially respond to emergencies are the Livermore Police Department, LPFD, Public Works Maintenance and Water Resources Divisions, and later the Community Development Department Building and Engineering Divisions. Any of the following conditions may apply to the City during this phase:

- The situation can be controlled without mutual aid assistance from outside the City
- Evacuation of portions of the city is required due to uncontrollable immediate and ensuing threats
- Mutual aid from outside the City is required
- The City is either minimally impacted or not impacted at all, and is requested to provide mutual aid to other jurisdictions

Livermore will give priority to the following operations:

- Dissemination of accurate and timely emergency information and warning to the public
- Situation analysis
- Resource allocation and control
- Evacuation and rescue operations
- Lifesaving and emergency medical care operations
- Care and shelter operations
- Maintaining city facilities, roadways, and city vehicles for response
- Access and perimeter control
- Public health operations
- Ensuring availability of drinking water and sewage control
- Restoration of vital services and utilities
- Damage and safety assessments
- Debris clearance

When local resources are overwhelmed and additional resources are required, mutual aid is initiated. Fire and law enforcement agencies will request mutual aid directly through established mutual aid coordinators and existing agreements. If no agreement is in force, requests will be initiated through the Alameda OA, or through the Cal OES Coastal Region if necessary. Cal OES regions have the responsibility to carry out the coordination of information and resources within the region and between the state and regional levels to ensure effective and efficient support to local response. The regions serve as the conduit for local and regional perspective and provide a physical presence for Cal OES functions at the local level in all phases of emergency management.

Depending on the severity of the emergency, the City of Livermore Emergency Operations Center (EOC) may be activated. Under the Standardized Emergency Management System (SEMS) regulations the OA will activate its EOC when:

- A local government activates its EOC and requests the OA EOC to activate
- Two or more cities within an OA declare or proclaim a local emergency

- The County and one or more cities declare or proclaim a local emergency

The OA may request the state to proclaim an emergency on behalf of the OA and the City of Livermore. The State Coastal Regional EOC (REOC) in Walnut Creek will support the Alameda OA and City of Livermore.

Depending on the severity of the emergency or disaster, the Cal OES Director may request a gubernatorial proclamation of a state of emergency. Should the state of emergency be proclaimed, state agencies will, to the extent possible, respond to requests for assistance. These activities will be coordinated with the Cal OES Director and/or Governor. Cal OES may also activate the State Operations Center (SOC) in Sacramento to support regions, agencies, and other entities in the affected areas on behalf of the state response. If the Governor requests and receives a Presidential Declaration of an Emergency or a Major Disaster under Public Law 93-288, he will appoint a state coordinating officer. The state coordinating officer and an appointed federal coordinating officer will coordinate and control state and federal recovery efforts in supporting local operations. All emergency response efforts and initial recovery support will be coordinated by the REOC.

Sustained Emergency: As the emergency response phase continues, and life-saving and property protection operations are decreasing, response operations continue with mass care, relocation of evacuees, registration of displaced persons, damage assessment operations, debris removal, and other activities to assist the community. At some point, the emergency will transition from the response phase to the recovery phase.

3.1.3 RECOVERY PHASE

Recovery operations address the procedures for accessing federal and state programs available for individual, business, and public assistance following a disaster. Examples of recovery activities include:

- Developing a Recovery Plan
- Restoring utilities
- Applying for state and federal assistance programs
- Identifying residual hazards
- Determining and recovering costs associated with response and recovery
- Demobilizing operations
- After-action reporting
- Conducting hazard mitigation analysis

3.1.4 MITIGATION PHASE

Mitigation efforts occur both before and following disaster events. Post-disaster mitigation is part of the recovery process. Eliminating or reducing the impact of hazards which exist within Livermore and are a threat to life and property are part of the mitigation efforts. Mitigation tools include:

- Local ordinances and statutes (zoning ordinance, building codes and enforcement, etc.)
- Structural measures (physical construction to reduce or avoid impacts of hazards)
- Tax levies or abatements
- Public information and community relations
- Land use planning

- Professional training

The recently developed Tri-Valley Hazard Mitigation Plan renders the City of Livermore to be eligible to apply for potential funding through the Federal Hazard Mitigation Grant Program as set forth in Title 44 of Code of Federal Regulations Section 201.6 (Local Mitigation Plans).

3.2 STANDARDIZED EMERGENCY MANAGEMENT SYSTEM

The Standardized Emergency Management System (SEMS) regulations are found in Title 19 Public Safety, Division 2 Office of Emergency Services, Chapter 1, SEMS (Authority cited: Section 8607(a), Government Code). These regulations establish the SEMS based on the Incident Command System (ICS) adapted from the system originally developed by the Firefighting Resources of California Organized for Potential Emergencies (FIRESCOPE) program, the Multi-Agency Coordination System (MACS) as developed by FIRESCOPE program, the Operational Area (OA) concept, and the Master Mutual Aid Agreement and related mutual aid systems.

SEMS legislation was passed in 1996 to improve coordination of state and local emergency response in California. SEMS emphasizes a standard organizational structure and terminology at all emergency management levels. SEMS is required for managing multiagency and multijurisdictional responses to emergencies, and unifies all elements of California's emergency management community into a single integrated system and standardizes key elements. State agencies are required to use SEMS. Local government entities were required to use SEMS by December 1, 1996 in order to be eligible for reimbursement of response-related costs under the state's disaster assistance programs.

3.3 PRESIDENTIAL POLICY DIRECTIVE 8

National preparedness is the shared responsibility of the whole community. Presidential Policy Directive 8 (PPD – 8) encompasses the full spectrum of prevention, protection, response, and recovery efforts to prepare the Nation for all hazards – whether terrorist attack or natural disaster – and defines what it means to be prepared for all hazards.

Together, the City of Livermore, individuals, communities, local and state governments, federal entities, the private and nonprofit sectors, and faith-based organizations across the nation strive to prepare for the threats and hazards that pose the greatest risk to the security of the United States. This effort is aimed at strengthening the security and resilience of the United States. The directives given in PPD – 8 are intended to stimulate action by the Federal Government, while facilitating an integrated nationwide capabilities-based approach to preparedness.

3.3.1 THE NATIONAL PREPAREDNESS GOAL

The National Preparedness Goal, Second Edition, September 2015, reiterates that preparedness for disasters is the shared responsibility of the entire nation and incorporates critical edits identified through real world events, lessons learned and implementation of the National Preparedness System.

Everyone can contribute to safeguarding the Nation from harm through systematic preparation for the threats that pose the greatest risk to the security of the Nation, including acts of terrorism, cyber-

attacks, and catastrophic natural disasters. The National Preparedness Goal is an integrated, layered, and all-Nation approach as the foundation for building and sustaining core capabilities, including coordinated structures to effectively sustain and deliver them. Key elements of the National Preparedness Goal include:

- Five Mission Areas
  - Prevention, Protection, Mitigation, Response, Recovery
- The Core Capabilities
  - 31 in total – essential for execution of the Mission Areas
- The Strategic National Risk Assessment Scenarios
  - The means of understanding the greatest risks to the Nation's security and resilience
- The concept of the whole community
  - Preparedness is the shared responsibility of the entire nation

3.4 NATIONAL INCIDENT MANAGEMENT SYSTEM

Homeland Security Presidential Directive-5 (HSPD-5) established the National Incident Management System (NIMS), integrating best practices into a consistent, flexible and adjustable nationwide approach for emergency management. Using the NIMS, federal, state, local and tribal governments, and private sector, and non-governmental organizations work together to prepare for, respond to, and recover from domestic incidents, regardless of cause, size or complexity. Federal and state government agencies are required to use NIMS, while local government agencies and special districts must use NIMS in order to be eligible for federal funding for emergency and disaster preparedness activities.

3.5 INCIDENT COMMAND SYSTEM

The Incident Command System (ICS) is a standardized, on-scene, all-hazards incident management approach that:

- Allows for the integration of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure
- Enables a coordinated response among various jurisdictions and functional agencies, both public and private
- Establishes common processes for planning and managing resources

ICS is applicable across all disciplines and is structured to facilitate activities in the following five major functional areas.

Figure 8: ICS Major Functional Areas

Functional Area	Activities
Command	Responsible for overall emergency policy and coordination through the joint efforts of governmental agencies and private organizations.
Operations	Responsible for coordinating all jurisdictional operations in support of the response to the emergency through implementation of the organizational level's action plan.
Planning/Intelligence	Responsible for collecting, evaluating, and disseminating information; developing the organizational level's action plan in coordination with the other

	functions; and maintaining documentation.
Logistics	Responsible for providing facilities, services, personnel, equipment, and materials.
Finance/Administration	Responsible for financial activities and administrative aspects not assigned to the other functions.

In the EOC, the command function is referred to as management. During large, complex incidents the EOC may be activated to assume a coordination role. As an incident expands in size or increases in complexity, and centralized coordination is needed, the EOC can provide support for incident stabilization, continuity of City operations, or crisis communications activities. The EOC provides a central location from which government at any level can provide multi-agency and interagency coordination, and executive decision-making in support of incident response. The EOC does not command or control the on-scene response. The EOC carries out the coordination function through:

- Information collection and evaluation
- Priority setting
- Resource management

Decision-making at the EOC affects incident response as well as the public response.

3.6 SEMS ORGANIZATIONAL LEVELS

Fully activated, SEMS consists of five organizational levels: field response, local government, operational area, regional, and state. ICS is used by all levels of response as well as by many non-governmental organizations and the private sector.

3.6.1 FIELD RESPONSE LEVEL

The field response level is where emergency response personnel and resources, under the direction of an Incident Commander (IC) of the appropriate authority, carry out tactical decisions and activities in direct response to an incident or threat. The Livermore Police Department, LPFD, and Livermore Public Works Department are the primary emergency service responders within the City of Livermore. The Alameda County Department of Public Health would serve as the IC during a public health emergency. Additional stakeholders may also assist in the response. SEMS regulations require the use of ICS at the field level of a multi-agency or multi-jurisdictional incident.

Requests for resources or support that cannot be filled at the field level are requested through a Department Operations Center (DOC) or the EOC. Incident information is reported by the field level to the EOC for use in decision making, and to provide information for EOC action planning.

3.6.2 LOCAL GOVERNMENT LEVEL

The local government level must use SEMS when the local government EOC is activated, and when a local emergency, as defined in Government Code §8558(c), is declared or proclaimed. The local government role is to manage and coordinate the overall emergency response and recovery activities within its jurisdiction. This is typically accomplished from within the EOC. Coordination takes place between the field level and the EOC and from the EOC to the Operational Area (OA). Information is reported from the OA to the Cal OES Coastal Region and from the region to the SOC. The City of

Livermore is also responsible for providing resources and mutual aid within their capabilities. Livermore will comply with SEMS regulations in order to be eligible for state funding of response-related personnel costs and will:

- Use SEMS when a local emergency is declared or proclaimed, or the EOC is activated
- Establish coordination and communications with Incident Commander(s) either through DOCs or the EOC
- Use existing mutual aid systems for coordinating fire and law enforcement resources
- Establish coordination and communications between the City of Livermore EOC, the Alameda OA EOC, and any state or local emergency response agency having jurisdiction at an incident within the city's boundaries
- Use multi-agency or inter-agency coordination to facilitate decisions for overall local government level emergency response activities

A local government under SEMS is defined as a city, county, city and county, school district, or special district. The City of Livermore is one of 14 incorporated cities within Alameda County. Special districts in Livermore include the Livermore Valley Joint Unified School District, Livermore Area Recreation and Park District, Zone 7 Water Agency (Alameda County Flood Control and Water Conservation District), and Chabot – Las Positas Community College District.

The advancement of SEMS is a cooperative effort of all departments and special districts within the jurisdiction that have an emergency response role. The Livermore Emergency Manager has the lead staff responsibility for SEMS development and planning with responsibilities for:

- Communicating information within the City of Livermore on SEMS requirements and guidelines
- Coordinating SEMS development among departments and special districts
- Identifying all departments and agencies involved in field level response
- Identifying departments and agencies with DOCs
- Coordinating with other local governments, and the operational area on development of SEMS
- Ensuring SEMS is incorporated into City of Livermore Emergency Operations Plan and emergency procedures
- Ensuring SEMS is incorporated into Livermore emergency ordinances, agreements, memorandum of understandings, etc.
- Identifying special districts that operate or provide services within the boundaries of Livermore (the emergency role of these special districts should be determined and provisions made for coordination during emergencies)
- Identification of local volunteer and private agencies that have an emergency response role (contacts should be made to develop arrangements for coordination in emergencies)

3.6.3 UNIFIED COMMAND

Unified command allows all agencies with responsibility for an incident, either geographically or functionally, to manage incidents through the establishment of a common set of incident objectives and strategies. This is accomplished by developing an authority structure in which the role of Incident Commander (IC) is shared by two or more individuals, each already having authority in a different

responding agency, without losing or abdicating agency authority, autonomy, responsibility, or accountability.

3.6.4 MULTI/INTER-AGENCY COORDINATION

Multi-agency or inter-agency coordination is defined as the participation of agencies and disciplines working together in a coordinated effort to facilitate decisions for overall emergency response activities, including the sharing of critical resources and the prioritization of incidents. Livermore Police Department, LPFD, and the Public Works Department participate in multi-agency, inter-agency coordination during an emergency with response departments from Pleasanton, the Alameda County Sheriff's Office, the California Highway Patrol, East Bay Regional Parks Police, Livermore Laboratory Security Force, Sandia National Laboratories Security Force, Bay Area Rapid Transit Police Department, Zone 7 Water Agency, Alameda County Public Works, Dublin San Ramon Services District, Livermore Area Recreation and Parks District, California Water Service Company-Livermore District, and other neighboring police, fire, and public works agencies.

3.6.4.1 EAST BAY INCIDENT MANAGEMENT TEAM

The LPFD serves on the East Bay Incident Management Team (IMT) that may respond to manage an emergency or disaster for the city, county, or in the region. There are three types of IMTs: Type 1, Type 2, and Type 3, all teams being self-contained. The East Bay IMT is a Type 3 IMT, although trained to a higher level. According to the U.S. Fire Administration, the Type 3 IMT is a team of 10 to 20 trained personnel consisting of an incident commander; operations section chief; plans section chief; finance section chief; and logistics section chief. It also can include a communications unit leader; food unit leader; medical unit leader; supply unit leader; public information officer; liaison officer and safety officer. It is recommended that a well-developed team is at least three deep in every one of the key command and general staff and significant unit level positions. IMTs generally manage resources brought in for incidents and perform tasks such as:

- Maintaining and up keeping assets, including food, water, sanitary needs, fuel and equipment
- Tracking costs and other data related to the use of resources
- Providing orderly and manageable systems for the supervision of assets or span of control
- Providing information sharing and management
- Providing a systemic approach to ensuring safety of the resources and the public
- Providing basic and detailed planning for operational needs, forecasting trends and probabilities
- Recording the incident scenario as it progresses

3.6.4.2 FEMA URBAN SEARCH & RESCUE TASK FORCE

LPFD serves on California Task Force 4. CA Task Force 4 is one of 28 FEMA National Urban Search & Rescue (US&R) Task Forces spread throughout the continental United States trained and equipped by FEMA to handle structural collapse. Sponsored by the Oakland Fire Department, CA Task Force 4 is comprised of personnel from 15 fire agencies throughout the greater Bay Area, as well as trained experts in other fields, such as physicians and engineers. California Task Force 4 stands prepared to respond on short notice to requests for assistance within California or other parts of the United States.

