

1 **WHEREAS**, local jurisdictions must update their Hazard Mitigation Plans and
2 resubmit them for FEMA approval every five years to remain eligible for certain types of
3 funding assistance; and

4 **WHEREAS**, as such, and in accordance with FEMA requirements at 44
5 C.F.R. § 201.6, the City of Culver City and CCUSD have, once again, completed a
6 coordinated planning process that engaged the public, assessed the risk and vulnerability
7 to the impacts of natural hazards, developed a mitigation strategy consistent with a set of
8 uniform goals and objectives, and created a plan for implementing, evaluating, and revising
9 the strategy; and
10

11 **WHEREAS**, residents of the City of Culver City were awarded opportunities to
12 comment and provide input on the Multi-Jurisdictional Hazard Mitigation Plan and the
13 actions in the plan by completing a survey, attending two special events hosted by the City,
14 and via the City's website; and
15

16 **WHEREAS**, on June 21, 2024, the Multi-Jurisdictional Hazard Mitigation Plan
17 2024 was approved as written by FEMA, pending adoption by the participating jurisdictions;
18 and

19 **WHEREAS**, to ensure eligibility for funding under FEMA's Hazard Mitigation
20 Assistance programs, formal adoption documentation must be submitted to FEMA Region
21 9 by at least one participating jurisdiction within one calendar year of FEMA's conditional
22 approval, after which FEMA will approve the plan; and
23

24 **WHEREAS**, all participating agencies must adopt the plan within five calendar
25 years of the date of approval.

26 **NOW, THEREFORE**, the City Council of the City of Culver City, **DOES**
27 **HEREBY RESOLVE** as follows:
28

1 The Multi-Jurisdictional Hazard Mitigation Plan, attached as Exhibit "A", is
2 hereby approved and adopted by the City of Culver City.

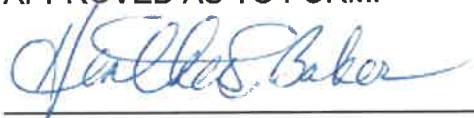
3
4 APPROVED and ADOPTED this 12th day of August, 2024.

5
6
7 
8 YASMINE UMAMI MCMORRIN, Mayor
City of Culver City, California

9
10 ATTEST:

11 
12 JEREMY BOCCHINO
13 City Clerk

14
15 APPROVED AS TO FORM:

16
17 
18 HEATHER BAKER
19 City Attorney

20
21
22
23
24
25
26
27
28

STATE OF CALIFORNIA)
COUNTY OF LOS ANGELES) SS
CITY OF CULVER CITY)

Certification of Resolution No. 2024-R055

I, Jeremy Bocchino, City Clerk of the City of Culver City, do hereby certify that the foregoing Resolution was duly passed, approved, and adopted at a regular meeting of the City Council, which was held on the 12th day of August 2024, at the Mike Balkman Council Chambers by the following vote:

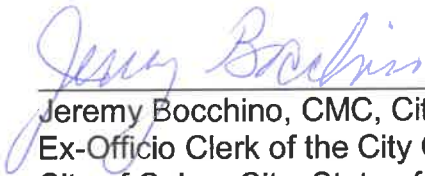
AYES: Eriksson, Puza, Vera, O'Brien, McMorris

NOES: None

ABSENT: None

ABSTAIN: None

Certified on this 12th day of August 2024, at the City of Culver City.



Jeremy Bocchino, CMC, City Clerk
Ex-Officio Clerk of the City Council
City of Culver City, State of California



Culver City
Unified School District

Multi-Jurisdictional Hazard Mitigation Plan

**City of Culver City and
Culver City Unified
School District**

March 2024

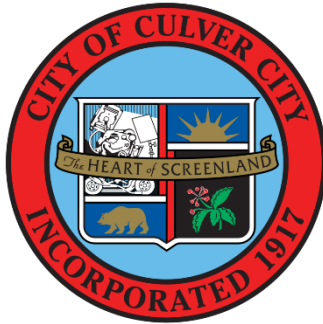
Michael Baker
INTERNATIONAL

***Draft Submittal to Cal OES
March 8, 2024***

CITY OF CULVER CITY AND
CULVER CITY UNIFIED SCHOOL DISTRICT

MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

DRAFT



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March 2024

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SECTION 1.0: INTRODUCTION

Natural and human-caused hazards can cause significant damage to communities, businesses, public infrastructure, and the environment. The impacts to residents and businesses within communities can be immense, and infrastructure damages can result in regional, economic, and public health consequences. Municipal buildings and schools are vulnerable to a variety of hazards that can result in damaged structures, loss of power, disruption to operations and services, contaminated natural resources, and revenue losses. By planning for natural and human-caused hazards, and implementing projects that mitigate risk, cities and school districts can reduce costly damage and improve reliability of service following a disaster incident.

The City of Culver City (City) and Culver City Unified School District (CCUSD) strives to improve local reliability and resilience through capital improvement projects, innovative planning, and emergency management practices. The City and the CCUSD developed this Multi-Jurisdictional Hazard Mitigation Plan update (the “MJHMP” or “Plan”) in an effort to reduce future loss of life and property damage resulting from natural disasters and other human-caused hazards. The previous iteration of the MJHMP was approved by Cal OES and FEMA in 2017, and this document serves as a comprehensive update in accordance with recent state and federal regulations. The California Governor’s Office of Emergency Services (Cal OES) and the Federal Emergency Management Agency (FEMA) awarded the City and CCUSD grant funding that supported this MJHMP update and made this planning process possible.

No community can be fully protected against all potential impacts from natural hazards, although communities can reduce potential impacts by taking actions to become more resilient. This MJHMP is a blueprint for the City/CCUSD to reduce threats posed by natural hazards that may impact infrastructure or operations. Proper planning, prior to a natural or human-caused disaster, will allow the City/CCUSD to return to “normal” sooner, with fewer impacts upon people, facilities and/or infrastructure.

1.1 PURPOSE OF THE PLAN AND AUTHORITY

The purpose of the MJHMP is to provide the City and CCUSD with clear direction for hazard mitigation action planning. This MJHMP identifies natural and human-caused hazards that threaten City and CCUSD infrastructure and operations, and provides resources, information, and strategies to reduce the risk these threats pose.

This plan focuses on the mitigation component of the cycle shown in Figure 1-1, *Disaster Response Cycle*. Hazard mitigation plays an important role in reducing the impacts of disasters by identifying effective and feasible actions to reduce the risks posed by potential hazards before they occur. This plan has been developed and updated to be consistent with current standards and regulations, ensuring that the understanding of hazards facing the community reflects best available information and present-day conditions.



**Figure 1-1
Disaster Response Cycle**

The MJHMP does not supersede any City or CCUSD internal plans or strategies. Rather, the MJHMP enhances the ability to identify, inform and mitigate hazard risks unique to Culver City.

Information in this plan will be used to help guide and coordinate mitigation actions, and serve as a tool for the City and CCUSD decision-makers to specifically direct mitigation activities and resources.

1.2 PLAN AUTHORITY

FEDERAL

The federal Robert T. Stafford Disaster Relief and Emergency Act (Stafford Act), as amended by the Disaster Mitigation Act of 2000 (DMA 2000) and supported by various regulations, directs hazard mitigation planning activities, including creation of this plan. The Stafford Act requires State, local, and tribal governmental entities that wish to be eligible for federal hazard mitigation grant funds to submit a hazard mitigation plan that outlines the processes for identifying the natural and man-made hazards, risks, and vulnerabilities of each jurisdiction (United States Code [USC] Title 42, Section 5156[a]). FEMA has promulgated Code of Federal Regulations (CFR) Title 44, Part 201 to carry out the hazard mitigation planning requirements in the Stafford Act. These regulations direct the planning process, plan content, and FEMA approval of hazard mitigation plans. This MJHMP complies with the Stafford Act and DMA 200, along with the appropriate sections of Title 44 of the CFR, including parts 201, 206 and 322.

STATE

California Government Code Section 8685.9 (Assembly Bill [AB] 2140) limits the State of California's share of disaster relief funds paid out to local governments to 75 percent of the funds not paid for by federal disaster relief efforts, unless the jurisdiction has adopted a valid hazard mitigation plan consistent with DMA 2000. This MJHMP is consistent with current standards and regulations, as outlined by Cal OES and FEMA. It uses the best available information and its mitigation actions reflect best practices and community values. This MJHMP meets the requirements of current State and federal guidelines and ensures Culver City and CCUSD are eligible for all appropriate benefits under State and federal law and practices. This MJHMP has been prepared to meet FEMA and Cal OES requirements, thus making the City and CCUSD eligible for funding and technical assistance from State and federal hazard mitigation programs.

1.3 PLAN ADOPTION

Following FEMA approval of the MJHMP, the City Council and the CCUSD Board of Directors will formally adopt the MJHMP. Copies of their respective resolutions are provided in [Appendix A, Adoption Resolution](#).

1.4 PLAN ORGANIZATION

The MJHMP is organized into seven sections to reflect the logical progression of activities undertaken to develop the Plan and includes all relevant documentation required to meet the necessary criteria for FEMA approval. Each section is briefly described below.

Section 1.0: Introduction describes the background and purpose of the Plan, as well as the authority established for its development.

Section 2.0: Planning Process describes the 10-step MJHMP planning process, as well as the meetings and outreach activities undertaken to engage City/CCUSD officials and staff and members of the public.

Section 3.0: Community Profile provides the history, geography, demographics, and socioeconomics of the City and the CCUSD, including land use and development trends.

Section 4.0: Hazards Assessment identifies and profiles the natural hazards affecting the City and CCUSD, identifies the vulnerability and risk associated with each natural hazard, and provides a vulnerability assessment to critical facilities in relation to each of those hazards.

Section 5.0: Mitigation Actions identifies the mitigation strategy and actions to reduce potential risks to the City's critical facilities, residents, and business owners and to CCUSD's critical facilities, staff, and students and assesses the City's and CCUSD's capabilities to implement and achieve the objectives of the mitigation actions.

Section 6.0: Plan Maintenance and Capabilities discusses implementation of the Plan, including the process to monitor, evaluate, update, and maintain the MJHMP, and identifies opportunities for continued public involvement.

Section 7.0: References identify the various resources utilized throughout the MJHMP.

1.5 MITIGATION GOALS

The City and CCUSD have adopted the following goals for reducing disaster risk:

Protect Life and Property

- Develop mitigation actions that address both natural hazards and human-caused hazards known to affect or potentially affect the multi-jurisdictional area.
- Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resilient.
- Reduce losses and repetitive damage sustained from chronic hazard events.
- Improve hazard assessment information to make more informed development recommendations in high-risk areas or areas vulnerable to hazards.

Public Awareness

- Develop and implement educational outreach programs that promote equity and inclusion to increase public awareness of the risks associated with hazards.
- Provide information on tools, partnership opportunities, and funding resources to assist in implementing mitigation activities.

Natural Systems

- Balance natural resource management and land use planning with natural hazard mitigation to protect life, property, and the environment.
- Preserve, rehabilitate, and enhance natural systems and utilize nature-based solutions to mitigate natural hazards.

Partnerships and Implementation

- Strengthen communication and coordinate participation among and within public agencies, residents, nonprofit organizations, businesses, and industry to develop a vested interest in implementation and put forth a whole-community approach to hazard mitigation and emergency planning.
- Encourage leadership within public and private sector organizations to prioritize and implement hazard mitigation activities.

Emergency Services

- Prioritize implementation of mitigation projects at critical facilities, that preserve services, and result in more resilient infrastructure.
- Where appropriate, coordinate and integrate hazard mitigation activities with emergency operations plans and procedures.

1.6 CHANGES IN MJHMP PRIORITIES

The priorities of both the City and CCUSD as jurisdictional partners remain similar to those established in the previous 2017 MJHMP. The planning process for the MJHMP remains similar, with the City and CCUSD acting as co-leaders on the MJHMP Project Management Team. This approach is further discussed and described in Section 2.0.

Mitigation goals established in the 2017 MJHMP were reviewed for potential inclusion in this plan. The MJHMP Planning Team reviewed the 2017 mitigation goals, and collectively decided to revise the goals for increased focus on hazard mitigation instead of emergency preparedness/planning. The updated mitigation goals were revised based on feedback from the MJHMP Planning Team during Meeting #1 and Meeting #2.

Last, the MJHMP Project Management Team decided to incorporate additional hazards into this updated MJHMP to more accurately reflect hazards experienced by both the City and CCUSD. New hazards included in this updated MJHMP include:

- Dam/Reservoir Failure
- Human-Caused Hazards (Hazardous Materials Release, Terrorism/Cyber-Attack, Civil Disturbance, Pandemic)
- Extreme Heat (included under the previously included Severe Weather profile)
- Power Outage (included under the previous included Severe Weather profile as a secondary impact)

The MJHMP Project Management Team coordinated with the MJHMP Planning Team to incorporate these above-mentioned hazards into the hazard profiles in a similar manner as the previous MJHMP. All new hazards identified include at least one mitigation action, as identified in Section 5.0. No other significant changes in MJHMP priorities affected the development of this plan.

SECTION 2.0: PLANNING PROCESS

This section describes each stage of the planning process used to develop the MJHMP. The MJHMP planning process provides a framework to document development and follows the FEMA recommended steps. The MJHMP follows a prescribed series of planning steps which includes organizing resources, assessing risk, developing the mitigation plan, drafting the plan, reviewing/revising the plan, and adopting and submitting the plan for approval. Each step is described in this section.

Hazard mitigation planning in the United States is guided by the statutory regulations described in the Disaster Mitigation Act of 2000 (DMA 2000) and implemented through 44 Code of Federal Regulations (CFR) Parts 201 and 206. FEMA’s hazard mitigation plan guidelines outline a four-step planning process for the development and approval of hazard mitigation plans. Table 2-1, DMA 2000 CFR Crosswalk, lists the specific CFR excerpts that identify the requirements for approval, and identifies the applicable section of this MJHMP.

**Table 2-1
DMA 2000 CFR Crosswalk**

DMA 2000 (44 CFR 201.6)	2016 MJHMP Plan Section
(1) Organize Resources	Section 2
201.6(c)(1)	Organize to prepare the plan
201.6(b)(1)	Involve the public
201.6(b)(2) and (3)	Coordinate with other agencies
(2) Assess Risks	Section 4
201.6(c)(2)(i)	Assess the hazard
201.6(c)(2)(ii) and (iii)	Assess the problem
(3) Develop the Mitigation Plan	Section 5
201.6(c)(3)(i)	Set goals
201.6(c)(3)(ii)	Review possible activities (actions)
201.6(c)(3)(iii)	Draft an action plan
(4) Plan Maintenance	Section 6
201.6(c)(5)	Adopt the plan
201.6(c)(4)	Implement, evaluate, and revise

2.1 ORGANIZING RESOURCES

Cal OES and FEMA awarded the City and CCUSD grant funding for MJHMP development and made this planning process possible. The first step in the planning process involved organization of resources, including identifying the MJHMP Project Management Team, and convening the MJHMP Planning Team and performing document review.

2.1.1 PROJECT MANAGEMENT TEAM

The Project Management Team was responsible for the day-to-day coordination of the MJHMP work program, including forming and assembling the MJHMP Planning Team; scheduling meetings; preparing, reviewing, and disseminating meeting materials; coordinating, scheduling, and participating in community engagement activities and meetings; and coordinating document review. The MJHMP Project Management Team included a representative from the City’s Public Works Department and a representative from the CCUSD Maintenance and Operations

Department, both of whom also participated on the MJHMP Planning Team. Both points of contact from the City and CCUSD acted as co-project managers throughout the planning process and shared decision-making authority on key components of the MJHMP. All participation in the planning process was conducted collaboratively, and there were no differences in participation unique to either the City or CCUSD. All project meetings included representation from both the City and CCUSD. This partnership between the City and CCUSD is further discussed as it relates to specific components of the planning process, below.

The Project Management Team worked directly with the MJHMP Consultant Team (Michael Baker International) throughout development of the MJHMP. The Consultant Team, consisting of a variety of hazard mitigation/planning professionals, provided guidance and support to the City and CCUSD through facilitation of the planning process, data collection, community engagement, meeting materials and document development. The Consultant Team coordinated and communicated with both points of contact from the City and CCUSD throughout the plan update process.

2.1.2 MJHMP PLANNING TEAM

The MJHMP Consultant Team worked with both the City and CCUSD to identify individuals to participate on the MJHMP Planning Team. The City and CCUSD both rely on many of the same utilities, service providers and nonprofits/NGOs. Therefore, all local and regional agencies involved in hazard mitigation activities, agencies with the authority to regulate development, representatives of business/academia/private organizations, and representatives that provide support to underserved communities, participated on behalf of both the City and CCUSD to save time and reduce redundancy. For example, the City and CCUSD are both served by Los Angeles Department of Water and Power (potable water/electric) and Southern California Gas (natural gas). Therefore, both the City and CCUSD made the recommendation to invite these utilities to participate on the MJHMP Planning Team, in mutual agreement.

In addition, the City and CCUSD both share the same jurisdictional boundaries; therefore, all neighboring communities also participated on behalf of both entities. For example, the City and CCUSD identified the Cities of Beverly Hills, Los Angeles, Santa Monica and West Hollywood as neighboring jurisdictions to participate on the MJHMP Planning Team, in mutual agreement.

The City and CCUSD collaborated via email with the Consultant Team to identify representatives to participate on the MJHMP Planning Team. The Consultant Team received approval from both the City and CCUSD before inviting the following organizations to participate in the MJHMP planning process.

The MJHMP Consultant distributed a planning team invitation via email. Participants were advised of the City's and CCUSD's efforts to prepare an MJHMP in partnership, and requested involvement from a representative of their organization in preparation of this plan. Included was an invitation to attend the MJHMP Planning Team meetings (hosted via Microsoft Teams). A list of organizations invited to participate on behalf of both the City and CCUSD is included in [Table 2-2](#), below.

**Table 2-2
MJHMP Planning Team and Community Lifelines**

Agency or Utility Name	Community Lifeline
<i>Local and Regional Agencies Involved in Hazard Mitigation Activities</i>	
California Governor’s Office of Emergency Services	Safety and Security; Communications
City of Culver City (see department list below)*	Food, Water, Shelter; Safety and Security; Communications; Transportation
County of Los Angeles Office of Emergency Management*	Safety and Security; Communications
Culver City Unified School District*	Safety and Security; Communications
Golden State Water Company*	Food, Water, Shelter; Hazardous Material
Los Angeles County Fire Department*	Safety and Security
Los Angeles County Sheriff’s Department*	Communications; Energy; Hazardous Material
Los Angeles Department of Water and Power*	Energy
Southern California Edison*	Energy
Southern California Gas*	Energy
West Basin Municipal Water District*	Food, Water, Shelter; Hazardous Material
<i>Agencies with the Authority to Regulate Development</i>	
City of Culver City (see department list below)*	Food, Water, Shelter; Safety and Security; Communications; Transportation
<i>Neighboring Communities</i>	
City of Beverly Hills	Food, Water, Shelter; Safety and Security; Communications; Transportation
City of Los Angeles	Food, Water, Shelter; Safety and Security; Communications; Transportation
City of Santa Monica	Food, Water, Shelter; Safety and Security; Communications; Transportation
City of West Hollywood	Food, Water, Shelter; Safety and Security; Communications; Transportation
County of Los Angeles	Food, Water, Shelter; Safety and Security; Communications; Transportation
<i>Representatives of Business, Academia, and other Private Organizations</i>	
Amazon Studios	Safety and Security
Sony Pictures Entertainment	Safety and Security
Southern California Hospital at Culver City*	Health and Medical
West Los Angeles College	Safety and Security
<i>Representatives of Nonprofit Organizations/Community Based Organizations</i>	
American Red Cross*	Food, Water, Shelter; Communications
Culver City Downtown Business Association	N/A
Culver-Palms Family YMCA*	Food, Water, Shelter
Culver City Disability Advisory Committee*	N/A
One Incredible Family, Inc. (Senior, Homelessness and Disadvantaged Youth Services)*	Food, Water, Shelter
St. Joseph Center (Homelessness Services)*	Food, Water, Shelter
Share! (Homelessness, Drug Counseling, and Self-Help Services)*	Health and Medical; Food, Water, Shelter
*Indicates an MJHMP Planning Team member that provides services to socially vulnerable populations or other “high-risk” populations within the planning area.	

In addition, the MJHMP Planning Team consisted of staff members from the City and CCUSD, representing a diverse-cross section of departments and responsibilities. Members of the MJHMP Planning Team represented the following City/CCUSD departments and divisions:

City of Culver City

- Advance Planning Division
- Building Safety
- City Attorney
- Public Works
- Finance
- Fire
- Parks, Recreation & Community Services
- Police
- Transportation
- Information Technology

Culver City Unified School District

- Maintenance and Operations

The MJHMP Planning Team worked together to ensure the success of the planning process and is responsible for its implementation and future maintenance. The committee’s key responsibilities included:

- Participation in MJHMP Planning Team meetings
- Collection of valuable local information and other requested data
- Decision on plan process and content
- Development and prioritization of mitigation actions for the MJHMP
- Review and comment on plan drafts
- Coordination and involvement in the public engagement process

Table 2-3, *MJHMP Planning Team*, identifies the MJHMP Project Management Team and MJHMP Planning Team members, along with their roles in MJHMP development.

**Table 2-3
MJHMP Planning Team**

Name	Title/Role	Organization	MJHMP Planning Team Role
<i>MJHMP Project Management Team</i>			
Joe Susca	Senior Management Analyst/ City Project Manager	City – Public Works Department	City Project Manager – Organization of MJHMP Planning Team and meetings, development of and participation in community outreach, hazard identification, capabilities assessment, mitigation actions and prioritization, plan coordination and review.
Mike Korgan	Maintenance & Operations and Transportation (MOT) Director/CCUSD Project Manager	CCUSD Maintenance and Operations	CCUSD Project Manager/ MJHMP Planning Team Representative – Organization of MJHMP Planning Team and meetings, development of and participation in community outreach, hazard identification, capabilities assessment, mitigation actions and prioritization, plan coordination and review.

**Table 2-3 (continued)
MJHMP Planning Team**

Name	Title/Role	Organization	MJHMP Planning Team Role
<i>MJHMP Planning Team</i>			
Adam Ferguson	Sr. Management Analyst	City – Parks, Recreation & Community Services	Project goals and objectives identification, hazard identification and prioritization, critical facilities review and discussion, capabilities assessment, risk assessment/vulnerability discussion, mitigation action discussion, mitigation strategy discussion.
Christine Parra	Emergency Preparedness Coordinator	City – Fire Department	Project goals and objectives identification, hazard identification and prioritization, critical facilities review and discussion, capabilities assessment, risk assessment/vulnerability discussion, mitigation action discussion, integration and coordination with City's Emergency Operations Plan.
Brandon Vanscoy	Lieutenant	City – Police Dept.	Project goals and objectives identification, hazard identification and prioritization.
Hector Calvinisti	Safety & Training Coordinator	City – Transportation	Project goals and objectives identification, hazard identification and prioritization.
Hoa Diep	IT Manager	City – Information Technology	Project goals and objectives identification, hazard identification and prioritization, critical facilities review and discussion, capabilities assessment, risk assessment/vulnerability discussion, mitigation action discussion, mitigation strategy discussion.
Lauren Wrenn	Associate Planner	City – Advance Planning Division	Project goals and objectives identification, hazard identification and prioritization, critical facilities review and discussion, capabilities assessment.
Lisa Vidra	Assistant City Attorney	City – City Attorney	Project goals and objectives identification, hazard identification and prioritization, critical facilities review and discussion, capabilities assessment, risk assessment/vulnerability discussion, mitigation action discussion.
Ryan Thompson	Police Sergeant	City – Police Dept.	Risk assessment/vulnerability discussion, mitigation strategy discussion.
Sean Singletary	Environmental Programs & Operations Manager	City – Public Works	Project goals and objectives identification, hazard identification and prioritization.

**Table 2-3 (continued)
MJHMP Planning Team**

Name	Title	Organization	MJHMP Planning Team Role
Tim Koutsouros	Building Official	City – Building and Safety	Project goals and objectives identification, hazard identification and prioritization, critical facilities review and discussion, capabilities assessment, risk assessment/vulnerability discussion, mitigation action discussion, mitigation strategy discussion.
Troy Evangelho	Advanced Planning Manager	City – Advanced Planning	Project goals and objectives identification, hazard identification and prioritization, critical facilities review and discussion, capabilities assessment.
Yanni Demitri	Public Works Director/City Engineer	City – Public Works	Project goals and objectives identification, hazard identification and prioritization, critical facilities review and discussion, capabilities assessment, risk assessment/vulnerability discussion, mitigation action discussion, mitigation strategy discussion.
Savanna Fiehler	Disaster Program Manager	American Red Cross	Project goals and objectives identification, hazard identification and prioritization, critical facilities review and discussion, capabilities assessment, risk assessment/vulnerability discussion, mitigation action discussion.
Timothy Dahlum	Representative	American Red Cross	Project goals and objectives identification, hazard identification and prioritization.
Terrance Washington	Representative	California Governor's Office of Emergency Services	Project goals and objectives identification, hazard identification and prioritization.
Meena Janmohamed	Emergency Management Manager	City of Beverly Hills	Critical facilities review and discussion, capabilities assessment.
Jillian De Vela	Emergency Management Coordinator	City of Los Angeles	Project goals and objectives identification, hazard identification and prioritization, critical facilities review and discussion, capabilities assessment, risk assessment/vulnerability discussion, mitigation action discussion, mitigation strategy discussion.
Margarita Kustanovich	Emergency Management Coordinator	City of West Hollywood	Project goals and objectives identification, hazard identification and prioritization.

**Table 2-3 (continued)
MJHMP Planning Team**

Name	Title/Role	Organization	MJHMP Planning Team Role
Linda Cunningham	Capital Programs – Project Coordinator, Culver City	Golden State Water	Project goals and objectives identification, hazard identification and prioritization, critical facilities review and discussion, capabilities assessment, risk assessment/vulnerability discussion, mitigation action discussion.
Fredy Ceja	Legislative Representative	Los Angeles Department of Water and Power	Project goals and objectives identification, hazard identification and prioritization, risk assessment/vulnerability discussion, mitigation action discussion, mitigation strategy discussion.
Rick Blackburn	Emergency Services Advisor	SoCalGas	Project goals and objectives identification, hazard identification and prioritization, risk assessment/vulnerability discussion, mitigation strategy discussion.
Edson Ramos	Crisis Management	Sony Pictures Entertainment	Critical facilities review and discussion, capabilities assessment.
Kristin Cavanaugh	Director of Studio Relations	Sony Pictures Entertainment	Project goals and objectives identification, hazard identification and prioritization.
Alexandria Chwierut	Climate Adaptation and Resiliency Planning	Southern California Edison	Risk assessment/vulnerability discussion, mitigation strategy discussion.
Marie Aragon, MSN, BSN, RN	Chief Nursing Officer Regional Administrator	Southern California Hospital	Project goals and objectives identification, hazard identification and prioritization, critical facilities review and discussion, capabilities assessment.
Edward Caldwell	Government Affairs Program Manager	West Basin Municipal Water District	Project goals and objectives identification, hazard identification and prioritization.
Brian Stokes	Vice President of Administrative Services	West Los Angeles College	Project goals and objectives identification, hazard identification and prioritization, critical facilities review and discussion, capabilities assessment.

The MJHMP Planning Team held four meetings, as summarized [Table 2-4, MJHMP Planning Team Meeting Summary](#). Meetings were held virtually via Microsoft Teams, to accommodate City/CCUSD staff and key stakeholders who have primarily transitioned to hybrid work. Meeting materials, including PowerPoint presentations, sign-in sheets, agendas, notes, and other relevant handouts, are provided in [Appendix B, MJHMP Planning Team Documentation](#).

**Table 2-4
MJHMP Planning Team Meeting Summary**

Date	Meeting	Discussion Items
April 6, 2023	MJHMP Planning Team Meeting #1	<ul style="list-style-type: none"> • Project Background • Purpose & Requirements of the MJHMP • Project Goals, Objectives and Expectations • Hazard Identification and Prioritization
May 25, 2023	MJHMP Planning Team Meeting #2	<ul style="list-style-type: none"> • Hazard Mitigation Goals and Hazard Ranking • Critical Facilities Review and Discussion • Capabilities Assessment • Summary of Previously Identified Hazards • Introduction to Mitigation Actions
June 15, 2023	MJHMP Planning Team Meeting #3	<ul style="list-style-type: none"> • Risk Assessment/Vulnerability Overview • Mitigation Action Discussion • Public Involvement Update
July 13, 2023	MJHMP Planning Team Meeting #4	<ul style="list-style-type: none"> • Community Outreach Update • Risk Assessment/Vulnerability Overview • Mitigation Strategy • Mitigation Action Discussion

The draft MJHMP was electronically circulated to the MJHMP Planning Team on August 25, 2023, for an internal two-week review period concluding on September 8, 2023. At the conclusion of the internal two-week review period, minor comments, edits and points of clarification were requested in the MJHMP. Documentation of this process is included in [Appendix B](#).

2.1.3 PUBLIC OUTREACH

The public outreach and engagement strategy was developed to maximize public involvement in the MJHMP planning process. Due to scheduling constraints outside of the City and CCUSD’s control, the majority of public outreach associated with the MJHMP update took place during the summer months. Engagement with CCUSD students and families tends to be lower during the summer when compared to engagement during the school year. Therefore, the MJHMP Consultant Team offered solutions to the City and CCUSD as outlined below to maximize engagement with both constituencies. In addition, it is acknowledged that there is a substantial overlap in both the City and CCUSD constituencies. As CCUSD shares jurisdictional boundaries with the City of Culver City, students and families attending public school at CCUSD also must reside within the City. Therefore, the engagement strategy was tailored around free and family-friendly City-hosted events, where attendees could review content and provide feedback on plan components. The MJHMP strategy included a dedicated webpage, community survey, a community outreach event, and distribution of a draft Plan for public review, as described below; refer to [Appendix B](#).

The MJHMP public outreach process was specifically designed to maximize participation and input from all community members, including underserved groups and vulnerable populations. The City and CCUSD, in coordination with the MJHMP Planning Team, publicized opportunities to provide input. Opportunities to provide input included virtual platforms through the City/CCUSD webpage, an online community survey, and the electronic distribution of the public review draft MJHMP. Opportunities to provide input in-person included a pop-up community outreach event on July 29, 2023. Details regarding each outreach component are included below.

WEBPAGE

A dedicated webpage was developed on the City's and CCUSD's website for the MJHMP development process. The CCUSD website provided a link to the City's webpage as well. The webpage provided information on the MJHMP, and how the public can get involved in the planning process. Contact information was included for comments or questions via email. A link to complete the community survey was posted to encourage participation. The website was updated throughout the planning process and provided notifications and access to MJHMP materials. The draft MJHMP was also made available for public review on the City's webpage, available here: www.culvercity.org/hazardmitigationplan; and CCUSD's webpage, available here: <https://www.ccusd.org/apps/links/>.

Virtual outreach on the City's website posted for the entirety of the MJHMP development process allowed for maximum audience reach, including underserved and vulnerable populations. Traditionally, virtual outreach has the ability to reach community members who may be unable to attend in-person meetings or hearings. Individuals can access all information at their own convenience, and have the ability to communicate directly with City staff regarding questions or comments. Published content was also advertised via GovDelivery (e-mail distribution lists) and social media channels.

COMMUNITY SURVEY

A community survey was developed by the MJHMP Consultant Team to obtain input from the community about various hazard mitigation topics. Both the City and CCUSD reviewed the survey content in coordination, and approved prior to public distribution. Due to schedule constraints outside of both the City and CCUSD control, the majority of public outreach on the MJHMP was conducted during the summer months. CCUSD elected for the City to be the primary distributor of the community survey, as the survey launched during the summer months when attention from CCUSD parents/students is more limited when compared to the regular school year. In all public distribution and messaging, it was made clear this survey was distributed on behalf of both the City and CCUSD.

In addition to basic demographic information (e.g., zip code and age), the survey asked residents to identify specific safety concerns, including identifying what hazards they felt were most likely to impact their neighborhood or property. Participants were also asked what actions they had taken to be more resistant to hazards, and preferences for future communication methods from the City/CCUSD. A survey QR code was posted on the MJHMP webpage and was distributed on a printed handout at both the Movie in the Park and Fiesta La Ballona outreach events (below). Left over handouts were placed at check-in/reception areas in designated locations within City Hall public counters, the Council Chambers and the Senior Center reception area. Members of the MJHMP Planning Team also distributed the survey link to colleagues and constituents within their jurisdiction.

The survey was open between July 6, 2023 and closed September 3, 2023. A total of 99 responses were received. Of the 99 participants, approximately 38 percent provided contact information and requested notification when the draft MJHMP becomes available for public review. Input received was generally consistent with feedback from the Movie in the Park Pop-Up Event, outlined below. Survey input directly influenced the ultimate hazard ranking, provided in [Section 4.0](#). Further details received allow the City to better target future outreach and engagement activities regarding the MJHMP. The survey specifically provides outreach with underserved and vulnerable populations who may not have the capacity or ability to attend in-person outreach events or hearings. A detailed community outreach summary is included in [Appendix B](#).

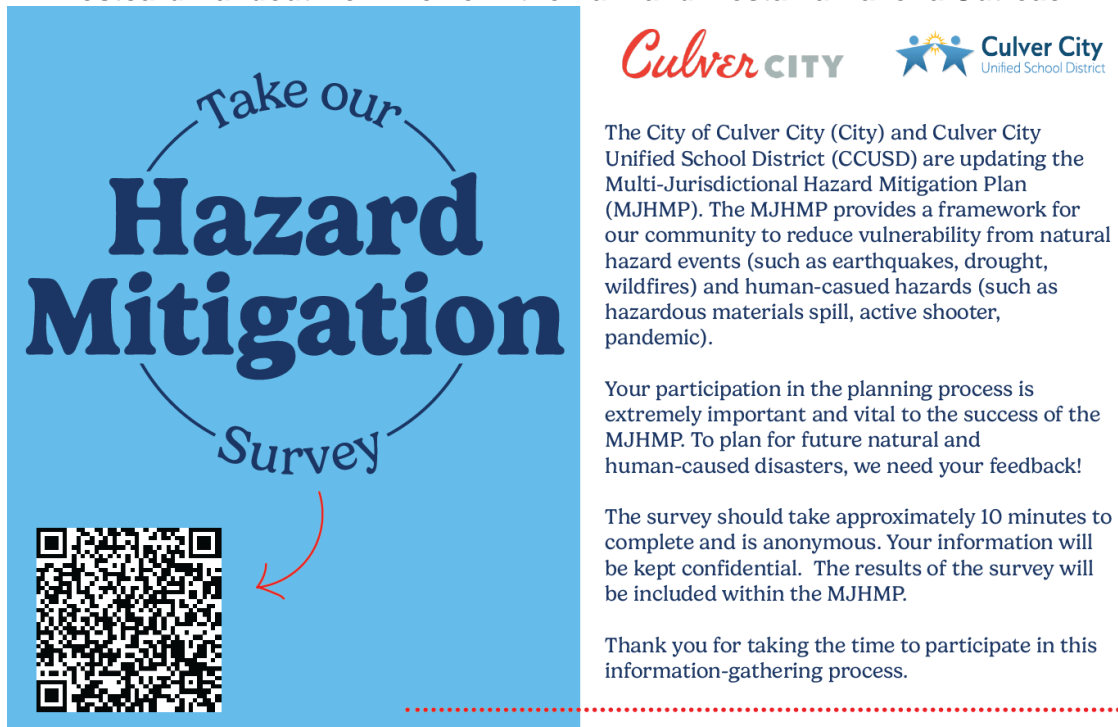
MOVIE IN THE PARK – OUTREACH AND DATA GATHERING

An interactive pop-up booth focused on MJHMP outreach and content was hosted at the City's Movie in the Park series on July 29, 2023 from 6:00 PM – 8:30 PM. This event was hosted at the Culver City Park (Bill Botts Field). As previously mentioned, the majority of public outreach on the MJHMP was conducted during the summer months due to scheduling constraints outside of both the City and CCUSD's control. Engagement with CCUSD students and families is generally lower during the summer months when kids are out of school, as compared to engagement during the school year. Therefore, this pop-up booth opportunity was selected by both the City and CCUSD as an opportunity to engage with both City and CCUSD constituents – acknowledging that there is a significant overlap of constituents receiving services from both entities. The Culver City Parks and Recreation Departments advertises the summer Movies in the Park Series as a free, family-friendly community event. The July 29th date was specifically chosen as this movie showing was Ghostbusters (rated PG), attracting fans and viewers from multi-generations. Sony Pictures (headquartered in Culver City) distributed the movie to the City Parks and Recreation Department, and staged Ghostbusters props and set pieces to further attract families to the event. As a result, the MJHMP Consultant was able to engage with both City and CCUSD constituents during this singular outreach event. The intent of this outreach event was to use the "Whole Community" approach and meet stakeholders/constituents at a convenient location during a free City event.


The MJHMP Consultant, Michael Baker International, set up several informational boards regarding the MJHMP update process and information about key community lifelines. Participants were given sheets of five dot stickers, to place on the list of Culver City/CCUSD hazards indicating which of the hazards were a top concern or priority. Results from this exercise, along with the board illustrations are documented in [Appendix B](#). Feedback was generally consistent with the results from the community survey exercise. The MJHMP Consultant was also available to answer questions from the public regarding hazard mitigation and resilience related to the City and CCUSD. Approximately 75 – 100 individuals stopped by the booth during the two hour long pop-up event.


In addition to the activities and informational boards, staff passed out an informational postcard describing the MJHMP Update process containing the Community Survey QR Code to provide them the opportunity to give additional input. An illustration of this handout is included below as [Figure 2-1](#) and pictures from the event are included as [Figure 2-2](#). All materials distributed to the public clearly outlined the involvement of both the City and CCUSD in the MJHMP update.

Figure 2-1
Postcard Handout from Movie in the Park and Fiesta La Ballona Outreach



Take our
Hazard Mitigation
Survey



Culver CITY 

The City of Culver City (City) and Culver City Unified School District (CCUSD) are updating the Multi-Jurisdictional Hazard Mitigation Plan (MJHMP). The MJHMP provides a framework for our community to reduce vulnerability from natural hazard events (such as earthquakes, drought, wildfires) and human-caused hazards (such as hazardous materials spill, active shooter, pandemic).

Your participation in the planning process is extremely important and vital to the success of the MJHMP. To plan for future natural and human-caused disasters, we need your feedback!

The survey should take approximately 10 minutes to complete and is anonymous. Your information will be kept confidential. The results of the survey will be included within the MJHMP.

Thank you for taking the time to participate in this information-gathering process.

FIESTA LA BALLONA

As part of the Fiesta La Ballona celebration held from August 25 to August 27, 2023, the City sponsored a booth to publicize and promote participation in various City programs, including the MJHMP Update. City staff distributed an advertisement postcard on behalf of both the City and CCUSD that included information about the MJHMP Update and a QR code to complete the community survey. Visitors at the booth were invited to sign-up for future event and information updates, and were encouraged to ask questions or provide comments. Similar to the Movie in the Park Event, Fiesta la Ballona is a major family-friendly event that attracts both City and CCUSD constituents.

Figure 2-2
Pictures from the Movie in the Park MJHMP Pop-Up Event



PUBLIC REVIEW DRAFT MJHMP

A draft of the MJHMP was made available on the City and CCUSD MJHMP webpage for the public to review and comment during a 2-week period beginning on September 25, 2023 and ending on October 9, 2023. The MJHMP was posted on the City's and CCUSD's website and a notification of availability was posted on the City's social media account and via e-mail using GovDelivery. The MJHMP received four comments on the draft plan. Documentation of this process is included in [Appendix B](#).

2.1.4 REVIEW AND INCORPORATE EXISTING INFORMATION

The MJHMP Planning Team referenced a variety of plans, studies, data and technical reports available from local, State, and federal sources to prepare the MJHMP update. Primary sources were reviewed and incorporated as part of the MJHMP planning process, and are listed in [Table 2-5, Existing Plans, Studies, Reports, and Other Technical Data/Information](#). A complete list of references is included in [Section 7.0, References](#).

**Table 2-5
Existing Plans, Studies, Reports, and Other Technical Data/Information**

Existing Plans, Studies, Reports, and Other Technical Data/Information	Planning Process / Area of Document Inclusion
California Department of Conservation	Hazard Profiles
California Governor's Office of Emergency Services California Adaptation Planning Guide (2020)	Hazard Profiles; Climate Mitigation Plan Development
California State Hazard Mitigation Plan (2018)	Hazard Profiles
CCUSD Master Facilities Plan (2023)	Multiple Plan Sections
City of Los Angeles 2018 Local Hazard Mitigation Plan	Hazard Profiles
County of Los Angeles All-Hazard Mitigation Plan (2020)	Hazard Profiles
Culver City Capital Improvement Plan (2022/2023)	Mitigation Strategy; Plan Maintenance and Capabilities
Culver City Emergency Operations Plan	Multiple Plan Sections
Culver City General Plan	Local Plan Integration Existing/Planned Land Uses
Culver City Mass Debris Management Master Plan (2021)	Mitigation Strategy
Culver City Mitigation Action Plan: Drought, Wildfire, & Flood (2022)	Mitigation Strategy
Culver City Stormwater Quality Master Plan	Hazard Profiles; Mitigation Strategy
Enhanced Watershed Management Program for the Ballona Creek Watershed (2016)	Hazard Profiles; Mitigation Strategy
FEMA Fact Sheet – Hazard Mitigation Planning for Local Communities	Multiple Plan Sections
FEMA Local Mitigation Plan Review Guide	Multiple Plan Sections
FEMA Local Mitigation Planning Handbook	Multiple Plan Sections
FEMA Local Mitigation Planning Policy Guide	Multiple Plan Sections
Golden State Water Company Culver City Service Area 2020 Urban Water Management Plan	Hazard Profiles; Vulnerability Assessment; Mitigation Strategy; Capabilities Assessment
Los Angeles Department of Water and Power Urban Water Management Plan (2022)	Hazard Profiles; Vulnerability Assessment; Mitigation Strategy; Capabilities Assessment
Lower Franklin Dam Emergency Action Plan (2022)	Hazard Profiles; Vulnerability Assessment; Mitigation Strategy
Mulholland Dam Emergency Action Plan (2022)	Hazard Profiles; Vulnerability Assessment; Mitigation Strategy
National Oceanic and Atmospheric Administration Databases	Hazard Profiles
Silver Lake Dam Emergency Action Plan (2022)	Hazard Profiles; Vulnerability Assessment; Mitigation Strategy
Southern California Earthquake Data Center	Hazard Profiles
Stone Canyon Dam Emergency Action Plan (2022)	Hazard Profiles; Vulnerability Assessment; Mitigation Strategy
United States Drought Monitor	Drought Hazard Profile
United States Geological Survey Science Data Catalog	Hazard Profiles, Vulnerability Assessment
Very High Fire Hazard Severity Zones Map in LRA As Recommended by CALFIRE	Vulnerability Assessment
West Basin Municipal Water District 2020 Urban Water Management Plan	Hazard Profiles; Vulnerability Assessment; Mitigation Strategy; Capabilities Assessment

2.2 ASSESS RISKS

In accordance with FEMA requirements, the MJHMP Planning Team identified and prioritized the hazards affecting the City and CCUSD, and assessed vulnerability from those hazards. Results from this phase of the MJHMP planning process aided subsequent identification of appropriate mitigation actions to reduce risk from these hazards; refer to [Section 5.0, *Mitigation Actions*](#).

2.2.1 IDENTIFY/PROFILE HAZARDS

Based on a review of past hazards, as well as a review of existing plans, reports, and other technical studies, data, and information, the MJHMP Planning Team determined which specific hazards could affect both the City and CCUSD. As the City and CCUSD share jurisdictional boundaries, hazard profiles were prepared in unison to reduce redundancy in the MJHMP. Content for each hazard profile is provided in [Section 4.0, *Hazards Assessment*](#).

2.2.2 ASSESS VULNERABILITIES

Hazard profiling exposes the unique characteristics of individual hazards and begins the process of determining which areas within the City are vulnerable to specific hazards. The vulnerability assessment included input from the MJHMP Planning Team and a GIS overlaying method for hazard risk assessments. Using these methodologies, critical facilities impacted by hazards were identified and potential loss estimates were determined, where available. Specific vulnerabilities unique to the City and CCUSD were also highlighted in this section. Detailed information on the vulnerability assessments for each hazard is provided in [Section 4.0](#).

2.3 DEVELOP MITIGATION PLAN

2.3.1 IDENTIFY GOALS

The MJHMP Planning Team reviewed mitigation goals from the previous hazard mitigation plan against the State of California HMP. Hazard mitigation goals were discussed during Meeting #1 and Meeting #2, before finalization and incorporation into the MJHMP. The Mitigation Goals are included in [Section 1.0, *Introduction*](#).

2.3.2 DEVELOP CAPABILITIES ASSESSMENT

A capabilities assessment is a comprehensive review of all the various mitigation capabilities and tools currently available to the City and CCUSD mitigation action implementation, prescribed in the MJHMP. The MJHMP Planning Team identified the technical, financial, and administrative capabilities to implement mitigation actions, as detailed in [Section 5.3, *Capabilities Assessment*](#).

2.3.3 IDENTIFY MITIGATION ACTIONS

As part of the MJHMP planning process, the MJHMP Planning Team worked to identify and develop mitigation actions, after which mitigation actions were prioritized as high, medium, or low. A detailed discussion of the identification and prioritization of mitigation actions, and the creation of the implementation strategy is provided in [Section 5.0](#).

2.3.4 PLAN ADOPTION AND SUBMITTAL

This Plan will be submitted to Cal OES and FEMA for review. Upon receiving “approvable pending adoption” notification from FEMA, this Plan will be presented to the City Council and CCUSD Board of Directors for consideration and approval. If approved, a copy of the resolution will be provided in Appendix A, *CCUSD/City of Culver City Adoption Resolutions*.

2.3.5 PLAN MAINTENANCE

Plan maintenance procedures, found in Section 6.0, *Plan Maintenance and Capabilities*, include the measures the City and CCUSD will take to ensure the MJHMP’s continuous long-term implementation. The procedures also include the manner in which the MJHMP will be regularly monitored, reported upon, evaluated, and updated to remain a current and meaningful planning document.

SECTION 3.0: COMMUNITY PROFILE

3.1 PHYSICAL SETTING

The City is located in the western portion of Los Angeles County, approximately 2.7 miles east of the Pacific Ocean; refer to [Exhibit 3-1, *Regional Location*](#). The City is surrounded by the City of Los Angeles communities of Mar Vista and Palms to the north, Westchester to the south, Mid-City and West Adams to the east, Baldwin Hills and Ladera Heights to the southeast, and Venice, Playa Del Ray, and Marina Del Rey to the west; refer to [Exhibit 3-2, *Local Vicinity*](#). Los Angeles International Airport is located approximately five miles south of the City. Neighboring cities including the City of Beverly Hills, West Hollywood, and Santa Monica (who collectively, formed the Westside Cities Council of Governments). Cities within the Westside Cities Council of Governments are also mutual aid partners during natural disasters and emergencies. Regional access to the City is provided by the San Diego (I-405), Santa Monica (I-10) and Marina (CA-90) freeways. Ballona Creek extends through the City in a northeast to southwest direction.

CCUSD facilities are located entirely within the City of Culver City. CCUSD serves both students in the City and from unincorporated Los Angeles County (primarily the neighborhoods listed above); refer to [Exhibit 3-3, *CCUSD Boundary*](#).

3.2 HISTORY

Culver City was founded by Harry H. Culver, who planned to create an economically diverse and balanced community. He started plans for the City in 1913, which became a municipal corporation in 1917. In the early days, Culver City benefitted from access to nearby railroad routes, halfway between the growing pueblo of Los Angeles and Abbot Kinney's resort of Venice. Culver City began to develop as a 1.2 square mile area around a Main Street.

In 1920, the school district name was changed from Palms School District to the Culver School District. Culver CityBus became the first municipal transit agency in the state of California in 1928. Entertainment production studios formed the City's early economic base and remain an important component of the local economy. Industry came in the form of Western Stove in 1922, Helms Bakeries in 1930, and Hayden Industrial Tract in the 1940s. Prohibition spawned a plethora of night spots and bootlegging in the 1920s and 1930s, with World War II stalling growth in the 1940s. Car dealerships replaced the night spots on Washington Boulevard in the 1950s.

More than 40 annexations over the years increased the City's size to about five square miles. Culver City transitioned from a general law city to a charter city in 1947. In 1949, the Culver City Unified School District (CCUSD) was established and in 1953, Culver City High School had its first graduating class. The five-member Board of Education governs the City's public schools just as the five-member City Council governs the City through a Council/City Manager form of government. The Culver City population now hovers around 40,000 residents.



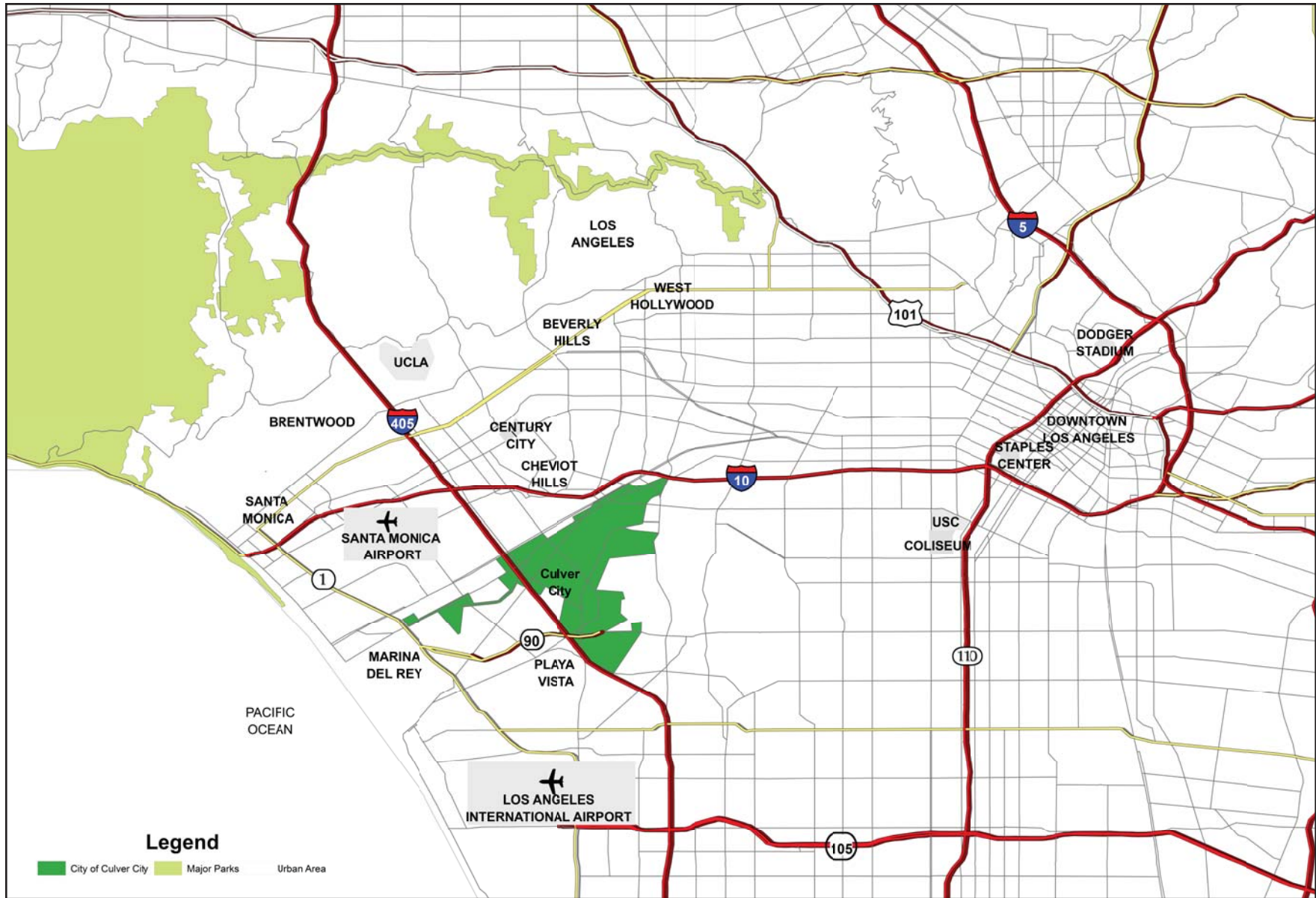
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MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN
CITY OF CULVER CITY AND CULVER CITY UNIFIED SCHOOL DISTRICT
Regional Location

Exhibit 3-1



Source: City of Culver City, Information Technology Department, GIS; January 31, 2007.

NOT TO SCALE

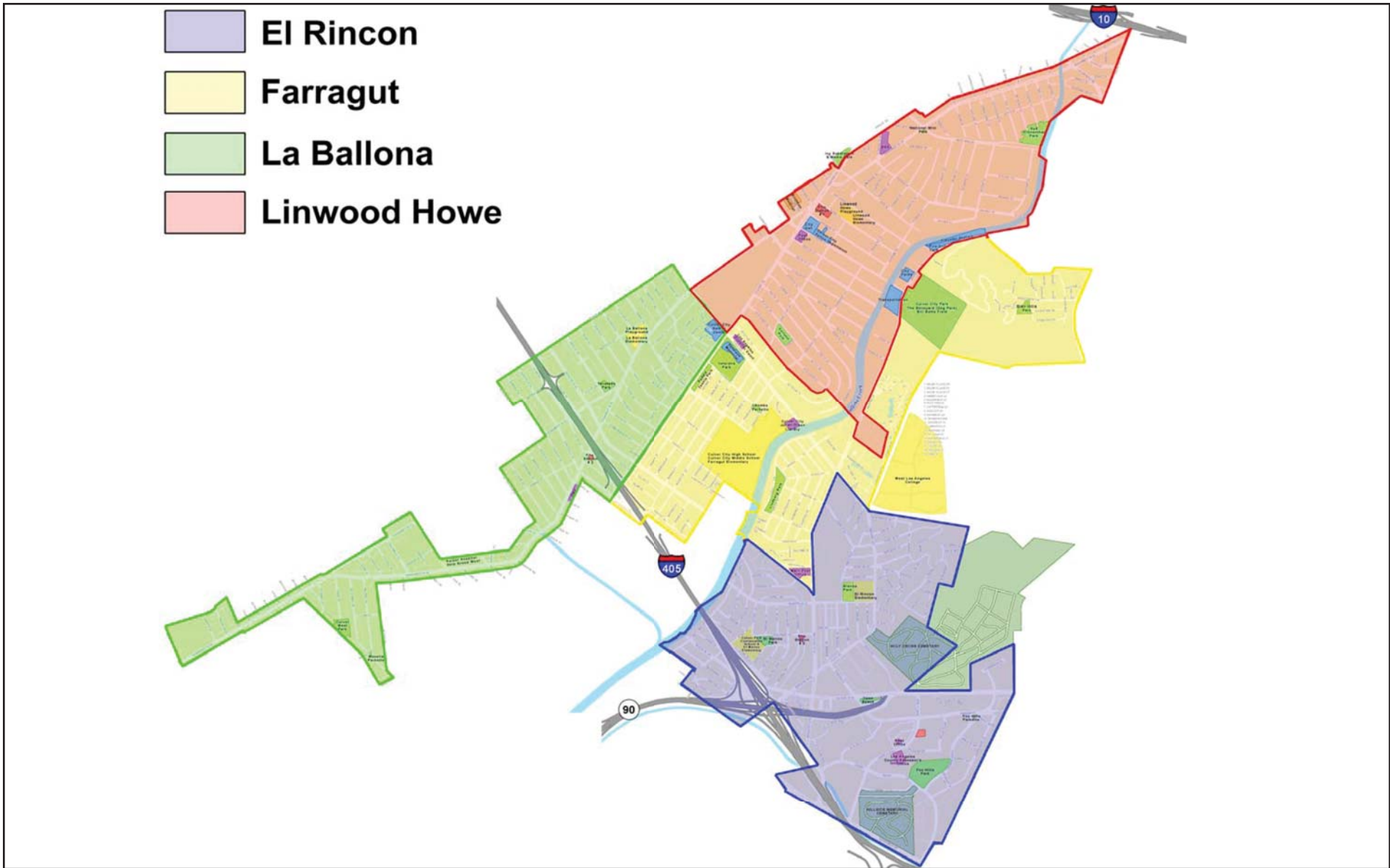


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MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN
CITY OF CULVER CITY AND CULVER CITY UNIFIED SCHOOL DISTRICT

Local Vicinity

Exhibit 3-2



Source: Culver City Unified School District, April 2016.

NOT TO SCALE



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MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN
 CITY OF CULVER CITY AND CULVER CITY UNIFIED SCHOOL DISTRICT
CCUSD Boundary

3.3 SOCIOECONOMIC FACTORS

Population, education, employment, and housing factors of the City are described in this section. Where data is specific to CCUSD, it is stated below.

3.3.1 CULVER CITY POPULATION

Table 3-1, *Culver City and L.A. County Population and Housing Data (2021)*, provides an overview of the City’s and County’s demographics.

**Table 3-1
Culver City and L.A. County Population and Housing Data (2021)**

Category	Culver City	Los Angeles County
Total Population	40,640	10,019,635
Percent of Residents that are children (under 18 years)	19.6%	21.6%
Percent of Residents that are senior citizens (65 and over)	17.7%	13.7%
Median Age (years)	41.7	37.0
Median Household Income	\$105,346	\$76,367
Median House Value (Owner-occupied housing units w/ a mortgage)	\$976,300	\$647,000
Occupied Housing Units	18,144	3,342,811
Percent of Renter-Occupied Housing Units	45.9%	53.8%
Percent of Owner-Occupied Housing Units	54.1%	46.2%
Average Household Size	2.22	2.94
Source: US Census Bureau, 2017-2021: American Community Survey 5-Year Estimates.		

Culver City has an estimated population of 40,640 according to the 2017-2021 U.S. Census American Community Survey (ACS) 5-year estimates. Culver City residents under the age of 18 make up 19.6 percent of the City’s population, residents 65 and older make up 17.7 percent of the population and approximately 62.7 percent of the population is between the ages of 18 and 65. The median age of City residents is 41.7 years of age. Comparatively, the Los Angeles County age demographic comprises 21.6 percent of residents under the age of 18, 13.7 percent of residents 65 and over, and approximately 65.4 percent of the population is between the ages of 18 and 65 with a median age of 37 years. Overall, these metrics show that the City has an older population than that of the County.

The City has a higher median household income, home ownership rate and median house value in comparison to Los Angeles County. The median household income in Culver City is \$105,346, which is substantially higher than the median income in Los Angeles County at \$76,367. Owner-occupied housing units in Culver City accounts for 54.1 percent of total occupied housing which is greater than the 46.2 percent of owner-occupied housing units in the County. The median home value in the City is \$976,300 compared to a median home of \$647,000 in Los Angeles County. Culver City has an average household size of 2.22 persons per household, and the average household size across Los Angeles County is 2.94 persons per household.

Table 3-2, *Culver City and L.A. County Racial and Ethnic Composition (2021)*, provides an overview of the City’s and County’s racial/ethnic demographics. The largest ethnic group in the City is the non-Hispanic White population, which accounts for 46.7 percent of the City’s total population. The City’s ethnic makeup consists of White at 46.7 percent, Asian at 18.3 percent, Black or African American at 8.6 percent, American Indian and Alaskan Native at 0.0 percent, and Native Hawaiian and Other Pacific Islander at 0.3 percent. Hispanic or Latino persons of any race

constitute 18.4 percent of the City’s residents. Persons identifying as “other race” account for 0.7 percent of the population, while those reporting two or more races make up 7.0 percent of the City’s population.

**Table 3-2
Culver City and L.A. County Racial and Ethnic Composition (2021)**

Race or Ethnicity	Culver City		Los Angeles County	
	Population	Percentage of Population	Population	Percentage of Population
White (non-Hispanic)	18,992	46.7	2,550,832	25.5%
Asian	7,441	18.3	1,458,140	14.6%
Black or African American	3,478	8.6	766,190	7.6%
American Indian and Alaskan Native	12	0.0	19,571	0.2%
Native Hawaiian and Other Pacific Islander	139	0.3	21,433	0.2%
Other Race	268	0.7	43,451	0.4%
Two or More Races	2,841	7.0	281,399	2.8%
Hispanic or Latino (of any race) ¹	7,469	18.4	4,878,619	48.7%
Total	40,640	100%	10,019,635	100%

Source: U.S. Census 2017-2021 5-Year American Community Survey, DP05 Demographic and Housing Estimates, 2021.
¹ Hispanic or Latino persons are not counted as a separate racial or ethnic category; persons who identify as Hispanic or Latino are also included in other racial or ethnic categories. Totals may vary slightly due to rounding.

The racial/ethnic makeup of Los Angeles County consists of White at 25.5 percent, Asian at 14.6 percent, Black or African American at 7.6 percent, American Indian and Alaskan Native at 0.2 percent, and Native Hawaiian and Other Pacific Islander at 0.2 percent. Hispanic or Latino persons of any race make up the largest ethnic group in the County constituting 48.7 percent of the population. Persons identifying as “other race” account for 0.4 percent of the population, while those reporting two or more races make up 2.8 percent of the population.

The level of racial/ethnic diversity throughout Culver City is comparable to that of Los Angeles County for most racial/ethnic groups. However, the largest ethnic group in the City is the non-Hispanic White population at 46.7 percent, whereas the largest ethnic group in the County is the Hispanic or Latino population at 48.7 percent. The second largest ethnic group in the City is the Hispanic or Latino population at 18.4 percent, and the second largest ethnic group in the County is the non-Hispanic White population at 25.5 percent. Effectively, the level of ethnic diversity between the City and County is similar, but the most populous ethnic groups in the City and County are inverted with respect to each other.

3.3.2 CULVER CITY EDUCATIONAL ATTAINMENT

Educational attainment is analyzed based on the population of individuals ages 25 and over. Culver City residents have a higher level of educational attainment compared to Los Angeles County; refer to Table 3-3, Culver City and L.A. County Educational Attainment (2021).

Of the City’s population aged 25 years and older, 29.5 percent attained a graduate or professional degree, 32.9 percent attained a bachelor’s degree, and 5.5 percent attained an associate degree. Thus, nearly 70 percent of the City’s population has completed a higher education degree. In comparison, Los Angeles County’s higher education degree attainment is as follows: 11.9 percent

attained a graduate or professional degree, 22.1 percent attained a bachelor’s degree, and 7.0 percent attained an associate degree. Approximately 6.2 percent of adults in Culver City have not completed high school compared to approximately 20 percent of adults in the County.

**Table 3-3
Culver City and L.A. County Educational Attainment (2021)**

Education Attainment (Age 25 and Over)	Culver City		Los Angeles County	
	Number	Percentage of Population	Number	Percentage of Population
Less than 9 th Grade	1,020	3.3	813,149	11.7%
9 th to 12 th Grade	891	2.9	568,298	8.2%
High School Graduate	3,058	9.9	1,411,475	20.4%
Some College, No Degree	4,945	16.0	1,285,626	18.6%
Associate’s Degree	1,690	5.5	486,941	7.0%
Bachelor’s Degree	10,163	32.9	1,530,075	22.1%
Graduate or Professional Degree	9,095	29.5	826,497	11.9%
Total	30,862	100%	6,922,061	100%

Source: U.S. Census 2017-2021 5-Year American Community Survey, S1501 Educational Attainment, 2021.

3.3.3 EMPLOYMENT

According to the 2017-2021 U.S. Census ACS, there are 33,355 residents over 16 years of age in Culver City, and 23,205 residents in the labor force. Out of the 23,205 people in the labor force, 21,801 (65.4 percent) were employed and 1,404 (4.2 percent) were unemployed. The educational services and healthcare/social services sector employed the largest number of City residents (24.3 percent), followed by professional scientific, management, and administrative and waste management services (22.0 percent) and information (9.2 percent). The median household income in the City was \$105,346. While approximately 20.0 percent of employees work from home, a majority of Culver City residents commute for work. The average commute travel time is 27.5 minutes.¹

3.3.4 HOUSING

According to the 2017 – 2021 ACS, there are 19,319 housing units in the City. Of the total housing units, approximately 94 percent are occupied. The majority of housing units in the City are categorized as single unit detached homes (36.0 percent). The second most prevalent type were multi-unit homes of 10 or more units (32.2 percent), followed by single-unit attached homes (10.1 percent). Of the 18,144 occupied housing units, more than half are owner-occupied (54.1 percent), while the remaining 45.9 percent are renter-occupied units. Approximately 86.5 percent of housing units in the City were constructed prior to 1980 and therefore are more susceptible to deterioration.² According to the 2017-2021 U.S. Census ACS, the average household size in the City was 2.22 persons per household.³

¹ United States Census Bureau, 2017-2021 American Community Survey 5 year Estimates, <https://data.census.gov/table?q=Culver+City+employment+2021&tid=ACSDP5Y2021.DP03>, accessed August 23, 2023.

² United States Census Bureau, 2017-2021 American Community Survey 5 year Estimates, <https://data.census.gov/table?q=Culver+City+housing+2021>, accessed August 23, 2023.

³ United States Census Bureau, 2017-2021 American Community Survey 5 year Estimates, <https://data.census.gov/table?q=Culver+City+housing+2021>, accessed August 23, 2023.

3.3.5 CULVER CITY UNIFIED SCHOOL DISTRICT

CCUSD serves over 7,000 students in 10 schools; refer to [Table 3-4, *Culver City Unified School District Schools*](#). The district consists of five K–5 elementary schools, one middle school, and one high school. CCUSD also operates an alternative high school, an independent study school, an adult school, and a preschool program. In addition to school facilities, CCUSD owns several other buildings, including the District Office and maintenance facilities. [Table 3-5, *Culver City Unified School District Ethnicity*](#), provides ethnicity information for CCUSD students and [Table 3-6, *Culver City Unified School District Languages*](#), identifies languages spoken by families within the District.

**Table 3-4
Culver City Unified School District Schools**

School	Address	Grades	Enrollment
Office of Child Development	10800 Farragut Drive	Preschool and K–5 ¹	292
El Marino Language School	11450 Port Road	K–5	842
El Rincon Elementary	11177 Overland Avenue	K–5	589
La Ballona Elementary	10915 Washington Boulevard	K–5	560
Linwood E. Howe Elementary	4100 Irving Place	K–5	554
Farragut Elementary	10820 Farragut Drive	K–5	565
Culver City Middle School	4601 Elenda Street	6–8	1,619
Culver City High School	4401 Elenda Street	9–12	2,258
Culver Park Continuation High School	5303 Berryman Avenue	10–12	41
Adult School	4909 Overland Avenue	Adult	30
Notes: 1. The Preschool program offers full and part day curriculum for children 3–4 years old. The School Age Before and After School Enrichment programs are offered to grades K–5 for before-and-after school care and for non-school days, winter break, spring break, and some holidays.			
Source: Culver City Unified School District, District Website, http://www.ccusd.org/ , accessed August 14, 2015.			

**Table 3-5
Culver City Unified School District Ethnicity**

Race/Ethnicity	Percentage of Student Population
American Indian	1%
Asian	12%
Black	18%
Filipino	2%
Pacific Islander	1%
White	25%
Two or More Races	6%
Hispanic	36%
Non-Hispanic	64%
Source: CCUSD, <i>Culver City Unified School District Facilities Master Plan</i> , revised January 10, 2014.	

**Table 3-6
Culver City Unified School District Languages**

Language	Percentage of Families
Arabic	1
English	67
Japanese	4
Mandarin (Putonghua)	1
Spanish	20
Urdu	1
Other	6
Source: CCUSD, <i>Culver City Unified School District Facilities Master Plan</i> , revised January 10, 2014.	

3.4 LAND USES AND EXISTING DEVELOPMENT

Existing land use information was obtained from the *Culver City General Plan Land Use Element* and the Culver City Zoning Map. Exhibit 3-4, *General Plan Land Use Element Map*, presents the Land Use Map, which divides the City into residential, commercial, industrial, focused special study areas, and other land use designations. Table 3-7, *Land Use Designations*, identifies the General Plan land use designations and descriptions of the typical uses allowed in each designation. It is noted that at the time of this MJHMP writing, the City is in the process of a comprehensive General Plan update, anticipated to include land use planning provisions to 2045. Adoption of the updated General Plan is anticipated to occur within this MJHMP planning period, and thus land use designations and distributions outlined below may change.

Generally, land uses have not substantially changed since the previous 2017 MJHMP was prepared. The primary land uses within the City continue to be residential, commercial, and civic/institutional, in order. Residential land uses are located throughout the City, and the majority are zoned for single-family homes. Open space uses are primarily located along the eastern and central areas of the City. Commercial and Industrial areas are scattered throughout the City, but occur primarily in the northern and western areas of the City. Existing (on-the ground) development within the City limits are identified in Table 3-8, *Existing Land Use Summary*. Development within specific hazard zones has generally remained the same in intensity and character, and no major or significant changes are of note from the previous 2017 MJHMP.

**Table 3-7
Land Use Designations**

Land Use Designation	Density	Summary Description of Land Designation
Residential – Low Density Single Family	8.7 du/acre	One dwelling unit per lot on lots not less than 5,000 square feet in area.
Residential – Low Density Two Family	17.4 du/ac	One to two dwellings per lot/parcel on parcels of not less than 5,000 square feet.
Residential – Low Density Three Family	29 du/ac	Up to three dwelling units per parcel at not less than 1,500 square feet of net lot area per unit.
Residential – Low Density Multiple Family	15 du/ac	Multiple family dwellings, as well as single family, two family and three family dwellings, on parcels of 15,000 square feet or more.
Residential – Medium Density Multiple Family	29 du/ac	Multiple family dwellings, as well as single family, two family and three family dwellings, on parcels of up to 13,000 square feet.
Residential – Planned Residential Development	43.5 to 82 du/ac	Large residential complexes which may consist of more than one building on a site of one acre or larger.

**Table 3-7 (continued)
Land Use Designations**

Land Use Designation	Density	Summary Description of Land Designation
Commercial – Neighborhood Serving Corridor	—	A range of small-scale commercial uses with an emphasis on neighborhood serving retail, encouraging desirable existing and future uses such as sidewalk cafes, bakeries, dry cleaners, small markets, tax services, medical offices and small scale mixed-use residential opportunities.
Commercial – General Corridor	—	A range of small-to medium-scale commercial uses, with an emphasis on community-serving retail to which patrons often travel by car.
Commercial –Downtown	—	Medium and large-scale commercial uses and shared parking, with specific use restrictions and design standards.
Commercial –Community Serving Center	—	Medium-scale commercial uses that may share parking, serving both residential and business communities by providing uses such as supermarkets, pharmacies, restaurants, banks, office supplies, copy services and retail stores.
Commercial –Regional Center	—	Large-scale commercial uses that may share parking.
Industrial – Light Industrial	—	A limited variety of light manufacturing and industrial uses that can be contained within wholly enclosed structures. Commercial and live-work residential uses also would be allowed. Residential uses are prohibited.
Industrial – Industrial Park	—	Industrial uses that can be contained within wholly enclosed structures and permits shared parking. It also would allow commercial uses such as office and only employee-supporting retail, but would preclude residential and large-scale retail uses.
Industrial – Industrial	—	A variety of manufacturing and industrial uses, but precludes heavy industry. Commercial uses, particularly those that support or service daytime industrial employees, also would be allowed. Residential uses are prohibited.
Other – Studio	—	Studio and media businesses.
Other – Cemetery	—	Cemeteries.
Other – Open Space	—	Open space resources, park/recreation facilities that include public or private land.
Other – Institutional	—	Government Facility, School, Utility, Health Center.
Other – School	—	School.
Other – Freeway	—	Freeway.
Focused Special Studies Area – Hayden Industrial Tract	—	Open Space, Residential, and Industrial.
Focused Special Studies Area – Blair Hills / Baldwin Hills	—	Open Space.
Focused Special Studies Area – Ballona Creek	—	Industrial.

Source: City of Culver City, *City of Culver City General Plan Land Use Element*, July 22, 1996.

**Table 3-8
Existing Land Use Summary (Inventory dated 2020)**

Land Use	Acres	% of City
Residential	1,233.8	49.2
Single-Family	898.4	35.8
Duplex, Triplex, Fourplex	185.5	7.4
Multi-Family (5+ Units)	144.6	5.8
Mobile Homes	5.3	0.2
Commercial	594.0	23.7
Retail and Services	339.2	13.5
Office	186.5	7.4
Studios	68.3	2.7
Oil Field	68.0	2.7
Civic and Institutional	239.2	9.5
Parks, Recreation, Cemeteries, Open Space	153.6	6.1

Table 3-8 (continued)
Existing Land Use Summary (Inventory dated 2020)

Land Use	Acres	% of City
Cemetery	0.1	0.0
Parks, Recreation, Open Space	153.5	6.1
Industrial	120.2	4.8
Waterway	74.6	3.0
Vacant, Utilities, Transportation	20.6	0.8
Vacant	15.6	0.6
Utilities, Transportation	5.0	0.2
Mixed Use	4.7	0.2
Total	2,508.6	100.0

Source: City of Culver City, *Land Use and Community Design Existing Conditions Report*, October 2020.

The City has 15 distinct neighborhoods including: Carlson Park, Blair Hills, Blanco/Culver Crest, Clarkdale, Culver/West, Downtown, Fox Hills, Jefferson, Lucerne/Higuera, McLaughlin, McManus, Park East, Park West, Studio Village, Sunkist Park, and Washington Culver.

3.5 CULVER CITY DEVELOPMENT TRENDS AND FUTURE DEVELOPMENT

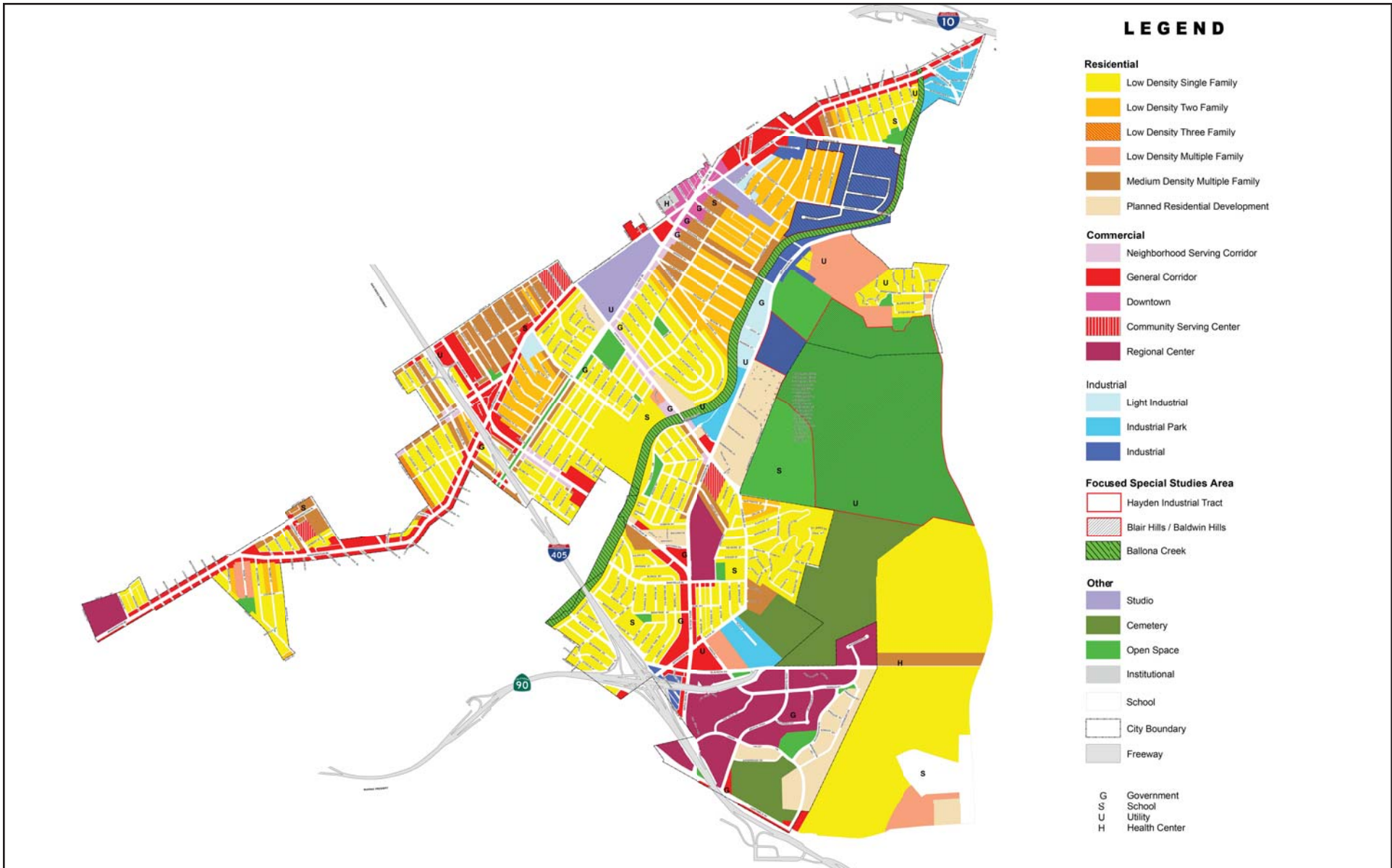
Since the previous iteration of the MJHMP, population patterns have not substantially changed within the planning area and therefore vulnerability has not substantially changed as associated with drought hazards. The Culver City population remains stable at approximately 40,000 individuals, as previously identified in the 2017 MJHMP. Similarly, CCUSD enrollment remains stable at approximately 7,000 students. The City likely experienced this lack of growth due to the COVID-19 pandemic during 2020 – 2022, where major development significantly slowed. No major changes in land use occurred while the previous 2017 MJHMP was active, therefore risk and vulnerability associated with the majority of hazards listed in this MJHMP update remains similar.

The Culver City General Plan is a key guide for future land use and development. At the time of this writing, the City is in the process of a comprehensive General Plan Update for projected growth through 2045. Future growth guidelines are also included in the 2021 – 2029 Housing Element, updated in 2022. The Regional Housing Needs Assessment (RHNA) quantifies the anticipated need for housing within each jurisdiction for the period from October 2021 to October 2029. The total housing growth need for the City during the 2021 – 2029 planning period is 3,341 units. This total is distributed by income category as shown in [Table 3-9, *Culver City RHNA Allocation*](#).