3.6.5 OPERATIONAL AREA LEVEL

An operational area (OA) is defined in the Emergency Services Act as an intermediate level of the state's emergency services organization consisting of a county and all political subdivisions within the county area. There are 58 OAs in the state – one for each county. The Alameda County Sheriff's Office is the lead agency for the Alameda OA. The Alameda OA is comprised of the County of Alameda, 14 cities, and special districts within the boundaries of the county. The "Agreement for Participation in the Alameda County Operational Area Emergency Management Organization" dated May 10, 2016, is an agreement to recognize and participate in an operational area emergency management organization. It is signed by the County, cities, special districts, and other public benefit non-profit corporations that are parties to the agreement, creating a partnership. The Alameda County Sheriff serves as the Director of Emergency Services for the County and the Operational Area Coordinator. The OA is responsible for:

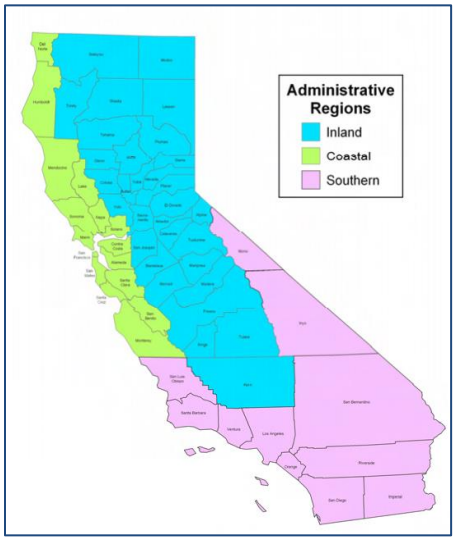
- Managing and coordinating information, resources and priorities among local governments within the Alameda OA
- Serving as the coordination and communication link between the local governments and the Cal OES Coastal Region
- Using multi-agency or inter-agency coordination to facilitate decisions for overall OA level emergency response activities

All local, state and federal governments should cooperate in organizing an effective operational area, however, the OA authority and responsibility is not affected by the nonparticipation of any local government.

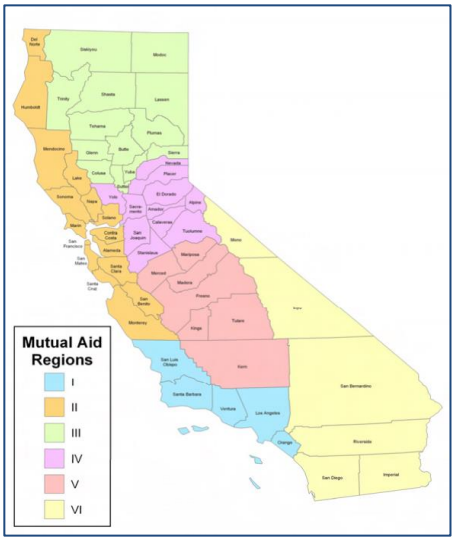
Activation of the OA during a State of Emergency or a Local Emergency is required by SEMS regulations under the following conditions:

- A local government within the OA has activated its EOC and requested activation of the OA EOC to support their emergency operations
- Two or more cities within the OA have proclaimed a local emergency
- The county and one or more cities have proclaimed a local emergency
- A city, city and county, or county has requested a governor's proclamation of a state of emergency, as defined in the Government Code Section 8558(b)
- A state of emergency is proclaimed by the governor for the county or two or more cities within the OA
- The OA is requesting resources from outside its boundaries. This does not include resources used in normal day-to-day operations that are obtained through existing mutual aid agreements
- The OA has received resource requests from outside its boundaries. This does not include resources used in normal day-to-day operations which are obtained through existing mutual aid agreements.

3.6.6 REGIONAL LEVEL



Cal OES has divided California into three Administrative Regions – Inland, Coastal and Southern – which are further divided into six mutual aid regions. The regional levels manage and coordinate information and resources among operational areas. The City of Livermore is in the Coastal Administrative Region. There are 16 counties within the Coastal Administration Region, which is the same area as Mutual Aid Region II. The counties represented by the region include Alameda, Contra Costa, Del Norte, Humboldt, Lake, Marin, Mendocino, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano, and Sonoma. Within the region there are 151 incorporated cities with a total population of 8,808,346 for all cities and counties in the Coastal region (Department of Finance E-1 County Population Estimates, 2017). The terrain of the Coastal Region significantly varies consisting of the coastal mountain range areas, foothill regions, watershed areas, and the valley floor with numerous agricultural centers.



Region II is managed through the Regional Emergency Operations Center (REOC) at the Cal OES Coastal Region Office, 1340 Treat Blvd., Suite 270, Walnut Creek, California 94597. The REOC is managed and staffed by Cal OES personnel. The administration office phone number is (925) 953-1405.

3.6.7 STATE LEVEL

In response to the emergency needs and requests from local governments and operational areas, the state level manages state resources and coordinates mutual aid among the mutual aid regions and between the regional and state levels. The state level also serves as the coordination and communication link between the state and the federal disaster response system. The Cal OES Main Offices (Buildings A, B, & C) are located at 3650 Schriever Avenue, Mather, California 95655-4203. The phone number to the main office is (916) 845-8510. This location houses the SOC, the State Warning Center, and Executive offices. The Cal OES Main Office (Building D) is located at 10390 Peter A McCuen Boulevard, Mather, California 95655. The Public Safety Communications Main Office is located at 601 & 630 Sequoia Pacific Boulevard, Sacramento, California 95811. The administration phone number is (916) 657-9494.

3.6.8 FEDERAL LEVEL

The Department of Homeland Security has designated FEMA to serve as the main federal government contact during disasters and national security emergencies. FEMA Region 9, is headquartered in Oakland, California, and is one of ten Regional Offices across the country. FEMA Region 9 has

responsibility for the areas of Arizona, California, Hawaii, Nevada, Guam, American Samoa, the Commonwealth of Northern Mariana Islands, the Republic of Marshall Islands, the Federated States of Micronesia, and more than 150 sovereign tribal entities.

In a disaster, different federal agencies may be involved in the response and recovery operations. Federal disaster assistance is organized under the concept of Emergency Support Functions as defined in the National Response Framework. All contact with FEMA and other federal agencies is made through the OA to the state during the response phase. During the recovery phase, cities, or special district may have direct contact with FEMA and other federal agencies. The FEMA Region office is located at 1111 Broadway, Suite 1200, Oakland, CA 94607-4052. The phone number is 1-800-621-FEMA (3362) or TTY (800) 462-7585.

3.7 SEMS COORDINATION LEVELS

The SEMS concepts, principles and organizational structure will be used in managing field operations. The size, complexity, hazard environment, and objectives of the situation will determine the ICS organizational size and the support that will be required to support field activities. Incidents will be managed by the objectives to be achieved and those objectives are communicated to field and EOC personnel through the use of the action planning process.

The IC will communicate with the Emergency Services Director (in the role of EOC Director) as to the status of the situation and resources through established communications channels. Members of the IC Command and General Staff will communicate with their counterparts in the EOC using the same communications methods. Some members of the EOC Management or General Staff may be asked to attend briefings or planning meetings at an Incident Command Post.

When multiple agencies respond to an incident, the IC will establish a Unified Command or Multi-Agency Coordination System and agency representatives will be asked to report to the Liaison Officer. Outside agencies including those from county, state and federal governments will participate in the Unified Command/Multi-Agency Coordination System by assisting in identifying objectives, setting priorities, and allocating critical resources to the incident.

3.7.1 FIELD/EOC COMMUNICATIONS AND COORDINATION

The Communications Unit Leader, working with the police and fire departments, will develop a Communications Plan outlining the communications system, equipment, channels and protocols to be used during an incident. The Incident Action Plan (IAP) developed for a specific incident will include a Communications Plan on an ICS 205 or 217A form. Typically, field to EOC communications will occur at the Command and General Staff levels or, if established, field units will communicate with the DOC, who will in turn relay the information to the appropriate section/function in the EOC. Clear Text, a component of NIMS, is the use of plain English in radio communications transmissions. No Ten Codes, used by law enforcement while on radio, or agency specific codes are used when utilizing clear text so that emergency responders will communicate clearly with each other.

The OA EOC will communicate situation and resource status information to the REOC via CalEOC, a web-based emergency management response system.

3.7.2 FIELD/EOC DIRECTION AND CONTROL INTERFACE

The EOC Director and General Staff will establish jurisdictional objectives and priorities and communicate those to everyone in the organization through an EOC Action Plan. The EOC action plan does not direct or control field units but supports their activities. Field commanders will ensure incident objectives and priorities are consistent with those policies and guidelines established by the EOC Director and Policy Group. It is the responsibility of ICs to communicate critical field level information to the EOC Director in a timely manner.

3.7.3 FIELD/EOC COORDINATION WITH DEPARTMENT OPERATIONS CENTERS

If a Livermore department establishes a DOC to coordinate and support their departmental field activities, the DOCs location, time of establishment and staffing information will be communicated to the EOC. All communications with the field units of that department will be directed to the DOC which will then relay situation and resource information to the EOC. DOCs act as an intermediate communications and coordination link between field units and the EOC.

3.8 EOC COORDINATION LEVELS

3.8.1 EOC COORDINATION WITH FIELD RESPONSE LEVEL

Coordination among SEMS levels is clearly necessary for effective emergency response. In a major emergency, the EOC may be activated to coordinate the overall response while the ICS is used by field responders. ICs may report pertinent information to DOCs, which in turn will report and coordinate with the EOC. Occasionally an EOC may need to operate in a centralized coordination and direction mode, where the EOC directly oversees Incident Command teams.

Another scenario is the interaction between the EOC and an Area Command. Area Command may be implemented during an occurrence of several similar type incidents located in close proximity, but in different jurisdictions. A Unified Area Command may be established to oversee Incident Commanders operating in general proximity to each other. The Unified Area Command would coordinate with activated local government EOCs.

3.8.2 COORDINATION WITH THE ALAMEDA OA

Coordination and communications will be established between the Livermore EOC and the OA. The communications link may be through the radio system, telephone, fax, email, or amateur radio to ensure notifications, information sharing, and reporting are completed.

The OA may direct the most heavily impacted agencies to coordinate and communicate directly with the OA EOC. The City of Livermore may use a multi-agency coordination system (MACS) concept when developing response and recovery operations. When and where possible, Livermore will include jurisdictional representatives in planning for jurisdictional support.

3.8.3 SPECIAL DISTRICT INVOLVEMENT

The emergency response role of special districts in Livermore is generally focused on normal services, but during disasters, these districts play a vital role in the emergency response and work with assisting

state, federal and private agencies. Special districts may include water districts, school districts, utility districts and other types related to performing a vital function during an emergency.

Typically, special district boundaries cross municipal boundary lines. A special district may serve several communities and county unincorporated areas. Some special districts serve more than one county. In such a situation, the special district may wish to provide a liaison representative to the City of Livermore EOC to facilitate coordination and communication with the various entities it serves.

3.8.4 COORDINATION WITH VOLUNTEER AND PRIVATE SECTOR AGENCIES

The Livermore EOC will establish communication with private and volunteer agencies that provide services to the City. The Alameda County Sheriff Search and Rescue, Community Emergency Response Team (CERT) and American Red Cross may play key roles assisting in the emergency response. These agencies, if significantly involved in an incident, may assign a representative to the Livermore EOC as an Agency Representative. Some agencies may have several personnel participating in functional elements in the EOC, (Red Cross personnel may be part of the staffing for the Care and Shelter Unit of the EOC).

Agencies that have countywide response roles and cannot respond to multiple city EOCs should be represented within the OA level EOC. Coordination with volunteer and private agencies that do not have representatives at an EOC may be accomplished through telecommunications, liaison with community councils that represent several agencies, or involvement of agencies in special multi-agency groups on specific issues.

In an emergency, governmental response is an extraordinary extension of responsibility and action, coupled with normal day-to-day activities. Normal governmental duties will be maintained, with emergency operations carried out by those agencies assigned specific emergency functions.

3.9 STATEWIDE EMERGENCY MANAGEMENT

Governments at all levels must work together effectively, along with the private sector, business and industry, community based organizations and volunteers, to meet the challenges posed by a disaster.

All resources available within the state that may be applied in disaster response and recovery phases, together with the private sector, are collectively referred to as the California Emergency Organization. The goal is to support emergency activities to protect life, property, and the environment. During a state of war emergency, a state of emergency, or a local emergency, the Cal OES Director will coordinate the emergency activities of all state agencies (California Emergency Services Act, §8587).

Emergency mutual aid response and recovery activities are generally conducted at the request and under the direction of the affected local government. Some emergency responses are led by designated state agencies. Such agencies have jurisdiction at the state level or those emergencies or disasters. Resource requests for response and recovery originate at the lowest level of government and are progressively forwarded to the next level until filled.

When support requirements cannot be met with state resources, the state may request assistance from those federal agencies having statutory authority to provide assistance in the absence of presidential declarations. The state may also request a Presidential Declaration of an Emergency or

Major Disaster under the provisions of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93288 as amended.

3.9.1 CALIFORNIA MASTER MUTUAL AID AGREEMENT

California's emergency assistance is based on a statewide mutual aid system designed to ensure that additional resources are provided to the state's political subdivisions whenever their own resources are overwhelmed or inadequate. The basis for this system is the California Disaster and Civil Defense Master Mutual Aid Agreement, which is entered into by local governments and the State of California. The various departments and agencies within the political subdivisions, municipal corporations, and public agencies agree to assist each other by providing resources during an emergency. The agreement obligates each signatory entity to provide aid to each other during an emergency without expectation of reimbursement. Under specific conditions, federal, and state monies may be appropriated to reimburse public agencies who aid other jurisdictions. If other agreements, memoranda, and contracts are used to provide assistance for consideration, the terms of those documents may affect disaster assistance eligibility and local entities may only be reimbursed if funds are available. This plan promotes the establishment of emergency assistance agreements between public and private sector agencies at all levels.

3.9.2 EMERGENCY MANAGEMENT ASSISTANCE COMPACT (EMAC)

California is a signatory to the interstate EMAC – a congressionally ratified organization that provides form, structure, and procedures for rendering emergency assistance between states. Once the governor has declared a state of emergency, Cal OES will assess the needs for the emergency incident. California can then request resources through the EMAC network for assistance provided by other states in the nation. The use of EMAC resolves two of the key issues regarding mutual aid, liability, and reimbursement so that a disaster impacted state can request and receive assistance from other member states quickly and efficiently.

3.9.3 MUTUAL AID SYSTEM

The statewide mutual aid system, operating within the framework of the Master Mutual Aid Agreement, allows for the progressive mobilization of resources to and from emergency response agencies, local governments, operational areas, regions, and state with the intent to provide the requesting agencies with adequate resources.

The statewide mutual aid system includes several discipline-specific mutual aid systems, such as fire and rescue, law, medical, and public works. The adoption of SEMS and NIMS does not alter these existing systems, but enhances the facilitation of mutual aid through the local government, operational area, regional, and state levels.