Table 3-9
Culver City RHNA Allocation

Income Level	Units	Percent
Very Low	1,108	33.0%
Low	604	18.0%
Moderate	560	17.0%
Above Moderate	1,069	32.0%
TOTAL	3,341	100.0%

Source: City of Culver City, *General Plan 2045 – Housing Element Update 2021 – 2029*, October 2021.



Source: City of Culver City, Information Technology Department, GIS; August 28, 2007.

NOT TO SCALE

The RHNA represents the minimum number of housing units the City is required to provide “adequate sites” for zoning and is one of the primary threshold criteria to achieve State approval of the Housing Element. Within the Housing Element and 2045 General Plan, the City demonstrated capacity for approximately 8,700 future units through a combination of opportunity sites, accessory dwelling units, and planned residential development. It is noted that RHNA allocations and the City’s capacity identification represents a planning target and is not a building quota. At the time of the Housing Element preparation, there were a total of 2,061 units in the approved, entitled, or proposed phase of development, listed below:

- Plan Check: 3725 Robertson (12 units), United Methodist – 4464 Sepulveda (95 units).
- Entitled: Jackson Condos – 4051 and 4055 Jackson (95 units).
- Proposed: Triangle Site – 12717 Washington (104 units), 11111 Jefferson (230 units), Community Garden – 10808-10860 Culver Boulevard (6 units), 7th Day Adventist – 11828 Washington (12 units).
- Pipeline: Virginia Lot Modular – 10555 (24 units), Venice Lot (12 units), Culver Center Regency (1,200 units), Venice/Sepulveda (347 units), 5915 Blackwelder (10 units)

To accommodate the RHNA requirements, several housing sites were identified distributed throughout the City. The majority of sites are identified outside of major hazard areas, where possible. The City will continue to ensure proposed projects comply with the latest building and safety requirements, and mitigate environmental impacts to the maximum extent feasible.

While the City is primarily built out, the City is constantly evolving through new and re-development projects. As of May 2023, there are 12 active development projects underway in the City; refer to Table 3-10, *Active Projects*.⁴ The Economic Development Department is partnering with multiple developers to bring a number of economic development projects to the City; refer to Table 3-11, *Economic Development Projects*. These projects will help grow creative office uses, promote small business attraction and expansion, expand affordable housing opportunities, and advance transit-oriented development.

**Table 3-10
Active Projects**

No.	Project Name	Description
1	11259 Washington Boulevard – New Office	New 8,958 sq. ft., 3-story office building with 11 parking spaces (vacant land).
2	12300 W. Washington Boulevard – New Office	Construction of a 4-story, 47’3” high, 11,100 sq. ft. office building with ground level parking for a total of 32 spaces.
3	12337-12423 Washington Boulevard – Market Hall	New multi-site (Site A and Site B) commercial development consisting of 26,835 square feet of commercial (artisanal food retail/restaurant) floor area and a three-and-a-half-level parking structure containing a total of 184 parking spaces, and a 20 stall surface parking lot.
4	3800 Sepulveda Boulevard – Cannabis Retailer	Beyond Hello Cannabis Retailer – Construction of a single story, 3,824 sq. ft. cannabis retail building with 11 surface parking spaces.
5	3434 Wesley Street – Mixed-Use Project	New 15-unit mixed-use project with 14, 237 sq. ft. of office/gallery floor area.
6	3814 Lenawee Avenue – Lenawee-Culver Place	New 8 single family dwelling units and 95 unit, 110 bed, assisted living and memory care.
7	4055 Jackson Avenue – Jackson Condos	New 9 unit condominium development with subterranean parking.
8	4464 Sepulveda Boulevard – SB 35 Mixed-Use Project	A new 1.41 acre site, 6-story residential structure with 95 rental units affordable to low-income households with 127 parking spaces (nine level of at grade parking, and one level of subterranean parking). A 6,730 sq. ft. religious facility building. A 7,200 sq. ft. pre-school building.

⁴ City of Culver City, *Active Projects*, <https://www.culvercity.org/Active-Projects>, accessed May 30, 2023.

**Table 3-10 (continued)
Active Projects**

No.	Project Name	Description
9	5861 – 63 Washington Boulevard – Office and Retail Building	Construction of a 3-story, 47'3" high, 16,900 sq. ft. office and retail building with one level of subterranean parking and ground level parking for a total of 43 spaces.
10	8511 Warner Drive – Warner Parking Structure	Five level parking structure with retail/restaurant. 51,520 sq. ft. of retail/restaurant uses. Parking structure is 307,522 sq. ft.
11	8631 – 8635 Hayden Place – Creative Office Space	Construction of a 4-story, 244,000 sq. ft. creative office building with 3 subterranean levels to provide 752 parking spaces.
12	9925 Jefferson Boulevard – Creative Office Building	Demolition of existing commercial and warehouse structures and construction of a new 3-story, 43' high, 51,178 sq. ft. creative office building.
Sources: City of Culver City, <i>Active Projects</i> , https://www.culvercity.org/Active-Projects?dlv_CC%20CL%20Active%20Projects=(pageindex=2) , accessed May 30, 2023.		

**Table 3-11
Economic Development Projects**

No.	Project Name	Description
1	Culver Public Market Hall	The project is a 1.6 acre project located on the two northernly corners of Washington Boulevard at Centinela Avenue. It will be a public market featuring artisanal vendors under one roof to sell their products such as specialty cheeses and charcuterie, a bakery, chocolatier and related confections, wine, locally grown produce, specialty coffee, flowers, organic meats, and other high-quality ingredients.
2	Ivy Station	Lowe Enterprises Real Estate Group is developing a 5.52 acre Transit Oriented Development in the Culver City Transit Oriented Development District. The \$300 million project provides residential, office, retail, restaurant, and a boutique hotel with a large central open space.
3	Media Park Revitalization and Conceptual Plan Development	The City of Culver City, in partnership with the City of Los Angeles, is developing a conceptual plan to revitalize Media Park, which is located at the corner of Culver and Venice Boulevards. Community Survey in progress.
4	West Washington (AIP) Streetscape Medians	The West Washington Area Improvement Program was created to promote revitalization, encourage reinvestment and eliminate blight along West Washington Boulevard between Centinela Avenue and the western City boundary.
5	West Washington Mixed Use – The Lucky	The former Baldwin Motel property at 12803/12823 Washington Boulevard will be used to develop a mixed-use project consisting of a ground floor retail component topped by approximately 37 residential apartments (with some affordable housing units) and a full complement of subterranean and ground-level parking.
Source: City of Culver City, <i>Economic Development Projects</i> , https://www.culvercity.org/City-Hall/Departments/Economic-and-Cultural-Development/EconDev-Projects , accessed May 30, 2023.		

While it remains unlikely that all approved, proposed, and pipeline projects listed above will be constructed during the active period of this MJHMP, the City is anticipating population growth to occur within the next five-years. Discussions related to how this could impact risk and vulnerability is discussed on a hazard-by-hazard basis within Section 4.0.

Generally, population growth within the City correlates to enrollment growth for CCUSD, and requires additional staff members to meet increased enrollment needs. At the time of this writing, CCUSD has not proposed capital improvement projects or new facilities to accommodate projected growth within the planning area. CCUSD continues to collect development impact fees for new residential and non-residential development to off-set costs associated with growth in the planning area.

3.5.1 CULVER CITY ECONOMIC DEVELOPMENT IMPLEMENTATION PLAN

In January 2014, the Economic Development Department of the City developed an *Economic Development Implementation Plan* (EDI Plan), which provides a detailed look at the City's economic base, identifies economic issues, and recommends a framework by which informed

business, redevelopment, and economic development decisions can be made. The purpose of the EDI Plan is to survey the City’s strengths and weaknesses, evaluate local market constraints, and provide a strategy going forward to address the EDI Plan findings. The EDI Plan was prepared with significant input from the public, including multiple meetings with members of the business and residential communities. The City’s strengths as identified in the EDI Plan include the high quality public school system within CCUSD, excellent quality of life, a convenient and affordable Westside community, accessible local government staff and elected officials, and a strong jobs-to-housing ratio. The City’s weaknesses include limited parking in many areas, congested traffic, lack of public transportation connections in all areas of the City, lack of walkability and high-speed fiber optics, lack of City branding and marketing, poorly defined commercial areas, lack of public improvements and maintenance in most commercial areas, and underdeveloped commercial areas with poor tenant diversity. In addition, the EDI Plan analyzes designated commercial districts to determine opportunities and challenges presented by each district. While the EDI Plan provides a road map, it is intended to be a living, working document; one that will be drawn upon frequently to refresh and remind all stakeholders of the desired direction in which to move the City.

3.6 INFRASTRUCTURE SYSTEMS

Infrastructure systems within the City, such as roadways, water and wastewater facilities, electricity, and natural gas, provide vital community and individual functions. These facilities and distribution systems are primarily owned, operated, and maintained by other agencies. The ability for infrastructure systems to remain operational during disasters and emergencies will contribute to the City’s ability to withstand or recover sooner from catastrophes.

3.6.1 TRANSPORTATION

Regional access to the City is provided via SR-90 and I-405. SR-90 ends in the southeastern portion of the City in a west-east direction while I-405 passes through the City in a southeast to southwest direction. The I-10 follows along the northern City boundary, and also provides ingress and egress to Culver City. Major arterial roadways providing the City include Culver Boulevard and Jefferson Boulevard, as well as Venice Boulevard lying along the northern boundary of the City. The Los Angeles County Metropolitan Transportation Authority (Metro) operates the Expo or “E” Line, a light rail line through the City along National Boulevard. Inspection and maintenance of the City’s transportation facilities are critical to ensuring their protection against disasters, such as earthquakes.

3.6.2 WATER AND WASTEWATER

Culver City is served by two major water providers: the Los Angeles Department of Water and Power (LADWP) and Golden State Water Company (GSWC). GSWC and LADWP receive water from the West Basin Municipal Water District (WBMWD), which purchases water assets from the Metropolitan Water District of Southern California. The WBMWD water supplies are the primary source of water to meet the GSWC City service area demands.⁵ GSWC also has access to groundwater from the Santa Monica Groundwater Basin, though the GSWC Culver City Service Area has not relied upon groundwater to serve customers over the last few years. Primary sources of water for LADWP supplies are the Los Angeles Aqueducts, local groundwater such as the San Fernando Basin, the State Water Project, and the Colorado River Aqueduct.⁶ As many water sources for the City originate outside of the LADWP or GSWC service area, the City may be

⁵ Golden State Water Company, *Culver City Service Area 2020 Urban Water Management Plan*, June 15, 2020.

⁶ Los Angeles Department of Water and Power, *Urban Water Management Plan*, 2020.

vulnerable to natural hazards outside of a jurisdiction. Droughts occurring in other parts of California may limit water supplies to the City, or physical damage to water conveyance systems outside of the planning area could interfere with the ability to provide water within the City.

The City Public Works Department is responsible for sewer management and maintenance, including stormwater. Critical wastewater facilities, including pump stations, are included on the Critical Facilities list, below.

3.6.3 ELECTRICITY

Southern California Edison and the Los Angeles Department of Water and Power provide electricity to the City. Electricity is distributed from power plants through power lines and substations. Substations within the City include the following: MWD Venice Substation, Sony Substation, Culver Substation, and the Movie Substation. Power lines within the City include both overhead and underground lines. Damage to substations or the larger distribution system outside of the City could result in power loss to the City. More localized power losses can also occur in the event underground transmission lines are damaged.

3.6.4 NATURAL GAS

Southern California Gas (SoCal Gas) provides gas service to Culver City. There is one major gas transmission line that traverses the City, generally located in the vicinity of the intersection of Inglewood Boulevard and Washington Boulevard. Damage to these facilities or other transmission lines in the surrounding area could interfere with natural gas service in the City and the rest of Los Angeles County.

3.7 CCUSD FACILITY IMPROVEMENTS

The CCUSD Facilities Master Plan summarizes district, school, and site facility needs in order to determine the most immediate priorities. The Facilities Master Plan provides information and background for targeted, collaborative discussions and ultimately, board and community decision making. The five master plan guiding principles for the Facilities Master Plan include: Inclusivity, Equity, Student Centered Accountability, Partnerships, and Innovation. The probable cost for all improvements listed in the plan for are estimated at \$949 million. Specific site plans are identified for each CCUSD school, along with improvements located at non-academic facilities (CCUSD Maintenance, Operations and Transportation Departments, District Office, and Staff Housing). Hazard mitigation, sustainability and resilience are built into the Facilities Master Plan, and include plans for reducing water use and greenhouse gas emissions.

3.8 CRITICAL FACILITIES

3.8.1 CITY OF CULVER CITY CRITICAL FACILITIES

The MJHMP Planning Team identified 51 critical facilities for incorporation in the hazard vulnerability/risk analysis; refer to [Table 3-12, *Culver City Critical Facilities*](#), and [Exhibit 3-5, *Culver City & CCUSD Critical Facilities*](#), for the facilities' locations within the City. These facilities include City Hall, a police station, fire stations, a fire training building, a public works yard, a sanitation transfer station, a transportation facility, several parks, and various sewage pump stations that provide important services to the community. Damage to these facilities caused by a hazard event has the potential to impair response and recovery from the event and may lead to disruption of services.

The MJHMP Planning Team identified each facility’s potential loss value, comprised of replacement and contents for each facility. If a facility is completely destroyed in a hazard event, the replacement and contents values indicate the cost to replace the facility. Typically, the cost to repair a damaged facility will be less than the replacement value. While the replacement and contents values are used throughout this Plan to estimate potential losses, it is noted that the actual cost to recover from a hazard event will depend on the type and magnitude of the event.

3.8.2 CULVER CITY UNIFIED SCHOOL DISTRICT CRITICAL FACILITIES

The CCUSD Planning Team identified 16 critical facilities associated with the district for incorporation in the hazard vulnerability/risk analysis; refer to Table 3-13, *Culver City Unified School District Critical Facilities*, and Exhibit 3-5, *Culver City & CCUSD Critical Facilities*, for their locations within the City. These facilities comprise the CCUSD district office, a high school, a middle school, elementary schools, and other schools and facilities that operate within CCUSD. Two private schools (Echo Horizon School and Wildwood School) operate under long-term leases at CCUSD owned facilities. As both Echo Horizon School and Wildwood Schools are private, services and programming is not coordinated through CCUSD.

**Table 3-12
Culver City Critical Facilities**

#	Facility Name	Category	Community Lifeline Category
1	City Hall	Government Building	Safety and Security; Communications
2	Police Department	Government Building	Safety and Security; Communications
3	Fire Station No. 1/Emergency Operations Center (EOC)	Government Building	Safety and Security; Communications
4	Fire Station No. 2	Government Building	Safety and Security; Communications
5	Fire Station No. 3	Government Building	Safety and Security; Communications
6	Fire Training Building	Government Building	Safety and Security; Hazardous Material
7	Public Works Yard	Government Building	Safety and Security; Hazardous Material
8	Sanitation Transfer and Recycling Station	Government Building	Safety and Security; Hazardous Material
9	Transportation Facility/Department	Government Building	Transportation; Safety and Security
10	Southern California Hospital at Culver City	Hospital	Health and Medical
11	Culver - Palms YMCA	Non-Profit/NGO	Food, Water, Shelter
12	Marycrest Manor - Skilled Nursing Facility (Culver Crest)	Non-Profit/NGO	Food, Water, Shelter
13	Veterans Park & Memorial Building	Parks and Recreation	Safety and Security; Food, Water, Shelter
14	Syd Kronenthal Park	Parks and Recreation	Safety and Security
15	Blanco Park	Parks and Recreation	Safety and Security
16	Culver West Alexander Park	Parks and Recreation	Safety and Security

Table 3-12 (continued)
Culver City Critical Facilities

#	Facility Name	Category	Community Lifeline Category
17	Ivy Substation & Media Park	Parks and Recreation	Safety and Security
18	El Marino Park	Parks and Recreation	Safety and Security
19	Blair Hills Park	Parks and Recreation	Safety and Security
20	Dr. Paul Carlson Park	Parks and Recreation	Safety and Security
21	Culver City Park (Botts Field)	Parks and Recreation	Safety and Security
22	Fox Hills Park	Parks and Recreation	Safety and Security
23	Lindberg Park	Parks and Recreation	Safety and Security
24	Tellefson Park	Parks and Recreation	Safety and Security
25	Senior Center	Parks and Recreation	Safety and Security; Food, Water, Shelter
26	Municipal Plunge	Parks and Recreation	Safety and Security; Food, Water, Shelter
27	Culver City Community and Social/Teen Center	Parks and Recreation	Safety and Security; Food, Water, Shelter
28	Combs Parkette	Parks and Recreation	Safety and Security
29	Culver City Skate Park	Parks and Recreation	Safety and Security
30	Fox Hills Parkette	Parks and Recreation	Safety and Security
31	The Boneyard Dog Park	Parks and Recreation	Safety and Security
32	Culver City Light Rail Station	Parks and Recreation	Safety and Security
33	MWD Venice Substation	Utility - Electric	Energy
34	Sony Substation	Utility - Electric	Energy
25	Culver Substation	Utility - Electric	Energy
36	Movie Substation	Utility - Electric	Energy
37	Braddock Sewer Pump Station	Utility - Wastewater	Safety and Security; Hazardous Material
38	Bristol Sewer Pump Station	Utility - Wastewater	Safety and Security; Hazardous Material
39	Hayden Sewer Pump Station	Utility - Wastewater	Safety and Security; Hazardous Material
40	Culver Blvd Lift Station	Utility - Wastewater	Safety and Security; Hazardous Material
41	Jasmine Sewer Pump Station	Utility - Wastewater	Safety and Security; Hazardous Material
42	Mesmer Sewer Pump Station	Utility - Wastewater	Safety and Security; Hazardous Material
43	National Boulevard Bridge over Ballona Creek	Transportation - Bridge	Transportation
44	Higuera Street Bridge over Ballona Creek	Transportation - Bridge	Transportation
45	Duquesne Avenue Bridge over Ballona Creek	Transportation - Bridge	Transportation
46	Jackson Avenue Pedestrian Bridge over Ballona Creek	Transportation - Bridge	Transportation
47	Overland Avenue Bridge over Ballona Creek	Transportation - Bridge	Transportation

**Table 3-12 (continued)
Culver City Critical Facilities**

#	Facility Name	Category	Community Lifeline Category
48	Ocean Drive Pedestrian Bridge over Ballona Creek	Transportation - Bridge	Transportation
49	Sepulveda Boulevard Bridge over Ballona Creek	Transportation - Bridge	Transportation
50	Sawtelle Boulevard Bridge over Ballona Creek	Transportation - Bridge	Transportation
51	I-405 Freeway Bridge over Ballona Creek	Transportation - Bridge	Transportation

**Table 3-13
Culver City Unified School District Critical Facilities**

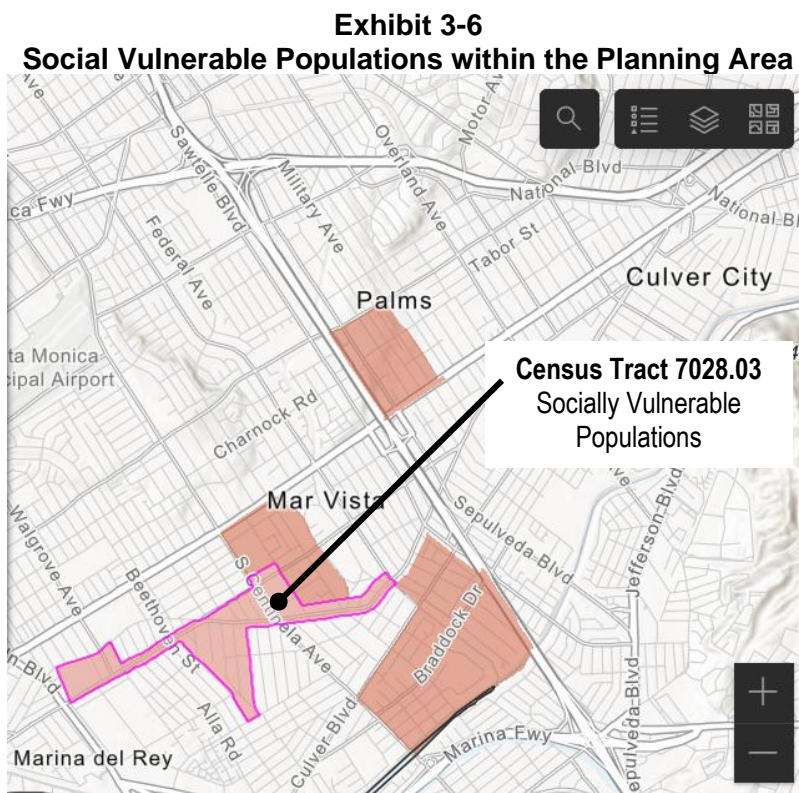
#	Facility Name	Category	Community Lifeline Category
1	School District Office	Public School	Safety and Security; Communications
2	Culver City High School	Public School	Safety and Security
3	Culver Park Continuation High School	Public School	Safety and Security
4	Culver City Middle School	Public School	Safety and Security
5	El Marino Language School	Public School	Safety and Security
6	El Rincon Elementary	Public School	Safety and Security
7	Farragut Elementary	Public School	Safety and Security
8	La Ballona Elementary	Public School	Safety and Security
9	Linwood E. Howe Elementary	Public School	Safety and Security
10	Office of Child Development	Public School	Safety and Security
11	Adult School	Public School	Safety and Security
12	Maintenance Facilities	Public School	Safety and Security
13	Natatorium Property	Public School	Safety and Security
14	Warehouse/District IMC	Public School	Safety and Security
15	Echo Horizon School (leased)	Public School	Safety and Security
16	Wildwood School (leased)	Public School	Safety and Security

3.9 SOCIALLY VULNERABLE POPULATIONS

Identification and integration of Socially Vulnerable Populations (SVP) into the hazard mitigation planning process is a new addition from Cal OES and FEMA, as required by the recent Local Mitigation Planning Policy Update effective April 2023. The purpose of this new MJHMP section is to identify vulnerable populations within the planning area, along with identifying characteristics that can make individuals more vulnerable to natural and human-caused hazards. Socially vulnerable populations within the City and CCUSD are further described, below.

3.9.1 CULVER CITY SOCIALLY VULNERABLE POPULATIONS

Cal OES maintains the Hazard Exposure and Social Vulnerability Map to determine eligibility for specific grant programs. This data set evaluates census tracts in California based on hazard exposures and social vulnerability indices. Hazard exposure is based on Cal OES analysis of datasets related to wildfire, flood, earthquake, drought, and heat wave frequencies. Social vulnerability is based on the 2018 Center for Disease Control and Prevention (CDC) Social Vulnerability Index. Within the planning area, one census tract (Census Tract 7028.03) is identified as a socially vulnerable community or SVP. This census tract is illustrated in Exhibit 3-6, Socially Vulnerable Populations within the Planning Area, below.



Source: California Governor's Office of Emergency Services, Hazard Exposure and Social Vulnerability Map, <https://www.arcgis.com/apps/dashboards/3c78aea361be4ea8a21b22b30e613d6e>, accessed August 21, 2023.

Census Tract 7028.03 consists of the western-most portion of the City, and generally follows the route of West Washington Boulevard toward the west of I-405. Land uses are similar to those in the remainder of the City, and consist of single-family residential, multi-family residential and neighborhood/regional commercial uses. Two designated critical facilities are located within Census Tract 7028.03, including City-owned Culver West Park (City Critical Facility #21) and CCUSD owned Wildwood School (CCUSD Critical Facility #16). This census tract is surrounded

entirely by the City of Los Angeles. The Cal OES Hazard Exposure and Social Vulnerability Map reports specific percentile scores regarding hazard exposure and SVPs as outlined in Table 3-14, Cal OES Hazard Exposure and Social Vulnerability Map – Census Tract 7028.03, below.

**Table 3-14
Cal OES Hazard Exposure and Social Vulnerability Map – Census Tract 7028.03**

Category	Percentile Score
Fire	0.15
Flood	0.83
Drought	0.95
Heat	0.25
Earthquake	0.76
Total Hazard	0.77
Social Vulnerability Index	0.77
Source: California Governor’s Office of Emergency Services, <i>Hazard Exposure and Social Vulnerability Map</i> , https://www.arcgis.com/apps/dashboards/3c78aea361be4ea8a21b22b30e613d6e , accessed August 21, 2023.	

Census Tract 7028.03 is reported to have the highest vulnerability to drought, flood, and earthquakes. Vulnerability to these specific hazards is generally considered similar to the rest of the planning area. Previous droughts and earthquakes are known to have affected Census Tract 7028.03, and are discussed in further detail within Section 4.0, Hazards Assessment. The MJHMP Planning Team is unaware of any unique flood hazards within Census Tract 7028.03 that would result in a percentile score of 0.83. This census tract is set back from major regional flood control channels (Ballona Creek) and has not experienced significant flooding incidents in recent history. Further, the 100-Year Urban Flood Study conducted as part of 2021 Stormwater Master Plan Update confirms flood depths within Census Tract 7028.03 generally between 0 and 1 feet. The most significant flooding mapped within the planning area are located outside of the census tract, with depths in excess of 6 feet.

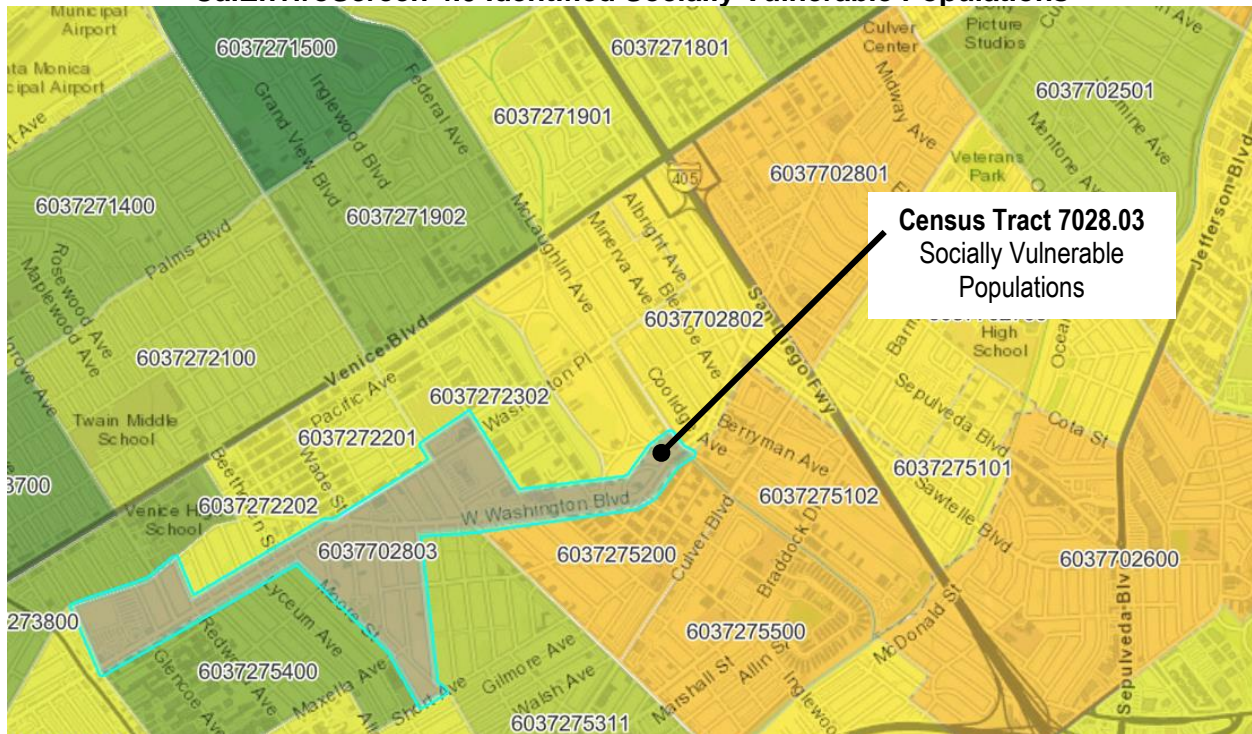
The Social Vulnerability Index is reported as 0.77, indicating a concentration of SVP within this specific census tract. As the Cal OES Hazard Exposure and Social Vulnerability Map reports out data from the CDC Social Vulnerability Index, further investigation was made into this data to understand factors contributing to the concentration of SVP. To supplement Cal OES and the CDC data, additional research regarding SVPs was conducted using CalEnviroScreen 4.0.

CalEnviroScreen 4.0 is a geospatial mapping tool with socioeconomic, environmental, and health data, developed by the Office of Environmental Health Hazards Assessment (OEHHA). This tool provides statewide data in percentile scores to compare communities disproportionately impacted by, or vulnerable to, environmental pollution and contaminants. CalEnviroScreen 4.0 is the latest data reporting at the time of this writing and uses 21 indicators covering pollution sources and drivers of vulnerability by census tract, to measure overall cumulative burdens affecting California communities. Cumulative impacts refer to exposures, public health or environmental effects from the combined emissions and discharges, in a geographic area; exposures include environmental pollution from all sources, whether single or multi-media, routinely, accidentally, or otherwise released. Impacts will consider sensitive populations and socioeconomic factors, where applicable and to the extent data are available.

State guidance from OEHHA and California Environmental Protection Agency (CalEPA) indicate that census tracts with percentile scores above 75 are considered disproportionately burdened or formally labeled as Disadvantaged Communities (DACs). Census Tract 7028.03 is listed by

CalEnviroScreen 4.0 with an overall percentile score of 81, and thus formally meets the threshold for designation as a DAC. Similar to the Cal OES and CDC data, this is the only census tract within the City with identified SVPs. Refer to Exhibit 3-7, CalEnviroScreen 4.0 Identified Socially Vulnerable Populations, below.

Exhibit 3-7
CalEnviroScreen 4.0 Identified Socially Vulnerable Populations



Source: California OEHHA, CalEnviroScreen 4.0 Results Map, <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40>, accessed August 21, 2023.

As Census Tract 7028.03 is formally designated as a DAC, this MJHMP assumes the 3,063 residents within this census tract constitute the City's SVP. In addition to the composite score, CalEnviroScreen 4.0 includes data regarding both pollution burden and population characteristics to provide background data regarding disproportionate burdens within the DAC. Refer to Table 3-15, Pollution Burden CalEnviroScreen 4.0 Data – Census Tract 7028.03, and Table 3-16, Population Characteristics CalEnviroScreen 4.0 Data – Census Tract 7028.03, for further detail, below.

Census Tract 7028.03 reports a pollution burden percentile score of 92, significantly higher than the population characteristics percentile score of 61. The most significant concern includes impaired waters (percentile score 95), lead from housing (percentile score 92) and hazardous waste (percentile score 83). While the presence of pollution burdens within the DAC are noted, the scope of the MJHMP has limited ability to address or mitigate specific pollution concerns or impacts. It is noted that the City is in the process of preparing a Health and Environmental Justice Element as part of the comprehensive General Plan Update process, where such concerns would be identified and addressed at the policy level.

The highest scoring percentile under population characteristics is listed as linguistic isolation with a percentile score of 79. Other population characteristics percentiles did not meet the threshold of 75 or higher. These percentile scores listed above provided additional context in updating the

mitigation action matrix within Section 5.0, *Mitigation Actions*, and assisted in establishing a priority level and timeframe for new actions.

**Table 3-15
Pollution Burden CalEnviroScreen 4.0 Data – Census Tract 7028.03**

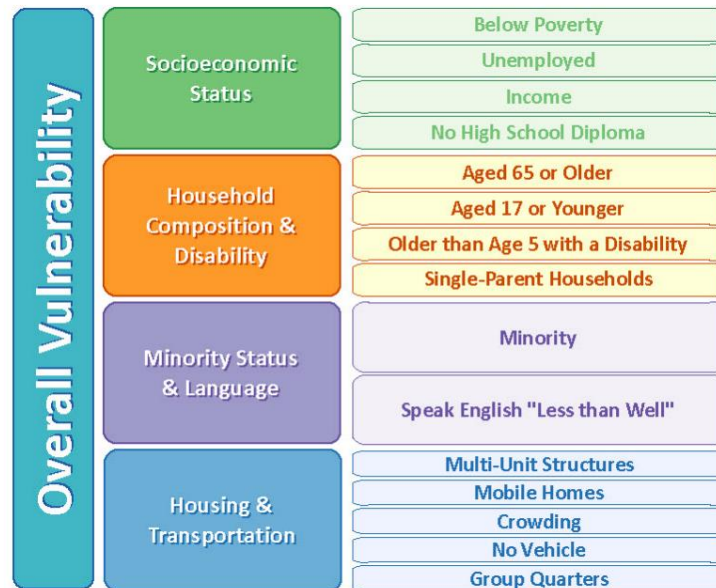
Category	Percentile Score
Pollution Burden Percentile	92
Exposures	
Ozone	43
Particulate Matter 2.5	64
Diesel Particulate Matter	47
Toxic Releases	80
Traffic	54
Pesticides	0
Drinking Water	53
Lead from Housing	92
Environmental Effects	
Cleanup Sites	61
Groundwater Threats	81
Hazardous Waste	83
Impaired Waters	95
Solid Waste	56
Source: California OEHHA, <i>CalEnviroScreen 4.0 Results Map</i> , https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40 , accessed August 21, 2023.	

**Table 3-16
Population Characteristics CalEnviroScreen 4.0 Data – Census Tract 7028.03**

Category	Percentile Score
Population Characteristics	61
Sensitive Populations	
Asthma	32
Low Birth Weight	65
Cardiovascular Disease	45
Socioeconomic Factors	
Education	62
Linguistic Isolation	79
Poverty	70
Unemployment	61
Housing Burden	61
Source: California OEHHA, <i>CalEnviroScreen 4.0 Results Map</i> , https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40 , accessed August 21, 2023.	

For the purposes of the MJHMP, the population within the Disadvantaged Community - Census Tract 7028.03 is established as a formal Socially Vulnerable Population (SVP) based on the data provided by Cal OES, the CDC and CalEnviroScreen 4.0. However, it is acknowledged that certain characteristics can make individuals more vulnerable or “high-risk” in specific natural or human-caused hazard incidents. According to the CDC, these characteristics include but are not limited to the factors outlined in Exhibit 3-8, *Social Vulnerability Index Themes and Social Factors*, below.

**Exhibit 3-8
Social Vulnerability Index Themes and Social Factors**



Source: Center for Disease Control and Prevention – National Center for Environmental Health, *Planning for an Emergency: Strategies for Identifying and Engaging At-Risk Groups*, published 2015.

The CDC Social Vulnerability Index (as reported in the Cal OES Hazard Exposure and Social Vulnerability Map) tracks these data markers to report congregated populations that indicate a high social risk. On an individual level, residents outside of the DAC may meet one or more of the characteristics listed above that enhance vulnerability within specific hazard circumstances. While this MJHMP only identifies the SVP Community as the formally identified socially vulnerable population within the planning area, additional consideration is given at the qualitative data level regarding characteristics that make individuals more socially vulnerable or “high-risk” during hazard incidents. This is integrated into the hazard profiles within [Section 4](#) and the mitigation action matrix within [Section 5](#).

3.9.2 CCUSD SOCIALLY VULNERABLE POPULATIONS

As previously discussed in [Section 2.0](#), there is a substantial overlap between the constituency between the City and CCUSD. As CCUSD shares jurisdictional boundaries with the City of Culver City, students and families attending public school at CCUSD must also reside within the City. Therefore, CCUSD students that live within the identified DAC (Census Tract 7028.03) would also be considered part of the formally designated SVP. In addition, there is one CCUSD facility located within the DAC, Wildwood School. As noted in [Section 3.8.2](#), the Wildwood School is a private K through 12th grade educational facility that operates under a long-term lease at this CCUSD facility. As Wildwood School is a private facility, services are not coordinated or distributed through CCUSD. No other CCUSD critical facilities are located within the DAC.

Similar to findings from Culver City above, it is acknowledged that certain characteristics can make individuals outside of the DAC more vulnerable or “high-risk” in specific natural or human-caused hazard incidents. The California Department of Education – School Dashboard defines socioeconomically disadvantaged students as students who are eligible for free or reduced price meals; or, have parents/guardians who did not receive a high school diploma. For the 2021 – 2022 school year, 2,626 CCUSD students or 31.9 percent of the CCUSD student population are reported as socioeconomically disadvantaged. A breakdown of socioeconomic students by

CCUSD is included in Table 3-17, below. CCUSD facilities not listed include properties without regularly or full-time enrolled students on property, such as the Office of Child Development (Critical Facility #10), Adult School (Critical Facility #11), Maintenance Facilities (Critical Facility #12) and Warehouse/District IMC (Critical Facility #14). In addition, Echo Horizon School and Wildwood School (Critical Facilities #15 and #16) operate as private schools leasing CCUSD facilities; as private schools, data is not presented in Table 3-17 below.

**Table 3-17
CCUSD Socioeconomically Disadvantaged Students by Public School**

School	Total Enrollment	Socioeconomically Disadvantaged	Percent Socioeconomically Disadvantaged of Total Enrollment
Culver City High School (#2)	2,228	1,000	44.9%
Culver City Middle School (#4)	1,586	684	43.1%
El Marino Language School (#5)	795	144	18.1%
El Rincon Elementary (#6)	590	205	34.7%
Farragut Elementary (#7)	553	92	16.6%
La Ballona Elementary (#8)	556	317	57.0%
Linwood E. Howe Elementary (#9)	556	184	33.1%

Source: 2021 – 2022 School Accountability Report Card (Published during the 2022 – 2023 School Year), *Culver City Unified School District*, <https://www.caschooldashboard.org/reports/1964444000000/2019>, accessed March 5, 2024.

The highest concentration of socioeconomically disadvantaged students within the CCUSD public schools include La Ballona Elementary, followed by Culver City High School and Culver City Middle School. Culver City Middle and High School are funnels for all five local elementary schools, which explains the relatively consistent distribution between these student populations.

Outside of the student population, CCUSD employs approximately 450 staff members at Critical Facilities #1 through #14, including teachers, administrators, and other facilities/support staff. Staff members may also have characteristics as identified in Exhibit 3-8 that would enhance social vulnerability.

SECTION 4.0: HAZARDS ASSESSMENT

4.1 HAZARD IDENTIFICATION AND PRIORITIZATION

HAZARD IDENTIFICATION

The first step in developing the risk assessment is identifying relevant hazards. The MJHMP Planning Team reviewed the previously prepared hazard mitigation plan for the City and CCUSD, discussed the County of Los Angeles All-Hazard Mitigation Plan (2020) and other hazard mitigation plans from neighboring jurisdictions, as well as other relevant information to determine the extent of natural hazards with potential to affect the City; refer to Table 2-5, Existing Plans, Studies, Reports, and Other Technical Data/Information. A discussion of potential hazards during the first MJHMP Planning Team meeting resulted in the identification of the natural hazards that pose a potential risk to the City and CCUSD. Table 4-1, Culver City and CCUSD Hazard Identification, summarizes the Planning Team’s discussion of each of the natural hazards and indicates those identified for inclusion in the MJHMP.

**Table 4-1
Culver City and CCUSD Hazard Identification**

List of Hazards	Identified in Previous 2017 Hazard Mitigation Plan	Include in MJHMP	Discussion Summary
Avalanche	No	No	Not applicable to the City as snowfall does not regularly occur within the jurisdiction, and there is no historical record of an avalanche in the planning area.
Climate Change	Yes	Yes	Climate change is closely correlated with several hazards profiled in the MJHMP, and may exacerbate hazards that affect the City. Therefore, climate change is discussed within each hazard profile.
Coastal Erosion	No	No	Not applicable; the City is located inland in Los Angeles County, and there is no coastline within the jurisdiction. Therefore, the City does not experience impacts due to coastal erosion.
Coastal Storm	No	No	Not applicable; the City is located inland in Los Angeles County, and there is no coastline within the jurisdiction. Therefore, the City does not experience impacts due to coastal storms.
Dam Failure	No	Yes	There are four dams with an inundation zone mapped in Culver City, all categorized “extremely high” hazard dams. Critical infrastructure is located within mapped inundation zones. None of these dams are located within the City.
Disease/Pest Management	No	No	The City has experienced minor issues with infestation of trees in localized areas, but determined that concerns were not significant enough for incorporation into the MJHMP. Pandemics are determined to be a concern for the City, and are profiled under Human-Caused Hazards.

Table 4-1 (continued)
Culver City and CCUSD Hazard Identification

List of Hazards	Identified in Previous 2017 Hazard Mitigation Plan	Include in MJHMP	Discussion Summary
Drought	Yes	Yes	The City water portfolio includes local groundwater and imported surface water supply, both of which are susceptible to drought. The City has experienced several historical droughts, and thus has included this hazard in the MJHMP.
Expansive Soils	No	No	Expansive soils have not been identified within the City. As there is no historical risk of expansive soils hazards in the City, and because the Uniform Building Code effectively mitigates impacts that would occur if expansive soils were present, this MJHMP does not include expansive soils.
Extreme Heat	Yes	Yes	The City experiences extreme heat events during the summer months; there are several extreme heat days per year. Extreme heat is discussed in the Severe Weather profile.
Fault Rupture	Yes	Yes	Active and potentially active faults are known within the vicinity of the City. A portion of the City is located within an Alquist-Priolo Fault Zone. Fault rupture is discussed under the Seismic Hazards profile.
Flood	Yes	Yes	Portions of the City are located within FEMA mapped floodplains and have experienced historic flooding. Localized flooding can also occur during severe rainstorms.
Geological Hazards	Yes	No	The City is located in an area of geological hazards; however, the MJHMP Planning Team has identified more specific hazards relevant to the planning area related to seismic hazards. Thus, geologic hazards are no longer identified in the MJHMP.
Hailstorm	No	No	Not applicable; significant hailstorms rarely occur within the City.
Hazardous Materials	No	Yes	Hazardous materials are generated, used, stored, and transported within the City. Hazardous materials (including intentional or accidental releases) could compromise City water supplies, health, and infrastructure. This topical area is included under the Human-Caused Hazards profile.
Human-Caused Hazards	No	Yes	Hazardous materials release, terrorism/active shooter, civil unrest, and pandemics are potential human-caused hazards within the City.
Hurricane	No	No	Not applicable; hurricanes do not occur within the City.
Land Subsidence	No	No	The City does not have major or historical occurrences of land subsidence.
Landslide/Mudflow	Yes	Yes	The City includes mapped landslide hazard zones. Additionally, steep open space areas are at risk to mudflow incidents following heavy rains or wildfire events.

**Table 4-1 (continued)
Culver City and CCUSD Hazard Identification**

List of Hazards	Identified in Previous 2017 Hazard Mitigation Plan	Include in MJHMP	Discussion Summary
Lightning	No	No	Not applicable; significant lightening events are rare in the City.
Liquefaction	Yes	Yes	The City is located within mapped liquefaction hazard zones, and several structures are susceptible. Liquefaction is included under the Seismic Hazards profile.
Sea Level Rise	No	No	Not applicable; The City is located inland in Los Angeles County, and there is no coastline within the jurisdiction. Therefore, the City does not experience impacts due to sea level rise.
Seismic Hazards	Yes	Yes	The City is located within a seismically active region in southern California and is susceptible to fault rupture, ground shaking, landslides, and liquefaction. For organizational purposes, these four hazards are profiled together under Seismic Hazards.
Severe Winter Storm	No	No	The climate within southern California does not result in severe winter storms such as ice storms, blizzards, or significant snowfall.
Thunderstorm/Heavy Rains	No	Yes	The City experiences heavy rain events that could impact daily life and/or City operations. For purposes of the MJHMP, thunderstorms/heavy rains are profiled under Severe Weather.
Tornado	No	Yes	While rare, tornadoes do occur in California, mostly in the south coastal region. However, tornadoes in the region are less severe than those in other parts of the country, but the frequency of occurrences and density of the Los Angeles urban area makes tornadoes a relevant hazard for the City. Tornadoes are profiled under Severe Weather.
Tsunami	No	No	Not applicable; The City is located inland in Los Angeles County, and there is no coastline within the jurisdiction. Therefore, the City does not experience impacts due to tsunamis.
Volcano	No	No	Not applicable; the City is not located in an active volcano area.
Wildfire	Yes	Yes	A portion of the City and surrounding area is located in a Very High Hazard Severity Zone, and wildfire season regulatory occurs within the City. While wildfire rarely occurs within the City, impacts could be significant.
Wind	No	No	Regular wind does not cause significant damage.
Windstorm	Yes	Yes	The City is prone to severe windstorms (Santa Ana winds) that commonly cause trees to fall or damage associated with falling limbs. Windstorms are evaluated under the Severe Weather profile, and power outages are outlined as a secondary impact.

HAZARD PRIORITIZATION

The MJHMP Planning Team used a Microsoft Excel-based tool to prioritize the identified hazards by assigning each hazard a ranking based on probability of occurrence and potential impact. These rankings were assigned based on a group discussion, knowledge of past occurrences, and familiarity with the City's and CCUSD's vulnerabilities. Four criteria were used to establish priority:

- Probability (likelihood of occurrence)
- Location (size of potentially affected area)
- Maximum Probable Extent (intensity of damage)
- Secondary impacts (severity of impacts to community)

For the purposes of this hazard prioritization exercise, these criteria were evaluated for both Culver City and CCUSD concurrently. A value from one to four was assigned for each criterion, where one is the lowest and four is the highest. The four criteria were then weighted based on the MJHMP Planning Team's opinion of each criterion's importance. To enhance collaboration and discussion regarding hazard rankings, the MJHMP Planning Team participated in a live survey through Mentimeter, allowing each MJHMP Planning Team member to individually report initial thoughts on probability, location, maximum probable extent, and secondary impacts. Rankings were assigned individually based on knowledge of past occurrences and familiarity with both City/CCUSD vulnerabilities. The survey was integrated into the MJHMP Planning Team Meeting #1 PowerPoint presentation, and all attendees filled out the survey questions. Results were averaged to provide a group score per hazard, utilizing the weighted value (recommended by FEMA and confirmed by the MJHMP Planning Team) based on the importance of the criterion; refer to [Table 4-2, Hazard Ranking Methodology](#).

The hazard rankings were multiplied by weighted factors to obtain a score for each criterion. A higher weight was given to the criterion considered more important or significant. For example, the probability of the hazard occurrence received a higher weight than the potential secondary impacts. The scores for location, maximum probable extent (anticipated damage), and secondary impacts for each hazard were added together to determine the total impact score. The total impact score was then multiplied by the overall probability score to determine the final score. The final scores were used to determine the prioritization of each hazard based on the following FEMA recommended scale:

- Low Threat: 0 to 12;
- Medium Threat: 12.1 to 42; and
- High Threat: 42.1 to 64.

**Table 4-2
Hazard Ranking Methodology**

Probability	Importance	2.0	Secondary Impacts	Importance	0.5
Based on estimated likelihood of occurrence from historical data			Based on estimated secondary impacts to community at large		
<i>Probability</i>		<i>Score</i>	<i>Impact</i>		<i>Score</i>
Unlikely (less than 1% probability in next 100 years or has a recurrence interval of greater than every 100 years)			Negligible – no loss of function, downtime, and/or evacuations		1
Somewhat Likely (between 1% and 10% probability in next year or has a recurrence interval of 11 to 100 years)			Limited – minimal loss of function, downtime, and/or evacuations		2
Likely (between 10% and 100% probability in next year or has a recurrence interval of 10 years or less)			Moderate – some loss of function, downtime, and/or evacuations		3
Highly Likely (near 100% probability in next year or happens every year)			High – major loss of function, downtime, and/or evacuations		4
Affected Area	Importance	0.8	Total Score = Probability x Impact, where:		
Based on size of geographical area of community affected by hazard			Probability = (Probability Score x Importance)		
<i>Affected Area</i>		<i>Score</i>	Impact = (Affected Area + Primary Impact + Secondary Impacts), where:		
Isolated		1	Affected Area = Affected Area Score x Importance		
Small		2	Primary Impact = Primary Impact Score x Importance		
Medium		3	Secondary Impacts = Secondary Impacts Score x Importance		
Large		4			
Primary Impact	Importance	0.8	Hazard Planning Consideration		
Based on percentage of damage to typical facility in community			Total Score	Range	Distribution
<i>Impact</i>		<i>Score</i>	Hazard Level		
Negligible – less than 10% damage			0.0	20.0	0
Limited – between 10% and 25% damage			20.1	42.0	6
Critical – between 25% and 50% damage			42.1	64.0	3
Catastrophic – more than 50% damage					
<p>The probability of each hazard is determined by assigning a level, from unlikely to highly likely, based on the likelihood of occurrence from historical data. The total impact value includes the affected area, primary impact, and secondary impact levels of each hazard. Each level's score is reflected in the matrix. The total score for each hazard is the probability score multiplied by its importance factor times the sum of the impact level scores multiplied by their importance factors. Based on this total score, the hazards are separated into three categories based on the hazard level they pose to the communities: High, Medium, and Low.</p>					

The results from the MJHMP Planning Team Meeting #1 survey were compiled and presented during MJHMP Planning Team Meeting #2 for further evaluation and discussion. The team generally agreed with the responses and rankings during the hazard identification and prioritization survey, but brought up Seismic Hazards – Ground Shaking, Seismic Hazards – Liquefaction and Wildfire hazards for further discussion. While Seismic Hazards – Ground Shaking and Seismic Hazards – Liquefaction were initially scored in the “Medium” category however, further discussion with the Planning Team adjusted the hazard planning consideration for both as “High”. Generally, the hazard planning considerations remained the same for natural hazards carried over from the previous 2017 MJHMP, with the exception of Drought (moved from

high to medium) and Seismic Hazards – Fault Rupture (moved from high to medium). Table 4-3, Hazard Rankings, identifies the criterion scores, final scores, and the hazard planning consideration (threat level) for each hazard based on discussions with the MJHMP Planning Team and the prioritization process described above.

**Table 4-3
Hazard Rankings**

Hazard Type ¹	Probability	Impact			Total Score ²	Hazard Planning Consideration ³
		Affected Area	Primary Impact	Secondary Impact		
Dam/Reservoir Failure	1.21	1.44	2.17	2.24	9.17	Low
Drought	2.79	3.50	2.00	2.12	29.35	Medium
Flood	1.84	2.11	2.17	2.59	16.57	Medium
Human Caused Hazards – Hazardous Materials Spill	2.05	2.22	2.28	2.41	18.77	Medium
Human Caused Hazards – Terrorism/Active Shooter	2.37	2.33	2.72	2.59	24.00	Medium
Human Caused Hazards – Civil Disturbance/Civil Unrest	2.42	2.61	2.50	2.71	25.13	Medium
Human Caused Hazards – Pandemic	1.89	3.33	2.33	2.59	21.13	Medium
Seismic Hazards – Landslide/Mudflow	2.33	1.94	2.35	2.56	20.86	Medium
Seismic Hazards – Fault Rupture	2.22	3.00	2.47	3.50	26.10	High ³
Seismic Hazards – Ground Shaking	3.06	3.67	3.06	3.06	40.44	High ³
Seismic Hazards – Liquefaction	2.00	2.17	2.35	2.56	18.64	Medium
Severe Weather – Thunderstorm/Heavy Rains	2.71	3.32	2.35	2.21	29.30	Medium
Severe Weather – Windstorm/Santa Ana Winds/Power Outage	3.35	3.11	2.18	2.21	34.30	Medium
Severe Weather – Extreme Heat	3.06	3.53	2.06	2.00	32.23	Medium
Dam/Reservoir Failure	1.21	1.44	2.17	2.24	9.17	Low
Severe Weather – Tornado	1.24	1.53	1.88	1.64	8.33	Low
Wildfire	2.47	2.05	2.41	2.14	21.72	Medium

1. The MJHMP Planning Team did not rank climate change, due to the interconnected nature with other identified hazards. Climate change is profiled with each identified hazard in Section 4.4, below.

2. Refer to Table 4-2 for the hazard ranking methodology. The total score is based on an equation that provides a weighted value to each category by importance.

3. After reviewing the MJHMP Planning Team survey responses on hazard identification/prioritization, the team further discussed seismic hazards – ground shaking and seismic hazards – liquefaction within the City of Culver City. Original hazard ranking calculations listed the hazard planning consideration as “medium”. Further discussion and evaluation resulted in the unanimous decision to change the hazard planning consideration from “medium” to “high” for both hazards.

Many hazards identified by the MJHMP Planning Team are recognized to be interconnected or interrelated. Where appropriate, the hazard profiles (presented below) may include references to other hazard profiles. Additionally, as part of the hazard identification and prioritization process, the MJHMP Planning Team determined that some hazards could be combined for clarity purposes within a larger hazard category. Some hazards were expanded or renamed to reflect conditions more accurately for Culver City. Thus, the Human-Caused Hazards includes Hazardous Materials, Terrorism/Cyber-Attack, Civil Disturbance/Civil Unrest and Pandemic; Seismic Hazards includes Fault Rupture, Ground Shaking, Landslide and Liquefaction; and Severe

Weather includes Heavy Rains, Windstorm (Santa Ana Winds)/Tornados, Extreme Heat and Power Outage, as a secondary impact.

It is noted that Power Outage is not a direct hazard, but a secondary impact from other natural disasters (primarily windstorm, but potentially extreme heat and wildfire as well). The MJHMP Planning Team and survey participants expressed concerns about the ramifications of Power Outages and the effects on City infrastructure and operations; thus, Power Outage is discussed under Severe Weather.

The following hazards are discussed in the MJHMP, below:

- Dam/Reservoir Failure;
- Drought Hazards;
- Flood Hazards;
- Human-Caused Hazards (Hazardous Materials, Terrorism/Cyber-Attack, Civil Disturbance/Civil Unrest, Pandemic);
- Seismic Hazards (Fault Rupture, Ground Shaking, Landslide, Liquefaction);
- Severe Weather (Heavy Rains, Windstorm [Santa Ana Winds]/Tornado, Extreme Heat, Power Outage [Secondary Impact]);
- Wildfire; and
- Climate Change (integrated into each hazard)

4.2 CLIMATE CHANGE CONSIDERATIONS

Climate change has the potential to exacerbate many of the existing hazards in the City. As such, the MJHMP Planning Team decided climate change would be included under each applicable hazard profile with a discussion about how each hazard would intersect or become more significant with impacts of climate change.

4.3 VULNERABILITY/RISK ASSESSMENT METHODOLOGY

Vulnerability describes how exposed or susceptible to damage an asset is, and depends on an asset's condition, construction, contents, and economic value of functions. A vulnerability analysis predicts the extent of injury/damage on the built environment that may result from a hazard event of a given intensity in a specific area. The vulnerability assessment considers risks to critical facilities listed in [Section 3.0, *Community Profile*](#), and to residential and non-residential buildings throughout the City. Critical facilities serve an important function in the operations of the municipal government, school district and in serving the community. Facilities listed include essential public buildings, police and fire stations, schools, transportation infrastructure, and vital public utility assets. Many facilities may also be vital to evacuations, serve as assembly points or temporary structures, or provide a supportive role in preparing for and recovering from hazard events. While the City and/or CCUSD owns and maintains the majority of critical facilities, there are critical facilities owned by investor-owned utilities and other public agencies or jurisdictions. Direct and indirect impacts were considered as part of the vulnerability assessment as impacts to some particular facilities may have indirect impacts on other facilities or populations.

The vulnerability assessment below quantifies, to the extent feasible using the best available data, City/CCUSD assets at risk to hazards and estimates potential losses. This section focuses on the profiled hazards and risks specific to the City and CCUSD.

Each hazard profile in the following section includes a Vulnerability and Risk Assessment section

that presents the results of the method described below. Replacement and content values for the facilities in each the hazard areas are tallied in each vulnerability table to estimate the total potential losses for each facility.

4.3.1 METHODOLOGY

For each hazard profiled in Section 4.4, *Hazard Profiles*, a vulnerability/risk assessment is included within the section. The vulnerability/risk assessment gives equal weight to all hazards, regardless of the identified probability. The specific hazard and associated probability are considered as part of the mitigation prioritization, discussed in Section 5.0, *Mitigation Strategy*. This assessment considers the physical threats to critical facilities. It should be noted that actual losses will depend on the type, location, magnitude, and extent of the actual hazard event.

This assessment considers the physical threat to the critical facilities, as well as the physical threat to residential, non-residential structures, and persons within the planning area. Socioeconomic impacts are generally discussed as some hazards have the potential to impact the City and CCUSD in ways beyond physical damages. To confirm at-risk community populations, a detailed parcel analysis investigated the intersection of each mapped natural hazard with development and population vulnerability.

To understand vulnerability to the Culver City population, parcel data from the County of Los Angeles was utilized to identify residential and non-residential structures within each mapped natural hazard zone. For residential assets, the number of units is reported per hazard zone. Single family homes are assumed to be one unit. The number of residential units then informs an estimate of residents within each hazard zone. The estimate was generated using the 2.22 persons per household identified by the American Community Survey (ACS) 2017 – 2021 dataset. For non-residential assets, the total structure square footage was calculated.

Hazard area and critical facility overlays were conducted for: dam inundation, flood, landslide, fault zones, liquefaction, and wildfire. It should be noted that the parcel analysis is based on the best available data and is intended for planning purposes only. Michael Baker International did not manipulate the data and used the data as it was provided to estimate hazard vulnerabilities. The County of Los Angeles provided parcel data via ArcGIS download in July 2023. As such, the parcel analysis serves as an estimate of potential losses based on this data snapshot and may not reflect actual or current conditions within the City at the time of this document approval.

To understand vulnerability to CCUSD students and staff, data was utilized from the 2021 – 2022 School Accountability Report Cards (published during the 2022 – 2023 school year) for relevant public schools within hazard zones. This data set provides details regarding the number of students enrolled at each facility along with the number of CCUSD staff employed at each school. Data limitations related to the private schools (Echo Horizon School and Wildwood School) and other CCUSD facilities (such as the Maintenance Facility, Natatorium Property, or Warehouse/District IMC) that do not serve enrolled students are discussed on a hazard-by-hazard basis below.

A hazard event may have different impacts on different people. Age, socioeconomic status, access to services, physical and mental conditions, and other conditions affect the ability to prepare for and respond to a hazard event. Senior citizens and those with disabilities are more likely to need assistance during and after a hazard event due to physical and/or mental disabilities, lower income levels, and reduced mobility/accessibility to services and resources. Disabled persons typically are unable to care for themselves completely and they rely on others. Lower-

income households are less likely to have the financial resources to implement mitigation actions in their homes, and less likely to have the financial means to recover as a result of a hazard event. Due to the dynamic nature of hazards, the extent of impacts can vary greatly. The assessment provides an overview and understanding of the risks and vulnerabilities associated with the hazards and serves as a basis for the mitigation actions.

The critical facilities listed in Section 3.0, *Community Profile*, were mapped in GIS and overlaid with mapped hazard areas (those hazards that have a specific geographic area) to determine which assets are located in each hazard area. Hazard area and critical facility overlays were conducted for the following hazards: dam inundation, flood, landslide, fault zones, liquefaction (specific to seismic conditions), and wildfire. Dam inundation mapping included the failure of multiple dams, including: Greystone Reservoir, Silver Lake, Lower Franklin Reservoir, Mulholland Reservoir, and Stone Canyon Reservoir.

Overlays were not prepared for the following hazards: drought, human-caused hazards (hazardous materials releases, terrorism/cyber-attack, civil disturbance/civil unrest, pandemic), seismic hazards – ground shaking, and severe weather (heavy rains, windstorm/tornado, extreme heat, power outage). These hazards are not geographically defined and have the potential to affect the entire City and CCUSD jurisdiction. For the purposes of this MJHMP and vulnerability assessment, it is assumed that drought, ground shaking susceptibility, human-caused hazards, and severe weather could impact the entirety of the planning area, including all critical facilities.

Replacement and contents values for the facilities and the number of residents and residential and non-residential structures in each hazard area are provided where possible, to estimate the potential losses based on the method described above. The Culver City Risk Manager – Human Resources Department prepared replacement values for the majority of City facilities and provided them to the consultant for incorporation into the MJHMP.

Replacement values for CCUSD facilities were estimated using the replacement values identified in the previous 2017 MJHMP, and applying the 2023 Consumer Price Index (CPI) percent increase from 2017. The CPI increase was determined to be 23 percent, and this increase in value was applied to all CCUSD facilities to account for inflation from the previous iteration of the plan. Replacement values were not available for certain privately owned facilities in the tables. Where feasible, estimations were prepared using replacement values identified in the HAZUS 6.0 Inventory Technical Manual (2022). Additional data limitations specific to each hazard are discussed further in the sections below.

4.4 HAZARD PROFILES

This section contains profiles for the hazards identified in Table 4-4, *Hazard Profiles*. The profiles include a vulnerability analysis and risk assessment using the methods described in the Vulnerability and Risk Assessment section.

As jurisdictional partners and co-project managers on this work effort, both Culver City and CCUSD as the MJHMP Project Management Team, directed the MJHMP Consultant (Michael Baker International) to replicate the hazard profile, vulnerability, and risk assessment formatting structure from the 2017 MJHMP. In the previous 2017 MJHMP, and the hazard profiles included below, Culver City and CCUSD are evaluated together within the same sections (such as past occurrences, location/extent, magnitude/severity, and probability). As Culver City and CCUSD share the same jurisdictional boundaries, and there is significant overlap between the

constituencies of both entities, this approach was mutually agreed upon to reduce redundancy in the plan.

Because Culver City and CCUSD share the same jurisdictional boundaries, the term “planning area” is used below to reference the jurisdictions of both entities. In many cases, past occurrences, location/extent, magnitude/severity, and probability for both the City and CCUSD are identical. Where differences in risk and vulnerability do exist, these are discussed on a hazard-by-hazard basis within the profiles below.

4.4.1 DROUGHT

DROUGHT DESCRIPTION

A drought is a period of drier-than-normal conditions that can result in decreases in water supplies. When precipitation is less than normal for a lengthy period of time, the flow of streams and rivers decline, water levels in lakes and reservoirs fall, and the depth to water in wells increases. If dry weather persists and water-supply problems develop, the dry period can become a drought. The term "drought" can have different meanings to different people, depending on how a water deficiency affects them. Drought is a complex natural hazard, which is reflected in the following four definitions commonly used to describe it:

- *Agricultural* – Drought is defined principally in terms of naturally occurring soil moisture deficiencies relative to water demands of plant life, usually arid crops.
- *Hydrological* – Drought is related to the effects of precipitation shortfalls on stream flows and reservoir, lake, and groundwater levels.
- *Meteorological* – Drought is defined solely on the degree of dryness, expressed as a departure of actual precipitation from an expected average or normal amount based on monthly, seasonal, or annual time scales.
- *Regulatory (Socioeconomic)* – Drought associates the supply and demand of economic goods or services with elements of meteorological, hydrologic, and agricultural drought. Regulatory drought occurs when the demand for water exceeds the supply as a result of weather-related supply shortfall. It may also be called a water management drought.

Although climate is a primary contributor to hydrological drought, other factors such as changes in land use (e.g., deforestation), land degradation, and dam construction all affect the hydrological characteristics of a particular region. Because regions are geographically interconnected by natural systems, the drought impacts may extend well beyond the borders of the precipitation-deficient area. Changes in land use upstream may alter hydrologic characteristics such as infiltration and runoff rates, resulting in more variable stream flow and a higher incidence of hydrologic drought downstream. Land use change is one way human actions alter the frequency of water shortage even when no change in precipitation has been observed.¹

Droughts cause public health and safety impacts, as well as economic, environmental, and social impacts. Public health and safety impacts are primarily associated with catastrophic wildfire risks and drinking water shortage risks. Example of other impacts include costs to homeowners due to loss of residential landscaping, degradation of urban environments due to loss of landscaping,

¹ National Drought Mitigation Center, *Drought Basics*, <https://drought.unl.edu/Education/DroughtBasics.aspx>, accessed April 4, 2023.

agricultural land fallowing and associated job loss, degradation of fishery habitat, and tree mortality with damage to forest ecosystems. Drought conditions can also result in damage to older infrastructure that is located within dry soils with potential to break or crack. Dead or dying vegetation poses a risk to falling and damaging structures and infrastructure systems.

In Los Angeles County, drought conditions typically result in implementation of large-scale conservation efforts, reducing water supplies to customers and altering the pricing system by implementing higher rates for water usage that exceed certain levels. Drought conditions often cause a reliance on groundwater supplies, and extended periods of drought can deplete these reserves.

Drought also results in drier brush and an increase in the size and severity of wildfires. Dry brush becomes significantly more flammable and increases the rate wildfire would spread. Extended drought conditions can also create challenges in procuring adequate amounts of water to fight wildfires. For more on wildfire hazards, refer to Section 4.4.5, *Wildfire*.

PAST OCCURRENCES

Drought has affected virtually every county in California, and California has experienced numerous severe droughts over the past century. FEMA declared one drought emergency for California in January 1977, and several drought emergency declarations have been declared by the State. According to the 2018 State Hazard Mitigation Plan (SHMP), from 1972 to 2016, there have been fifteen drought State Emergency Proclamations in California. Prior to September 2018, more than \$5.1 billion in drought-related damages had occurred in the State. In total, there have been four state and federal declared drought disasters in Los Angeles County since 1950. The most recent drought occurrences affecting the planning area include the 2012 – 2017 drought and the 2020 – 2023 droughts.

The California 2012 - 2017 drought included the driest four-year period of statewide precipitation (2012-2015) and was marked by extremely high heat, minimal snowpack, and high costs. On January 17, 2014, the Governor of California declared a State drought emergency, and on April 1, 2015, the Governor announced the first-ever mandatory 25-percent Statewide water use reduction. Southern California particularly struggled due to dryness and below-average precipitation. Following the drought emergency declaration in January 2014, numerous water restrictions and mitigation actions were implemented in Los Angeles County to conserve water, which eventually combined with plentiful rain in 2017 to end the drought state of emergency. Both the City and CCUSD were subject to water conservation requirements, but both entities continued to receive potable water for critical uses. Impacts were minor, primarily related to landscaping losses.

The most recent drought began in 2020, and a proclamation of a State of Emergency was issued in April 2021 for Mendocino and Sonoma counties. The proclamation was expanded that summer to include the majority of northern and central California. In October 2021, the proclamation expanded again to include the rest of the State's counties, including Los Angeles County (and the planning area). This proclamation directed local water suppliers to execute Water Shortage Contingency Plans and Drought Plans.² Los Angeles reached a state of "extreme drought" in 2021, the second most severe of five drought distinctions identified by the U.S. Drought Monitor. Following above-average rainfall in the beginning of 2023, Los Angeles County, amongst many other counties, are no longer affected by drought conditions. During this drought, both the City

² State of California, *California Drought Update*, <https://drought.ca.gov/media/2021/10/CA-Drought-Update-10-25-21.pdf>, October 25, 2021, accessed May 4, 2023.

and CCUSD were subject to water conservation requirements, but both entities continued to receive potable water for critical uses. Impacts were minor, primarily related to landscaping losses.

No federally declared disasters relating to drought have occurred including the planning area within the last five years; refer to [Table 4-28, *Summary of Federally Declared Disasters Affecting the Planning Area*](#).

LOCATION/GEOGRAPHIC EXTENT

Droughts are generally widespread events that could easily affect the entire planning area, Los Angeles County, and surrounding region. Both the City and CCUSD would be equally affected, as both entities receive potable water from the same utility providers. The geographic extent of drought conditions would extend to all customers receiving water from the City's water purveyors Golden State Water Company (GSWC) and the Los Angeles Department of Water and Power (LADWP). GSWC and LADWP both receive water from the West Basin Municipal Water District (WBMWD), and WBMWD purchases wholesale water from the Metropolitan Water District of Southern California (MWD). The WBMWD water supplies are the primary source of water to meet the GSWC City service area demands.³ GSWC also has access to groundwater from the Santa Monica Groundwater Basin, though the GSWC Culver City Service Area has not recently relied upon groundwater to serve customers. Primary sources of water for LADWP supplies are the Los Angeles Aqueducts, local groundwater such as the San Fernando Basin, State Water Project, and Colorado River Aqueduct.⁴ As both GSWC and LADWP purchase and import potable water from outside of the planning area, the City and CCUSD may be vulnerable to droughts or other natural hazards outside of the jurisdiction.

MAGNITUDE/SEVERITY

Drought is one of the few hazards that have the potential to impact each and every person within the larger region, as well as adversely affect the local economy. This would include impacts to all residents and business owners within the City, and all students and staff at CCUSD. The impacts would be water restrictions associated with domestic supplies, agricultural losses, and economic impacts associated with those losses, economic impacts to tourism and recreation industries, hydroelectric power reductions, increased wildland firefighting costs, and increased costs for water.

Drought severity depends on numerous factors, including duration, intensity, and geographic extent, as well as regional water supply demands by humans and vegetation. The severity of drought can be aggravated by other climatic factors, such as prolonged high winds and low relative humidity. The magnitude of drought is usually measured in time and the severity of the hydrologic deficit. There are five distinctions identified by the U.S. Drought Monitor to classify the severity of a drought, refer to [Table 4-4, *Drought Severity Classification*](#).

³ Golden State Water Company, *Culver City Service Area 2020 Urban Water Management Plan*, June 15, 2021.

⁴ Los Angeles Department of Water and Power, *Urban Water Management Plan*, 2020.

**Table 4-4
Drought Severity Classification**

Category	Description	Possible Impacts
D0	Abnormally Dry	Going into drought: short-term dryness slowing planting, growth of crops or pastures. Coming out of drought: some lingering water deficits; pastures or crops not fully recovered.
D1	Moderate Drought	Some damage to crops, pastures; streams, reservoirs, or wells low, some water shortages developing or imminent; voluntary water-use restrictions requested.
D2	Severe Drought	Crop or pasture losses likely; water shortages common; water restrictions imposed.
D3	Extreme Drought	Major crop/pasture losses; widespread water shortages or restrictions.
D4	Exceptional Drought	Exceptional and widespread crop/pasture losses; shortages of water in reservoirs, streams, and wells creating water emergencies.

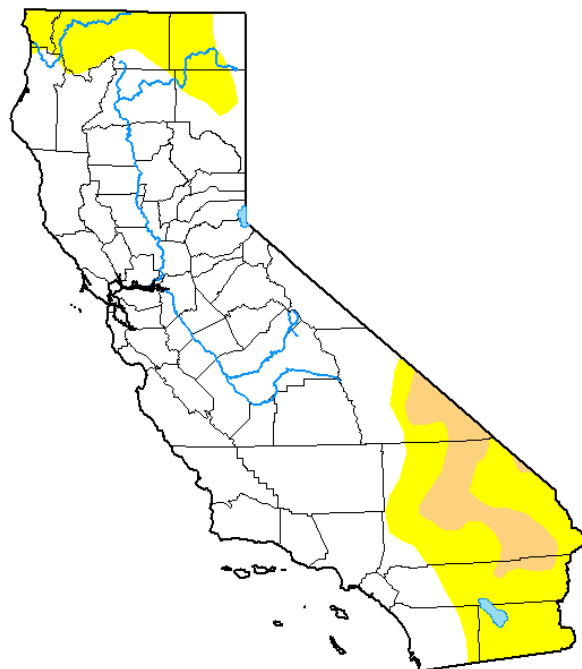
Source: United States Drought Monitor, *Drought Classification*, <https://droughtmonitor.unl.edu/About/AbouttheData/DroughtClassification.aspx>, accessed April 4, 2023.

Exhibit 4-1, *California Drought Monitor*, shows current statewide drought conditions. As of July 2023, the planning area and Los Angeles County, is not affected by drought at any level. The recent removal of drought conditions is attributed to the heavy rains that occurred throughout the State from December 2022 to March 2023.

**Exhibit 4-1
California Drought Monitor**

**U.S. Drought Monitor
California**

July 11, 2023
(Released Thursday, Jul. 13, 2023)
Valid 8 a.m. EDT



Intensity:

- None
- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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CPC/NOAA/NWS/NCEP



droughtmonitor.unl.edu

PROBABILITY OF FUTURE OCCURRENCES

California weather is classified by a typical dry and wet season. During the wet season, the state relies on heavy precipitation events to constitute the majority of the annual total rainfall, so the absence of any event can significantly impact water availability. Certain atmospheric circulation patterns define California's temperature and precipitation extremes. Examining these patterns, researchers discovered that atmospheric conditions associated with extreme drought have become increasingly common in recent decades.⁵

The U.S. Seasonal Drought Outlook indicates no drought will likely occur within the planning area, and throughout most of California, from July through September 2023.⁶ These improved conditions are expected to be largely the result of the extraordinarily wet winter of 2022/2023, and continued storms into 2024. While the planning area received high levels of precipitation during the December 2022 – February 2023 storms, drought is a known reoccurring hazard within the southern California region. Based available and historical data, drought is considered to have a high probability for reoccurrence within the planning area.

CLIMATE CHANGE CONSIDERATIONS

According to the 2018 SHMP, climate scientists studying California find that drought conditions are likely to become more frequent and persistent over the 21st century due to climate change. The experiences water supply agencies faced during 2013, such as reduced reservoir supply and water delivery issues underscore the need to examine the planning area's water storage, distribution, management, conservation, and use policies more closely. Decreasing snowmelt, reduced precipitation, and higher temperatures are all expected effects of climate change. When coupled with increasing populations and increasing demand for water in southern portions of California, these conditions may result in water shortages affecting both the City and CCUSD. The California Adaptation Planning Guide states that the pressure climate change places on ground water reliance during times of drought is not sustainable. Additionally, snowpack levels are expected to decline significantly due to reduced snowfall and faster snowmelt, leading to reduced water availability.⁷

VULNERABILITY AND RISK ASSESSMENT

Drought conditions would affect the entirety of the planning area, and therefore all the City and CCUSD critical facilities, infrastructure systems, structures, residents, and businesses are considered vulnerable to drought hazards. This would include the entire population of Culver City (approximately 40,000 people) and CCUSD students/employees (approximately 7,000 students and 450 estimated staff members). Droughts do not typically result in physical damage to buildings and infrastructure, thus critical facilities are not at risk of destruction or structural failure. Instead, drought could potentially limit the availability of water supplies to City residents and businesses or CCUSD facilities.

⁵ Stanford News, *Rise of the 'Ridiculously Resilient Ridge': California drought patterns becoming more common, Stanford scientists say*, <https://news.stanford.edu/2016/04/01/drought-patterns-change-040116/>, published April 1, 2016, accessed April 25, 2023.

⁶ NOAA, *U.S. Seasonal Drought Outlook*, https://www.cpc.ncep.noaa.gov/products/expert_assessment/sdo_summary.php, published June 30, 2023, accessed July 19, 2023.

⁷ California Governor's Office of Emergency Services, *California Adaptation Planning Guide*, <https://www.caloes.ca.gov/office-of-the-director/operations/planning-preparedness-prevention/california-climate-adaptation/#:~:text=Cal%20OES%20has%20been%20at%20the%20forefront%20of,help%20make%20California%20more%20resilient%20to%20climate%20hazards.>, published June 2020, accessed April 25, 2023.

During previous droughts, both the City and CCUSD continued to receive water supplies from GSWC and LADWP for critical uses but were subject to various water conservation policies/regulations. Historically, droughts have not resulted in substantial water shortages where either entity experienced a total loss. Disastrous drought damage is usually sustained by parks, landscaping, and grounds around commercial and residential facilities, as well as by various plant and animal species, which depend on a delicate meteorological balance to survive. The primary risk to the City is damage to landscaping and the natural ecosystem, and potential economic impacts from increased water prices. Similarly, the primary risk to CCUSD is damage to landscaping, and economic impacts from increased water prices.

Both GSWC and LADWP obtain potable water supply for the City/CCUSD by purchasing imported water supplies from the West Basin Municipal Water District (WBMWD). Both agencies are actively pursuing the availability of a reliable, cost-effective supply of imported water through the implementation of conjunctive use storage programs. Storage programs could use water imported from WBMWD or other suppliers. Additionally, GSWC still owns water rights in the Santa Monica Subbasin and is assessing the feasibility of potential groundwater development projects in several local basins. This would provide some increment of local groundwater that would improve the reliability of or displace the use of imported water for the City and CCUSD.

Although efforts to expand regional sources of water storage and groundwater are in progress, the entire planning area will continue to experience drought conditions and remain highly vulnerable to drought. Those that would be potentially affected by drought would include the CCUSD school population and the residents and employees within the City. Facilities that would be vulnerable to drought include open space, park and recreation facilities with several trees and grass areas, and schools. Drought conditions may cause loss of natural vegetation, potentially worsening the adverse effects of brushfires and floods, and may also cause economic impacts for commercial and residential property owners from landscape damage due to water shortages or rationing. Water agencies could experience reduced revenue when water usage declines due to use restrictions on water; and water supply agencies could experience increased operations cost and/or increased treatment costs as less desirable water supply sources are tapped.

As discussed in [Section 3.5](#), population patterns have not substantially changed within the planning area during the last five years. Both the Culver City population and CCUSD enrollment remains stable at levels previously identified in the 2017 MJHMP. No major changes in land use and development occurred while the previous 2017 MJHMP was active that would affect risk or vulnerability associated with drought.

At the time of this MJHMP preparation, the City adopted an updated Housing Element and published a draft General Plan Update, planning for future growth. While it is unlikely that all approved, entitled, or proposed developments (including those identified in [Table 3-10](#)) will be constructed within the five-year active period of this MJHMP, the City and CCUSD anticipate some level of population growth to occur. Population growth within the City is therefore expected to increase enrollment in CCUSD schools. As the entirety of the planning area would be vulnerable to drought effects, any projected population growth within the City or enrollment at CCUSD would increase the number of vulnerable individuals. At this time, no proposed projects under the purview of the City are expected to substantially increase drought vulnerability. CCUSD has not proposed new facilities to accommodate projected growth that would affect drought risk or vulnerability.

DAC/SVP VULNERABILITY AND RISK ASSESSMENT

The location, extent and magnitude of drought hazards would apply to the entirety of the planning area, including Socially Vulnerable Populations (SVPs) within the Disadvantaged Community district of the City (“DAC” Census Tract 7028.03) and other high-risk individuals located throughout the planning area. SVPs and other high-risk individuals may experience cost burdens associated with potable water surcharges during drought conditions, and may need additional outreach and communication for drought awareness purposes. Due to linguistic isolation noted within the DAC, communication and outreach should consider specific languages and cultural competency. These considerations were included in Section 5.0 as Mitigation Actions #3 and #38.