Within California, there are several discipline specific mutual aid plans that work in conjunction with the Master Mutual Aid Agreement. These plans derive their authority from the California Emergency Services Act and from the California Disaster and Civil Defense Master Mutual Aid Agreement. The State of California Law Enforcement Mutual Aid Plan is issued and revised under the authority of Sections 8550, 8569, 8615 through 8619, and 8668 of the California Government Code, the California

Emergency Plan, and the Master Mutual Aid Agreement. The California Fire Service and Rescue Emergency Mutual Aid Plan was first prepared and adopted in 1950. This plan has been reviewed, revised, approved, and adopted after by the Cal OES Fire and Rescue Service Advisory Committee/FIRESCOPE Board of Directors.

3.9.4 MUTUAL AID COORDINATORS

To facilitate mutual aid, discipline-specific mutual aid systems work through designated mutual aid coordinators at the operational area, regional and state levels. The basic role of a mutual aid coordinator is to receive mutual aid requests, coordinate the provision of resources from within the coordinator's geographic area of responsibility and pass on unfilled requests to the next level. Law Enforcement, Fire and Rescue Services, and the Medical Health Operational Coordinator work within existing state mutual aid systems for requests and assignments of mutual aid.

Mutual aid requests that do not fall into one of the discipline-specific mutual aid systems are handled through the emergency services mutual aid system by emergency management staff at the local government, operational area, regional, and state levels. When EOCs are activated, all discipline-specific mutual aid systems should establish coordination and communications within the respective local, operational area, regional, or state EOCs. Mutual aid system representatives at an EOC may be located in various functional elements (sections, branches, groups, or units) or serve as an agency representative, depending on how the EOC is organized and the extent to which it is activated.

3.9.5 CITY OF LIVERMORE MUTUAL AID REQUESTS

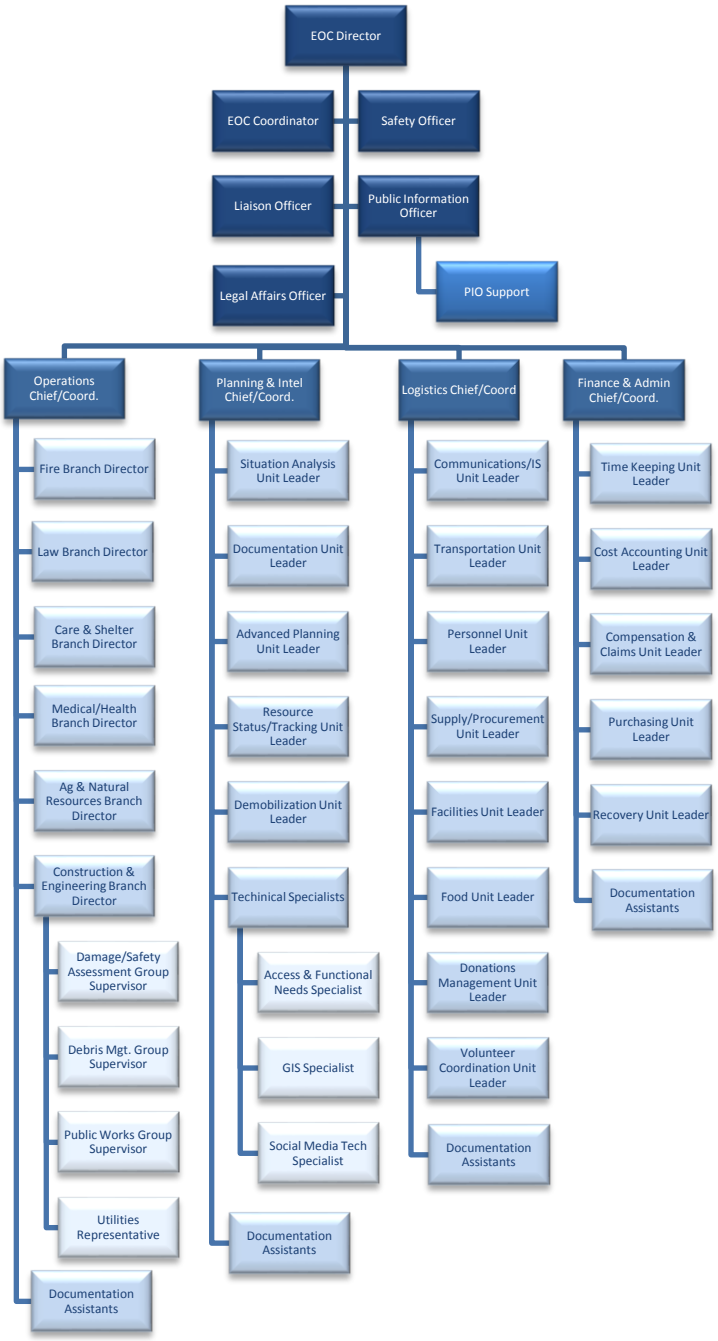
Requests for Fire and Rescue or Law Enforcement mutual aid will be made through existing Regional Mutual Aid Coordinators that may be present at the OA EOC.

Livermore will make non-fire or law mutual aid requests through the Alameda OA EOC via the Alameda County Sheriff's Office, Office of Emergency Services, 4985 Broder Boulevard, Dublin, CA 94568. The main phone number is (925) 803-7800. The OA will make mutual aid requests through the Cal OES Coastal Region when resources are not available within the OA.

3.10 CITY OF LIVERMORE EMERGENCY ORGANIZATION

The California Emergency Services Act requires the City of Livermore to manage and coordinate the overall emergency response and recovery activities within its jurisdiction. Per Chapter 2.48 of the City of Livermore Municipal Code, the Director of Emergency Services is responsible to impress into service all officers and employees of the City of Livermore, together with volunteers, groups, and organizations enrolled to aid them during an emergency, to constitute the emergency organization of the City of Livermore. The Emergency Organization chart shows the Livermore EOC organization within the SEMS/NIMS concept.

Exhibit 8: City of Livermore Emergency Organization



3.10.1 EMERGENCY PROCLAMATIONS

A Local Emergency may be proclaimed by the City Council or by the City Manager in his role of the Emergency Services Director as specified by Section 2.48.060 of the City of Livermore Municipal Code. Health and Safety Code 101080, states that the local health officer may declare a local health emergency under certain conditions. A Local Emergency proclaimed by the Emergency Services Director or Health Officer must be ratified by the City Council within seven days. The governing body must review the need to continue the proclamation at least every fourteen days until the Local Emergency is terminated. The Local Emergency must be terminated by resolution as soon as conditions warrant. Proclamations are normally made when there is an actual incident, threat of disaster, or extreme peril to the safety of persons and property within the county caused by natural or man-made situations. A Local Emergency proclamation provides the governing body with the legal authority to:

- If necessary, request that the Governor proclaim a state of emergency
- Promulgate or suspend orders and regulations necessary to provide for the protection of life and property, including issuing orders or regulations imposing a curfew within designated boundaries
- Exercise full power to provide mutual aid to any affected area in accordance with local ordinances, resolutions, emergency plans, or agreements
- Request state agencies and other jurisdictions to provide mutual aid
- Require the emergency services of any local official or employee
- Requisition necessary personnel and materials from any local department or agency
- Obtain vital supplies and equipment and, if required, immediately commandeer the same for public use
- Impose penalties for violation of lawful orders
- Conduct emergency operations without incurring legal liability for performance or failure of performance (see Article 17 of the Emergency Services Act for privileges/immunities)

3.10.2 STATE OF EMERGENCY

The Governor may proclaim a state of emergency when:

- Conditions of disaster or extreme peril exist which threaten the safety of persons and property within the state caused by natural or man-made incidents
- The Governor is requested to do so by local authorities
- The Governor finds that local authority is inadequate to cope with the emergency
- Mutual aid shall be rendered in accordance with approved emergency plans when the need arises in any county, city and county, or city for outside assistance

When a state of emergency has been proclaimed:

- The Governor shall, to the extent deemed necessary, have the right to exercise all police power vested in the state by the Constitution and the laws of the State of California within the designated area;
- Jurisdictions may command the aid of residents as deemed necessary to cope with an emergency
- The Governor may suspend the provisions of orders, rules or regulations of any state agency and any regulatory statute or statute prescribing the procedure for conducting state business

- The Governor may commandeer or make use of any private property or personnel (other than the media) in carrying out the responsibilities of their office
- The Governor may promulgate, issue, and enforce orders and regulations deemed necessary

3.10.3 STATE OF WAR EMERGENCY

Whenever the Governor proclaims a state of war emergency, or if a state of war emergency exists, all provisions associated with a state of emergency apply, additionally:

- All state agencies and political subdivisions are required to comply with the lawful orders and regulations of the Governor which are made or given within the limits of his authority as provided for in the Emergency Services Act.

3.11 CONTINUITY OF GOVERNMENT

A major disaster or national security emergency could result in the death or injury of key government officials, or the partial or complete destruction of established seats of government and public and private records essential to continued operations of government. Government at all levels is responsible for providing continuity of effective leadership, authority, and adequate direction of emergency and recovery operations. The California Government Code Section 8643(b) and the Constitution of California provide the authority for state and local government to reconstitute itself in the event incumbents are unable to serve.
A continuity of operations plan, or COOP, outlines the steps a municipality will take to continue their essential functions and maintain government operations during a major emergency or disaster within their jurisdiction. The City of Livermore is in the process of developing a Continuity of Operations Plan.

3.11.1 ALTERNATE SEAT OF GOVERNMENT

It is necessary at all levels of government to designate temporary seats of government in the event the normal location is not available. The Mayor or any other member of the City Council may designate alternate or temporary seats of City government should that be necessary. The seat of City government may be the EOC, or the alternate EOC, during an extreme emergency. These sites have the capacity and capability to conduct operations, including the necessary equipment, communications, planning and response tools necessary to function as the seat of government and/or EOC. In the event the government offices are unusable because of emergency conditions, the seat and temporary seats of City government are as follows:

- City Seat: City Council Chambers, 3575 Pacific Ave, Livermore, CA 94550
- 1st Alternate: City of Livermore Police Department, 1110 South Livermore Avenue, Livermore, CA 94550
- 2nd Alternate: City of Livermore Water Resources Department, Facilities Administrative Building, 101 West Jack London Boulevard, Livermore, CA 94550

3.11.2 SUCCESSION OF GOVERNING BODY

Article 15, Section 8633 of the Emergency Services Act establishes a method for reconstituting the governing body. It authorizes that should all members, including all standbys, be unavailable, temporary officers shall be appointed as follows:

- By the chairman of the board of the county in which the political subdivision is locate;
- By the chairman of the board of any other county within 150 miles (nearest and most populated down to farthest and least populated)
- By the mayor of any city within 150 miles (nearest and most populated down to farthest and least populated)

Article 15, Section 8639, Chapter 7, Division 1, Title 2 of the California Government Code permits the governing body to appoint up to three standby officers for each member of the governing body and up to three standby officers for the political subdivision's chief executive. The standby officers shall have the same authority and powers as the regular officers.

Article 15, Section 8642 of the Emergency Services Act authorizes local governing bodies to convene as soon as possible whenever a state of war emergency, state of emergency, or local emergency exists, and at a place not necessarily within the political subdivision.
Article 15, Section 8643 of the Emergency Services Act describes the duties of a governing body during emergencies as follows:

- Ascertain the damage to the jurisdiction and its personnel and property
- Reconstitute itself and any subdivisions
- Perform function in preserving law and order and furnishing local services

The City Manager is designated as the Director of Emergency Services. Should the Director be unavailable or unable to serve, the successors to the position of Director of Emergency Services are listed below in order of succession to act as the Director of Emergency Services. The individual serving as acting director shall have the authority and powers of the Director, and will serve until the Director is again able to serve, or until a successor has been appointed by the City Council. The designated alternates are:

- 1st Alternate: Office of Innovation and Economic Development Director
- 2nd Alternate: Administrative Services Director
- 3rd Alternate: Community Development Director

Notification of any successor changes shall be made through the established chain of command.

3.11.3 SUCCESSION OF OFFICERS HEADING DEPARTMENTS

Section 8637, Article 15, Chapter 7, Division 1, Title 2 of the California Government Code permits the political subdivision to provide for the succession of officers who head departments having duties in the maintenance of law and order or in the furnishing of public services relating to health and safety. The Livermore Department Directors successor positions for continuity of government are designated below:

Figure 9: City of Livermore Lines of Succession

Administrative Services Director	1. Finance Manager 2. Human Resources Manager 3. City Clerk 4. Information Technology Manager
City Attorney's Office	1. Assistant City Attorney

	2. Assistant City Attorney 3. Assistant City Attorney
Community Development Director	1. Assistant Community Development Director 2. Division Manager 3. Division Manager
Office of Innovation and Economic Development Director	1. Senior Management Analyst 2. Economic Development Specialist
Livermore – Pleasanton Fire Department Fire Chief	1. Assistant Chief 2. Deputy Chief of Operations
Police Department	1. Operations Captain 2. Support Captain 3. Lieutenant
Public Library Director	1. Supervising Librarian 2. Supervising Librarian 3. Supervising Librarian
Public Works Department Director	1. Division Manager (depends on type of incident) 2. Division Manager 3. Division Manager

Figure 10: City of Livermore Emergency Functions Matrix

Functional Responsibilities of Departments/Assisting Agencies are designated by P or S: P = Primary Responsibility; S= Support Role

DEPARTMENTS	City of Livermore Emergency Functions																							
	Management	Emergency Management	Safety / Security	Legal	Public Information	Liaison	Law / Coroner	Fire/Rescue	Emergency Medical	Public Works / Utilities	Public Health	Hazardous Materials	Animal Care & Control	Care & Shelter	Situation Analysis	Damage Assessment	Recovery	Resource Status	Documentation	Human Resources	Communications/Data	Supply	Facilities	Transportation	Finance
Mayor / City Council	P			S	S	S											S								
City Manager	P	P		S	P												P								S
City Attorney	S	S	S	P																					
– Risk Management Division	S		P	S			S	S		S	S			S						S					
Administrative Services Department	S	S			S		S	S	S	S	S				S	S	S	S			S	S			S
– Finance Division	S																S				S	S			P
– Human Resources Division			S		S		S	S	S	S					S		S		S	P					

DEPARTMENTS	City of Livermore Emergency Functions																								
	Management	Emergency Management	Safety / Security	Legal	Public Information	Liaison	Law / Coroner	Fire/Rescue	Emergency Medical	Public Works / Utilities	Public Health	Hazardous Materials	Animal Care & Control	Care & Shelter	Situation Analysis	Damage Assessment	Recovery	Resource Status	Documentation	Human Resources	Communications/Data	Supply	Facilities	Transportation	Finance
– City Clerk	S	S		S																					
– Information Technology Division		S			S		S	S	S	S	S				S	S		S							
Community Development Department	S														S	S	S	S	S						S
– Building Division										S	S				S	P	S		S			S	S		
– Engineering Division										S						P	S								
– Housing and Human Services Division					S	S	S	S			S			S				S							
– Permit Center															S	S	S			S	S		S		
– Planning Division											P				S	S	S	S	S						
Livermore – Pleasanton Fire Department	S	S	S		S		S	P	P		S	P	S	S	S		S	S				S	S		
Livermore Police Department	S	S	P	P	S		P	S		S			S	S	S		S	S				S	S		
– Livermore Police Animal Control							S	S					P	S	S									S	
Livermore Public Library					S	S								S						S			S		
Office of Innovation and Economic Development	P														S	S	S	S	S						S
Public Works Department	S	S	S		S					P	S	S			S		S	S					S	S	
– Livermore Airport Division														S	S								S	P	
– Golf Division										S				S	S			S				S	S		
– Maintenance Division	S	S	S		S					P	S	S			S		S	S					S	S	
– Environment Services Division											S						S					S			
– Water Resources Division			S		S		S	S	S	P	S	S			S	S	S	S				S			
Partner Agencies																									

DEPARTMENTS	City of Livermore Emergency Functions																							
	Management	Emergency Management	Safety / Security	Legal	Public Information	Liaison	Law / Coroner	Fire/Rescue	Emergency Medical	Public Works / Utilities	Public Health	Hazardous Materials	Animal Care & Control	Care & Shelter	Situation Analysis	Damage Assessment	Recovery	Resource Status	Documentation	Human Resources	Communications/Data	Supply	Facilities	Transportation	Finance
Alameda Operational Area	S	S			S	S	S	S	S	S	S	S		S	S			S	S	S	S				S
Alameda County Sheriff's Office			S		S	S	S	S	S			S	S		S			S		S	S	S	S	S	
Alameda County Health Department	S	S			S				S		P	P	S		S		S						S		
American Red Cross					S									P	S	S				S					
Cal OES	S	S		S	S												S								S
CA Highway Patrol					S		P										S							S	
Livermore USD														S	S	S							S		
FEMA	S	S		S	S												S					S			S
Stanford Health Care - ValleyCare Medical Center							S	S	S		S			S	S		S						S	S	
VA Palo Alto Health Care System							S	S	S		S			S	S	S	S						S	S	
Lawrence Livermore National Laboratory		S		S			S					S				S	S				S		S		
Sandia National Laboratories		S		S			S					S				S	S						S		

3.11.4 VITAL RECORD RETENTION

The preservation of vital records is critical to the City's recovery from a catastrophic event. During an emergency or disaster, all City departments are responsible to maintain and collect documentation of the department's activities. Although the principal focus of vital records preservation is to support recovery through reimbursement of disaster-related costs, vital records also have a broader and more important function. Vital records help to describe a reasonably complete compilation of damage, death, physical and mental trauma, and allocation of public and private resources, making it possible to learn from the disaster experience.

3.12 TRAINING, DOCUMENTATION, AND EXERCISES

The Livermore Emergency Manager is responsible for coordinating and scheduling training and exercises of this plan. The City shall conduct regular exercises of this plan to train all necessary City staff in their roles and responsibilities during major emergencies and disasters, EOC activations, and continuity of government operations.

All employees having any responsibilities in emergency response or being assigned a position in the EOC are trained on the EOP. The appropriate SEMS/NIMS/ICS training is provided to all public safety, EOC, and first responder personnel. Each county department is responsible to schedule and document ongoing emergency management training for their employees that have been designated with an emergency role.

3.12.1 SEMS TRAINING REGULATIONS

The requirements for SEMS training are outlined in Title 19. Public Safety Division 2. Office of Emergency Services Chapter 1. Standardized Emergency Management System (SEMS). The regulation provides the minimum performance objectives and assigns the determination of appropriate levels of SEMS instruction to each emergency response agency, based on the employees' potential assignment during an emergency response. The SEMS Approved Course of Instruction (ACI) Objectives are included in the following curriculum:

Figure 11: SEMS Training Objectives

Employee Level	Course(s)
Disaster Service Worker (All employees)	SEMS Introduction Course (G-606)
EOC Staff DOC Staff Coordination Center Personnel	SEMS EOC: EOC Operations G-775 ICS EOC Interface G-191 Essentials Section/Position Training (specific to the section/position)
Executives	SEMS Executive Course
Field Personnel	ICS 100, 200, 300, 400

SEMS Certification

For SEMS certification, the City departments follow their current procedures for documenting training and issuing certificates.

1. An individual training record for each person is kept either in their personnel file or in a separate training record file. The name of the course, instructor, location, and date is included in the training record.
2. The individual training record is maintained for as long as the person is employed in a position that involves an emergency response role. Records of personnel involved in an actual emergency are until any training compliance issues have been resolved.
3. Documentation of the agency's SEMS training program, including copies of the training materials used, (instructor syllabus, lesson plans, participant manuals, exercises, and tests).

3.12.2 NIMS TRAINING REQUIREMENTS

The National Incident Management System Training Program, September 2011, identifies the courses critical to train personnel capable of implementing all functions of emergency management. This program revises the NIMS core curriculum to ensure it adequately trains emergency and incident response personnel to all concepts and principles of each NIMS component.

NIMS Baseline Courses

The following courses are designed to provide a baseline, as they introduce basic NIMS and ICS concepts and provide the foundation for higher-level EOC, MACS, and ICS related training:

- **IS-700 NIMS, an Introduction:** This course introduces the NIMS concepts of a consistent nationwide template to enable all government, private sector, and nongovernmental organizations to work together during domestic incidents.
- **ICS-100 Introduction to the Incident Command System:** This course introduces ICS and provides the foundation for higher level ICS training. It describes the history, features and principles, and organizational structure of the system. It also explains the relationship between ICS and NIMS.

Supervisory Level Training

Additional training designed to provide an overview of key NIMS principles relating to MACS, public information, resource management, mutual aid, and communication and information management should be taken based on each person's assigned or expected position. Per the NIMS, individuals who may be assigned supervisory roles during an incident type by level, should take the following training:

Figure 12: Supervisory Training

Incident Type 1, 2, or 3	Incident Type 4	Incident Type 5
• ICS-100 Introduction to ICS • ICS-200 ICS for Single Resources – Initial Action Incidents • ICS-300 Intermediate ICS for Expanding Incidents • ICS-400 Advanced ICS Command and General Staff – Complex Incidents • IS-700 NIMS Introduction • IS-800 NRF Introduction • Appropriate ICS Position-specific courses	• ICS-100 • ICS-200 • IS-700	• ICS-100 • IS-700

FEMA recommends completion of the two baseline courses identified above prior to taking the awareness and additional training relating to MACS, EOC, and ICS. There are also additional courses designed to enhance skills development and are geared towards fulfilling Cal OES / NIMS position credentialing tracks. The NIMS Training Program document is available at: http://www.caloes.ca.gov/CaliforniaSpecializedTrainingInstituteSite/Documents/nims_training_program.pdf.

EOC/MACS Training Needs

The NIMS Training Program states that the training needs for EOC staff or other elements of the MACS

is different than that of field level personnel. Individuals who will be working in MACS, including an EOC should take IS-700, ICS-100, IS-800, and other NIMS courses related to emergency management responsibilities. Beyond the baseline and supervisory courses, additional training for EOC/MACS includes IS-701 NIMS Multiagency Coordination System, IS-706 NIMS Intrastate Mutual Aid, G-191 ICS/EOC, and G-775 EOC Management and Operations.

Senior Elected and Appointed Officials Training Needs

It is vital that elected and appointed officials understand and receive NIMS training. FEMA recommends the G-402 Incident Command System (ICS) Overview for Executives, Senior Officials course, and G-191 ICS/EOC for elected and appointed officials to ensure they have a clear understanding of their roles and responsibilities for successful emergency management and incident response.

3.12.3 EXERCISES

The City of Livermore's training exercises utilize the guiding principles of the Homeland Security Exercise and Evaluation Program (HSEEP). HSEEP provides a common method to manage the exercise program, design and develop the exercise, perform and evaluate the exercise, and conduct improvement planning. Exercises are a key component of preparedness providing an opportunity to assess and validate capabilities, and address areas for improvement.

Exercises play a vital role in national preparedness by enabling whole community stakeholders to test and validate plans and capabilities, and identify both capability gaps and areas for improvement. A well-designed exercise provides a low-risk environment to test capabilities, familiarize personnel with roles and responsibilities, and foster meaningful interaction and communication across organizations.

Discussion-Based Exercises

Discussion-based exercises include seminars, workshops, tabletop exercises (TTXs), and games. These types of exercises can be used to familiarize players with, or develop new, plans, policies, agreements, and procedures. Discussion-based exercises focus on strategic, policy-oriented issues. Facilitators and/or presenters usually lead the discussion, keeping participants on track towards meeting exercise objectives.

Figure 13: Discussion-Based Exercises

Seminars	Workshops	Tabletop Exercises (TTX)	Games
• Provide an overview of authorities, plans, policies, procedures, resources, concepts, and ideas.	• Increase participant interaction and focus by presenting clearly defined goals and objectives and should focus on a specific issue.	• TTXs generate discussion of issues regarding a hypothetical, simulated emergency. • Scenario based TTX to identify strengths and areas for improvement, and/or achieving changes in perceptions.	• A simulation of operations that often involves two or more teams, usually in a competitive environment, using rules, data, and procedures designed to depict an actual or hypothetical situation.

Operations Based Exercises

Operations-based exercises include drills, functional exercises, and full-scale exercises. These exercises can be used to validate plans, policies, agreements, and procedures; clarify roles and responsibilities; and identify resource gaps. Operations-based exercises are characterized by observance of actual reactions to an exercise scenario, such as initiating communications or mobilizing personnel and resources.

Figure 14: Operations-Based Exercises

Drills	Functional Exercises (FE)	Full Scale Exercises (FSE)
• A drill is a coordinated, supervised activity usually employed to validate a specific function or capability in a single agency or organization. Drills are commonly used to provide training on new equipment, validate procedures, or practice and maintain current skills.	• FEs are designed to validate and evaluate capabilities, multiple functions and/or sub-functions, or interdependent groups of functions. • FEs typically focus on exercising plans, policies, procedures, and staff members involved in management, direction, command, and control functions.	• FSEs are the most complex and resource-intensive type of exercise. • FSEs are conducted in a real-time, stressful environment intended to mirror a real incident. • The FSE present complex and realistic problems that require critical thinking, rapid problem solving, and effective responses by trained personnel.

Exercise evaluation assesses the ability to meet exercise objectives and capabilities by documenting strengths, areas for improvement, core capability performance, and corrective actions in an After-Action Report/Improvement Plan (AAR/IP). Through improvement planning, organizations take the corrective actions needed to improve plans, build and sustain capabilities, and maintain readiness.

3.13 ALERTING AND WARNING

Alerting and warning is the process of alerting governmental forces and warning the general public to the threat of imminent extraordinary danger. Success in saving lives and property is dependent upon timely dissemination of warning and emergency information to persons in threatened areas. Local government is responsible for warning the population within their jurisdiction. Depending on the nature of the threat and the population at risk, warning can originate at any level of government. Often the use of various warning systems and devices originate or are disseminated from a central location that is staffed 24 hours a day, typically the communications center.

The Livermore Police Department is in the process of acquiring access to AC Alert, provided by Alameda County and powered by Everbridge. AC Alert is a unified system for Alameda County residents, businesses, and visitors, in partnership with Alameda County agencies and the 14 cities in the county. AC Alert is a voluntary subscriber based alerting system to provide critical information such as earthquakes, fires, severe weather, road closures, missing persons, evacuations of buildings or

neighborhoods etc. Subscribers can elect to receive notifications at home, work, or other locations via phone (home, mobile or business), email address, text message or other.

The City of Livermore has access to other various systems that can be used to alert and warn employees and the public, as described below.

3.13.1 EAST BAY REGIONAL COMMUNICATIONS SYSTEM AUTHORITY

The City of Livermore is part of the East Bay Regional Communications System Authority (EBRCSA). EBRCSA is a P-25 compliant communications system that will provide fully interoperable communications to all 40 member agencies within Alameda and Contra Costa counties. The radio system encompasses a land area of over 1,500 square miles with a combined population of over 2.5 million people. The EBRCSA consists of six cells with a total of 36 sites, and a digital microwave system, linking all the sites to the master site controller. The system is designed and sized to offer participation to adjoining counties, as well as state and federal agencies. The EBRCSA is part of the Bay Area Urban Area Security Initiative (UASI), and has been working closely with its regional partners to ensure region-wide interoperability. EBRSCA also facilitates regional alert and warning capabilities for public safety agencies to warn the public at risk.

3.13.2 EMERGENCY ALERT SYSTEM

The Emergency Alert System (EAS) may be used to alert and warn the public. The EAS is designed for the broadcast media to disseminate emergency public information. This system enables federal, state, and local governments to communicate with the general public through commercial broadcast stations. EAS is operated by the broadcast industry voluntarily, and utilizes approved EAS plans, and standard operating procedures within the rules and regulations of the Federal Communications Commission (FCC). EAS can be accessed at federal, state, and local levels to transmit essential information to the public. Message priorities under Part 73.922(a) of the FCC's rules are as follows:

- Priority One - Presidential Messages (carried live)
- Priority Two - EAS Operational (Local) Area Programming
- Priority Three - State Programming
- Priority Four - National Programming and News

State programming originates from the State Operating Center (SOC) and is transmitted through the state using the state's California Law Enforcement Radio System (CLERS) VHF/UHF radio relay stations. California has 30 EAS Operational Areas within radio reception range of EAS stations serving the area. The state message priorities are as follows:

- Priority One - Immediate and positive action without delay is required to save lives
- Priority Two - Actions required for the protection of property and instructions to the public requiring expedient dissemination
- Priority Three - Information to the public and all others

Livermore is within the FCC EAS Plan for the San Francisco Bay Area, which includes the counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma. Emergency information is broadcast directly through the transmitters to all broadcasters in the city of Livermore simultaneously and to special districts and businesses with more than 100 employees, who

by law must monitor the EAS frequency. Emergencies that may warrant an alert include a child abduction emergency, civil danger or emergencies, evacuations, law enforcement or fire warning, radiological or hazardous materials warnings, flash flooding, and severe weather warnings. Local EAS voice and video broadcasts are accomplished at the Alameda County EOC.
In the city of Livermore, the EAS is administered under the authority of Alameda County. Access is through the Alameda County EOC. The California Law Enforcement Teletype System (CLETS) may be used to contact any public safety agency in the county or state. Access is through public safety dispatch centers.

Figure 15: Emergency Alert System Designations

Code	County/Local Area Designator	Facility/Station
SF	San Francisco Bay Counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma	LP1: KCBS 740 LP1S: KSOL 98.9 LP2: KQED 88.5 LP2: KSJO(FM) 92.3 LP2: KZST(FM) 100.1

3.13.3 NATIONAL WARNING SYSTEM

The National Warning System (NAWAS) is a dedicated wire-line system that provides two-way voice communications between the federal warning center, state warning points and local warning points. If the situation ever presents itself, NAWAS is a nationwide system developed to send warnings of impending attack throughout the nation. The system may be activated from two federal facilities that are staffed 24 hours daily: the National Warning Center (North American Air Defense Command, Colorado Springs) and the Alternate National Warning Center (Olney, Maryland). NAWAS is tested three times daily at unscheduled times.