Drought impacts are less likely to affect vulnerable populations specifically at CCUSD. As drought is a long-duration hazard, response would largely be coordinated by CCUSD facilities and maintenance staff to follow water conservation requirements or other relevant directives. Socioeconomically disadvantaged students and staff would be equally affected by such water conservation requirements, and there are no unique burdens on these communities outside of the broader CCUSD constituency.

4.4.2 SEISMIC HAZARDS

SEISMIC HAZARDS DESCRIPTION

Seismic hazards occur when accumulated stress between portions of the earth’s crust is released, resulting in sudden ground movement perceived as an earthquake. The US Geological Survey (USGS) defines an earthquake as a sudden slip on a fault and the resulting ground shaking and radiated seismic energy caused by the slip (or any other sudden stress changes in the earth).⁸ Faults are fractures along the earth’s crust between two blocks of earth, and can be further defined as a strike slip, normal, or thrust faults. Earthquakes occur without warning, and result in primary and secondary seismic hazards. Primary seismic hazards are the direct result of the release of this accumulated stress and are typically characterized as earthquake fault rupture and seismic shaking. Earthquakes can also cause secondary seismic hazards such as liquefaction and earthquake-induced landslides.

Fault Rupture

Fault rupture or surface faulting is the differential movement of two sides of a fracture, where the ground breaks apart. The length, width, and displacement of the ground characterize surface faults, which occur based on the type of underlying fault. Faults occur at boundaries between large sections of the earth’s surface, called tectonic plates. The deformation of the plates and the accumulated stress between them causes faults in a wider area than the precise boundary between the plates. In California, the Pacific and North American plates are sliding horizontally past each other, a “strike-slip fault.” The boundary between the two plates is known as the San Andreas Fault, although the stress caused by this movement has created thousands of fault areas throughout the state. Most of California lies on the North American plate, although the coastal areas of Central and Southern California, including the planning area, sit on the Pacific Plate. There are numerous faults in and around the City, including the Newport-Inglewood Fault Zone running through the community, the Whittier-Elsinore Fault Zone, and the San Andreas Fault. The Newport-Inglewood Fault Zone is capable of causing surface rupture within the planning area, and a number of other faults can create substantial ground shaking in the community. Some of

⁸ USGS, *The Science of Earthquakes*, <https://www.usgs.gov/programs/earthquake-hazards/science-earthquakes>, accessed May 2, 2023.

the major faults within and near the planning area are discussed in the Probability of Future Occurrence subsection.

Where surface traces of active faults are found in California, an Alquist-Priolo fault zone is mapped. A regulatory zone, which is a 500-foot buffer, is then created around the mapped Alquist-Priolo fault zone.⁹ If an active fault has a potential for surface rupture, a structure for human occupancy cannot be placed over the fault and must be a minimum distance from the fault (generally fifty feet). The intent of the Alquist-Priolo Act is to reduce losses from surface fault rupture, and to prevent the construction of buildings used for human occupancy on the surface trace of active faults. Before a new development is permitted, cities and counties require a geologic investigation to demonstrate that proposed buildings will not be constructed on active faults.¹⁰

Ground Shaking

Ground motion is the movement of the earth's surface from earthquakes. Ground motion is produced by seismic waves that are generated by sudden slip on a fault or sudden pressure at the explosive source and travel through the earth and along its surface.¹¹ Seismic waves produce ground vibrations above the surface. The severity of the vibration increases with the amount of energy released and decreases with distance from the causative fault or epicenter. Soft soils can further amplify ground motion.¹²

Seismic shaking can be strong enough to result in widespread devastation or be virtually undetectable by the average person. The intensity of seismic shaking is a result of the release by the fault rupture (how much of the accumulated stress was released), the length of the rupture (the longer the slip along the fault line, the greater the shaking), and the depth at which the rupture occurs (ruptures that occur closer to the surface often cause stronger shaking). Usually, areas closest to the site of the rupture experience the greatest shaking, although differences in geology and soil can also have an impact. Seismic shaking can damage or destroy buildings and structures and may cause partial or total collapse. Ground movement can damage or destroy infrastructure on or beneath the surface, such as roads, rail lines, and utility lines and pipes. This in turn, can cause hazardous materials releases, water main breaks, and other dangerous situations resulting from infrastructure failure. Falling debris and structures also create a risk of injury or death.

Liquefaction

Liquefaction occurs when ground shaking causes saturated soils, primarily clay-free deposits such as sand or silt, to lose strength and act like a viscous fluid. Certain soils are more susceptible to liquefaction, particularly younger and looser sediment closer to the water table. According to FEMA, liquefaction causes three types of ground failure, as described below:

- Lateral spreads involve the lateral movement of large blocks of soil as a result of liquefaction of an underlying layer. They generally develop on gentle slopes, most commonly between 0.3 and 3 degrees. Horizontal movements commonly are as much as 10 to 15 feet. However, where slopes are particularly favorable, and the duration of ground shaking is long, lateral movement may be as much as 100 to 150 feet. Lateral spread usually breaks up internally, forming numerous fissures and scarps.

⁹ California Department of Conservation, *Alquist-Priolo Earthquake Fault Zones*, <https://www.conservation.ca.gov/cgs/alquist-priolo>, accessed May 2, 2023.

¹⁰ USGS, *Alquist-Priolo Faults*, <https://earthquake.usgs.gov/education/geologicmaps/apfaults.php>, accessed May 2, 2023.

¹¹ USGS, *What are the Effects of Earthquakes?*, <https://www.usgs.gov/programs/earthquake-hazards/what-are-effects-earthquakes>, accessed May 2, 2023.

¹² FEMA, *Multi-Hazard Identification and Risk Assessment - Subpart D: Seismic Hazards*, January 1, 1997.

- Flow failures consist of liquefied soil or blocks of intact material riding on a layer of liquefied soil and are the most catastrophic type of ground failure caused by liquefaction. They commonly move several feet and up to dozens of miles under certain conditions. Flow failures usually form in loose saturated sands or silts on slopes greater than three degrees.
- Loss of bearing strength occurs when the soil supporting buildings or other structures liquefies. When large deformations occur, structures settle and tip. The general subsurface geometry required for liquefaction-caused bearing failures is a layer of saturated, cohesionless soil that extends from near the ground surface to a depth equal to about the width of the building.

Seismically Induced Landslides

Landslide is a generalized term for a falling mass of soil or rocks. When a hillside or slope becomes unstable, downslope movement of rock and soil occurs under the direct influence of gravity. Landslides are often sudden, although some occur very slowly over a long period of time. Loose and fractured materials are more likely to slide than compact materials or solid rock, and steep slopes are at greater risk than gentle rises.

Landslides are usually induced by either earthquakes or moisture. The shaking of an earthquake can decrease slope stability, or in a more severe instance, can fracture the earth material enough that the material slides. Moisture-induced landslides can occur when the ground soaks up enough water that the soil becomes loose and unstable. This is often the result of intense or long-lasting rainfall but can also result from a pipeline burst or overwatering landscapes. In some cases, hillside erosion from rainfall can cause instability and result in landslides. Regardless of the cause or specific form, a landslide can damage or destroy structures built on the sliding material or in its path. Underground infrastructure, such as pipelines or telecommunication lines, may be severed during a landslide. This could lead to infrastructure induced flooding if water pipes or sewage lines burst. In addition to property damage, landslides can crush or bury people, creating a risk of serious injury or death.

PAST OCCURRENCES

Fault Rupture & Ground Shaking

One fault is located within the planning area, the Whittier Fault. Several other faults are located near the planning area, and could trigger ground shaking that affects the City and CCUSD. Table 4-5, Major Earthquake Faults of Local Concern, identifies faults of concern within the region and their last major ruptures.

**Table 4-5
Major Earthquake Faults of Local Concern**

Fault Name	Type of Faulting	Last Major Rupture	Slip Rate	Interval Between Major Ruptures	Probable Magnitudes
Whittier	Right-lateral strike-slip	Holocene	2.5 to 3.0 mm/yr	Unknown	6.0 - 7.2 Mw
Elsinore	Right-lateral strike-slip with some reverse slip	18th century A.D.	Roughly 4.0 mm/yr	Roughly 250 years	6.5 - 7.5 Mw
Palos Verdes	Right-reverse	Holocene	0.3 to 3.0 mm/yr	Unknown	6.0 - 7.0 Mw
Sierra Madre	Reverse	Holocene	0.36 to 4.0 mm/yr	Several thousand years	6.0 - 7.0 Mw
Newport/Inglewood	Right lateral; local reverse slip associated with fault steps	March 10, 1933, Magnitude 6.4	0.6 mm/yr	Unknown	6.0 - 7.4 Mw

Table 4-5 (continued)
Major Earthquake Faults of Local Concern

Fault Name	Type of Faulting	Last Major Rupture	Slip Rate	Interval Between Major Ruptures	Probable Magnitudes
San Jacinto	Right-lateral strike-slip; minor right-reverse	April 9, 1968, Magnitude 6.5	7 to 17 mm/yr	Varies; between 100 and 300 years	6.5 - 7.5 Mw
San Andreas	Right lateral strike-slip	April 18, 1906, Magnitude 7.9	20 to 35 mm/yr	Varies; average 140 years	6.8 – 8.0 Mw
Notes: Mm = millimeters, yr = year, Mw = Moment Magnitude Source: Southern California Earthquake Center, <i>Significant Earthquakes and Faults</i> , http://scedc.caltech.edu/significant/fault-index.html , accessed May 2, 2023.					

Four significant earthquakes have affected the planning area in recent history:

- In 1933, an earthquake off the coast of Long Beach on the Newport-Inglewood fault measured an estimated 6.4 on the moment magnitude scale with an estimated Mercalli intensity of VIII. This earthquake killed 115 people, largely in southern Los Angeles County and Long Beach. Significant damage to the City was not reported. One CCUSD school (Critical Facility #15, formerly known as the Washington School but now leased by the private Echo Horizon School) was substantially damaged during this earthquake.
- The 1971 San Fernando earthquake in the San Gabriel Mountains measured 6.6 on the moment magnitude scale and XI on the Mercalli intensity scale, killing 64 people and causing extensive damage to freeway structures and buildings. Fault rupture occurred outside of the planning area, and no substantial damage or impacts were reported by the City or CCUSD.
- In 1987 an earthquake near Rosemead in the San Gabriel Valley, with a moment magnitude of 5.9 and a Mercalli intensity of VIII, killed three people and was widely felt throughout Southern California. No substantial damage or impacts were reported by the City or CCUSD.
- The Northridge earthquake in 1994 measured 6.7 on the moment magnitude scale with a Mercalli intensity of IX. It killed 57 people, caused over 5,000 injuries, and spawned multiple strong aftershocks. This earthquake caused an estimated \$20 billion or more in damages across Los Angeles and Orange Counties. Private property was damaged in Culver City, but no major damage or impact to City or CCUSD critical facilities was reported. The I-10 freeway experienced collapse at several overpasses (La Cienega Boulevard, Venice Boulevard, Fairfax Avenue and Washington Boulevard) immediately adjacent to the planning area, requiring a three month closure to rebuild.

No federally declared disasters relating to fault rupture or ground shaking have occurred including the planning area within the last five years; refer to [Table 4-28, *Summary of Federally Declared Disasters Affecting the Planning Area*](#).

Liquefaction

The California Geological Survey does not identify any previous instances of liquefaction within the planning area. Communities near the planning area, in Santa Monica and Marina Del Ray have experienced past liquefaction events related to earthquakes. On a regional scale, liquefaction has caused damage in past earthquakes in Los Angeles County, including the 1971 San Fernando earthquake and the 1994 Northridge earthquake.

No federally declared disasters relating to liquefaction have occurred including the planning area within the last five years; refer to Table 4-28, *Summary of Federally Declared Disasters Affecting the Planning Area*.

Seismically Induced Landslides

The California Geological Survey has noted evidence of previous landslides in the Blanco/Culver Crest neighborhood and the Blair Hills neighborhood, particularly near the Baldwin Hills Scenic Overlook, of the City.¹³ No other major seismically induced landslides are known to have occurred within the planning area. No historical or previous damage has been reported by CCUSD.

No federally declared disasters relating to seismically induced landslides have occurred including the planning area within the last five years; refer to Table 4-28, *Summary of Federally Declared Disasters Affecting the Planning Area*.

LOCATION/GEOGRAPHIC EXTENT

Fault Rupture & Ground Shaking

The planning area is located in a seismically active area. One fault, the Newport-Inglewood Fault Zone, runs from the Santa Monica Mountains near Beverly Hills southeast to Newport Beach, passing through the northern portion of the City; refer to Exhibit 4-2, *Local Earthquake Faults*. The fault zone is made up of three distinct segments and several faults and fractures, and is responsible for the topography of the Blair Hills area and nearby Ladera Heights. The Newport-Inglewood Fault Zone caused the 1933 Long Beach earthquake, which was the last major event along this fault. The Southern California Earthquake Center estimates that a future major event along this fault could measure 6.0 to 7.4 on the moment magnitude scale.¹⁴ As a major fault passing through the planning area, it is capable of causing surface rupture and ground shaking in the planning area.

A number of other faults within 60 miles of the planning area are capable of producing earthquakes that could cause significant ground shaking, although these faults do not run through the community and so are unlikely to result in fault surface rupture. Table 4-6, *Local Earthquake Faults*, lists each active and potentially active fault near the planning area, their distance from the planning area, and estimated magnitude.

**Table 4-6
Local Earthquake Faults**

Fault Name	Category	Distance ¹ (miles)	Estimated Magnitude ²
Elsinore	Active	22	6.5-7.5
Newport-Inglewood	Active	Within City boundaries	6.0-7.4
Palos Verdes	Active	10	6.0-7.0
San Andres	Active	40	6.8-8.0
San Jacinto	Active	60	6.5-7.5
Sierra Madre	Active	16	6.0-7.0
Whittier	Active	22	6.0-7.2
Notes: 1. Estimated Distance 2. In Mw (Moment Magnitude) Source: Southern California Earthquake Data Center, <i>Earthquake Information</i> , https://scedc.caltech.edu/earthquake/faults.html , accessed May 3, 2023.			

¹³ California Department of Conservation, *Landslide Inventory and Deep-Seated Landslide Susceptibility*, <https://maps.conservation.ca.gov/cgs/lsl/>, accessed May 2, 2023.

¹⁴ Southern California Earthquake Data Center, *Newport-Inglewood Fault Zone*, <https://scedc.caltech.edu/earthquake/newport.html>, accessed April 4, 2023.

- The Palos Verdes Fault Zone extends from the Palos Verdes peninsula south out into the Pacific Ocean, running approximately 10 miles from the City at its closest point. It has not produced a significant earthquake in recorded history, although the last such event is believed to have happened within the past 10,000 years. The Southern California Earthquake Data Center estimates that this fault is capable of producing an earthquake measuring 6.0 to 7.0 or more on the moment magnitude scale.¹⁵
- The Sierra Madre Fault Zone runs along the southern edge of the San Gabriel Mountains from La Cañada-Flintridge to Claremont, approximately 16 miles from the City at its closest point. It is made up of five segments; scientists are unclear if any event along this fault could be limited to one segment or if events along multiple segments are possible. The last major event along the Sierra Madre Fault Zone is believed to have happened within the past 10,000 years, although no specific event is known. The Southern California Earthquake Data Center estimates that it is capable of producing an event measuring 6.0 to 7.0 on the moment magnitude scale.¹⁶
- The Whittier-Elsinore Fault Zone runs from the Chino Hills region to the California-Mexico border, and is approximately 22 miles from the City at its closest point. Near Chino Hills it splits into two separate segments, the Chino Fault and the Whittier Fault. The last major event along this fault was a 1910 earthquake measuring an estimated 6.0 on the moment magnitude scale. This fault is believed to cause a major event approximately every 250 years with a probable magnitude of 6.5 to 7.5.¹⁷
- The San Andreas Fault, the largest and most well-known of California's faults, runs from Cape Mendocino to the Salton Sea. It is approximately 40 miles from the City at its closest point. It has caused numerous major earthquakes throughout California's history, including the 1906 San Francisco earthquake that destroyed much of that city and the 1989 Loma Prieta earthquake that caused widespread damage in the San Francisco Bay Area. The central portion of the San Andreas Fault was responsible for an earthquake measuring an estimated 7.9 on the moment magnitude scale, the strongest in California's recorded history in 1857 near the town of Parkfield (approximately 170 miles from the City). The Southern California Earthquake Data Center estimates that a future major event along the southern part of the San Andreas Fault could measure 6.8 to 8.0 on the moment magnitude scale. The recurrence interval along the fault varies greatly, from less than 20 years to more than 300 years between events.¹⁸
- The San Jacinto Fault Zone runs from San Bernardino to the Superstition Mountains south of the Salton Sea, and is approximately 60 miles from the City at its closest point. The last major event along this fault was the Borrego Mountain earthquake in 1968, which measured 6.5 on the moment magnitude scale. The Southern California Earthquake Data Center estimates that major events along this fault could measure 6.5 to 7.5 on the moment magnitude scale.¹⁹

¹⁵ Southern California Earthquake Data Center, *Palos Verdes Fault Zone*, <https://scedc.caltech.edu/earthquake/palosverdes.html>, accessed April 4, 2023.

¹⁶ Southern California Earthquake Data Center, *Sierra Madre Fault Zone*, <https://scedc.caltech.edu/earthquake/sierramadre.html>, accessed April 4, 2023.

¹⁷ Southern California Earthquake Data Center, *Elsinore Fault Zone*, <https://scedc.caltech.edu/earthquake/elsinore.html>, accessed April 4, 2023.

¹⁸ Southern California Earthquake Data Center, *San Andreas Fault Zone*, <https://scedc.caltech.edu/earthquake/sanandreas.html>, accessed April 4, 2023.

¹⁹ Southern California Earthquake Data Center, *San Jacinto Fault Zone*, <https://scedc.caltech.edu/earthquake/sanjacinto.html>, accessed April 4, 2023.

The list above is not a comprehensive list of all known faults capable of producing a significant earthquake near the planning area. Additionally, there is a risk of earthquakes from faults that have not yet been discovered. The 1994 Northridge earthquake, which caused more property damage than any other earthquake in the United States and was the ninth most damaging earthquake in history, occurred along a then-undiscovered thrust fault. A major earthquake along any of these faults could cause significant damage to the planning area, affecting both the City and CCUSD.

Liquefaction

Most of the planning area is identified with elevated liquefaction risk. The liquefaction zone generally follows Ballona Creek, from the northeast through the planning area center. Some parts of the community are not within the liquefaction zone, including the areas along the City's northwestern border (much of the McLaughlin, Clarkdale, Washington Culver, Culver-West, and Downtown neighborhoods), the Blair Hills neighborhood, and the extreme southeastern part of the City; refer to Exhibit 4-3, *Liquefaction Potential Zone*. While the likelihood of liquefaction occurring in a future seismic event is dependent on a number of factors, there is a possibility for widespread and damaging liquefaction in the community, affecting both the City and CCUSD.

Seismically Induced Landslides

The California Geologic Survey identifies the Blair Hills neighborhood as the primary location in the City with an elevated landslide risk; refer to Exhibit 4-4, *Landslide Potential Zone*. Past landslides in this area have been comparatively small, although still potentially large enough to significantly damage or destroy buildings. Seismic-related landslides would likely be confined to this specific region of the City, although under the right conditions there could be widespread damage or destruction in the Blair Hills neighborhood.²⁰ While the most landslide potential is in Blair Hills, the landslide potential zone extends into parts of the Blanco-Culver Crest and Jefferson neighborhoods, on the west side of the City.

All CCUSD assets are located outside of a mapped landslide hazard zone.

²⁰ California Department of Conservation, *Seismic Hazard Zone Report: Beverly Hills Quadrangle*, 1998.

Hazard Mitigation Plan











Culver City

Exhibit 4-3, Liquefaction Potential Zones

Scale: 17,000

June 9, 2023

Legend

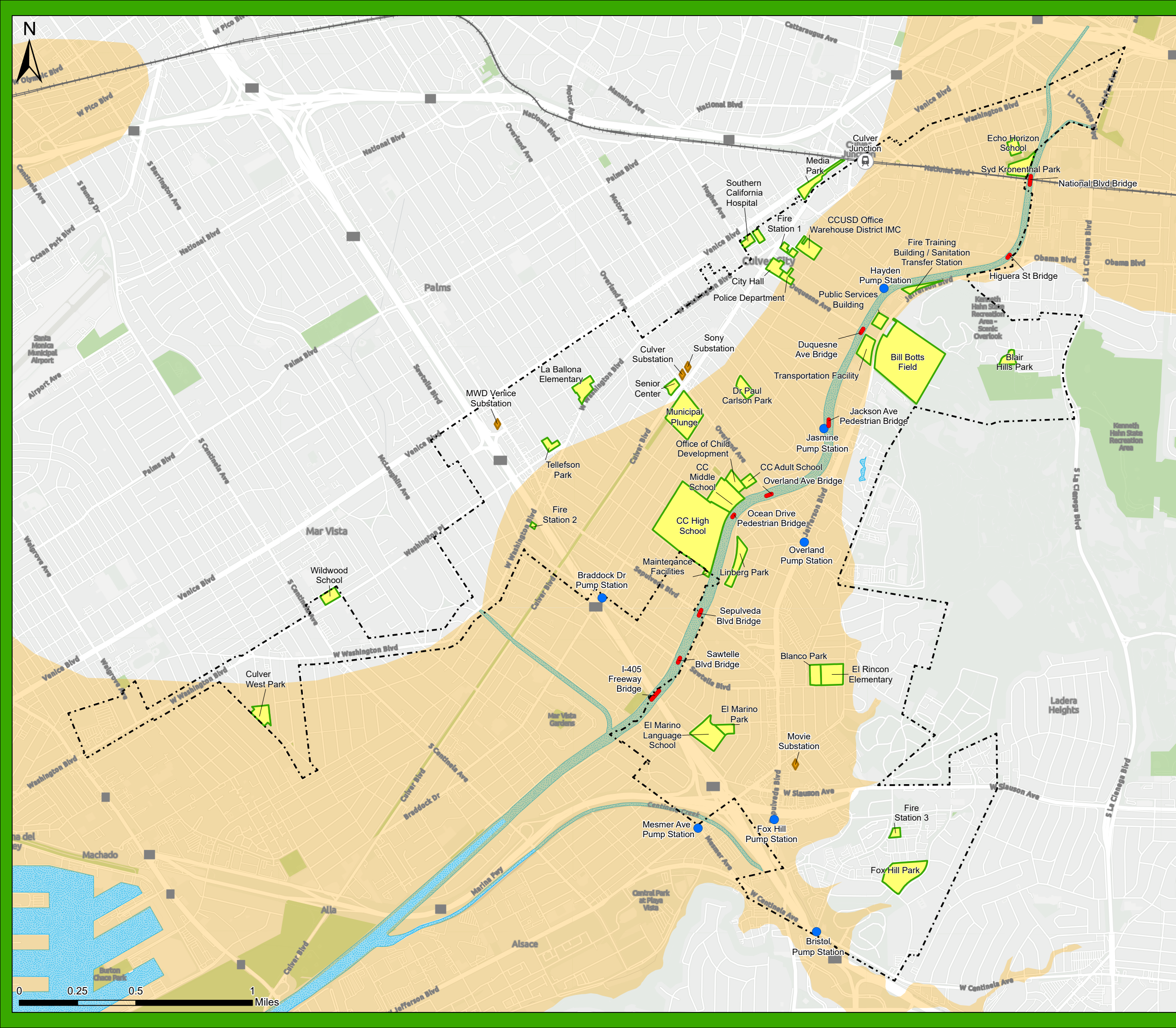
-  City Boundary
-  Critical Facility
-  Bridge
-  Electric Substation
-  Sewer Pump Station
-  Waterbody
-  Park or Open Space
-  Metro Station
-  Metro Rail
-  Liquefaction Zone

THE CITY OF CULVER CITY



INFORMATION TECHNOLOGY DEPARTMENT
GEOGRAPHIC INFORMATION SYSTEMS
9770 CULVER BLVD
CULVER CITY, CA 90232
TEL: 310-253-5976

Source: CGS 2017



Hazard Mitigation Plan

Culver City

Exhibit 4-4, Landslide Potential Zone

Scale: 17,000

June 9, 2023

Legend

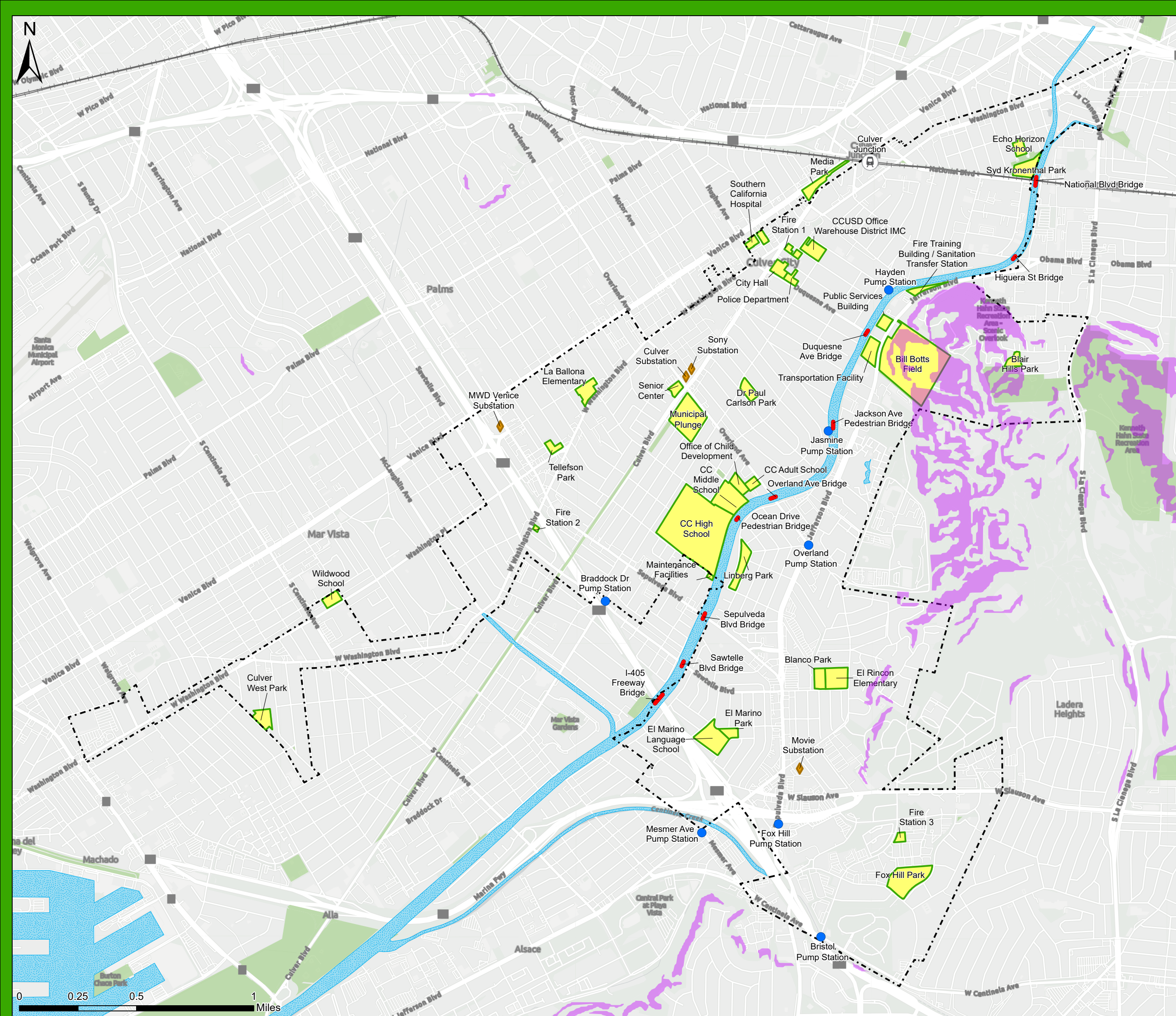
- City Boundary
- Critical Facility
- Bridge
- Electric Substation
- Sewer Pump Station
- Waterbody
- Park or Open Space
- Metro Station
- Metro Rail
- Landslide Hazard Zone

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Source: CGS 2022



MAGNITUDE/SEVERITY

Fault Rupture & Ground Shaking

Ground motion would be particularly damaging to residential buildings constructed of wood or reinforced masonry construction, and to mobile homes. Other buildings that do not typically perform well in earthquakes are soft-story buildings. These types of buildings have a story (typically the first floor) that lacks adequate strength or toughness due to too few shear walls. Two scales are commonly used to measure earthquakes: the moment magnitude scale and the Modified Mercalli Intensity Scale. The moment magnitude scale is based on the now largely unused Richter scale and measures the amount of energy released by the earthquake.

The Modified Mercalli Intensity Scale (MMI Scale) measures the effects of the earthquake and is based on qualitative observations rather than a mathematical basis. The intensity scale consists of a series of certain key responses such as people awakening from sleep, movement of furniture, damage to chimneys, and destruction. Although numerous scales have been developed to evaluate earthquake effects, the scale currently used in the United States is the Modified Mercalli Intensity Scale. This scale, composed of twelve increasing levels of intensity ranging from imperceptible shaking to catastrophic destruction, is designated by Roman numerals I through XII. Table 4-7, *Modified Mercalli Intensity Scale*, shows the different categories of the Mercalli intensity scale.

**Table 4-7
Modified Mercalli Intensity Scale**

Intensity	Shaking	Description/Damage
I	None felt	Not felt except by a very few under especially favorable conditions.
II	Weak	Felt only by few persons at rest, especially on upper floors of buildings.
III	Weak	Felt quite noticeably by persons indoors, especially on upper floors of buildings. Many people do not recognize as an earthquake. Standing motor cars may rock slightly. Vibrations similar to the passing of a truck. Duration estimated.
IV	Light	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. Standing motor cars rocked noticeably.
V	Moderate	Felt by nearly everyone; many awakened. Some dishes, windows broken. Unstable objects overturned. Pendulum clocks may stop.
VI	Strong	Felt by all, many frightened. Some heavy furniture moved; a few instances of fallen plaster. Damage slight.
VII	Very Strong	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.
VIII	Severe	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	Violent	Damage considerable in specifically designed structures; well-designed frame structures thrown out of plumb. Damage great in substantial buildings, with partial collapse. Buildings shifted off foundations.
X	Extreme	Some well-built wooden structures destroyed; most masonry and frame structures destroyed with foundations. Rails bent.
Source: USGS, <i>The Modified Mercalli Intensity Scale</i> , https://www.usgs.gov/natural-hazards/earthquake-hazards/science/modified-mercalli-intensity-scale?qt-science_center_objects=0#qt-science_center_objects , accessed May 3, 2023.		

Magnitude and intensity measure different characteristics of earthquakes but often correlate. Magnitude measures the energy released at the source of the earthquake, determined by measurements on seismographs. Intensity measures the strength of shaking produced by an earthquake at a certain location and is determined by effects on people, structures, and the natural environment. Refer to Table 4-8, *Approximate Comparison of Moment Magnitude and Mercalli Intensity Scales*, which lists the intensities that are typically observed at locations near the epicenter of earthquakes of different magnitudes.

Table 4-8
Approximate Comparison of Moment Magnitude and Mercalli Intensity Scales

Moment Magnitude	Mercalli Intensity
1.0 to 3.0	I
3.0 to 3.9	II to III
4.0 to 4.9	IV to V
5.0 to 5.9	VI to VII
6.0 to 6.9	VII to IX
7.0 and greater	VIII and greater
Source: USGS, <i>Magnitude/Intensity Comparison</i> , http://earthquake.usgs.gov/learn/topics/mag_vs_int.php , accessed August 11, 2015.	

Liquefaction

Liquefaction can be a significant contributor to earthquake losses. The magnitude of liquefaction depends on the location where it occurs. Liquefaction occurring beneath buildings and other structures can cause major damage. Buildings may sink into the ground and tilt, cars can be swallowed into the ground, and roads and bridges can crack and fail.²¹ Homes or other development may be damaged beyond repair. Liquefaction may also threaten underground utilities, such as damaging underground water pipes.

Seismically Induced Landslides

Seismically induced landslides’ predictability and velocity levels depend upon the nature and location of the event and earthquake. Slow landslides may damage structures and infrastructure and are difficult to stabilize due to their large size. However, slow landslides allow people to evacuate before there is the danger of loss of life. Landslides with high velocity can destroy structures or other lifeline utilities and can cause significant loss of life or injury. The severity of a landslide is often measured by the amount of material that slides (e.g., in cubic feet).

PROBABILITY OF FUTURE OCCURRENCES

Fault Rupture & Ground Shaking

The southern California region is known to be seismically active, and thus the probability for future seismic hazard occurrences is considered high. Given the historic seismic events in the region affecting both the City and CCUSD, and presence of several local/regional faults, it is certain that such events will continue. The USGS Uniform Earthquake Rupture Forecast Version 3 released in 2017 provides a perspective of the likelihood each California region will experience a magnitude 6.7 or larger earthquake in the next 30 years; refer to Table 4-9, Likelihood of One or More Earthquakes Occurring in the Next 30 Years in Orange County Region by Fault.

The Newport-Inglewood Fault, located within the planning area, shows lower probabilities for an earthquake greater than 6.7 M in the next 30 years compared to the San Andreas, San Jacinto and Elsinore Fault. It is noted that while less likely, an earthquake on the Newport-Inglewood Fault would have the highest probability for fault rupture and strong ground shaking within the City.

²¹ National Academics, *Can earthquakes liquify soil?*, <https://www.nationalacademies.org/based-on-science/can-earthquakes-liquefy-soil#:~:text=Liquefaction%20can%20trigger%20landslides%2C%20cause%20embankments%20to%20slump%2C,and%20roads%20and%20bridges%20to%20crack%20and%20fail>, accessed May 3, 2023.

**Table 4-9
Likelihood of One or More Earthquakes Occurring in the Next 30 Years in Los Angeles
Region by Fault**

Magnitude	Whittier Fault	Elsinore Fault	Newport/Inglewood	San Jacinto	San Andreas
M ≥ 6.7	1.17%	3.66%	0.95%	5.41%	19.21%
M ≥ 7.0	1.07%	1.82%	0.81%	5.39%	12.86%
M ≥ 7.5	0.58%	0.90%	0.42%	5.28%	10.21%
M ≥ 8.0	< 0.01%	<0.01%	--	2.75%	3.24%
Notes:					
1. M≥6.7 means magnitude greater than or equal to 6.7, and likewise for the other magnitude thresholds.					
2. The 30-year period measured by this report is 2014 to 2044; a 30-year period is the typical duration of a homeowner mortgage.					
3. Percentages for fault sections closest to the City.					
Source: U.S. Department of the Interior and U.S. Geological Survey, <i>The Third California Earthquake Rupture Forecast (UCERF3)</i> , March 2015.					

The impact and potential losses of such an event reveal significant risk and could be devastating to not only the planning area and Los Angeles County, but the entire Southern California region. With the highly concentrated county population of almost 10 million and the heavy use of the transportation infrastructure, a major earthquake could virtually shut down large portions of Southern California. This would ultimately result in substantial impacts to both the City and CCUSD.

Liquefaction

Because there are several areas in the planning area that are located within an identified liquefaction zone, the likelihood for future occurrences is considered medium. Because seismic activity is expected to continue in the southern California region, liquefaction should also be expected and anticipated as a secondary impact in the planning area from this hazard.

However, it should be noted that liquefaction would most likely be triggered by a significant earthquake event within one of the fault zones close to or within the planning area. As previously noted, the Newport-Inglewood Fault has limited probability to produce a 6.7 M earthquake or greater in the next 30 years. This would then reduce the probability of future liquefaction as a result of an earthquake on this fault. Earthquakes are more probable to occur on the San Andres, San Jacinto, or Elsinore Faults. These three faults are located several miles from the planning area and depending on the epicenter and magnitude of the earthquake, may not be strong enough to trigger liquefaction within the jurisdiction.

Seismically Induced Landslides

Seismically induced landslides are considered to have a medium probability of occurring in the planning area. The Blair Hills neighborhood in the northwestern part of the City is the only area noted as having an elevated landslide risk in the City. As earthquake activity has a high probability of occurring in the City, landslides are anticipated to be a secondary hazard within the planning area. Landslides have a low probability of affecting CCUSD, as all assets are located outside of a mapped hazard zone.

CLIMATE CHANGE CONSIDERATIONS

Fault Rupture & Ground Shaking

Seismic hazards are not directly affected by climate; thus, climate change is not expected to have any direct influence on the likelihood, size, and/or severity of any future primary seismic hazard. The City and CCUSD would be equally affected.

Liquefaction

Climate change may increase susceptibility to liquefaction. Climate change is likely to bring more severe rain events to southern California, including the planning area, increasing the amount of water saturation in loose soils. Saturated soils are known to be at risk for liquefaction or ground failure in an earthquake. Thus, heavy periods of rain combined with a local earthquake with strong ground shaking could increase the likelihood of liquefaction potential.

Seismically Induced Landslides

While there is no climate change link to seismically induced landslides, climate change is expected to increase the frequency of drought and the intensity of rainfall events. Drought can dry out soils, reducing the ability for soils to absorb precipitation. Heavier rainfall events combined with reduced moisture absorption can cause hillside destabilization and increase the probability of a landslide occurring after an earthquake. Climate change is not expected to directly affect seismic-induced landslides in the City. As CCUSD assets are currently mapped outside of a landslide hazard zone, correlation with climate change is not anticipated to substantially increase landslide vulnerability.

VULNERABILITY AND RISK ASSESSMENT

Fault Rupture

A total of five critical facilities were identified as vulnerable to fault rupture within the planning area, as outlined in Table 4-10, Culver City – Facilities in a Fault Zone and Table 4-11, Culver City Unified School District – Facilities in a Fault Zone, below. Fault rupture hazard zones are defined as 0.25-mile in both directions of the mapped fault line, as determined by the California Geological Survey in the Alquist-Priolo Earthquake Fault Zone. Fault ruptures should physically and structurally impact the critical facilities below, through ground displacement (normal or reverse faulting) or horizontal movement (strike-slip faulting). Vulnerable critical facilities include two parks, two bridges and one CCUSD school facility. City parks are generally used for staging emergency response to natural hazards, whereas structure damage to bridges or the Echo Horizon School could cause major service disruptions and require response efforts from the City.

**Table 4-10
Culver City - Facilities in a Fault Zone**

Map ID	Name	Asset Type	Total Loss Potential
14	Syd Kronenthal Park	Parks and Recreation	\$944,000
19	Blair Hills Park	Parks and Recreation	\$120,000
43	National Boulevard Bridge over Ballona Creek	Transportation - Bridge	\$7,200,144*
44	Higuera Street Bridge over Ballona Creek	Transportation - Bridge	\$11,088,828*
* Replacement Values Generated Using FEMA HAZUS Estimations (HAZUS 6.0 Inventory Technical Manual).			
* Replacement Values Generated Using Previously Identified Replacement Values in 2017, with the 2023 Consumer Price Index applied.			

**Table 4-11
Culver City Unified School District - Facilities in a Fault Zone**

Map ID	Name	Asset Type	Total Loss Potential
15	Echo Horizon School (leased)	Public School	\$6,298,454.30*
* Replacement Values Generated Using Previously Identified Replacement Values in 2017, with the 2023 Consumer Price Index applied.			

Culver City identifies approximately 436 residential units are located within 0.25-mile of a mapped fault line. As the persons per household in the City is 2.22, it is assumed approximately 968

individuals reside in a potential fault hazard zone. Approximately 863,817 square feet of non-residential structures are located within the fault hazard zone.

CCUSD identifies one facility, Echo Horizon School, within 0.25-mile of a mapped fault line. While CCUSD owns this facility (formerly known as Washington School), the Echo Horizon School has a long-term lease to operate a private pre-K through 6th grade school. At the time of this writing, the Echo Horizon School website reports an enrollment of approximately 180 students and 50 staff members, and all students and staff members are considered to be vulnerable to fault rupture. The number of students and staff present at the facility may vary due to time of day or time of year.

A fault rupture would occur with very little warning, giving residents minimal time to prepare. Damages would depend on the strength and location of the earthquake. Building codes within the Alquist-Priolo zone are designed to mitigate impacts associated with fault ruptures. However, depending on the magnitude and strength of the fault rupture incident, impacts could be significant to both residential and non-residential structures. Further, the vulnerability to underground utilities within this hazard zone remains high, as ground displacement or horizontal movement could break pipelines or dry utility connections.

As discussed in [Section 3.5](#), population patterns have not substantially changed within the planning area during the last five years. Both the Culver City population and CCUSD enrollment remain at stable levels previously identified in the 2017 MJHMP. The previous 2017 MJHMP identified 354 housing units within the City's fault rupture zone; updated data indicates there are now 436 housing units, representing a growth of 82 housing units within the fault rupture hazard zone. Enrollment at Echo Horizon School is not reported in the previous 2017 MJHMP, therefore it is unknown if the number of vulnerable individuals at this facility significantly changed within the last five years.

At the time of this MJHMP preparation, the City adopted an updated Housing Element and published a General Plan update, planning for future growth. While it is unlikely that all approved, entitled, or proposed developments (including those identified in [Table 3-10](#)) will be constructed within the five-year period of this MJHMP, the City and CCUSD anticipate some level of population growth to occur. Therefore, this could result in additional housing units or non-residential construction occurring within the fault rupture hazard zone. At this time, no proposed projects under the purview of the City are expected to substantially increase fault rupture vulnerability. Future construction would be subject to the latest regulations from the Alquist-Priolo Earthquake Fault Zone, and would decrease vulnerability associated with fault rupture risk.

Population growth within the City is reasonably expected to increase enrollment in CCUSD schools. However, Echo Horizon is a private school that leases a CCUSD facility and operates as an independent entity. Enrollment at Echo Horizon may not necessarily correlate with population growth within the planning area. At this time, CCUSD has not proposed new facilities to accommodate projected population growth that would affect fault rupture risk or vulnerability.

Ground Shaking

Ground shaking would affect the entirety of the planning area, and therefore all City and CCUSD critical facilities, infrastructure systems, structures, individuals and businesses are considered vulnerable. This would include the entire population of Culver City (approximately 40,000 individuals) and CCUSD students/employees (approximately 7,000 students and 450 estimated staff members). The extent of damage would depend on the location and magnitude of the earthquake. Significant ground shaking could be triggered by the Newport-Inglewood Fault Zone

within the City, or could be triggered by a regional incident on a major fault line such as the San Andreas Fault. As there are several fault lines known to cause earthquakes in the southern California region, the City is also vulnerable to ground shaking from incidents outside of the planning area.

Damage to facilities, infrastructure, or private property due to ground shaking could be significant, and result in injuries or even death. Ground shaking is likely to cause physical or structural impacts to the planning area. Depending on the extent of the earthquake, transportation systems and utility systems could be hindered which would further disrupt the City/CCUSD response and evacuation.

As discussed in [Section 3.5](#), population patterns have not substantially changed within the planning area during the last five years. Both the Culver City population and CCUSD enrollment remains stable at levels previously identified in the 2017 MJHMP. No major changes in land use and development occurred while the previous 2017 MJHMP was active that would affect risk or vulnerability associated with groundshaking.

At the time of this MJHMP preparation, the City adopted an updated Housing Element and published a draft General Plan Update, planning for future growth. While it is unlikely that all approved, entitled, or proposed developments (including those identified in [Table 3-10](#)) will be constructed within the five-year active period of this MJHMP, the City and CCUSD anticipate some level of population growth to occur. Population growth within the City is therefore expected to increase enrollment in CCUSD schools. As the entirety of the planning area would be vulnerable to groundshaking, any projected growth within the City or enrollment at CCUSD would increase the number of vulnerable individuals. At this time, no proposed projects under the purview of the City would substantially increase vulnerability to ground shaking. Development would be subject to the City’s Building Code, including the latest building requirements for seismic safety. CCUSD has not proposed new facilities to accommodate projected growth that would affect groundshaking risk or vulnerability.

Liquefaction

The planning area is susceptible to seismic-induced liquefaction, and mapped liquefaction zones identify areas most vulnerable to this hazard. [Table 4-12, Culver City - Facilities in a Liquefaction Hazard Zone](#) and [Table 4-13, Culver City Unified School District – Facilities in a Liquefaction Hazard Zone](#), identify the critical facilities located within the liquefaction hazard area. Liquefaction zones are mapped by the California Department of Conservation, utilizing geological and groundwater data to establish zones that are potentially susceptible. The liquefaction hazard zone is mapped around the historic footprint of Ballona Creek (pre-channelization). A variety of critical facilities are vulnerable to liquefaction including City buildings, parks, utilities, and bridges. The majority of CCUSD facilities are also located within a liquefaction hazard zone as well.

**Table 4-12
Culver City – Facilities in a Liquefaction Hazard Zone**

Map ID	Name	Asset Type	Total Loss Potential
2	Police Department	Government Building	\$15,275,000.00
4	Fire Station No. 2	Government Building	\$1,835,500.00
6	Fire Training Building	Government Building	\$144,000.00
7	Public Works Yard	Government Building	\$9,946,000.00
8	Sanitation Transfer and Recycling Station	Government Building	\$4,654,000.00
9	Transportation Facility/Department	Government Building	\$17,928,000.00
11	Culver - Palms YMCA	Non-Profit/NGO	Unavailable
13	Veterans Park & Memorial Building	Parks and Recreation	\$9,036,000.00

Table 4-12 (continued)
Culver City – Facilities in a Liquefaction Hazard Zone

Map ID	Name	Asset Type	Total Loss Potential
14	Syd Kronenthal Park	Parks and Recreation	\$944,000.00
15	Blanco Park	Parks and Recreation	\$189,000.00
16	Culver West Alexander Park	Parks and Recreation	\$989,866.00
18	El Marino Park	Parks and Recreation	\$370,000.00
20	Dr. Paul Carlson Park	Parks and Recreation	\$132,746.00
23	Lindberg Park	Parks and Recreation	\$546,000.00
26	Municipal Plunge	Parks and Recreation	\$2,826,000.00
27	Culver City Community and Social/Teen Center	Parks and Recreation	Unavailable
28	Combs Parkette	Parks and Recreation	\$100,000.00
36	Movie Substation	Utility - Electric	Confidential
37	Braddock Sewer Pump Station	Utility - Wastewater	\$244,500.00
38	Bristol Sewer Pump Station	Utility - Wastewater	\$293,000.00
39	Hayden Sewer Pump Station	Utility - Wastewater	\$247,500.00
40	Culver Boulevard Lift Station	Utility - Wastewater	Unavailable
41	Jasmine Sewer Pump Station	Utility - Wastewater	\$355,000.00
42	Mesmer Sewer Pump Station	Utility - Wastewater	\$322,729.00
43	National Boulevard Bridge over Ballona Creek	Transportation - Bridge	\$7,200,144.00*
44	Higuera Street Bridge over Ballona Creek	Transportation - Bridge	
45	Duquesne Avenue Bridge over Ballona Creek	Transportation - Bridge	\$8,624,644.00*
46	Jackson Avenue Pedestrian Bridge over Ballona Creek	Transportation - Bridge	\$2,324,952.00*
47	Overland Avenue Bridge over Ballona Creek	Transportation - Bridge	\$18,481,380.00*
48	Ocean Drive Pedestrian Bridge over Ballona Creek	Transportation - Bridge	\$1,359,792.00*
49	Sepulveda Boulevard Bridge over Ballona Creek	Transportation - Bridge	\$11,357,640.00*
50	Sawtelle Boulevard Bridge over Ballona Creek	Transportation - Bridge	\$10,219,104.00*
51	I-405 Freeway Bridge over Ballona Creek	Transportation - Bridge	\$49,950,857.00*
* Replacement Values Generated Using FEMA HAZUS Estimations (HAZUS 6.0 Inventory Technical Manual).			
* Replacement Values Generated Using Previously Identified Replacement Values in 2017, with the 2023 Consumer Price Index applied.			

Table 4-13
Culver City Unified School District – Facilities in a Liquefaction Hazard Zone

Map ID	Name	Asset Type	Total Loss Potential
1	School District Office	Public School	\$8,448,719.74*
2	High School	Public School	\$60,960,622.47
3	Culver Park Continuation High School	Public School	\$2,441,592.36*
4	Middle School	Public School	\$35,881,898.67*
5	El Marino Language School	Public School	\$12,129,229.89*
6	El Rincon Elementary	Public School	\$12,653,393.87*
7	Farragut Elementary	Public School	\$13,783,339.28*
9	Linwood E. Howe Elementary	Public School	\$13,318,142.00*
10	Office of Child Development	Public School	\$1,643,753.65*
11	Adult School	Public School	\$5,654,070.19*
12	Maintenance Facilities	Public School	\$2,297,942.75*
14	Warehouse/District IMC	Public School	\$1,907,278.42*
15	Echo Horizon School (leased)	Public School	\$6,298,454.30*
* Replacement Values Generated Using Previously Identified Replacement Values in 2017, with the 2023 Consumer Price Index applied.			

Culver City identifies approximately 9,542 residential units are located in a liquefaction zone. Multiplied by 2.22 persons per unit within the planning area, it is assumed 21,183 individuals reside within a potential liquefaction zone. Approximately 10,547,231 square feet of non-residential development are located within a liquefaction hazard zone. The liquefaction hazard vulnerability is the most significant compared to other mapped hazards within the planning area, and shows the most vulnerable residential units and non-residential square footage.

Nearly all CCUSD facilities are located within a mapped liquefaction hazard zone. According to the 2021 – 2022 School Accountability Report Cards, these CCUSD facilities serve approximately 6,500 students and 350 staff members. It is noted that the presence of students and staff can vary due to time of day or time of year. Critical Facilities #3, #10, and #11 serve students on part-time or half-day basis. Parents, guardians, or other volunteers may also be present on CCUSD campuses and facilities on a varying basis. As previously mentioned, Echo Horizon School is a private pre-K through 6th grade school within a leased building owned by CCUSD. The Echo Horizon School website reports enrollment at approximately 180 students and 50 staff members.

Similar to ground shaking and fault rupture hazards, liquefaction can physically damage critical facilities and other structures throughout the planning area. Depending on the extent of the liquefaction incident, transportation systems and other utility services could be hindered which would further disrupt emergency response. Damaged CCUSD infrastructure would also disrupt public education service, and could take a significant amount of time to rectify. A major liquefaction incident at a CCUSD facility would require mass evacuations, requiring quick and substantial response from public safety agencies.

As discussed in [Section 3.5](#), population patterns have not substantially changed within the planning area during the last five years. Both the Culver City population and CCUSD enrollment remain stable at levels previously identified in the 2017 MJHMP. The previous 2017 MJHMP identified 9,401 housing units within the liquefaction hazard zone; updated data indicates there is now 9,542 housing units within the liquefaction hazard zone, representing a growth of 141 housing units. The previous 2017 MJHMP reports approximately the same number of enrolled students and employed staff at listed vulnerable facilities. Enrollment at Echo Horizon School is not reported in the previous 2017 MJHMP, therefore it is unknown if the number of vulnerable individuals significantly changed within the last five years.

At the time of this MJHMP preparation, the City adopted an updated Housing Element and published a draft General Plan update, preparing for future growth. While it is unlikely that all approved, entitled, or proposed developments (including those identified in [Table 3-10](#)) will be constructed within the five-year period of this MJHMP, the City and CCUSD anticipate some level of population growth to occur. Therefore, this could result in additional housing units or non-residential construction occurring within the liquefaction hazard zone. At this time, no proposed projects under the purview of the City are expected to substantially increase liquefaction vulnerability. Future construction would be subject to the latest City Building and Safety Code, including seismic requirements that would decrease vulnerability associated with liquefaction risk.

Population growth within the City is reasonably expected to increase enrollment in CCUSD schools. At this time, CCUSD has not proposed any new facilities to accommodate projected population growth that would affect liquefaction risk or vulnerability.

Seismically Induced Landslides

Within the planning area steep slopes are mapped as at-risk for landslides. [Table 4-14, *Culver City - Facilities in a Landslide Hazard Zone*](#), identifies City critical facilities located within mapped landslide potential zones. Critical facilities within a mapped hazard zone include two parks, Blair Hills Park and the Culver City Park. Public parks primarily serve as a location for public safety agencies to stage emergency response efforts. Culver City Park (Critical Facility #21) is identified as a critical emergency response facility, and existing post-disaster plans identify this park as a debris collection and staging zone (as documented in the Debris Management Plan). As the Culver City Park is one of the largest open space facilities within the planning jurisdiction, this

critical facility could serve a variety of uses during and after an emergency incident. A seismic-induced landslide at the Culver City Park could substantially affect response efforts, and require contingency plan.

**Table 4-14
Culver City Facilities a Landslide Hazard Zone**

Map ID	Name	Asset Type	Total Loss Potential
19	Blair Hills Park	Parks and Recreation	\$120,000.00
21	Culver City Park (Bill Botts Field)	Parks and Recreation	\$491,492.00

Culver City identified approximately 185 residential units are located in a landslide susceptibility zone. Multiplied by 2.22 persons per unit within the planning area, it is assumed 411 individuals reside within a potential landslide hazard zone. Approximately 235,632 square feet of non-residential development are located within a landslide susceptibility zone.

CCUSD does not identify any critical facilities located within a landslide hazard zone. Therefore, it is assumed risk to CCUSD students and staff is minimal and vulnerability associated with landslide is considered low.

Because potential impacts associated with landslide could occur quickly and with little warning, vulnerability to landslide are extremely serious. In addition, landslide hazard maps document the likelihood and susceptibility of specific vulnerabilities, there is the potential for localized landslide incidents to occur outside of mapped hazard zones. Depending on the nature of the incident, landslides can require significant response from the City or other public safety agencies.

As discussed in [Section 3.5](#), population patterns, land use, or development, have not substantially changed within the planning area during the last five years. Both the Culver City population and CCUSD enrollment remain at stable levels previously identified in the 2017 MJHMP. The previous MJHMP identified no housing units or non-residential development within the landslide hazard zone; the increase in vulnerability as included in the updated MJHMP is due to utilizing an improved data resource from the California Geologic Survey, and not related to substantially changing population patterns, land use or development. The previous 2017 MJHMP does not list any CCUSD students or staff as vulnerable; the same finding is confirmed in this updated MJHMP.

At the time of this MJHMP preparation, the City adopted an updated Housing Element and published a draft General Plan update, planning for future growth. While it is unlikely that all approved, entitled, or proposed developments (including those identified in [Table 3-10](#)) will be constructed within the five-year period of this MJHMP, the City and CCUSD anticipate some level of population growth to occur. Therefore, this could result in additional housing units or non-residential construction occurring within the landslide hazard zone. At this time, no proposed projects under the purview of the City are expected to substantially increase landslide vulnerability. Future construction would be subject to the latest City Building and Safety Code, including hillside stability requirements that would decrease vulnerability associated with landslide risk.

Population growth within the City is reasonably expected to increase enrollment at CCUSD schools. At this time, CCUSD has not proposed any new facilities to accommodate projected population growth that would affect landslide risk or vulnerability.

DAC/SVP VULNERABILITY AND RISK ASSESSMENT

SVPs within the DAC are most vulnerable to ground shaking and liquefaction seismic hazards. As there is no landslide hazard zone or mapped fault line within the DAC (Census Tract 7028.03), vulnerability to these specific hazards is considered low. Vulnerability to ground shaking within the DAC is comparable to the rest of the City. In addition, there is a mapped liquefaction hazard zone within the DAC. SVPs (and other high-risk individuals located throughout the planning area) may have limited means or ability to prepare for earthquakes within the planning area. Low-income households may live in older buildings more vulnerable to ground shaking or liquefaction, and may require financial assistance to retrofit or prepare for seismic hazards. In addition, SVPs may need assistance in evacuation or finding temporary housing after a hazard event. These considerations were included in [Section 5.0](#) as Mitigation Action #51.

Socioeconomically disadvantaged children and staff at CCUSD may need additional support during and following seismic hazards. Socioeconomically disadvantaged children may have parents or guardians with fewer resources to immediately pick-up children following an evacuation request or provide extended childcare if public schools are closed for significant periods of time. Natural hazards may also be major disruptive events affecting the mental health of already socioeconomically disadvantaged children. For CCUSD, staff with fewer resources to respond to natural hazard events may have challenges reporting to their jobs.

4.4.3 FLOOD HAZARDS

FLOOD HAZARDS DESCRIPTION

Flooding occurs when a waterway, either a natural one or an artificial drainage channel, receives more water than it is capable of conveying, causing the water level in the waterway to rise. Depending on how long these conditions last and the amount of water the waterway receives in proportion to its capacity, the rising water level may eventually overtop the waterway's banks or any other boundaries to the drainage area, resulting in flooding in the surrounding area.

Floods often occur during heavy precipitation events, when the amount of rainwater exceeds the capacity of storm drains or flood control channels. Floods can also happen when infrastructure such as levees, dams, or culverts fail, or when a section of drainage infrastructure fails and water cannot be drained from an area fast enough. These failures can be linked to precipitation events (e.g., when water erodes away a levee, allowing water to escape and flood nearby areas), or can be a consequence of other emergency situations (e.g., a dam collapsing due to an earthquake).

FEMA defines flood or flooding as a general and temporary condition of partial or complete inundation of normally dry land areas from:

- The overflow of inland or tidal waters;
- The unusual and rapid accumulation or runoff of surface waters from any source; or,
- Mudslides which are proximately caused by flooding and are akin to a river of liquid and flowing mud on the surfaces of normally dry land areas, as when earth is carried by a current of water and deposited along the path of the current.

- Collapse or subsidence of land along the shore of a lake or similar body of water as a result of erosion or undermining caused by waves or currents of water exceeding anticipated cyclical levels that result in a flood as defined above.²²

Floods can be caused by a number of factors, including:

- Weather and climate patterns (e.g., El Niño, La Niña, Pineapple Express, Atmospheric River, etc.)
 - El Niño and La Niña are complex weather patterns resulting from variations in ocean temperatures in the equatorial Pacific. Warmer or colder than average ocean temperatures in one part of the world can influence weather around the globe. El Niño and La Niña episodes typically last 9 to 12 months, but some prolonged events may last for years.²³
 - Pineapple Express is a name given to an atmospheric river on the West Coast. It is a channel in the atmosphere that moves vast amounts of moisture and can result in massive rain showers.
- Hydrologic features such as reservoirs, ponds, lakes, rivers, etc., can have a large impact on the amount of flooding.
- The absorption capacity of the ground depends on the composition of soil and bedrock of the area. Less absorbent soil conditions in addition to lack of proper storm infrastructure can result in flooding.
- Type and density of vegetation is related to moisture absorption affecting the flow of water.
- Patterns of land use/urbanization relates to the pervious and impervious nature of the ground.
- Expected level, age, and condition of flood management infrastructure can impact flooding conditions.
- Large-scale wildfires dramatically alter the terrain and ground conditions. Vegetation absorbs rainfall, reducing runoff. However, wildfires leave the ground charred, barren, and unable to properly absorb water, creating conditions ripe for flash flooding and debris flow. Flood risk remains significantly higher until vegetation is restored – up to five years after a wildfire.²⁴

PAST OCCURRENCES

Floods are among the most common types of disaster in California. According to the SHMP, there have been 34 state-proclaimed flood emergencies and 15 federally declared flood disasters in California from 1992 to February 2018. Of the 15 federally declared floods, Los Angeles County was impacted by 10 of the disasters.

Los Angeles County had 34 state and federal declared flood disasters from 1950 to February 2018, tied with San Bernadino County for the highest amount of flood disasters in California for this period. Flooding in Los Angeles County primarily occurs in the areas immediately around the Los Angeles River, which is located approximately nine miles from the City. Floods in the early 20th century triggered major civil engineering efforts to construct regional stormwater drainage systems, channelizing major waterways including Ballona Creek within the planning area.

²² FEMA, *Glossary: Flood*, <https://www.fema.gov/glossary/flood#:~:text=A%20general%20and%20temporary%20condition,inland%20or%20tidal%20waters%3B%20or,> accessed May 2, 2023.

²³ NOAA, *What are El Nino and La Nina?*, <https://oceanservice.noaa.gov/facts/ninonina.html>, accessed May 2, 2023.

²⁴ FEMA, *Flood Risk Increases After Fires Are Out – Buy Flood Insurance Now*, <https://www.fema.gov/fact-sheet/4562/flood-risk-increases-after-fires-are-out-buy-flood-insurance-now>, published October 21, 2020, accessed July 12, 2022.

The main waterway in the planning area is Ballona Creek, which runs approximately nine miles from the Mid-Wilshire neighborhood of Los Angeles through the planning area and out to the Pacific Ocean at Marina Del Rey. Ballona Creek was channelized, straightened, and deepened in the 1930s to control flooding. While local and regional drainage systems have decreased the frequency and likelihood of major flooding, risk for future flooding still exists.

The planning area has been relatively free of major flood events in previous years, although localized flooding has occurred during intense precipitation. For example, in January of 2008, a powerful Pacific storm caused flash flooding in the region. Interstate 405 was flooded near the Braddock Road offramp by the planning area, but no damage was reported.²⁵ During the heavy precipitation events during the winter of 2022 – 2023, the City experienced erosion damage at the City Public Works Facility above the Ballona Creek Channel and slope instability at the rear of 9530 Jefferson Boulevard. Temporary mitigation measures and remediation actions were immediately identified. No specific flooding impacts occurred at CCUSD critical facilities. While the planning area was included in several NOAA issued flood-watch and flood warnings, the local storm drain infrastructure and Ballona Creek accommodated the increased precipitation.

Several federally declared flood disasters have occurred within the planning area since the adoption of the previous MJHMP. A list of federally declared flood disasters is included below; refer to Table 4-28, Summary of Federally Declared Disasters Affecting the Planning Area for further details regarding specific impacts (if any) to Culver City or CCUSD.

- DR 4305, Severe Winter Storms, Flooding and Mudslides in California – March 16, 2017
- DR 3591, California Severe Winter Storms, Flooding and Mudslides – January 9, 2023
- DR 4683, California Severe Winter Storms, Flooding, Landslides, and Mudslides – January 14, 2023
- DR 3592, California Severe Winter Storms, Flooding, Landslides, and Mudslides – March 10, 2023

LOCATION/GEOGRAPHIC EXTENT

Areas of particular concern within the planning area include flood zones near Ballona Creek, which runs from the northeast portion of the City through the City center. FEMA flood maps indicate that a few locations in the northern part of the City are at an elevated risk for flooding; refer to Exhibit 4-5, FEMA Flood Zones. A small area, bordered roughly by Ballona Creek, Fairfax Avenue, and Adams Boulevard lies within a 100-year flood zone for a one to three foot flood, meaning that there is a one in 100 chance that a flood event sufficient to cause one to three feet of inundation will occur in any given year (Zone AO). Two additional areas nearby, one between Eastham Drive and Ballona Creek and the second in the area immediately adjacent to Ballona Creek between National Boulevard and Sentney Avenue, are also within a 100-year flood zone, although FEMA does not specify the potential amount of inundation in this area (Zone A). Another part of the planning area, between Adams Boulevard and Dauphin Street, is at risk from a flood capable of causing inundation of less than 1 foot with a chance of occurring between one in 100 and one in 500 in any given year (Zone X).

MAGNITUDE/SEVERITY

Magnitude and severity of flooding generally results from prolonged heavy rainfall and are characterized by high intensity, short duration runoff events. Floods usually occur during the season of highest precipitation events or during heavy rainfalls after long dry spells. The force of

²⁵ NOAA, *Storm Events Database*, <https://www.ncdc.noaa.gov/stormevents/eventdetails.jsp?id=75235>, accessed May 3, 2023.

a flood is sufficient to carry away large objects and damage structures, causing considerable damage to buildings and infrastructure. In severe instances, floodwaters themselves can destroy structures or move them off their foundation. Floods can saturate and weaken soil, potentially making structures built on them more susceptible to damage or collapse. Flooding can also affect water quality, as large volumes of water can transport contaminants into water bodies and overload storm/wastewater systems. Additionally, large increases in water volume can cause water body erosion and loss of aquatic habitat. Flooding can also cause economic loss to people and government due to the destruction of property and/or infrastructure. Flood events may be particularly destructive when they create conditions conducive to geologic hazards including landslides or debris flows.

The extent or magnitude of flooding is measured by percentage and annual chance floods. The flooding areas are classified as 1 in 100 (one percent) or high risk, and 1 in 500 (0.2 percent) or moderate risk of flooding. Areas having a chance of less than 0.2 percent are classified as low risk areas. Floods are measured by stream gages that are installed in bodies of water near populated areas. They are installed and operated by the United States Geological Survey (USGS) and continuously monitor water levels.

**Table 4-15
Flood Zones Definitions**

Zone	Risk
Floodplain – 100-year flood zone (A, AE, AH, AO, VE)	1% annual flood risk
Floodway – 100-year flood zone (AE)	1% annual flood risk
500-year flood zone	0.2% annual flood risk
Area with reduced flood risk due to levee	Reduced flood risk
Source: FEMA, <i>FEMA Flood Maps and Zones Explained</i> , https://www.fema.gov/blog/fema-flood-maps-and-zones-explained , accessed August 23, 2023.	

PROBABILITY OF FUTURE OCCURRENCES

There is a medium probability of a significant flood occurring within the planning area. FEMA defines flood zones based on the probability of occurrence, expressed in a percentage of the change of a flood of a specific extent occurring in any given year. For areas located within the 100-year flood zone, there is a 1 percent chance in a given year that this area will be inundated by flood waters. For moderate flood hazard areas located within the 500-year flood zone, this probability decreases to 0.2 percent. For minimal flood hazard areas, they are located outside of the 0.2 percent annual chance flood.

CLIMATE CHANGE CONSIDERATIONS

Climate change is likely to have a direct effect on flooding. According to research conducted by the University of California, Los Angeles, California will experience extremely wet and extremely dry seasons by the end of the century. It is predicted that “over the next 40 years, the State will be 300 to 400 percent more likely to have a prolonged storm sequence as severe as the one that caused the legendary California flood more than 150 years ago.”²⁶

This research team confirmed the recent findings from a New York Times article titled “The Coming California Megastorm,” predicting a future superstorm exacerbated by climate change. A warmer climate can carry atmospheric rivers in rapid succession to California, testing the capacity of dams and flood control infrastructure. The risk of a month-long megastorm as modeled and visualized by this article has a one in 50 chance of occurring annually. If global temperatures continue to climb, the likelihood of such a storm could increase to one in 30.²⁷ Thus, flood considerations should continue to remain a mitigation priority into the future.

VULNERABILITY AND RISK ASSESSMENT

The planning area has several mapped zones known to be vulnerable to flood. The flood hazard zone in the City is relatively small, covering 28.3 acres (approximately 0.8 percent of the community’s land area) in the northeastern corner of the planning area. Additionally, a portion of the special flood zone is located within designated flood hazard areas, including channelized Ballona Creek, Sepulveda Channel, and Centinela Creek Channel. Assets located within a special flood zone include two bridges and one City park. Table 4-16, Critical Facilities in the Flood Hazard Zone, identifies the critical facilities within the flood hazard zone.

Significant flood events could result in inundation or damage to the critical facilities identified below. Considering the primary type of critical facility impacted above are bridges, floods could impact ingress or egress. The National Boulevard Bridge over Ballona Creek (Critical Facility #44) is a major east-west arterial, providing egress through the City to the City of Los Angeles and unincorporated areas of Los Angeles County. The I-405 Freeway Bridge over Ballona Creek is a major regional transportation route, providing north-south access through the Los Angeles metropolitan region. Both bridges are critical components of the local and regional transportation system, and would be utilized for both evacuation and emergency response purposes. Inundation may impact operations or public safety agency response in the case of an emergency.

**Table 4-16
Critical Facilities in a Flood Hazard Zone**

Map ID	Name	Asset Type	Total Loss Potential
14	Syd Kronenthal Park	Parks and Recreation	\$944,000.00
44	National Boulevard Bridge over Ballona Creek	Transportation - Bridge	\$7,200,144.00*
51	I-405 Freeway Bridge over Ballona Creek	Transportation - Bridge	\$49,950,857.00*
* Replacement Values Generated Using FEMA HAZUS Estimations (HAZUS 6.0 Inventory Technical Manual).			

Culver City identified approximately four residential units are located within a FEMA designated flood hazard zone. As the persons per household in Culver City is 2.22, it is assumed

²⁶ UCLA Newsroom, *Study forecasts a severe climate future for California*, <https://newsroom.ucla.edu/releases/california-extreme-climate-future-ucla-study>, accessed July 12, 2023.

²⁷ New York Times, *The Coming California Megastorm*, <https://www.nytimes.com/interactive/2022/08/12/climate/california-rain-storm.html>, published August 12, 2022, accessed July 12, 2023.

approximately nine individuals reside in a flood hazard zone. The majority of the City's flood zone is located within an industrial corridor. Approximately 333,729 square feet of non-residential structures are located within a flood hazard zone.

CCUSD does not identify any critical facilities located within a flood hazard zone. Therefore, it is assumed risk to CCUSD students and staff is minimal and vulnerability associated with flood is considered low.

FEMA National Flood Hazard Maps account for areas susceptible to major or regional flooding; these hazard maps do not account for localized flooding incidents that could impact the City on a smaller scale. Localized floods could impede access to critical facilities, create impassable conditions for first responders, or damage/destroy structures. Access challenges can delay proper life safety response and increase the severity of impacts, depending on the location and extent of the flood. A significant rain event may result in localized flooding outside of mapped flood zones that may impact the City's ability to respond or evacuate.

As discussed in [Section 3.5](#), population patterns have not substantially changed within the planning area during the last five years. Both the Culver City population and CCUSD enrollment remain at stable levels previously identified in the 2017 MJHMP. The previous MJHMP did not identify the number of housing units located in the flood zone, but conservatively estimated approximately 20 to 30 residents within the flood hazard zone. Estimates produced with 2023 parcel map data now indicate four residential units within the flood hazard zone, thus estimates nine individuals residing in these units. This decrease in vulnerability as included in the updated MJHMP is due to utilizing an updated data resource, and not related to substantially changing population patterns, land use, or development. The previous 2017 MJHMP does not list any CCUSD students or staff as vulnerable; the same finding is confirmed in this updated MJHMP.

At the time of this MJHMP preparation, the City adopted an updated Housing Element and published a draft General Plan update, planning for future growth. While it is unlikely that all approved, entitled, or proposed developments (including those identified in [Table 3-10](#)) will be constructed within the five-year period of this MJHMP, the City and CCUSD anticipate some level of population growth to occur. Due to the City's Floodplain Management Ordinance, it is unlikely that additional housing units, non-residential development, or critical City/CCUSD facilities will be constructed within a mapped FEMA flood zone. At this time, no proposed projects under the purview of the City are expected to substantially increase flood vulnerability. Future construction would be subject to the latest City Building and Safety Code and Floodplain Management Ordinance, including requirements that would decrease vulnerability associated with flood risk.

Population growth within the City is reasonably expected to increase enrollment at CCUSD. At this time, CCUSD has not proposed any new facilities to accommodate projected population growth that would affect flood risk or vulnerability.

DAC/SVP VULNERABILITY AND RISK ASSESSMENT

There are no mapped flood zones located within the DAC (Census Tract 7028.03); vulnerability to a significant flood event is considered low for SVPs. Difficulty with evacuations, communication and outreach would be unlikely due to the low risk of flood hazards within the DAC. The primary concern for SVPs within the DAC other high-risk individuals across the planning area would be localized flooding. SVPs may be particularly vulnerable to flood impacts because of a lack of mobility, inability to evacuate efficiently and/or limited economic resources. Localized flooding may impact local roads and hinder access for SVPs and other high-risk individuals; however,

recurrent localized flooding has not been an issue for the City. The City can help SVPs be better prepared for floods by crafting community-specific flood warnings, alerts, and education/outreach. These considerations were included in Section 5.0 as Mitigation Actions #1 and #3. Additionally, infrastructure and capital improvements to improve stormwater management can mitigate flood hazards and have been included in Section 5.0 as Mitigation Action #63.

Socioeconomically disadvantaged children and staff at CCUSD may need additional support during and following flood hazards. Socioeconomically disadvantaged children may have parents or guardians with fewer resources to immediately pick-up children following an evacuation request or provide extended childcare if public schools are closed for significant periods of time. Natural hazards may also be major disruptive events affecting the mental health of already socioeconomically disadvantaged children. For CCUSD, staff with fewer resources to respond to natural hazards events may have challenges reporting to their jobs.

4.4.4 SEVERE WEATHER

SEVERE WEATHER DESCRIPTION

Severe weather can be defined as any destructive weather event with the potential to damage property or cause loss of life. While the definition for what constitutes severe weather is highly localized by jurisdiction, the following types of weather events are categorized as severe weather for the planning area:

- High winds, including Santa Ana winds
- Tornadoes
- Thunderstorms and Heavy Rains
- Power Shutoff
- Extreme Heat

This hazard profile will discuss each of the above-mentioned hazards more specifically in the subsections below.

Windstorms

High winds are defined as those that last longer than one hour and are greater than 39 miles per hour (mph) or for any length of time at greater than 57 mph. High winds that affect the City are usually the Santa Ana winds. Santa Ana winds push dry air from the inland deserts of California and the Southwest over the mountains that lie between these desert areas and coastal California. Santa Ana winds are created when high pressure over the high desert of the Great Basin region causes winds to blow from the east, toward the Pacific Ocean and the lower air pressure offshore. The phenomenon is most common during the cooler months, occurring from the fall through late spring (September through May), and is usually accompanied by warmer than average temperatures.²⁸

Severe windstorms pose a significant risk to life and property by creating conditions that disrupt essential systems such as public utilities, telecommunications, and transportation routes. High winds can and do occasionally cause damage to homes and businesses. The winds are not considered major widespread threats to population and property, but do involve responses from emergency service crews. Severe windstorms can present a very destabilizing effect on the dry brush that covers local hillsides and wildland-urban interface areas and can increase wildfire

²⁸ NOAA National Weather Service, *Mountain and Valley Winds*, <https://www.weather.gov/safety/wind-mountain-valley>, accessed July 14, 2023.

threat. Destructive impacts to trees, power lines, and utility services also are associated with high winds. Falling trees can occasionally cause fatalities and serious structural damage while fallen power lines could cause widespread power outages and fire. These incidents are rare and localized.

Tornadoes

Tornadoes are violently rotating columns of air reaching from the ground's surface to a cloud, usually a thundercloud. The very high wind speeds of tornadoes can directly damage structures and other objects (such as trees), and can cause further damage by picking up heavy objects and hurling them around. Tornadoes are rare in Los Angeles County and California, but not unprecedented.

Thunderstorms/Heavy Rains

Thunderstorms are another type of severe weather which may affect the City. They bring lightning and thunder, and frequently (although not always), high winds and intense precipitation. While there are many types of thunderstorms of varying severity, they all form when warm moist air rises rapidly through an unstable atmosphere, allowing for the development of large thunderclouds. Lightning from thunderstorms can spark fires, and hailstorms can damage structures and injure people caught outside. Thunderstorms may also spark tornadoes, severe winds, and flooding from intense precipitation.

Heavy rains refer to events during which the amount of rainfall in a location substantially exceeds normal or typical rainfall conditions. Establishing a threshold to define periods of heavy rain varies greatly, depending on location and season. Heavy precipitation is not necessarily an indicator that the total amount of precipitation has increased, rather that precipitation is occurring in more intense events. Changes in the intensity of precipitation, coupled with changes in the interval between events, can affect overall precipitation totals.²⁹ One method for determining heavy rain events is to consider what percentage of a location's total annual precipitation has come from extreme, one-day events. Potential impacts of heavy rains include property damage, soil erosion, and increased flood risk (refer to [Section 4.4.3](#)), which in turn contribute to other hazards including debris flows and landslides (refer to [Section 4.4.2](#)). The contribution of heavy rains to other hazards has the potential to cause significant property damage and loss of life within the City.

Power Shutoff

Power outages are a major secondary effect of severe weather events in the City. An outage could result in damaged power equipment or equipment failures and can affect multiple jurisdictions for hours. This type of event can range from a moderate event to a catastrophic regional event that may threaten human life, safety, and health, or interferences with vital services.

A portion of the City receives electricity from Los Angeles Department of Water and Power, but the City is primarily serviced by Southern California Edison (SCE). During severe weather incidents such as high winds, extreme heat, or severe flooding, SCE may implement an operational practice called Public Safety Power Shutoffs (PSPS) to preemptively shut off power in high-risk areas during potentially dangerous conditions. This program is designed to proactively prevent SCE facilities from starting a wildfire in at-risk areas when winds, low-humidity, and temperatures are high.

²⁹ U.S. EPA, *Climate Change Indicators: Heavy Precipitation*, <https://www.epa.gov/climate-indicators/climate-change-indicators-heavy-precipitation>, accessed April 18, 2023.

Strong Santa Ana winds, high temperatures, and low humidity are all severe weather conditions that could trigger a PSPS event. It is possible for extreme weather incidents outside of the City to trigger a PSPS that affects the service area (i.e., strong winds affecting regional infrastructure that powers SCE grids in Los Angeles County). The frequency of these events depends on the weather and environmental factors, and SCE makes decisions based on internal threat thresholds, assessment of real-time information, and situational awareness data. When possible, SCE notifies customers prior to a PSPS event. When weather forecasts indicate extreme fire conditions, SCE begins predictive modeling to assess the potential impacts while monitoring weather watch alerts from the National Weather Service. Three days prior to the forecasted PSPS, SCE would coordinate first with local governments, the emergency management community, first responders, and other critical infrastructure/service providers. Two days prior to the forecasted PSPS, notices would go out to SCE customers with a follow-up one day before a notice of power shut off. It is noted that actual or sudden onset of extreme weather conditions could impact the intended coordination and notification efforts.³⁰

Outside of the PSPS events, there is the potential for unplanned power outages to occur within the City. SCE defines a major outage as a large, unexpected outage caused by either accidents or natural disasters. While uncommon, loss of electrical power is a potential secondary effect of heavy rains or strong winds. Other types of events that could occur is mechanical power failure due to aging equipment.

Extreme Heat

Extreme heat conditions generally refer to temperatures that are significantly higher than average for a particular regional location and time of year. Extreme or excessive heat can be a combination of high heat and humidity, leading to heat-related illness. The heat index, or the apparent temperature, is what the temperature feels like to the human body when relative humidity and air temperature are both considered. Relative humidity can significantly increase the heat index and contribute to dangerous health conditions.³¹ High heat and humidity can cause heat-related illness including heat cramps, heat exhaustion and heat stroke.³²

Extreme heat is location-specific and determined based on average temperature for a given location. While there is no universal definition for an extreme heat event, a common definition for planning in California identifies an extreme heat day as a day where the high temperature exceeds the average high temperatures of 98 percent of the historic days between April and October. For the City, this would generally be temperatures in excess of 90°F. Five extreme heat days in a row is considered a heat wave. The threat of extreme heat can be higher in urban areas, such as the City, where dark-colored roofs and paving materials cause the air temperature to be hotter; this is known as the urban heat island effect.

Excessive heat events often coincide with Santa Ana Winds and create conditions that are conducive to exacerbating wildfire events. The Santa Ana winds remove moisture in the air

³⁰ Southern California Edison, *Public Safety Power Shutoff*, <https://www.sce.com/wildfire/psps>, accessed April 18, 2023.

³¹ National Weather Service, *What is the Heat Index?*, <https://www.weather.gov/ama/heatindex#:~:text=The%20heat%20index%2C%20also%20known,sweat%20to%20cool%20itself%20off.>, accessed May 30, 2023.

³² National Weather Service, *Excessive Heat Conditions*, <https://www.weather.gov/phi/heatcond#Overview>, accessed May 30, 2023.

resulting in evaporation and dry vegetation.³³ Dry vegetation acts as a fuel for wildfires to grow, with the strong Santa Ana winds driving wildfire spread.³⁴

PAST OCCURRENCES

Windstorms

Santa Ana winds occur annually between October and March in the planning area, with winds at varying speeds and frequencies. Generally, the City receives less significant Santa Ana winds compared to other areas in Los Angeles County, such as the Santa Monica Mountains, Santa Clarita Valley, or San Gabriel Valley. Most recently, the City experienced strong winds accompanying the heavy rains experienced during the 2022 – 2023 rainy season. The City experienced minor damages associated with strong winds, mostly downed tree limbs.

No federally declared disasters relating to windstorms have occurred including the planning area within the last five years; refer to Table 4-28, *Summary of Federally Declared Disasters Affecting the Planning Area*.

Tornadoes

The south coastal region of California, including the Los Angeles Basin, has the greatest incidence of tornadoes in the state. From 1970 to January of 2023, Los Angeles County experienced 36 confirmed tornadoes.³⁵ The majority of these tornadoes were assigned a F0 magnitude (refer to Table 4-18, *Fujita Tornado Scale* below). None of these tornado events occurred within the planning area, but, in 2004, a weak tornado caused minor damage to trees and rooftops in nearby Inglewood. The cause of many, if not most, of the Los Angeles Basin tornadoes seem to be linked to the terrain layout of the basin. Tornadoes in the Los Angeles Basin are typically less severe than those in other parts of the country. There is no record of a tornado-caused fatality in Los Angeles.³⁶

No federally declared disasters relating to tornadoes have occurred including the planning area within the last five years; refer to Table 4-28, *Summary of Federally Declared Disasters Affecting the Planning Area*.

Thunderstorms/Heavy Rains

The rainy season in the planning area traditionally occurs between November and April; although, severe rains have occurred during other times of the year.³⁷ For five days from February to March of 1938, at least a foot of rain drenched most of Southern California.³⁸ The heavy storm rains caused all the region's rivers to flood, resulting in an estimated \$1 billion (current-day value) in damages. Los Angeles experienced heavy destruction from the rains and floods, and fear of future

³³ Spectrum News 1, *What are Santa Ana winds and do they cause wildfires?*, <https://spectrumnews1.com/ca/la-west/weather/2020/10/01/what-are-santa-ana-winds-and-do-they-cause-wildfires->, published November, 2021, accessed May 30, 2023.

³⁴ KTLA, *What are Santa Ana winds and how do they impact fire season?*, <https://ktla.com/news/local-news/what-are-santa-ana-winds-and-how-do-they-impact-fire-season/#:~:text=Santa%20Ana%20winds%20are%20often%20strong%20enough%2C%20and%20being%20warm,perfect%20environment%20for%20a%20fire.>, published June 3, 2022, accessed May 30, 2023.

³⁵ NOAA, *Storm Events Database*, https://www.ncdc.noaa.gov/stormevents/listevents.jsp?eventType=%28C%29+Tornado&beginDate_mm=01&beginDate_dd=01&beginDate_yyyy=1970&endDate_mm=01&endDate_dd=31&endDate_yyyy=2023&county=LOS%20BANGELES%3A37&hailfilter=0.00&torfilter=0&windfilter=000&sort=DT&submitbutton=Search&statefips=6%2CCALIFORNIA, accessed May 4, 2023.

³⁶ City of Los Angeles, *2018 local Hazard Mitigation Plan*, January 2018.

³⁷ USA Facts, *Climate in Los Angeles County, California*, <https://usafacts.org/issues/climate/state/california/county/los-angeles-county#climate>, accessed May 4, 2023.

³⁸ LA Times, *How the deluge of 1938 changed Los Angeles – and its river*, <https://www.latimes.com/california/story/2023-02-28/explaining-l-a-with-patt-morrison-the-legacy-of-the-1938-los-angeles-flood>, published February 28, 2023, accessed May 4, 2023.

overflow spawned flood control measures to be put in place along Ballona Creek during the subsequent decades.³⁹ By 1965, Ballona Creek was fully channelized, and this channelization, along with the channelization of the region’s other waterways, is credited for having prevented another catastrophic flood in the decades since.⁴⁰

Between December 2022 to March of 2023, the planning area experienced an unusually rainy winter due to a series of several storms fueled by an atmospheric river over the Pacific Ocean. The Ballona Creek storm gauge (located at the intersection of Sawtelle Boulevard and Ballona Creek) reports 28.55 inches of rainfall for the rainy season.⁴¹ Comparatively, the normal rainfall measured in nearby Downtown Los Angeles is 11.86 inches – with the rainy season in 2022 – 2023 over double the average amount of received rainfall.⁴² No specific damage or losses were reported by either the City or CCUSD.

Several federally declared heavy rain disasters have occurred within the planning area since the adoption of the previous MJHMP. A list of federally declared heavy rain disasters is included below; refer to Table 4-28, Summary of Federally Declared Disasters Affecting the Planning Area for further details regarding specific impacts (if any) to Culver City or CCUSD.

- DR 4305, Severe Winter Storms, Flooding and Mudslides in California – March 16, 2017
- DR 3591, California Severe Winter Storms, Flooding and Mudslides – January 9, 2023
- DR 4683, California Severe Winter Storms, Flooding, Landslides, and Mudslides – January 14, 2023
- DR 3592, California Severe Winter Storms, Flooding, Landslides, and Mudslides – March 10, 2023

Power Shutoff

The planning area (including both the City and CCUSD) has never experienced a citywide power outage due to severe weather or an SCE PSPS. Most recently in November 2021, SCE announced a PSPS in the region due to gusting Santa Ana winds and low humidity. At least 6,882 customers in Los Angeles County outside of the planning area lost power.⁴³ The incident is representative of regional trends, and the City is served by a circuit that crosses into a High Fire Risk area, so shutoffs may occur to prevent wildfires.⁴⁴ During heavy rains and storm conditions in February 2023, thousands of LADWP and SCE customers lost power; up to 78,000 LADWP customers were without power at one point and nearly 8,000 SCE customers in the County.⁴⁵ Overall, short-term power losses have primarily occurred as isolated incidents, without major impacts to the City.

³⁹ LA Times, *Column: It's flooding in Southern California. 85 years ago, the damage was way worse*, <https://www.latimes.com/california/story/2023-01-11/1938-flood-southern-california>, published January 11, 2023, accessed May 4, 2023.

⁴⁰ Friends of the Ballona Wetlands, *The Tides of Change*, <https://storymaps.arcgis.com/stories/fa20489354ff4a7bb9c60aacbae58a79>, published August 23, 2021, accessed May 4, 2023.

⁴¹ County of Los Angeles - Department of Public Works, *Rain Fall Interval (Inches) Tracker*, <https://dpw.lacounty.gov/wrd/rainfall/>, accessed July 20, 2023.

⁴² Los Angeles Almanac, *Total Seasonal Rainfall vs. Overall Seasonal Average*, <http://www.laalmanac.com/weather/we09a.php>, accessed July 20, 2023.

⁴³ The Press-Enterprise, *Thousands lose power in Southern California because of wildfire worries*, <https://www.pressenterprise.com/2021/11/24/dry-weather-high-winds-on-thanksgiving-day-raise-threat-of-wildfire-spread/>, published November 24, 2021, accessed April 21, 2023.

⁴⁴ Southern California Edison, *Check Outage Status*, <https://www.sce.com/outage-center/check-outage-status>, accessed October 5, 2022.

⁴⁵ LAist, *Thousands remain without power, dozens of roads closed including Grapevine overnight*, <https://laist.com/news/climate-environment/forecasters-say-the-heaviest-rain-is-behind-us-but-power-outages-and-closed-roads-are-still-very-much-here>, published February 25, 2023, accessed April 21, 2023.

No federally declared disasters relating to power outages have occurred including the planning area within the last five years; refer to [Table 4-28, *Summary of Federally Declared Disasters Affecting the Planning Area*](#).

Extreme Heat

On average, the planning area experienced two extreme heat days per year between 1961 and 1990.⁴⁶ The typical range over that period was 0-12 extreme heat days per year. The NOAA database reports two extreme heat events in August - September 2007 and June 2008, where temperatures in Los Angeles County exceeded 100°F, which resulted in numerous heat-related injuries or death.⁴⁷

Several heatwaves occurred in the planning area during 2022, including July and August. The most significant heatwave in 2022 occurred over Labor Day weekend, where temperatures in the planning area and West Los Angeles exceeded 100°F. This event was the most significant September heatwave in California history, and pushed the electric grid to the brink of rolling blackouts. The California Independent System Operator issued several emergency alerts, and narrowly avoided rotating power outages.⁴⁸

No federally declared disasters relating to extreme heat have occurred including the planning area within the last five years; refer to [Table 4-28, *Summary of Federally Declared Disasters Affecting the Planning Area*](#).

LOCATION/GEOGRAPHIC EXTENT

Windstorms

Generally, the Santa Ana winds blow westward through the canyons and into the coastal areas of southern California, including the planning area. While the planning area is not positioned in direct relation to mountains or canyons, Santa Ana winds broadly affect the Los Angeles area.⁴⁹ Specific neighborhoods or City/CCUSD assets in the planning area are not more vulnerable to Santa Ana winds due to geography or topography, thus windstorms would generally impact the entirety of the planning area.

Tornadoes

While California has tornadoes, such storms represent a relatively low risk compared to areas in the Midwestern and Southern United States. However, the south coastal region of California has the greatest incidence of tornadoes in the State.⁵⁰ Specific neighborhoods in the planning area are not more vulnerable to tornadoes than any other due to geography or topography. A tornado could form anywhere and impact any area within the planning area, including both City and CCUSD assets.

⁴⁶ Cal-Adapt, *Extreme Heat Days and Warm Nights*, <https://cal-adapt.org/tools/extreme-heat/>, accessed May 30, 2023.

⁴⁷ NOAA, *Storm Events Database*, https://www.ncdc.noaa.gov/stormevents/listevents.jsp?eventType=%28Z%29+Excessive+Heat&beginDate_mm=02&beginDate_dd=01&beginDate_yyyy=2003&endDate_mm=02&endDate_dd=28&endDate_yyyy=2023&county=LOS%2BANGELES%3A37&hailfilter=0.00&tornfilter=0&windfilter=000&sort=DT&submitButton=Search&statefips=6%2CCALIFORNIA, accessed May 30, 2023.

⁴⁸ Los Angeles Times, *California pushed to the limit by a relentless heat wave that broke the mold*, <https://www.latimes.com/california/story/2022-09-07/extreme-heat-across-california-lingers-threat-of-blackouts-grows>, published September 7, 2022, accessed July 20, 2023.

⁴⁹ City of Los Angeles, *2018 Local Hazard Mitigation Plan*, January 2018.

⁵⁰ City of Los Angeles, *2018 Local Hazard Mitigation Plan*, January 2018.

Thunderstorms/Heavy Rains

When thunderstorms and heavy rains occur, the entire planning area is susceptible to negative impacts. Generally, areas identified by FEMA as a floodplain are more likely to experience flooding impacts during severe heavy rains. Localized flooding could also occur outside of FEMA identified flood zones, due to undersized or clogged stormwater infrastructure.

Power Shutoff

SCE designates High Fire Risk Areas as areas with circuits within California Public Utilities Commission's (CPUC) Tier 2 (elevated risk) and Tier 3 (extreme risk) Fire Threat Areas. The CPUC Fire-Threat Map was developed with input from the U.S. Forest Service, California Department of Forestry and Fire Protection, and the State's investor-owned utilities, including SCE. SCE uses their own thresholds prior to initiating a PSPS event. When evaluating weather and environmental conditions, SCE considers a variety of factors which include but are not limited to:

- National Weather Service Red Flag Warnings;
- SCE meteorological assessments;
- SCE Fire Potential Index;
- SCE Fire Scientist assessments;
- Real-time situational awareness information;
- SCE Fire Management/Office of Emergency Management input;
- Concerns from local or State fire authorities;
- Mandatory or voluntary evacuation orders in place;
- Expected impact of de-energizing circuits on essential services (including public safety agencies, water pumps, traffic controls, etc.); and
- Other operational considerations to minimize wildfire ignitions.

Extreme Heat

An extreme heat events are regional occurrences and impact the entirety of the planning area. Specific neighborhoods in the planning area are generally not more vulnerable to extreme heat than others. The Culver City Downtown and urban core may experience nominally higher temperatures compared to open space areas in the Blair Hills neighborhood due to the urban heat island effect, but such differences in temperature would be nominal.

MAGNITUDE/SEVERITY

Windstorms

The severity and magnitude of hurricane winds are measured using the Saffir-Simpson Hurricane Wind Scale. Although hurricane events are not typical within the planning area, the scale can be used to measure strong winds that are not associated with a hurricane event. The scale uses measurements in pressure, wind speed, and damage potential to identify the types of damage associated with sustained wind events; refer to [Table 4-17, Saffir-Simpson Hurricane Wind Scale](#). The specific magnitude, severity and actual impacts from a Santa Ana wind events can vary greatly due to the sustained windspeed and duration of the event.

Table 4-17
Saffir-Simpson Hurricane Wind Scale

Category	Sustained Wind Speed	Description of Damage
1	74–95 mph	Very dangerous winds will produce some damage: Well-constructed frame homes could have damage to roof, shingles, vinyl siding, and gutters. Large branches of trees will snap, and shallowly rooted trees may be toppled. Extensive damage to power lines and poles likely will result in power outages that could last a few to several days.
2	96–110 mph	Extremely dangerous winds will cause extensive damage: Well-constructed frame homes could sustain major roof and siding damage. Many shallowly rooted trees will be snapped or uprooted and block numerous roads. Near-total power loss is expected with outages that could last from several days to weeks.
3	111–129 mph	Devastating damage: Well-built framed homes may incur major damage or removal of roof decking and gable ends. Many trees will be snapped or uprooted, blocking numerous roads. Electricity and water will be unavailable for several days to weeks after the storm passes.
4	130–156 mph	Catastrophic damage: Well-built framed homes can sustain severe damage with loss of most of the roof structure and/or some exterior walls. Most trees will be snapped or uprooted and power poles downed. Fallen trees and power poles will isolate residential areas. Power outages will last weeks to possibly months. Most of the area will be uninhabitable for weeks or months.
5	157 mph or higher	Catastrophic damage: A high percentage of framed homes will be destroyed, with total roof failure and wall collapse. Fallen trees and power poles will isolate residential areas. Power outages will last for weeks to possibly months. Most of the area will be uninhabitable for weeks or months.
Source: National Hurricane Center, <i>Saffir-Simpson Hurricane Wind Scale</i> , https://www.nhc.noaa.gov/aboutsshws.php , accessed April 21, 2023.		

Tornadoes

Despite tornadoes in the Los Angeles area being low in intensity and short-lived, the frequency of occurrences and density of the Los Angeles urban area makes tornadoes a relevant hazard for the planning area. Wind speeds in tornadoes range from below that of hurricane speeds to more than 300 miles per hour. The maximum winds are often confined to very small areas and vary substantially over very short distances, even within the tornado funnel. Tornadoes can occur throughout the year at any time of day but are most frequent from November through March, specifically in the spring during the late afternoon. Tornadoes may result in property damage, agricultural and landscape destruction, injuries, and even deaths. The magnitude and severity of tornado impacts can vary on location, wind speed, and duration of the event. Tornadoes are categorized using the Enhanced Fujita Scale or EF Scale based on estimated wind speeds and related damage. The EF Scale replaced the original Fujita Scale in 2007 to better categorize tornadoes by more closely estimating wind speeds based on associated storm damage. Refer to Table 18, *Enhanced Fujita Tornado Scale*, which shows the EF Rating and associated wind speeds for tornadoes. Historically, tornadoes in Los Angeles County remain at the EF0 category and rarely exceed into the EF1 tornado category.

Table 4-18
Enhanced Fujita Tornado Scale

EF Rating	3 Second Gust
0	65-85 mph
1	86-110 mph
2	111-135 mph
3	136-165 mph
4	166-200 mph
5	Over 200 mph
Note: The EF scale still is a set of wind estimates (not measurements) based on damage. It uses three-second gusts estimated at the point of damage based on damage indicators. These estimates vary with height and exposure. Important: The 3 second gust is not the same wind as in standard surface observations. Standard measurements are taken by weather stations in open exposures, using a directly measured, "one minute mile" speed. Source: NOAA/National Weather Service, <i>The Enhanced Fujita Scale (EF Scale)</i> , https://www.weather.gov/oun/efscale , accessed February 6, 2024.	

Thunderstorms/Heavy Rains

The magnitude and severity of thunderstorms and heavy rains can vary due to the duration and intensity of each event. Over the last 125 years, the average annual rainfall in Los Angeles County is 14.9 inches. But the term “average” means very little, as the annual rainfall during this time period has ranged from 38.2 inches in 1883-1884 to 4.35 inches in 2001-2002. This makes the Los Angeles basin a land of extremes in terms of annual precipitation. The most severe heavy rain events in the planning area have resulted in localized flooding, downed tree limbs/power lines, and limited power outages. Regionally, severe heavy rain events across the Los Angeles Metropolitan Area have resulted in substantial property damage, injuries and even death.

During uncharacteristically heavy storms or rain events these drainage systems may not be sufficient to move stormwater flows and thus, result in flooding. Flooding from heavy rain events most often affects the City within the 100-year flood zones. Severe storms could also cause overtopping of dams or reservoirs (refer to Section 4.4.6, *Dam/Reservoir Failure*) or threaten slope stability (refer to Section 4.4.2, *Seismic Hazards*).

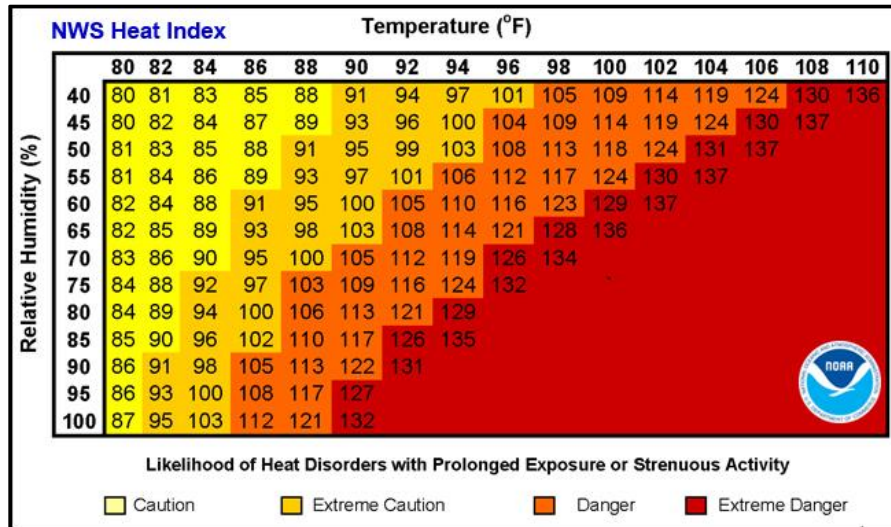
Power Shutoff

The magnitude or extent of impacts to the City would depend on the duration of the outage and the size of the impacted area. Prolonged or widescale power shutoffs across the planning area or Los Angeles region could significantly disrupt City/CCUSD operations and emergency response. The City relies on permanent and portable generators to power critical facilities and traffic lights, but would require a coordinated response to maintain service to constituents. CCUSD also has access to limited generators in the case of extended power outages, and would coordinate with City resources as well. Existing generator capacity would be sufficient to address small scale or short power shutoffs affecting portions of the planning area.

Extreme Heat

An extreme heat event in the planning area occurs when daily maximum temperature exceeds 91.2 degrees. The heat index is used by the NWS to help identify the magnitude of extreme heat events and predict potential impacts. The severity of extreme heat increases with time and exposure, meaning that a prolonged period of extreme heat for a number of days can be particularly dangerous. Extreme heat events over a number of days can strain the electric grid and slow public safety agency response. Vulnerable populations, such as senior citizens, children, or unhoused individuals, may be disproportionately burdened by extreme heat events within the planning area. Exhibit 4-6, *Heat Index*, shows the likelihood of heat disorder with prolonged exposure or strenuous activity associated with temperature and relative humidity.

**Exhibit 4-6
Heat Index**



Source: National Weather Service, *What is the Heat Index?*,

<https://www.weather.gov/ama/heatindex#:~:text=The%20heat%20index%2C%20also%20known,sweat%20to%20cool%20itself%20off.,> accessed May 30, 2023.

PROBABILITY OF FUTURE OCCURRENCES

Windstorms

Santa Ana winds are a known occurrence within the planning area, and are generally expected to continue into the future. The probability of future strong winds is considered high, due to the geographic location of the City.

Tornadoes

While rare, tornadoes have historically occurred within Los Angeles County. It is assumed tornadoes will continue to infrequently occur, with a probability of future occurrences in the planning area is considered low.

Thunderstorms/Heavy Rains

Based on previous occurrences and weather trends in the planning area and Los Angeles County, there is a high probability that storms and heavy rains will continue to occur in the planning area.

Power Shutoff

The probability of power outages as a secondary impact is considered medium, based on the continued Santa Ana wind and wildfire conditions in the southern California region.

Extreme Heat

Based on recent and historical extreme heat incidents, the probability of future occurrences in the planning area is considered high.

CLIMATE CHANGE CONSIDERATIONS

Windstorms

It is anticipated that wind patterns and Santa Ana wind development may be altered due to climate change. The resulting change is expected to cause an increase in the number of intense storms,

which could lead to an increase in the frequency of strong winds, thunderstorms, and other severe weather.

Tornadoes

Scientists are uncertain how climate change will impact tornado occurrences.⁵¹ However, the individual weather components, including moisture and wind shear, that can lead to the development of tornadoes are understood. As global temperatures rise, the atmosphere will hold more moisture thereby increasing atmospheric instability, but wind shear will likely decrease. These two forces counteract each other, making it difficult to predict how tornado formation may change. Recent years have shown that tornado events are becoming more clustered in time. Research also suggests that the geographic patterns of tornadoes have shifted; fewer tornadoes are occurring in “Tornado Alley” while more tornadoes are beginning to occur in outlying states.

Thunderstorms/Heavy Rains

Climate change will affect the frequency and intensity of heavy rain events. According to research conducted by UCLA, California will experience both extremely wet and extremely dry seasons by the end of the century. Climate scientists predict that “over the next 40 years, the State will be 300 to 400 percent more likely to have a prolonged storm sequence as severe as the one that caused the legendary California flood more than 150 years ago.” This could increase secondary effects, such as flooding, erosion, or wildfire events.

Power Shutoff

SCE reports that increased power outages are directly related to climate change, and that PSPS will become “the new normal during high fire/wind events”. PSPS will become increasingly necessary to mitigate fire risk if increased severity and duration of extreme weather events continue to occur.

Extreme Heat

Climate change is understood to have a direct impact on temperature. As global temperatures rise, there will be an increased occurrence and prolonged duration of extreme heat events. It is estimated that if climate change continues under a medium emissions scenario, the planning area would experience an average of 6 extreme heat days per year between 2035 – 2046, with a range of up to 22 heat days in a given year. Projections further estimate that by the end of the century (2070-2099), the annual average number of heat days could be as high as 8 with a range of 0-24 extreme heat days in a given year.⁵² The greatest temperature increases are likely to occur in more inland areas, but scientists have identified moderate-temperature areas, such as the planning area, as being at an elevated risk because people in these areas are not used to extreme heat.

VULNERABILITY AND RISK ASSESSMENT

Severe weather includes windstorms (Santa Ana winds), tornadoes, heavy rains/thunderstorms, and extreme heat. These natural hazards could impact the entire of the City and CCUSD; therefore, all the City and CCUSD critical facilities, infrastructure systems, structures, residents, and businesses are considered vulnerable to severe weather hazards. This would include the entire population of Culver City (approximately 40,000 people) and CCUSD students/employees (approximately 7,000 students and 450 estimated staff members).

⁵¹ National Geographic, *Tornadoes and Climate Change*, <https://education.nationalgeographic.org/resource/tornadoes-and-climate-change/>, updated May 19, 2022, accessed April 24, 2023.

⁵² Ibid.

Windstorms, thunderstorms and heavy rains could cause damage to City and CCUSD buildings or infrastructure, although it is generally not significant enough to damage critical facilities or substantially impact City or CCUSD operations. Santa Ana wind events are known to cause communication issues, which can disrupt technology infrastructure or result in response challenges. Heavy rains can result in physical access challenges to critical facilities if roads are flooded or otherwise unsafe for access. While rare, tornadoes can cause substantial damage depending on the location and duration of high winds. There is not a substantial history of tornadoes occurring within the planning area, and no previous impacts to City or CCUSD critical facilities.

Extreme heat incidents do not typically result in physical damage to buildings and infrastructure, and thus City and CCUSD critical facilities are not at risk of destruction or structural failure. Instead, City and CCUSD operations can be affected due to human health concerns such as increased risk to heat stroke or other heat-related illnesses. In some cases, cooling centers may be used to temporarily address the health effects of extreme heat. Extreme heat events can also increase the burden on power suppliers due to increased electricity consumption.

Heavy rains, windstorms, tornadoes and extreme heat events may result in power outages or power shutoffs. Power outages are more likely to occur during a severe weather event, primarily strong winds associated with Santa Ana wind events. Proactive power outages are becoming more common from utility providers during predicted strong Santa Ana wind conditions due to the risk of wildfires. The associated power outages impact the City/CCUSD's ability to provide services and respond to emergencies. The City/CCUSD may rely on generators while SCE power is unavailable.

As discussed in [Section 3.5](#), population patterns have not substantially changed within the planning area in the last five years. Both the Culver City population and CCUSD enrollment remains stable at levels previously identified in the 2017 MJHMP. No major changes in land use and development occurred while the previous 2017 MJHMP was active that would affect risk or vulnerability associated with severe weather, including windstorms, tornadoes, thunderstorms/heavy rains, power shutoffs or extreme heat.

At the time of this MJHMP preparation, the City adopted an updated Housing Element and published a draft General Plan Update, planning for future growth. While it is unlikely that all approved, entitled, or proposed developments (including those proposed in [Table 3-10](#)) will be constructed within the five-year active period of this MJHMP, the City and CCUSD anticipate some level of population growth to occur. Population growth within the City is therefore expected to increase enrollment in CCUSD schools. As the entirety of the planning area would be vulnerable to the effects of severe weather, any projected population growth within the City or enrollment at CCUSD would increase the number of vulnerable individuals. At this time, no proposed projects under the purview of the City are expected to substantially increase severe weather vulnerability. CCUSD has not proposed new facilities to accommodate projected growth that would affect severe weather risk or vulnerability.

DAC/SVP VULNERABILITY AND RISK ASSESSMENT

The location, extent and magnitude of severe weather hazards would apply to the entirety of the planning area, including Socially Vulnerable Populations (SVPs) within the Disadvantaged Communities portion of the City ("DAC"; Census Tract 7028.03) and other high-risk individuals located throughout the planning area. SVPs and other high-risk individuals may need additional outreach and specialized communication to combat linguistic isolation or other awareness

challenges. In addition, SVPs (particularly children, seniors and those with chronic health conditions) may be especially vulnerable during extreme heat and power outages. These considerations were included in [Section 5.0](#) as Mitigation Actions #3 and #71.

Socioeconomically disadvantaged children and staff at CCUSD may need additional support during and following severe weather hazards. Socioeconomically disadvantaged children may have parents or guardians with fewer resources to immediately pick-up children following an evacuation request or provide extended childcare if public schools are closed for significant periods of time. Severe weather hazards such as extreme heat or power outage may burden specific households that would otherwise rely on CCUSD public schools for relief during daytime hours. For CCUSD, staff with fewer resources to respond to natural hazard events may have challenges reporting to their jobs, especially in the case of heavy rains, windstorms, or tornadoes.

4.4.5 WILDFIRE

WILDFIRE DESCRIPTION

Fire is an integral component of many of California's ecosystems. However, uncontrolled fire hazards threaten lives, property, and natural resources and also present a considerable risk to vegetation and wildlife habitat. Fires occur in wildland and urban areas. A wildland fire is a large destructive fire that can spread quickly over woodland or brush. A wildfire is an uncontrolled fire spreading through vegetative fuels. Wildfires can be caused by human error (such as campfires), intentionally by arson, by mechanical sources of ignition (such as heaters and generators), and by natural events (such as lightning). Wildfires often occur in forests or other areas with ample vegetation. In areas where structures and other human development meets or intermingles with wildland or vegetative fuels (referred to as the wildland urban interface), wildfires can cause significant property damage and present extreme threats to public health and safety.

There are three categories of interface fire: the classic wildland urban interface exists where well-defined urban and suburban development presses up against open wildland areas; the mixed wildland urban interface is characterized by isolated homes, subdivisions and small communities situated predominantly in wildland settings; and the occluded wildland urban interface exists where islands of wildland vegetation occur inside a largely urbanized area. The wildland-urban interface is present in the eastern portion of the City. Wildland located within Los Angeles County are directly adjacent to the City communities of Blair Hills and Culver Crest.⁵³

Certain conditions must be present for significant interface fires to occur. The most common conditions include: hot, dry and windy weather; the inability of fire protection forces to contain or suppress the fire; the occurrence of multiple fires that overwhelm committed resources; and a large fuel load (dense vegetation). Once a fire has started, several conditions influence its behavior, including fuel topography, weather, drought and development.

Southern California faces challenges with wildfire hazards from the increasing number of houses being built in the wildland-urban interface. Every year the growing population has expanded further and further into the hills and mountains, including into forest lands. The increased "interface" between urban/suburban areas and the open spaces created by this expansion has produced a significant increase in threats to life and property from fires and has pushed existing fire protection systems beyond original or current design and capability.

⁵³ Culver City Fire Department, *Community Risk Assessment and Standards of Cover*, 2019.

During wildfire season, SCE monitors weather conditions in fire prone areas. To prevent strong winds and extreme heat from causing fire accidents, SCE may proactively turn off power through activation of their Public Safety Power Shutoff (PSPS) program. Power outages as a secondary effect is discussed in detail in Section 4.4.4, *Severe Weather*.

PAST OCCURRENCES

Wildland fires have historically occurred within proximity to the planning area and the surrounding Los Angeles region. Table 4-19, *Largest Wildfires in Los Angeles County History*, identifies notable significant fires which occurred from 1878 to 2020.

**Table 4-19
Largest Wildfires in Los Angeles County History**

Year	Fire Name	Location	Acres Burned
2009	Station Fire	Angeles National Forest, Flintridge	160,577
2020	Bobcat Fire	Angeles National Forest, north Monrovia - Juniper Hills	115,796
1970	Clampitt Fire	Newhall to Chatsworth/Simi Valley	105,212
2018	Woolsey Fire	Southeast Ventura County to Malibu, Los Angeles County	96,949
1919	Ravenna Fire	Angeles National Forest, Big Tujunga Canyon	75,000
1878	Unnamed Fire	San Gabriel Mountains	60,000
1919	San Gabriel Fire	Angeles National Forest, San Gabriel Canyon	60,000
2007	Ranch Fire	Townsend Peak, southwest Templin Highway and I-5	54,000
1982	Dayton Canyon	Malibu Canyon to Canoga Park	54,000
1924	San Gabriel Fire	Angeles National Forest, San Gabriel Canyon	49,421
Source: Los Angeles Almanac, <i>Wildfires in Los Angeles County</i> , http://www.laalmanac.com/fire/fi07.php#largest , accessed July 20, 2023.			

Major wildfires regularly occur within Los Angeles County, though none of the major or significant events listed above occurred within the planning area. While these major wildfires occurred in other parts of Los Angeles County, the planning area experiences secondary effects such as smoke and poor air quality.

The most significant wildfire within close proximity to the planning area in recent history occurred in July 1985. An arsonist ignited a major brush fire on the Baldwin Hills Vista within the Kenneth Hahn Recreation area, immediately adjacent to the City boundary. Flames rose over 100 feet in height, and temperatures were reported over 115°F. Damages occurred outside of the planning area, within unincorporated Los Angeles County. Over 50 homes were destroyed, 12 homes were damaged, two residents died and several injuries were reported. Damages totaled over \$16 million (approximately \$45 million in 2023 dollars, accounting for inflation).⁵⁴ While major wildfire activity in the Baldwin Hills open space area adjacent to the planning area is rare, this historical incident demonstrates vulnerability and risk to this type of natural hazard.

Outside of the 1985 Baldwin Hills fire, wildfire activity within the Baldwin Hills open space area tends to be small and easily containable. For example, a small brush fire was reported on the Baldwin Hills Vista near La Brea Avenue in June 2023, and was immediately contained by the Los Angeles County Fire Department.⁵⁵ Small incidents with limited impacts to the planning area are more common historical occurrences than major wildfire incidents.

⁵⁴ Los Angeles Times, *2 Killed, 53 Homes Destroyed by Arson Fire in Baldwin Hills: Winds Drive Flames from Roof to Roof*, <https://www.latimes.com/archives/la-xpm-1985-07-03-mn-10192-story.html>, published July 1985, accessed July 21, 2023.

⁵⁵ CBS Los Angeles, *LA County fire crews respond to Baldwin Hills brush fire*, <https://www.cbsnews.com/losangeles/news/la-county-fire-crews-respond-to-baldwin-hills-brush-fire/>, published June 12, 2023, accessed July 21, 2023.

Several federally declared wildfire disasters have occurred within the planning area since the adoption of the previous MJHMP. A list of federally declared wildfire disasters is included below; refer to [Table 4-28, *Summary of Federally Declared Disasters Affecting the Planning Area*](#) for further details regarding specific impacts (if any) to Culver City or CCUSD.

- DR 5201, California la Tuna Fire – September 2, 2017
- DR 5225, California Creek Fire – December 5, 2017
- DR 5226, California Rye Fire – December 5, 2017
- DR 5227, California Skirball Fire – December 6, 2017
- DR 3396, Wildfires in California – December 8, 2017
- DR 4353, California Wildfires, Flooding, Mudflows, and Debris Flows – January 2, 2018
- DR 3409, California Wildfires – November 9, 2018
- DR 5280, California Woolsey Fire – November 9, 2018
- DR 4407, California Wildfire – November 12, 2018
- DR 5293, California Saddle Ridge Fire – October 11, 2019
- DR 5296, California Tick Fire – October 24, 2019
- DR 5297, California Getty Fire – October 28, 2019
- DR 5374, California Bobcat Fire – September 13, 2020
- DR 4569, California Wildfires – October 16, 2020

LOCATION/GEOGRAPHIC EXTENT

The California Department of Forestry and Fire Protection (CAL FIRE) prepares fire hazard severity maps including mapping areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors. These zones, referred to as Fire Hazard Severity Zones (FHSZ), define the application of various mitigation strategies and influence how people construct buildings and protect property to reduce risk associated with wildland fires. While FHSZ do not predict when or where a wildfire will occur, zones identify where wildfire hazards could be more severe and therefore, are of greater concern for mitigation purposes.

According to the City VHFHSZ map shown in [Exhibit 4-7, *Fire Hazards Area*](#), two neighborhoods are located within a Very High Fire Severity Zone (VHFHSZ), the Blair Hills neighborhood and Blanco/Culver Crest neighborhood. In addition to the mapped wildfire hazard zones within the planning area, a significant portion of the planning area's eastern boundary is mapped immediately adjacent to the Los Angeles County VHFHSZ. Thus, the neighborhoods adjacent to the County VHFHSZ may also experience higher risk and vulnerability, despite the fact this area is not mapped within a wildfire hazard zone.

Land uses within the County VHFHSZ include West Los Angeles College, SCE Stanhill Substation, Holy Cross Catholic Cemetery & Mortuary, and the Inglewood Oil Field. The Inglewood Oil Field is located partially in the planning area and the unincorporated area of Los Angeles County known as Baldwin Hills. The oil field is approximately 1,000 acres making it one of the largest contiguous urban oil fields in the United States. Ten percent of the oil field's acreage is in the planning area. In the past, this area has experienced brush fires, primarily as a result of electrical transformer failures. Because the Inglewood Oil Field and surrounding area are considered wildland-urban interface, the Culver City Fire Department is aware of the risk to the planning area and is prepared with equipment necessary to address wildland-urban interface fires in this area.

MAGNITUDE/SEVERITY

The magnitude and severity of wildfire impacts can vary significantly, based on size, scale, and location of the fire. Wildfires are not measured on a specific scale and are usually classified by size or impact. The size and severity of any fire depends on the availability of fuel, weather conditions, and topography, although wildfires in the wildland urban interface do not need to be significant in acreage to be damaging. Small fires in Los Angeles history have been known to cause significant property damage or loss of human life.

Fire protection challenges occur where development is located within and directly adjacent to wildland urban interface areas, thus increasing the extent of the hazard. As the number of structural features increases, so does the risk of incidence of fire. Due to the location of development within and adjacent to the VHFHSZ, there is the potential for a wildfire to spread quickly within the planning area, depending on the conditions and nature of the fire.

PROBABILITY OF FUTURE OCCURRENCES

While the planning area has limited historical wildfire occurrences within the planning area, there is a medium probability of future wildfire occurrence. With the increase of major wildfire activity across California, it is probable that the City VHFHSZ will continue to experience wildfires of varying size, scale, and severity. The City Fire Department takes aggressive measures to prevent wildfires, including vegetation management, brush clearance, and code enforcement actions within the planning area. Regional brush clearing and weed abatement outside of the planning area within unincorporated Los Angeles County is largely outside of the local jurisdiction's control. The specific chance of wildfire in the wildland-urban interface is not known, but the general vulnerability of this area to fires means that there is a reasonable possibility such an event will occur.

CLIMATE CHANGE CONSIDERATIONS

Recent wildfires in California are becoming more severe as a result of climate change impacts. Of the top 20 largest California wildfires in State history, fourteen have occurred in the last decade, five occurred during 2020, and four occurred in 2021. The August Complex Fire in 2020, burned over one million acres in Mendocino, Humboldt, Trinity, Tehama, Glenn, Lake and Colusa counties, destroying nearly 1,000 structures. This became the largest wildfire experienced in California recorded history. During 2020, several other large fires began in northern California due to unusual thunderstorm and lightning strike activity over the summer, the largest being SCU Lightning Complex (396,624 acres) and the LNU Lightning Complex (363,220 acres). During 2021, the pattern of large fires caused by lightning strikes continued, with the Dixie Fire (963,309 acres, second largest wildfire in California recorded history), Monument Fire (223,124 acres) and Caldor Fire (221,835 acres).⁵⁶ Similar lightning strikes could occur and ignite wildfires in southern California.

Further, a wildfire does not need to be record-breaking in terms of size to have devastating impacts. During 2018, the Camp Fire became the deadliest wildfire in California history, killing at least 85 civilians and burning 153,000 acres in Butte County.⁵⁷ While the wildfires listed above cite different causes (including lightening, powerline failure, human related/arson), it is clear that

⁵⁶ CAL FIRE, *Top 20 Largest California Wildfires*, https://www.fire.ca.gov/media/4jandlhh/top20_acres.pdf, accessed August 7, 2022.

⁵⁷ U.S. Census Bureau, *Camp Fire – 2018 California Wildfires*, <https://www.census.gov/topics/preparedness/events/wildfires/camp.html>, published November 2018, accessed October 12, 2022.

warmer temperatures, drought conditions, dry vegetation, and unusual wind conditions are driving major wildfires in the state of California.

Climate change and global warming patterns are expected to cause an increase in temperatures, as well as more frequent and intense drought conditions. As mentioned previously, the severity of a wildfire is dependent on the amount of oxygen, heat, wind, relative humidity, and fuel. Excessive heat and low humidity during the summer and fall months are likely to occur. It is possible that higher temperatures could cause local native chaparral and scrub ecosystems to change to grasslands. This would increase dry plant matter, which could cause wildfires to move more quickly or spread into developed areas.

It is well documented that regional wildfires will likely become an increased threat in Los Angeles County, which are likely impact the planning area. Wildfires release smoke, ash, and other particulate matter that substantially degrade air and water quality. Thus, fires located in different parts of Los Angeles, Orange, Riverside, or San Bernardino counties can negatively impact air and water quality within the City.

VULNERABILITY AND RISK ASSESSMENT

A portion of the planning area is located within a Very High Fire Hazard Severity Zone (VHFHSZ) categorized as a local responsibility area. The majority of the fire hazard zone is located in the eastern portion of the City, within the Blair Hills and Blanco/Culver Crest neighborhoods adjacent to the Baldwin Hills open space area. Critical facilities include two parks and the Marycrest Manor, a skilled nursing facility.. Marycrest Manor has accommodations for 57 individuals within two separate buildings, and support staff are present on-site 24/7. The Blanco/Culver Crest neighborhood is identified with limited ingress/egress points for evacuation purposes. As the Marycrest Manor is a facility known to house and care for vulnerable populations, specific mitigation actions have been identified in [Section 5](#) to enhance the wildfire resilience of this specific facility. While there is no significant history of wildfire within the Baldwin Hills open space area, the wildfire risk remains a present threat and risk for the planning area. [Table 4-20, Culver City – Facilities in a Wildfire Hazard Zone](#) identifies vulnerable populations and critical City facilities located within the wildfire hazard zone.

**Table 4-20
Culver City - Facilities in a Wildfire Hazard Zone**

Map ID	Name	Asset Type	Total Loss Potential
12	Marycrest Manor – Skilled Nursing Facility (Culver Crest)	Non-Profit/NGO	Unavailable
19	Blair Hills Park	Parks and Recreation	\$120,000.00
21	Culver City Park (Bill Botts Field)	Parks and Recreation	\$491,492.00

Culver City identified approximately 393 residential units are located within the wildfire hazard zone. The majority of these units are single-family residential units, with a few duplexes and multi-family residential structures. Based on the 2.22 persons per household for the City, it is assumed approximately 873 individuals reside in the wildfire hazard zone. Approximately 163,679 square feet of non-residential structures are located within a wildfire hazard zone.

CCUSD does not identify any critical facilities located within a wildfire hazard zone. Therefore, it is assumed risk to CCUSD students and staff is minimal and vulnerability associated with wildfire is considered low. CCUSD is more likely to experience secondary impacts associated with wildfire, as discussed below.

Depending upon the location and extent of the wildfire, transportation routes could become impaired or inaccessible. Evacuation remains a vulnerability for the wildfire hazard zone, as both the Blair Hills and Blanco/Culver Crest neighborhoods have been identified with limited ingress/egress points. Vulnerable populations within these communities, particularly those with limited mobility or lack of access to transportation, require specialized response during emergency incidents.

Secondary impacts associated with wildfire are more likely to affect the planning area within the five-year period of the plan. Wildfires within the region (outside of the planning area) can impact health and safety due to poor air quality. Senior citizens, youth, and people with preexisting medical conditions are most at risk. CCUSD schools may be required to keep students inside or cancel classes/programming all together if air quality is substantially degraded. Both City and CCUSD operations may be disrupted if a regional wildfire results in localized power outages. It is also noted that wildfire vulnerability is closely related to vulnerability with other natural hazards, including drought, landslide, and power outage (public safety power shut offs).

As discussed in Section 3.5, population patterns have not substantially changed within the planning area during the last five years. Both the Culver City population and CCUSD enrollment remain at stable levels previously identified in the 2017 MJHMP. The previous MJHMP identified 83 housing units within the wildfire hazard zone; the increase in vulnerability as included in the updated MJHMP is due to improved data resources and the recent City decision to extend the Very High Fire Hazard Zone beyond the formal Cal FIRE designation. This increase in vulnerability is not related to substantially changing population patterns, land use or development. The previous 2017 MJHMP does not list any CCUSD students or staff as vulnerable; the same finding is confirmed in this updated MJHMP.

At the time of this MJHMP preparation, the City adopted an updated Housing Element and published a draft General Plan update, planning for future growth. While it is unlikely that all approved, entitled, or proposed developments (including those identified in Table 3-10) will be constructed within the five-year period of this MJHMP, the City and CCUSD anticipate some level of population growth to occur. Therefore, this could result in additional housing units or non-residential construction occurring within the VHFHSZ. At this time, no proposed projects under the purview of the City are expected to substantially increase wildfire vulnerability. Future construction would be subject to the latest City Building and Safety Code, including defensible space and hardscape requirements that decrease vulnerability associated with wildfire risk.

Population growth within the City is reasonably expected to increase enrollment at CCUSD schools. At this time, CCUSD has not proposed any new facilities to accommodate projected population growth that would affect wildfire risk or vulnerability.

DAC/SVP VULNERABILITY AND RISK ASSESSMENT

The DAC (Census Tract 7028.03) is not located within the mapped wildfire hazard zone, thus the formal SVP has low vulnerability to wildfire hazards. Secondary hazards would be similar to the rest of the planning area, and SVPs may experience unique risks due to poor air quality and smoke. While the DAC is located outside of the mapped wildfire hazard zone, the MJHMP Planning Team is aware of high-risk individuals residing within the wildfire hazard zone – primarily at the Marycrest Manor assisted living facility. In the case of wildfire, this facility would need additional support in response and evacuation. Considerations for wildfire hazards impacting Marycrest Manor were included in Section 5.0 as Mitigation Actions #77 and #78.

Socioeconomically disadvantaged children and staff at CCUSD may need additional support during and following wildfire hazards. Socioeconomically disadvantaged children may have parents or guardians with fewer resources to immediately pick-up children following an evacuation order. Wildfire hazards are known to be quick moving, so CCUSD may have to account for extended childcare for students with parents/guardians unable to immediately respond to an evacuation order. Natural disasters such as wildfire may also be major disruptive events affecting the mental health of already socioeconomically disadvantaged children. In addition, secondary impacts of wildfire such as diminished air quality may also affect children more than adult counterparts. For CCUSD, staff with fewer resources to respond to natural hazard events may have challenges reporting to their jobs. This vulnerability can be increased as CCUSD staff may live outside of the planning area, and may personally be located closer to other wildfire hazard zones. This could cause challenges for CCUSD to provide services during County-wide or regional wildfire incidents.

4.4.6 DAM/RESERVOIR FAILURE

DAM/RESERVOIR FAILURE DESCRIPTION

A dam is an artificial barrier preventing the flow of water or a barrier built across a watercourse for impounding water. Dam failure is the uncontrolled release of impounded water from behind a dam. Flooding, earthquakes, blockages, landslides, lack of maintenance, improper operation, poor construction, vandalism, and terrorism can all cause dam infrastructure to fail. Dam failure causes downstream flooding of varying velocities that can result in loss of life and property. Reservoirs are defined as an artificial lake, pond, impoundment, or tank, used to store water (both potable and non-potable). Reservoirs can be created on the surface by constructing dams to store water. Additionally, tank reservoirs can be constructed to store water above ground, on the surface, or below ground. Reservoir failure is the uncontrolled release of impounded water from a reservoir.

Dam or reservoir failures are most likely to happen for the following reasons:⁵⁸

- Overtopping, caused by water spilling over the top of the dam, usually a precursor of dam failure because of inadequate spillway design, debris blockage of spillways, or settlement of the dam crest;
- Foundation defects, including settlement or slope stability;
- Cracking caused by natural settling of a dam or seismic movements;
- Inadequate maintenance and upkeep; and/or
- Piping, when seepage through a dam is not properly filtered, soil particles continue to progress and form sinkholes in the dam.

Because dam failure can have severe consequences, FEMA and Cal OES require all dam owners to develop an Emergency Action Plan (EAP) for warning, evacuation, and post-flood actions. In the event of a major dam failure, mutual aid from all levels of government would be required for an extended period. Recovery efforts would include the removal of debris, clearing roadways, demolishing unsafe structures, assistance in reestablishing public services, and providing continued care for the affected population.

⁵⁸ Association of State Dam Safety Officials, *Dam Failures and Incidents*, <https://damsafety.org/dam-failures>, accessed April 11, 2023.

Dams in the planning area are regulated by the City of Los Angeles Department of Water and Power (LADWP), Division of Safety of Dams (DSOD) Southern Region. DSOD ensures dam safety by:⁵⁹

- Reviewing and approving dam enlargements, repairs, alterations, and removals, and ensuring that the dam appurtenant structures are designed to meet minimum requirements;
- Performing independent analyses to understand dam and appurtenant structures performance (including structural, hydrologic, hydraulic, and geotechnical evaluations);
- Overseeing construction to ensure work is performed in accordance with approved plans/specifications;
- Inspecting each dam on an annual basis to ensure safety and performance standards; and
- Periodically reviewing the stability of dams/major appurtenances, as well as new findings regarding earthquake hazards and hydrologic estimates in California.

DSOD is responsible for assigning each jurisdictional dam a downstream hazard classification. This classification is based only on potential downstream impacts to life and property, should the dam fail when operating with a full reservoir. This hazard status is not related to the condition of the dam or the likelihood of the dam to fail in either the short- or long-term. Additionally, dams in southern California usually do not operate at full capacity at all times of the year, and thus hazard risks and classifications are a worst-case scenario assessment. The DSOD definitions for downstream hazards are borrowed from the Federal Guidelines for Inundation Mapping of Flood Risks Associated with Dam Incidents and Failures, and are outlined in Table 4-21, DSOD Downstream Hazard Potential Classification Levels.

**Table 4-21
DSOD Downstream Hazard Potential Classification Levels**

Downstream Hazard Potential Classification	Potential Downstream Impacts to Life and Property
Low	No probable loss of human life and low economic and environmental losses. Losses are expected to be principally limited to the owner's property.
Significant	No probable loss of human life but can cause economic loss, environmental damage, impacts to critical facilities, or other significant impacts.
High	Expected to cause loss of at least one human life.
Extremely High	Expected to cause considerable loss of human life or would result in an inundation area with a population of 1,000 or more.
Source: California Department of Water Resources, Division of Safety of Dams, <i>Definitions of Downstream Hazard and Condition Assessment</i> , https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/All-Programs/Division-of-Safety-of-Dams/Files/Publications/Division-of-Safety-of-Dams-Definitions-for-Downstream-Hazard-and-Condition-Assessment.pdf , accessed July 13, 2022.	

Due to the urbanized nature of the planning team, the downstream hazard potential from dam failure is classified as “extremely high”. As noted above, this is not reflective of the likelihood for the specific infrastructure to fail; this classification is due to the highly populated areas downstream from the dams. DSOD inspects dams once annually and provides a condition assessment. This condition assessment is a more accurate tool to evaluate infrastructure risk. DSOD uses the National Inventory of Dams (NID) condition rating definitions, with additional criteria, as a guideline in assigning condition assessments. This rating system is outlined in Table 4-22, DSOD Condition Assessment Rating Levels.

⁵⁹ California Department of Water Resources, *Division of Safety of Dams*, <https://water.ca.gov/Programs/All-Programs/Division-of-Safety-of-Dams>, accessed April 11, 2023.

**Table 4-22
DSOD Condition Assessment Rating Levels**

Rating	National Inventory of Dams Definitions	California DSOD Additional Criteria
Satisfactory	No existing or potential dam safety deficiencies are recognized. Acceptable performance is expected under all loading conditions (static, hydrologic, seismic) in accordance with the applicable regulatory criteria or tolerable risk guidelines.	None.
Fair	No existing dam safety deficiencies are recognized for normal loading conditions. Rare or extreme hydrologic and/or seismic events may result in a dam safety deficiency. Risk may be in the range to take further action.	<ul style="list-style-type: none"> • Dam has a long-standing deficiency that is not being addressed in a timely manner. • Dam is not certified and its safety is under evaluation. • Dam is restricted and operation of the reservoir at the lower level does not mitigate the deficiency.
Poor	A dam safety deficiency is recognized for loading conditions that may realistically occur. Remedial action is necessary. A poor rating may also be used when uncertainties exist as to critical analysis parameters that identify a potential dam safety deficiency. Further investigations and studies are necessary.	Dam has multiple deficiencies or a significant deficiency that requires extensive remedial work.
Unsatisfactory	A dam safety deficiency is recognized that requires immediate or emergency remedial action for problem resolution.	None.
Not Rated	The dam has not been inspected, is not under State jurisdiction, or has been inspected but, for whatever reason, has not been rated.	None.
<small>Source: California Department of Water Resources, Division of Safety of Dams, <i>Definitions of Downstream Hazard and Condition Assessment</i>, https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/All-Programs/Division-of-Safety-of-Dams/Files/Publications/Division-of-Safety-of-Dams-Definitions-for-Downstream-Hazard-and-Condition-Assessment.pdf, accessed April 11, 2023.</small>		

PAST OCCURRENCES

The Baldwin Hills Dam failure is the most significant past occurrence to affect the planning area. The Baldwin Hills dam was formerly located adjacent to the planning area within the Kenneth Hahn State Recreation Area. The dam was constructed by the Los Angeles Department of Water and Power within unincorporated Los Angeles County to supply water to southern portions of the county. The dam was constructed with earthen embankments to store 250 million gallons of water. The dam operated for 12 years without incident.⁶⁰

On December 14, 1963, signs of lining failure and leakage were identified at the Baldwin Hills Dam. Within three hours the dam failed, resulting in approximately 250 million gallons of water surging down the hillside into the planning area and the City of Los Angeles. The inundation resulted in five deaths, thousands of homes destroyed, and approximately \$11 million in total damage (over \$110 million in 2023 dollars, accounting for inflation).

The Baldwin Hills Dam failure is considered a major civil engineering failure and resulted in loss of life and property across Los Angeles County. The ultimate cause of dam failure is multi-faceted. LADWP designers were aware of the Newport-Inglewood Fault system traces underlying the Baldwin Hills Dam. A small offset on the fault was later discovered after the dam failure. It is also suspected that oil extraction activity from the Inglewood Oil Field caused additional subsidence around the Baldwin Hills Dam. Further study in the early 2000s concluded that over-compaction

⁶⁰ Association of State Dam Safety Officials, *Lessons Learned from Dam Incidents and Failures, Case Study: Baldwin Hills Dam (California, 1963)*, <https://damfailures.org/case-study/baldwin-hills-dam/>, accessed April 11, 2023.

of earthen embankments created rapid instability, ultimately accelerating the Baldwin Hills Dam failure.⁶¹

The dam and reservoir were removed following the incident, and the Kenneth Hahn State Recreation Area was established in its place. The Baldwin Hills Dam failure informed engineers and dam personnel on construction, inspection, and emergency action. The State of California implemented stringent dam standards, regulations, and inspection schedules after the Baldwin Hills Dam failure.

No other major dam failure or incidents have occurred within the planning area, or any upstream dams with inundation zones mapped within the planning area. Minor historic incidents have been reported at upstream dams such as the Mulholland Dam, which experienced cracking in the uppermost berm after the 1994 Northridge earthquake and the Silver Lake Dam experienced cracking at the crest and downstream face/toe in the late 1980s. No incidents have been reported at Lower Franklin Dam and Stone Canyon Dam.

No federally declared disasters relating to dam or reservoir failure have occurred including the planning area within the last five years; refer to Table 4-28, *Summary of Federally Declared Disasters Affecting the Planning Area*.

LOCATION/GEOGRAPHIC EXTENT

The geographic extent from dam or reservoir failure is dependent on the type of infrastructure and amount of water stored at the time of the hazard incident. There are no dams located within the planning area; however, other nearby dams have inundation zones that would potentially impact the City/CCUSD. Critical dams and reservoirs in proximity to the City, are listed in Table 4-23, *Upstream Dams affecting Culver City*. Refer to Exhibit 4-8, *Dam Inundation Map* for an illustration of inundation extent.

**Table 4-23
Upstream Dams affecting Culver City**

Dam Name	Dam Owner	Location	Hazard Classification	Type	Size	DSOD Rating
Mulholland	LADWP	Inundation zone within the City	Extremely High	Gravity	4,036 acre-feet	Satisfactory
Lower Franklin	LADWP	Inundation zone within the City	Extremely High	Hydraulic Fill	920 acre-feet	Satisfactory
Stone Canyon	LADWP	Inundation zone within the City	Extremely High	Earthen Embankment	10,372 acre-feet	Satisfactory
Silver Lake	LADWP	Inundation zone within the City	Extremely High	Earthen Embankment	2,020 acre-feet	Satisfactory

Source: California Department of Water Resources, Division of Safety of Dams, *Dams within Jurisdiction of the State of California*, <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/All-Programs/Division-of-Safety-of-Dams/Files/Publications/Dams-Within-Jurisdiction-of-the-State-of-California-Listed-Alphabetically-by-County-September-2022.pdf>, published September 2022, accessed April 11, 2023.

⁶¹ Association of State Dam Safety Officials, *Lessons Learned from Dam Incidents and Failures, Case Study: Baldwin Hills Dam (California, 1963)*, <https://damfailures.org/case-study/baldwin-hills-dam/>, accessed April 11, 2023.

Hazard Mitigation Plan

Culver City

Exhibit 4-8, Dam Inundation Map

Scale: 17,000

June 9, 2023

Legend

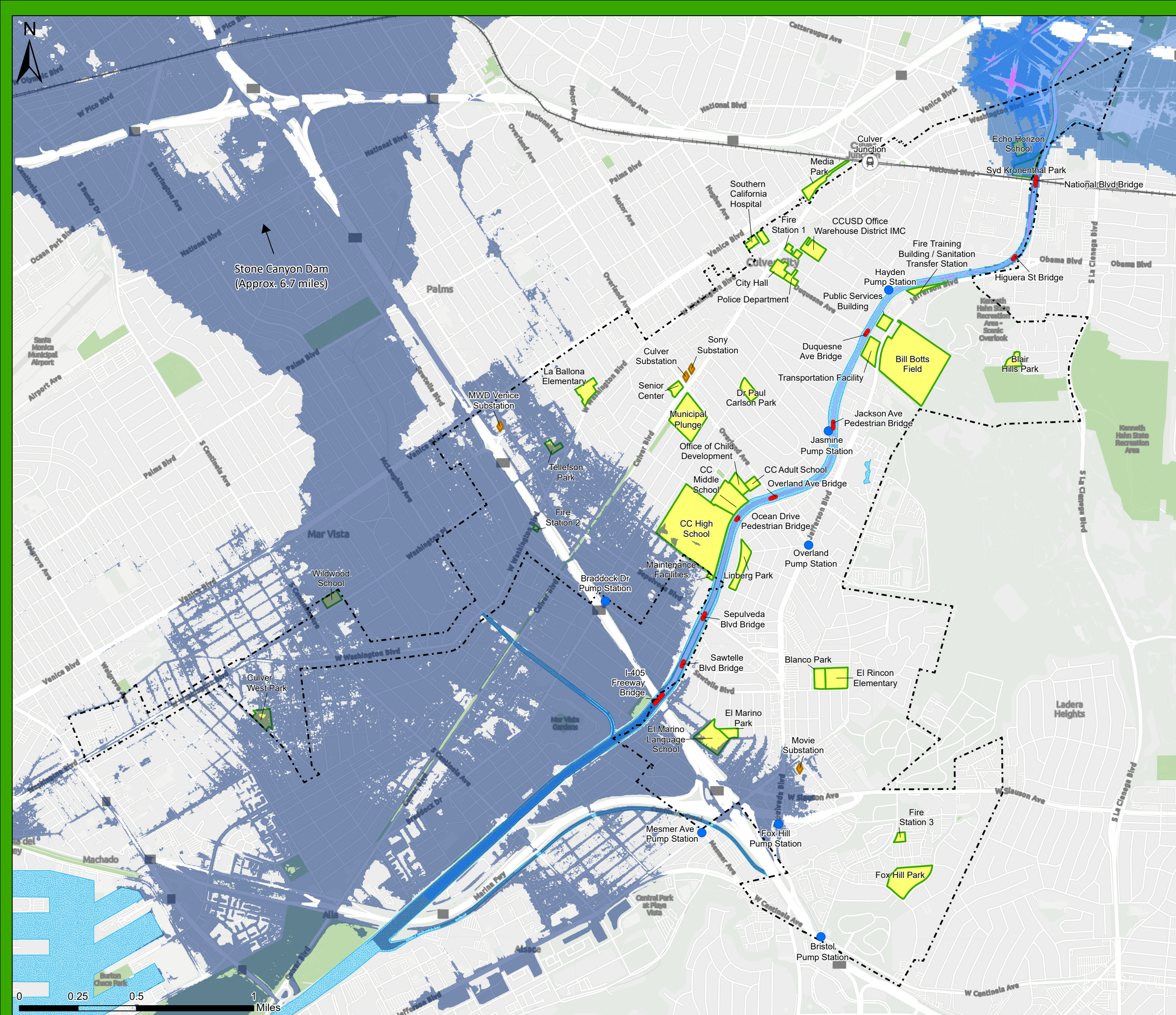
- City Boundary
- Critical Facility
- Bridge
- Electric Substation
- Sewer Pump Station
- Waterbody
- Park or Open Space
- Metro Station
- Metro Rail
- Dam Inundation Area
 - Greystone Reservoir
 - Silver Lake
 - Lower Franklin
 - Mulholland
 - Stone Canyon

THE CITY OF CULVER CITY



INFORMATION TECHNOLOGY DEPARTMENT
GEOGRAPHIC INFORMATION SYSTEMS
9770 CULVER BLVD
CULVER CITY, CA 90232
TEL: 310-253-5976

Source: CA DWR 2023



Mulholland Dam is a concrete arched gravity dam that was built in 1924 and has an “extremely high” DSOD hazard classification. The dam, enclosing the Lower Hollywood Reservoir, lies just east of SR-101 in northern Hollywood and is the responsibility of LADWP. The original capacity of the dam 7,437-acre feet at the spillway elevation of 751.8 feet. Following the 1928 St. Francis Dam failure, the Mulholland Dam’s spillway elevation was lowered to 720.7 feet, reducing the storage capacity to 4,029-acre feet. In 2001, the reservoir was removed from potable service, and as of April 2022, the reservoir water level is generally kept below spillway elevation.

The Lower Franklin Dam and Reservoir was finished in 1916 and are located in the City of Los Angeles on the south slope of the Santa Monica Mountains, just north of Beverly Hills, and is the responsibility of LADWP. The dam has an “extremely high” DSOD hazard classification and is an earthen embankment type with a crest length of 475 feet and a spillway crest height of 579.22 feet. The dam was drained after being removed from storage service in 1976 due to seismic stability concerns. Lower Franklin Dam now serves as a stormwater detention basin and otherwise remains empty. While the City falls within the dam’s inundation zone, a disaster event is unlikely because the reservoir is no longer stores water and ungated outlets immediately convey stormwater into a downstream storm drain.

Stone Canyon Dam and Reservoir are a mile east of I-405 in Stone Canyon within the City of Los Angeles and has a DSOD hazard classification of “extremely high”. The dam is the responsibility of the LADWP and stores non-potable water for emergencies. Construction finished in 1924, but the dam was partially reconstructed in the 1950s to increase the reservoir capacity. The current Stone Canyon Dam has a crest elevation of 877.6 feet and reservoir capacity of 10,372 acre-feet. It is an earthfill dam with a DSOD hazard classification of “extremely high”.

Silver Lake Dam and Reservoir are located between SR-101 and I-5, south of Griffith Park and owned and operated by LADWP. The original reservoir was constructed in 1907 as a hydraulic fill dam, but the 1971 San Fernando earthquake revealed the potential of liquefaction within the dam. Reconstruction concluded in 1976, replacing the old dam with a compacted earthfill dam. The current Silver Lake Dam impounds non-potable water for LADWP emergency storage and has a capacity of 2,440 acre-feet at the primary spillway crest elevation of 454 feet. Water level in the reservoir is generally kept below the primary spillway elevation. The Silver Lake Dam has an “extremely high” DSOD hazard classification.

MAGNITUDE/SEVERITY

While dam failure is a rare and unlikely occurrence within the planning area, the magnitude and severity can be significant. Dam or reservoir failure within highly urbanized areas like the City can be catastrophic and result in property damage, destruction, and loss of life. Dams in Los Angeles County are regularly inspected and monitored to ensure structural integrity and safety; thus, most issues are identified early and immediately rectified to prevent dam failure. Dam failures can also increase in magnitude and severity when coupled with other natural disasters. Earthquakes or heavy rains can threaten the structural integrity of dam/reservoir infrastructure, and create challenging conditions for emergency response.

PROBABILITY OF FUTURE OCCURRENCES

As dams upstream of the City have a DSOD rating of “satisfactory” and no historical emergencies, the probability for future dam failure remains low. As previously mentioned, the Baldwin Hills Dam failure in 1963 triggered the State of California to update and implement dam safety standards,

regulations and inspection schedule. In the past 50 years, there have been few incidents in California as a result of these regulations.

The Oroville Dam Crisis in 2017 is the most recent major dam incident in California, where erosion at the Oroville Dam emergency spillway threatened the structural integrity of the main weir and gate. Over 188,000 people were evacuated from downstream areas; however, emergency repairs ultimately prevented dam failure. The crisis served as a reminder of the ongoing risk presented by dams and initiated additional inundation mapping and emergency preparedness planning for California dams.

The City participates in local and regional emergency exercises and planning at major upstream dams and provides input on annual EAP updates to keep them current. Despite best planning efforts however, dam or reservoir failure resulting in flooding within the community could occur due to severe seismic activity. While the probability of future occurrences remains low, an incident has the potential to be destructive due to the urbanized nature of the City and the proximity to extremely high hazard dams.

CLIMATE CHANGE CONSIDERATIONS

Climate change could indirectly increase the likelihood of dam/reservoir infrastructure failure. Increased severe storm events and flooding incidents could increase strain on dam/reservoir infrastructure, including those dams nearby the City. This is evidenced by the 2017 Oroville Dam Crisis, triggered by an unusually high influx of water from snowmelt and repetitive rain events.⁶² These inputs overwhelmed soil storage leading to extreme runoff and resulting in erosion. Incidents such as this one could increase “wear and tear” and require additional maintenance and infrastructure improvements to protect dam integrity and function. Severe storm events and increased temperatures resulting in rapid snowmelt both threaten to overwhelm dams/reservoirs. Severe storm events could also oversaturate soils and compromise dam infrastructure.

VULNERABILITY AND RISK ASSESSMENT

Dam failures have the capacity to cause environmental and property damage, loss of human life, and displacement to persons residing in the inundation path. Inundation mapping is available for the following four dams, Stone Reservoir, Lower Franklin Reservoir, Mulholland Reservoir, and Silver Lake, owned and operated by LADWP.

**Table 4-24
Culver City - Facilities in a Dam Inundation Zone**

Map ID	Name	Asset Type	Dam Zone(s)	Total Loss Potential
4	Fire Station No. 2	Government Building	Stone	\$1,835,500.00
11	Culver – Palms YMCA	Non-Profit/NGO	Stone	Unavailable
14	Syd Kronenthal Park	Parks and Recreation	Lower Franklin Mulholland	\$944,000.00
16	Culver West Alexander Park	Parks and Recreation	Stone	\$989,866.00
18	El Marino Park	Parks and Recreation	Stone	\$370,000.00
24	Tellefson Park	Parks and Recreation	Stone	\$124,611.00
33	MWD Venice Substation	Utility - Electric	Stone	Confidential

⁶² UC San Diego, Scripps Institute of Oceanography, *Researchers Identify Factor Behind 2017 Oroville Dam Spillways Incident*, <https://scripps.ucsd.edu/news/researchers-identify-factor-behind-2017-oroville-dam-spillways-incident>, published July 22, 2020, accessed April 11, 2023.

Table 4-24 (continued)
Culver City - Facilities in a Dam Inundation Zone

Map ID	Name	Asset Type	Dam Zone(s)	Total Loss Potential
37	Braddock Sewer Pump Station	Utility - Wastewater	Stone	\$244,500.00
40	Culver Lift Station	Utility - Wastewater	Stone	Unavailable
43	National Boulevard Bridge over Ballona Creek	Transportation - Bridge	Lower Franklin Mulholland Silver Lake	\$7,200,144.00*
44	Higuera Street Bridge over Ballona Creek	Transportation - Bridge	Lower Franklin Mulholland Silver Lake	\$11,088,828.00+
45	Duquesne Avenue Bridge over Ballona Creek	Transportation - Bridge	Lower Franklin Silver Lake	\$8,624,644.00+
46	Jackson Avenue Pedestrian Bridge over Ballona Creek	Transportation - Bridge	Lower Franklin Silver Lake	\$2,324,952.00*
47	Overland Avenue Bridge over Ballona Creek	Transportation - Bridge	Lower Franklin Silver Lake Stone	\$18,481,380.00+
48	Ocean Drive Pedestrian Bridge over Ballona Creek	Transportation - Bridge	Lower Franklin Silver Lake Stone	\$1,359,792.00*
49	Sepulveda Boulevard Bridge over Ballona Creek	Transportation - Bridge	Lower Franklin Silver Lake Stone	\$11,357,640.00*
50	Sawtelle Boulevard Bridge over Ballona Creek	Transportation - Bridge	Lower Franklin Silver Lake Stone	\$10,219,104.00*
51	I-405 Freeway Bridge over Ballona Creek	Transportation - Bridge	Lower Franklin Stone	\$49,950,857.00*
* Replacement Values Generated Using FEMA HAZUS Estimations (HAZUS 6.0 Inventory Technical Manual).				
+ Replacement Values Generated Using Previously Identified Replacement Values in 2017, with the 2023 Consumer Price Index applied.				

Table 4-25
Culver City Unified School District - Facilities in a Dam Inundation Zone

Map ID	Name	Asset Type	Dam Zone(s)	Total Loss Potential
2	Culver City High School	Public School	Stone	\$60,960,622.47*
5	El Marino Language School	Public School	Stone	\$12,129,229.89*
15	Echo Horizon School (leased)	Public School	Mulholland	\$6,298,454.30*
16	Wildwood School (leased)	Public School	Stone	\$10,060,031.18*
* Replacement Values Generated Using Previously Identified Replacement Values in 2017, with the 2023 Consumer Price Index applied.				

Failure of Stone Canyon Dam would have the most significant impact on the planning area, and inundate the most critical facilities as listed above. Stone Canyon Dam is located in Beverly Glen/Bel Air, and inundation flows would generally travel south bound toward Ballona Creek and ultimately the Pacific Ocean. The inundation area includes a substantial portion of the planning area, southwest of the City. Several parks and government facilities are located within the Stone Canyon Dam inundation zone. Fire Station No. 2 (Critical Facility #4) is also within the inundation zone, which could create challenges in emergency response. Utility failure at MWD Venice Substation (Critical Facility #33) could result in power outages extending beyond the immediately

affected inundation zone. Utility failure at the Braddock Sewer Pump Station (Critical Facility #33) and Culver Lift Station (Critical Facility #40) could result in sewage spills with a public health and safety risk. Inundation at Culver City High School (Critical Facility #2), El Marino Language School (Critical Facility #5) and Wildwood School (Critical Facility #16) would require prompt evacuation outside of the inundation zone to protect students and staff.

In addition, several bridges over Ballona Creek are located within the Stone Canyon Dam inundation zone. Bridges over Ballona Creek provide critical east-west access points at several major arterials such as I-405, Overland Avenue, Sepulveda Boulevard, and Sawtelle Boulevard. Portions of the I-405 within and outside of the planning area would be inundated, creating access and response challenges in west Los Angeles County.

Compared to Stone Canyon Dam, the other three dams pose a less significant threat to the planning area. Failure at Mulholland, Lower Franklin or Silver Lake Dam would result in smaller inundation footprint in the northernmost portion of the City. Otherwise, inundation flows would largely be channeled to Ballona Creek and eventually the Pacific Ocean. Both Mulholland and Silver Lake Dams are used for emergency water storage, and water levels are maintained below the spillway. Lower Franklin Dam is no longer operated as potable or recycled water storage. Lower Franklin Dam serves as a stormwater detention basin and open grates immediately convey stormwater flow to the regional drainage system. The inundation zones mapped for these three facilities illustrate a worst-case scenario for a full reservoir, which is not reflective of current operational conditions.

Culver City identifies approximately 4,025 residential units are located within a dam inundation zone; as the persons per household in the City is 2.22, it is assumed that approximately 8,936 reside within a dam inundation zone. Approximately 5,307,920 square feet of non-residential structures are located within a dam inundation hazard zone, including critical facilities previously listed.

CCUSD identifies four facilities within a dam inundation zone, two public schools and two facilities leased to private schools. Both students and staff at these facilities are considered vulnerable. At Culver City High School and El Marino Language School, approximately 3,000 students and 180 staff members are vulnerable to dam inundation. At the time of this writing, CCUSD has a long-term lease with Echo Horizon School and Wildwood School for use of CCUSD-owned buildings. Both Echo Horizon School and Wildwood School operate private schools within these leased buildings. The Echo Horizon School serves children pre-K through 6th grade, and the website reports enrollment of approximately 180 students and 50 staff members. The Wildwood School serves children K through 12th grade, and the website reports enrollment of approximately 730 students and 160 staff members. The ultimate number of students and staff at all facilities listed above can vary due to time of day or time of year.

The potential impacts associated with dam inundation across the planning area rely on many factors including the amount of water stored at the time, weather conditions, the cause of the incident and potential warning time. The potential warning time and/or notice to prepare would vary depending on the situation. A potential failure may occur suddenly with little to no warning, or it may be preceded by heavy rains and signs of failure. Impacts of a sudden failure would likely be more severe; however, depending on the circumstances, any dam failure may result in physical damage due to inundation which may impact residences, businesses, and critical facilities within the planning area. Impacts would likely require an immediate and continued response from the planning area including evacuation coordination, temporary shelter for displaced residents or other assistance for residents and businesses.

As discussed in Section 3.5, population patterns, land use, and development have not substantially changed within the planning area during the last five years. Both the Culver City population and CCUSD enrollment remain at stable levels previously identified in the 2017 MJHMP. The previous MJHMP did not profile or consider vulnerability associated with dam inundation, therefore the specific changes in vulnerability from the City and CCUSD is unknown.

At the time of this MJHMP preparation, the City adopted an updated Housing Element and published a draft General Plan update, planning for future growth. While it is unlikely that all approved, entitled, or proposed developments (including those identified in Table 3-10) will be constructed within the five-year period of this MJHMP, the City and CCUSD anticipate some level of population growth to occur. Therefore, this could result in additional housing units or non-residential construction occurring within the dam inundation hazard zone. At this time, no proposed projects under the purview of the City are expected to substantially increase dam inundation vulnerability.

Population growth within the City is reasonably expected to increase enrollment in CCUSD, including Culver City High School and El Marino Language School within the dam inundation zone. As private schools, enrollment at Echo Horizon School and Wildwood School may not necessarily correlate with population growth within the planning area. At this time, CCUSD has not proposed new facilities to accommodate projected growth that would affect dam inundation risk or vulnerability.

DAC/SVP VULNERABILITY AND RISK ASSESSMENT

The DAC (Census Tract 7028.03) shows mapped vulnerability to failure at the Stone Canyon Dam. Inundation would occur at varying depths within this census tract. The primary concern for SVPs within the DAC and other high-risk individuals across the planning area is communication, outreach and evacuation. Emergency communication and alerts in the case of dam failure should consider potential linguistic isolation and language barriers. Specific SVPs such as senior citizens or the disabled may need support or assistance during evacuations. These considerations were included in Section 5.0 as Mitigation Actions #3 and #83.

Socioeconomically disadvantaged children and staff at CCUSD may need additional support during and following dam/reservoir failure. Socioeconomically disadvantaged children may have parents or guardians with fewer resources to immediately pick-up children following an evacuation order. Dam/reservoir failure hazards are known to be quick moving, so CCUSD may have to account for extended childcare for students with parents/guardians unable to immediately respond to an evacuation order. Natural disasters such as dam inundation may also be major disruptive events affecting the mental health of already socioeconomically disadvantaged children. For CCUSD, staff with fewer resources to respond to natural hazard events may have challenges reporting to their jobs. This vulnerability can be increases as CCUSD staff may live outside of the planning area, and transportation to the planning area could be compromised in the case of significant dam failures.