3.13.4 CALIFORNIA WARNING SYSTEM

The California Warning System (CALWAS) is the state portion of NAWAS that extends to communications and dispatch centers throughout the state. Both state and federal circuits are monitored 24 hours a day at the Warning Center, the alternate point, and each of the local warning points. Circuits then extend to county warning points. Counties not on this system will receive warning through other means (normally over the California Law Enforcement Telecommunications System (CLETS).

Immediately following the NAWAS test through the Warning Center, the state conducts the CALWAS test through Cal OES. On alternate Wednesdays, the CHP conducts a test at 10:00 a.m. local time. Backup communications systems for CALWAS alerts include:

- CESFRS - California Emergency Services Fire Radio System
- CESRS - California Emergency Services Radio System
- CLEMARS - California Law Enforcement Mutual Aid Radio System
- CLERS - California Law Enforcement Radio System
- CLETS - California Law Enforcement Telecommunications System

3.13.5 NATIONAL WEATHER SERVICE

For the city of Livermore, the National Weather Service (NWS) transmits continuous weather information on frequencies 162.550 MHz at Monterey and 162.400 MHz at San Francisco. The Weather Service can also access NAWAS to announce severe weather information. Weather advisories and emergency warnings for Livermore are issued out of the San Francisco Bay Area, 21 Grace Hopper Avenue, Stop 5, Monterey CA 93943-5505.

3.13.6 CALIFORNIA STATE WARNING CENTER

The California State Warning Center (CSWC) is a signal and information conduit for Cal OES and a central information hub for statewide emergency communications. The CSWC is under the command and direction of the CHP, and staffed by sworn officers and civilian emergency services communications personnel. The CSWC provides service to all California law enforcement agencies and their officers 24 hours a day, 365 days a year. Additionally, the CSWC will provide the means by which fire service agencies can communicate intelligence information to the Federal Bureau of Investigations. The CSWC has the responsibility to receive, coordinate, verify and disseminate information pertaining to events which occur within California or that could affect California. Information received by the CSWC is coordinated between Cal OES and other sources to ensure that the information which is disseminated is both timely and accurate. The CSWC receives reports of hazardous material spills, which result in spill notifications to federal, state and local government agencies. In addition, CSWC make notifications due to weather related warnings, fires, seismic events and other potential events that could have emergency management impacts.
The following is a list of current functions and responsibilities of the CSWC:

- Facilitates multi-regional and statewide AMBER Alerts
- Carries out critical incident notifications, warnings, and tactical alerts to all involved agencies and organizations
- Conducts computer crime incident notifications
- Conducts homeland security incident notifications
- Conducts hazardous material notifications
- Monitors natural disasters and coordinates emergency response
- Monitors and maintains state and national emergency response communications
- Conducts Governor and executive staff notifications
- Facilitates toxic call-outs (drug labs)

3.13.7 CALEOC

CalEOC is the state's version of WebEOC®. CalEOC is an internet-based platform allowing for secure and real-time sharing of information related to management of emergencies among emergency management personnel, first responder agencies and cooperating organizations. CalEOC provides real-time information sharing to authorized users through the Internet. The information is universally available to all authorized users simultaneously. Currently the permitted users are limited to counties and operational areas. The City of Livermore will provide situation status and requests for assistance to the Alameda OA EOC, which will be forwarded to the Cal OES REOC via CalEOC.

3.13.8 EMERGENCY DIGITAL INFORMATION SERVICE

The Emergency Digital Information Service (EDIS) provides local, state, and federal agencies with a direct computer link to the news media and other agencies during emergencies. EDIS supplements existing emergency public information systems such as the Emergency Alert System. The main purpose of EDIS is to distribute official information to the public during emergencies; although, non-emergency uses of EDIS are permitted as long as they do not interfere with more urgent transmissions.

EDIS may be used to transmit information in the following categories, listed in priority order:

1. FLASH - Alerts and warning of immediate life-safety value to members of the public
2. NEWS - Information of immediate benefit to the public. Releases in this category may include reports of unusual natural, social, or technological events; notices of government activities requiring specific action by members of the public; road and traffic information and instructions for those affected by an emergency
3. INFO - Advisory messages for coordination between government and the news media. Topics might include: times and locations of news briefings, schedules for media tours of emergency scenes, “pool coverage” arrangements, airspace restrictions
4. TEST - Transmissions to verify operation of equipment and for training of originating personnel

The EDIS may be used to disseminate emergency information to the public. Access is through the EDIS website or any CLETS terminal.

3.13.9 OPERATIONAL AREA SATELLITE INFORMATION SYSTEM

The Operational Area Satellite Information System (OASIS) is a system that consists of a communications satellite, multiple remote sites, and a hub that allows virtually uninterruptable communication between state, regional, and operational area level EOCs. The system, which uses technology similar to cellular telephones, has 60 channels. When a user picks up the line, the system automatically searches for the best available channel and is capable of conducting six simultaneous voice conversations and one data channel at a rate of 9600 baud. Access to OASIS is through the Alameda OA to Cal OES.

3.13.10 LIVERMORE NOTIFICATION AND ALERT SYSTEMS

Employees’ contact information is pre-programmed into the City’s Nixle account to notify them of an emergency requiring them to report to work or contact their supervisor for instructions. Alameda County’s AC Alert is a voluntary subscriber based emergency notification system to provide critical information about earthquakes, fires, severe weather, road closures, missing persons, evacuations of buildings or neighborhoods, etc. Subscribers can elect to receive notifications at home, work, or other locations via phone (home, mobile or business), email address, or text message.

The City of Livermore has Facebook, Twitter, Instagram, Next Door, and LinkedIn accounts. The Livermore Police Department has Facebook, Nixle, You Tube, and Twitter accounts that can be used to make notifications via the social media application. The Public Library has Facebook, Twitter, Instagram, You Tube and Pinterest accounts. The Livermore – Pleasanton Fire Department has Facebook, Twitter, Next Door, LinkedIn, and Instagram accounts. The Livermore Airport has a Facebook account. Subscribers to these accounts can monitor the applications for information and directions

during an emergency, while City departments can monitor and receive initial assessments of disaster damage from followers. In some cases, emergency call response centers have shut down or have become unreachable because of damaged communications systems. Social media platforms such as Facebook, Nextdoor, and Twitter allow followers to connect to rescuers, organize food and medical supplies, and find places for people to stay.

3.13.11 AMATEUR RADIO EMERGENCY SERVICES

The Radio Amateur Civil Emergency Services (RACES) provides the Cities of Livermore and Pleasanton with auxiliary communications services and emergency communications based on a variety of volunteer skills for emergency field level, administrative, and logistical communications between Livermore and Pleasanton, their departments, and between the cities and county government. RACES also provides amateur radio operators in support of an EOC activation and disaster recovery. RACES operations are carried out in accordance with FCC Rules and Regulations. The Amateur Radio operators within the Tri-Valley area are considered to be a single regional resource and may be assigned to any appropriate jurisdiction within the area.

The Livermore Amateur Radio Klub (LARK) was incorporated on July 30, 1959, as a nonprofit association of persons commonly interested in amateur radio. LARK serves the communities of Livermore, Pleasanton, and Dublin, and the surrounding Tri-Valley area. LARK is also affiliated with the American Radio Relay League (ARRL). LARK operates according to Federal Communications Commission (FCC) rules (Part 97 Amateur Radio Service). It is a volunteer organization of licensed amateur radio operators who donate time, energy, skills, and use of personal equipment for public service. LARK members may provide communications support using amateur radio, cellular, and regular phones, computers, e-mail, facsimile, Internet, microwave, public service radio, satellite, television and video-conferencing systems, as well as field and in-office support of personnel.

LARK may be requested as a part of the mutual aid system during a disaster, if a local agency's resources are overwhelmed or they have lost primary communications capabilities. Mutual aid requests will be forwarded to the Alameda OA Logistics Section by the local agency.

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4.0 CITY OF LIVERMORE RECOVERY OPERATIONS

During the response phase, when lifesaving activities are in effect, an assessment is made of when to transition from the response phase to the recovery phase. Disaster recovery can be thought of as the blueprint for the restoration of the whole community after a disaster occurs. At the onset of a disaster, the location, type, severity and effects of the incident will determine the approach to recovery planning. Short and long-term planning strategies may include policy changes, programs, projects, and other activities. The recovery plan defines the community's vision of how it would like to rebuild in the aftermath of a devastating disaster.

Post-disaster recovery planning is a shared responsibility between individuals, the private sector, non-governmental organizations, and the local, state, and federal governments. Local governments are encouraged to develop a pre-disaster recovery plan, which will help to effectively guide outside resources from state, regional and federal authorities. As a result, community redevelopment and recovery can take place in a manner that is consistent with the values of the whole community.

The short-term recovery phase involves restoring the infrastructure in the affected area to meet immediate needs. Coordination from the response phase to the recovery phase is necessary to identify high priority requirements such as resumption of utilities, liability concerns, financing, and recovery ordinances. Short-term recovery includes actions to:

- Stabilize the situation
- Restore essential services
- Begin the process of restoring community and economic functions
- Perform damage assessment
- Perform debris removal
- Restore utilities, such as water and power services
- Restore basic transportation services and routes
- Provide temporary housing

It is critical that documentation of response functions continue during the response and transition to recovery. Failure to strictly account for damage documentation and personnel costs can negatively affect reimbursement levels.

Long-term recovery consists of actions that will return the City back to pre-disaster levels of service, barring the inevitable changes that result from a major disaster. Long-term recovery requires significant planning to maximize opportunities and mitigate risks after a major incident. Long-term recovery can continue for years and may include the following:

- Reconstructing public and private facilities and infrastructure
- Planning and rebuilding of housing
- Implementing waivers, zoning changes, and other land-use regulations to promote recovery
- Providing long-term assistance to displaced families, including financial support as well as social and health services
- Restoring the local economy to pre-disaster levels
- Integrating mitigation strategies into rebuilding efforts
- Recovering disaster-related costs for infrastructure restoration through Federal grant programs

During recovery, Local Assistance Centers (LAC) may be opened by the City of Livermore to assist the community members. The LAC provides a centralized location at which individuals, families and businesses can access available disaster assistance programs and services. The LAC is staffed and supported by local, state and federal agencies, as necessary, as well as volunteer, faith based, non-profit and other non-governmental organizations. The LACs need to be physically accessible and information needs to be provided in accessible formats for people with disabilities and others with access and functional needs and all community members. If federal resources are authorized, a state-federal disaster recovery center may be co-located with the LACs.

The state coordinates with FEMA as necessary to activate a Joint Field Office (JFO) to coordinate federal support for the emergency. The state will appoint a state coordinating officer to serve as the state point of contact. A federal coordinating officer is appointed on a presidential declaration of an emergency or major disaster.

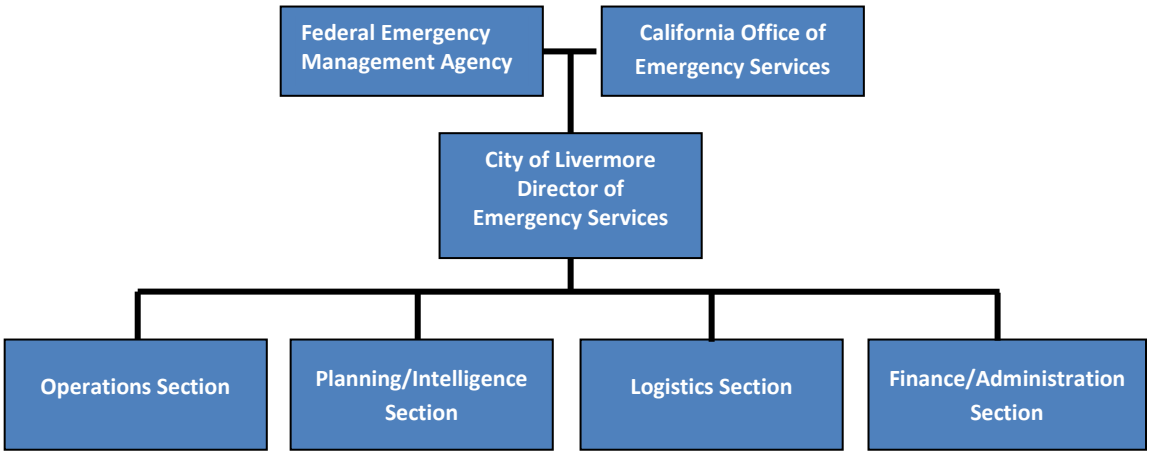
As the response activities cease, and resources are no longer needed to support the response, resources are demobilized. Demobilization includes provisions to verify and document the safe return of resources to their original location. All resources are tracked to ensure appropriate reimbursement.

Where applicable, the demobilization should include compliance with mutual aid and assistance provisions.

4.1 SEMS RECOVERY ORGANIZATION

During the recovery phase, the City of Livermore will participate in a modified organization for recovery. As well, the Alameda OA serves in a different role during recovery than in response. Local governments, rather than the OA, coordinate directly with state and federal recovery programs, while the OA acts as an information and coordination point for its constituent jurisdiction in the unincorporated area of the county. The recovery organization will provide significant resources and information to support disaster recovery efforts.

Exhibit 9: Livermore Recovery Organization



4.2 DAMAGE ASSESSMENT

During the early phase of a disaster, the initial damage from the disaster is estimated due to time constraints related to the response. This is referred to as a safety assessment. The Post-Disaster Safety Assessment Program (SAP) of California, Cal OES, has the goal of helping local government perform accurate facility safety assessments as quickly as possible. This will allow people to use safe homes and businesses, and ensure that people are prohibited from entering unsafe structures after a disaster.

Pre-trained SAP Evaluators survey damaged facilities to determine if there are safety hazards to building occupants or to the general public. SAP Evaluators also provide recommended posting of placards that denote the condition of each structure evaluated. A three-tier posting classification system is used as described in Procedures for Post-Earthquake Safety Evaluation of Buildings (ATC-20). Cal OES recommends using the modified forms and placards as described in the SAP Evaluator training manual. The colored placards (tags) are tools posted on inspected structures to easily identify facility damage assessment results from a distance. They are normally posted at all building entrances. The following describes the circumstances that inspectors post each type of placard:

- A green placard means the facility has been inspected and may be damaged, but remains safe to occupy.
- A red placard means the facility poses an imminent threat to life or safety under expected loads or other unsafe conditions.
- A yellow placard means there is some risk from damage in all or part of the facility that does not warrant red-tagging. The placard should indicate the specific restriction (i.e., entry, duration of occupancy, use, etc.).

The actual posting of a structure is accomplished by mounting the appropriate placard in a clearly visible location at the front door and near all usual points of entry to the building. Procedures for conducting more detailed surveys should be developed to be used in disaster project applications once the recovery process begins.

4.2.1 PUBLIC SAFETY CONCERNS

Safety precautions that will contribute to recovery operations include:

- Ensuring gas, water, sewer leaks are identified
- Ensuring utilities are turned off in unsafe or damaged structures
- Securing hazardous materials sites and preparing clean-up plan
- Ensuring unsafe buildings are vacated, clearly marked and access is restricted
- Identifying safety precautions to be undertaken by emergency workers

4.2.2 STRUCTURAL DAMAGE

Procedures for survey teams should include these definitions when describing damages. The definitions are limited to the structure, and do not include the contents inside the building.