4.4.7 HUMAN CAUSED HAZARDS

HUMAN CAUSED HAZARDS DESCRIPTION

Hazardous Materials Release/Spill

A hazardous material is a substance that, because of its quantity, concentration or physical or chemical composition, poses a significant present or potential hazard to human health and safety or to the environment if released. The term “release” means spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, unless permitted or authorized by a regulatory agency.⁶³ Hazardous materials can be in the form of explosives, flammable and combustible substances, poisons, and radioactive materials. Hazardous materials accidents can occur during production, storage, transportation, use, or disposal.⁶⁴

The impacts of a hazardous materials release can vary, depending on the type and amount of material released. Hazardous materials exposure can include the following effects: skin/eye irritation; difficulty breathing; headaches; nausea; behavior abnormalities; cancer; genetic mutations; physiological malfunctions (i.e., reproductive impairment, kidney failure); physical deformations; or birth defects.⁶⁵

Terrorism/Active Shooter

Domestic terrorism is defined by the Federal Bureau of Investigation (FBI) as perpetrated by individuals and/or groups inspired by or associated with a primarily United States based movement that espouses extremist ideologies of a political, religious, social, racial, or environmental nature. International terrorism is perpetrated by individuals and/or groups inspired by or associated with designated foreign terrorist organizations or nations (i.e., State sponsored).⁶⁶ The United States Federal Code states that terrorism must be intended to 1) intimidate or coerce a civilian population; 2) influence the policy of a government by intimidation or coercion; or, 3) affect the conduct of a government by mass destruction, assassination, or kidnapping.⁶⁷

An active shooter is defined by the FBI as an individual actively engaged in killing or attempting to kill people in a populated area. Active shooters select victims at random, and the shooting event is unpredictable and often evolves quickly.⁶⁸ Active shooters select public gathering and community areas, often targeting schools, places of worship, and transportation centers. There may be one or more shooters involved in an event, and there is not one demographic profile of an active shooter. The FBI identify the pathway to active shooting as typically involving an unresolved real or perceived grievance and an ideation of a violent resolution.⁶⁹

Civil Unrest

The 2012 Los Angeles County Operational Area Emergency Response Plan (ERP) defines civil unrest as any incident intended to disrupt community affairs that requires intervention to maintain

⁶³ Health and Safety Code Division 20, Chapter 6.95, *Hazardous Materials Release Response Plans and Inventory*, Article 1.

⁶⁴ Department of Homeland Security, *Chemicals and Hazardous Materials Incidents*, <https://www.ready.gov/hazardous-materials-incidents>, accessed April 12, 2023.

⁶⁵ U.S. EPA, *Health and Ecological Hazards Caused by Hazardous Substances*, <https://www.epa.gov/emergency-response/health-and-ecological-hazards-caused-hazardous-substances>, accessed April 12, 2023.

⁶⁶ Federal Bureau of Investigation, *Terrorism*, <https://www.fbi.gov/investigate/terrorism>, accessed April 12, 2023.

⁶⁷ U.S. Federal Code Title 18, *Chapter 113B*, Section 2331.

⁶⁸ Federal Bureau of Investigation, *OPS Active Shooter Guide*, <https://www.fbi.gov/file-repository/active-shooter-508.pdf/view>, accessed April 12, 2023.

⁶⁹ Federal Bureau of Investigation, *Addressing the Problem of the Active Shooter*, <https://leb.fbi.gov/articles/featured-articles/addressing-the-problem-of-the-active-shooter>, published March 7, 2013, accessed April 12, 2023.

public safety, such as riots, mass demonstrations, and even terrorist attacks.⁷⁰ Civil unrest can also be referenced as civil disorder, civil disturbance, or social unrest. The ERP identified civil unrest as a “high risk” priority hazard for the County and notes that it often arises from underlying intergroup tensions or mob behavior at large gatherings, such as sporting events or political demonstrations. According to the County of Los Angeles, civil unrest is characterized by:

- Rioting
- Looting
- Arson fires
- Attacks on public safety personnel

A civil disturbance could be initiated by small gatherings or large crowds. Impacts can range from a passive disturbance where groups block roadways or buildings that interfere with public order, or full-scale riots where participants also commit crimes such as arson, theft, property damage, vandalism, assault, or other violence. Secondary impacts from civil disturbance can vary significantly, and potentially include urban fire, utility failure, transportation, and environmental hazards. While rare, the most significant impact is the interruption of the continuity of government. In the City, responses to civil unrest include a coordinated response from agencies within the Los Angeles County operational area.

Pandemic

The Centers for Disease Control and Prevention (CDC) defines an epidemic as an increase, often sudden, in the number of cases of a disease above what is normally expected in a population. The CDC makes the distinction that a pandemic refers to an epidemic that has spread over several countries or continents, usually affecting significant proportions of the population.⁷¹ This definition of pandemic refers specifically to infectious diseases. Non-infectious diseases, such as asthma or diabetes, may exist in “pandemic proportions” but do not readily spread throughout a population and thus do not constitute a pandemic. Pandemics also exclude vector-borne diseases, categorized by transmission through a vector (rats, mosquitos, etc.).

Pandemics require two components, an agent (disease or virus) and a susceptible host population. The host population, usually humans, is the primary mode that agents are spread under this definition of pandemic. Pandemic agents are spread from person to person through direct or indirect contact, so humans are understood to be the causal element of pandemics.

Viruses of special concern in pandemics are novel: a new viral strain not previously identified in humans. Novel viruses present public health challenges, as limited information about transmission, prevention and treatment is available. Further, the human body does not have natural immune defenses prepared to fight novel viruses.⁷² In recent history, novel viruses originated as zoonotic diseases; the virus beginning in animals evolves to transfer from human to human. Examples of zoonotic diseases becoming human pandemics include COVID-19 (theorized to originate in bats), H1N1 influenza (originated in pigs), and H5N1 influenza (originated in birds).⁷³

⁷⁰ Los Angeles County, *Los Angeles County Operational Area Emergency Response Plan*, June 2012.

⁷¹ CDC, *Lesson 1: Introduction to Epidemiology*, Section 11, <https://www.cdc.gov/csels/dsepd/ss1978/lesson1/section11.html#:~:text=Epidemic%20refers%20to%20an%20increase,a%20more%20limited%20geographic%20area.>, accessed April 12, 2023.

⁷² GoodRX Health, *The Novel Coronavirus: What are Novel Viruses, and How do they Impact Public Health?*, <https://www.goodrx.com/conditions/covid-19/what-does-novel-coronavirus-mean-science-medical-definition>, published April 30, 2020, accessed April 12, 2023.

⁷³ CDC, *Lesson 1: Introduction to Epidemiology*, Section 11, <https://www.cdc.gov/csels/dsepd/ss1978/lesson1/section11.html#:~:text=Epidemic%20refers%20to%20an%20increase,a%20more%20limited%20geographic%20area.>, accessed April 12, 2023.

PAST OCCURRENCES

Hazardous Materials Release/Spill

The Comprehensive Environmental Response, Compensations, and Liability Act (CERCLA), Emergency Planning and Community Right-to-Know Act (EPCRA), and California law require responsible parties to report hazardous materials releases if certain criteria are met. All hazardous materials releases exceeding reportable quantities must be reported to the National Response Center. Spills reported within the last five years include natural gas, lead paint, oil, rainbow sheen, hydraulic fluid, fuel gasoline, mineral oil (non-PCB), motor oil, (raw) sewage, and paint additive mixed with water. Spill amounts varied depending on the substance type but were generally categorized as minor spills with limited impacts on the community. Culver City Fire Department is the administrative agency for reported spills within the planning area and are generally responsible for notifying Cal OES.⁷⁴ The majority of historical hazardous materials releases in the planning area are relatively small in scale and are efficiently cleaned up.

No federally declared disasters relating to hazardous materials release/spills have occurred including the planning area within the last five years; refer to Table 4-28, *Summary of Federally Declared Disasters Affecting the Planning Area*.

Terrorism/Active Shooter

The planning area has not previously experienced any major terrorism incidents. A notable recent incident occurred in May of 2022; antisemitic flyers were distributed around a Culver City neighborhood by a known hate group.⁷⁵

The City and the greater Los Angeles County does contain numerous sites of regional importance and has been targeted for many terrorist attacks before, though most were thwarted. The California State Hazard Mitigation Plan (SHMP) lists 11 terrorism events, both attempted and successful, in Los Angeles County from 2006 to 2016; refer to Table 4-26, *Terrorist Events in Los Angeles County - 2006 to 2016*.⁷⁶

Table 4-26
Terrorist Events in Los Angeles County - 2006 to 2016

Date	Location	Description
June 30, 2006	Los Angeles	Attempted firebombing of private home
June 24, 2007	Los Angeles	Attempted firebombing of private home
October 20, 2007	Los Angeles	Flooding of private home
February 5, 2008	Los Angeles	Arson at private home
March 7, 2009	Los Angeles	Firebombing of private vehicle
November 16, 2010	Los Angeles	Razor blade booby trap mailed to private home
November 1, 2013	Los Angeles	Active shooter targeting Transportation Security Administration (TSA) at Los Angeles Airport
December 7, 2014	Los Angeles	Arson at apartment complex
September 30, 2015	Thousand Oaks	Arson at a Planned Parenthood facility
November 6, 2015	Inglewood	Racially motivated assault of a man
February 28, 2016	Los Angeles	Racially motivated attack of three people
Source: Cal OES, <i>California State Hazard Mitigation Plan</i> , September 2018.		

⁷⁴ California Governor's Office of Emergency Services, *Spill Release Reporting*, Spill Reporting Database <https://www.caloes.ca.gov/office-of-the-director/operations/response-operations/fire-rescue/hazardous-materials/spill-release-reporting/>, accessed April 19, 2023.

⁷⁵ Spectrum News 1, *Antisemitic flyers distributed in Culver City neighborhood*, <https://spectrumnews1.com/ca/la-west/public-safety/2022/05/03/antisemitic-flyers-distributed-in-culver-city-neighborhood>, published May 3, 2022, accessed April 18, 2023.

⁷⁶ Cal OES, *California State Hazard Mitigation Plan*, September 2018.

According to the Federal Bureau of Investigation, there are seven reported active shooter incidents in Los Angeles County between 2000 to 2021.⁷⁷ No incidents occurred in the planning area, but within neighboring communities including two incidents at Los Angeles International Airport (July 2002, November 2013) and one at Santa Monica College (June 2013). The other incidents occurred at a Kenyon Press facility in Signal Hill (May 2007), Thousand Oaks bar (November 2018), the Redondo Beach Pier (August 2021), and various unspecified locations (October 2021). There were two active shooter incidents in Los Angeles County in January of 2023; the first occurring in Monterey Park and the second occurring in the Beverly Glen neighborhood.⁷⁸

No federally declared disasters relating to terrorism or active shooters have occurred including the planning area within the last five years; refer to Table 4-28, *Summary of Federally Declared Disasters Affecting the Planning Area*.

Civil Unrest

According to the SHMP, two major significant civil disturbances occurred within Los Angeles County from 1965 to 2018: the 1965 Watts Riots and 1992 Los Angeles Riots. The Watts Riots did not significantly affect the planning area. The City did experience minor looting in the downtown area, but Culver City Police were able to address the unrest quickly.⁷⁹ All deaths and severe material damage for both the Watts Riots and Los Angeles Riots occurred outside of the planning area.

A significant protest occurred in the planning area on June 6, 2020, as part of the larger George Floyd protests across Los Angeles County.⁸⁰ More than a thousand people gathered at Culver City High School and marched to City Hall. The City EOC was activated, but no impacts to the City/CCUSD were reported.

The City's EOC was activated in November 2020 as a precaution to the week of the presidential election.⁸¹ Additional officers were assigned to the field, and some businesses boarded up windows. No impacts to the planning area were reported.

No federally declared disasters relating to civil unrest have occurred including the planning area within the last five years; refer to Table 4-28, *Summary of Federally Declared Disasters Affecting the Planning Area*.

Pandemic

The Centers for Disease Control and Prevention have identified two recent pandemics and two major historical pandemics in the past 100 years:⁸²

- 2019 Covid-19 Pandemic (SARS-CoV-2 virus)
- 2009 H1N1/"Swine Flu" Pandemic (H1N1pdm09 virus)

⁷⁷ Federal Bureau of Investigation, *Active Shooter Incidents in the United States in 2021*, May 2022 and *Active Shooter Incidents in the United States from 2008-2018*, April 2019.

⁷⁸ CNN, *3 killed and at least 4 wounded in overnight shooting in Los Angeles*, <https://www.cnn.com/2023/01/28/us/los-angeles-fatal-shooting/index.html>, updated January 28, 2023, accessed April 18, 2023.

⁷⁹ LA Times, *RIOT AFTERMATH: Police Credited for Heading Off Spread of Riots*, <https://www.latimes.com/archives/la-xpm-1992-05-07-we-2569-story.html>, published May 7, 1992, accessed April 18, 2023.

⁸⁰ NBC, *Live Updates: Thousands Protest Across Southern California*, <https://www.nbclosangeles.com/news/local/protests-los-angeles-george-floyd-justice-police-marches/2375892/>, published June 6, 2020, accessed April 18, 2023.

⁸¹ Westside Today, *Culver City Police Activate Emergency Operations Center Ahead of Election*, <https://westsidetoday.com/2020/11/02/culver-city-police-activate-emergency-operations-center-ahead-of-election/>, published November 2, 2020, accessed April 25, 2023.

⁸² CDC, *Past Pandemics*, <https://www.cdc.gov/flu/pandemic-resources/basics/past-pandemics.html>, accessed April 18, 2023.

- 1968 Pandemic (H3N2 virus)
- 1918 Pandemic (H1N1 virus)

The City experienced significant impacts from the ongoing COVID-19 Pandemic. A novel coronavirus disease, SARS-CoV-2 or Covid-19 was identified in Wuhan, China in December 2019. By March 2020, the Governor issued the first statewide stay at home order, closing non-essential businesses.

Covid-19 is highly transmissible and can spread by breathing in air or aerosol particles.⁸³ Covid-19 has a wide range of symptoms including fever, chills, cough, shortness of breath, difficulty breathing, and loss of smell or taste. The symptoms of Covid-19 can result in severe complications that require hospitalization. Severe complications often lead to death, particularly in seniors and people with underlying health conditions or compromised immune systems.⁸⁴ At the time this document was prepared, there have been 3,509,407 total confirmed cases and 35,863 total confirmed deaths in the County of Los Angeles.⁸⁵ Covid-19 has significantly affected every city within Los Angeles County, including the City.

As part of the response to slow the spread of the virus, non-essential businesses and schools were closed or transitioned to remote environments, if feasible. The City followed guidelines and safety standards set by the Los Angeles County Department of Public Health, particularly regarding the reopening of non-essential business and schools. Following the same protocols, CCUSD closed all public schools to in-person learning during 2020 – 2021 and shifted to virtual learning for all grade levels. A significant milestone and improvement against the pandemic came in December of 2020 with the release of the Covid-19 vaccine. CCUSD returned to in-person education services during 2022, with mitigation measures implemented to reduce the risk of COVID-19 spread (such as masking and social distancing). Generally, the pandemic resulted in significant economic, educational and public health impacts that are still reverberating throughout the City and CCUSD.

Before Covid-19, the most recent pandemic experienced was in 2009, the (H1N1)pdm09, “swine flu” pandemic.⁸⁶ H1N1pdm09 primarily affected children and young/middle-aged adults, atypical from most influenza pandemics. Between April 2009 and April 2010, the CDC estimates over 60 million cases, nearly 275,000 hospitalizations and over 12,000 deaths in the United States. The World Health Organization declared an end to the global pandemic in August 2010; however, the virus continues to circulate as a seasonal influenza virus.⁸⁷

Both the 1968 and 1918 pandemics were caused by avian flu outbreaks. The 1968 pandemic was caused by an influenza H3N2 virus. The estimated number of deaths in the United States was 116,000 and the worldwide total is estimated at 1.1 million.⁸⁸ Medical advances in the 1960s including antiviral medications and expanded influenza vaccine options significantly helped combat this pandemic. The 1918 pandemic was an outbreak of influenza caused by an H1N1 virus. The virus spread worldwide from 1918-1919. It is estimated that one third of the worldwide population at the time, about 500 million people, became infected with the virus. The pandemic

⁸³ CDC, *COVID-19 Overview and Infection Prevention and Control Priorities in non-U.S. Healthcare Settings*, <https://www.cdc.gov/coronavirus/2019-ncov/hcp/non-us-settings/overview/index.html>, accessed April 18, 2023.

⁸⁴ Ibid.

⁸⁵ Covid19 California State Dashboard, *Tracking Covid-19 in California*, https://covid19.ca.gov/state-dashboard/#location-los_angeles, accessed April 18, 2023.

⁸⁶ CDC, *Origin of 2009 H1N1 Flu (Swine Flu): Questions and Answers*, https://www.cdc.gov/h1n1flu/information_h1n1_virus_qa.htm, published November 25, 2009, accessed April 18, 2023.

⁸⁷ CDC, *Past Pandemics*, <https://www.cdc.gov/flu/pandemic-resources/basics/past-pandemics.html>, accessed April 18, 2023.

⁸⁸ Ibid.

resulted in an estimated 675,000 deaths in the United States alone and over 50 million total world-wide.⁸⁹

Two federally declared pandemic disasters have occurred within the planning area since the adoption of the previous MJHMP. A list of federally declared pandemic disasters is included below; refer to Table 4-28, *Summary of Federally Declared Disasters Affecting the Planning Area* for further details regarding specific impacts to Culver City or CCUSD.

- DR 3428, California COVID-19 – March 13, 2020
- DR 4482, California COVID-19 Pandemic – March 22, 2020

LOCATION/GEOGRAPHIC EXTENT

Hazardous Materials Release/Spill

Hazardous materials are generated, used, and stored by facilities throughout the planning area and in surrounding communities for a variety of purposes in service industries, businesses, schools, and households. Uses known to transport, store, use and/or dispose hazardous materials within the planning area involve construction, industry (both light and heavy), dry cleaning, film processing, landscaping, automotive maintenance and repair, and common residential/commercial maintenance activities. Most hazardous materials in the planning area are associated with low-risk, small-scale operations consistent with day-to-day activities. Common hazardous materials include diesel fuel, chlorine, fuel waste, pesticides, paint/paint thinner, and solvents. Additionally, hazardous materials are likely used in households throughout the planning area. Household hazardous materials are commonly found in paints, lawn and garden products, household cleaners, beauty products, medicine, automotive fluids, and batteries.

The most significant hazardous materials land use threat to the planning area is the Inglewood Oil Field. The Inglewood Oil Field is partially located in the planning area and adjacent Baldwin Hills, with approximately 78 acres of the total 1,000 acres within the City. As of January 2017, the California Geologic Energy Management Division reported 1,550 wells in the oil field, producing oil and natural gas. In 2008, regulations for the oil and gas production activities within the Baldwin Hills portion of the oil field were established through the Baldwin Hills Community Standards District. At the time of this writing, the City is working cooperatively with Los Angeles County to prohibit new oil wells and allow existing oil wells to continue operation under a legal nonconforming status. The City and Sentinel Peak Resources (“Sentinel”, the existing oil extraction operator) have made substantial progress toward a final settlement agreement in response to the City’s Oil Termination Ordinance (the “Ordinance”) which calls for the phase out of all oil operations within the City’s portion of the Inglewood Oil Field by December 31, 2032. The Ordinance, which was adopted by the City Council on October 25, 2021, prohibits the drilling of any new wells, the redrilling of any existing wells, requires the plugging and abandonment of all oil and gas wells and termination of oil and gas operations within the City.

Geographically, the Inglewood Oil Field poses a significant and unique hazardous materials threat due to the location within and adjacent to the planning area. Further, the Inglewood Oil Field location intersects with mapped wildfire hazard zones and known faults in the Newport Inglewood Fault Zone.

Otherwise, the planning area generally does not contain the types of significant industrial uses that typically result in larger amounts of hazardous materials. There is an industrial corridor in the

⁸⁹ Ibid.

northeastern portion and small pockets of industry in the southern portion of the City, zoned for light industry (“Industrial Light”) and general industry (“Industrial General”).

According to the Department of Toxic Substances Control EnviroStor database, there are three voluntary cleanup sites and one school cleanup site in the City. One voluntary site, an Auto Body Repair and Paint business (8888 W. Washington Boulevard), is active as of October 2019. Another voluntary site is an active oil field (10100 Jefferson Boulevard), which requires no further action as of September 2021 following a restriction recommendation that limits the property to commercial or industrial use. The final, inactive, voluntary cleanup site (bounded by Sepulveda, Slauson, and Hannum) is 4.5 acres of retail and manufacturing space that was assessed to pose no significant risk under commercial land use. There is a cleanup site at the Willows II Community School (8490 Warner Drive) due to the site previously being used for light industrial purposes. In 2007, sampling identified significant residual levels of chlorinated solvents in soil gas samples, limited soil contamination, and limited volatile organic compounds impacts in perched groundwater. Soil vapor extraction is proposed as remediation, and the site was certified as of September 2012. Additionally, there is one state response active site, one military evaluation inactive site, and one tiered permit site.

The Environmental Protection Agency (EPA) biennially collects information regarding the generation, management, and disposal of hazardous materials under the Resource Conservation and Recovery Act (RCRA). The Biennial Report Summary for 2021 reported seven hazardous waste generators in the City.⁹⁰ Hazardous waste types generated at these locations (including aqueous and alkaline solutions, ignitable waste, inorganic and organic wastes, oxygenated solvents, pharmaceutical waste, photochemicals, oils, sludge waste, corrosive waste, reactive waste, lead, and more) are disposed pursuant to RCRA regulations.

Hazardous materials are transported throughout California and Los Angeles County, primarily occurring along highways under the regulatory authority of the California Highway Patrol (CHP). Two freeways, the I-405 and the SR-90 traverse the City. The I-10 abuts the northeast portion of the City. The California Department of Transportation (Caltrans) operates all three freeways. There is hazardous materials release risk in the event of traffic collisions. Disruption to a major freeway due to a hazardous materials release could result in significant safety and economic impacts to the City, County, or even State.

Terrorism/Active Shooter

The specific location of terrorism and active shooter incidents are difficult to predict. Generally, locations most vulnerable to terrorism and active shooters are places where people gather, places of political importance, infrastructure, and destinations. Examples include but are not limited to:

- CCUSD Schools
- Hospitals
- Churches/religious centers
- Employment centers
- City Hall
- Community centers
- Libraries
- Transit operations and stops
- Shopping malls/large retail centers

⁹⁰ EPA, *Biennial Report Summary: 2021*, <https://rcrepublic.epa.gov/rcreainfoweb/action/modules/br/summary/view>, accessed April 24, 2023.

- Highways and other transportation infrastructure
- Power plants and utility infrastructure
- Event/entertainment centers

The planning area is a major entertainment production center, both locally and regionally. Land uses within the planning area include many major film studios, including Sony and Amazon. Threats against California film studios were generated in 2001 post-9/11, but never materialized. While there are no historical incidents affecting the planning area, film studios could be uniquely vulnerable to a politically motivated terrorist threat.

Civil Unrest

Similar to terrorism and active shooter threats, the specific location of civil unrest is difficult to predict. Politically motivated civil unrest may target government facilities like City Hall, the public library, CCUSD schools, and parks. Commercial corridors are scattered throughout the City and could serve as a starting point for a civil unrest, along with other localized opportunities for citizens to gather. Civil unrest has the potential to migrate from a specific starting point (including outside the City) and impact multiple public facilities, businesses and private property throughout the City.

Pandemic

By definition, a pandemic is understood to have a significant geographic range with impacts extending to the global level. Effects of a pandemic would impact the entirety of the City, depending on the disease and the susceptible population. While the entirety of the City would be at risk, specific subsets of the population may be more susceptible than others, including vulnerable populations, the very young (those under 1 year), elderly and immune-compromised individuals, depending on the disease.^{91,92}

MAGNITUDE/SEVERITY

Hazardous Materials Release/Spill

The magnitude and severity of a hazardous materials spill would be highly dependent on the type of spill, location, and the extent to which hazardous materials are released. Hazardous materials can be flammable, radioactive, infectious, corrosive, toxic/poisonous, or otherwise reactive. For example, a radioactive material spill would have a much further-reaching extent when compared to a paint spill. Climate conditions can also affect the severity of hazardous materials spills. Heavy rains or winds could spread hazardous materials over a larger geographical area or create challenging cleanup conditions. Challenging cleanup conditions could allow for the contamination extent to grow.

Additionally, natural hazards such as wildfires or earthquakes could cause hazardous materials releases as a secondary impact requiring immediate response. This is a concern associated with the Inglewood Oil Field, as this location intersects with mapped wildfire hazard zones and known faults in the Newport Inglewood Fault Zone.

Terrorism/Active Shooter

The severity of impacts of terrorism and/or active shooter are difficult to predict, and would depend on the nature of the attack and target. The impacts vary in size and severity depending on the

⁹¹ Mayo Clinic, *Covid-19 in babies and children*, <https://www.mayoclinic.org/diseases-conditions/coronavirus/in-depth/coronavirus-in-babies-and-children/art-20484405>, published October 21, 2022, accessed April 12, 2023.

⁹² University of Michigan, *Which Populations are Most Vulnerable to the Coronavirus Pandemic?*, <https://sph.umich.edu/news/2020posts/which-populations-are-most-vulnerable-to-coronavirus.html>, published April 6, 2020, accessed April 12, 2023.

specific event, but typically results in loss of life, psychosocial damage, and service/industry disruptions. Further, the City could experience secondary effects due to terrorism incidents located outside of the City. The City is located within the west side of Los Angeles, in close proximity to major urbanized cities and communities. West Los Angeles County is a major tourist destination with several key regional facilities that could be targets for terrorism, including Los Angeles International Airport, UC Los Angeles, and the Santa Monica Pier. Depending on the type and size of an attack in a neighboring jurisdiction, impacts could extend to the City.

Civil Unrest

The extent and severity of damages is highly dependent on various factors including the motivation behind the civil unrest, the number of participants, and level of law enforcement response. The aftermath of civil unrest is usually measured by number of injuries, deaths, and property damage/losses in U.S. dollars. Less severe civil unrests may occur in small geographic areas, involve limited individuals, and result in minor property damage. Severe civil unrests can occur citywide, involve significant numbers of people, resulting in injuries or deaths, and result in significant property damage from mass rioting, looting, or arson. Financial impacts to residents and business owners who are insured or without comprehensive insurance policies would experience the most severe impacts.. Most comprehensive insurance policies include coverage for civil unrest, riots and other vandalism causes, but payment and repairs may be delayed due to the nature of the unrest incident. Depending on the extent and severity of damages, significant downtime may be required to cleanup and/or rebuild after an event. Generally, extended duration of civil unrest would be associated with greater extent of impacts and damages compared to shorter durations.

Pandemic

The extent to which a pandemic would impact the City would depend on the disease type and symptoms. Some diseases may be extremely transmissible and would affect a significant portion of the population, however, the symptoms might be mild. On the other hand, a disease might be very deadly but not be easily transmitted. The worst-case pandemic scenario is a disease that is both highly transmissible and highly deadly, such as Covid-19. The severity and extent of a pandemic may also depend on the ability to respond by developing and administering vaccinations, or other methods for mitigating the spread of the disease.

PROBABILITY OF FUTURE OCCURRENCES

Hazardous Materials Release/Spill

Hazardous materials use and transport throughout the planning area will continue into the future, and the probability for future occurrences is considered medium. However, federal, State, and local governments implement applicable polices and regulations regarding the use, transport, storage, and disposal of hazardous materials in order to mitigate the risk of a hazardous materials release. The City participates in a household hazardous waste disposal program, set up by the County of Los Angeles. There are seven permanent household hazardous waste disposal facilities (referred to as S.A.F.E. Centers), and the program hosts mobile collection events in different cities.

Both the federal government and the State require hazardous materials handling to be reported with the local Certified Unified Program Agency, a local agency certified by the California Environmental Protection Agency to implement and enforce hazardous materials management

programs.⁹³ Many different industries handle hazardous materials as part of day-to-day operations, and each agency/company are responsible to follow policies and programs dictated by federal and State regulation to ensure that hazardous materials are not released. Because of the preventative action, the probability and likelihood for future hazardous materials spills is considered medium.

Terrorism/Active Shooter

The probability of a terrorist or active shooter attack in the planning area is medium, due to the presence of potential targets within the planning area and within the greater Los Angeles region. Because of the dynamic nature of a terrorist and active shooter threat, terrorism can occur without warning and may occur in any area within the planning area. Additionally, terrorism-related cases have been increasing across the nation in recent years; domestic terrorism-related cases increased 357% from 2013 to 2021.⁹⁴

Civil Unrest

Civil unrest incidents occur throughout the nation for varying reasons and causes. In the current political and social climate, it is reasonable to assume that lawful protests and lawful assembly will continue. However, lawful assembly can quickly erupt into civil unrest making it difficult to predict when intervention from law enforcement will be necessary. The presence of law enforcement at protests is a standard preemptive measure to mitigate civil unrest. Additionally, increased vigilance and increased intelligence gathering methods can be used by law enforcement in the City to better prepare for gatherings that may result in civil disturbance/civil unrest. Because of the nature of civil disturbance and civil unrest and the linkages to political, social, racial and or environmental movements, the probability and likelihood of future occurrences is considered medium.

Pandemic

The likelihood of pandemics has increased over the last hundred years due to increased globalization, urbanization, and changes in land use. Another potential key contributor to an increased likelihood of pandemics is factory farming. The shift from small scale animal agriculture to large factory farming operations may be a driving factor in recent pandemic diseases and may cause the next pandemic. For these reasons, the probability of future occurrences is considered medium. However, the exact time and location that another virus with the potential to create a global pandemic would occur is difficult to predict. Future pandemic occurrences would likely result from a mutation of a virus that results in a new virus to which the population has no immunity. With medical technology, it is possible to anticipate new viruses and develop vaccines to prepare for the next outbreak; however, preventing a pandemic through preemptive measures is unlikely.

CLIMATE CHANGE CONSIDERATIONS

Hazardous Materials Release/Spill

Accidental hazardous materials releases are usually caused by human error, unrelated with climate change. However, hazardous materials releases can be a secondary impact of infrastructure failure during a natural hazard event, such as a wildfire or severe storm. Climate change could cause an increase in destructive natural hazards in the City and surrounding region, and thus risk future hazardous materials spills. Further, hazardous materials releases during

⁹³ Department of Toxic Substances Control, *Certified Unified Program Agencies (CUPA)*, <https://dtsc.ca.gov/certified-unified-program-agencies-cupa/>, accessed April 19, 2023.

⁹⁴ ABC7, *Domestic terrorism-related cases increased by more than 350% over 8 years*, <https://abc7.com/domestic-terrorism-related-cases-increased-by-more-than-350%25-over-8/12895401/>, published March 1, 2023, accessed April 18, 2023.

wildfire or severe weather events could spread contamination to large geographic areas and amplify long-term impacts to human and ecological health. Spills or releases in challenging clean-up conditions can result in more severe damage or impacts compared to spills during normal conditions.

Terrorism/Active Shooter

As terrorism and active shooter events are human-caused, these types of hazards are not directly tied to climate change impacts. However, significant and prolonged climate change impacts can cause conflicts regarding natural resources and livelihood insecurity, as well as food insecurity or water scarcity. Terrorist organizations could operate more easily in fragile and conflict-affected environments, according to the Climate Diplomacy Organization.⁹⁵

Civil Unrest

Civil unrest is also not directly tied to climate change impacts. However, environmental concerns and climate change implications could drive conflict on a local, regional, or global scale. Academic research has connected climate change influenced droughts to periods of societal unrest over the course of many centuries. Most recently, research from Colombia University links climate change and unprecedented drought as the key societal stressor that led to uprisings that initiated the Syrian Civil War.⁹⁶ Vulnerability associated with limited resources can make periods of civil unrest more likely to occur in the future. As climate change continues, protests and demonstrations may become more extreme, escalating to civil unrest.

Pandemic

While pandemics can originate for reasons outside of climate change, it is possible that the impacts of climate change will make pandemics more severe. According to the National Science Foundation, climate change will likely require humans to relocate and wild animals to find new habitats, dramatically increasing the risk of viral jumps/transmissions. For example, rising temperatures are expected to have a major impact on bats – a species known for novel virus sharing, most recently with Covid-19 or the Ebola virus.⁹⁷ When coupled with increased urbanization and globalization, pandemics could continue to spread as quickly or more quickly than the Covid-19 pandemic. While the full effects of climate change on pandemics are not fully known, it is reasonable to assume the risk for future pandemics continues to exist.

VULNERABILITY AND RISK ASSESSMENT

Human-caused hazards could affect the entirety of the planning area, and therefore all the City and CCUSD critical facilities, infrastructure systems, structures, residents and businesses are considered vulnerable to human-caused hazards. This would include the entire population of Culver City (approximately 40,000 people) and CCUSD students/employees (approximately 7,000 students and 450 estimated staff members). Specific vulnerabilities by human-caused hazards are discussed in the paragraphs below.

Impacts from hazardous materials spills can vary significantly based on the type, content, or amount of hazardous materials and the release location. Many entities within the planning area lawfully handle hazardous materials such as gasoline stations, dry cleaners, medical facilities,

⁹⁵ Climate Diplomacy Organization, *Insurgency, Terrorism and Organized Crime in a Warming Climate*, <https://www.climate-diplomacy.org/publications/insurgency-terrorism-and-organised-crime-warming-climate>, accessed April 12, 2023.

⁹⁶ Columbia University, *Can studying climate change help predict civil unrest*, <https://giving.columbia.edu/can-studying-climate-change-help-predict-civil-unrest>, accessed April 12, 2023.

⁹⁷ National Science Foundation, *Study finds that climate change could spark the next pandemic*, <https://beta.nsf.gov/news/study-finds-climate-change-could-spark-next>, accessed April 12, 2023.

and commercial/retail businesses. In addition, hazardous materials transport occurs on local roadways within the planning area, including SR-90, and I-405. Though the City participates in regional hazardous materials emergency response efforts and follows local, state, and federal law, there remains a possibility of accidental hazardous materials spills. While areas adjacent to major transport routes could be a greater risk from a spill, hazardous materials release could potentially occur in any area of the planning area. Therefore, all City and CCUSD critical facilities and the entire planning area is considered vulnerable. Although hazardous materials could result in damages to structures, the most significant impact is the potential human health hazards or potential environmental contamination. Environmental contamination could impact air quality or water quality and could involve costly long-term clean-up measures. Damage to utility systems could disrupt service or cause significant outages at both City and CCUSD facilities. Spills near or at government and utility infrastructure could disrupt services to students and constituents. The intent behind hazardous materials spills can influence the magnitude of impact as well. An intentional hazardous materials release linked to terrorism or sabotage attempts could have wider-ranging impacts compared to an unintentional, accidental release. Thus, the threat of harm and injury is highly dependent on the actual incident.

Terrorism and active shooter incidents may also occur anywhere within the planning area, and thus the entirety of the City and CCUSD is considered vulnerable. Active shooters specifically target people, and attacks usually occur at places or events where large numbers of people congregate. Comparatively, terrorism attacks may either focus on places where people gather, or target CCUSD schools and/or City-owned facilities or public infrastructure (such as substations, transportation infrastructure, or water reservoirs). Depending on the nature of the attack, impacts could be widespread throughout the planning area or highly localized. Additionally, the planning area could be vulnerable to impacts from terrorism or active shooter incidents outside of the planning area but within the greater Los Angeles region. For example, a major incidents outside of the planning area boundaries could prompt a proactive lockdown at CCUSD facilities for the safety of students and staff.

Similarly, civil disturbance could also occur anywhere within the planning area, but generally would be more likely to occur at public spaces where people gather or targeted locations (specific businesses, City Hall, police stations). As public spaces are distributed throughout the planning area, the entirety of the City and CCUSD facilities are considered vulnerable to civil disturbance/civil unrest. The effects could be widespread throughout the City or be highly localized, depending on the nature of the actual incident. For this reason, all City and CCUSD critical facilities are considered susceptible to damages. Similar to terrorism and active shooter vulnerability above, the planning area could be vulnerable to civil disturbance incidents outside of the planning area but within the greater Los Angeles region. For example, a civil unrest incident outside of the planning area boundaries could prompt a proactive lockdown at CCUSD facilities for the safety of students and staff.

Pandemic by definition is a wide-reaching hazard, and would affect the entirety of the planning area. Thus, the entire population within the City and all students/staff at CCUSD would be vulnerable. Physical structures are not typically vulnerable to pandemics; thus, a structural failure of a critical facility due to pandemics is unlikely. The main concern for pandemic vulnerability is the impact on human health, and critical facilities that support in minimizing this impact. Health and medical community lifelines may be strained in response to a pandemic. As resources at public schools play a large role in the day-to-day life of students, critical programming at CCUSD facilities may be strained or reduced due to a pandemic. Historically, pandemics have substantially affected services offered by CCUSD, with the most recent COVID-19 pandemic closing down in-person educational services during 2020 – 2021. Overall, health impacts may be

widespread throughout the City and CCUSD, and therefore impact a significant percentage of the population. Additionally, pandemics may result in significant economic impacts to the planning area, businesses, and residents. Depending on the size and scale of the disease outbreak, the City emergency responders or CCUSD faculty may experience staffing challenges to continue services.

The entirety of the City is susceptible to harm associated with a human-induced hazard. However, the extent of harm or injury is highly dependent upon the nature of the actual incident. Hazardous materials releases, terrorism/cyber-attacks, civil disturbances/civil unrest, or pandemic could damage the environment, damage physical buildings and property, or impact human health. The effects of human-caused hazards could involve costly long-term clean-up actions and recovery measures.

As discussed in [Section 3.5](#), population patterns have not substantially changed within the planning area during the last five years. Both the Culver City population and CCUSD enrollment remains stable at levels previously identified in the 2017 MJHMP. No major changes in land use and development occurred while the previous 2017 was active that would affect the risk or vulnerability associated with human-caused hazards.

At the time of this MJHMP preparation, the City adopted an updated Housing Element and published a draft General Plan Update, planning for future growth. While it is unlikely that all approved, entitled, or proposed developments (including those identified in [Table 3-10](#)) will be constructed within the five-year active period of this MJHMP, the City and CCUSD anticipate some level of population growth to occur. Population growth within the City is therefore expected to increase enrollment in CCUSD schools. As the entirety of the planning area would be vulnerable to human-caused hazards, any projected population growth within the City or enrollment at CCUSD would increase the number of vulnerable individuals. At this time, no proposed projects under the purview of the City are expected to substantially increase human-caused hazard vulnerability. CCUSD has not proposed new facilities to accommodate projected growth that would affect human-caused hazard risk or vulnerability.

DAC/SVP VULNERABILITY AND RISK ASSESSMENT

The location, extent and magnitude of human-caused hazards would apply to the entirety of the planning area, including SVPs within the DAC (Census Tract 7028.03) and other high-risk individuals located within the City. No physical infrastructure or unique considerations within the DAC elevate risk to specific human-caused hazards. The primary concern for SVPs and other high-risk individuals is outreach and communication. Emergency communication and alerts in the case of human-caused hazards should consider potential linguistic isolation and language barriers. Specific SVP groups such as senior citizens or the disabled may need support or assistance if human-caused hazards trigger the need for evacuations. These considerations were included in [Section 5.0](#) as Mitigation Actions #1 and #3.

Socioeconomically disadvantaged children and staff at CCUSD may need additional support during and following human-caused hazards. Socioeconomically disadvantaged children may have parents or guardians with fewer resources to immediately pick-up children following an evacuation associated with a hazardous materials spill or civil disturbance threat. In addition, the recent COVID-19 pandemic illustrated disparities in public education when in-person services were suspended during 2020 – 2021. Many socioeconomically disadvantaged children rely on services offered by public schools for free/reduced price meals or other after school childcare

services. Other children may not have home environments that are conducive to productive homeschooling or at-home learning.

4.5 SUMMARY OF VULNERABILITY

Table 4-27, *Risk Assessment Summary Table*, shows a summary of critical facilities that intersect with hazard areas in the City. Those facilities that intersect with a hazard area are indicated with a “Y” and a red-shaded cell. Facilities that do not fall within the hazard area are designated with an “N” and a green-shaded cell. The risks of drought, ground shaking, and windstorm/heavy rain are equal throughout the community.

**Table 4-27
Risk Assessment Summary Table**

Facility	Hazard									
	Drought	Fault Rupture	Ground Shaking	Liquefaction	Landslide	Flood	Severe Weather	Wildfire	Dam Failure	Human-Caused
#1 – City Hall	Y	N	Y	N	N	N	Y	N	N	Y
#2 – Police Department	Y	N	Y	Y	N	N	Y	N	N	Y
#3 – Fire Station No. 1/Emergency Operations Center	Y	N	Y	N	N	N	Y	N	N	Y
#4 – Fire Station No. 2	Y	N	Y	Y	N	N	Y	N	Y	Y
#5 – Fire Station No. 3	Y	N	Y	N	N	N	Y	N	N	Y
#6 – Fire Training Building	Y	N	Y	Y	N	N	Y	N	N	Y
#7 – Public Works Yard	Y	N	Y	Y	N	N	Y	N	N	Y
#8 – Sanitation Transfer and Recycling Station	Y	N	Y	Y	N	N	Y	N	N	Y
#9 – Transportation Facility/Department	Y	N	Y	Y	N	N	Y	N	N	Y
#10 – Southern California Hospital at Culver City	Y	N	Y	N	N	N	Y	N	N	Y
#11 – Culver – Palms YMCA	Y	N	Y	Y	N	N	Y	N	Y	Y
#12 – Marycrest Manor – Skilled Nursing Facility	Y	N	Y	N	N	N	Y	Y	N	Y
#13 – Veterans Park & Memorial Building	Y	N	Y	Y	N	N	Y	N	N	Y
#14 – Syd Kronenthal Park	Y	Y	Y	Y	N	Y	Y	N	Y	Y
#15 – Blanco Park	Y	N	Y	Y	N	N	Y	N	N	Y
#16 – Culver West Alexander Park	Y	N	Y	Y	N	N	Y	N	Y	Y
#17 – Ivy Station & Media Park	Y	N	Y	N	N	N	Y	N	N	Y
#18 – El Marino Park	Y	N	Y	Y	N	N	Y	N	Y	Y
#19 – Blair Hills Park	Y	Y	Y	N	Y	N	Y	Y	N	Y
#20 – Dr. Paul Carlson Park	Y	N	Y	Y	N	N	Y	N	N	Y
#21 – Culver City Park (Botts Field)	Y	N	Y	N	Y	N	Y	Y	N	Y
#22 – Fox Hills Park	Y	N	Y	N	N	N	Y	N	N	Y
#23 – Lindberg Park	Y	N	Y	Y	N	N	Y	N	N	Y
#24 – Tellefson Park	Y	N	Y	N	N	N	Y	N	Y	Y
#25 – Senior Center	Y	N	Y	N	N	N	Y	N	N	Y
#26 – Municipal Plunge	Y	N	Y	Y	N	N	Y	N	N	Y
#27 – Culver City Community and Social/Teen Center	Y	N	Y	Y	N	N	Y	N	N	Y
#28 – Combs Parkette	Y	N	Y	Y	N	N	Y	N	N	Y
#29 – Culver City Skate Park	Y	N	Y	N	N	N	Y	N	N	Y
#30 – Fox Hills Parkette	Y	N	Y	N	N	N	Y	N	N	Y
#31 – The Boneyard Dog Park	Y	N	Y	N	N	N	Y	N	N	Y
#32 – Culver City Light Rail Station	Y	N	Y	N	N	N	Y	N	N	Y
#33 – MWD Venice Substation	Y	N	Y	N	N	N	Y	N	Y	Y
#34 – Sony Substation	Y	N	Y	N	N	N	Y	N	N	Y
#35 – Culver Substation	Y	N	Y	N	N	N	Y	N	N	Y

**Table 4-27 (continued)
Risk Assessment Summary Table**

Facility	Hazard									
	Drought	Fault Rupture	Ground Shaking	Liquefaction	Landslide	Flood	Severe Weather	Wildfire	Dam Failure	Human-Caused
#36 – Movie Substation	Y	N	Y	Y	N	N	Y	N	N	Y
#37 – Braddock Sewer Pump Station	Y	N	Y	Y	N	N	Y	N	Y	Y
#38 – Bristol Sewer Pump Station	Y	N	Y	Y	N	N	Y	N	N	Y
#39 – Hayden Sewer Pump Station	Y	N	Y	Y	N	N	Y	N	N	Y
#40 – Culver Boulevard Lift Station	Y	N	Y	Y	N	N	Y	N	Y	Y
#41- Jasmine Sewer Pump Station	Y	N	Y	Y	N	N	Y	N	N	Y
#42 – Mesmer Sewer Pump Station	Y	N	Y	Y	N	N	Y	N	N	Y
#43 – National Boulevard Bridge over Ballona Creek	Y	Y	Y	Y	N	N	Y	N	Y	Y
#44 – Higuera Street Bridge over Ballona Creek	Y	Y	Y	Y	N	Y	Y	N	Y	Y
#45 – Duquesne Avenue Bridge over Ballona Creek	Y	N	Y	Y	N	N	Y	N	Y	Y
#46 – Jackson Avenue Pedestrian Bridge over Ballona Creek	Y	N	Y	Y	N	N	Y	N	Y	Y
#47 – Overland Avenue Bridge over Ballona Creek	Y	N	Y	Y	N	N	Y	N	Y	Y
#48 – Ocean Drive Pedestrian Bridge over Ballona Creek	Y	N	Y	Y	N	N	Y	N	Y	Y
#49 – Sepulveda Boulevard Bridge over Ballona Creek	Y	N	Y	Y	N	N	Y	N	Y	Y
#50 – Sawtelle Boulevard Bridge over Ballona Creek	Y	N	Y	Y	N	N	Y	N	Y	Y
#51 – I-405 Freeway Bridge over Ballona Creek	Y	N	Y	Y	N	Y	Y	N	Y	Y
#1 – School District Office	Y	N	Y	Y	N	N	Y	N	N	Y
#2 – High School	Y	N	Y	Y	N	N	Y	N	N	Y
#3 – Culver Park Continuation High School	Y	N	Y	Y	N	N	Y	N	N	Y
#4 – Middle School	Y	N	Y	Y	N	N	Y	N	N	Y
#5 – El Marino Language School	Y	N	Y	Y	N	N	Y	N	N	Y
#6 – El Rincon Elementary	Y	N	Y	Y	N	N	Y	N	N	Y
#7 – Farragut Elementary	Y	N	Y	Y	N	N	Y	N	N	Y
#8 – La Ballona Elementary	Y	N	Y	N	N	N	Y	N	N	Y
#9 – Linwood E. Howe Elementary	Y	N	Y	Y	N	N	Y	N	N	Y
#10 – Office of Child Development	Y	N	Y	Y	N	N	Y	N	N	Y
#11 – Adult School	Y	N	Y	Y	N	N	Y	N	N	Y
#12 – Maintenance Facilities	Y	N	Y	Y	N	N	Y	N	N	Y
#13 – Natatorium Property	Y	N	Y	N	N	N	Y	N	N	Y
#14 – Warehouse/District IMC	Y	N	Y	Y	N	N	Y	N	N	Y
#15 – Echo Horizon School (leased)	Y	Y	Y	Y	N	N	Y	N	N	Y
#16 – Wildwood School	Y	N	Y	N	N	N	Y	N	N	Y

4.6 SUMMARY OF FEDERALLY DECLARED DISASTERS AFFECTING THE PLANNING AREA

As required by the recent FEMA policy guidelines updates, a summary of federally declared disasters specifically affecting the planning area within the last five years is included below as Table 4-28. Specific effects are also outlined in the hazard profiles, previous occurrences sections (where applicable) within Section 4.4, above.

**Table 4-28
Summary of Federally Declared Disasters Affecting the Planning Area**

Declaration Date	Disaster Number	Incident Subcategory	Incident Description	Effect on Planning Area
March 16, 2017	4305	Flood	Severe Winter Storms, Flooding, and Mudslides in California: On March 7, 2017, Governor Edmund G. Brown Jr. requested a major disaster declaration due to severe winter storms, flooding, and mudslides during the period of January 18-23, 2017. The Governor requested a declaration for Public Assistance) for 16 counties and Hazard Mitigation statewide. The Countywide per capita impact for Los Angeles County was reported \$3.94.	Several series of moist systems moved through California and Nevada during January and February 2017 bringing abundant precipitation and flooding. The Southern California area and Los Angeles County experienced washed out roads, closed highways, downed trees, damaged cars and flooded creeks and rivers. Culver City experienced flooded roads but no significant damage to infrastructure, buildings or property were reported. No major impacts to CCUSD were reported.
September 2, 2017	5201	Fire	California la Tuna Fire: On September 2, 2017, Governor Edmund G. Brown Jr. declared a state of emergency for Los Angeles County and requested a federal emergency declaration for the La Tuna Fire which burned in the Verdugo Mountains.	The La Tuna Fire burned 7,194 acres in the Verdugo Mountains from September 1 to September 9, 2017. The fire did not have any impacts on the planning area, other than impacts to air quality. No major impacts to the City or CCUSD were reported.
December 5, 2017	5225	Fire	California Creek Fire: On December 5, 2017, Governor Edmund G. Brown Jr. declared a state of emergency for Los Angeles County and Ventura County and requested a federal emergency declaration for the Creek Fire in Kagel Canyon and the Angeles National Forest.	The Creek Fire began on December 5, 2017 and ultimately burned 15,619 acres in Kagel Canyon and Angeles National Forest. The fire did not have any impacts on the planning area, other than impacts to air quality. No major impacts to the City or CCUSD were reported.
December 5, 2017	5226	Fire	California Rye Fire: On December 5, 2017, Governor Edmund G. Brown Jr. declared a state of emergency for Los Angeles County and requested a federal emergency declaration for the Rye Fire in Santa Clarita.	The Rye Fire began on December 5, 2017 in Santa Clarita, California. The fire burned 6,049 acres in Santa Clarita. Due to the distance away from the City, the fire did not have any impacts on the planning area.
December 6, 2017	5227	Fire	California Skirball Fire: On December 6, 2017, Governor Edmund G. Brown Jr. declared a state of emergency for Los Angeles County for the Skirball Fire in the Bel Air neighborhood of Los Angeles.	The Skirball Fire began on December 6, 2017 and burned 422 acres in the City of Los Angeles. The fire did not have any impacts on the planning area, other than impacts to air quality. No major impacts to the City or CCUSD were reported.

Declaration Date	Disaster Number	Incident Subcategory	Incident Description	Effect on Planning Area
December 8, 2017	3396	Fire	Wildfires in California: On December 7, 2017, Governor Edmund G. Brown Jr. requested a Presidential Emergency Declaration for direct federal assistance to supplement the state and local emergency response to the Southern California wildfires.	Multiple wildfires throughout Southern California including the Creek, Rye, Skirball and Thomas fires began in December 2017. The fire did not have any impacts on the planning area, other than impacts to air quality. No major impacts to the City or CCUSD were reported.
January 2, 2018	4353	Fire	California Wildfires, Flooding, Mudflows, and Debris Flows: On December 20, 2017, Governor Edmund G. Brown Jr. requested a major disaster declaration due to wildfires beginning on December 4, 2017, and continuing. The Governor requested a declaration for Individual Assistance and Public Assistance, including direct Federal assistance for four counties and Hazard Mitigation statewide. The Countywide per capita impact for Los Angeles County was reported \$1.89.	Multiple wildfires throughout Southern California including the Creek, Rye, Skirball and Thomas fires began in December 2017 and continued into January 2018. The fire did not have any impacts on the planning area, other than impacts to air quality. No major impacts to the City or CCUSD were reported.
November 9, 2018	3409	Fire	California Wildfires: On November 9, 2018, acting Governor Gavin Newsom issued an emergency proclamation for Los Angeles and Ventura counties due to the effects of the Hill and Woolsey fires, which have destroyed homes, threatened critical infrastructure and caused the evacuation of residents.	Wildfires across Southern California, including the Hill Fire and Woolsey Fire, began in November 2018. These fires impacted Ventura and Los Angeles counties. The fire did not have any impacts on the planning area, other than impacts to air quality. No major impacts to the City or CCUSD were reported.
November 9, 2018	5280	Fire	California Woolsey Fire: On November 9, 2018, it was announced that the President and Federal Emergency Management Agency (FEMA) have granted California's request, for a Presidential Emergency Declaration for direct federal assistance to supplement the state and local emergency response to major wildfires burning in Butte, Ventura and Los Angeles counties.	The Woolsey Fire began on November 8, 2018, and burned 94,949 acres destroying 1,643 structures throughout Ventura and Los Angeles counties. The fire did not have any impacts on the planning area, other than impacts to air quality. No major impacts to the City or CCUSD were reported.
November 12, 2018	4407	Fire	California Wildfires: On November 11, 2018, Governor Edmund G. Brown Jr. requested an expedited major disaster declaration due to wildfires during the period of November 8-25, 2018. The Governor requested a declaration for Individual Assistance and Public Assistance, including direct federal assistance for three counties and Hazard Mitigation statewide. This event was of the severity and magnitude that the need for supplemental Federal assistance was determined to be necessary prior to the completion of joint Federal, State, and local government Preliminary Damage Assessments (PDAs).	Multiple wildfires throughout California, including the Hill, Woolsey and Camp fires, began in November 2018. The Woolsey fire burned 96,949 acres in Los Angeles and Ventura counties, and the Camp Fire burned 153,336 acres in Butte County. The fire did not have any impacts on the planning area, other than impacts to air quality. No major impacts to the City or CCUSD were reported.

Declaration Date	Disaster Number	Incident Subcategory	Incident Description	Effect on Planning Area
October 11, 2019	5293	Fire	California Saddle Ridge Fire: On October 11, 2019, Governor Gavin Newsom issued an emergency proclamation for Los Angeles and Riverside counties due to the effects of several fires, including the Saddle Ridge, Eagle, Sandalwood, Reche, and Wolf fires, which have destroyed structures, threatened homes and critical infrastructure, and caused the evacuation of tens of thousands of residents.	The Saddle Ridge Fire began October 10, 2019 and burned 8.799 acres in Los Angeles County. The fire began in the Sylmar neighborhood of Los Angeles. The fire did not have any impacts on the planning area, other than impacts to air quality. No major impacts to the City or CCUSD were reported.
October 24, 2019	5296	Fire	California Tick Fire: On October 24, 2019, Governor Gavin Newsom issued an emergency proclamation for the counties of Sonoma and Los Angeles due to the effects of the Kincade and Tick fires, which have destroyed structures, threatened homes and critical infrastructure, and caused the evacuation of tens of thousands of residents.	The Tick Fire began on October 24, 2019 and burned 4,615 acres in Los Angeles County near Santa Clarita. The fire did not have any impacts on the planning area, other than impacts to air quality. No major impacts to the City or CCUSD were reported.
October 28, 2019	5297	Fire	California Getty Fire: On October 28, 2019, the California Governor's Office announced that the state has secured a Fire Management Assistance Grant from the Federal Emergency Management Agency (FEMA) to help ensure the availability of resources to fight the Getty Fire burning in Los Angeles County, which has threatened homes and caused the evacuation of residents.	The Getty Fire began on October 28, 2019 and burned 745 acres in the Brentwood neighborhood of Los Angeles. The fire caused power outages and evacuations north of the planning area. Additionally, the fire shutdown the I-405 north of the planning area. The fire did not have any structural impacts on the planning area, other than impacts to air quality. No major impacts to the City or CCUSD were reported.
March 13, 2020	3428	Biological	California Covid-19: On March 13, 2020, the President declared the ongoing Coronavirus Disease 2019 (COVID-19) pandemic of sufficient severity and magnitude to warrant an emergency declaration for all states, tribes, territories, and the District of Columbia pursuant to section 501 (b) of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, 42 U.S.C. 5121-5207 (the "Stafford Act").	Similar to other jurisdictions across California, Culver City was affected by the COVID-19 pandemic. In April 2020, the City delegated public health duties and responsibilities to the Los Angeles County Public Health Officer. The City followed the Stay at Home Order between March and May 2020, and followed industry specific guidelines and checklists to ensure safety in reopening the local economy. CCUSD closed all educational facilities to in person learning during 2020 – 2021, and returned for the 2020 academic school year in-person with mitigation measures implemented (masks, social distancing, etc.).

Declaration Date	Disaster Number	Incident Subcategory	Incident Description	Effect on Planning Area
March 22, 2020	4482	Biological	California Covid-19 Pandemic: On March 22, 2020, Governor Gavin Newsom requested a major disaster declaration due to the Coronavirus Disease 2019 (COVID-19) pandemic beginning on January 20, 2020, and continuing. The Governor requested a declaration for Individual Assistance, including the Individuals and Households Program, Crisis Counseling Program, Disaster Unemployment Assistance, Disaster Case Management, and Disaster Legal Services statewide; Public Assistance, including direct Federal assistance statewide; and Hazard Mitigation statewide.	Similar to other jurisdictions across California, Culver City was affected by the COVID-19 pandemic. In April 2020, the City delegated public health duties and responsibilities to the Los Angeles County Public Health Officer. The City followed the Stay at Home Order between March and May 2020, and followed industry specific guidelines and checklists to ensure safety in reopening the local economy. CCUSD closed all educational facilities to in person learning during 2020 – 2021, and returned for the 2020 academic school year in-person with mitigation measures implemented (masks, social distancing, etc.).
September 13, 2020	5374	Fire	California Bobcat Fire: On October 16, 2020, the President issued a major disaster declaration for damage in the State of California resulting from wildfires beginning on September 4, 2020, and continuing	The Bobcat Fire began on September 6, 2020, and burned over 115,000 acres in the San Gabriel Mountain, northeast of Los Angeles. The fire did not have any impacts on the planning area, other than impacts to air quality. No major impacts to the City or CCUSD were reported.
October 16, 2020	4569	Fire	California Wildfires: On September 28, 2020, Governor Gavin Newsom requested a major disaster declaration due to wildfires beginning on September 4, 2020, and continuing. The Governor requested a declaration for Individual Assistance and Public Assistance for seven counties and Hazard Mitigation statewide.	Multiple wildfires throughout California, including the Bobcat, Creek, and El Dorado fires, began in September, 2020. Most of these fires impacted northern California and areas outside of the Culver City area. The fire did not have any impacts on the planning area, other than impacts to air quality. No major impacts to the City or CCUSD were reported.
January 9, 2023	3591	Flood	California Severe Winter Storms, Flooding, and Mudslides: On January 9, 2023, FEMA Announced that a federal disaster assistance has been made available to the state of California to supplement state, local and tribal response efforts due to emergency conditions resulting from severe winter storms, flooding and mud slides beginning January 8, 2023, and continuing.	A series of storms hit Southern California in January 2023. On January 9 th , a flash flood warning was extended to all of Los Angeles County. Culver City experienced heavy rains but no significant damage to infrastructure, buildings or property were reported. No specific damage to CCUSD facilities was reported.

Declaration Date	Disaster Number	Incident Subcategory	Incident Description	Effect on Planning Area
January 14, 2023	4683	Flood	California Severe Winter Storms, Flooding, Landslides, and Mudslides: On January 12, 2023, Governor Gavin Newsom requested an expedited major disaster declaration due to severe winter storms, flooding, landslides, and mudslides beginning on December 24, 2022, and continuing. The Governor requested a declaration for Individual Assistance and Public Assistance for 49 counties and Hazard Mitigation statewide. The Countywide per capital impact indicator was reported \$4.44.	A series of storms hit Southern California in January 2023. On January 9 th , a flash flood warning was extended to all of Los Angeles County. Culver City experienced heavy rains but no significant damage to infrastructure, buildings or property were reported. No specific damage to CCUSD facilities was reported.
March 10, 2023	3592	Flood	California Severe Winter Storms, Flooding, Landslides, and Mudslides: On March 10, 2023, FEMA announced that federal disaster assistance has been made available to the state of California to supplement state, tribal and local response efforts due to emergency conditions resulting from severe winter storms, flooding, landslides and mudslides beginning March 9, 2023, and continuing.	A series of storms hit Southern California in January 2023 and extended into April 2023. In March, Culver City experienced heavy rains but no significant damage to infrastructure, buildings or property were reported. No specific damage to CCUSD facilities was reported.
April 3, 2023	4699	Severe Storm	California Severe Winter Storms, Straight-line Winds, Flooding, Landslides, and Mudslides: On March 28, 2023, Governor Gavin Newsom requested a major disaster declaration due to severe winter storms, straight-line winds, flooding, landslides, and mudslides beginning on February 21, 2023, and continuing. The Governor requested a declaration for Individual Assistance for seven counties, Public Assistance for four counties, and Hazard Mitigation statewide. The Countywide per capital impact indicator was reported \$4.44.	A series of storms hit Southern California in January 2023 and extended into April 2023. In April, Culver City experienced heavy rains but no significant damage to infrastructure, buildings or property were reported. No specific damage to CCUSD facilities was reported.

Source: FEMA, *Disaster Declarations for States and Counties*, <https://www.fema.gov/data-visualization/disaster-declarations-states-and-counties>, accessed February 6, 2024.

SECTION 5.0: MITIGATION ACTIONS

Hazard mitigation strategies are used to reduce hazard impacts on critical facilities or other infrastructure identified by the City and CCUSD. This section is developed from an in-depth review of the vulnerabilities and capabilities described in the previous plan section. Overall, the actions represent the CCUSD/City's approach for reducing and/or eliminating the potential losses as identified in Section 4.0.

5.1 HAZARD MITIGATION OVERVIEW

FEMA'S NATIONAL FLOOD INSURANCE PROGRAM

The National Flood Insurance Program (NFIP) provides affordable flood insurance to property owners, renters, and businesses by encouraging communities to adopt and enforce floodplain management regulations. Participation in the NFIP is optional; however, property owners who live in a non-participating community with flood-prone areas are not able to buy flood insurance through the program. Communities with mapped floodplains cannot receive federal grants or loans for development activities in flood-prone areas and cannot receive federal disaster assistance to repair flood damaged buildings or structures in mapped floodplains if the jurisdiction is not a participant of the NFIP.

The City is a participant of the NFIP and implements the requirements of NFIP through the Culver City Municipal Code Chapter 15.03, Construction in Flood Prone Areas. Specific administration and enforcement regulations are outlined in Sections 15.03.025 to Section 15.03.095. Section 15.03.20, Establishment of Areas of Special Flood Hazard states: "The areas of special hazard identified by the Federal Insurance Administration (FIA) of the Federal Emergency Management Agency (FEMA) in the City of Culver City Flood Insurance Study (FIS), dated August, 1979, and accompanying Flood Insurance Rate Map (FIRM), dated February 1, 1980, and all subsequent amendments or revisions are hereby adopted by reference and declared to be a part of this Chapter." The latest FIRM maps adopted for the City are dated effective December 20, 2018.

The Culver City Municipal Code Section 15.03.050 designates the City's Building Official as the Floodplain Administrator who is responsible for administering and implementing the provisions of the NFIP. All development, including new construction and substantial improvements, within designated special flood hazards must be in full compliance with Chapter 15.03. The terms "new construction" and "substantial improvement" are defined in Section 15.03.015 of the Municipal Code. All new construction and substantial improvement are subject to the development standards outlined in Section 15.03.055 and Section 15.03.070 of the Municipal Code, which implement NFIP requirements. Requirements for new construction and significant improvement would also apply after any event where property had been substantially impacted by flood. No other specific regulations or requirements are outlined in the City code for implementation after any event where property had substantial improvement or damage. Significant flood events are rare within the City, even during heavy precipitation years. To date, the City does not have any repetitive loss properties or severe repetitive loss properties within the jurisdiction.

Additionally, it is noted that the City's General Plan Land Use map identifies where specific land uses are allowed within the City. The City's Focused Special Studies Area – Ballona Creek is applied to the major drainage channel bisecting the City. This land use and zone does not permit habitable development within Ballona Creek. The City will continue to use and implement General Plan land use designations to control development within flood hazard zones.

As a school district/special district, CCUSD cannot participate in the NFIP. CCUSD does not have any repetitive loss or severe repetitive loss properties, nor does CCUSD own any facilities within a FEMA mapped flood zone. While CCUSD cannot individually participate in the NFIP, all CCUSD related development (including future development) must demonstrate consistency with Culver City Municipal Code Section 15.03.050, Floodplain Management Program.

HAZARD MITIGATION PRIORITIZATION

The MJHMP Project Management Team and the MJHMP Planning Team discussed each mitigation action to identify priority, using the following as guidance:

- **High Priority:** Top organizational priority and is generally a well-detailed project idea. Protects population, resource, facility, or property at high risk. Uses feasible methods, techniques, or technology.
- **Medium Priority:** A good idea that needs more information or is an action that addresses a moderate hazard.
- **Low Priority:** An idea that needs a lot more information or will take a lot of preliminary action to build support.

The hazard ranking completed as part of MJHMP Planning Team Meeting #1, and additional discussion during Meeting #2 influenced the ultimate ranking of each hazard. MJHMP Planning Team Meeting #4 influenced the priority/timeline of each specific mitigation action, and a small working group of City and CCUSD staff members reviewed and provided comment on the mitigation actions afterward. The MJHMP Planning Team considered the frequency and severity of the hazard; the vulnerability of critical facilities or infrastructure; the impacts the mitigation action would avoid or reduce; the benefits of the action on the community; the critical facilities that would benefit; the environmental benefits of the action; and the capability of the City and CCUSD to implement the action. For example, some actions may require further study or information but were identified as a high priority because of current conditions (i.e., heightened risk of the hazard, probability of future occurrences, or lack of redundancy established in a specific portion of the community). Several actions were identified as high priority, while the nature and complexity of the action involves a “long-term” timeline of five or more years.

The MJHMP Planning Team used the STAPLE/E (Social, Technical, Administrative, Political, Legal, Economic, and Environmental) criteria, as described in Table 5-1, STAPLE/E Review and Selection Criteria, when considering and prioritizing the most appropriate mitigation alternatives for the City and CCUSD. This methodology, as endorsed by FEMA, requires that social, technical, administrative, political, legal, economic, and environmental considerations be considered when reviewing potential actions. This process was used to help ensure that the most equitable and feasible actions would be undertaken based on the City’s and CCUSD’s unique capabilities.

**Table 5-1
STAPLE/E Review and Selection Criteria**

STAPLE/E Review	Selection Criteria
Social	<ul style="list-style-type: none"> • Is the proposed action socially acceptable to the jurisdiction and surrounding community? • Are there equity issues involved that would mean that one segment of the jurisdiction and/or community is treated unfairly? • Will the action cause social disruption?

Table 5-1 (continued)
STAPLE/E Review and Selection Criteria

STAPLE/E Review	Selection Criteria
Technical	<ul style="list-style-type: none"> • Will the proposed action work? • Will it create more problems than it solves? • Does it solve a problem or only a symptom? • Is it the most useful action in light of other jurisdiction goals?
Administrative	<ul style="list-style-type: none"> • Can the jurisdiction implement the action? • Is there someone to coordinate and lead the effort? • Is there sufficient funding, staff, and technical support available? • Are there ongoing administrative requirements that need to be met?
Political	<ul style="list-style-type: none"> • Is the action politically acceptable? • Is there public support both to implement and to maintain the project?
Legal	<ul style="list-style-type: none"> • Is the jurisdiction authorized to implement the proposed action? • Are there legal side effects? Could the activity be construed as a taking? • Will the jurisdiction be liable for action or lack of action? • Will the activity be challenged?
Economic	<ul style="list-style-type: none"> • What are the costs and benefits of this action? • Do the benefits exceed the costs? • Are initial, maintenance, and administrative costs taken into account? • Has funding been secured for the proposed action? If not, what are the potential funding sources (public, nonprofit, and private)? • How will this action affect the fiscal capability of the jurisdiction? • What burden will this action place on the tax base or local economy? • What are the budget and revenue effects of this activity? • Does the action contribute to other jurisdiction goals? • What benefits will the action provide?
Environmental	<ul style="list-style-type: none"> • How will the action affect the environment? • Will the action need environmental regulatory approvals? • Will it meet local and state regulatory requirements? • Are endangered or threatened species likely to be affected?

HAZARD MITIGATION BENEFIT – COST REVIEW

FEMA requires local governments to analyze the benefits and costs of a range of mitigation actions that can reduce the effects of each hazard within their communities. Benefit-cost analysis is used in hazard mitigation to show if the benefits to life and property protected through mitigation efforts exceed the cost of the mitigation activity. Conducting benefit-cost analysis for a mitigation activity can assist communities in determining whether a project is worth undertaking now in order to avoid disaster-related damages later. The analysis is based on calculating the frequency and severity of a hazard, avoided future damages, and risk.

A hazard mitigation plan must demonstrate that a process was employed which emphasized a review of benefits and costs when prioritizing the mitigation actions. The benefit-cost review must be comprehensive to the extent that it can evaluate the monetary as well as the nonmonetary benefits and costs associated with each action. The benefit-cost review should at least consider the following questions:

- How many people will benefit from the action?
- How large an area is impacted?

- How critical are the facilities that benefit from the action (e.g., which is more beneficial to protect, the fire station or the administrative building)?
- Environmentally, does it make sense to implement this project for the overall community?

More details regarding specific funding mechanisms (both internal funding and grant resources) are provided within Table 5-3, *Hazard Mitigation Actions*, below.

STATUS OF PREVIOUS PLAN ACTIONS

The previous 2017 MJHMP identified 60 mitigation actions for use by both the City and CCUSD. The status of previous plan actions are outlined in Table 5-2, *Status of Previous Plan Mitigation Actions*, below. Several actions were identified as either completed or no longer applicable/logistically feasible. If mitigation actions were eliminated, the reasoning behind the decision is documented. The remainder of the mitigation actions were carried over into the current plan update within Table 5-3, *Hazard Mitigation Actions*.

**Table 5-2
Status of Previous Plan Mitigation Actions**

2017 Mitigation Action	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	Notes
Mitigation Action #1 City: Continue to use emergency alert systems, such as Nixle and Reverse 911, and coordinate with CCARES and CERT members to notify community members in the event of an imminent threat or a need to evacuate.			✓	Included as New Mitigation Action #1. Mitigation action text received minor edits/updates for clarity, and added more specificity for targeting socially vulnerable populations. Content and intent of mitigation action remains the same.
Mitigation Action #2 City and CCUSD: Continue to provide back-up power and supplies at critical facilities and identify any critical facilities that may not currently have them in order to maintain basic functions during emergency situations.			✓	Included as New Mitigation Action #2. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #3 City: Establish alternative bus routes as part of City Bus emergency planning efforts to maintain service in the event that key roads are blocked.		✓		No longer applicable or feasible. City is in the process of conducting a comprehensive emergency evacuation capacity and analysis work effort in accordance with AB 747 and SB 99. Public transportation will be evaluated in this work effort, and is no longer feasible as a stand-alone mitigation action.
Mitigation Action #4 City: Develop and maintain an evacuation plan for the City to effectively distribute evacuation notices, and to ensure that evacuating traffic flows smoothly.	✓			Done. City has evacuation plans and processes in place. Expanded capacity and analysis work effort is in progress.
Mitigation Action #5 City and CCUSD: Continue to distribute information about ways to reduce the threat of hazards to all community members through mailings, printed notifications, television and digital devices, and in-person events and workshops. This strategy would mitigate impacts from all priority hazards.			✓	Included as New Mitigation Action #3. Mitigation action text received minor edits/updates for clarity, and added more specificity for targeting socially vulnerable populations. Content and intent of mitigation action remains the same.
Mitigation Action #6 City and CCUSD: Continue to incorporate hazards in the Plan into agency emergency planning and programs.		✓		No longer applicable or feasible. This mitigation action was reviewed and determined to be vague and no longer applicable in the MJHMP. New mitigation actions include more specific, action-based language that achieve the same goal/intent as this action.
Mitigation Action #7 City: Review and update the City's Municipal Code and applicable ordinances, as appropriate, to implement the strategies identified in this Plan and other emergency planning efforts.			✓	Included as New Mitigation Action #4. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #8 City and CCUSD: Coordinate with regional and state agencies to monitor potential changes in severity, frequency, and affected areas from future emergency situations, especially due to climate change.			✓	Included as New Mitigation Action #5. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #9 City and CCUSD: Continue to conduct assessments of agency buildings, facilities, and infrastructure to identify vulnerabilities. Secure funding to retrofit vulnerable structures such as soft story and masonry buildings constructed prior to 1976. Encourage adjacent jurisdictions to conduct assessments of buildings, facilities, and infrastructure located adjacent to or serving the City.	✓			Done. This was completed in 2021, and the assessment of vulnerable soft story properties is available through the City's Seismic Retrofit Program webpage. New mitigation actions will focus on using the findings to implement the Seismic Retrofit Program.
Mitigation Action #10 City and CCUSD: Avoid locating any new critical facilities within or immediately adjacent to hazard areas. If no reasonable alternative is available, use extensive mitigation features to reduce the impact.			✓	Included as New Mitigation Action #6. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #11 City and CCUSD: Conduct energy efficiency retrofits, expand energy conservation efforts, and pursue the use of renewable energy at agency facilities to help avoid service disruptions during emergency situations. Explore the use of microgrids (localized grids that disconnect from the traditional grid to mitigate grid disturbances) to support energy resiliency at key facilities.			✓	Included as New Mitigation Action #7. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #12 City and CCUSD: Conduct hazard vulnerability studies when constructing new City/CCUSD buildings /infrastructure. Based on study results, construct new buildings/infrastructure with features that improve resiliency to all applicable hazards. Encourage hazard vulnerability studies be conducted for new infrastructure/ development activities proposed in surrounding areas, especially when subject to natural hazards.			✓	Included as New Mitigation Action #8. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #13 City and CCUSD: Continue to coordinate with the American Red Cross to maintain the list of City/CCUSD-owned facilities approved as community shelter sites, and ensure that such facilities continue to be equipped with shelter carts.			✓	Included as New Mitigation Action #9. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #14 City: Partner with the local community and other organizations, such as the American Red Cross, to work directly with vulnerable populations (elderly, homeless, low income, special needs, etc.) to identify opportunities to mitigate impacts in the event of a natural disaster, including the identification of available resources and how to access and implement those resources.			✓	Included as New Mitigation Action #10. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.

**Table 5-2 (continued)
Status of Previous Plan Mitigation Actions**

2017 Mitigation Action	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	Notes
Mitigation Action #15 City: Coordinate with the Southern California Hospital and West Los Angeles College to understand their capabilities and opportunities to partner in hazard mitigation activities.	✓			Done. The City and CCUSD invited both Southern California Hospital and West Los Angeles College to participate as an MJHMP stakeholder, and representatives provided feedback regarding capabilities and opportunities to partner in hazard mitigation activities. Such partnerships are documented in the MJHMP and the mitigation action matrix.
Mitigation Action #16 City: Work with regional utility companies and service agencies, including electricity and natural gas providers, telecommunication providers, and transit agencies, to ensure that services remain fully active as much as safely possible during emergency events and that full service is fully restored as quickly as possible following an emergency.		✓		No longer applicable or feasible. This mitigation action was reviewed and determined to be more focused on emergency planning/response over hazard mitigation. Regional utilities and service agencies were invited to participate in the MJHMP planning process, and more specific actions/partnerships focused on hazard mitigation are documented in the mitigation action matrix.
Mitigation Action #17 City and CCUSD: Continue to update emergency-related planning documents every five years to ensure consistency with state and federal law, best practices, local conditions, and recent science.			✓	Included as New Mitigation Action #11. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #18 City and CCUSD: Work to continue to improve estimates of potential casualties and property damage under various emergency scenarios, and incorporate findings into emergency planning efforts as appropriate.			✓	Included as New Mitigation Action #12. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #19 City: In coordination with state and regional agencies and other key stakeholders, continue to participate in and conduct disaster training events and drills.			✓	Included as New Mitigation Action #13. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #20 City: Work with local real estate agents and landlords to require the disclosure of the presence of any natural hazard risk zones prior to the sale or lease of buildings.			✓	Included as New Mitigation Action #14. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #21 CCUSD: Conduct regular drills for students and school employees to ensure an effective response to emergency situations.			✓	Included as New Mitigation Action #15. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #22 CCUSD: Stock school facilities with supplies to meet the short-term basic needs of students and staff in the event of an emergency situation.			✓	Included as New Mitigation Action #16. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #23 City: Work in coordination with the West Basin Municipal Water District to implement increased water conservation strategies that maximize the use of existing water resources.			✓	Included as New Mitigation Action #34. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #24 City: Identify and pursue alternative water sources to supplement imported West Basin Municipal Water District deliveries from the Metropolitan Water District in the event of regional drought conditions, including expanding groundwater recharge and making recycled water available in Culver City.			✓	Included as New Mitigation Action #35. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #25 City: Explore constructing additional water storage facilities and additional emergency connections to supplement water supplies during drought conditions or short-term shortages.			✓	Included as New Mitigation Action #36. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #26 City and CCUSD: Develop and implement long-term strategies to reduce community water use, including mandatory use of drought-tolerant plants in new or replacement landscapes, and requirements to install water fixtures in new buildings that exceed minimum code requirements.			✓	Included as New Mitigation Action #37. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #27 City: Coordinate with the West Basin Municipal Water District to inform the public of water conservation restrictions and drought conditions.			✓	Included as New Mitigation Action #38. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #28 City and CCUSD: Hold water saving workshops, drought-tolerant courses, and smart gardening classes, and educate community residents and businesses about available rebates for water-efficient and water-conserving equipment. CCUSD will support these City-lead workshops by notifying parents/students of the events and encouraging their attendance.			✓	Included as New Mitigation Action #39. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.