- Destroyed - Cost of repair is more than 75% of value
- Major Damage - Cost of repair is greater than 10% of value

- Minor Damage - Cost of repair is less than 10% of value

4.3 RECOVERY ACTIVITIES

Common terms for recovery activities include:

- Category A: Debris Clearance - Clearance of debris, wreckage, demolition, and removal of buildings damaged beyond repair.
- Category B: Protective Measures - Measures to eliminate or lessen immediate threats to life, public health, and safety.
- Category C: Roads and Bridges - All non-emergency work and any that may require more time for decision-making, preparation of detailed design, construction plans, cost estimates, and schedules.
- Category D: Water Control Facilities - Includes flood control, drainage, levees, dams, dikes, irrigation works, and bulkheads.
- Category E: Public Buildings and Equipment - Buildings, vehicles or other equipment, transportation systems, fire stations, supplies or inventory, higher education facilities, libraries, and schools.
- Category F: Utilities - Water supply systems, sanitary sewerage treatment plants, storm drainage, and light/power.
- Category G: Other - Park facilities, public and private non-profit facilities, recreational facilities, and playground equipment.

4.3.1 DAMAGE REPORT

Once a Presidential Disaster Declaration has been made, a complete and comprehensive list of all the damage that has occurred needs to be completed by the City and reported to the OA. The OA will then transmit the damage information to the Cal OES Coastal Region, who will in turn report the damage to the state and FEMA. The report should include:

- Location of Action/Damage – Geographical location of damaged facility or emergency work
- Description of Action/Damage – Narrative description explaining the nature of the disaster related problem (engineering details are not needed)
- Cost Estimates – A separate estimate for each facility or system affected

The Damage Assessment Group in the Construction and Engineering Branch of the Operations Section is responsible to conduct damage and safety assessments during the operations and recovery phases.

4.4 RECOVERY REPORTING AND DOCUMENTATION

Recovery documentation and reporting is the key to recovering eligible emergency response and recovery costs. Well-timed safety and damage assessments, documentation of all incident activities, and accurate reporting are critical in establishing the basis for eligibility of disaster assistance programs. The Documentation Unit of the Planning and Intelligence Section is responsible for documenting recovery activities and coordinating the collection of all incident documentation for dissemination and filing.

4.4.1 RECOVERY DOCUMENTATION

The recovery documentation should include the location and extent of damage, estimates of costs for debris removal, emergency work, and repairing or replacing damaged facilities to a non-vulnerable and mitigated condition. The cost of compliance with building codes for new construction, repair, and restoration will also be documented. The cost of improving facilities may be provided under federal hazard mitigation grant programs. Documentation is the key to recovering expenditures related to emergency response and recovery operations. Documentation must begin at the field response level and continue as the disaster unfolds.

4.4.2 AFTER-ACTION REPORTING

SEMS regulations require that jurisdictions complete an After-Action Report (AAR) within 120 days after each emergency proclamation. The SEMS regulations under Title IX, Division 2, Chapter 1, Section 2450(a), require any federal, state, or local jurisdiction proclaiming or responding to a Local Emergency for which the governor has declared a state of emergency or state of war emergency shall complete and transmit an AAR to Cal OES within 90 days of the close of the emergency period. On completion of the AAR, corrective actions must be identified to make recommendations for correcting problems noted in the response/recovery effort, or during exercises and training. Depending on the level of the AAR, corrective actions may include anything from recommendations for improving individual agency plans and procedures, to system-wide improvements. Priority corrective actions are assigned to relevant stakeholders and tracked to ensure the identified problem has been addressed. The Livermore Emergency Manager is responsible to prepare the After-Action Report with input from the Livermore departments and the LPFD.

4.5 DISASTER ASSISTANCE

There are two forms of disaster assistance: Individual and Public Assistance. Recovery plans should address both types of assistance, methods of acquiring help, restrictions, and other pertinent information.

4.5.1 GOVERNMENT ASSISTANCE TO INDIVIDUALS

The state does not have authority to offer financial assistance to private sector disaster victims under the California Disaster Assistance Act (CDAA). Many non-governmental organizations (NGOs), such as the American Red Cross, the Salvation Army, or faith-based organizations provide recovery assistance to individuals, families and community organizations. This may include assistance for shelter, food, clothing, and housing reconstruction. The Cal OES Voluntary Agency Liaison (VAL) works closely with non-profit partners to help coordinate assistance to individuals. Under the Welfare and Institutions Code, the California Department of Social Services (CDSS) is authorized to assist those who receive the maximum grant under the Federal Individuals and Households Program (IHP) and still have eligible losses as identified by the federal inspector. The state also has a variety of other programs and services to assist individuals, businesses, and farmers in recovering from a disaster.

4.5.2 FEDERAL PROGRAMS

FEMA's recovery mission is to support communities in rebuilding so individuals, civic institutions, private businesses, and governmental organizations can function on their own, return to normal life, and protect against future hazards. FEMA's disaster assistance programs include:

- Disaster Housing Assistance Program – The IHP may provide temporary housing to eligible homeowners and renters disaster victims during presidentially declared disasters
- Other Needs Assistance – The IHP provides financial assistance for uninsured disaster-related necessary expenses and serious needs, including personal property, medical, dental, and transportation expenses.
- Additional Programs – Other Stafford Act programs that may be made available as a result of a major disaster declaration includes: crisis counseling, disaster unemployment assistance, and legal services.
- Low-Interest Loans **–** The U.S. Small Business Administration (SBA) provides low-interest disaster loans to homeowners, renters, businesses and certain private non-profit organizations in declared disaster areas. Loans may be made for uninsured physical damage to homes, businesses and other properties, or for economic losses. When there is no Presidential disaster declaration, Cal OES may coordinate a request for SBA assistance.
- Agricultural Assistance**:** The U.S. Department of Agriculture (USDA) provides low-interest loans to farmers, ranchers, and aqua-culturists for physical and/or crop production losses in areas designated a disaster by the Secretary of Agriculture. The SBA may also provide economic injury disaster loans to small non-farm businesses, small agricultural cooperatives, and most private non-profit organizations of any size.

FEMA cannot provide assistance where there is a duplication of benefits. This occurs when assistance can be granted to a disaster survivor through other federal program authorities.

4.6 PUBLIC ASSISTANCE

Public assistance consists of various programs of disaster relief to the public and private non-profit sectors. Public sector includes state and local governments (city, county, special district). Private non-profit includes certain eligible private nonprofit organizations or an intermediary private nonprofit applicant to receive state assistance for extraordinary costs incurred while providing assistance at the request of local agencies during a state disaster event.

4.6.1 FEDERAL – ROBERT T STAFFORD DISASTER RELIEF ACT OF 1974

The following is a brief overview of this program:

A Presidential Declaration of Major Disaster or Emergency is required to activate the provisions of this law. Eligible applicants include the following:

- State agencies
- Counties
- Cities

- Special districts
- Schools K-12
- Colleges and institutions of higher education
- Private non-profit organizations organized under § 501(c) 3 of the Internal Revenue Code
- Utilities
- Emergency agencies
- Medical agencies
- Custodial care organizations
- Government services such as: community centers, libraries, homeless shelters, senior citizen centers, and similar facilities open to the general public

4.6.2 JOINT FIELD OFFICE

Once a disaster is declared by the President, a Joint Field Office (JFO) is established in the proximity of the disaster area. A JFO is where FEMA and the state can coordinate the disaster response and recovery efforts. The JFO serves as the coordination point for federal assistance. Utilizing the NIMS principle of Unified Command, JFO activities are managed by a JFO Coordination Group:

- JFO Coordination Group: The JFO Coordination Group functions as a multiagency coordination entity (as defined by the NIMS) and works to establish joint priorities (single or multiple incidents) and allocate resources, resolve agency policy issues, and provide strategic guidance to support Federal incident management activities. The exact composition of the JFO is dependent on the nature and magnitude of the incident.
- Operations: The Operations Section coordinates support to on-scene incident management efforts, program implementation and activities required to address broader impacts beyond the immediate incident site. The Operations Section coordinates with Federal command posts that may be established to support incident management activities.
- Planning/Intelligence: The Planning Section's function includes the collection, evaluation, dissemination, and use of information regarding the incident and the status of Federal resources.
- Logistics: The Logistics Section's function is to coordinate logistics support which includes management and accountability for Federal supplies and equipment; resource ordering; delivery of equipment, supplies, and services to the JFO and other field locations; facilities; transportation coordination; information and technology systems services; and administrative services.
- Finance/Administration: The Finance/Administration Section is responsible for the financial management, monitoring, and tracking of all Federal costs relating to the incident and the functioning of the JFO while adhering to all Federal laws, acts, and regulations.

4.6.3 STATE – CALIFORNIA DISASTER ASSISTANCE ACT

The California Disaster Assistance Act (CDAA) provides state financial assistance for recovery efforts to counties, cities, special districts, and certain eligible private non-profit agencies after a Cal OES Agency Director's Concurrence or a Governor's Proclamation. CDAA may be implemented as a "stand alone" funding source following a state disaster.

CDAA is available to counties, cities, and special districts to repair disaster-related damages to public buildings, levees, flood control works, channels, irrigation works, city streets, county roads, bridges, and other public works except those facilities used solely for recreational purposes. This program offers a percentage of the eligible cost to: repair, restore, reconstruct or replace public property or facilities; to cover direct and indirect costs of grant administration with the Cal OES Director's concurrence; and to cover the cost of overtime and supplies used for response. The conditions for implementation of the CDAA are as follows:

- The Cal OES Director must concur with local emergency declaration for permanent restoration assistance; or
- The Governor must proclaim a state of emergency for disaster response and permanent restoration assistance; or
- The President must declare a major disaster or emergency for matching fund assistance for cost sharing required under federal public assistance programs.

4.6.4 STATE PRIVATE NONPROFIT ORGANIZATIONS ASSISTANCE PROGRAM

Recent state legislation created the *State Private Nonprofit Organizations Assistance Program.* The new program allows certain eligible private nonprofits or an intermediary private nonprofit applicant to receive state assistance for extraordinary costs incurred while providing assistance at the request of local agencies during a state disaster event. Cal OES was designated as the grantor for the program.

After a state disaster has been declared, an eligible private nonprofit applicant may apply for reimbursement for the extraordinary cost of performing an essential community service at the request of an affected local agency.

4.7 HAZARD MITIGATION GRANT PROGRAMS

The Hazard Mitigation Grant Program (HMGP) is aimed at actions taken to reduce or eliminate future damages. Activities include cost-effective hazard mitigation projects and development of hazard mitigation plans, approved by FEMA. HMGP grants are provided on a cost-share of 75% federal share and 25% non-federal share. The Disaster Mitigation Act of 2000 (DMA2000) states that each jurisdiction (counties, cities, towns, and special districts) must have a Local Hazard Mitigation Plan (LHMP) approved by FEMA in order to be eligible for federal pre/post disaster mitigation funds.

Federal funding is provided under the Robert T. Stafford Emergency Assistance and Disaster Relief Act (The Stafford Act) through FEMA and Cal OES. Cal OES is responsible for identifying program priorities, reviewing applications and forwarding recommendations for funding to FEMA. FEMA has final approval for activity eligibility and funding. The federal regulations governing the HMGP are found in Title 44 of Code of Federal Regulations Part 206 and Part 13. For specific information regarding current HMGP activities, refer to the Cal OES website: www.oes.ca.gov/

The California Disaster Assistance Act limits the state share for any eligible project to no more than 75% of total state eligible costs, except that the state share shall be up to 100% of total state eligible costs connected with certain events. In October 2006, the Legislature passed AB 2140, which became effective January 1, 2007. This bill limits the state share for any eligible project from exceeding 75% of total State eligible costs unless the city, county, or city and county has adopted a local hazard

mitigation plan in accordance with the federal Disaster Mitigation Act of 2000 as part of the safety element of its general plan. In this case the Legislature may provide for a State share of local costs that exceeds 75% of total state eligible costs.

4.7.1 MITIGATION

The mitigative aspect of recovery operations is critical for reducing or eliminating disaster-related property damage and loss of lives from recurring hazards. The immediate post-disaster period presents a rare opportunity for mitigation. During this time, officials and residents are more responsive to mitigation recommendations, and unique opportunities to rebuild or redirect development may be available. Recovery plans would benefit from addressing mitigation planning as part of the recovery process. The following issues represent some information that would be useful in recovery sections of emergency plans.

4.7.2 FORMS OF MITIGATION

- Revisions to building codes
- Variances or set-backs in construction
- Zoning, to reduce types of construction in high hazard areas
- Relocation or removal of structures from high hazard zones

4.7.3 REFERENCE INFORMATION

FEMA procedures over the last few years have evolved and mitigation of disasters is becoming a key component of disaster recovery. Information about Individual Assistance Programs is available on the FEMA website at https://www.fema.gov/individual-disaster-assistance . Information about Public Assistance Programs is available on the FEMA website at https://www.fema.gov/public-assistance-local-state-tribal-and-non-profit .

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5.0 EMERGENCY OPERATIONS CENTER OVERVIEW

The EOC is the central physical location where key City of Livermore staff provide interagency coordination and executive decision making in support of incident response and recovery. The EOC is responsible for multi-agency/ multi-jurisdictional coordination, policy implementation, information management and resource coordination to support Incident Commanders in the field.

5.1 EOC PURPOSE

The role of the EOC is to collect, validate and organize emergency information and to provide for the overall coordination of resources required during response and recovery operations. The EOC does not directly manage or command incidents. Field level emergency responders, such as law enforcement, fire and rescue, and public works departments are managed by on-scene incident commander(s). Information is disseminated through the EOC Director and tactical decisions are coordinated from field response personnel.

The EOC may serve as a Multi-Agency Coordination Center (MACC) from which local governments can provide interagency coordination and executive decision making in support of incident response and recovery operations. The decisions made through the EOC are designed to be broad in scope and offer general guidance on priorities.

The EOC is staffed by City personnel that are specially trained to perform the centralized coordination of emergency activities. Those activities include emergency management, support to Department Operations Centers (DOCs), public information and warning, communications, and resource coordination. The EOC facility has specialized equipment, information systems, and various tools that aid in restoring critical functions.

5.2 DEPARTMENT OPERATIONS CENTER

Emergency response departments such as law enforcement, fire and rescue, and public works departments often utilize a Department Operations Center (DOC) to coordinate the actions of their personnel and maintain internal departmental continuity of operations. DOCs may be activated during serious or major incidents when activation of the EOC is not required, and during major emergencies and disasters when the EOC is activated and essential response departments require coordination and support for their departmental activities. The EOC supports the DOCs and receives emergency information and situation reports from the field level through them to develop situation analysis and resource status of the overall incident. LPFD has a DOC in the Fire Headquarters facility located at 3560 Nevada Street, Pleasanton. The Livermore Police and Public Works departments also have DOCs located at their primary facilities.

5.3 EOC COORDINATION WITH OTHER ENTITIES

The EOC may need to coordinate with special districts, private sector businesses, volunteer and civic organizations, churches, and other non-governmental organizations to meet disaster needs by connecting available resources within the community with the requests for assistance. Local communities may identify services and resource capabilities that may be coordinated by

the EOC. The local organizations may also provide the EOC with a situational awareness within the community, including ongoing monitoring of resource shortfalls and service needs. Often a representative from the agency providing support will respond to the EOC and serve as an agency representative. In this scenario, a liaison officer will be responsible to coordinate with the agency representative in the EOC.

5.4 EMERGENCY ACTIVATION LEVELS

The magnitude of the emergency will dictate Livermore's response level. Response levels are used to describe the type of event, extent of coordination or assistance needed, and degree of participation from City departments. The EOC will be activated when one of the following individuals, or their appointed representatives, notifies the City Manager and recommends activation of the EOC:

- City Manager or designee
- Chief of Police or designee
- Director of Public Works or designee
- Livermore-Pleasanton Fire Department Chief or designee

The City Manager or official activating the EOC will determine the level of activation and request notification of Level 1, Level 2, or Level 3 staff.

5.4.1 LEVEL 3 – MINOR EMERGENCY – NO EOC ACTIVATION REQUIRED

Level 3 is a minor incident that can be managed by first responders and resources from within the City. The EOC may be activated with one or a few people to monitor a situation or assist a department with coordination. Off-duty personnel may be recalled to back fill personnel assigned to the incident. City and/or mutual aid police, fire, public works, or medical responders will use ICS procedures and may work in a Unified Command.

5.4.2 LEVEL 2 – MODERATE EMERGENCY – POTENTIAL EOC ACTIVATION

Level 2 is a moderate to severe emergency in which Livermore's resources are not adequate and mutual aid is required. Key management personnel from the involved departments will co-locate to provide jurisdiction coordination. The Livermore EOC may be partially or fully activated based on the severity of the situation. Off-duty personnel will likely be recalled. A local emergency may be requested wherein Alameda OA would be notified. Indications that the EOC should be activated include:

- If an incident has escalated due to the number of jurisdiction departments or agencies involved, or personnel and resources required where the coordination of an incident is not efficiently accomplished at the scene or at another location.
- Any of the persons authorized to activate the Livermore EOC determines that coordination of the response/recovery would be enhanced by multi-department or multiagency coordination in the EOC.

- When the level of request for varied resources from the City are received from adjacent cities or special districts, the county, or the state to respond outside the City and coordination of these requests are better facilitated at one central point.
- If an incident is of such magnitude that coordination of the response to an incident is not possible, as in a regional flooding, major earthquake, fire, HAZMAT incident requiring extensive evacuation/rescue problems, or other mass casualty incident.
- When the resources of Livermore to respond or recover from a disaster or other emergency are overwhelmed.

5.4.3 LEVEL 1 – MAJOR EMERGENCY - FULL EOC ACTIVATION

Level 1 is a major local or regional disaster wherein resources in or near the impacted area are overwhelmed and extensive county, state and/or federal resources are required. A proclamation of emergency will be made and communications and coordination with the Alameda OA EOC will be maintained. The overall response and early recovery activities will be managed from the Livermore EOC. Off-duty personnel will be recalled and long-term planning for human resources will be conducted.

5.4.4 POTENTIAL EOC ACTIVATION TRIGGERS

EOC activation is likely when one of the following events take place:

- When an earthquake of a significant magnitude occurs that would cause damage in the city or other neighboring jurisdictions.
- An emergency situation that has occurred or is likely to occur of such a magnitude that it will require a large commitment of resources from two or more City departments over an extended period of time – i.e., a sudden, severe and widespread energy shortage, explosion, fire, or police action (hostage situation, bombing, or other event).
- An uncontrolled release or failure of a chemical manufacturing or processing facility occurs that requires evacuation or shelter-in-place activity of 4 or more hours.
- An impending or a declared state of war emergency, national security emergency, or any event that warrants activation such as a terrorism event in the greater Alameda County area.
- Other examples include a major hazardous materials incident, civil disturbance, aircraft disaster, structure fire or severe weather conditions.

5.5 EOC LOCATION

Primary:	Livermore Police Department 1110 South Livermore Ave, Livermore, CA 94550
Alternate:	City of Livermore Water Resources Department, Facilities Administrative Building, 101 West Jack London Boulevard, Livermore, CA 94550

The Alternate EOC will be activated only when the primary EOC is damaged, inaccessible, and/or evacuation of EOC staff members becomes necessary. If the primary EOC is unusable before its activation, staff members will be asked to report to the alternate EOC site. If the

primary EOC becomes unusable during an activation, the EOC Logistics Section will arrange for relocation of EOC staff members to the alternate EOC. All field Incident Commanders will be notified of all transitions to the alternate EOC.

5.5.1 EOC MAINTENANCE

The Livermore Emergency Manager will ensure the EOC is in a state of readiness for an activation. EOC supplies must be maintained in preparation for an EOC activation. All personnel responding to an EOC activation are required to bring any reference materials, day-to-day supplies, equipment, and tools necessary to conduct their assigned position in the EOC.

5.6 EOC ORGANIZATION STRUCTURE

Livermore operates under the NIMS/SEMS emergency management structure based on the Incident Command System. The basic Livermore EOC organizational structure consists of five functional SEMS/ICS sections including Management, Operations, Planning & Intelligence, Logistics, and Finance & Administration.

The Livermore EOC reports information to the state emergency management level at the California Office of Emergency Services Coastal Region through the Alameda OA. SEMS regulations require an operational area EOC to be activated when:

1. A local government within the operational area has activated its EOC and requested activation of the operational area EOC to support their emergency operations.
2. Two or more cities within the operational area have declared or proclaimed a local emergency.
3. The county and one or more cities have declared or proclaimed a local emergency.
4. A city and/or county has requested a governor's proclamation of a state of emergency.
5. A state of emergency is proclaimed by the governor for the county or two or more cities within the operational area.
6. The operational area is requesting resources from outside its boundaries. This does not include resources used in normal day-to-day operations that are obtained through existing mutual aid agreements.
7. The operational area has received resource requests from outside its boundaries. This does not include resources used in normal day-to-day operations which are obtained through existing mutual aid agreements.

The EOC Director has overall responsibility for coordinating and supporting emergency operations within the city. The EOC will also be the focal point for information transfer and mutual aid requests by the departments within the City.

5.7 EOC ACTIVATION AND DEACTIVATION

The City Manager, Chief of Police, Livermore-Pleasanton Fire Department Chief, Public Works Director, or their designees have the authority to activate the EOC during an emergency greatly affecting the City of Livermore. The Livermore Emergency Manager shall be immediately notified to initiate EOC set up, and alert affected Departments to notify their employees. Each

Department will be required to notify staff of the emergency or disaster, the immediate situation, and recall of or reporting of EOC staff for an activation.

Departments are responsible upon notification to contact all appropriate support personnel within their oversight and direct them to their assignment, whether in the EOC, at the field level or to maintain City operations. Each City department shall develop and maintain a current duty staff roster to be used to recall staff during off-time emergencies.

The Director of Emergency Services/EOC Director will determine when it is appropriate to deactivate the EOC.

5.7.1 DISASTER SERVICE WORKERS

According to Chapter 8, Division 4 of Title 1, Section 3100 of the California Government Code, all public employees are declared to be disaster service workers subject to such disaster service activities as may be assigned to them by their superiors or by law. In the event of a local emergency, under Section 2.56.060 B.3 of the Livermore Municipal Code, the Director of Emergency Services may require the emergency services of any City officer or employee and may requisition necessary personnel or materials of any City department or agency.

During a disaster, employees may be unable to report to work due to road closures, collapsed bridges, or other structural damage. Although employees are disaster service workers, it is not advised that Livermore employees report to another city to work during the disaster. Agreements have not been developed as of yet that would allow for Livermore employees to receive compensation for working at other cities or local governments.

5.8 CITY OF LIVERMORE ROLES AND RESPONSIBILITIES

During a major emergency or disaster, the City Manager, as Director of Emergency Services, has the support of all departments and divisions to respond to and provide the services, resources and capabilities necessary to protect lives, property, and the environment of the city. The City of Livermore has identified roles and responsibilities through by position title and by employee name on an ICS emergency organization chart. Below are the City departments and division's primary or support roles and responsibilities in an emergency by position title.

Figure 16: City of Livermore Roles and Responsibilities

Roles/Responsibilities		Department, Division, Position
Management Section	Overall EOC management	Emergency Services / EOC Director
	Public information assignment	Emergency Services / EOC Director
	Identification of a media center	Public Information Officer
	Rumor control	Public Information Officer
	Public inquires	PIO Support
	Provision for public safety communications and policy	Communications / IS Unit Leader
	Identification of a Safety Officer	Emergency Services / EOC Director
	Facility security	Safety Officer

	Agency liaison	Liaison Officer
	State/federal field activity coordination	Liaison Officer
Operations Section	General warning	Law Branch Director
	Special population warning	Law Branch Director; Access & Functional Needs Specialist
	Authority to activate Emergency Alert System	Emergency Services / EOC Director
	Inmate evacuation	Law Branch Director
	Traffic direction and control	Law Branch Director
	Debris removal	Debris Management Group
	Evacuation	Law Branch Director
	Evacuation-care for pets and livestock	Law Branch Director
	Access control	Law Branch Director
	Hazardous materials management	Fire Branch Director
	Coroner operations	Law Branch Director
	Emergency medical care	Fire Branch Director
	Transportation management	Transportation Unit Leader
	Crisis counseling for emergency responders	Personnel Unit Leader
	Urban search and rescue	Fire Branch Director
	Disease prevention and control	Medical / Health Branch Director
	Utility restoration	Utility Representative
	Flood operations	Public Works Group Supervisor
	Initial damage assessments	Damage / Safety Assessment Group Supervisor
	Safety assessments	Damage / Safety Assessment Group Supervisor
	Shelter and feeding operations	Care & Shelter Branch Director
	Emergency food/water distribution	Food Unit Leader
Planning / Intelligence Section	Situation status	Situation Analysis Unit Leader
	Situation analysis	Situation Analysis Unit Leader
	Information display	Situation Analysis Unit Leader
	Documentation	Documentation Unit Leader
	Advance planning	Advanced Planning Unit Leader
	Technical services	GIS Specialist
	Action planning	Planning/Intelligence Section Chief
	Demobilization	Demobilization Unit Leader
Logistics Section	Field incident support	Personnel Unit Leader
	Communications support	Communications / IS Unit Leader
	Transportation support	Transportation Unit Leader
	Personnel	Personnel Unit Leader
	Supply and procurement	Supply / Procurement Unit Leader

	Resource tracking	Resource Status / Tracking Unit Leader
	Sanitation services	Facilities Unit Leader
	Computer support	Communications / IS Unit Leader
Finance / Administration Section	Fiscal management	Finance & Administration Section Chief
	Time-keeping	Time Keeping Unit Leader
	Purchasing	Purchasing Unit Leader
	Compensation and claims	Compensation / Claims Unit Leader
	Cost recovery	Cost Accounting Unit Leader
	Travel request, forms, claims	Purchasing Unit Leader

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Appendix A – Glossary of Terms

This list contains definitions of terms used in this plan and commonly used in Emergency Management.

Activate: At a minimum, a designated official of the emergency response agency that implements SEMS as appropriate to the scope of the emergency and the agency's role in response to the emergency.

After Action Report: A report covering response actions, application of SEMS, modifications to plans and procedures, training needs, and recovery activities. After action reports are required under SEMS after any emergency which requires a declaration of an emergency. Reports are required within 90 days.

Agency: An agency is a division of government with a specific function, or a non-governmental organization, a private contractor, business, etc., that offers a particular kind of assistance. In ICS, agencies are defined as jurisdictional (having statutory responsibility for incident mitigation), or assisting and/or cooperating (providing resources and/or assistance). (See Assisting Agency, Cooperating Agency and Multi-agency.)

Agency Representative: An individual assigned to an incident or to an EOC from an assisting or cooperating agency that has been delegated authority to make decisions on matters affecting that agency's participation at the incident or at the EOC. Agency Representatives report to the Liaison Officer at the incident, or to the Liaison Coordinator at SEMS EOC levels.

Area Command: An organization established to: 1) oversee the management of multiple incidents that are each being handled by an Incident Command System organization; or 2) to oversee the management of a very large incident that has multiple Incident Management Teams assigned to it. Area Command has the responsibility to set overall strategy and priorities, allocate critical resources based on priorities, ensure that incidents are properly managed, and ensure that objectives are met and strategies followed.

Assignments: Tasks given to resources to perform within a given operational period, based upon tactical objectives in the Incident or EOC Action Plan.

Assistant: Title for subordinates of the Command Staff positions at the Field SEMS level. The title indicates a level of technical capability, qualifications, and responsibility subordinate to the primary positions. Assistants may also be used to supervise unit activities at camps.

Available Resources: Incident-based resources which are available for immediate assignment.

Base: The location at an incident at which primary logistics functions for an incident are coordinated and administered. There is only one Base per incident. (Incident name or other designator will be added to the term "Base.") The Incident Command Post may be collocated with the Base.

Branch: The organizational level at the SEMS Field Level having functional or geographic responsibility for major parts of incident operations. The Branch level is organizationally between Section and Division/Group in the Operations Section, and between Section and Units

in the Logistics Section. Branches are identified by the use of Roman Numerals or by functional name (e.g., medical, security, etc.).

Branch Director: The ICS title for individuals responsible for supervision of a Branch at the Field Level. At SEMS EOC levels, the title Branch Director is preferred.

Cache: A pre-determined complement of tools, equipment and/or supplies stored in a designated location, available for incident use.

Camp: A geographical site, within the general incident area, separate from the Incident Base, equipped and staffed to provide sleeping, food, water, and sanitary services to incident personnel.

Chain of Command: A series of management positions in order of authority.

Clear Text: The use of plain English in radio communications transmissions. No Ten Codes or agency specific codes are used when utilizing Clear Text.

Command: The act of directing, and/or controlling resources at an incident by virtue of explicit legal, agency, or delegated authority. May also refer to the Incident Commander.

Command Staff: The Command Staff at the SEMS Field level consists of the Information Officer, Safety Officer, and Liaison Officer. They report directly to the Incident Commander. They may have an assistant or assistants, as needed. These functions may also be found at the EOC levels in SEMS. At the EOC, they would report to the EOC Director but may be designated as Coordinators. At EOCs, the functions may also be established as Sections, or Branches to accommodate subsequent expansion.

Communications Unit: An organizational unit in the Logistics Section responsible for providing communication services at an incident or an EOC. A Communications Unit may also be a facility (e.g., a trailer or mobile van) used to provide the major part of an Incident Communications Center.

Compensation/Claims Unit: Functional unit within the Finance/Administration Section responsible for financial concerns resulting from property damage, injuries or fatalities at the incident or within an EOC.

Complex: Two or more individual incidents located in the same general area that is assigned to a single Incident Commander or to a Unified Command.

Cooperating Agency: An agency supplying assistance other than direct tactical or support functions or resources to the incident control effort (e.g., American Red Cross, Telephone Company, etc.).

Coordination: The process of systematically analyzing a situation, developing relevant information, and informing appropriate command authority of viable alternatives for selection of the most effective combination of available resources to meet specific objectives. The coordination process (which can be either intra- or inter-agency) does not involve dispatch actions. However, personnel responsible for coordination may perform command or dispatch functions within the limits established by specific agency delegations, procedures, legal authority, etc. Multi-agency or Inter-agency coordination is found at all SEMS levels.