Table 5-2 (continued)
Status of Previous Plan Mitigation Actions

2017 Mitigation Action	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	Notes
Mitigation Action #29 City: Consider implementing additional mandatory restrictions on water use during drought conditions.		✓		No longer applicable or feasible. In the case of a drought declaration, the City would not be responsible for issuing restrictions on water usage. Water purveyors would communicate use restriction, and the City would be responsible for supporting in message dissemination. Thus, this action was removed from the mitigation action matrix.
Mitigation Action #30 City and CCUSD: Incorporate drought-tolerant landscaping and materials at City park and recreation facilities and CCUSD properties where feasible.			✓	Included as New Mitigation Action #40. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #31 City: Continue to seek funding and provide rebate opportunities for residents and businesses to incorporate drought-tolerant landscaping.			✓	Included as New Mitigation Action #41. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #32 City and CCUSD: Add compost and mulch to landscaped areas as feasible to reduce water evaporation.			✓	Included as New Mitigation Action #42. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #33 City: Coordinate with water purveyors to ensure accurate land use and growth information is incorporated into projected water supply analyses as part of Urban Water Management Plan updates.			✓	Included as New Mitigation Action #43. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #34 City: Partner with local organizations to offer low-cost or free water audits to residents and businesses.			✓	Included as New Mitigation Action #44. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #35 City: Conduct an inventory of seismically vulnerable private buildings, including unreinforced masonry and soft first-story structures, and prioritize retrofits for more vulnerable structures and lower income housing. Identify potential funding sources to assist with seismic retrofits.	✓			Done. The seismic survey was conducted in 2018 – 2019, and the Seismic Retrofit Ordinance was adopted in September 2021.
Mitigation Action #36 City: Explore creating an ordinance requiring seismically vulnerable structures to conduct earthquake resistant retrofitting over a phased period and/or when major renovation occurs.	✓			Done. The Seismic Retrofit Ordinance was adopted in September 2021.
Mitigation Action #37 City: Require new development in the liquefaction vulnerability zone to conduct liquefaction vulnerability studies and conduct liquefaction mitigation activities as needed.			✓	Included as New Mitigation Action #46. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #38 City: Require new development in landslide-prone areas to include landslide resiliency features to minimize the risk of damage.			✓	Included as New Mitigation Action #47. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #39 City: Establish a zoning overlay for the Alquist-Priolo hazard zone, and create and enforce development standards for new construction activities in this hazard zone to improve the resiliency of new structures to seismic hazards.		✓		No longer applicable or feasible. The City implements the regulatory requirements of the Alquist-Priolo Hazard Zone through the municipal code. A separate zoning overlay is not required for implementation purposes, and City staff confirmed this action is no longer needed.
Mitigation Action #40 City and CCUSD: Ensure that all tall furniture in City and school property is securely fastened to the wall to reduce damage during an earthquake. When purchasing furniture or reconfiguring rooms in City/CCUSD buildings, consider the potential impacts to seismic vulnerability.			✓	Included as New Mitigation Action #48. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #41 City and CCUSD: Hold seismic preparation workshops to educate community residents and businesses about securing property to reduce damage during an earthquake. Consider coordination of the events to be advertised through the City and CCUSD and held at their facilities.			✓	Included as New Mitigation Action #49. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #42 City: Continue to evaluate the effectiveness of City-owned drain systems and carry out improvements as needed. Monitor City-owned drainage infrastructure during rain events, and take emergency action as necessary to avoid or minimize flooding.			✓	Included as New Mitigation Action #57. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #43 City: Encourage property owners to improve drainage on their properties through low-impact development features, particularly property owners in and adjacent to flood hazard areas.			✓	Included as New Mitigation Action #58. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #44 City: Update the Stormwater Master Plan to address drainage and flood control.	✓			Done. The Stormwater Master Plan update was completed in 2021. Applicable mitigation measures identified in the master planning process are included in the MJHMP.

**Table 5-2 (continued)
Status of Previous Plan Mitigation Actions**

2017 Mitigation Action	Completed	Removed; No Longer Feasible	Carried Over to Plan Update	Notes
Mitigation Action #45 City: Maintain an adequate supply of sandbags and other low-cost flood control measures to protect City facilities and to meet public demand.			✓	Included as New Mitigation Action #59. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #46 City: Retrofit public spaces, including sidewalks and parking lots, to include permeable paving and other low-impact development features.			✓	Included as New Mitigation Action #60. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #47 City: Continue to participate in the National Flood Insurance Program.			✓	Included as New Mitigation Action #61. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #48 CCUSD: Identify and upgrade deficient drainage systems on school property. Use low-impact development features to supplement drainage features as appropriate.			✓	Included as New Mitigation Action #62. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #49 City and CCUSD: Design future critical infrastructure to withstand wind events beyond minimum building code standards.		✓		No longer applicable or feasible. The MJHMP Planning Team found this mitigation action unclear and vague, and was unsure of the original intent. Thus, this action was eliminated in favor for more specific actions.
Mitigation Action #50 City: Continue to work with Southern California Edison and the Los Angeles Department of Water and Power to relocate above-ground power lines and associated infrastructure underground in order to reduce damage from fallen power lines during severe wind events.			✓	Included as New Mitigation Action #65. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #51 City and CCUSD: Continue to coordinate with Southern California Edison and the Los Angeles Department of Water and Power to implement an ongoing tree trimming program for trees located in close proximity to overhead power lines.			✓	Included as New Mitigation Action #66. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #52 City and CCUSD: Monitor trees, limbs, and other vegetation near power lines, and promptly inform Southern California Edison and the Los Angeles Department of Water and Power of the need for any tree trimming.			✓	Included as New Mitigation Action #67. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #53 City: Continue to coordinate with the National Weather Service Decision Support program to be advised of upcoming weather conditions in a manner that enables smart decisions and disaster preparedness.			✓	Included as New Mitigation Action #68. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #54 City and CCUSD: Continue to regularly monitor El Niño Southern Oscillation (ENSO) conditions, and incorporate forecasted conditions into short-term emergency planning.		✓		No longer applicable or feasible. Since the 2017 MJHMP, stakeholders understand severe weather and heavy rains may occur outside of the El Niño cycle (for example, the winter storms in 2022 – 2023). This action was eliminated in favor for mitigation actions more specific to severe weather/heavy rains.
Mitigation Action #55 City: Monitor slope stability in landslide-prone areas, and issue evacuation notices if slopes appear unstable.			✓	Included as New Mitigation Action #69. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #56 City: As part of regular emergency preparedness education, continue to notify community members of current or future El Niño conditions, the anticipated impacts, and appropriate ways to prepare.		✓		No longer applicable or feasible. Since the 2017 MJHMP, stakeholders understand severe weather and heavy rains may occur outside of the El Niño cycle (for example, the winter storms in 2022 – 2023). This action was eliminated in favor for mitigation actions more specific to severe weather/heavy rains.
Mitigation Action #57 City: Adopt and enforce the most up-to-date California Building Code and California Fire Code, with local amendments as appropriate.			✓	Included as New Mitigation Action #72. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #58 City: Continue to maintain cooperative fire protection and fire prevention mutual aid agreements with relevant agencies.			✓	Included as New Mitigation Action #73. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #59 City: Continue to support the Culver City Fire Department, California State Fire Marshal, and other relevant agencies to promote the implementation and awareness of fire prevention programs.			✓	Included as New Mitigation Action #74. Mitigation action text received minor edits/updates for clarity. Content and intent of mitigation action remains the same.
Mitigation Action #60 City: Identify inadequate access roadways. Develop a program to address inadequacies by altering the roadway design if possible.		✓		No longer applicable or feasible. This mitigation action was reviewed and determined to be vague and no longer applicable in the MJHMP. Thus, the MJHMP Planning Team has elected to eliminate this action in favor of more specific mitigation actions referencing ongoing evacuation progress in compliance with AB 747 and SB 99.

5.2 HAZARD MITIGATION ACTIONS

The MJHMP Planning Team worked together to identify mitigation actions and establish the responsible department, priority level and timeline. The process used is outlined below:

- Review of the Vulnerability and Risk Assessment presented in [Section 4.0](#);
- Review of the Capabilities Assessment presented in [Section 5.3](#) of this Plan;
- Review of the results of the community survey and feedback received as part of the community outreach; and,
- The MJHMP Planning Team’s discussion of concerns/issues that need to be addressed to reduce hazards to critical facilities and the community.

[Table 5-3, *Hazard Mitigation Actions*](#), identifies the mitigation action, hazard(s) addressed, agency and/or department responsible for implementation, potential funding source(s), timeline for implementation, and priority. The timeline for implementation is defined as follows:

- Ongoing: currently in process; or 1-2 years and ongoing thereafter;
- Short-Term: 1 to 2 years;
- Medium-Term: 3 to 4 years; and
- Long-Term: 5+ years.

Mitigation actions below may be funded through the City or CCUSD budget, particularly mitigation actions identified as “ongoing”. However, the City and CCUSD will also explore funding for specific mitigation actions through local, State, or federal grant programs. Potential grant programs or funding mechanisms are identified for specific mitigation actions as applicable, below.

The City maintains and annually updates a Capital Improvement Project (CIP) budget that identifies priority City projects and major equipment purchases for all City departments. Similarly, CCUSD maintains and updates the Facilities Master Plan that identifies priority school maintenance and upgrade projects for all infrastructure. Identified CIP and Facilities Master Plan projects were integrated into the MJHMP mitigation actions where appropriate for projects with a nexus to resilience or natural hazards. In addition, as part of the annual review and update of the CIP budget and Facilities Master Plan, mitigation actions will be reviewed and integrated.

All mitigation actions considered for the City and CCUSD were ultimately included in the MJHMP and [Table 5-3, *Hazard Mitigation Actions*](#) including the mitigation actions from the previous 2017 MJHMP when still relevant and useful for this plan update. There were no mitigation actions considered but ultimately excluded from the MJHMP. The mitigation action development process is carefully documented in [Appendix B](#), and was a key area of focus during Stakeholder Meetings #3 and #4. [Appendix B](#) also documents revisions, comments, and feedback, from the MJHMP Planning Team, Project Management staff and the City’s consultant, Michael Baker International.

**Table 5-3
Hazard Mitigation Actions**

#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline
1	City: Continue to use emergency alert systems, such as Everbridge (Nixle), Integrated Public Alert and Warning System (IPAWS), to notify community members in the event of an imminent threat or evacuation order. Promote emergency alert systems, and encourage residents to sign-up to receive alerts through their preferred notification approach. Promote emergency warning system sign-up with underserved or vulnerable populations (particularly linguistically isolated populations within the DAC), who may not be aware of existing notification programs or may require additional coordination/support during evacuation scenarios.	All Hazards	City: Police Department, Fire Department. External Partners: Los Angeles County Emergency Management.	Staff time, City General Fund. FEMA: Next Generation Warning System Grant Program (NGWSGP); Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC).	High	Ongoing
2	City and CCUSD: Continue to provide back-up power at critical facilities through permanent or portable generators. Identify critical facilities in need of new or expanded generator capacity, and identify funding sources for purchase of additional generator capacity.	Multiple Hazards: Dam/Reservoir Failure; Flood; Seismic Hazards; Severe Weather; Wildfire	City: Public Works Department. CCUSD: Business Services Department, Safety and Security Department.	City General Fund, CCUSD General Fund. FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC).	High	Ongoing
3	City and CCUSD: Continue to distribute information on how to reduce hazard risk/vulnerability to all community members through mailings, printed notifications, television, and digital devices, and in-person events and workshops. Continue focused outreach with underserved or vulnerable populations, and consider the unique communication needs of these groups to ensure meaningful engagement. Continue to consult and solicit feedback for opportunities to improve communication/engagement procedures.	All Hazards	City: Public Works Department, Fire Department, Police Department. CCUSD: Business Services Department, Safety and Security Department, Education Services.	Staff time, City General Fund, CCUSD General Fund. FEMA: Hazard Mitigation Grant Program (HMGP).	Medium	Ongoing
4	City: Conduct regular City Municipal Code reviews for relevant updates to implement strategies identified in this Plan, and other hazard mitigation efforts.	All Hazards	City: Advanced Planning Division, Building Safety Division, Public Works Department.	Staff time, City General Fund.	Low	Long-Term
5	City and CCUSD: Coordinate with local, regional, and state agencies to monitor changes in hazard severity and frequency as related to climate change.	Multiple Hazards: Climate Change; Drought; Flood; Severe Weather; Wildfire	City: Public Works Department, Advanced Planning Division, Fire Department, Police Department. CCUSD: Business Services Department, Safety and Security Department	Staff time.	Medium	Ongoing
6	City and CCUSD: Avoid locating new critical facilities within or immediately adjacent to mapped hazard zones, where feasible. If no feasible alternative exists, integrate best-practices into the development to reduce vulnerability and risk to the maximum extent.	Multiple Hazards: Dam/Reservoir Failure; Flood; Seismic Hazards (Landslide, Liquefaction); Wildfire	City: Public Works Department, Advanced Planning Division, Building Safety Division. CCUSD: Business Services Department, Safety and Security Department.	Staff time, Developer Impact Fees.	Medium	Ongoing
7	City and CCUSD: Continue to implement energy efficiency retrofits, expand energy conservation efforts, and pursue the use of renewable energy at City facilities, to avoid service disruptions during emergency situations. Explore the use of microgrids (localized grids that disconnect from the traditional grid to mitigate grid disturbances) to support energy resilience and independence at key facilities.	All Hazards	City: Public Works Department. CCUSD: Business Services Department [Maintenance, Operations and Transportation Division].	FEMA: State Transportation Improvement Programs (STIP); Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC). California Energy Commission: Bright Schools Program; Healthy Air, Plumbing, and Efficiency Program (CalSHAPE). U.S. Department of Transportation: Improvements at Public School Facilities Program.	Medium	Long-Term
8	City and CCUSD: Conduct hazard vulnerability studies when constructing new City and CCUSD buildings or infrastructure. Based on vulnerability findings, construct new buildings/infrastructure in accordance with resilience best-practices and integrate mitigation into the building design.	All Hazards	City: Public Works Department, Building Safety Division. CCUSD: Business Services Department [Maintenance, Operations and Transportation Division].	Staff time, City General Fund, CCUSD General Fund. FEMA: Hazard Mitigation Grant Program (HMGP).	High/Medium	Ongoing
9	City and CCUSD: Continue to coordinate with the American Red Cross to maintain an active list of City/CCUSD-owned community shelter sites. Ensure that community shelter sites are proactively equipped with shelter carts and other required supplies.	All Hazards	City: Fire Department. CCUSD: Business Services Department, Safety and Security Department. External Partners: American Red Cross.	Staff time, City General Fund, CCUSD General Fund.	Medium	Ongoing
10	City: Continue to partner with local nonprofits and non-governmental organizations (NGOs), (such as the American Red Cross and homelessness services providers) to identify and implement targeted mitigation actions to support vulnerable or underserved populations.	All Hazards	City: Fire Department, Police Department. External Partners: American Red Cross, Culver City YMCA, One Incredible Family Inc., St. Joseph's Center, Share!, or similar organizations.	Staff time, City General Fund.	High	Ongoing

**Table 5-3 (continued)
Hazard Mitigation Actions**

#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline
11	City and CCUSD: Comprehensively update City emergency planning documents every five years, to ensure consistency with state and federal law, best practices, local conditions, and recent science.	All Hazards	City: Fire Department, Police Department, Public Works Department, Advance Planning Division. CCUSD: Business Services Department, Safety and Security Department	Staff time, City General Fund. OPR: Adaptation Planning Grant Program; Regional Resilience Planning and Implementation Grant Program. FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC);	Medium	Long-Term
12	City and CCUSD: Continue to improve estimates of potential casualties and property damage under various emergency scenarios, and incorporate findings into emergency planning efforts as appropriate.	All Hazards	City: Fire Department, Police Department CCUSD: Business Services Department, Safety and Security Department	Staff time, City General Fund.	Medium	Long-Term/Ongoing
13	City: Continue to regularly conduct emergency preparedness trainings, exercises, and drills. Participate in emergency preparedness trainings hosted by external partners, such as local dam owners.	All Hazards	City: Fire Department	Staff time, City General Fund.	Medium	Ongoing
14	City: Work with local real estate agents and landlords to require the disclosure of the presence of any natural hazard risk zones prior to the sale or lease of buildings.	Multiple Hazards: Dam/Reservoir Failure; Flood; Seismic Hazards (Landslide, Liquefaction); Wildfire	City: Economic Development Division	Staff time, City General Fund.	Low	Ongoing
15	CCUSD: Continue to regularly conduct emergency preparedness drills at all CCUSD facilities for the benefit of students and employees. The purpose of emergency preparedness drills will be to practice procedure and response during emergency situations.	All Hazards	CCUSD: Business Services Department, Safety and Security Department, Educational Services	Staff time, CCUSD General Fund.	High	Ongoing
16	CCUSD: Continue to stock school facilities with supplies to meet the short-term basic needs of students and employees in the event of an emergency situation.	All Hazards	CCUSD: Business Services Department, Safety and Security Department, Educational Services	Staff time, CCUSD General Fund.	High	Ongoing
17	CCUSD: Incorporate the findings of the CCUSD Integrated Energy Master Plan Campus Reports into the Energy Master Plan Zero Energy Report. Consider natural hazard vulnerability and increased resilience when developing capital improvement projects and design standards for CCUSD facilities, and seek funding sources where appropriate.	Multiple Hazards: Drought; Flood; Severe Weather; Wildfire	CCUSD: Business Services Department [Maintenance, Operations and Transportation Division]	California Energy Commission: Bright Schools Program; Healthy Air, Plumbing, and Efficiency Program (CalSHAPE). U.S. Department of Transportation: Improvements at Public School Facilities Program.	Medium	Long-Term
18	City and CCUSD: Identify the communication systems and procedures that facilitated remote work and remote learning during the COVID-19 Pandemic. Maintain, enhance and codify those systems and procedures to enhance communication and connectivity during future hazard incidents (including pandemic) or disaster recovery.	All Hazards	City: Information Technology Department, Administrative Services Department CCUSD: Business Services Department, Safety and Security Department, Education Services, School & Family Services	FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC); Emergency Management Performance Grant (EMPG); State and Local Cybersecurity Grant Program (SLCGP); Next Generation Warning System Grant Program (NGWSGP).	High	Long-Term
19	CCUSD: Continue to maintain and update individual school safety plans, and incorporate into the CCUSD Comprehensive School Safety Plan annually. Implement the goals and policies of the school safety plans, monitor progress those goals, and seek funding for major projects as appropriate.	All Hazards	CCUSD: Business Services Department, Safety and Security Department, Education Services, School & Family Services.	Staff time, CCUSD General Fund.	High	Long-Term
20	CCUSD: Conduct a comprehensive update of the CCUSD Emergency Preparedness web content and outreach materials. Work with the Fire Department and the American Red Cross to ensure that emergency preparedness educational materials and documents on the webpage are current and reflect up-to-date preparedness and response information. Consider language translation or other accessible web content to ensure outreach to vulnerable or underserved communities. Ensure the MJHMP update is linked on the webpage.	All Hazards	CCUSD: Business Services Department, Safety and Security Department.	Staff time, CCUSD General Fund.	Low	Short-Term
21	City: Integrate natural hazard information and mapping (e.g., liquefaction, landslide, fire hazard zones) into the City General Plan, to ensure the most current information is reflected and updated as necessary. Incorporate new and/or revised goals and policies specific to reducing vulnerability to natural hazards. Integrate the adopted HMP into the City Safety Element by reference to ensure compliance with AB 2140.	Multiple Hazards: Dam/Reservoir Failure; Flood; Seismic Hazards (Landslide, Liquefaction); Wildfire	City: Advanced Planning Division.	Staff time, City General Fund.	Low	Medium-Term
22	City: Coordinate with California State Parks and Golden State Water Company to redirect drainage flows away from the Baldwin Hills Reservoir and retaining walls. Identify key areas for curb and gutter improvements on State Parks property to collect and divert drainage. Seek grant funding for improvements, as appropriate.	Multiple Hazards: Flood; Seismic Hazards (Landslide)	City: Public Works Department External: Golden State Water Company, California State Parks	FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC).	Medium	Medium-Term

**Table 5-3 (continued)
Hazard Mitigation Actions**

#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline
23	City: Build upon the Community Resilience Framework initiated by the City Fire Department and Dr. Lucy Jones Center through the Connected Communities Resilience Program. Continue to expand connections amongst community leaders, deepen the local understanding of risk/vulnerability, and refine the communication strategy for members of the community. Expand opportunity for grassroots participation in resilience and hazard mitigation, and prioritize participation of representatives from the Disadvantaged Community (DAC) – Census tract 7028.03.	All Hazards	City: Fire Department External: Dr. Lucy Jones Center, additional community partners	FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC).	Medium	Long-Term
24	City: Continue regular bridge structural inspections in coordination with Los Angeles County Public Works and California Department of Transportation. If a bridge deficiency is found, identify a corrective plan of action and funding source (including grant funding).	All Hazards	City: Public Works Department External: California Department of Transportation, Los Angeles County Public Works	FEMA: State Transportation Improvement Programs (STIP); Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC). US Department of Transportation: Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant program; Build America Bureau Financing and Technical Assistance. Caltrans: Bridge Preventive Maintenance Program (BPMP), Highway Bridge Program (HBP)	Low	Ongoing
25	City: Pursue landfill remediation efforts at Culver City Park - Critical Facility #21 (former Hetzler Landfill, operated between 1959 – 1961) to prevent further differential settlement and groundwater intrusion, and reduce risk for future soil instability. Implement recommendations as outlined in the Geotechnical Design Report, including overexcavation to 3.5 feet below the proposed final grade, construction of a geogrid-reinforced raft, and placement of general soil fill to form the new surface. Seek grant funding sources, as appropriate.	Multiple Hazards: Flood; Seismic Hazards; Severe Weather	City: Public Works Department, Parks, Recreation and Community Services Department.	FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC).	Low	Long-Term
26	City/CCUSD: Explore opportunities to expand emergency supply storage and capacity across the jurisdiction, and seek funding sources as appropriate.	All Hazards	City: Fire Department, Police Department, Public Works Department. CCUSD: Business Services Department, Safety and Security Department	FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC).	Medium	Long-Term
27	City: Explore funding opportunities to convert and equip trailers into mobile command units, allowing local police and fire departments greater flexibility in monitoring emergency situations in progress.	All Hazards	City: Fire Department, Police Department.	FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC). Department of Homeland Security: Emergency Operations Center Grant Program.	Medium	Long-Term
28	City: Explore funding opportunities for mobile generators to support mobile command units and other facilities involved in emergency response, allowing local police and fire departments greater flexibility in monitoring emergency situations in progress.	All Hazards	City: Fire Department, Police Department.	FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC).	Medium	Long-Term
29	City: Explore funding opportunities to purchase battery systems for City traffic signals without backup power.	All Hazards	City: Public Works Department (Transportation Division).	FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC). US Department of Transportation: Rebuilding American Infrastructure with Sustainability and Equity (RAISE) grant program; Build America Bureau Financing and Technical Assistance.	High	Long-Term
30	City: Prepare an Environmental Justice Element in accordance with Government Code Section 65040.2 and SB 1000, as part of the City's Comprehensive General Plan Update effort. Identify specific goals, objectives, policies and programs to target Socially Vulnerable Populations (SVPs) within the Disadvantaged Community (DAC) – Census Tract 7028.03. Integrate the MJHMP by reference into the Environmental Justice Element, and identify policies regarding hazard mitigation, resilience, and natural disasters as appropriate.	All Hazards	City: Advanced Planning Division.	Staff time, City General Fund.	Medium	Medium-Term
31	City: Continue to update and maintain City evacuation plans and maps, in accordance with updated state and federal regulations. Identify roadways in high wildfire hazard risk with insufficient evacuation or emergency vehicle access, in accordance with AB 747 and SB 99. Document findings in a technical Evacuation Study. Identify and prioritize roadway capital improvement projects to enhance access, and seek grant funding opportunities as appropriate.	Multiple Hazards: Dam/Reservoir Failure; Flood; Seismic Hazards; Wildfire	City: Advanced Planning Division, Public Works Department.	Staff time, City General Fund. CalOES: California Wildfire Mitigation Program. CalFire: Wildfire Prevention Grants Program.	Medium	Medium-Term
32	City: Continue participating in the Clean Power Alliance (CPA) in coordination with Southern California Edison (SCE). Support CPA climate change mitigation actions in making the energy supply more resilient and sustainable.	All Hazards	City: Public Works Department External Partners: Southern California Edison	Staff time, City General Fund.	High	Long-Term

**Table 5-3 (continued)
Hazard Mitigation Actions**

#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline
33	City: Implement Concept Plans from the Culver City Stormwater Quality Master Plan (prepared 2021) to capture and manage stormwater in the Ballona Creek Watershed. Prioritize capital improvements based on criteria outlined in the Stormwater Quality Master Plan as funding sources become available. Pursue grant funding for capital improvements, as appropriate.	Multiple Hazards: Flood, Drought, Wildfire	City: Public Works Department	FEMA: Flood Mitigation Assistance (FMA); Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC). DWR: Floodplain Management, Protection and Risk Awareness (FMPRA) Grant. City: Drainage Impact Fees	Low	Long-Term
34	City: Work in coordination with potable water utilities to implement increased water conservation strategies that maximize the use of existing water resources.	Drought	City: Public Works Department External Partners: Golden State Water and Los Angeles Department of Water and Power	Staff time, City General Fund.	Medium	Long-Term
35	City: In coordination with Golden State Water and LADWP, identify and pursue alternative water sources to supplement imported deliveries in the event of regional drought conditions, including expanding groundwater recharge and making recycled water available in Culver City.	Drought	City: Public Works Department External Partners: Golden State Water and Los Angeles Department of Water and Power	Staff time, City General Fund.	Medium	Long-Term
36	City: In coordination with Golden State Water and LADWP, explore constructing additional water storage facilities and additional emergency connections to supplement water supplies during drought conditions or short-term shortages.	Drought	City: Public Works Department External Partners: Golden State Water and Los Angeles Department of Water and Power	FEMA: Flood Mitigation Assistance (FMA); Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC). DWR: Floodplain Management, Protection and Risk Awareness (FMPRA) Grant. City: Drainage Impact Fees	Medium	Long-Term
37	City and CCUSD: Develop and implement long-term strategies to reduce community water use, including mandatory use of drought-tolerant plants and water efficient irrigation in new/replacement landscapes.	Drought	City: Public Works Department CCUSD: Business Services Department, Safety and Security Department	Staff time, City General Fund.	Medium	Long-Term
38	City: Coordinate with local water purveyors in public outreach efforts regarding drought and water conservation. Develop communication methods targeted to underserved communities or vulnerable populations, who may be uniquely impacted by water surcharges or other drought-related fee increases.	Drought	City: Public Works Department External Partners: Golden State Water and Los Angeles Department of Water and Power	FEMA: Flood Mitigation Assistance (FMA); Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC).	Medium	Long-Term
39	City and CCUSD: Host water saving workshops, drought-tolerant courses, and smart gardening classes, and educate community residents and businesses about available rebates for water-efficient and water-conserving equipment. CCUSD will support these City-lead workshops by notifying parents/students of the events and encouraging their attendance.	Drought	City: Public Works Department CCUSD: Business Services Department, Education Services External Partners: Golden State Water and Los Angeles Department of Water and Power	Staff time, City General Fund.	Low	Ongoing
40	City and CCUSD: Plant drought tolerant/climate adapted landscape at City-owned property, CCUSD-owned property, or City-maintained easements. Replace/renovate landscape irrigation systems with water efficient devices such as drip irrigation.	Drought	City: Public Works Department, Parks, Recreation and Community Services Department CCUSD: Business Services Department [Maintenance, Operations and Transportation Division]	DWR: Urban Community Drought Relief Program. Bureau of Reclamation: WaterSMART Grant Program. FEMA: Hazard Mitigation Grant Program (HMGP).	Medium	Long-Term
41	City: Continue to advertise funding and provide rebate opportunities for residents and businesses to incorporate drought-tolerant landscaping.	Drought	City: Public Works Department External Partners: Golden State Water and Los Angeles Department of Water and Power.	Staff time, City General Fund.	Medium	Ongoing
42	City and CCUSD: Add compost and mulch to landscaped areas as feasible to reduce water evaporation.	Drought	City: Public Works Department, Parks, Recreation and Community Services Department CCUSD: Business Services Department [Maintenance, Operations and Transportation Division]	Staff time, City General Fund, CCUSD General Fund.	Medium	Long-Term
43	City: Coordinate with water purveyors to ensure accurate land use and growth information is incorporated into projected water supply analyses as part of Urban Water Management Plan updates.	Drought	City: Advanced Planning Division, Public Works. External Partners: Golden State Water and Los Angeles Department of Water and Power.	Staff time, City General Fund.	Medium	Long-Term

**Table 5-3 (continued)
Hazard Mitigation Actions**

#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline
44	City: Partner with local water purveyors to offer low-cost or free water audits to residents and businesses.	Drought	City: Public Works Department. External Partners: Golden State Water and Los Angeles Department of Water and Power.	Staff time.	Low	Long-Term
45	City: Proactively monitor drought conditions and water conservation warnings issued by State and National agencies or local water purveyors.	Drought	City: Public Works Department. External Partners: Golden State Water and Los Angeles Department of Water and Power.	Staff time.	Medium	Ongoing
46	City: Require new development in the liquefaction vulnerability zone to conduct liquefaction vulnerability studies and conduct liquefaction mitigation activities as needed.	Seismic Hazards (Liquefaction)	City: Building Safety Division, Advance Planning Division.	Staff time.	High	Ongoing
47	City: Require new development in landslide-prone areas to include landslide resiliency features to minimize the risk of damage.	Seismic Hazards (Landslide)	City: Building Safety Division, Advance Planning Division.	Staff time.	High	Ongoing
48	City and CCUSD: Ensure that all tall furniture in City and school property is securely anchored to reduce damage during an earthquake. When purchasing furniture or reconfiguring rooms in City/CCUSD buildings, consider the potential impacts to seismic vulnerability.	Seismic Hazards (Ground Shaking)	City: Public Works Department, Administration Department (Risk Management, Human Resources). CCUSD: Business Services Department, Safety and Security, Education Services.	Staff time, City General Fund, CCUSD General Fund.	High/Medium	Ongoing
49	City and CCUSD: Continue to conduct earthquake safety outreach, including preparation workshops. Consider advertising events through the City and CCUSD. Continue to engage the public through disaster fairs, drills, and other programming.	Seismic Hazards (Fault Rupture, Ground Shaking, Landslide, Liquefaction)	City: Fire Department CCUSD: Business Services Department, Safety and Security, Education Services.	Staff time, City General Fund, CCUSD General Fund. FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC)	Medium	Ongoing
50	City: Conduct a city-wide liquefaction, landslide, and slope failure vulnerability assessment. Use findings to determine future mitigation actions, or potential integration into the existing Seismic Retrofit Ordinance.	Seismic Hazards (Liquefaction, Landslide)	City: Public Works Department, Building Safety Division.	FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC).	Medium	Medium-Term
51	City: Secure grant funding to implement a program to retrofit privately-owned seismically vulnerable structures (such as soft story and masonry buildings) constructed prior to 1976. Consider modeling a seismic retrofit grant program after the City of Berkeley HMGP-funded program or Santa Monica BRIC application. Integrate prioritization where feasible for improvements benefitting at-risk populations, such as low-income housing or properties within the Disadvantaged Community (DAC) - Census Tract 7028.03.	Seismic Hazards (Fault Rupture, Ground Shaking, Landslide, Liquefaction)	City: Building Safety Division.	FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC).	High	Medium-Term/Long-Term
52	City: Continue to follow and implement the Alquist Priolo Earthquake Fault Zone regulations, to mitigate the risk of surface fault rupture.	Seismic Hazards (Fault Rupture)	City: Building Safety Division, Fire Department.	Staff time, City General Fund.	High	Ongoing
53	City: Maintain the City Debris Management Plan as an active and up-to-date resource, for use in post-disaster planning and actions. Continue to contract with debris removal and project management teams to ensure availability for debris clean-up post seismic disasters.	Seismic Hazards (Fault Rupture, Ground Shaking, Landslide, Liquefaction)	City: Public Works Department, Fire Department.	Staff time, City General Fund.	High	Ongoing
54	City and CCUSD: Annually inspect critical facilities to identify structural deficiencies or seismic concerns. If vulnerabilities or deficiencies are identified, document a retrofit plan, schedule, and funding source.	Seismic Hazards (Fault Rupture, Ground Shaking, Landslide, Liquefaction)	City: Public Works Department, Building Safety Division. CCUSD: Business Services Department, Safety and Security, Education Services.	Staff time, City General Fund, CCUSD General Fund. FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC).	Medium	Ongoing
55	City and CCUSD: Continue monitoring changes/updates to building codes and seismic regulations to determine if critical facilities require seismic retrofits as structures age.	Seismic Hazards (Fault Rupture, Ground Shaking, Landslide, Liquefaction)	City: Building Safety Division. CCUSD: Business Services Department, Safety and Security.	Staff time, City General Fund, CCUSD General Fund.	Medium	Ongoing
56	City: Investigate opportunities for seismic retrofits at City pump stations, including flexible pipelines.	Seismic Hazards (Fault Rupture, Ground Shaking)	City: Public Works Department, Building Safety Division.	FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC)	Medium	Long-Term
57	City: Continue to evaluate the effectiveness of City-owned drain systems and carry out improvements as needed. Monitor City-owned drainage infrastructure during rain events, and take emergency action as necessary to avoid or minimize flooding.	Flood	City: Public Works Department.	FEMA: Flood Mitigation Assistance (FMA); Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC). DWR: Floodplain Management, Protection and Risk Awareness (FMPRA) Grant.	Medium	Ongoing
58	City: Encourage property owners to improve drainage on their properties through low-impact development features, particularly property owners in and adjacent to flood hazard areas.	Flood	City: Building Safety Division.	Staff time.	Medium	Ongoing

**Table 5-3 (continued)
Hazard Mitigation Actions**

#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline
59	City: Maintain an adequate supply of sandbags and other low-cost flood control measures to protect City facilities and to meet public demand.	Flood	City: Fire Department, Public Works Department.	Staff time, City General Fund.	High/Medium	Ongoing
60	City: Continue to retrofit public spaces, including sidewalks and parking lots, to include permeable paving and other low-impact development features as funding sources become available.	Flood	City: Public Works Department, Building Safety Division, Parks, Recreation and Community Services Department.	FEMA: Flood Mitigation Assistance (FMA); Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC). DWR: Floodplain Management, Protection and Risk Awareness (FMPRA) Grant. City: Drainage Impact Fees	Medium	Long-Term/Ongoing
61	City: Continue to participate in the National Flood Insurance Program, including regular building code updates to reflect changes required by FEMA.	Flood	City: Building Safety Division, Public Works Department.	Staff time, City General Fund.	Medium	Ongoing
62	CCUSD: Continue to identify and upgrade deficient drainage systems on school property, as funding sources become available. Use low-impact development features to supplement drainage features as appropriate.	Flood	CCUSD: Business Services Department [Maintenance, Operations and Transportation Division]	FEMA: Flood Mitigation Assistance (FMA); Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC). DWR: Floodplain Management, Protection and Risk Awareness (FMPRA) Grant. City: Drainage Impact Fees	Medium	Ongoing
63	City: Implement Concept Plans from the Mitigation Action Plan (Blue Ocean, prepared May 2022, included as Appendix C) at key Critical Facilities known to be susceptible to drought, wildfire and flooding. Prioritize capital improvements based on criteria outlined within the Mitigation Action Plan, including prioritization for improvements within identified Disadvantaged Communities (DACs) as funding sources become available. Pursue grant funding for capital improvements, as appropriate.	Flood/Drought/Wildfire	City: Public Works Department.	FEMA: Flood Mitigation Assistance (FMA); Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC). DWR: Floodplain Management, Protection and Risk Awareness (FMPRA) Grant. City: Drainage Impact Fees	Medium	Long-Term
64	City: Coordinate with the Los Angeles Department of Water and Power to identify the cause of localized flooding around Sawtelle Boulevard and McDonald Street (adjacent to Ballona Creek). Identify a plan of corrective action, and seek funding sources as appropriate.	Flood	City: Public Works Department. External Partners: Los Angeles Department of Water and Power.	FEMA: Flood Mitigation Assistance (FMA); Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC). DWR: Floodplain Management, Protection and Risk Awareness (FMPRA) Grant. City: Drainage Impact Fees	Low	Long-Term
65	City: Continue to work with Southern California Edison and the Los Angeles Department of Water and Power to relocate above-ground power lines and associated infrastructure underground in order to reduce damage from fallen power lines during severe weather events.	Severe Weather [Heavy Rains, Windstorm/Tornado, Extreme Heat, Power Outage]	City: Public Works Department. External Partners: Los Angeles Department of Water and Power, Southern California Edison.	FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC).	Low	Long-Term
66	City: To supplement the City's existing street tree trimming program, continue to coordinate with Southern California Edison and the Los Angeles Department of Water and Power to implement an ongoing tree trimming program for trees located in close proximity to overhead power lines.	Severe Weather [Heavy Rains, Windstorm/Tornado, Power Outage]	City: Public Works Department. External Partners: Los Angeles Department of Water and Power, Southern California Edison.	Staff time.	Medium	Ongoing
67	City: Monitor trees, limbs, and other vegetation near power lines, and promptly inform Southern California Edison and the Los Angeles Department of Water and Power of the need for any tree trimming.	Severe Weather [Heavy Rains, Windstorm/Tornado, Power Outage]	City: Public Works Department. External Partners: Los Angeles Department of Water and Power, Southern California Edison.	Staff time..	Medium	Ongoing
68	City: Continue to coordinate with the National Weather Service Decision Support program to be advised of upcoming weather conditions in a manner that enables smart decisions and disaster preparedness.	Severe Weather [Heavy Rains, Windstorm/Tornado, Extreme Heat, Power Outage]	City: Fire Department.	Staff time.	High/Medium	Ongoing
69	City: Monitor slope stability in landslide-prone areas, and issue evacuation notices if slopes appear unstable.	Severe Weather [Heavy Rains]	City: Public Works Department, Fire Department, Building Safety Division.	Staff time.	Medium	Long-Term
70	City: Continue to proactively monitor and track projected storms where heavy rains may occur. Stage response equipment and materials in areas at risk of flooding, debris flow, or other associated secondary hazards.	Severe Weather [Heavy Rains, Power Outage]	City: Public Works Department.	Staff time.	Medium	Ongoing
71	City/CCUSD: Educate citizens (particularly vulnerable populations) regarding the dangers of extreme heat, and proactive steps to stay safe when extreme heat events occur. Continue to publicize the locations of cooling centers in the community. Explore opportunities to further support vulnerable populations and underserved communities during extreme heat.	Severe Weather [Extreme Heat]	CCUSD: Business Services Department, Safety and Security, Education Services.	OPR: Adaptation Planning Grant Program; Regional Resilience Planning and Implementation Grant Program. FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC).	Medium	Ongoing

**Table 5-3 (continued)
Hazard Mitigation Actions**

#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline
72	City: Adopt and enforce the most up-to-date California Building Code and California Fire Code, with local amendments as appropriate.	Wildfire	City: Building Safety Division, Fire Department.	Staff time, City General Fund.	Medium	Ongoing
73	City: Continue to maintain cooperative fire protection and fire prevention mutual aid agreements with relevant agencies.	Wildfire	City: Fire Department External Partners: Los Angeles County Fire Department, Los Angeles City Fire Department	Staff time, City General Fund.	Medium	Ongoing
74	City: Continue to support the Culver City Fire Department, California State Fire Marshal, and other relevant agencies to promote the implementation and awareness of fire prevention programs.	Wildfire	City: Fire Department External Partners: Los Angeles County Fire Department, Los Angeles City Fire Department, Cal FIRE	Staff time, City General Fund.	Medium	Ongoing
75	City: Establish a standardized vegetation management and clearing program, focused on open space areas within the City. Establish a defensible space zone for fire breaks. Consider alternative vegetation management clearing opportunities, such as grazing goats. Explore grant funding to establish and implement the vegetation management program.	Wildfire	City: Fire Department, Public Works Department, Parks, Recreation and Community Services Department.	FEMA: Building Resilient Infrastructure and Communities (BRIC); Hazard Mitigation Grant Program (HMGP). USDA/US Forest Service: Community Wildfire Defense Grant. CalOES: California Wildfire Mitigation Program. CalFire: Wildfire Prevention Grants Program.	Medium	Medium-Term
76	City: Communicate findings of the Evacuation Study to impacted residents in the Blair Hills and Culver Crest neighborhoods. Ensure ongoing awareness education regarding wildfire risk, safety, and preparedness actions.	Wildfire	City: Fire Department, Police Department, Public Works Department.	Staff time, City General Fund.	Medium	Medium-Term
77	City: Continue coordination and communication with the Marycrest Manor (as a residential nursing home for vulnerable populations) regarding wildfire risk, evacuation procedures and general emergency preparation/preparedness.	Wildfire	City: Fire Department, Police Department, Public Works Department. External Partners: Marycrest Manor	Staff time, City General Fund.	Medium	Ongoing
78	City: Explore opportunities to partner with Marycrest Manor regarding capital improvements to decrease wildfire risk and vulnerability. Consider wildfire resistant improvements in accordance with most recent California Building Code standards, including vegetation management programs, enhanced buffer zones, and regular maintenance. Work with the Marycrest Manor to identify a funding source for future capital improvements.	Wildfire	City: Fire Department, Police Department, Public Works Department, Building Safety Division. External Partners: Marycrest Manor	FEMA: Building Resilient Infrastructure and Communities (BRIC); Hazard Mitigation Grant Program (HMGP). USDA/US Forest Service: Community Wildfire Defense Grant. CalOES: California Wildfire Mitigation Program. CalFire: Wildfire Prevention Grants Program.	Medium	Long-Term
79	City: Continue to define the Blair Hills neighborhood as a local Very High Fire Hazard Severity Zone, as reflected in the Culver City General Plan Update.	Wildfire	City: Advanced Planning Division, Fire Department.	Staff time, City General Fund.	Medium	Long-Term
80	City: Evaluate early wildfire detection systems technology for implementation in Culver City. Evaluate wildfire detection systems by cost, installation considerations, required maintenance, and general feasibility. Identify grant funding opportunities to install and operate.	Wildfire	City: Fire Department, Police Department, Public Works Department, Building Safety Division. External Partners: Cal FIRE	FEMA: Building Resilient Infrastructure and Communities (BRIC); Hazard Mitigation Grant Program (HMGP). USDA/US Forest Service: Community Wildfire Defense Grant. CalOES: California Wildfire Mitigation Program. CalFire: Wildfire Prevention Grants Program.	Low	Long-Term
81	City: Continue wildfire awareness campaigns before and during wildfire season. Develop communication methods and approaches that include underserved or vulnerable populations, who may be uniquely impacted by wildfire risk.	Wildfire	City: Fire Department, Public Works Department.	FEMA: Building Resilient Infrastructure and Communities (BRIC); Hazard Mitigation Grant Program (HMGP). USDA/US Forest Service: Community Wildfire Defense Grant. CalOES: California Wildfire Mitigation Program. CalFire: Wildfire Prevention Grants Program.	Medium	Long-Term
82	City: Explore opportunities to expand emergency access for both the Blair Hills and Blanco-Culver Crest neighborhoods for evacuation purposes. Solutions could include limiting on-street parking during wildfire conditions, limiting new construction relying on off-street parking, or identifying locations for additional ingress/egress points (for both emergency access or evacuation purposes). Identify funding sources for selected improvements, including grant funding.	Wildfire	City: Fire Department, Police Department, Public Works Department, Building Safety Division, Advance Planning Division.	FEMA: Building Resilient Infrastructure and Communities (BRIC); Hazard Mitigation Grant Program (HMGP). USDA/US Forest Service: Community Wildfire Defense Grant. CalOES: California Wildfire Mitigation Program. CalFire: Wildfire Prevention Grants Program.	Medium	Long-Term
83	City: Communicate dam inundation risk to the community, with a focus on emergency preparedness. To ensure the whole community is engaged, develop communication methods and approaches for underserved communities or vulnerable populations, who may require specific or concentrated outreach to achieve maximum engagement.	Dam/Reservoir Failure	City: Fire Department, Police Department.	National Dam Safety Program (NDSP): State Assistance Grant Program. FEMA: Rehabilitation of High Hazard Potential Dams Grant Program, Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC).	Medium	Ongoing

**Table 5-3 (continued)
Hazard Mitigation Actions**

#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline
84	City: Continue to participate in emergency preparedness plan updates and exercises with the Los Angeles Department of Water and Power for Mulholland, Lower Franklin, Stone Canyon, and Silver Lake Dams.	Dam/Reservoir Failure	City: Fire Department, Police Department, Public Works. External Partners: Los Angeles Department of Water and Power	Staff time, City General Fund.	Medium	Ongoing
85	City/CCUSD: Coordinate with Culver City Police and Fire departments, along with Los Angeles County Sheriff and Fire Departments, to enhance communication and intelligence for political/social incidents that could result in civil disturbance or unrest.	Human Caused Hazards – Civil Disturbance	City: Police Department, Fire Department. CCUSD: Business Services Department, Safety and Security Department, Education Services External Partners: Los Angeles County Sheriff, Los Angeles County Fire Department, Los Angeles County Emergency Management.	Staff time, City General Fund.	Medium	Ongoing
86	City: Continue to educate the public regarding proper handling, storage, and disposal of hazardous materials.	Human Caused Hazards – Hazardous Materials	City: Fire Department, Police Department, Public Works.	Staff time, City General Fund.	Medium	Ongoing
87	City: Continue to communicate with the Los Angeles County Department of Public Health to follow the most recent guidance to address the COVID-19 and future pandemics.	Human Caused Hazards - Pandemic	City: Fire Department.	Staff time, City General Fund.	Medium	Ongoing
88	City: Prepare, adopt, and implement a Cybersecurity Plan in coordination with a consultant. Use the plan preparation process to identify specific vulnerabilities and actionable items that mitigate risk.	Human Caused Hazards – Terrorism/Cyber Attack	City: Information Technology Department.	FEMA: State and Local Cybersecurity Grant Program (SLCGP).	Medium	Long-Term
89	City: Encourage the reduction of greenhouse gas emissions by promoting targets outlined in Senate Bill 1383, including reducing disposal of organic waste in landfills and compost.	Climate Change	City: Public Works Department, Advance Planning Division.	Staff time, Enterprise Fund.	Medium	Long-Term
90	City/CCUSD: Continue to conduct regular active shooter drills at the City and CCUSD schools, to ensure public safety officials and employees are properly prepared and trained.	Human-Caused Hazards - Terrorism	City: Fire Department, Police Department. CCUSD: Business Services Department, Safety and Security Department	Staff time, City General Fund, CCUSD General Fund.	Medium	Ongoing
91	City: Prepare a comprehensive plan to mitigate the urban heat island effect in the planning area. Consider enhancing the urban forest and tree cover, install green/reflective roofs, or light colored streets/pavement. In the plan, establish specific capital improvement projects and responsible departments for implementation.	Severe Weather [Extreme Heat, Power Outage]	City: Public Works, Building Safety Division, Advance Planning Division.	FEMA: Building Resilient Infrastructure and Communities (BRIC); Hazard Mitigation Grant Program (HMGP).	Low	Long-Term

5.3 CAPABILITIES ASSESSMENT

This capabilities assessment is designed to identify existing local agencies, personnel, planning tools, public policy and programs, technology, and funds that have the capability to support hazard mitigation activities and strategies outlined in this Plan. To create this capability assessment, the MJHMP Planning Team collaborated to identify current local capabilities and mechanisms available to the City and CCUSD for reducing damage from future natural hazard events. These capabilities and resources were reviewed while developing the MJHMP.

KEY RESOURCES

The City and CCUSD have resources to support the implementation of mitigation actions including:

- Planning and regulatory capabilities are based on the implementation of ordinances, policies, local laws, and State statutes, and plans and programs that relate to guiding and managing growth and development.
- Administrative and technical capabilities refer to the staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions. It also refers to the ability to access and coordinate these resources effectively.
- Financial capabilities are the resources that a jurisdiction has access to or is eligible to use to fund mitigation actions.
- Education and outreach capabilities are programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information.

Refer to [Table 5-4](#) and [Table 5-5](#) below for a summary of City and CCUSD capabilities.

**Table 5-4A
City of Culver City Planning and Regulatory Capabilities Summary**

Ordinance/Plan/ Policy/Program	Responsible Agency or Department	Description/Comments
Zoning Ordinances	Planning and Development Department	The Culver City Zoning Code implements the General Plan by establishing regulations for land use control within the City, including where and how development occurs. Zoning is used to protect the public health, safety, and welfare of a community. The City can use the Zoning Code to implement mitigation actions to reduce risks associated with future development.
Subdivision Ordinance	Planning and Development Department	The City's subdivision ordinance regulates the development of housing, commercial, industrial, and other uses, including associated public infrastructure, as land is subdivided into buildable lots for sale or future development. The subdivision ordinance can ensure future subdivisions account for the risk of hazards on future development.
Building Codes, Permitting and Inspections	Planning and Development Department	The City Building Code regulates how buildings are constructed. The City adopts the State Building Code with amendments, as applicable. Mitigation actions to construct buildings at safer standards to enhance resilience could be considered as part of future building code updates.

Table 5-4A (continued)
City of Culver City Planning and Regulatory Capabilities Summary

Ordinance/Plan/ Policy/Program	Responsible Agency or Department	Description/Comments
Mitigation Action Plan (MAP): Drought, Wildfire, & Flood	Public Works Department	The MAP was developed based on the 2017 MJHMP to provide the City and CCUSD with a prioritized list of mitigation actions to address drought, wildfire, and flood hazards in the upcoming MJHMP update process. The plan provides a brief summary of drought, wildfire, and flood hazards, as well as a detailed summary of the prioritization metrics identification and method, and a summary of prioritized projects and concept plans. This plan was used to inform drought, wildfire, and flood hazard profiles and to develop mitigation actions in this MJHMP Update.
Emergency Operations Plan	Fire Department	The Emergency Operations Plan (EOP) establishes the City's planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies. The plan outlines strategies for various processes and actions that enable the City to prepare for, respond to, and recover from a disaster and/or emergency. The EOP identifies components of the Culver City emergency response organization and describes the overall responsibilities of the City in protecting life and development. Together, the EOP and MJHMP provide a mitigation and response strategy to hazard events.
General Plan	Planning and Development Department	The Culver City General Plan establishes the overall vision for growth and development in the City and provides goals/policies to guide municipal decision-making. Culver City is currently conducting a comprehensive update of the General Plan including all nine General Plan Elements. Each General Plan Element has an associated Existing Conditions Report that was referenced during MJHMP development. The General Plan provides the framework for the implementation of the MJHMP mitigation actions. The Safety Element identifies hazards that could impact the community and establishes policy for the preparation and update of the MJHMP. After the MJHMP is approved, the City will formally update the Safety Element to incorporate the MJHMP by reference to ensure compliance with California Assembly Bill 2140.
Capital Improvement Plan	Public Works Department	The Capital Improvement Plan (CIP) guides the scheduling of spending of construction, maintenance and repair of City facilities and infrastructure. The plan encompasses projects associated with public infrastructure and equipment such as roads, urban runoff facilities, and traffic signals. Projects are based on improvement, maintenance, and renovation of infrastructure. The CIP can identify and fund mitigation actions related to City facilities and infrastructure.

Table 5-4A (continued)
City of Culver City Planning and Regulatory Capabilities Summary

Ordinance/Plan/ Policy/Program	Responsible Agency or Department	Description/Comments
Dam Emergency Action Plans and Inundation Maps	City of Los Angeles Department of Water and Power	Dam Emergency Action Plans (EAPs) identify incidents that can lead to emergency conditions at the dam, identifies areas that could be affected by inundation, and specifies pre-planned actions to be followed to minimize property damage, loss of infrastructure/water resources, and loss of life. The EAP is reviewed and approved by the California Office of Emergency Services (Cal OES), and the inundation maps are approved by the California Department of Water Resources, Division of Safety of Dams (DSOD). The EAPs identify specific vulnerabilities that have been incorporated into the MJHMP, and dam specific risk evaluations coordinate with identified mitigation actions. EAPs also identify regular training and emergency preparedness exercises.
Community Guide to Public Alerts and Warnings	Fire Department	The Community Guide to Public Alerts and Warnings informs the public about the City's warning and notification systems and facilitates communication with the community in the event of an emergency or disaster. Mitigation actions that rely on effective emergency warning, community preparedness and response may use the existing alerts and warning systems outlined in this document.
Bicycle and Pedestrian Action Plan	Public Works Department	The Bicycle and Pedestrian Action Plan guides future development of bicycle and pedestrian facilities, as well as education, enforcement, and encouragement programs to foster walking and biking that result in reduced congestion, lower greenhouse gas emissions, and promote healthier lifestyles and improved quality of life. This plan informs the MJHMP of existing and proposed bike and pedestrian facilities. The development of these facilities can be coordinated with mitigation actions and optimized to ensure safety, efficiency and resilience of active transportation within the City.
Parks and Recreation Master Plan	Parks, Recreation, and Community Services Department	The Parks and Recreation Master Plan guides open space and recreational planning within the City, including park/recreation facilities and the use of CCUSD facilities. Mitigation actions can be implemented in coordination with park/recreation projects and facilities improvements identified in the Parks and Recreation Master Plan.
Water Conservation Plan	Public Works Department, in cooperation with Parks, Recreation, and Community Services Department	The Water Conservation Plan establishes a plan for the City to achieve targeted water reductions at City facilities and guides residents to adhere to mandatory water use restrictions in order to respond to recurring drought conditions and resulting potable water shortage in California. The tools and strategies of the Water Conservation Plan can be used to develop MJHMP drought mitigation actions.

Table 5-4A (continued)
City of Culver City Planning and Regulatory Capabilities Summary

Ordinance/Plan/ Policy/Program	Responsible Agency or Department	Description/Comments
Urban Forest Master Plan	Public Works Department	The Urban Forest Master Plan designates tree species for public street parkways and medians, including the use of drought-tolerant species that have low maintenance needs. City trees are continually maintained with trimming occurring once every three to four years. It also provides for the long-term management of the urban forest through tree planting, preservation, and maintenance. The plan is designed to support Culver City's environmental goals in regards to stormwater management and carbon sequestration; it also envisions increased shade for pedestrians and motorists, improved air quality, and increased opportunity for healthy recreation. Mitigation actions, specifically those related to drought-tolerant landscaping and stormwater management can be implemented in coordination with the designations of the Urban Forest Master Plan.
Economic Development Implementation Plan	Economic and Cultural Development	The Economic Development Implementation Plan provides strategies to improve economic development opportunities within the City including creating jobs, eliminating blight, revitalizing communities, and constructing affordable housing in order to provide a more sustainable economy. The plan contains a technical analysis of the City's economy and can be used to inform the MJHMP Community Profile as well as identify opportunities to incorporate mitigation actions into the City's existing economic development strategies and implementation plan.
Annual Catch Basin Cleaning Program	Public Works Department	The City provides regular maintenance and cleaning of its catch basins. There are more than 1,000 automatic retractable and connector pipe trash screens in storm drain catch basins to help prevent trash, leaves, and other debris from flowing into the storm drain system. Catch basin cleaning and maintenance procedures can be incorporated into MJHMP mitigation actions to address stormwater and surface runoff concerns.
Stormwater Quality Master Plan	Public Works Department	The Stormwater Quality Master Plan guides proposed actions for compliance with the MS4 permit and Enhanced Watershed Management Programs and ensures the TMDL requirements that drive these regulations are met. This plan outlines and implements projects that manage stormwater, improve water quality and reduce flooding. Mitigation actions of the MJHMP can be coordinated with the Stormwater Quality Master Plan projects to efficiently address stormwater management, reduce flooding and improve resilience.
Enhanced Watershed Management Programs and Coordinated Integrated Monitoring Plans	Public Works Department	The City joined the Ballona Creek Watershed Management Group in preparing the Enhanced Watershed Management Program for the Ballona Creek Watershed. Additionally, the City participated in the Marina Del Rey Enhanced Watershed Management Program. Participating in these watershed management programs, and their associated Coordinated Integrated Monitoring Program provide an opportunity to identify mitigation actions to monitor and maintain watersheds in the area in such a way that addresses water quality concerns, storm water management and flooding.

Table 5-4A (continued)
City of Culver City Planning and Regulatory Capabilities Summary

Ordinance/Plan/ Policy/Program	Responsible Agency or Department	Description/Comments
Community and Municipal Greenhouse Gas Inventory Reports	Transportation	The City's Greenhouse Gas (GHG) inventory reports present the greenhouse gas emissions inventories for municipal operations and community-wide activities. These inventories guide policymakers in applying cost-effective GHG reduction strategies and can be used to inform climate change and related hazard mitigation strategies.
Southern California Gas 2021 Gas Safety Plan	SoCalGas	The Southern California Gas 2021 Gas Safety Plan provides procedures to review, change, optimize or enhance operations to protect public safety and worker safety from gas-related risks and incidents. This plan can be used to identify opportunities for coordinating mitigation actions and safety strategies between the City and SoCal Gas.
West Basin Municipal Water Urban Water Management Plan	West Basin Municipal Water District	The Urban Water Management Plan (UWMP) provides a detailed summary of present and future water supplies and demands within West Basin's service area and assesses West Basin's water resource needs. The UWMP informs action on managing and mitigating the effects of drought and climate change.
West Basin Municipal Water District Water Shortage Contingency Plan	West Basin Municipal Water District	The Water Shortage Contingency Plan serves as an operating manual for West Basin Municipal Water District to prevent significant service disruptions through proactive management and to guide operations to address water shortages caused by drought, climate change, or catastrophic events. Drought and climate change mitigation actions are informed by the management strategies of the Water Shortage Contingency Plan.
Culver City Service Area 2020 Urban Water Management Plan	Golden State Water Company	The Culver City Service Area Urban Water Management Plan provides a detailed summary of present and future water supplies and demands within the Culver City service area of the Golden State Water Company. The plan informs coordinated action on managing and mitigating the effects of drought and climate change.
Los Angeles Department of Water and Power Urban Water Management Plan	Los Angeles Department of Water and Power	The Urban Water Management Plan provides a detailed summary of present and future water supplies and demands within the Los Angeles Department of Water and Power service area including portions of Culver City. The plan informs coordinated action on managing and mitigating the effects of drought and climate change.
Mutual Aid Agreements	Police Department; Public Works Department; Transportation Department; and Fire Department	The City maintains various mutual aid agreements with surrounding jurisdictions and agencies to provide services and assistance in the event of a disaster.
Memorandum of Understanding (MOU) with Smart & Final	Fire Department	Access to emergency supplies in bulk quantities.

Table 5-4A (continued)
City of Culver City Planning and Regulatory Capabilities Summary

Ordinance/Plan/ Policy/Program	Responsible Agency or Department	Description/Comments
Informal Mutual Aid Agreement with Sony Pictures Studios	Fire Department	Sony has its own fire department on-site that works directly with the City's Fire Department. It has a dedicated emergency manager. The studio's emergency response infrastructure includes storing water in underground tanks and pumping out in pop-up tanks, sanitizers, pump system, emergency supplies, and an emergency app for mobile devices. Sony has a signed agreement with the American Red Cross to be a potential shelter station.
Brush Clearance Inspection Protocol and Requirements	Fire Department	The City implements regular brush clearance protocols and requirements for neighborhoods within mapped wildfire hazard zones (including Culver Crest and Blair Hills neighborhoods). The Fire Department distributes outreach letters to each property owner, outlining brush clearing requirements and an inspection schedule. In addition, the City provides dumpsters for organic brush waste. These requirements and inspection protocol are examples of ongoing mitigation to reduce wildfire risk in known hazard areas.
<p>How can these capabilities be expanded upon and improved to reduce risk? Multiple mitigation measures are priority projects to expand on Culver City's capabilities, including new plans and programs. Examples of opportunities to expand planning/regulatory capabilities include the following mitigation actions:</p> <p>Conduct regular City Municipal Code reviews (Mitigation Action #4), Comprehensively update City emergency planning documents every five years (Mitigation Action #11), Integrate natural hazard information and mapping (e.g., liquefaction, landslide, fire hazard zones) into the City General Plan (Mitigation Action #21), Prepare an Environmental Justice Element in accordance with Government Code Section 65040.2 and SB 1000 (Mitigation Action #30), Continue to update and maintain City evacuation plans and maps (Mitigation Action #31), Continue monitoring changes/updates to building codes and seismic regulations (Mitigation Action #55), Prepare, adopt, and implement a Cybersecurity Plan (Mitigation Action #88).</p>		

Table 5-4B
City of Culver City Administrative and Technical Capabilities Summary

Staff/Personnel or Type of Resource	Agency or Department	Description/Comments
City Council	City Manager's Office	City Council is the legislative body for the City of Culver City and establishes overall policy direction and implementation. City Council will ultimately be responsible for adopting the MJHMP and implementing mitigation actions.
Planning Commission	Planning and Development Department	The Planning Commission reviews planning and development within the City including recommending the adoption, amendment or repeal of the General Plan to City Council. Planning Commission also oversees zoning, proposed public works and public improvement as necessary. Planning Commission will facilitate the adoption and implementation of the MJHMP and mitigation actions as needed.

Table 5-4B (continued)
City of Culver City Administrative and Technical Capabilities Summary

Staff/Personnel or Type of Resource	Agency or Department	Description/Comments
City Manager	City Manager's Office	The City Manager supports the development and implementation of the MJHMP by allocating the appropriate staff and resources. The City Manager will be involved in mitigation actions by providing support for their establishment and implementation.
Planners or engineers with knowledge of land development and land management practices	Planning and Development Department; Public Works Department	
Planners or engineers trained in building and/or infrastructure construction practices	Planning and Development Department; Public Works Department	
Planners or engineers with an understanding of natural hazards	Planning and Development Department; Public Works Department	
Certified Floodplain Manager	Public Works Department	
Licensed Land Surveyor	Public Works Department	The City typically enters into contracts with firms for land surveying services.
Staff with education or expertise to assess the community's vulnerability to hazards	Planning and Development Department; Public Works Department; Fire Department, Information Technology Department	Several staff reside in the City and could be available quickly in the event of a natural hazard.
Staff skilled in Geographic Information Systems (GIS)	Information Technology Department	
Emergency Management Coordinator	Fire Department	Coordinates with City staff on emergency preparedness, response, and mitigation activities. Educates City employees and residents on hazards awareness, prevention, and preparedness.
Emergency Response Team	Core City Staff, as identified in EOP	
Sewer Pipeline Repair	Public Works Department	In addition to in-house staff, the City enters into contracts with firms for on-call emergency services and repairs.
Specialized Analysis, Engineering or Design	Public Works Department	The City maintains a list of consultants for engineering, traffic, and design if needed.
Grant Application Writers	Planning and Development Department; Public Works Department; Transportation Department	Various City staff provide grant writing services.
Code Enforcement	Planning and Development Department	
Culver City Amateur Radio Emergency Service Volunteer (CCARES)	Coordination with Fire and Police Departments	Volunteer organization of area residents that work together to provide communication in case of emergencies.

Table 5-4B (continued)
City of Culver City Administrative and Technical Capabilities Summary

Staff/Personnel or Type of Resource	Agency or Department	Description/Comments
Los Angeles County Community Disaster Resilience	Fire Department	City participates in the Community Resilience Coalition to strengthen partnership, engagement, education, and community self-sufficiency.
<p>How can these capabilities be expanded upon and improved to reduce risk?</p> <p>Multiple mitigation measures are priority projects to expand on Culver City's capabilities, including new plans and programs. Examples of opportunities to expand administrative and technical capabilities include the following mitigation actions:</p> <p>Identify critical facilities in need of new or expanded generator capacity (Mitigation Action #2), Continue to implement energy efficiency retrofits, expand energy conservation efforts, and pursue the use of renewable energy (Mitigation Action #7), Maintain, enhance and codify systems and procedures to enhance communication and connectivity during future hazard incidents (Mitigation Action #18), Explore funding opportunities to convert and equip trailers into mobile command units (Mitigation Action #27), Explore funding opportunities for mobile generators to support mobile command units and other facilities involved in emergency response (Mitigation Action #28), Evaluate early wildfire detection systems technology for implementation in Culver City (Mitigation Action #80), Prepare, adopt, and implement a Cybersecurity Plan (Mitigation Action #88).</p>		

Table 5-4C
City of Culver City Financial Capabilities Summary

Financial Resources	Agency or Department	Description/Comments
General Fund	City Council; City Manager's Office; City Departments	Serves as the main operating fund for the City and is used to finance the most common municipal functions (e.g. police, fire, parks and recreation, etc.).
Capital Improvement Program	City Council and City Departments	Long-range plan for individual capital improvement projects and funding sources. Projects are considered unique construction projects that provide improvements or additions such as land, buildings, and infrastructure.
Community Development Block Grants (CDBG)	California Department of Housing and Community Development	Competitive grant funds for the following program activities: <ul style="list-style-type: none"> • Community Development (CD) • Economic Development (ED) • Disaster Recovery Initiative (DRI) • Neighborhood Stabilization Program (NSP)
Utility Users' Tax	Various utility providers	Culver City Municipal Code Chapter 3.08, Taxation, establishes a utility users' tax.
New Development Impact Fund	Planning and Development Department	Culver City Municipal Code Chapter 15.06, New Development Impact Fund, requires new developments pay into the fund for the privilege of development. Funds are for street improvements, traffic controls, and traffic management projects made necessary by the development.
State Gasoline Tax Funds	Public Works Department	The City receives funds for the acquisition of real property, or construction, maintenance or improvement of streets or highways.

Table 5-4C (continued)
City of Culver City Financial Capabilities Summary

Financial Resources	Agency or Department	Description/Comments
Emergency Reserve Fund	City Council	The City maintains committed General Fund reserves for contingencies/emergencies.
Emergency Management Performance Grant (EMPG)	U.S. Department of Homeland Security	Assists in providing resources to supplement and enhance all-hazard emergency management capabilities and to assist with building effective prevention and response capabilities consistent to any threatened or actual disaster or emergency, regardless of cause.
Local Law Enforcement Grants	Police Department	Grant funding that can be used for additional police protection services.
<p>How can these capabilities be expanded upon and improved to reduce risk? Multiple mitigation measures are priority projects to expand on Culver City's capabilities, including new plans and programs. Examples of opportunities to expand financial capabilities include the following mitigation actions:</p> <p>Identify funding sources for purchase of additional generator capacity (Mitigation Action #2), Explore funding opportunities to convert and equip trailers into mobile command units (Mitigation Action #27), Explore funding opportunities for mobile generators to support mobile command units and other facilities involved in emergency response (Mitigation Action #28), Pursue grant funding for capital improvements (Mitigation Action 33), Secure grant funding to implement a program to retrofit privately-owned seismically vulnerable structures (Mitigation Action 51).</p>		

Table 5-4D
City of Culver City Education and Outreach Capabilities Summary

Resource/Programs	Department/Agency	Description/Comments
Staff Training	Fire Department	The City provides staff training on emergency response and preparedness 1-2 times per year (typically held in September and December). Mitigation actions may include updating or enhancing staff training on emergency response and preparedness.
City Website	Information Technology Department	The website provides news and announcements to the community, including community events related to safety and emergency preparedness and mitigation. It maintains information and resources pertaining to hazards and mitigation. The City Website provides an opportunity to convey information and implement mitigation actions specific to educating and informing the community regarding all hazards and ways to reduce impacts from the hazards.
Social Media	City Manager; Fire Department; Police Department; Information Technology Department	The City and some individual departments have Facebook and Twitter accounts to provide information to the community. Social media channels provide an opportunity to convey information and implement mitigation actions pertaining community education/outreach.

Table 5-4D (continued)
City of Culver City Education and Outreach Capabilities Summary

Resource/Programs	Department/Agency	Description/Comments
Everbridge (i.e., Nixle)	City Manager; Fire Department; Police Department; Public Works Department	The City utilizes Everbridge (or Nixle) as its official emergency notification system to communicate urgent alerts, community events, and traffic-related information to the Culver City community. Mitigation actions may continue to rely on Everbridge for emergency notification.
Alert LA	County of Los Angeles	Emergency mass notification system to contact County residents and businesses in case of an emergency. The system sends shelter-in-place instructions, evacuation information, and other emergency messages. Mitigation actions may encourage or promote Alert LA as an emergency notification tool.
Community Emergency Response Team (CERT)	Fire Department	The Culver City Community Emergency Response Team (CERT) educates people about disaster preparedness for hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. Mitigation actions may utilize CERT to continue or enhance community emergency preparedness.
Communitywide Disaster Drill	Fire Department	The City's annual disaster drill takes place on the same day as the Great California ShakeOut, the 3 rd Thursday in October. The purpose of this drill is to give community members an opportunity to prepare and practice their "disaster plan." An effective mitigation and preparedness strategy may include continuing and promoting participation in this or similar disaster drills.
Culver City Amateur Radio Emergency Service Volunteer (CCARES)	Coordination with Fire Department	The Culver City Amateur Radio Emergency Service (CCARES) is a volunteer organization of area residents that work with the Culver City Fire Department and Culver City Community Emergency Response Team (CERT) to provide communication in case of emergencies. This service provides redundancy and resilience in the case of emergencies that might disable telephone or cellular service. Mitigation actions may include continued support from the City and Fire Department.

Table 5-4D (continued)
City of Culver City Education and Outreach Capabilities Summary

Resource/Programs	Department/Agency	Description/Comments
Culver City Citizens Police Academy	Police Department	The Culver City Police Department Citizens Police Academy is a program designed to educate residents and local citizens on the various aspects of law enforcement. The program consists of two types of volunteers, the Volunteers in Patrol (VIP) and the Senior Volunteer Program (SVP), who are trained by the Police Department to provide support to both the department and the community. The goal is to open lines of communication and encourage interaction between police officers and the community. Education and outreach may serve as a mitigation action to increase communication and interaction under this program .
American Red Cross	Coordination with Fire Department	Provide access to natural hazard information and resources, as well as educational and training programs. Promoting participation in American Red Cross educational and training programs would serve to mitigate hazards by increasing awareness and preparedness.
American Red Cross Disaster Preparedness Programs	Coordination with the Fire and Police Department, and other City Departments as relevant	Provides free disaster preparedness presentations in-person or virtually to the community that show participants how to make an emergency kit, family plan, and be informed. The Program educates participants on the correct actions to take during a disaster such as an earthquake, home fires, and wildfires.
<p>How can these capabilities be expanded upon and improved to reduce risk?</p> <p>Multiple mitigation measures are priority projects to expand on Culver City's capabilities, including new plans and programs. Examples of opportunities to expand education and outreach capabilities include the following mitigation actions:</p> <p>Promote emergency alert systems, and encourage residents to sign-up to receive alerts (Mitigation Action #1), Continue to regularly conduct emergency preparedness trainings, exercises, and drills (Mitigation Action #13), Coordinate with local water purveyors in public outreach efforts regarding drought and water conservation (Mitigation Action 38), Continue to engage the public through disaster fairs, drills, and other programming (Mitigation Action #49), Educate citizens (particularly vulnerable populations) regarding the dangers of extreme heat (Mitigation Action #71), Continue wildfire awareness campaigns before and during wildfire season (Mitigation Action #81).</p>		

**Table 5-5A
Culver City Unified School District Planning and Regulatory Capabilities Summary**

Plan/Regulations/Program	Responsible Agency or Department	Description/Comments
Culver City Unified School District Future-Ready Facilities Plan	Business Services Department	CCUSD has initiated development of district-wide campus master plans and design guidelines to serve as a strategic road map for future facility improvement projects. Mitigation actions can be coordinated with planned district facility improvement projects under the Future-Ready Facilities Plan.
Culver City Unified School District Integrated Energy Master Plan	Business Services Department	The purpose of the CCUSD Integrated Energy Master Plan is to analyze baseline energy and environmental indicators for each school and implement design guidelines and a path to zero net energy to optimize performance. The Integrated Energy Master Plan is comprised into two parts, campus reports and the Zero Net Energy Report (ZNE). Campus reports include analyses of air quality, temperature, visual and acoustic indicators; as well as FAQ, survey and energy use information. The Zero Net Energy Report will analyze benchmark data and identify energy conservation measures and design recommendations that, when implemented through capital improvement projects, will achieve CCUSD's zero net energy and carbon neutrality goals. Mitigation actions can be implemented through capital improvement projects under the Integrated Energy Master Plan.
The Field Act	Division of the State Architect (DSA)	The Field Act was enacted in 1933 following the Long Beach Earthquake that destroyed and damaged many schools. The Field Act and has been updated many times since its inception and requires all school buildings be built using more stringent standards than those required for other building construction. Provisions under the field act may be relied on to guide seismic hazard mitigation actions.
Comprehensive School Safety Plan (CSSP)	Safety and Security Department	CCUSD developed the CSSP for use as a template in the preparation of emergency procedures for each of the CCUSD schools and facilities. All schools maintain a school safety plan. School Safety Plans and the CSSP present specific procedures using Incident Command System (ICS) principles to prepare for and respond to school emergencies. Mitigation actions may rely on or enhance the procedures found in the CSSP.
<p>How can these capabilities be expanded upon and improved to reduce risk?</p> <p>Multiple mitigation measures are priority projects to expand on CCUSD's capabilities, including new plans and programs. Examples of opportunities to expand CCUSD's planning/regulatory capabilities include the following mitigation actions:</p> <p>Incorporate the findings of the CCUSD Integrated Energy Master Plan Campus Reports into the Energy Master Plan Zero Energy Report (Mitigation Action #17), Continue to maintain and update individual school safety plans, and incorporate into the CCUSD Comprehensive School Safety Plan annually (Mitigation Action #19), Continue monitoring changes/updates to building codes and seismic regulations (Mitigation Action #55).</p>		

**Table 5-5B
Culver City Unified School District Administrative and Technical Capabilities Summary**

Staff/Personnel or Type of Resource	Agency or Department	Description/Comments
Staff with an understanding of natural hazards	Business Services Department; Security Department	Public employees are Disaster Service Workers in the event a local or state emergency or federal disaster declaration has been made.
Emergency Operations Team	Security Department	Coordinates with Culver City Fire and Police Departments to develop comprehensive emergency response plans, training, and drills.
<p>How can these capabilities be expanded upon and improved to reduce risk? Multiple mitigation measures are priority projects to expand on CCUSD's capabilities, including new plans and programs. Examples of opportunities to expand CCUSD's administrative and technical capabilities include the following mitigation actions:</p> <p>Identify critical facilities in need of new or expanded generator capacity (Mitigation Action #2), Continue to implement energy efficiency retrofits, expand energy conservation efforts, and pursue the use of renewable energy (Mitigation Action #7), Maintain, enhance and codify systems and procedures to enhance communication and connectivity during future hazard incidents (Mitigation Action #18).</p>		

**Table 5-5C
Culver City Unified School District Financial Capabilities Summary**

Financial Resources	Agency or Department	Description/Comments
Annual Budget and General Fund	Business Services Department	Identifies the revenue and expenditures for CCUSD. The district revises its budget and multi-year projects twice during the fiscal year.
Measure CC Bond Program	Business Services Department	Funding for a range of projects throughout CCUSD identified in the Facilities Master Plan.
Parcel Tax	Business Services Department	Special Parcel Tax assessment per parcel for five years to maintain: math, science, technology, music and art programs; updated instructional materials; quality teachers; school libraries; and small class sizes.
<p>How can these capabilities be expanded upon and improved to reduce risk? Multiple mitigation measures are priority projects to expand on CCUSD's capabilities, including new plans and programs. Examples of opportunities to expand CCUSD's financial capabilities include the following mitigation actions:</p> <p>Identify funding sources for purchase of additional generator capacity (Mitigation Action #2), Seek funding for major projects identified in the School Safety Plans (Mitigation Action #19), Seek funding sources to expand emergency supply storage and capacity (Mitigation Action #26).</p>		

**Table 5-5D
Culver City Unified School District Education and Outreach Capabilities Summary**

Resource/Programs	Department/Agency	Description/Comments
Staff Training	Business Services Department; Security Department	CCUSD is required to plan for earthquakes, drills, hazard mitigation, and training.
CCUSD Website	Business Services Department; Security Department	The website provides information to staff, parents, and students regarding the school district, including school events and announcements, as well as emergency preparedness.
Culver Currents	Superintendent's Office	Monthly newsletter distributed to families.
Emergency Preparedness Newsletter	Security Department	Periodic newsletter focusing on emergency preparedness.

Table 5-5D (continued)
Culver City Unified School District Education and Outreach Capabilities Summary

Resource/Programs	Department/Agency	Description/Comments
Social Media	Superintendent's Office	CCUSD maintains Twitter and Facebook accounts and subscriptions to CCUSD news feed.
Disaster Drills	Security Department	CCUSD conducts disaster drills (fire, earthquake, and lock downs) periodically throughout the year.
Community Emergency Response Team (CERT)	Culver City Fire Department; Security Department	The CCUSD Security Team has completed the CERT training course made available through the City. Staff members are encouraged to obtain certification.
American Red Cross Youth Preparedness Programs	Coordination with Business Services Department, Safety and Security Department and Education Services	Provides free disaster preparedness presentations ("The Pillowcase Project" and "Prepare with Pedro") in person or virtually to students that prepares children for disasters, teaches coping skills and general preparedness information.
<p>How can these capabilities be expanded upon and improved to reduce risk?</p> <p>Multiple mitigation measures are priority projects to expand on CCUSD's capabilities, including new plans and programs. Examples of opportunities to expand CCUSD's education and outreach capabilities include the following mitigation actions:</p> <p>Continue to regularly conduct emergency preparedness drills at all CCUSD facilities for the benefit of students and employees (Mitigation Action #15), Conduct a comprehensive update of the CCUSD Emergency Preparedness web content and outreach materials (Mitigation Action #20), Continue to engage the public through disaster fairs, drills, and other programming (Mitigation Action #49), Educate citizens (particularly vulnerable populations) regarding the dangers of extreme heat (Mitigation Action #71).</p>		

SECTION 6.0: PLAN MAINTENANCE AND CAPABILITIES

This section identified the formal process that ensures the MJHMP (or “Plan”) remains an active and relevant document for the City and CCUSD. The Plan maintenance process includes a schedule for monitoring and evaluating the Plan annually, and producing an update every five years (to ensure the City and CCUSD maintain eligibility for federal and State hazard mitigation funding). This section also describes how the City will integrate public participation throughout Plan maintenance and implementation process. Finally, this section describes how City staff intend to incorporate the mitigation actions outlined in this Plan into existing planning mechanisms and programs.

6.1 PURPOSE OF THE PLAN AND AUTHORITY

Under the direction of the MJHMP Project Management Team (comprised of the City’s Public Works Department Senior Management Analyst and CCUSD MOT Director), the MJHMP Planning Team will be responsible for the on-going maintenance of this MJHMP. The Project Management Team will take the primary lead in MJHMP maintenance by coordinating maintenance of this Plan with the Planning Team, including undertaking the formal review process and updating the Plan. Key City and CCUSD departments and staff positions are identified below.

- Finance Department
- Planning and Development Department
- Public Works Department
- Transportation Department
- Information Technology Department
- Parks, Recreation & Community Services Department
- Police Department
- Fire Department
- CCUSD – Business Services

In addition to City and CCUSD staff, the following partner agencies who were part of the MJHMP Planning Team should be included in the maintenance and update activities:

- Amazon Studios
- American Red Cross
- California Governor’s Office of Emergency Services
- City of Los Angeles
- City of West Hollywood
- City of Santa Monica
- County of Los Angeles Office of Emergency Management
- Golden State Water Company
- Los Angeles Department of Water and Power
- Sony Pictures Entertainment
- Southern California Gas
- Southern California Edison
- Southern California Hospital at Culver City
- West Basin Municipal Water District
- West Los Angeles College

Although specific MJHMP Planning Team and Project Management members may change, the City staff positions, departments and other partner agencies and organizations should continue to be included in the Plan implementation and maintenance process.