Cost Unit: Functional unit within the Finance/Administration Section responsible for tracking costs, analyzing cost data, making cost estimates, and recommending cost-saving measures.

Demobilization Unit: Functional unit within the Planning Section responsible for assuring orderly, safe and efficient demobilization of incident or EOC assigned resources.

Department Operations Center (DOC): A facility used by a distinct discipline, such as flood operations, fire, medical, hazardous material, or a unit, such as Department of Public Works, or Department of Health. Department Operations enters may be used at all SEMS levels above the field response level depending upon the needs of the emergency.

Disaster: A sudden calamitous emergency event bringing great damage loss or destruction.

Dispatch: The implementation of a command decision to move a resource or resources from one place to another.

Dispatch Center: A facility from which resources are assigned to an incident.

Division: Divisions are used to divide an incident into geographical areas of operation. Divisions are identified by alphabetic characters for horizontal applications and, often, by numbers when used in buildings. Divisions are also used at SEMS EOC levels and are found organizationally between Branches and Units.

Division or Group Supervisor: The position title for individuals responsible for command of a Division or Group at an Incident. At the EOC level, the title is Division Coordinator.

Documentation Unit: Functional unit within the Planning Section responsible for collecting, recording and safeguarding all documents relevant to an incident or within an EOC.

Emergency: A condition of disaster or of extreme peril to the safety of persons and property caused by such conditions as air pollution, fire, flood, hazardous material incident, storm, epidemic, riot, drought, sudden and severe energy shortage, plant or animal infestations or disease, the Governor's warning of an earthquake or volcanic prediction, or an earthquake or other conditions, other than conditions resulting from a labor controversy.

Emergency Medical Technician (EMT): A health-care specialist with particular skills and knowledge in pre-hospital emergency medicine.

Emergency Operations Center (EOC): A location from which centralized emergency management can be performed. EOC facilities are established by an agency or jurisdiction to coordinate the overall agency or jurisdictional response and support to an emergency.

Emergency Operations Plan: The plan that each jurisdiction has and maintains for responding to appropriate hazards.

Emergency Manager: The individual within each jurisdiction that is delegated the day to day responsibility for the development and maintenance of all emergency management coordination efforts.

Emergency Response Agency: Any organization responding to an emergency, or providing mutual aid support to such an organization, whether in the field, at the scene of an incident, or to an operations center.

Emergency Response Personnel: Personnel involved with an agency's response to an emergency.

EOC Action Plan: The plan prepared in the EOC containing objectives for the emergency response SEMS level reflecting overall priorities and supporting activities for a designated period. See also Incident Action Plan.

EOC Director: The individual within each political subdivision that has overall responsibility for jurisdiction emergency management. For cities and counties, this responsibility is commonly assigned by local ordinance.

Event: A planned, non-emergency activity. ICS can be used as the management system for a wide range of events, e.g., parades, concerts or sporting events.

Facilities Unit: Functional unit within the Support Branch of the Logistics Section at the SEMS Field Response Level that provides fixed facilities for the incident. These facilities may include the Incident Base, feeding areas, sleeping areas, sanitary facilities, etc.

Finance/Administration Section: One of the five primary functions found at all SEMS levels which is responsible for all costs and financial considerations. At the incident, the Section can include the Time Unit, Procurement Unit, Compensation/Claims Unit and Cost Unit.

Food Unit: Functional unit within the Service Branch of the Logistics Section responsible for providing meals for incident and or EOC personnel.

Function: In ICS, function refers to the five major activities in the ICS, i.e., Command, Operations, Planning, Logistics and Finance/Administration. The same five functions also are found at all SEMS EOC levels. At the EOC, the term Management replaces Command. The term function is also used when describing the activity involved, e.g., "the planning function."

Functional Element: Refers to a part of the incident, EOC or DOC organization such as section, branch, group or unit.

General Staff: The group of management personnel reporting to the Incident Commander or to the EOC Director. They may each have a deputy, as needed. At the Field SEMS level, the General Staff consists of the Operations Section Chief, Planning/Intelligence Section Chief, Logistics Section Chief, and Finance/Administration Section Chief. At the EOC levels, the position titles are Section Chiefs.

Ground Support Unit: Functional unit within the Support Branch of the Logistics Section at the SEMS Field Response level that is responsible for the fueling, maintaining and repairing of vehicles, and the transportation of personnel and supplies.

Group: Groups are established to divide the incident into functional areas of operation. Groups are composed of resources assembled to perform a special function not necessarily within a single geographic division. (See Division.) Groups are located between Branches (when activated) and Resources in the Operations Section.

Incident: An occurrence or event, either human-caused or by natural phenomena, that requires action by emergency response personnel to prevent or minimize loss of life or damage to property and/or natural resources.

Incident Action Plan: The plan developed at the field response level which contains objectives reflecting the overall incident strategy and specific tactical actions and supporting information for the next operational period. The plan may be oral or written.

Incident Base: Location at the incident where the primary logistics functions are coordinated and administered. The Incident Command Post may be collocated with the Base. There is only one Base per incident.

Incident Commander: The individual responsible for the command of all functions at the field response level.

Incident Command Post (ICP): The location at which the primary command functions are executed. The ICP may be collocated with the incident base or other incident facilities.

Incident Command System (ICS): The nationally used standardized on-scene emergency management concept specifically designed to allow its user(s) to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents without being hindered by jurisdictional boundaries. ICS is the combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, with responsibility for the management of resources to effectively accomplish stated objectives pertinent to an incident.

Incident Management Team: The Incident Commander and appropriate General and Command Staff personnel assigned to an incident.

Incident Objectives: Statements of guidance and direction necessary for the selection of appropriate strategy(s), and the tactical use of resources. Incident objectives are based on realistic expectations of what can be accomplished when all allocated resources have been effectively deployed. Incident objectives must be achievable and measurable, yet flexible enough to allow for strategic and tactical alternatives.

Initial Action or Response: The actions taken by resources which are the first to arrive at an incident or the resources initially committed to an incident.

Jurisdiction: The range or sphere of authority. Public agencies have jurisdiction at an incident related to their legal responsibilities and authority for incident mitigation. Jurisdictional authority at an incident can be political/geographical, or functional.

Leader: The ICS title for an individual responsible for a functional unit, task forces, or teams.

Liaison Officer: A member of the Command Staff at the Field SEMS level responsible for coordinating with representatives from cooperating and assisting agencies. At SEMS EOC levels, the function may be done by a Coordinator and/or within a Section or Branch reporting directly to the EOC Director.

Local Government: Means local agencies per Article 3 of the SEMS regulations. The Government Code 8680.2 defines local agencies as any city, city and county, county, school district or special district.

Logistics Section: One of the five primary functions found at all SEMS levels. The Section is responsible for providing facilities, services and materials for the incident or at an EOC.

Master Mutual Aid Agreement: An agreement entered into by and between the State of California, its various departments and agencies, and the various political subdivision, municipal corporations, and other public agencies of the State of California to assist each other by providing resource during an emergency Mutual aid occurs when two or more parties agree to furnish resources and facilities and to render services to each other to prevent and combat any type of disaster or emergency.

Medical Unit: Functional unit within the Service Branch of the Logistics Section at SEMS Field levels responsible for the development of the Medical Emergency Plan, and for providing emergency medical treatment of incident personnel.

MHOAC: Medical Health Operational Area Coordinator; a functional position established by Health and Safety Code and1979.153. In the event of a local, state, or federal declaration of emergency, the MHOAC provides a 24 hour, seven day a week capability to staff public health and medical emergency operations.

Mobilization: The process and procedures used by all organizations federal, state and local for activating, assembling, and transporting all resources that have been requested to respond to or support an incident.

Multi-Agency or Inter-Agency Coordination: The participation of agencies and disciplines involved at any level of the SEMS organization working together in a coordinated effort to facilitate decisions for overall emergency response activities, including the sharing of critical resources and the prioritization of incidents.

Multi-Agency Coordination System (MACS): The combination of personnel, facilities, equipment, procedures and communications integrated into a common system. When activated, MACS has the responsibility for coordination of assisting agency resources and support in a multi-agency or multijurisdictional environment. A MAC Group functions within the MACS. MACS organizations are used within the California Fire Services.

Multi-Agency Incident: An incident where one or more agencies assist a jurisdictional agency or agencies. The incident may be managed under single or unified command.

Multi-jurisdiction Incident: An incident requiring action from multiple agencies that have a statutory responsibility for incident mitigation. In ICS, these incidents will be managed under Unified Command.

Mutual Aid Agreement: Written agreement between agencies and/or jurisdictions in which they agree to assist one another upon request, by furnishing personnel and equipment.

Mutual Aid Coordinator: An individual at local government, operational area, region or state level that is responsible to coordinate the process of requesting, obtaining, processing and using mutual aid resources. Mutual Aid Coordinator duties will vary depending upon the mutual aid system.

Mutual Aid Region: A mutual aid region is a subdivision of California OES established to assist in the coordination of mutual aid and other emergency operations within a geographical area of the state, consisting of two or more county (operational) areas.

Operational Area: An intermediate level of the state emergency organization, consisting of a county and all political subdivisions within the county area.

Operational Period: The period of time scheduled for execution of a given set of operation actions as specified in the Incident or EOC Action Plan. Operational Periods can be of various lengths, although usually not over 24 hours.

Operations Section: One of the five primary functions found at all SEMS levels. The Section responsible for all tactical operations at the incident, or for the coordination of operational activities at an EOC. The Operations Section at the SEMS Field Response Level can include Branches, Divisions and/or Groups, Task Forces, Teams, Single Resources and Staging Areas. At the EOC levels, the Operations Section would contain Branches or Divisions as necessary because of span of control considerations.

Planning Meeting: A meeting held as needed throughout the duration of an incident to select specific strategies and tactics for incident control operations and for service and support planning. On larger incidents, the planning meeting is a major element in the development of the Incident Action Plan. Planning meetings are also an essential activity at all SEMS EOC levels.

Planning/Intelligence Section: One of the five primary functions found at all SEMS levels. Responsible for the collection, evaluation, and dissemination of information related to the incident or an emergency, and for the preparation and documentation of Incident or EOC Action Plans. The section also maintains information on the current and forecasted situation, and on the status of resources assigned to the incident. At the SEMS Field Response level, the Section will include the Situation, Resource, Documentation, and Demobilization Units, as well as Technical Specialists.

Procurement Unit: Functional unit within the Finance/Administration Section responsible for financial matters involving vendor contracts.

Public Information Officer (PIO): A member of the Command Staff responsible for interfacing with the public and media or with other agencies requiring information directly from the incident. There is only one PIO per incident. The PIO may have assistants. At SEMS EOC levels, the information function may be established as a coordinator or as a section or branch reporting directly to the EOC Director.

Regional Emergency Operations Center (REOC): Facilities found at Cal OES Administrative Regions. REOCS are used to coordinate information and resources among operational areas and between the operational areas and the state level.

RDMHS: Regional Disaster Medical Health Specialist - performs the Medical and Health Branch functions in the REOC, providing support and coordination to the MHOAC

Resources: Personnel and equipment available, or potentially available, for assignment to incidents or to EOCs. Resources are described by kind and type, and may be used in tactical support or supervisory capacities at an incident or at EOCs.

Resources Unit: Functional unit within the Planning Section at the SEMS Field Response level responsible for recording the status of resources committed to the incident. The Unit also

evaluates resources currently committed to the incident, the impact that additional responding resources will have on the incident, and anticipated resource needs.

Safety Officer: A member of the Command Staff at the incident or within an EOC responsible for monitoring and assessing safety hazards or unsafe situations, and for developing measures for ensuring personnel safety. The Safety Officer may have assistants.

Section: That organization level with responsibility for a major functional area of the incident or at an EOC, e.g., Operations, Planning, Logistics, Administration/Finance.

Section Chief: The ICS title for individuals responsible for command of functional sections: Operations, Planning/Intelligence, Logistics and Administration/Finance. At the EOC level, the position title will be Section Chief.

Service Branch: A Branch within the Logistics Section responsible for service activities at the incident. Includes the Communications, Medical and Food Units.

Single Resource: An individual, a piece of equipment and its personnel complement, or a crew or team of individuals with an identified work supervisor that can be used on an incident.

Situation Status/Analysis Unit: Functional unit within the Planning Section responsible for the collection, organization and analysis of incident status information, and for analysis of the situation as it progresses. Reports to the Planning Section Chief.

Span of control: The supervisory ratio maintained within an ICS or EOC organization. A span of control of five-positions reporting to one supervisor is considered optimum.

Special District: A unit of local government (other than a city, county, or city and county) with authority or responsibility to own, operate or maintain a project (as defined in California Code of Regulations 2900(s) for purposes of natural disaster assistance. This may include a joint-powers authority established under section 6500 et seq. of the Code.

Staging Area: Staging Areas are locations set up at an incident where resources can be placed while awaiting a tactical assignment. Staging Areas are managed by the Operations Section.

Staging Area Managers: Individuals within ICS organizational units that are assigned specific managerial responsibilities at Staging Areas.

Standardized Emergency Management System (SEMS): A system required by California Government Code for managing response to multi-agency and multi-jurisdiction emergencies in California. SEMS consists of five organizational levels which are activated as necessary: field response, local government, operational area, region, and state.

State Operations Center (SOC): An EOC facility operated by the California Office of Emergency Services at the state level in SEMS.

Strategy: The general plan or direction selected to accomplish incident or EOC objectives.

Supply Unit: Functional unit within the Support Branch of the Logistics Section responsible for ordering equipment and supplies required for incident operations.

Support Branch: A Branch within the Logistics Section responsible for providing personnel, equipment and supplies to support incident operations. Includes the Supply, Facilities and Ground Support Units.

Support Resources: Non-tactical resources under the supervision of the Logistics, Planning, Finance/Administration Sections or the Command Staff.

Supporting Materials: Refers to the several attachments that may be included with an Incident Action Plan, e.g., communications plan, map, safety plan, traffic plan, and medical plan.

Task Force: A combination of single resources assembled for a particular tactical need, with common communications and a leader.

Technical Specialists: Personnel with special skills that can be used anywhere within the ICS or EOC organization.

Time Unit: Functional unit within the Finance/Administration Section responsible for recording time for incident or EOC personnel and hired equipment.

Type: Refers to resource capability. A Type 1 resource provides a greater overall capability due to power, size, capacity, etc., than would be found in a Type 2 resource. Resource typing provides managers with additional information in selecting the best resource for the task.

Unified Command: In ICS, Unified Command is a unified team effort which allows all agencies with responsibility for the incident, either geographical or functional, to manage an incident by establishing a common set of incident objectives and strategies. This is accomplished without losing or abdicating agency authority, responsibility or accountability.

Unit: An organizational element having functional responsibility. Units are commonly used in incident Planning, Logistics, or Finance/administration sections and can be used in operations for some applications. Units are also found in EOC organizations.

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APPENDIX B – RESOURCES

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APPENDIX C – CONTACT LIST

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APPENDIX D – SUPPORTING DOCUMENTATION

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