The MJHMP Project Management Team will facilitate the MJHMP Planning Team meetings and will assign tasks such as updating and presenting the Plan to other departments, stakeholder groups, and/or elected officials. The MJHMP Planning Team will be responsible for maintaining and updating the Plan and will coordinate implementation of the Plan through their respective positions and agencies. Plan implementation and evaluation will be a shared responsibility among all MJHMP Planning Team members.

EVALUATION

At a minimum, the ongoing annual MJHMP Planning Team meeting will evaluate the progress of the Plan and incorporate the actions into other planning documents. This review will include the following:

- Summary of any hazard events that occurred during the prior year and their impacts on the community.
- Review of successful mitigation initiatives identified in the Plan.
- Brief discussion about why targeted mitigation strategies were not completed.
- Reevaluation of the mitigation actions to determine if the timeline for identified projects needs to be amended (such as changing a long-term project to a short-term project due to funding availability).
- Recommendations for new mitigation actions.
- Changes in, or potential for, new funding options/grant opportunities.
- Integration of new GIS data and maps that can be used to inform the Plan.
- Evaluation of any other planning programs or initiatives within the City or CCUSD that involve hazard mitigation.

The purpose of the annual evaluation will be to ensure consideration and implementation of the MJHMP and document progress in order to inform the future MJHMP update.

6.2 METHOD AND SCHEDULE FOR UPDATING THE PLAN WITHIN FIVE YEARS

Section 201.6.(d)(3) of Title 44 of the Code of Federal Regulations requires that local hazard mitigation plans be reviewed, revised if appropriate, and resubmitted for approval in order to remain eligible for benefits awarded under the DMA. Monitoring the progress of the mitigation actions will be on-going throughout the five-year period between the adoption of the MJHMP and the next update effort. The MJHMP Planning Team will meet on an annual basis to monitor the status of the implementation of mitigation actions and develop updates as necessary.

The City and CCUSD intend to update the Plan on a five-year cycle from the date of its adoption. It is anticipated that this update process will occur one year prior to expiration of the existing Plan. This cycle may be accelerated to less than five years based on the following triggers:

- A presidential disaster declaration that impacts the City.
- A hazard event that causes loss of life.

Should a significant disaster occur within the City, the MJHMP Planning Team will reconvene to review and update the MJHMP as appropriate. The City Council and CCUSD Board will adopt written updates to the MJHMP.

PROCESS

The intent of the update process will be to add new planning process methods, community profile data, hazard data and events, vulnerability analyses, mitigation actions, and goals to the adopted Plan so that the MJHMP will always be current and up to date. Based on the needs identified by the MJHMP Planning Team, the update will, at a minimum, include the elements below:

1. The update process will be convened through an MJHMP Planning Team appointed by the Public Works Director/City Engineer and will consist of at least one member of the Planning and Development Department to ensure consistency with the City's General Plan.
2. The hazard risk assessment will be reviewed and updated using best available information and technologies on an annual basis.
3. The evaluation of critical structures and mapping will be updated and improved as funding becomes available.
4. The mitigation actions will be reviewed and revised to account for any actions completed, deferred, or changed to account for changes in the risk assessment or new City or CCUSD policies identified under other planning mechanisms, as appropriate (such as the City's General Plan).
5. The draft update will be sent to appropriate agencies for comment.
6. The public will be given an opportunity to comment prior to adoption.
7. The Culver City-City Council and CCUSD Board will adopt the updated MJHMP.

The MJHMP Planning Team will coordinate with responsible City and CCUSD departments and agencies/organizations identified for each mitigation action. These responsible departments and agencies/organizations will monitor and evaluate the progress made on the implementation of mitigation actions and report to the MJHMP Planning Team on an annual basis. Working with the MJHMP Planning Team, these responsible departments and agencies/organizations will be asked to assess the effectiveness of the mitigation actions and modify the mitigation actions as appropriate. The MJHMP Mitigation Action Progress Report worksheet will assist mitigation leads in reporting on the status and assessing the effectiveness of the mitigation actions.

Information culminated from the City departments and external partners will be used to monitor mitigation actions and annual evaluation of the MJHMP. The following questions will be considered as criteria for evaluating the Plan's effectiveness:

- Has the nature or magnitude of hazards affecting the City changed?
- Are there new hazards that have the potential to impact the City?
- Do the identified goals and actions address current and expected conditions?
- Have mitigation actions been implemented or completed?
- Has the implementation of identified mitigation actions resulted in expected outcomes?
- Are current resources adequate to implement the MJHMP?
- Should additional local resources be committed to address identified hazards?

An Annual MJHMP Review Questionnaire worksheet will be used to provide guidance to the MJHMP Planning Team on what should be included in the evaluation. Future updates to the MJHMP will account for any new hazard vulnerabilities, special circumstances, or new information that becomes available. Issues that arise during monitoring and evaluating the MJHMP, which

require changes to the risk assessment, mitigation strategy and other components of the Plan, will be incorporated into the next update of the MJHMP in 2028. The questions identified above will remain valid when preparing the 2028 Plan update.

6.3 LOCAL ADOPTION

Cal OES and FEMA are responsible for initial review and approval of the MJHMP. After the plan check review process concludes, the Culver City-City Council and CCUSD Board are responsible for adopting the MJHMP. This formal adoption should take place every five years. Once the Plan has been adopted, the City's Public Works Department will be responsible for final submission to the California Office of Emergency Services (Cal OES). Cal OES will then submit the Plan to FEMA for final review and approval.

6.4 MJHMP UPDATE IMPLEMENTATION THROUGH EXISTING PROGRAMS AND PLANNING MECHANISMS

The effectiveness of the MJHMP update depends on the implementation of the Plan and incorporation of the outlined mitigation action items into existing City and CCUSD plans, policies, and programs. The Plan includes a range of action items that, if implemented, would reduce loss from hazard events in the City. Together, the mitigation action items in the MJHMP provide the framework for activities that the City and CCUSD may choose to implement over the next five years. The City and CCUSD have prioritized the Plan's goals and identified actions that will be implemented (resources permitting) through existing plans, policies, and programs.

The City's Public Works Department (Senior Management Analyst) has taken on the responsibility for overseeing the Plan's implementation and maintenance through the City's existing programs. The Senior Management Analyst, or designated appointee, will assume lead responsibility for facilitating MJHMP implementation and maintenance meetings. Although the Public Works Department will have primary responsibility for review, coordination, and promotion, plan implementation and evaluation will be a shared responsibility among all departments identified as lead departments in the mitigation action plan, including CCUSD. The Public Works and Fire Departments of the City will continue to work closely with the Los Angeles County Disaster Management Area A Coordinator to ensure consistency with all relevant plans.

Similarly, the CCUSD Business Services Department is responsible for overseeing the Plan's implementation and maintenance through CCUSD's existing programs. The Assistant Superintendent, or designated appointee, will coordinate with the CCUSD Planning Team to facilitate MJHMP implementation and will be responsible for coordinating with the City's Senior Management Analyst for participation and coordination of maintenance meetings to ensure all information is coordinated.

The MJHMP can also build upon related planning efforts and mitigation programs that are already occurring within the City and CCUSD. This will also facilitate applying for funding opportunities as they become available. Progress on implementing mitigation actions through other City/CCUSD planning programs and mechanisms should be monitored and integrated into future updates.

By adopting a resolution to approve this MJHMP, the City and CCUSD agree to reference and incorporate the document into planning documents, programs, decisions, processes, and regulations. The MJHMP will be reviewed and considered by internal City departments, as applicable plans or programs are created or updated in the future. Upon creating or updating new plans, programs or policies, City staff will review this MJHMP and consider the following:

- What hazard and/or vulnerability information should be considered and/or integrated into this plan?
- Are there opportunities for this plan to support and/or implement mitigation actions?
- What mitigation actions can and should be integrated into this plan?
- Are there other community mechanisms that mitigation can be integrated?
- Is there information from this plan that can be integrated into the next MJHMP update?

Some of the ways the City and CCUSD will integrate information from this MJHMP into planning mechanisms are described below.

Planning and zoning law require California cities to adopt a comprehensive, long-term general plan for the physical development of the City. General plans are required to address natural hazards that could impact the jurisdiction and prepare for the impact of natural hazards. The City's General Plan identifies land use patterns, future development, and growth within the planning area. The City is currently in the process of a comprehensive General Plan update for all elements. Through the General Plan Safety Element update, updated policy considerations for natural hazards will be incorporated. The MJHMP update process has allowed the City to review the policies contained in the General Plan Safety Element and identified mitigation actions that will further implement these policies. The City views the General Plan and MJHMP as complimentary planning documents that work together to achieve the ultimate goal of the reduction of risk exposure to the citizens of the City. Once the MJHMP is formally adopted by FEMA, the City will update the Safety Element to incorporate the MJHMP and vulnerability assessment by reference to comply with California Assembly Bill 2140. As CCUSD operates exclusively within the jurisdictional boundaries of Culver City, any future CCUSD development will be consistent with General Plan policies established by the City.

The City's Capital Improvement Program (CIP) identifies capital projects and major equipment purchases for all City departments. The CIP links both the annual general plan and annual budget. Identified CIP projects were integrated into the MJHMP mitigation actions where appropriate, for projects with a nexus to resilience or natural hazards. In addition, as part of the annual review and update of the CIP, mitigation actions identified will be reviewed and integrated. The City Building and Safety Program is specifically interested in integrating Mitigation Action #51 into the City CIP, to procure grant funding so private property owners can conduct seismic retrofits.

Similarly, CCUSD maintains the Facility Management Plan as a comprehensive, long-term program for facilities and infrastructure capital improvements. Through the MJHMP update process, updated considerations for natural hazard and emergency planning have been integrated into the mitigation actions where appropriate.

In addition, CCUSD maintains several security and emergency management plans in coordination with Culver City Police and Fire Departments. Some documents, such as district-wide, school-specific Comprehensive School Safety Plans, are publicly accessible and referenced as a hazard mitigation capability in [Section 5.0](#). These safety plans are reviewed and audited by CCUSD annually, and mitigation measures from the MJHMP may be incorporated by reference. This MJHMP update was prepared to be consistent with standard procedures established in these safety plans.

The City and CCUSD are both jurisdictional partners on several dam Emergency Action Plans (EAP) where inundation zones would affect the planning area. EAPs include Greystone Reservoir, Silver Lake, Lower Franklin, Mulholland and Stone Canyon. Inundation mapping prepared in accordance with the Division of Safety of Dams (DSOD) standards was incorporated into the

Dam/Reservoir Failure hazard profile. This inundation mapping effort identified CCUSD public school facilities as critical, in the case of dam failure. Any significant updates to the EAPs will result in a review of the MJHMP hazard profiles (including exhibits), risk assessment, and mitigation actions. Assisting dam owners with safety is a top priority for the City, and integration of the EAPs into the hazard mitigation planning process reflects this priority.

This MJHMP update will be added, or incorporated by reference, into any and all City and CCUSD emergency plans as updates occur. The hazard profiles, risk assessment and mitigation actions will be reviewed during updates to these plans. Further, mitigation actions not currently provided in the MJHMP will be identified for consideration as part of the HMP update.

Other opportunities for integration of this MJHMP include education programs and continued coordination between the City and the identified external partners. The City and CCUSD maintain a website and utilize social media to provide updated information to residents and stakeholders. In the future, the City and CCUSD will continue provide in-person educational events and activities to further inform the community regarding natural hazard risk and mitigation.

6.5 2017 MJHMP PAST INTEGRATION EFFORTS

Both the City and CCUSD integrated the previous 2017 MJHMP into existing programs and planning mechanisms, as outlined below. Several successful integrations of the 2017 MJHMP are outlined in [Table 5-2](#), as previous mitigation actions marked “complete”. For example, the City successfully conducted a City-wide structural assessment to identify soft-story and masonry buildings constructed prior to 1976. Now the City has a comprehensive database of development in need of seismic retrofits, and anticipates using this MJHMP update to obtain grant funding to assist with retrofit costs.

The City also initiated a General Plan Update in 2019, and integrated data, natural hazard mapping, and key mitigation measures into the updated Safety Element. In addition, the City utilized the previous 2017 MJHMP to obtain Hazard Mitigation Grant Program (HMGP) funding to support a Stormwater Master Plan Update and a Mitigation Action Plan (focused on recommendations for drought, wildfire, and flood mitigation, included as [Appendix C](#)). These deliverables integrated the 2017 MJHMP by reference, and expanded capabilities by identifying specific capital improvements required to reduce risk/vulnerability associated with drought, wildfire, and flood. The City intends to use this MJHMP update to secure funding to construct these recommended capital improvements.

Limited CCUSD integration into existing programs and planning mechanisms occurred during the active period of the 2017 MJHMP. Staffing turnover and capacity limitations prevented full integration of the MJHMP into other CCUSD programs and mechanisms. This was further compounded by the staffing and capacity challenges associated with the COVID-19 pandemic, where focus shifted from hazard mitigation to active emergency response over the active period of the 2017 MJHMP.

6.6 CONTINUED PUBLIC INVOLVEMENT

The City and CCUSD is dedicated to involving the public in review and updates to the MJHMP throughout the 5-year planning period. The public will continue to be informed of the MJHMP actions through regular updates to the City and CCUSD websites, including socially vulnerable populations.

Additionally, continued public involvement will be achieved through the promotion of emergency preparedness, trainings, interagency coordinated outreach efforts, public disaster fairs, drills and other hazard awareness campaigns as included in Section 5.0 as Mitigation Actions #1, #13, #15, #20, #38, #49, #71 and #81. These mitigation actions include outreach and communication mechanisms designed with the “whole community” approach, ensuring that socially vulnerable populations will receive messaging. The City and CCUSD will inform participants of the MJHMP Planning Team of any updates at trainings and hazard preparedness events during the 5-year planning period. The adopted MJHMP will remain permanently available for review on the City and CCUSD’s website, with contact information for interested parties to direct comments and concerns. All public feedback will be reviewed and considered for incorporation (if deemed appropriate) into the next MJHMP update.

6.7 POINT OF CONTACT

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APPENDIX A

CCUSD / City of Culver City Adoption Resolutions

CCUSD / City of Culver City Adoption Resolutions Placeholder

APPENDIX B

MJHMP Planning Team Documentation

APPENDIX B .1

MJHMP Planning Team Meetings

B.1 - 1

Kick-Off Meeting Documentation

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CULVER CITY & CCUSD MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

PROJECT MANAGEMENT TEAM KICK-OFF MEETING

March 8, 2023, 10:00 AM

Via WebEx

Meeting Minutes

ATTENDEES

City of Culver City

Joe Susca, Senior Management Analyst & Project Manager

Culver City Unified School District

Robert Quinn, Assistant Superintendent

Michael Baker International

Noelle Steele, Project Manager

Michael Yaffe, Senior Resiliency Planner

Casey Marchese, Resiliency Planner

1. Introduction and Roles/Responsibilities

- Primary contacts & communication
 - Joe Susca serving as MJHMP Project Manager & Point of Contact for City
 - Robert Quinn to identify Point of Contact for CCUSD
 - Noelle Steele serving as Project Manager & Point of Contact for Baker
- Planning Process documentation
 - Baker will document the planning process, including any team meeting minutes, PPT presentations, attendee lists and pictures to append to the plan.
 - *Question from Joe Susca (Senior Management Analyst, Culver City) – Should I copy you on all the emails between the planning team and me?*
 - *Answer from Noelle Steele (Project Manager, Michael Baker) – Yes, will help with the documentation and coordination throughout the HMP process.*
 - **Action Item:** Noelle to be copied on any emails pertaining to the HMP

2. Planning Team Organization

- **Participants (names, titles, agencies, email, telephone numbers)**
 - FEMA Policy guidance now includes requirements for businesses, academia, and other non-profit organizations to be invited to the planning process.
 - See attached draft for recommendations of potential stakeholders
 - Internal Suggestions:

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- Previously participated: City Attorney, Community Development, Public Works, Finance, Fire, Information Technology, Parks, Recreation & Community Services, Police, Transportation, CCUSD Business Services
 - External Suggestions:
 - Previously participated: American Red Cross, City of West Hollywood, City of Santa Monica
 - Recommended additions:
 - Representative from City of Los Angeles or City of Los Angeles Emergency Service Provider
 - Representative from the County of Los Angeles or County of Los Angeles Emergency Service Provider
 - Representative from Beverly Hills (Austin)
 - Major employers, such as Sony Pictures Entertainment
 - Health care organizations, such as Southern County Hospital at Culver City
 - Academia, such as West Los Angeles College;
 - Electric utilities, LADWP and/or SCE
 - Natural gas utilities, SoCalGas
 - Water/Sewer, Golden State Water Company/West Basin Municipal Water District
 - Nonprofit service organizations, such as Upward Bound House, St. Joseph Center, Boys and Girls Club, Culver-Palms YMCA
 - *Question from Noelle Steele (Project Manager, Michael Baker) – Are there any other recommendations for stakeholders or organizations that should be invited to participate?*
 - *Answer from Robert Quinn (Assistant Superintendent, CCUSD) – Amazon is another prominent employer in the community.*
 - *Question from Joe Susca (Senior Management Analyst, Culver City) – We can reach out to the previous stakeholders since we have points of contact and relationships with them. How should we reach out to the additional recommended stakeholders?*
 - *Answer from Noelle Steele (Project Manager, Michael Baker) – We can help draft information and outreach content to use as part of the external stakeholder invitations, typically sending an email is effective.*
 - *Answer from Joe Susca (Senior Management Analyst, Culver City) – We will take you up on that offer.*
 - **Action Item:** Noelle & Joe to coordinate and finalize matrix of stakeholders
 - **Action Item:** Noelle to prepare stakeholder invitation email and information for outreach
- **Hazard Mitigation Planning Committee Meetings**
 - Intro meeting, stakeholder meetings (4), conclusion meeting

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- Recommend intro meeting in early April, stakeholder collaboration in June, conclusion meeting in August
 - *Question from Noelle Steele (Project Manager, Michael Baker) – Typically we like to host meetings at times that are convenient for everyone, is there a particular day of the week that works best that we can build the schedule around?*
 - *Question from Joe Susca (Senior Management Analyst, Culver City) – For external stakeholders do we need to use a poll to find out what time works for them?*
 - *Answer from Noelle Steele (Project Manager, Michael Baker) – What we usually do is set a standard meeting time during normal business hours and provide a virtual link so most participants are able to attend. For smaller meetings we will coordinate closer with stakeholders to make sure they can attend.*
 - *Question from Joe Susca (Senior Management Analyst, Culver City) – What tool do you use to determine availability?*
 - *Answer from Noelle Steele (Project Manager, Michael Baker) – We typically don't need a tool but we can use a tool like Mentimeter or Doodle.*
 - *Answer from Robert Quinn (Assistant Superintendent, CCUSD) – CCUSD meets on the 2nd and 4th Tuesdays of the month, so we should avoid those. Monday or Thursday is best for me.*
 - *Answer from Noelle Steele (Project Manager, Michael Baker) – We will set up a poll for external stakeholders to let us know when works for them.*
 - *Question from Michael Yaffe (Senior Resiliency Planner, Michael Baker) – We can invite CalOES and FEMA to attend meetings. That can either include our larger stakeholder meetings or smaller meetings with just the project management team. It can be helpful to have them involved in the process since they will be reviewing and approving the plan. Do you want us to extend that invitation if they're available?*
 - *Answer from Joe Susca (Senior Management Analyst, Culver City) – I will let you take the lead on that since you work with them often, but we would want to see if they are willing to join a meeting even if it's just the introduction meeting.*
 - **Action Item:** Noelle & Joe to coordinate meeting schedule
 - **Action Item:** Baker to set up a poll for stakeholders' availability
 - **Action Item:** Baker to help facilitate Cal OES and FEMA meeting invitation

3. Work Program and Schedule

- **Resource Identification and Data Needs**
 - See attached list
 - *Question from Joe Susca (Senior Management Analyst, Culver City) – Can you be more specific about the types of documents/resources needed for your review so*

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I N T E R N A T I O N A L

I can ask about updates? Most of these plans have been amended so we will want to make sure you have current versions.

- *Answer from Noelle Steele (Project Manager, Michael Baker) – Primarily we want to review planning documents that relate to operations and anything that identifies capabilities of the City in terms of resilience.*
- *Answer from Joe Susca (Senior Management Analyst, Culver City) – We are expecting City Council to adopt the General Plan update this summer. Many of the General Plan elements are in a state of flux until that does get adopted so I will ask about the status and provide updates.*
- *Question from Noelle Steele (Project Manager, Michael Baker) – If you have existing conditions reports from consultants on those General Plan elements would you be able to provide those?*
 - *Answer from Joe Susca (Senior Management Analyst, Culver City) – Yes, I will ask for that too.*
 - *Answer from Michael Yaffe (Senior Resiliency Planner, Michael Baker) – FEMA recently updated their guidance for the review of capabilities and capacities so if we are getting in the weeds with that it's to meet the FEMA requirements.*
- *Question from Noelle Steele (Project Manager, Michael Baker) – The Dam EAPs are now required to be reviewed as part of an HMP, does your emergency coordinator have those available? Also, the 2023 GIS parcel data will need to be utilized for the plan.*
 - *Answer from Joe Susca (Senior Management Analyst, Culver City) – We do have those EAPs so I can provide that.*
- *Question from Joe Susca (Senior Management Analyst, Culver City) – Who do I reach out to for parcel data?*
 - *Answer from Noelle Steele (Project Manager, Michael Baker) – Usually we would work with a GIS specialist from the City to provide updated parcel data for use in the vulnerability analysis to determine assets and parcels in hazard zones. This also captures changes in critical facilities and anything that has been built since the last HMP update.*
 - *Answer from Robert Quinn (Assistant Superintendent, CCUSD) – The school district has not built anything new so our critical facilities will all be the same.*
- Michael Baker eFTP link: <https://eftp.mbakerial.com/>
 - **Action Item:** Noelle and Joe to coordinate delivery of data needs (General Plan updates, Dam EAPs, GIS/parcel data)
 - **Action Item:** Identify confidential/redacted info
- **Community Engagement Strategy**
 - Online community survey & web content development
 - Use communications/PIO to distribute
 - Community Workshop/Pop-Up Event Ideas
 - Content, structure, location
 - Dates

Michael Baker

I N T E R N A T I O N A L

- *Question from Noelle Steele (Project Manager, Michael Baker) – Is there a preferred structure, method or timeframe for the community outreach? Also, if there is an upcoming event, we could utilize that to do the community outreach event for the HMP.*
 - *Answer from Joe Susca (Senior Management Analyst, Culver City) – Fiesta La Ballona is this summer, it's very well attended so I can give you the information if you want to request a booth. Also, the City will have a few booths if you want to set up some materials.*
- **Action Item:** Noelle and Joe to coordinate community outreach event (Booth at Fiesta La Ballona)
- **Critical Facilities List & Organization**
 - Updates to previous critical facilities list
 - *Robert Quinn (Assistant Superintendent, CCUSD) – Looking at the previous critical facilities list, number 13, the Natatorium was torn down about 5 or 6 years ago so that can be removed.*
 - *Michael Yaffe (Senior Resiliency Planner, Michael Baker) – One of the goals and incentives is opening up grant funding in the future, so identifying any facilities that are critical to the continuity of operations will be helpful if the City intends to do any improvements in the future.*
 - *Noelle Steele (Project Manager, Michael Baker) – We would also want to work with stakeholders to identify critical facilities. This would include utilities to see if there are improvements that are mutually beneficial to the City and the external agencies in terms of resilience.*
 - *Question from Joe Susca (Senior Management Analyst, Culver City) – Replacement values will need to be updated, is that something that you update, where does that information come from?*
 - *Answer from Noelle Steele (Project Manager, Michael Baker) – We often use insurance information from the City, but it is possible to use tools like HAZUS for estimates.*
 - *Answer from Michael Yaffe (Senior Resiliency Planner, Michael Baker) – FEMA defines replacement cost as including more than just the face value or market value of the facility so we would want to keep that in mind when determining the replacement value.*
 - **Action Item:** Noelle to draft critical facilities list prior to Meeting #1 for review & comment
- **Previously Included Hazards for Consideration**
 - *Climate Change (in all hazard profiles)*
 - *Drought*
 - *Seismic Hazards (fault rupture, ground shaking, liquefaction, Landslide and mudflow)*
 - *Flood*
 - *Severe Weather (Santa Ana winds, tornadoes, thunderstorms)*
 - *Wildfire*

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- **Opportunities to Enhance**

- *Dam/Reservoir Failure*
- *Severe Weather (heavy rains, power shut offs)*
- *Human-caused hazards*
 - *Pandemic*
 - *Hazardous materials release*
 - *Terrorism/Active-Shooter*
 - *Civil unrest*
- *Question from Noelle Steele (Project Manager, Michael Baker) – Are there any recommended hazards we should include in the HMP update?*
 - *Answer from Joe Susca (Senior Management Analyst, Culver City) – I would like to include all of them to whatever degree you recommend. At the very minimum we should include pandemic but all the hazards you recommended can be included. I understand that non-natural hazards are not covered by FEMA grants.*
 - *Answer from Noelle Steele (Project Manager, Michael Baker) – Great, we have been including these for other clients, and it does provide a comprehensive analysis of hazards. While FEMA may not fund these actions, having them in the plan makes it easier to apply for funding under different grant programs. We will provide an updated list of profiled hazards.*
- **Action Item:** Baker to update hazard list will all recommended hazards

- **Work Schedule**

- Grant term ends January 2024
 - **Action Item:** Noelle to provide detailed project schedule by March 15

4. Additional Discussion/Questions

- *Question from Joe Susca (Senior Management Analyst, Culver City) – Are there any other updates from the April FEMA guidance update?*
 - *Answer from Noelle Steele (Project Manager, Michael Baker) – Most of the changes are things we are already doing in terms of inviting a range of stakeholders and community outreach.*
 - *Answer from Michael Yaffe (Senior Resiliency Planner, Michael Baker) – The policy changes are not too substantial and are sort of black and white; however, different FEMA regions may interpret the policy changes differently. It makes sense to include FEMA in any meeting they are willing to attend so they may help expedite the review and inform us of things they expect to see in the plan and common missteps other HMPs may be making.*

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5. Next Steps & Action Items

Coordinated Action Items:

- **Action Item:** Noelle & Joe to coordinate and finalize matrix of stakeholders
- **Action Item:** Noelle & Joe to coordinate meeting schedule
- **Action Item:** Noelle and Joe to coordinate delivery of data needs (General Plan updates, Dam EAPs, GIS/parcel data)
- **Action Item:** Noelle and Joe to coordinate community outreach event (Booth at Fiesta La Ballona)

Baker:

- **Action Item:** Noelle to prepare stakeholder invitation email and information for outreach
- **Action Item:** Baker to set up a poll for stakeholders' availability
- **Action Item:** Baker to help facilitate Cal OES and FEMA meeting invitation
- **Action Item:** Noelle to draft critical facilities list prior to Meeting #1 for review & comment
- **Action Item:** Baker to update hazard list will all recommended hazards
- **Action Item:** Noelle to provide detailed project schedule by March 15

Culver City:

- **Action Item:** Noelle to be copied on any emails pertaining to the HMP
- **Action Item:** Identify confidential/redacted info when coordinating data needs

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Existing Data Resources

- Culver City
 - Hazard Mitigation Plan
 - Emergency Operations Plan
 - General Plan
 - Capital Improvement Plan
 - Bicycle and Pedestrian Master Plan
 - Parks and Recreation Master Plan
 - Water Conservation Plan
 - Urban Forest Master Plan
 - Economic Development Implementation Plan
 - Annual Catch Basin Cleaning Program
 - Mutual Aid Agreements
 - Memorandum of Understanding (MOU) with Smart & Final
 - Informal Mutual Aid Agreement with Sony Pictures Studios
 - Mitigation Action Plan – Prepared by Blue Ocean
- CCUSD
 - Culver City Unified School District Facilities Master Plan
 - Hazard Mitigation Plan
 - The Field Act
 - School Safety Plan

Additional Data Needs

- Dam EAPs
- Any drafts/updates associated with the ongoing GPU
- 2023 Parcel Data
- Any additional updates/changes the reports above?

Culver City & Culver City Unified School District
 Multi-Jurisdictional Hazard Mitigation Plan
 Kickoff Meeting
 March 8, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Initials
Joe Susca	Sr. Management Analyst	Culver City PW	9770 Culver Blvd. Culver City, CA 90232	Joe.susca@culvercity.org	(310) 253-5636	JS
Robert Quinn	Assistant Superintendent	CCUSD				RQ
Noelle Steele	Project Manager	Michael Baker International	5 Hutton Centre Drive, Suite 500 Santa Ana, CA 92707	Noelle.Steele@mbakerintl.com	(949) 855-3683	NS
Michael Yaffe	Resilience Lead	Michael Baker International	5 Hutton Centre Drive, Suite 500 Santa Ana, CA 92707	Michael.yaffe@mbakerintl.com	(949) 472-3483	MY
Casey Marchese	Project Planner	Michael Baker International	5 Hutton Centre Drive, Suite 500 Santa Ana, CA 92707	Casey.Marchese@mbakerintl.com	(949) 472-3494	CM

Marchese, Casey

From: Susca, Joe <joe.susca@culvercity.org>
Sent: Tuesday, March 21, 2023 11:18 AM
To: Susca, Joe
Cc: Steele, Noelle; robertquinn
Subject: EXTERNAL: Culver City Commences Update to their Hazard Mitigation Plan

Follow Up Flag: Follow up
Flag Status: Completed

The City of Culver City (City) and the Culver City Unified School District (CCUSD) have initiated a 5-year update to their [2017 Multi-Jurisdictional Hazard Plan](#) (MJHMP). The purpose of the MJHMP is to identify and then prepare measures that mitigate the impacts of natural disasters and other hazards, and enhance the overall resilience of the community. Mitigation actions are designed to reduce the level of injury, property damage, and disruption that might otherwise result from such disasters.

As part of the planning process, we are assembling a team of stakeholder partners to participate on the MJHMP Planning Committee and that's where you fit in. This Planning Committee will be the core group responsible for providing plan input/updates, guiding the planning process, and agreeing upon the final contents of the plan. Meetings will be virtual and be two hours each, via Microsoft Teams or similar platform. We understand the importance of your time and the meetings will be structured to maximize results and minimize "homework" outside of the meeting block.

There will be four planning team meetings, tentatively scheduled for the following days:

- Thursday, April 6, 2023 (2 hours)
- Thursday, May 25, 2023 (2 hours)
- Thursday, June 15, 2023 (2 hours)
- Thursday, July 13, 2023 (2 hours)

Please accept this invitation to participate and confirm your preferred time to meet on the days above by completing the following Mentimeter Poll: <https://www.menti.com/aldq7g5w6wji>

We appreciate your time and commitment to this important process. Your involvement will ensure a comprehensive and robust plan update that meets Cal OES/FEMA requirements.

Thank you,

Joe Susca | *Senior Management Analyst* – Public Works Department
City of Culver City | 310.253.5636 | joe.susca@culvercity.org
City Hall: 9770 Culver Boulevard in Culver City, CA 90232
(I'm in the office on Mondays and Tuesdays and work from home the remainder of the week)

The City of Culver City keeps a copy of all E-mails sent and received for a minimum of 2 years. All retained E-mails will be treated as a Public Record per the California Public Records Act, and may be subject to disclosure pursuant to the terms, and subject to the exemptions, of that Act.

B.1 - 2

Planning Team Meeting #1 Documentation



CULVER CITY & CCUSD MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN



PLANNING TEAM MEETING #1
Monday, April 6th, 2023
10:00 AM – 12:00 PM via Microsoft Teams

AGENDA

Presentation/Discussion:

- **Introductions**

- **Project Background**
 - 2017 MJHMP

- **Project Goals, Objectives & Expectations**
 - HMP Goals
 - Planning Team Meetings
 - Meeting #1: April 6, 2023
 - Introductions, Plan Process/Development, Goals, Hazard Prioritization Exercise
 - Meeting #2: May 25, 2023
 - Critical Facilities/Community Lifeline Updates, Hazard Prioritization Findings, Introduction to Vulnerability
 - Meeting #3: June 15, 2023
 - Vulnerability Assessment Findings, Mitigation Action Development
 - Meeting #4: July 13, 2023
 - Mitigation Action Development and Finalization

- **Purpose and Requirements of the HMP**
 - Focus on Natural Hazards, “Human-Caused Hazards” Optional Additions
 - Importance of Planning Process
 - Approval Process, Submittal goes to Cal OES first, then FEMA
 - Recent Policy Update

- **Hazard Identification and Prioritization**
 - FEMA suggested hazards presented; highlighted recommended hazards for profile; identified potential hazards that the team may want to consider/discuss further

- **Hazard Prioritization Activity**

- **Data Needs & Capabilities**

- **Critical Facilities Discussion (time permitting)**

Next Steps/Action Items:

Marchese, Casey

Subject: Culver City & CCUSD - Multi-Jurisdictional Hazard Mitigation Plan, Meeting #1
Location: Microsoft Teams Meeting

Start: Thu 4/6/2023 10:00 AM
End: Thu 4/6/2023 12:00 PM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Steele, Noelle

Required Attendees: Susca, Joe; Marchese, Casey; adam.ferguson@culvercity.org; Sims, Jason; Soghor, Lisa; Koutsouros, Tim; Diep, Hoa; Calvinisti, Hector; Barnes, Tevis; Vidra, Lisa; Evangelho, Troy; Singletary, Sean; Demitri, Yanni; Parra, Christine; Mike Korgan; Sean Kearney; steven.torrence@santamonica.gov; kristin_cavanaugh@spe.sony.com; Savanna.Fiehler@Redcross.org; mkustanovich; mjanmohamed; Jillian De Vela; sGWilliams@ceo.lacounty.gov; diane.forte@sce.com; sdiaz@semprautilities.com; Fredy.Ceja@ladwp.com; LindaCunningham@gswater.com; edwardc@westbasin.org; darrel+downtownculvercity.com@ccsend.com; samlevi@amazon.com; Jovel, Mario; MarieKathryna.Aragon@altacorp.com; Washington, Terrance@CalOES; Gymeka Williams

Optional Attendees: Yaffe, Michael; Diaz, Silvia A.; Cavanaugh, Kristin; Stokes, Brian; Blackburn, Rick B; Dahlum, Timothy

Looking forward to meeting with the group tomorrow. Please find the meeting agenda attached for reference. Thank you! – N

Hello,

You have been selected and notified by the City of Culver City and Culver City Unified School District (2017) as a member of the Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) Planning Committee. Michael Baker International is the City's consultant, charged with preparing the MJHMP update. This Planning Committee will be the core group responsible for providing MJHMP input/updates, guiding the planning process, and agreeing upon the final contents of the plan. A series of four meetings will be hosted for two hours each, via Microsoft Teams. We understand the importance of your time – meetings will be structured to maximize results and minimize “homework” outside of the meeting block.

The schedule for the four planning team meetings includes:

- **Thursday, April 6, 2023 (2 hours, 10AM – 12PM)**
- Thursday, May 25, 2023 (2 hours, 10AM – 12PM)
- Thursday, June 15, 2023 (2 hours, 10AM – 12PM)
- Thursday, July 13, 2023 (2 hours, 10AM – 12PM)

Agendas will be provided prior to each meeting via this email chain.

The 2017 MJHMP is linked here for your convenience:

<https://www.culvercity.org/files/assets/public/documents/community-development/multijurisdictionalhazardm.pdf>

We appreciate your time and commitment. Your involvement will ensure a comprehensive and robust plan update that meets Cal OES/FEMA requirements. Please reach out if you have any questions regarding the MJHMP or update process.

Thank you,
Noelle

Microsoft Teams meeting

Join on your computer, mobile app or room device

[Click here to join the meeting](#)

Meeting ID: 224 855 178 452

Passcode: TKpaWZ

[Download Teams](#) | [Join on the web](#)

Join with a video conferencing device

mbakerintl@m.webex.com

Video Conference ID: 111 213 543 7

[Alternate VTC instructions](#)

Or call in (audio only)

[+1 213-336-0348,740566005#](tel:+12133360348,740566005) United States, Los Angeles

Phone Conference ID: 740 566 005#

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CULVER CITY & CCUSD MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN



PLANNING TEAM MEETING #1

Monday, April 6th, 2023

10:00 AM – 12:00 PM via Microsoft Teams

MEETING MINUTES

Presentation/Discussion:

- **Introductions**

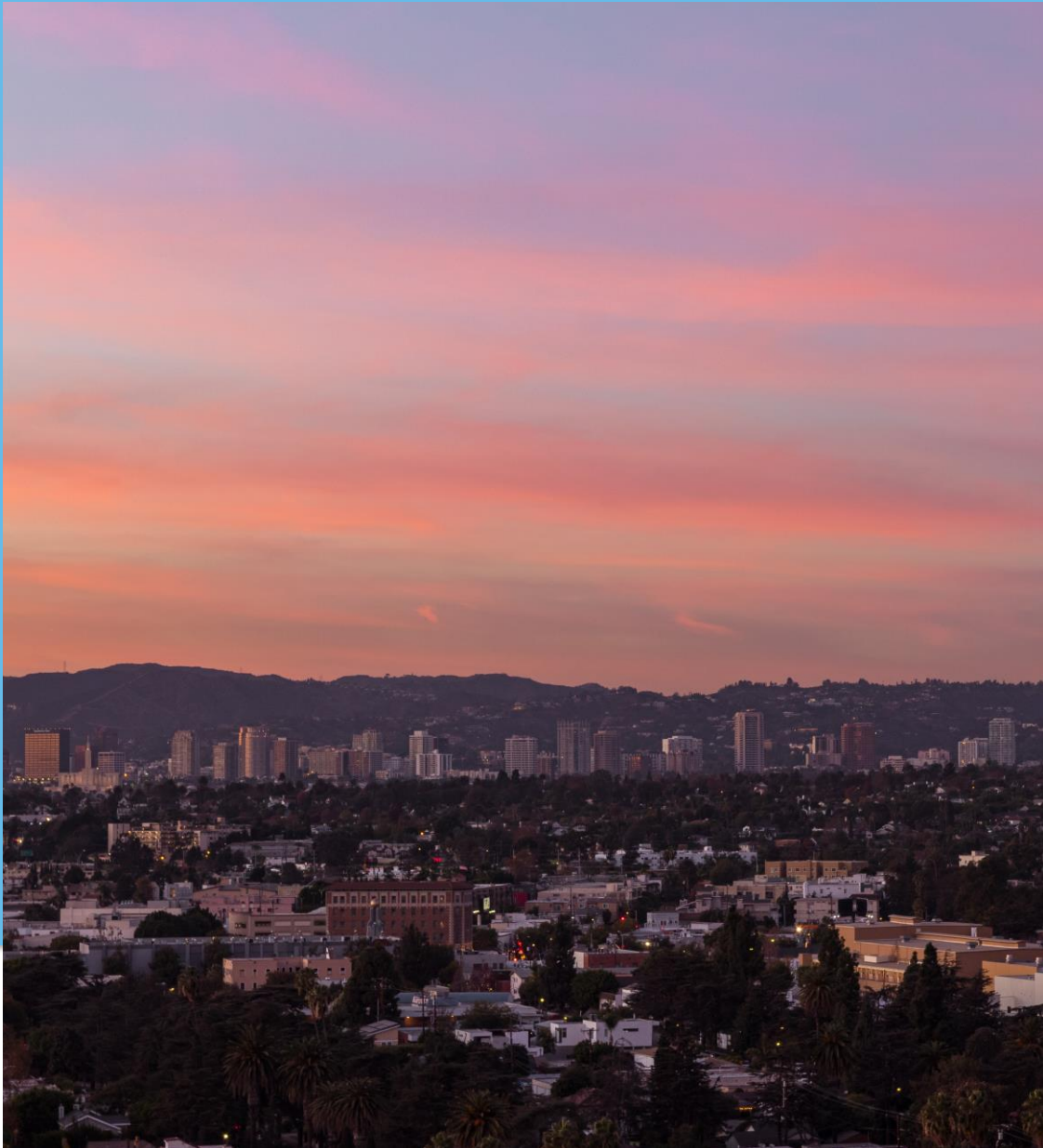
 - **Project Background**
 - 2017 MJHMP
 - Evacuation Route Mapping

 - **Project Goals, Objectives & Expectations**
 - HMP Goals
 - Planning Team Meetings
 - Meeting #1: April 6, 2023
 - Introductions, Plan Process/Development, Goals, Hazard Prioritization Exercise
 - Meeting #2: May 25, 2023
 - Critical Facilities/Community Lifeline Updates, Hazard Prioritization Findings, Introduction to Vulnerability
 - Meeting #3: June 15, 2023
 - Vulnerability Assessment Findings, Mitigation Action Development
 - Meeting #4: July 13, 2023
 - Mitigation Action Development and Finalization
 - *Question from Noelle Steele (Project Manager, Michael Baker) – Any Questions on hazard mitigation goals?*
 - *No Questions.*
-
- **Purpose and Requirements of the HMP**
 - Focus on Natural Hazards, “Human-Caused Hazards” Optional Additions
 - Importance of Planning Process
 - Approval Process, Submittal goes to Cal OES first, then FEMA
 - Recent Policy Update
 - *Question from Noelle Steele (Project Manager, Michael Baker) – Any questions on the plan preparation and adoption process so far?*
 - *Question from Joe Susca (Senior Management Analyst, Culver City) – Do we submit to Cal OES and FEMA at the same time that we bring this to City Council?*
 - *Answer from Noelle Steele (Project Manager, Michael Baker) – No, you would wait until you receive APA status before formally adopting the plan through City Council.*
 - *Question from Troy Evangelho (Advanced Planning Manager, Culver City) – Is there anything needed to integrate the HMP into the Safety Element?*

- *Answer from Noelle Steele (Project Manager, Michael Baker) – Typically that would be an increased effort from law enforcement on gathering information and preparing or anticipating those possibilities. Additionally, trainings, exercises and education can be effective mitigation.*

Action Items:

- **Action Item:** Stakeholders to provide information/resources and capabilities to Joe Susca and Noelle Steele by April 18th.



Multi-Jurisdictional Hazard Mitigation Plan Update

Stakeholder Meeting #1

Culver City and
Culver City Unified School District



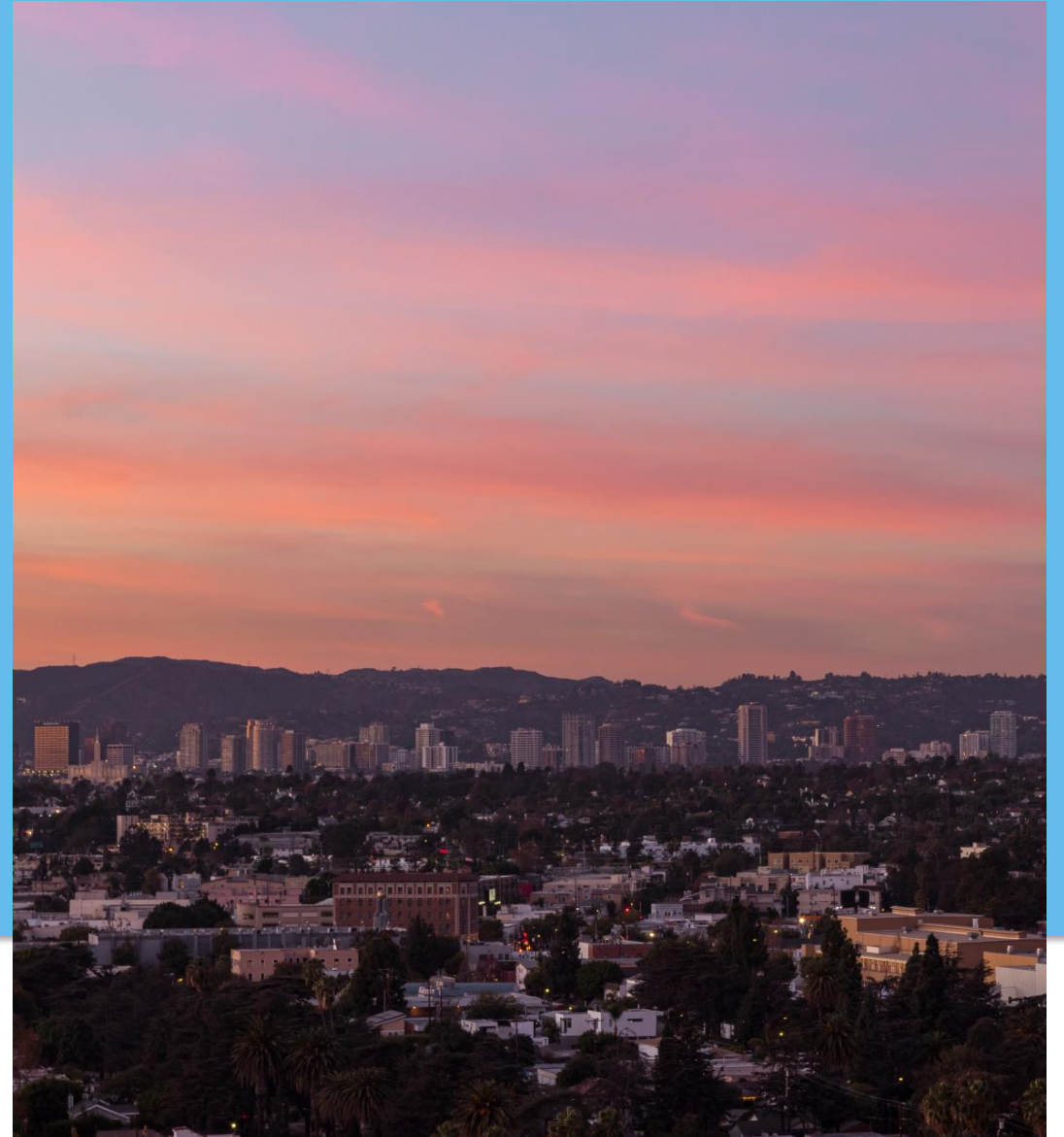
Michael Baker
INTERNATIONAL

Agenda

- Introductions
- Project Background
- Project goals, objectives & expectations
- Purpose and requirements of MJHMP
- Hazard identification and prioritization
- Data Needs & Capabilities
- Next steps
- Questions/additional discussion

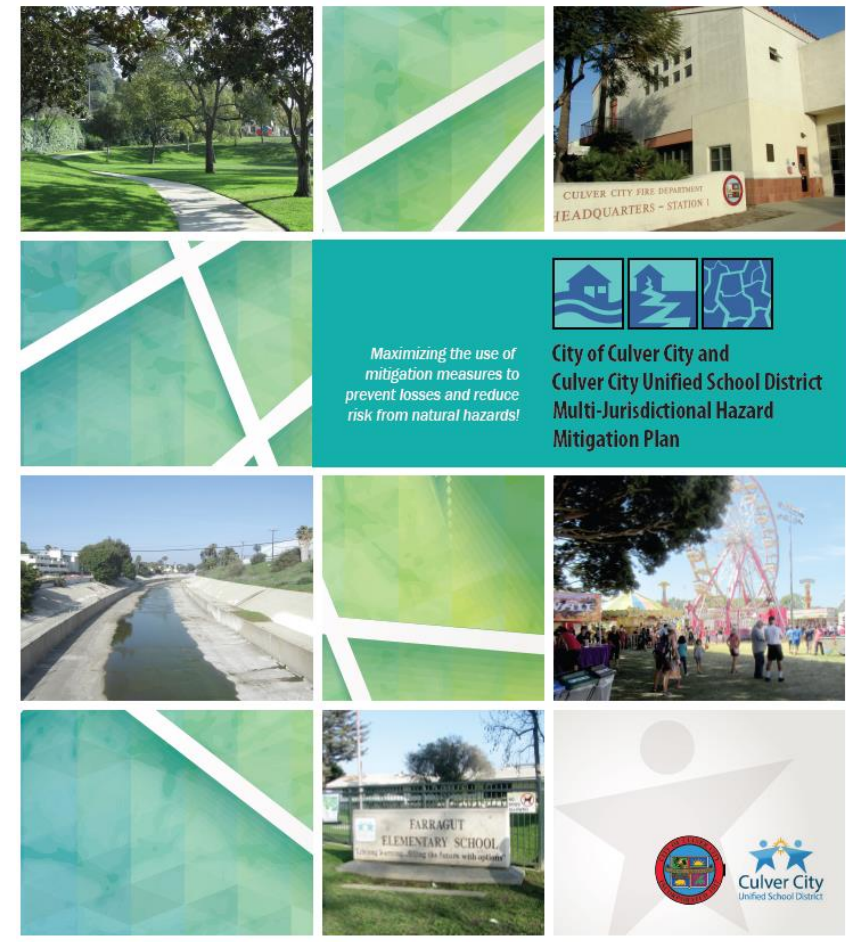


INTRODUCTION AND BACKGROUND

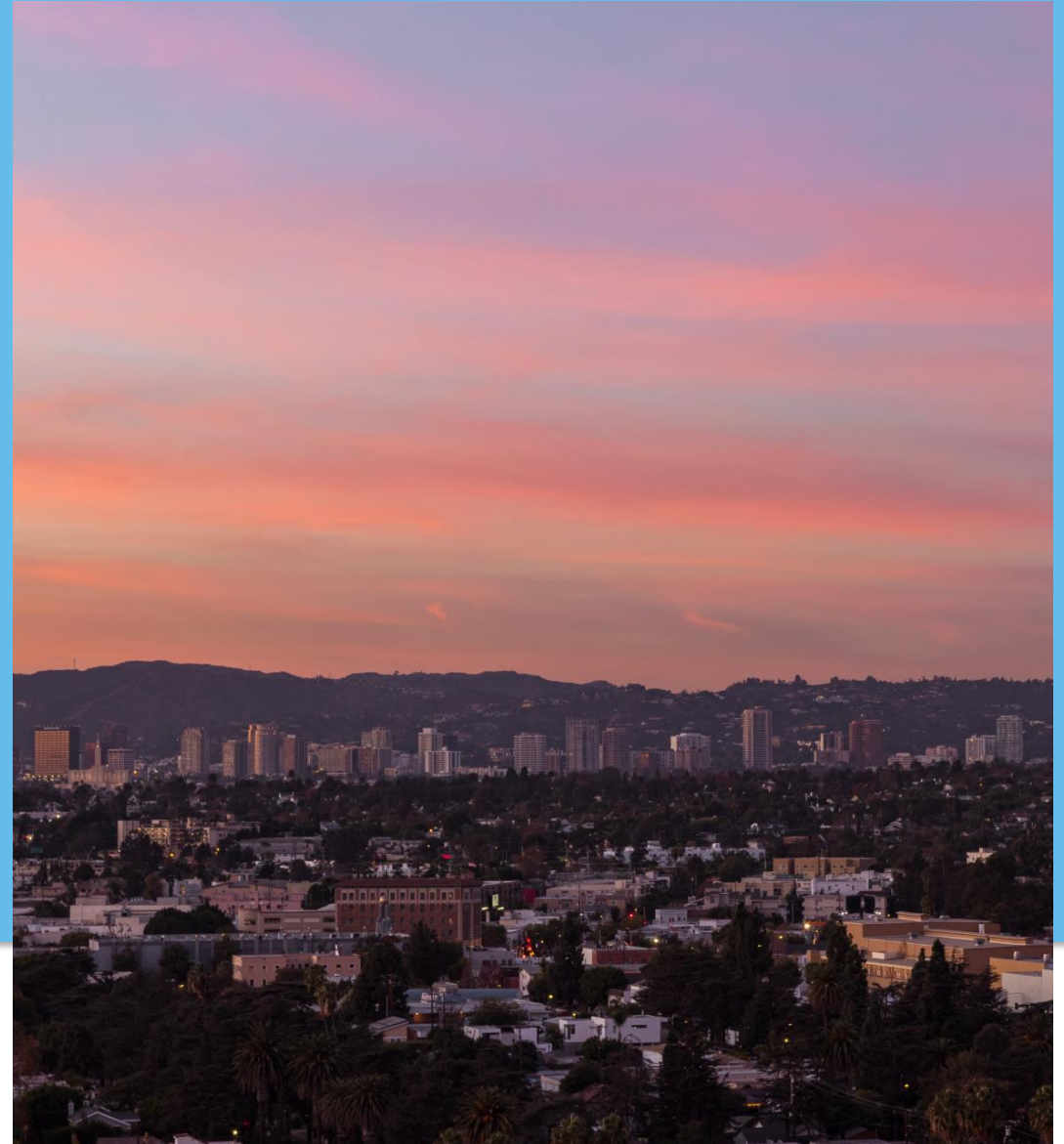


Background – 2017 Culver City/CCUSD MJHMP

- Prepared in 2016
- Approved May 21, 2017
 - Profiled 5 natural hazards
 - Identified 60 mitigation actions
- Expired May 22, 2022
- Current MJHMP Update process funded by the Hazard Mitigation Grant Program (HMGP)



PROJECT GOALS, OBJECTIVES AND EXPECTATIONS



Roles and Responsibilities

Our Job

- Facilitate the process
- Provide technical expertise
- Maintain schedule
- Do the heavy work
- Ensure FEMA-compliant plan

Your Job

- Participate
- Meet internal deadlines
- Provide agency-specific information/local insight
- Ensure plan is feasible and meets needs



Stakeholder Meeting Goals/Objectives

- Identify and address hazards specific to the Culver City
- Identify mitigation actions to reduce the severity/impact of the hazard
- Achieve certification by FEMA for hazard mitigation funding

Disaster Mitigation Act (DMA) of 2000 requires states and local governments prepare a multi-hazard mitigation plan as a precondition for receiving FEMA mitigation project grants.



HMP Planning Team Meetings

- Four Planning Team meetings:
 - Meeting #1: April 6, 2023
 - Meeting #2: May 25, 2023
 - Meeting #3: June 15, 2023
 - Meeting #4: July 13, 2023
- Anticipated review of draft plan – August



Culver City and CCUSD MJHMP Goals

- General guidelines that explain what the community wants to achieve with the HMP
 - What do we want to accomplish? Consider:
 - Unique community risks
 - Outreach desires and findings
 - Other community planning goals



MENTI INTRODUCTION

- Go to www.menti.com on your phone or desktop browser
- Enter the code at the top of the slide



Please enter the code

Submit

The code is found on the screen in front of you



Instructions

Go to
www.menti.com

Enter the code



Or use QR code

MENTI WORD CLOUD

- [Word cloud activity using key words/phrases for consideration and incorporation into the LHMP goals]

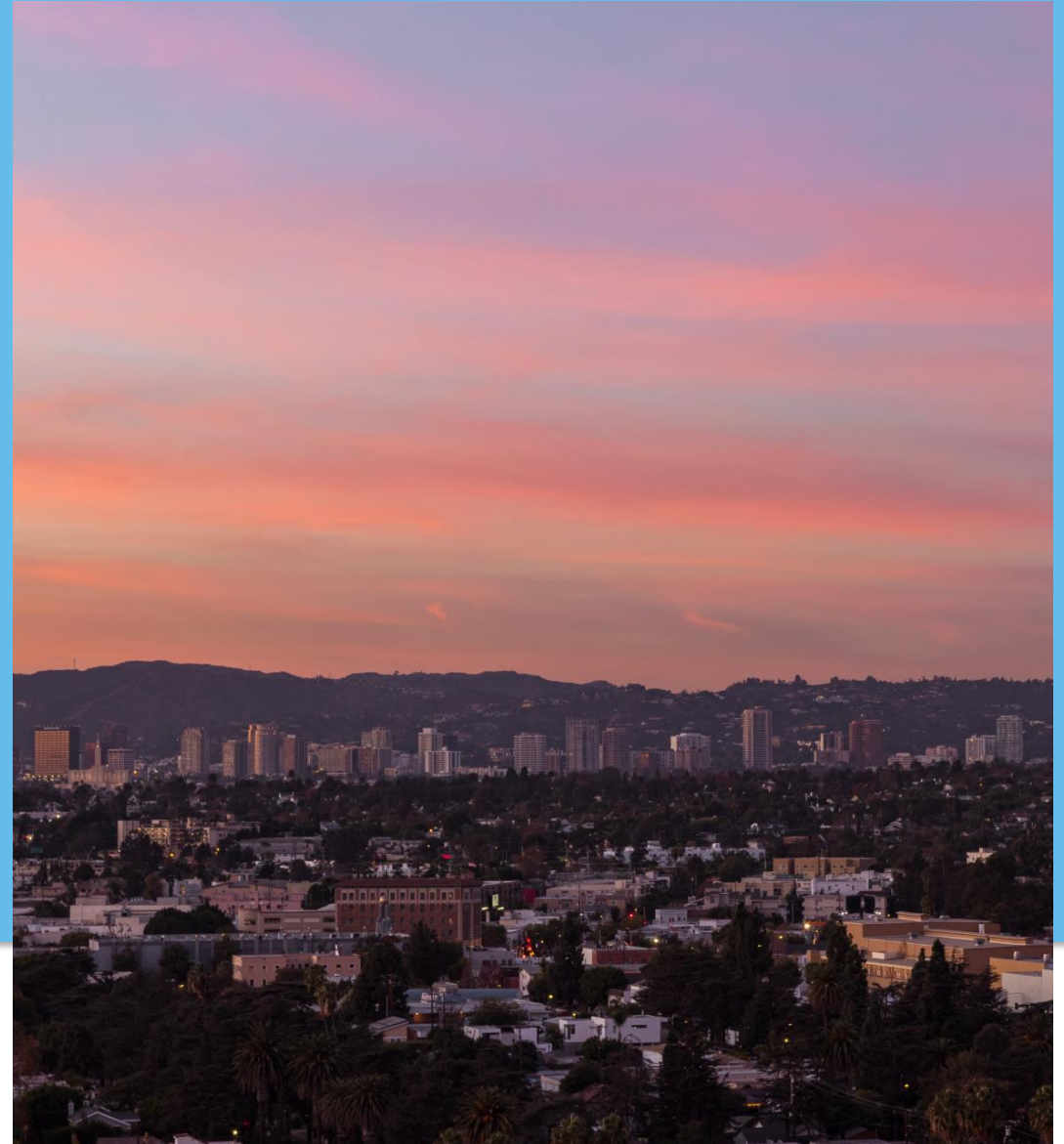


Culver City/CCUSD Previous MJHMP Goals

- Protect Life and Property
- Raise Public Awareness
- Balance Natural Systems
- Promote Partnerships and Implementation
- Strengthen Emergency Services



PURPOSE AND REQUIREMENTS OF THE HMP



What is Hazard Mitigation?

- Sustained actions taken to reduce or eliminate long-term risk to life and property from hazards

What is a Hazard Mitigation Plan?

- A plan based on a community's values and needs
- Results from a process-oriented approach (important)
- Focuses on mitigation strategies (making the future safer)

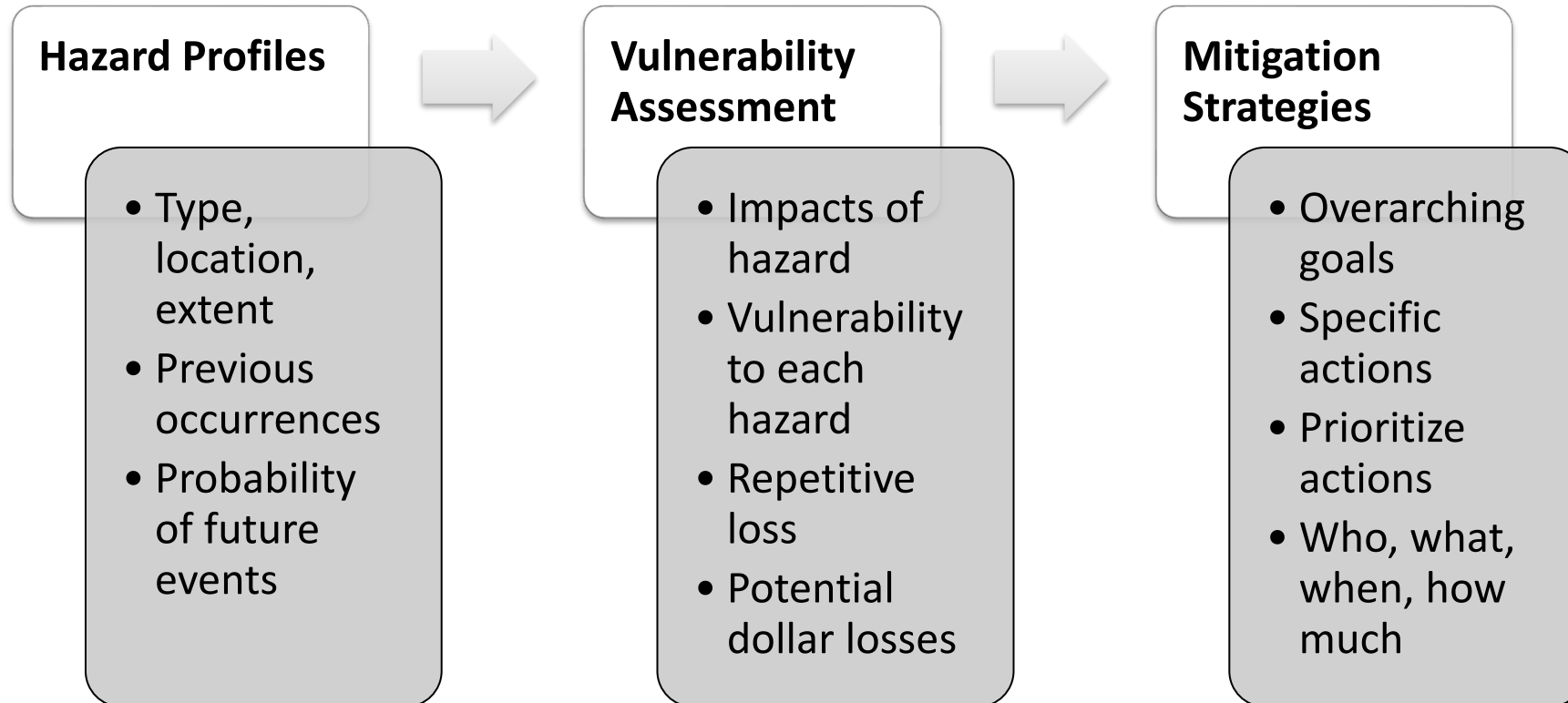


Plan Requirements

- Provide and **document** opportunities for stakeholder and public involvement
- Review and **incorporate** existing plans, studies, reports, and technical information
- **Document how** the plan was prepared and **who** was involved
- **Identify how** the plan will be monitored, evaluated, and updated within a five-year cycle
 - Provide for continued public participation in plan maintenance



HMP Development



Summarize and Document Risk Assessment



Mitigation Strategy

- Comprehensive range of mitigation actions and projects
 - Emphasize existing and new infrastructure
- Types of mitigation actions
 - Local plans and regulations
 - Structure and infrastructure projects
 - Natural systems protection
 - Education and awareness programs
- Action Plan
 - Incorporate into existing plans and policies
 - Identify who is responsible, funding mechanism, other resources, when completed and how purchased

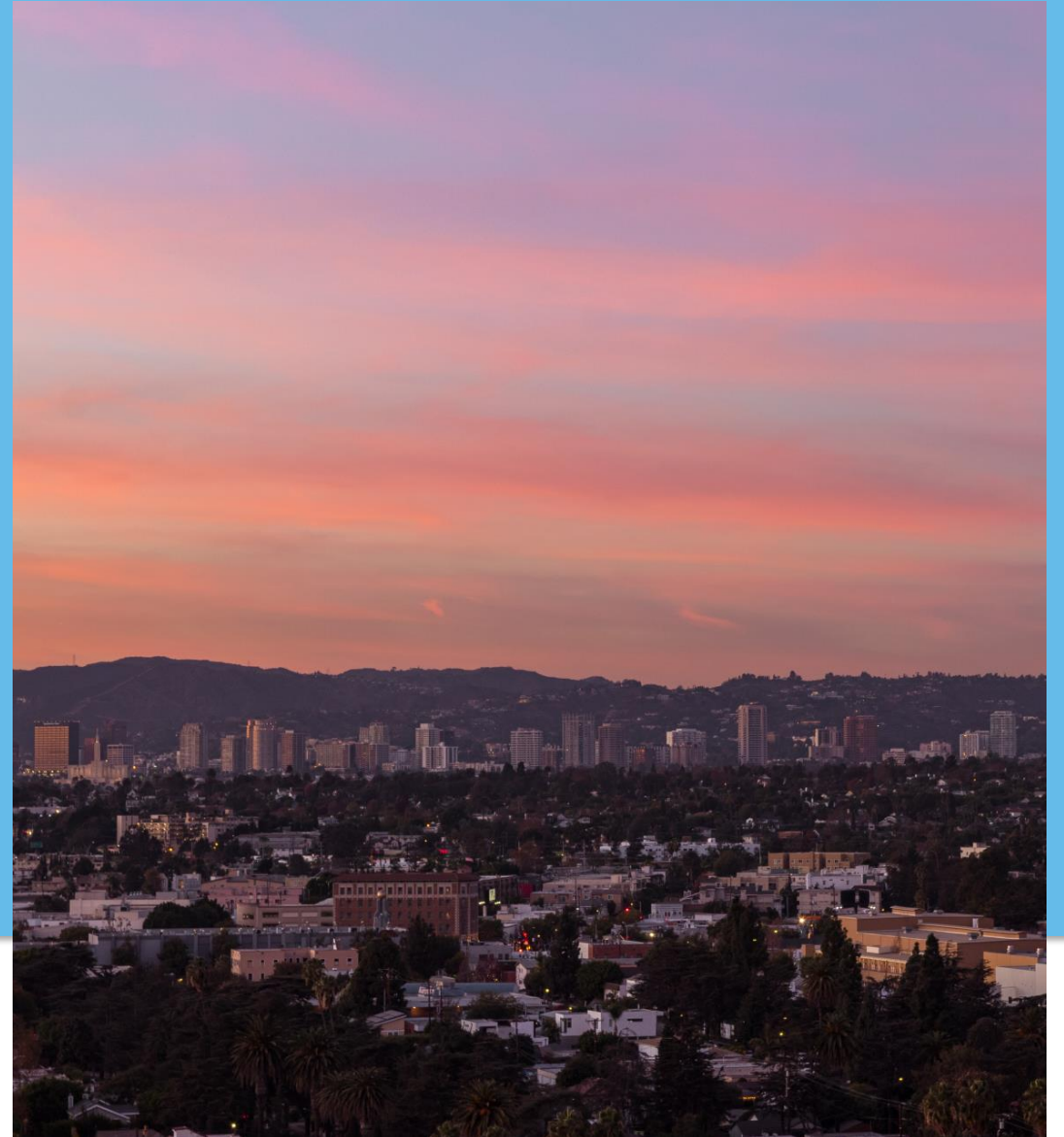


Plan Adoption

- Plan submitted to Cal OES/FEMA for Review
 - Receive “Approval Pending Adoption” status
- The City and CCUSD individually adopt the HMP
 - Must be adopted within one calendar year
 - Documentation of adoption (resolution) provided to FEMA
- FEMA issues approval letter



HAZARD IDENTIFICATION



FEMA-Suggested Hazards

Avalanche	Flood	Sea level rise
Climate change	Geological hazards	Seismic hazards
Coastal erosion	Hailstorm	Severe winter storm
Coastal storm	Hazardous materials	Tornado
Dam failure	Human-caused hazards	Tsunami
Disease/pest management	Hurricane	Volcano
Drought	Land subsidence	Wildfire
Earthquake fault rupture	Landslide and mudflow	Wind
Expansive soils	Lightning	Windstorm
Extreme heat	Liquefaction	



Previously Included Hazards

Avalanche	Flood	Sea level rise
Climate change	Geological hazards	Seismic hazards
Coastal erosion	Hailstorm	Severe winter storm
Coastal storm	Hazardous materials	Tornado
Dam failure	Human-caused hazards	Tsunami
Disease/pest management	Hurricane	Volcano
Drought	Land subsidence	Wildfire
Earthquake fault rupture	Landslide and mudflow	Wind
Expansive soils	Lightning	Windstorm
Extreme heat	Liquefaction	



LHMP Potential Hazards

Avalanche	Flood	Sea level rise
Climate change	Geological hazards	Seismic hazards
Coastal erosion	Hailstorm	Severe winter storm
Coastal storm	Hazardous materials	Tornado
Dam/Reservoir failure	Human-caused hazards	Tsunami
Disease/pest management	Hurricane	Volcano
Drought	Land subsidence	Wildfire
Earthquake fault rupture	Landslide and mudflow	Wind
Expansive soils	Lightning	Windstorm (& Power Outage)
Extreme heat	Liquefaction	Pandemic

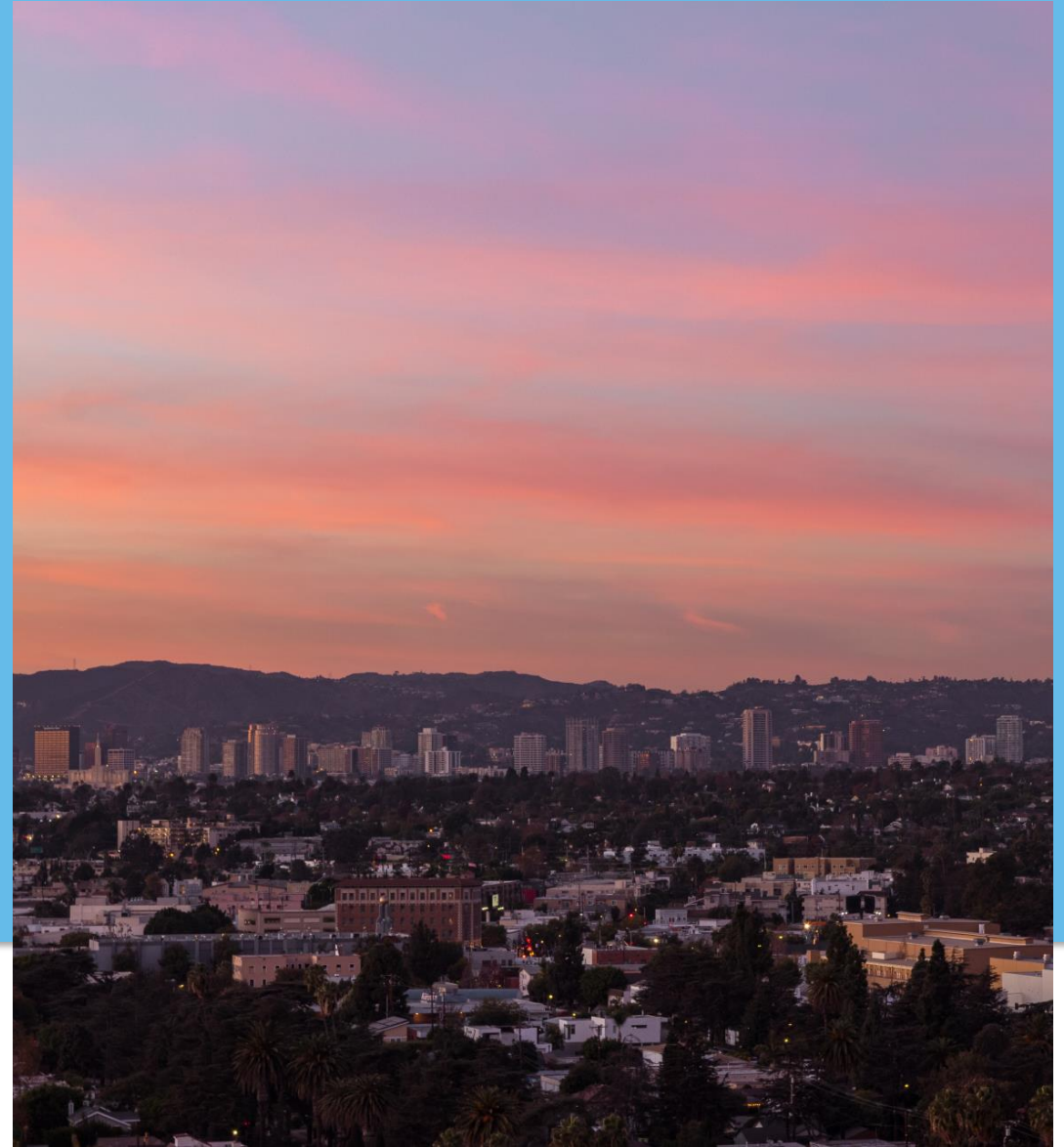


Proposed Hazards List

- Climate Change (integrated into each hazard)
- Dam/reservoir failure
- Drought
- Flood
- Human caused hazards – hazardous materials spills/release, terrorism/active shooter, civil unrest, pandemic
- Seismic hazards – Landslide/mudflow, fault rupture, ground shaking, liquefaction
- Severe Weather – heavy rains, thunderstorm, extreme heat, tornado, windstorm (secondary effect, power outage)
- Wildfire/urban fire



HAZARD PRIORITIZATION EXERCISE & SURVEY



Hazard Prioritization

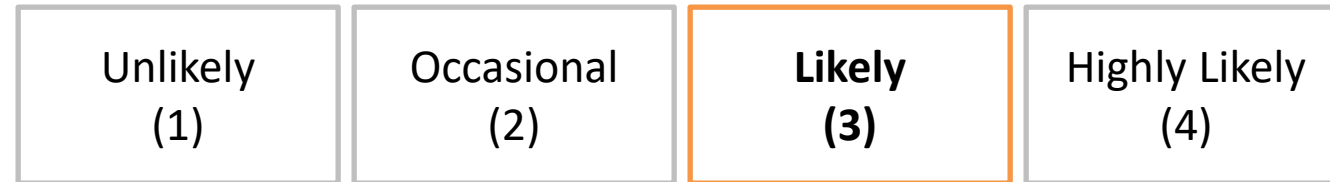
- Four criteria
 - Probability (likelihood of occurrence)
 - Location (size of potentially affected area)
 - Maximum Probable Extent (intensity of damage)
 - Secondary impacts (severity of impacts to community)
- A value of 1 – 4 is assigned for each criteria
- Every criteria has an Importance Score
 - Can be used to weigh the influence of an individual criterion
 - Criteria and importance values are combined to calculate a Total Score



Score Example: Avalanche

Probability

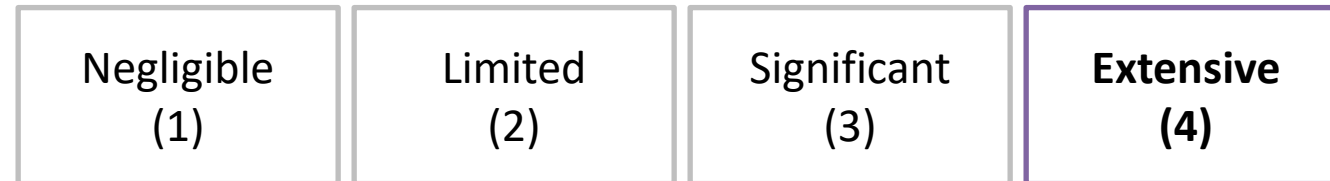
Importance score:
2.0



Probability score: $2.0 \times 3 = 6$

Location

Importance score:
0.8



Affected Area score: $0.8 \times 4 = 3.2$



Score Example: Avalanche

Primary Impact

Importance score:
0.7



Primary Impact score: $0.7 \times 2 = 1.4$

Secondary Impacts

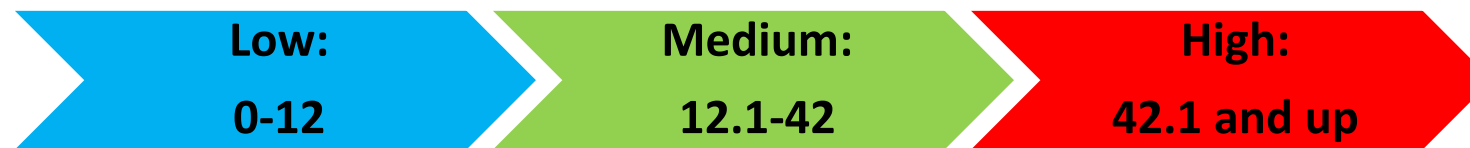
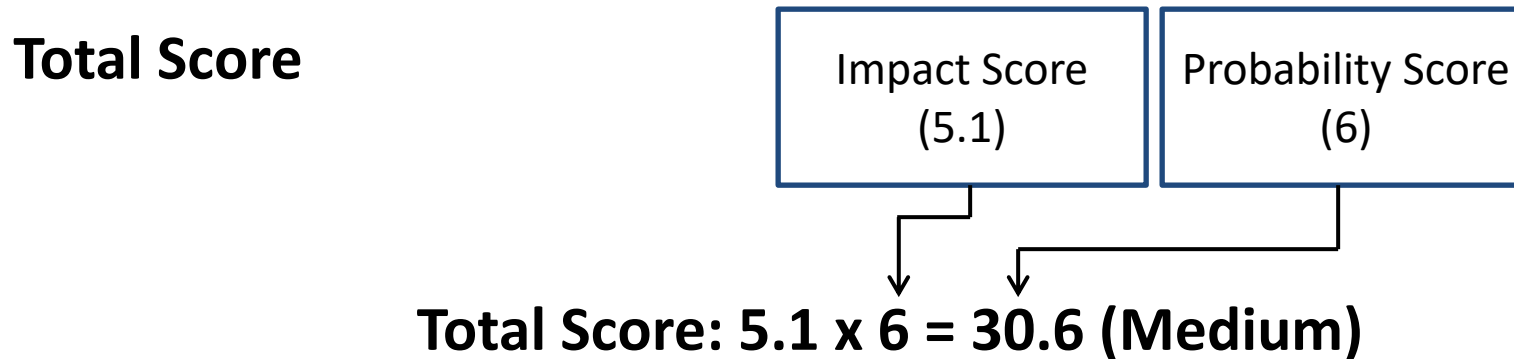
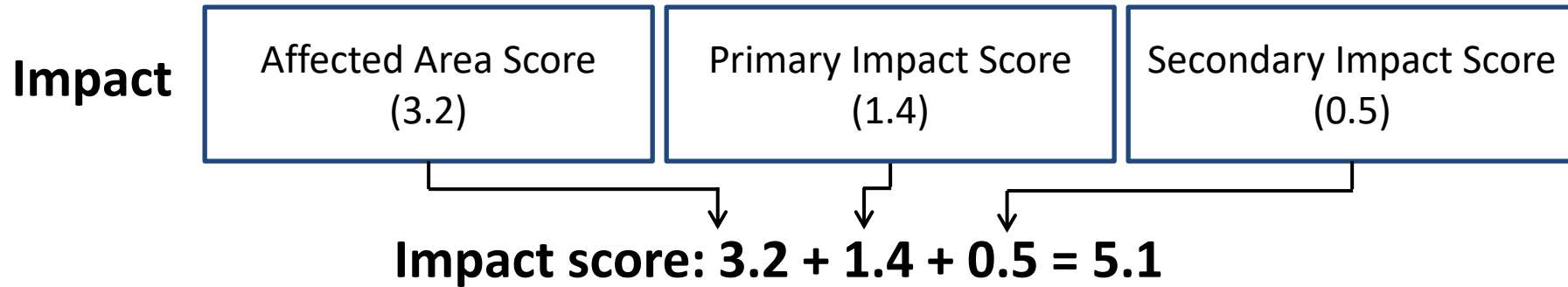
Importance score:
0.5



Secondary Impacts score: $0.5 \times 4 = 0.5$



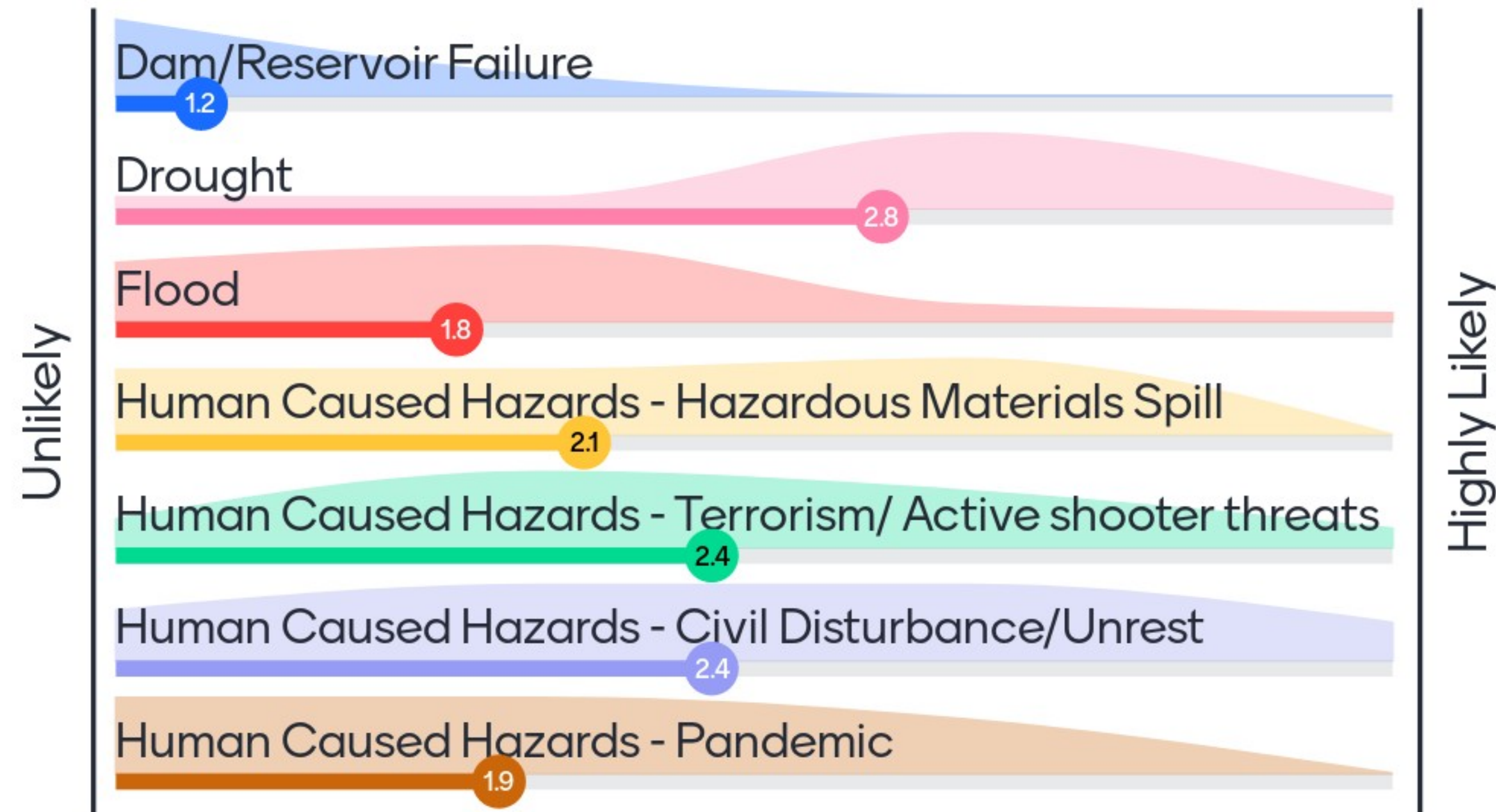
Score Example: Avalanche



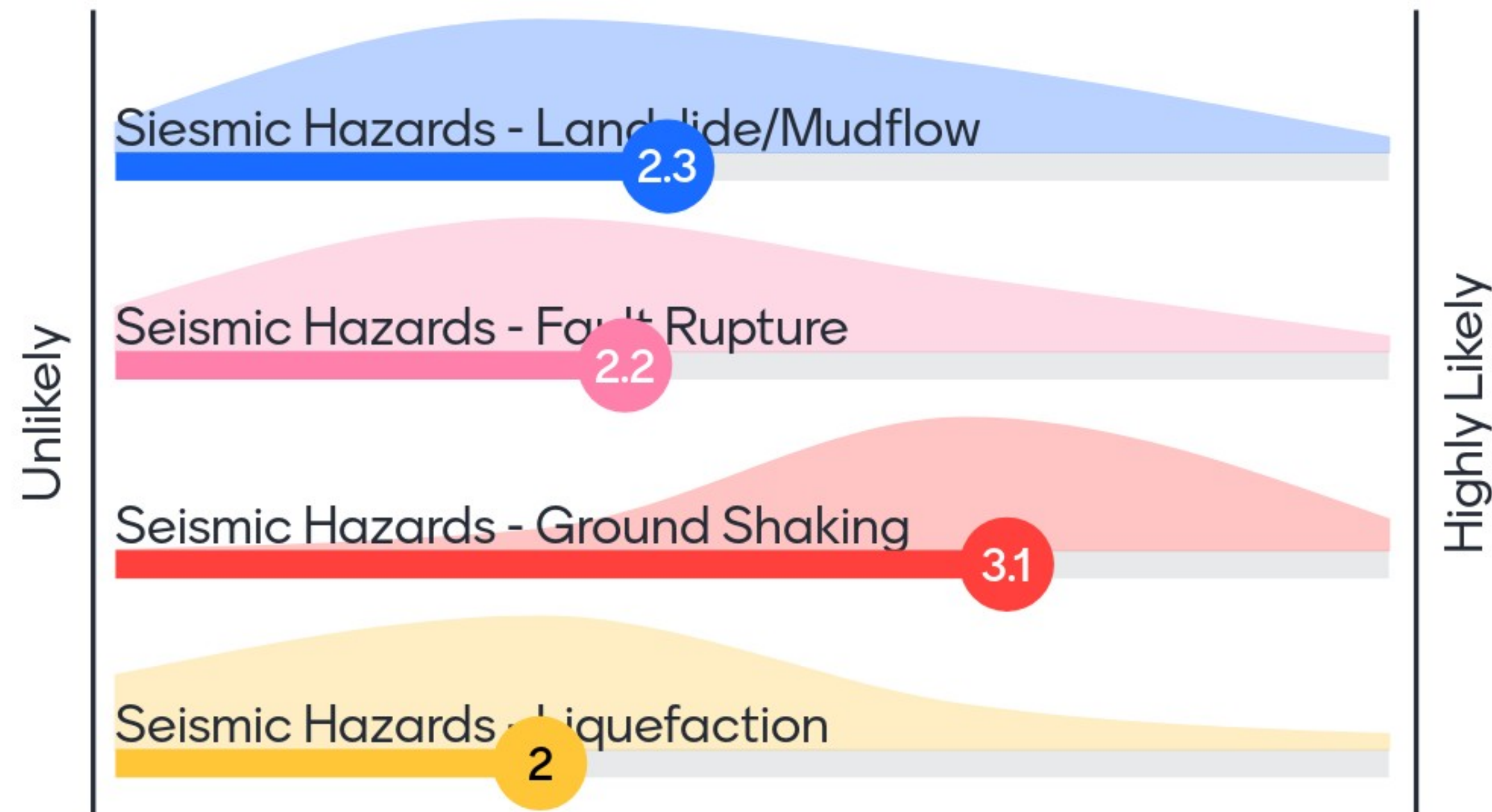
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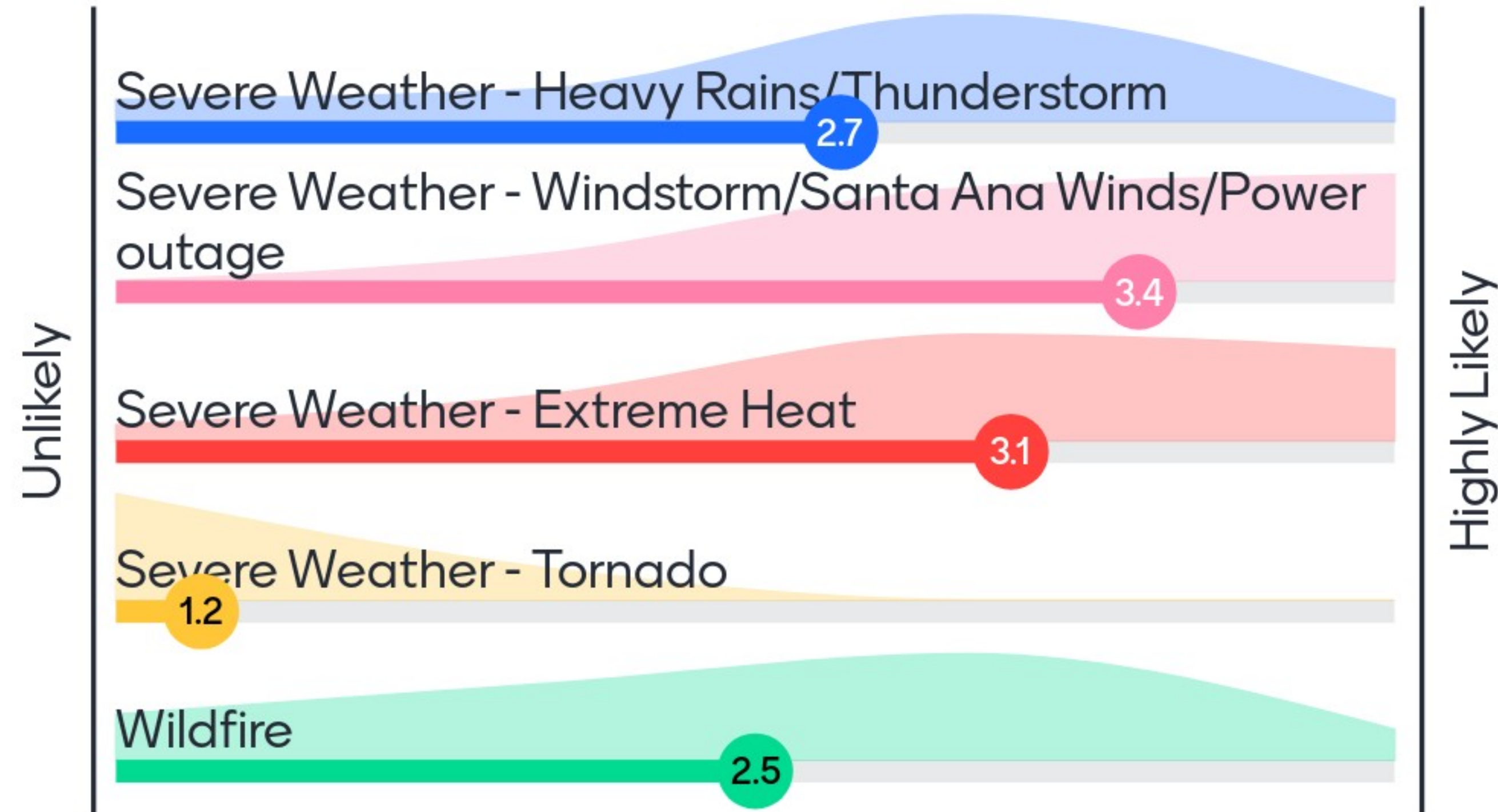
Probability: Likelihood of Occurrence within the Next Year



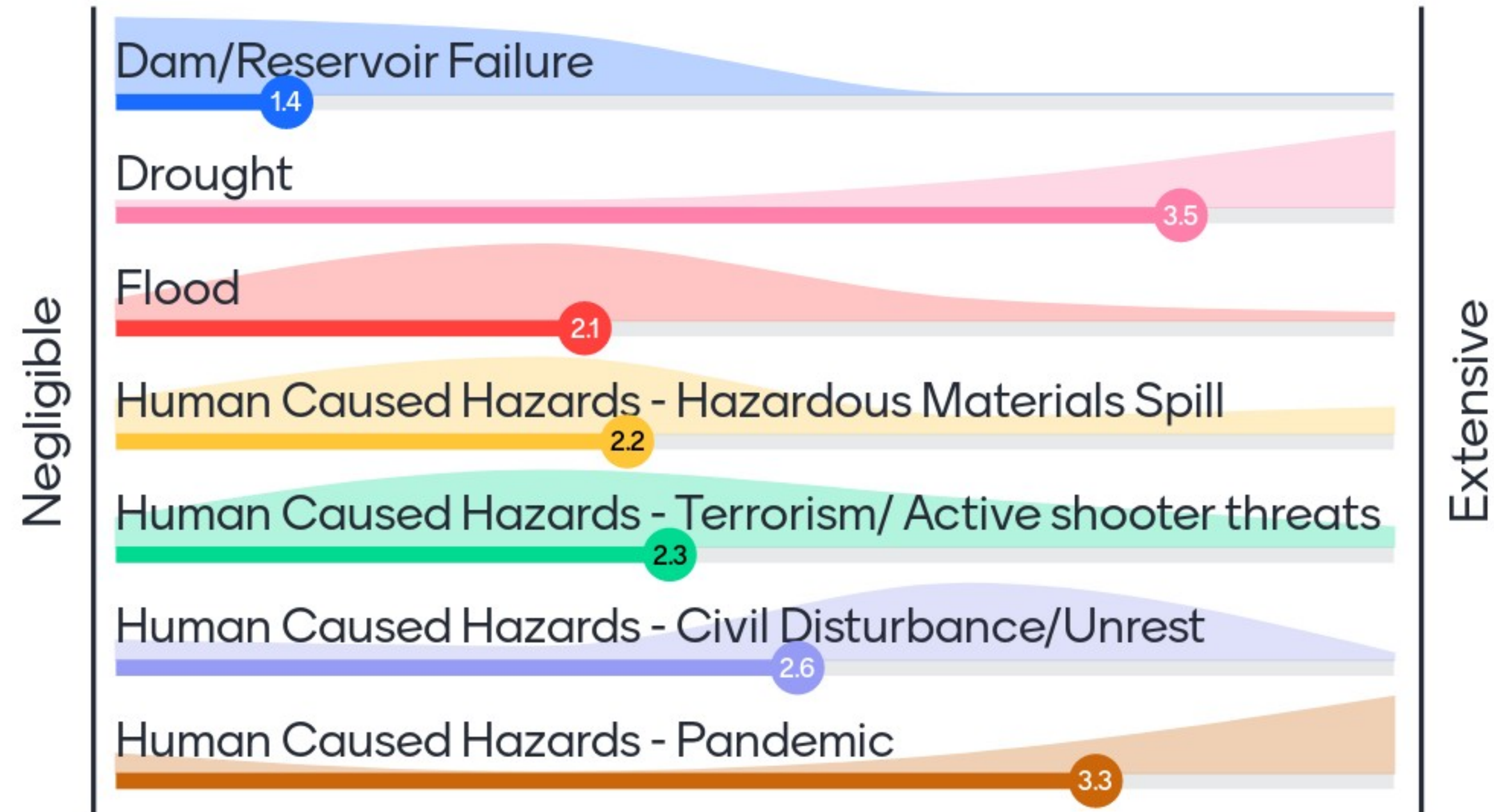
Probability: Likelihood of Occurrence within the Next Year



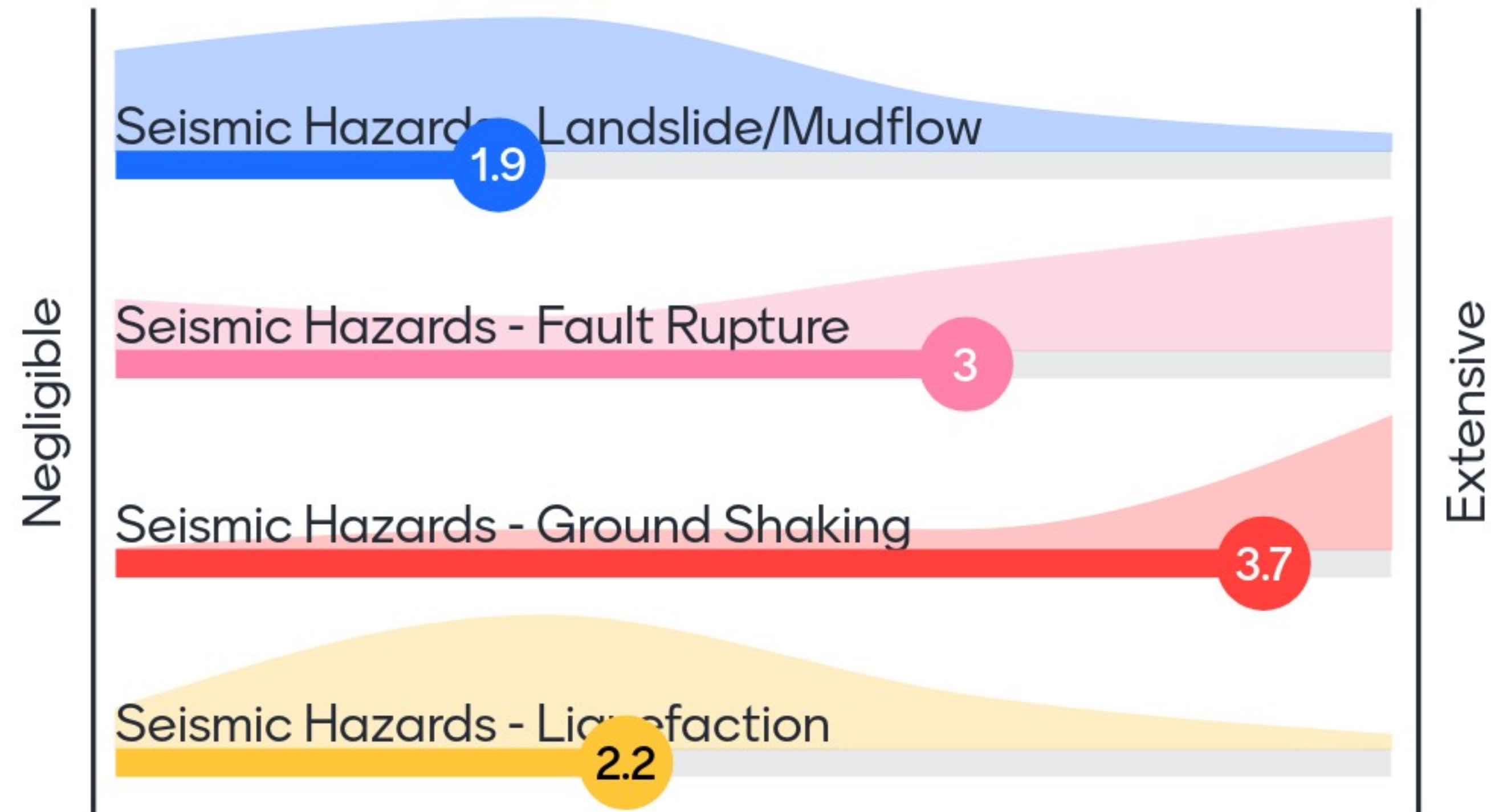
Probability: Likelihood of Occurrence within the Next Year



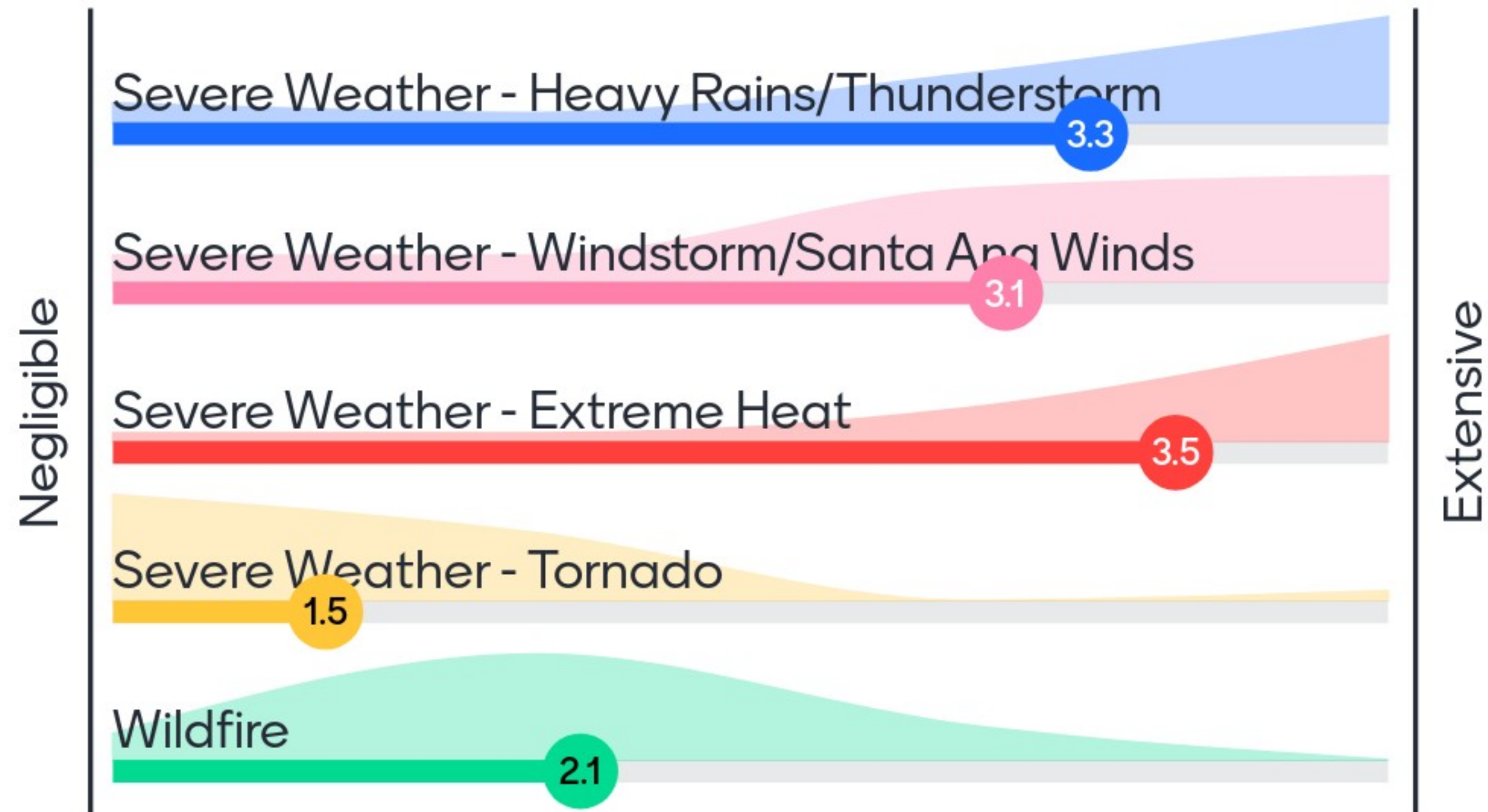
Location: Size of the Geographical Area Affected by Hazard



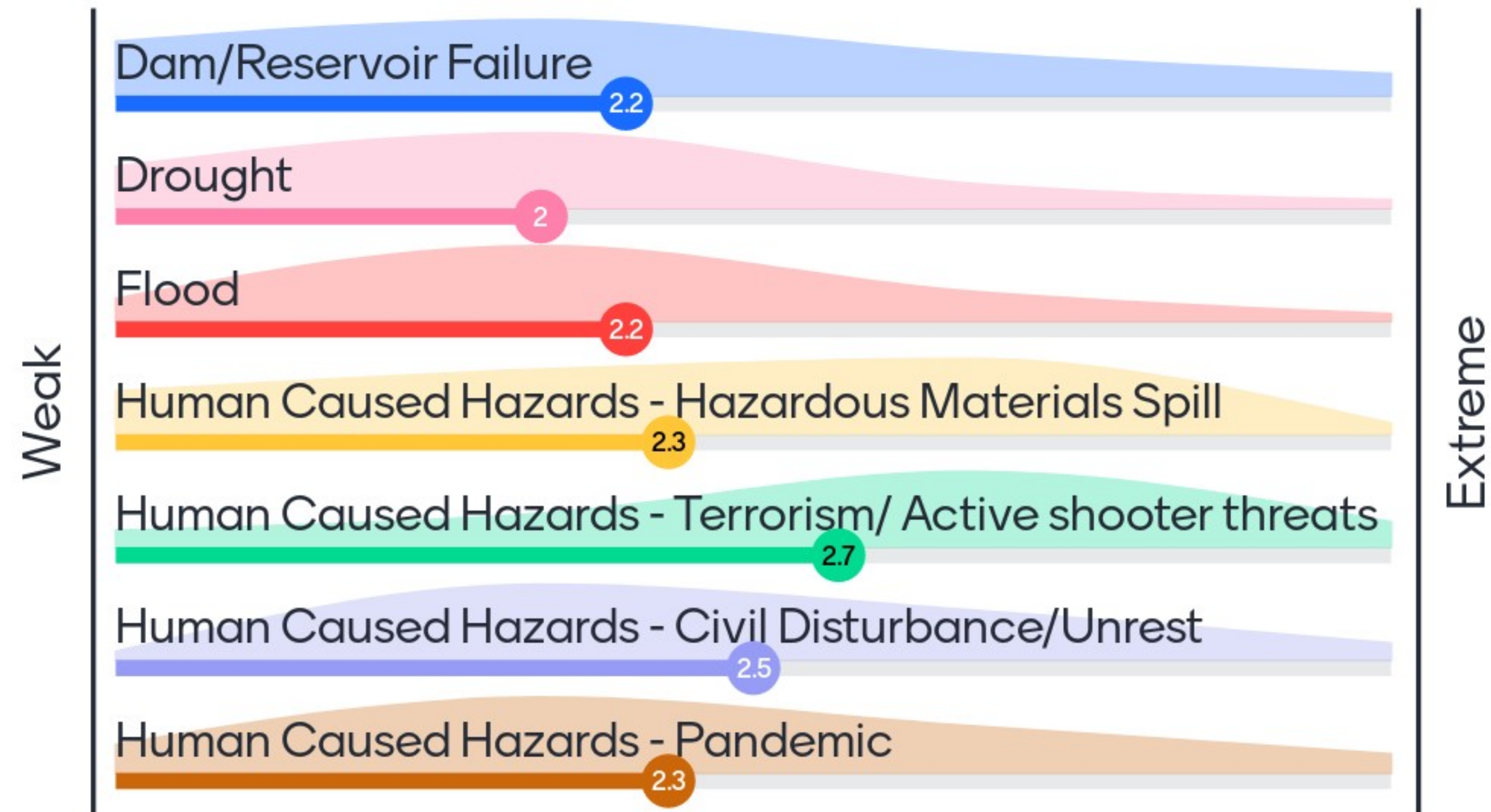
Location: Size of the Geographical Area Affected by Hazard



Location: Size of the Geographical Area Affected by Hazard



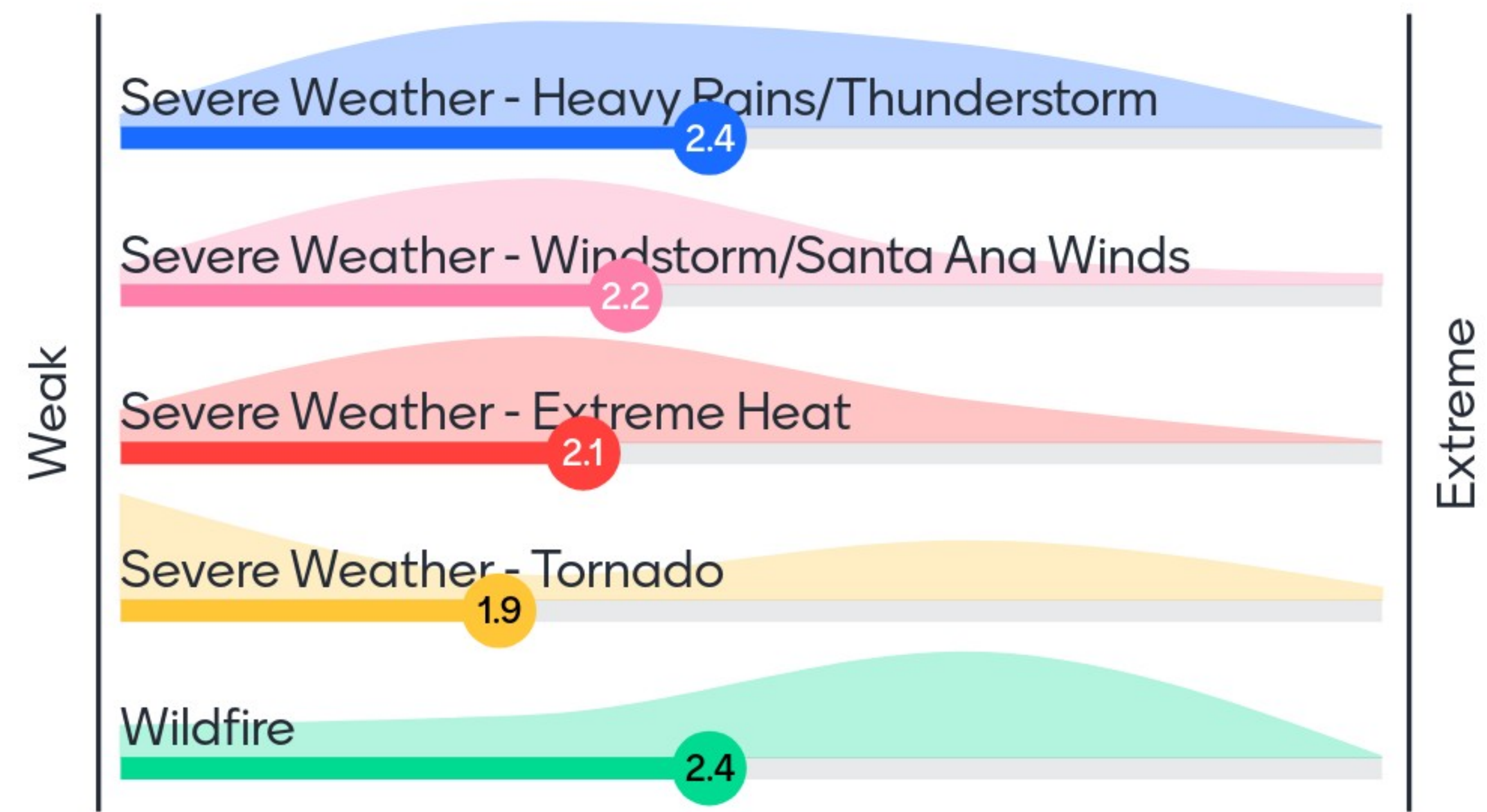
Primary Impact: Percentage of Damage to Typical Facility in Community



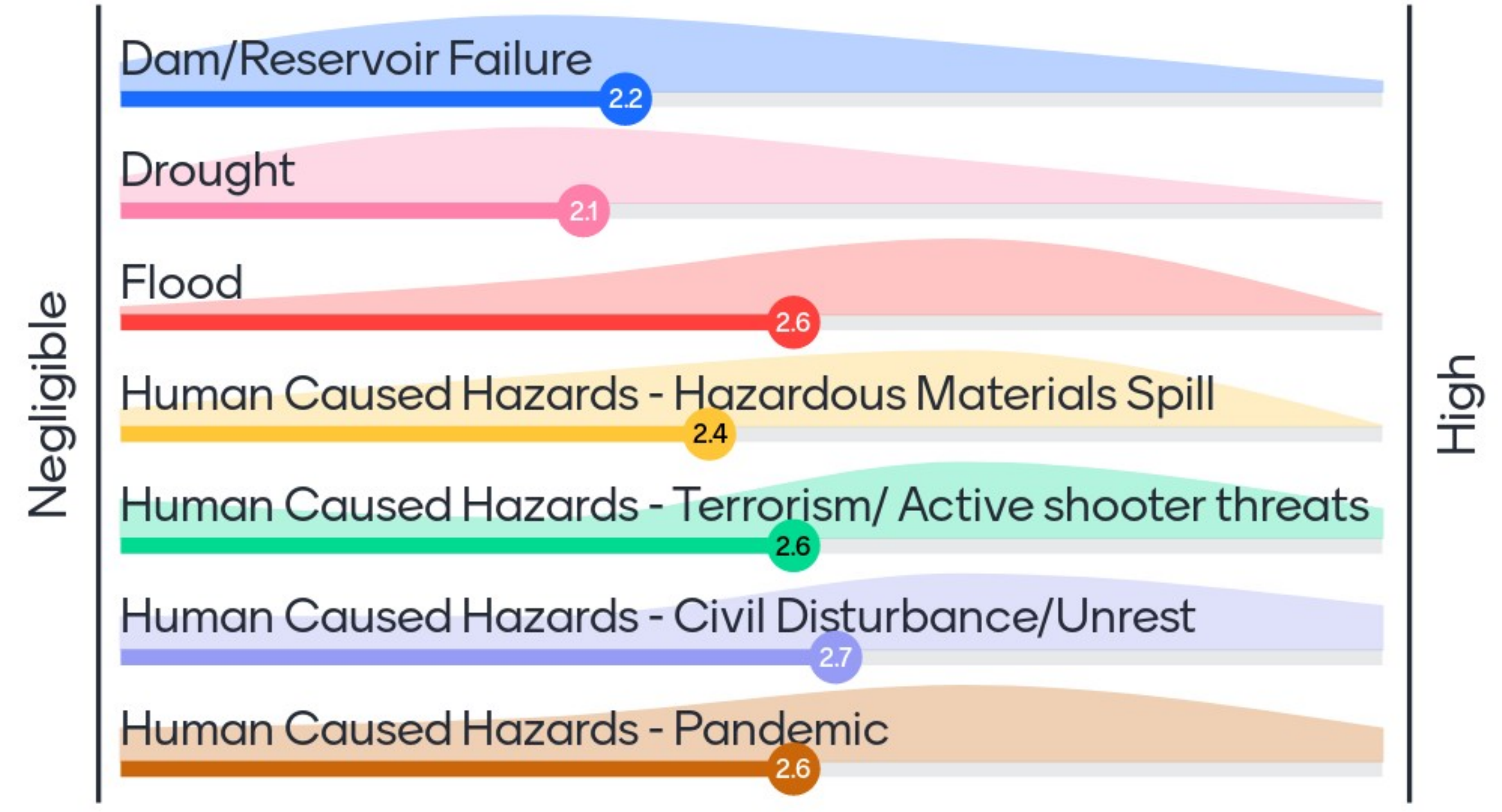
Primary Impact: Percentage of Damage to Typical Facility in Community



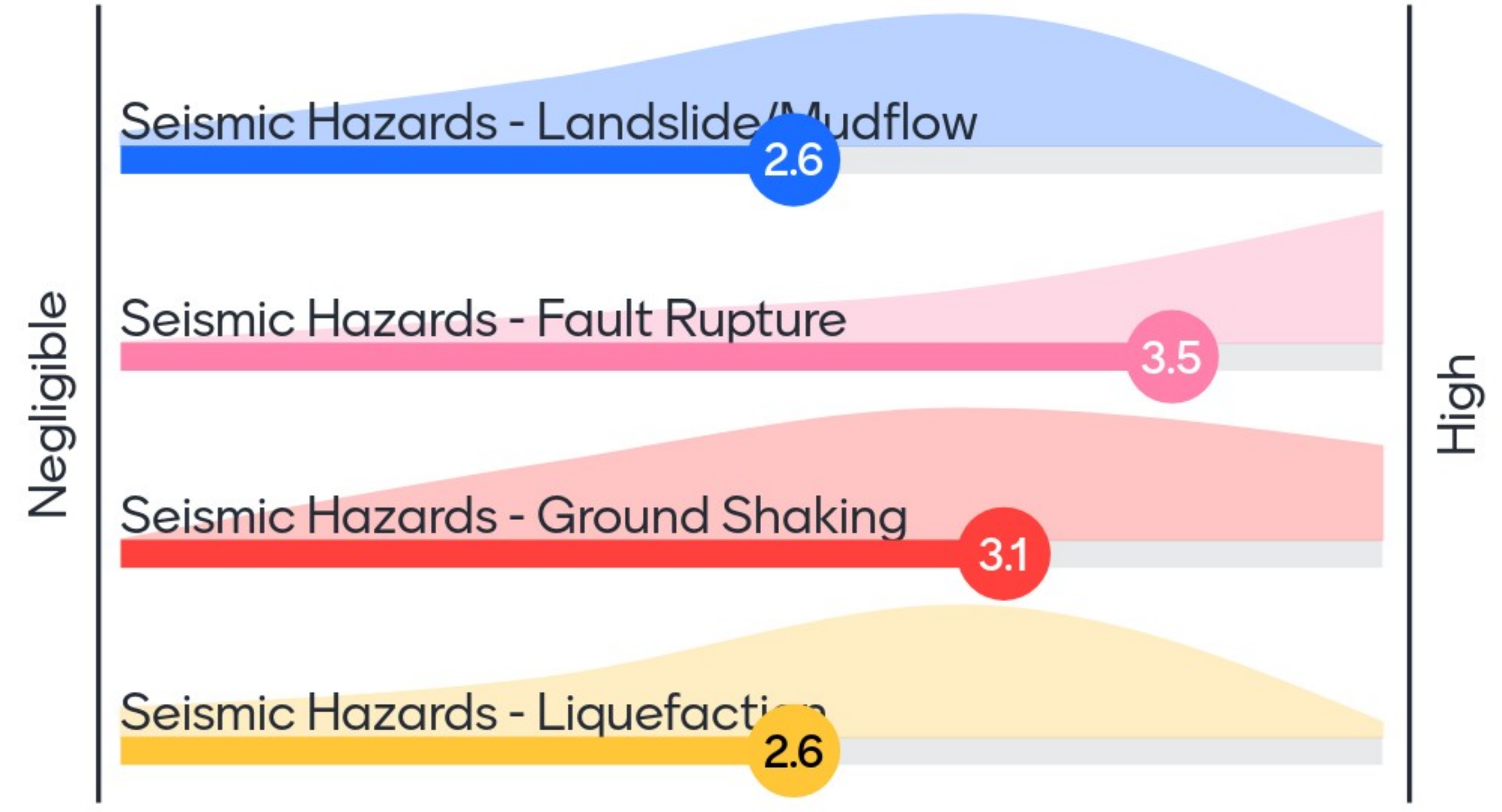
Primary Impact: Percentage of Damage to Typical Facility in Community



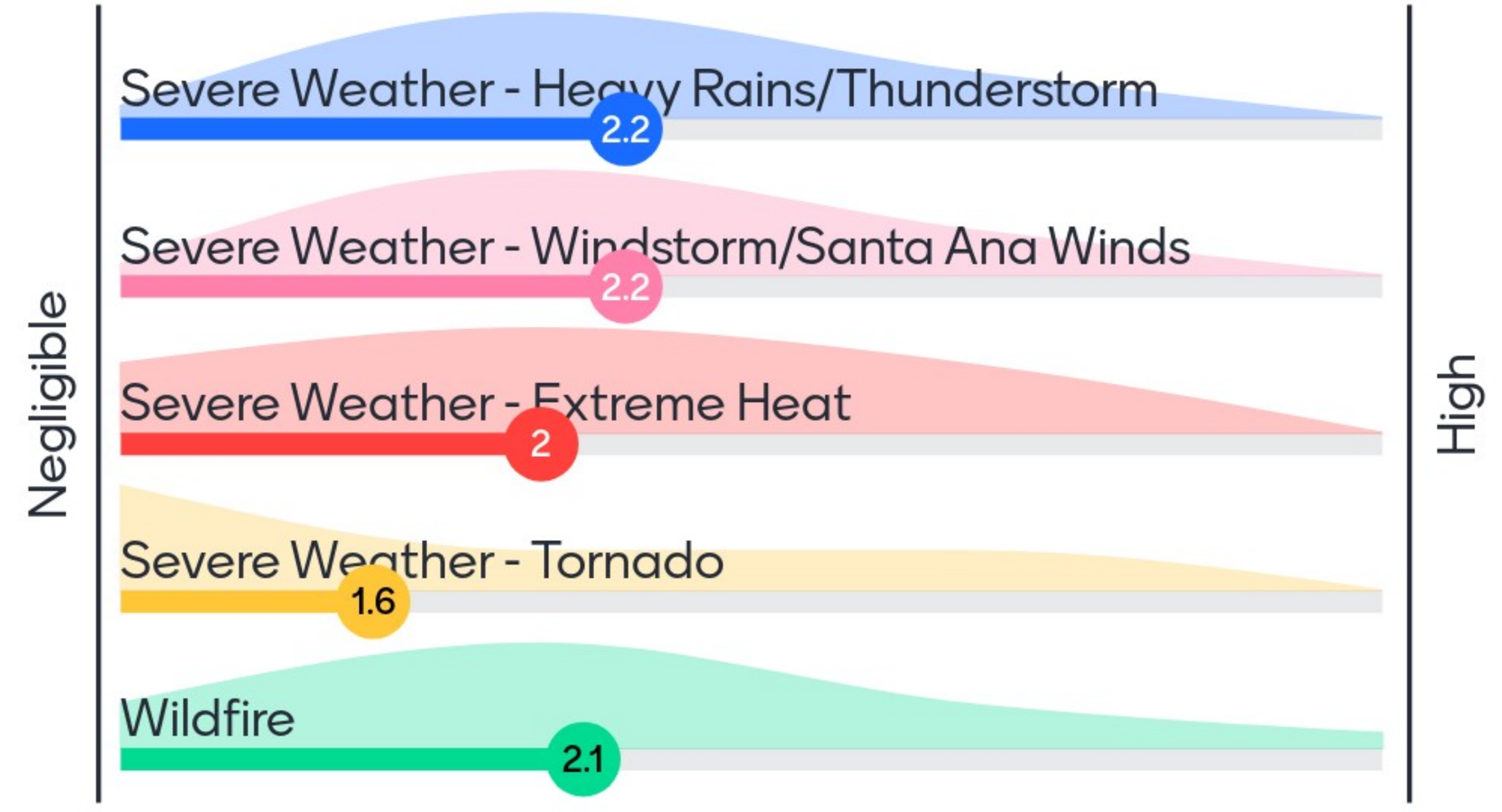
Secondary Impacts: Estimated to the Community at Large



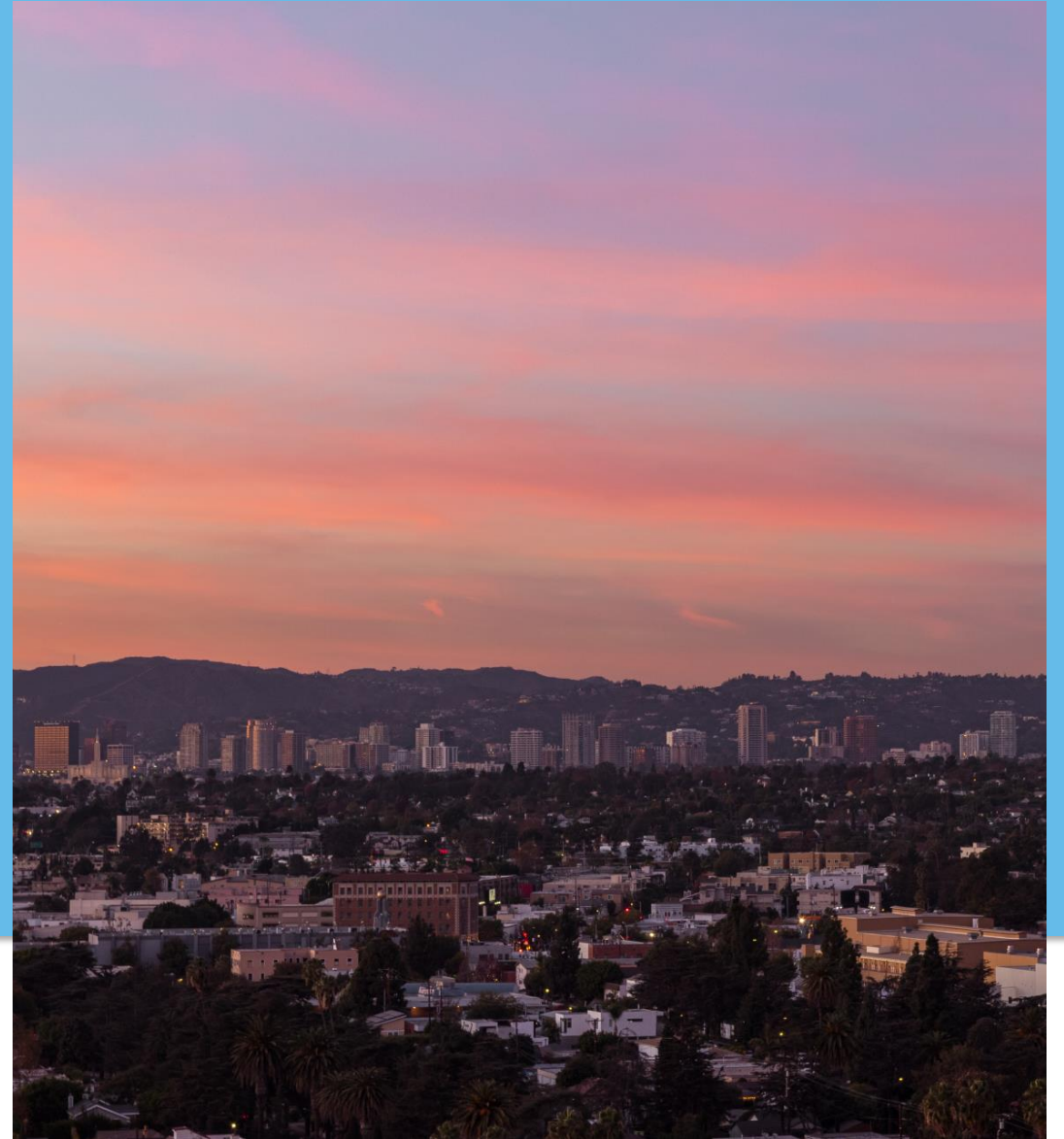
Secondary Impacts: Estimated to the Community at Large



Secondary Impacts: Estimated to the Community at Large



NEXT STEPS



Capabilities Assessment

- Two components
 - Inventory of existing resources and tools to accomplish mitigation and reduce long-term vulnerability, and understanding of ability to use them effectively
 - Identification of gaps, conflicts, and/or weaknesses that may need to be addressed through mitigation
- Types of capabilities
 - Planning and regulatory
 - Administrative and technical
 - Financial
 - Education and outreach



Data Needs & Capabilities

- Plans/studies
- Policies/programs
- Technical and GIS data
- Intrinsic/historic knowledge
- Photos
- Asset inventory for loss estimations

Provide any information/resources to Joe Susca – April 18th



Timeline

- **HMP Meeting #2: May 25, 2023**
 - Preliminary findings from hazard prioritization activity & risk assessment, critical facility inventory review, group analysis/risk factor development
- **HMP Meeting #3: June 15, 2023**
 - Identification of goals, discussion of capability assessment, mitigation action development
- **HMP Meeting #4: July 13, 2023**
 - Prioritization of mitigation actions, development of implementation strategy and plan maintenance process
- **Draft LHMP for Planning Team Review: August**
- **Draft LHMP for Public Review: August – September**

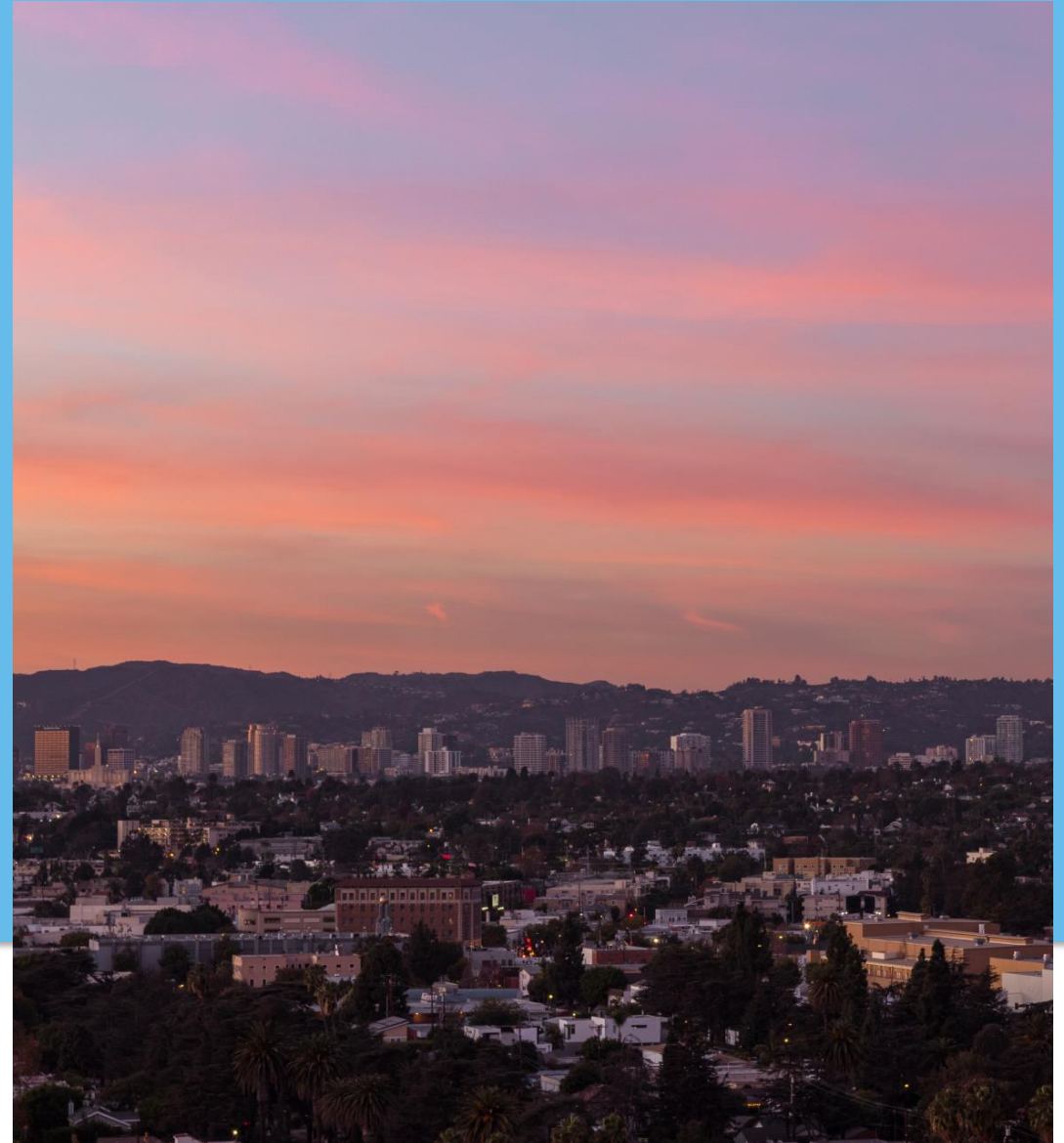


QUESTIONS/ADDITIONAL DISCUSSION?

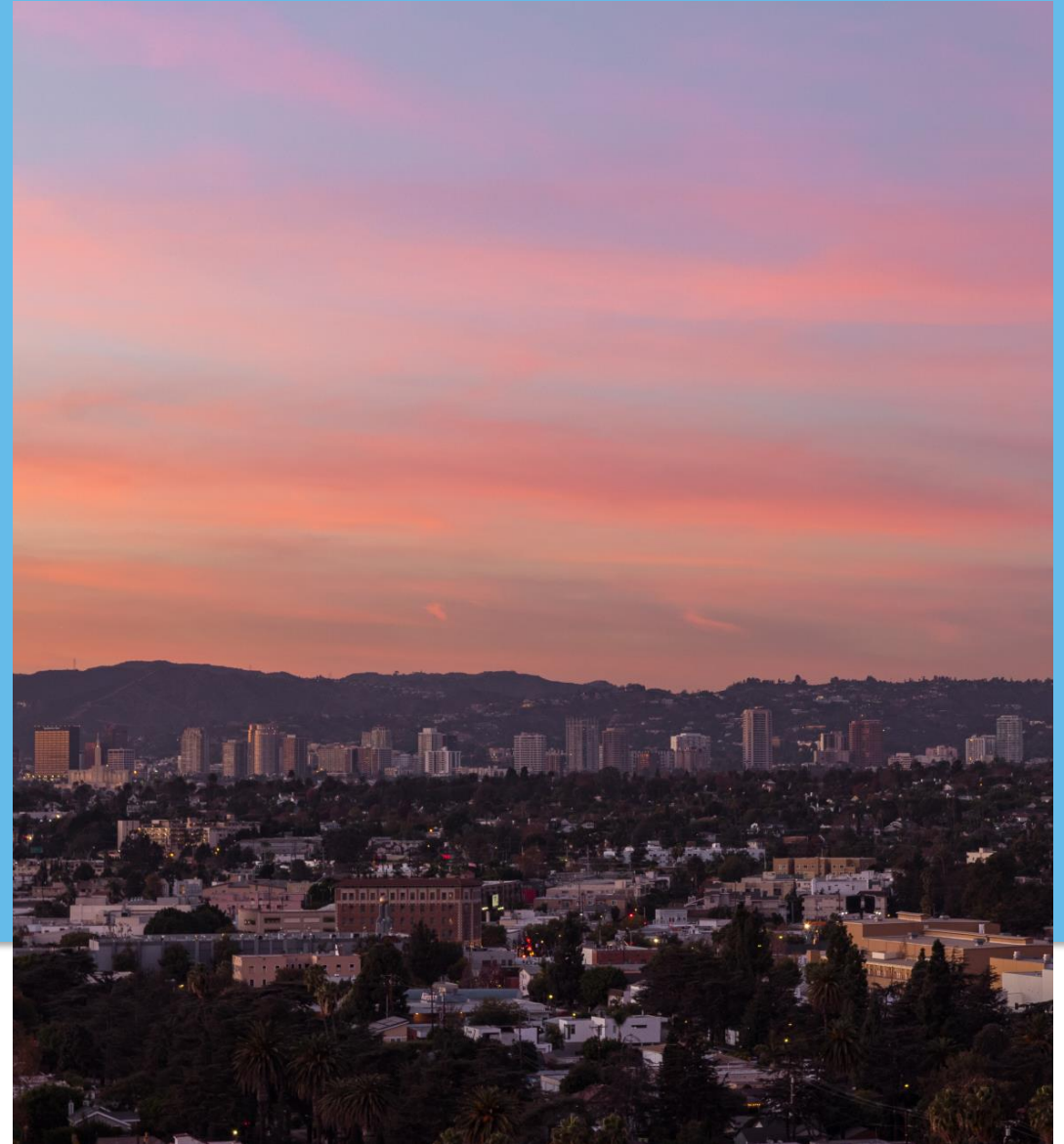
Forward all data/information to:

Joe Susca
Sr. Management Analyst
Joe.susca@culvercity.org

Mike Korgan
MOT Director
mikekorgan@ccusd.org



CRITICAL FACILITIES AND COMMUNITY LIFELINES



Critical Facilities

- Serve important/critical functions in the operations of municipal government, serving the community, and responding in an emergency
- Failure of critical facilities would result in significant issues with response efforts and maintaining service
- Risk assessment will look at what facilities are in hazard zones
- Mitigation strategies reflect vulnerabilities of critical facilities



Community Lifelines

Community lifelines are defined by FEMA, a construct for objectives-based post-disaster stabilization efforts. A lifeline enables the continuous operation of critical government and business functions and is essential to human health and safety or economic security.

- Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function.
- Lifelines are the integrated network of assets, services, and capabilities that are used day-to-day to support the recurring needs of the community.
- When disrupted, decisive intervention (e.g., rapid service re-establishment or employment of contingency response solutions) is required to stabilize the incident.



HAZARD RANKING WORKSHEET - Culver City HMP

DATE: 4/6/2023

Hazard Type	Probability	Impact			Total Score	Hazard Planning Consideration
		Location	Primary Impact	Secondary Impacts		
Dam/Reservoir Failure	1.21	1.44	2.17	2.24	9.17	Low
Drought	2.79	3.50	2.00	2.12	29.35	Medium
Flood	1.84	2.11	2.17	2.59	16.57	Medium
Human Caused Hazards - Hazardous Materials Spill	2.05	2.22	2.28	2.41	18.77	Medium
Human Caused Hazards - Terrorism/Active Shooter	2.37	2.33	2.72	2.59	24.00	Medium
Human Caused Hazards - Civil Disturbance/Civil Unrest	2.42	2.61	2.50	2.71	25.13	Medium
Human Caused Hazards - Pandemic	1.89	3.33	2.33	2.59	21.13	Medium
Seismic Hazards - Landslide/Mudflow	2.33	1.94	2.35	2.56	20.86	Medium
Seismic Hazards - Fault Rupture	2.22	3.00	2.47	3.50	26.10	High
Seismic Hazards - Ground Shaking	3.06	3.67	3.06	3.06	40.44	High
Seismic Hazards - Liquefaction	2.00	2.17	2.35	2.56	18.64	Medium
Severe Weather - Heavy Rains/Thunderstorm	2.71	3.32	2.35	2.21	29.30	Medium
Severe Weather - Windstorm/Santa Ana Winds/Power Outage	3.35	3.11	2.18	2.21	34.30	Medium
Severe Weather - Extreme Heat	3.06	3.53	2.06	2.00	32.23	Medium
Severe Weather - Tornado	1.24	1.53	1.88	1.64	8.33	Low
Wildfire	2.47	2.05	2.41	2.14	21.72	Medium

Probability*Based on estimated likelihood of occurrence from historical data*

Importance

2.0

ProbabilityScore

Unlikely

1

Occasional

2

Likely

3

Highly Likely

4

Location*Based on size of geographical area of community affected by*Affected Area

Importance

0.8

Score

Negligible

1

Limited

2

Significant

3

Extensive

4

Maximum Probable Extent (Primary Impact)*Based on percentage of damage to typical facility in community*Impact

Importance

0.7

Score

Weak - little to no damage

1

Moderate - some damage, loss of service for days

2

Severe - devastating damage, loss of service for months

3

Extreme- catastrophic damage, uninhabitable conditions

4

Secondary Impacts*Based on estimated secondary impacts to community at large*

Importance

0.5

ImpactScore

Negligible - no loss of function, downtime, and/or evacuations

1

Limited - minimal loss of function, downtime, and/or evacuations

2

Moderate - some loss of function, downtime, and/or

3

High - major loss of function, downtime, and/or

4

Total Score = Probability x Impact, where:

Probability = (Probability Score x Importance)

Impact = (Affected Area + Primary Impact + Secondary Impacts), where:

Affected Area = Affected Area Score x Importance

Primary Impact = Primary Impact Score x Importance

Secondary Impacts = Secondary Impacts Score x Importance

Hazard Planning ConsiderationTotal ScoreRangeDistributionHazard Level

0.0

12.0

2

Low

12.1

42.0

12

Medium

42.1

64.0

2

High

The probability of each hazard is determined by assigning a level, from unlikely to highly likely, based on the likelihood of occurrence from historical data. The total impact value includes the affected area, primary impact

Community Lifelines

Community lifelines are defined by FEMA, a construct for objectives-based post-disaster stabilization efforts. A lifeline enables the continuous operation of critical government and business functions and is essential to human health and safety or economic security.

- Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function.
- Lifelines are the integrated network of assets, services, and capabilities that are used day-to-day to support the recurring needs of the community.
- When disrupted, decisive intervention (e.g., rapid service re-establishment or employment of contingency response solutions) is required to stabilize the incident.



SAFETY AND SECURITY

- Law Enforcement/Security (stations, staff, site security)
- Fire Service (stations, staff, resources)
- Search and Rescue
- Government Service (emergency operations centers, essential functions, schools, gov't offices)
- Community Safety (flood control, protective actions, other hazards)



FOOD, WATER, SHELTER

- Food (commercial food distribution, supply chains, food distribution programs)
- Water (drinking water utilities, wastewater systems, water supply chain)
- Shelter (housing, shelters, commercial facilities such as hotels)
- Agriculture (animals and agriculture)



HEALTH AND MEDICAL

- Medical Care (hospitals, dialysis, pharmacies, care facilities, vet services, home care)
- Public Health (epidemiological monitoring, labs, clinical guidance, behavioral health)
- Patient Movement (emergency medical services)
- Medical Supply Chain (products, manufacturing, distribution, research, sterilization)
- Fatality Management (mortuary and post-mortuary services)



ENERGY

- Power Grid (generation, transmission, distribution systems)
- Fuel (refineries, processing, storage, pipelines, distribution)



COMMUNICATIONS

- Infrastructure (wireless, cable, broadcast, satellite, internet, data centers)
- Responder Communications (LMR networks)
- Alerts, Warnings, and Messages (local and regional alerts)
- Finance (banking services, electronic payment processing)
- 911 and Dispatch



TRANSPORTATION

- Highway, Roadway, Motor Vehicle (roads, bridges)
- Mass Transit (bus, rail, ferry)
- Railway (freight, passenger)
- Aviation (commercial, general, military)
- Maritime (waterways, ports, port facilities)



HAZARDOUS MATERIALS

- Oil/HAZMAT Facilities (facilities, toxic incidents from facilities)
- Oil/HAZMAT, Pollutants, Contaminants (toxic incidents from non-fixed facilities)



Culver City & Culver City Unified School District
Multi-Jurisdictional Hazard Mitigation Plan
Meeting #1
April 6, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present ?
Joe Susca	Sr. Management Analyst	Culver City Public Works	9770 Culver Blvd. Culver City, CA 90232	Joe.susca@culvercity.org	310-253-5636	✓
Mike Korgan	MOT Director	Culver City Unified School District	4034 Irving Place Culver City, CA 90232	mikekorgan@ccusd.org	310-842-4220	✓
Noelle Steele	Project Manager	Michael Baker International	5 Hutton Centre Drive, Suite 500 Santa Ana, CA 92707	Noelle.Steele@mbakerintl.com	(949) 855-3683	✓
Michael Yaffe	Resilience Lead	Michael Baker International	5 Hutton Centre Drive, Suite 500 Santa Ana, CA 92707	Michael.yaffe@mbakerintl.com	(949) 472-3483	✓
Casey Marchese	Project Planner	Michael Baker International	5 Hutton Centre Drive, Suite 500 Santa Ana, CA 92707	Casey.Marchese@mbakerintl.com	(949) 472-3494	✓
Adam Ferguson	Sr. Management Analyst	Culver City-Parks, Recreation & Community Services (Senior Center)	4175 Overland Ave. Culver City, CA 90230	adam.ferguson@culvercity.org	310-253-6685	✓
Jason Sims	Interim Police Chief	Culver City-Police Department	4040 Duquesne Ave. Culver City, CA 90230	Jason.sims@culvercity.org	310-253-6208	
Lisa Soghor	Chief Financial Officer	Culver City-Finance	97700 Duquesne Ave. Culver City, CA 90230	Lisa.soghor@culvercity.org	310-253-6016	
Tim Koutsouros	Building Official	Culver City-Building Safety	9770 Culver Blvd. Culver City, CA 90232	Tim.koutsouros@culvercity.org	310-253-5802	✓

Culver City & Culver City Unified School District
Multi-Jurisdictional Hazard Mitigation Plan
Meeting #1
April 6, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present ?
Hoa Diep	IT Manager	Culver City Information Technology	9770 Culver Blvd. Culver City, CA 90232	Hoa.diep@culvercity.org	310-253-6266	✓
Hector Calvinisti	Safety & Training Coord.	Culver City Transportation	4343 Duquesne Ave. Culver City, CA	hector.calvinisti@culvercity.org	310-253-6572	✓
Tevis Barnes	Director	Culver City Housing and Human Services	9770 Culver Blvd. Culver City, CA 90232	Tevis.barnes@culvercity.org	310-253-5782	
Lisa Vidra	Assistant City Attorney	Culver City - City Attorney	9770 Culver Blvd. Culver City, CA 90232	Lisa.vidra@culvercity.org	310-253-5673	✓
Troy Evangelho	Advanced Planning Manager	Culver City-Advanced Planning	9770 Culver Blvd. Culver City, CA 90232	troy.evangelho@culvercity.org	310-253-5744	✓
Sean Singletary	Environmental Programs & Operations Manager	Culver City-Public Works	9505 Jefferson Blvd. Culver City, CA 90232	Sean.singletary@culvercity.org	310-253-6457	✓
Yanni Demitri	Public Works Director/City Engineer	Culver City Public Works	9770 Culver Blvd. Culver City, CA 90232	Yanni.demitri@culvercity.org	310-253-5630	✓
Christine Parra	Emergency Prep. Coordinator	Culver City Fire Department	9770 Culver Blvd. Culver City, CA 90232	Christine.parra@culvercity.org	310-253-5909	✓
Sean Kearney	Director of Fiscal Services	Culver City Unified School District	4034 Irving Place Culver City, CA 90232	seankearney@ccusd.org	310-842-4220 ext. 4234	

Culver City & Culver City Unified School District
 Multi-Jurisdictional Hazard Mitigation Plan
 Meeting #1
 April 6, 2023

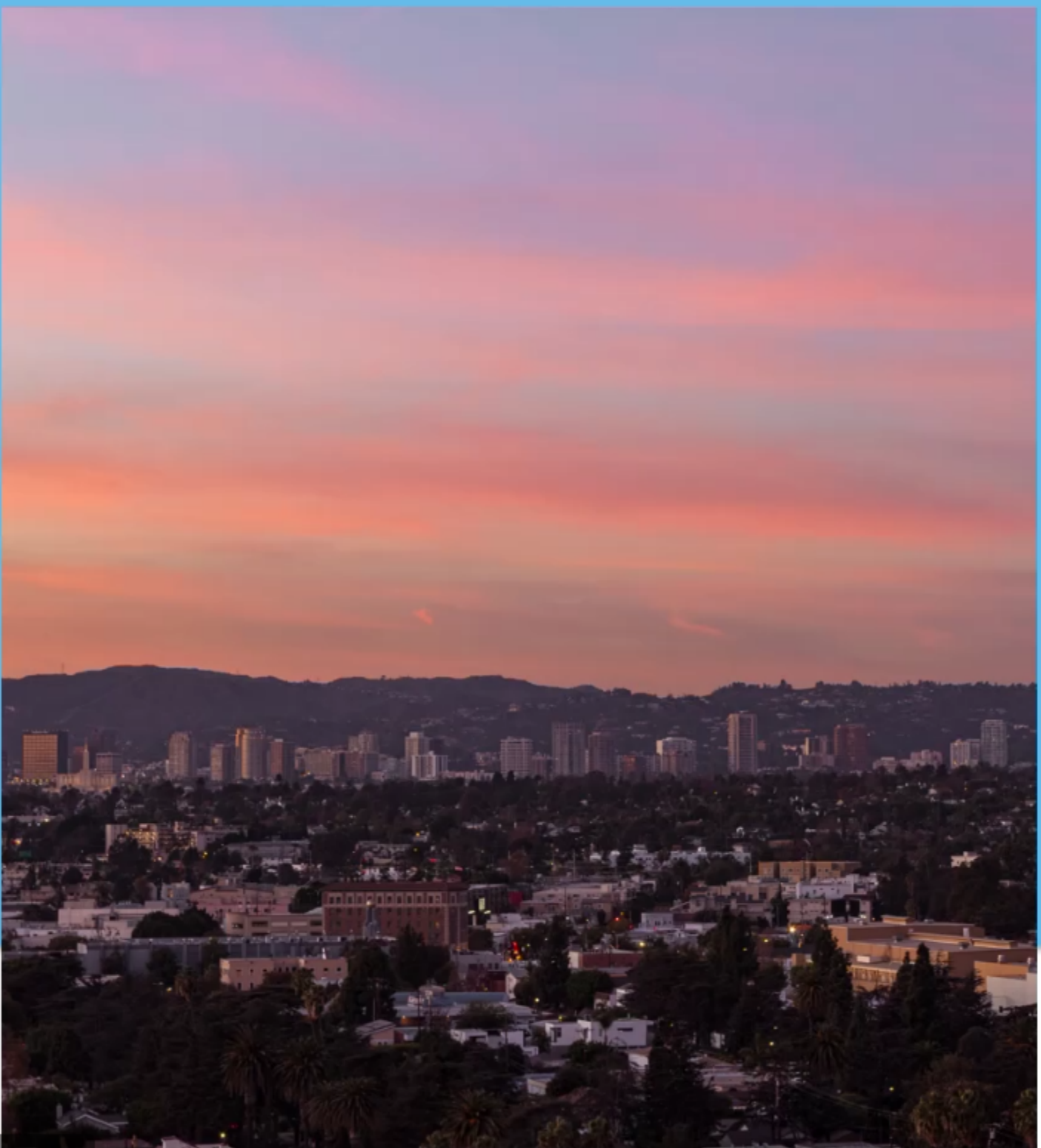
First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present ?
Steven Torrence	Emergency Services Coordinator	Santa Monica	333 Olympic Blvd. Santa Monica, CA 90401	steven.torrence@santamonica.gov	(310) 458-8686	
Kristin Cavanaugh	Director of Studio Relations	Sony Pictures Entertainment	10202 Washington Blvd. Culver City, CA 90232	kristin_cavanaugh@spe.sony.com	(310) 244-5368	✓
Savanna Fiehler	Disaster Program Manager	American Red Cross	1450 11 th St. Santa Monica, Ca 90405	Savanna.Fiehler@Redcross.org	(213) 266-1003	✓
Margarita Kustanovich	Emergency Management Coordinator	West Hollywood	8300 Santa Monica Blvd., West Hollywood, CA 90069-6216	mkustanovich@weho.org	(310) 657-4009	✓
Meena Janmohamed	Emergency Management Manager	Beverly Hills	455 N. Rexford Drive Beverly Hills, CA 90210	mjanmohamed@beverlyhills.org	(310) 285-1021	
Ms. Jillian De Vela	Emergency Management Coordinator	City of Los Angeles	201 N Figueroa St, Los Angeles, CA 90012	jillian.de.vela@lacity.org		✓
Gymeka Williams	Emergency Management Coordinator	County of Los Angeles OEM	1275 N. Eastern Avenue, Los Angeles, CA 90063	sGWilliams@ceo.lacounty.gov		✓
Diane Forte	Government Relations Manager	Southern California Edison	1721 22nd Street Santa Monica CA 90404	diane.forte@sce.com	(310) 310-5262	
Sylvia Diaz		Southern California Gas	9240 East firestone Blvd. Downey, CA 90241	sdiaz@semprautilities.com	(562) 803-7484	

Culver City & Culver City Unified School District
Multi-Jurisdictional Hazard Mitigation Plan
Meeting #1
April 6, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present ?
Fredy Ceja	Legislative Representative	Los Angeles Department of Water and Power		Fredy.Ceja@ladwp.com	(213)367-1051	✓
Linda Cunningham	Capital Programs -- Project Coordinator, Culver City	Golden State Water	5839 Green Valley Circle #106, Culver City, CA 90232	LindaCunningham@gswater.com	(562) 522-8835	✓
Edward Caldwell	Government Affairs Program Manager	West Basin Municipal Water District	17140 S. Avalon Blvd., Suite 210 Carson, CA 90746	edwardc@westbasin.org	(310) 660-6286 office (213) 500-0379 cell	✓
Darrel Menthe	Executive Director	Downtown Business Association	PO Box 1322 Culver City, CA. 90232	darrel+downtownculvercity.com@ccsen.d.com	(310) 202-6060	
Sam Levitt	Facilities Manager	Amazon Studios	9336 Washington Blvd. Culver City, CA 90232	samlevi@amazon.com	(310) 202-1234	
Mark Jovel		Culver-Palms Family YMCA	4500 Sepulveda Blvd. Culver City, CA 90230	mariojovel@ymcala.org	(310) 390-3604	
Marie Aragon, MSN, BSN, RN	Chief Nursing Officer Regional Administrator	Southern California Hospital	3828 Delmas Terrace Culver City, CA 90232	MarieKathryna.Aragon@altacorp.com	310-991-9439	✓
Rick Blackburn	Emergency Services Advisor	SoCalGas				✓
Timothy Dahlum		American Red Cross				✓

Culver City & Culver City Unified School District
 Multi-Jurisdictional Hazard Mitigation Plan
 Meeting #1
 April 6, 2023

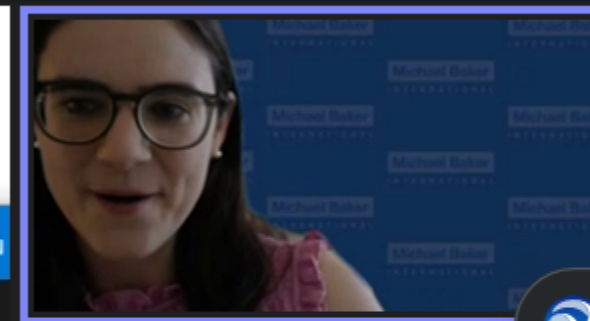
First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present ?
Brian Stokes	Vice President of	West Los Angeles College				✓
Brandon Vanscoy	Lieutenant	Culver City Police Dept.				✓
Lauren Wrenn	Associate Planner	Culver City Advance Planning Division	9770 Culver Blvd. Culver City, CA 90232	Lauren.wrenn@culvercity.org	(310) 253-5766	✓
Terrance Washington		CalOES				✓



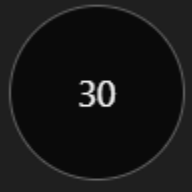
Multi-Jurisdictional Hazard Mitigation Plan Update

Stakeholder Meeting #1

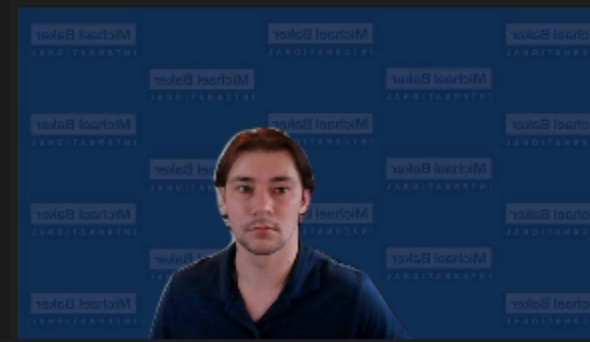
Culver City and Culver City Unified School District



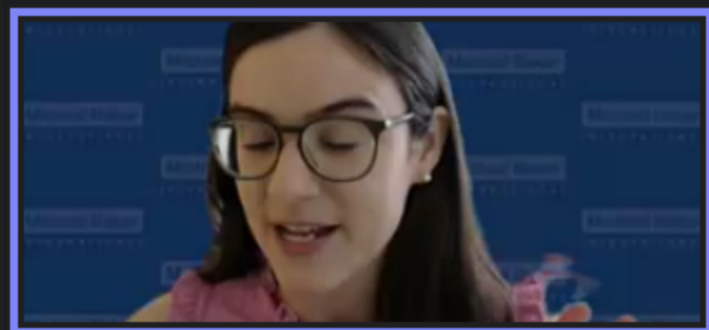
Vidra, Lisa



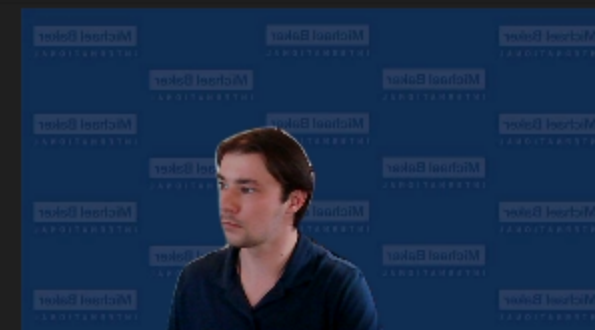
Participants



Steele, Noelle



LV Vidra, Lisa
 JS Susca, Joe
 30 Participants



Presenters (29) Mute all

- Marchese, Casey
- +1 562-522-8835 (External)
- MA Aragon, Marie External
- RB Blackburn, Rick B (External) External
- HC Calvinisti, Hector External
- TD Dahlum, Timothy External
- YD Demitri, Yanni External
- HD Diep, Hoa External
- EC E.J. Caldwell (External) External
- TE Evangelho, Troy External
- AF Ferguson, Adam External
- SF Fiehler, Savanna External
- FC Fredy Ceja (Guest) Meeting guest
- Gymeka Williams (External)

Agenda

- Introductions
- Project Background
- Purpose and requirements of MJHMP
- Project goals, objectives & expectations
- Hazard identification and prioritization
- Data Needs & Capabilities
- Next steps
- Questions/additional discussion



22:34

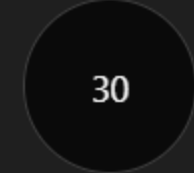
Take control Pop out Chat People Raise React View Apps More Camera Mic Share Leave



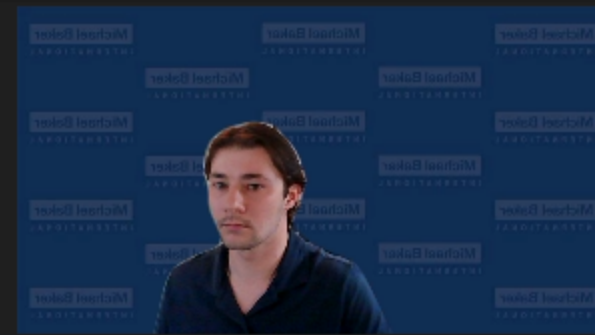
Vidra, Lisa



Susca, Joe



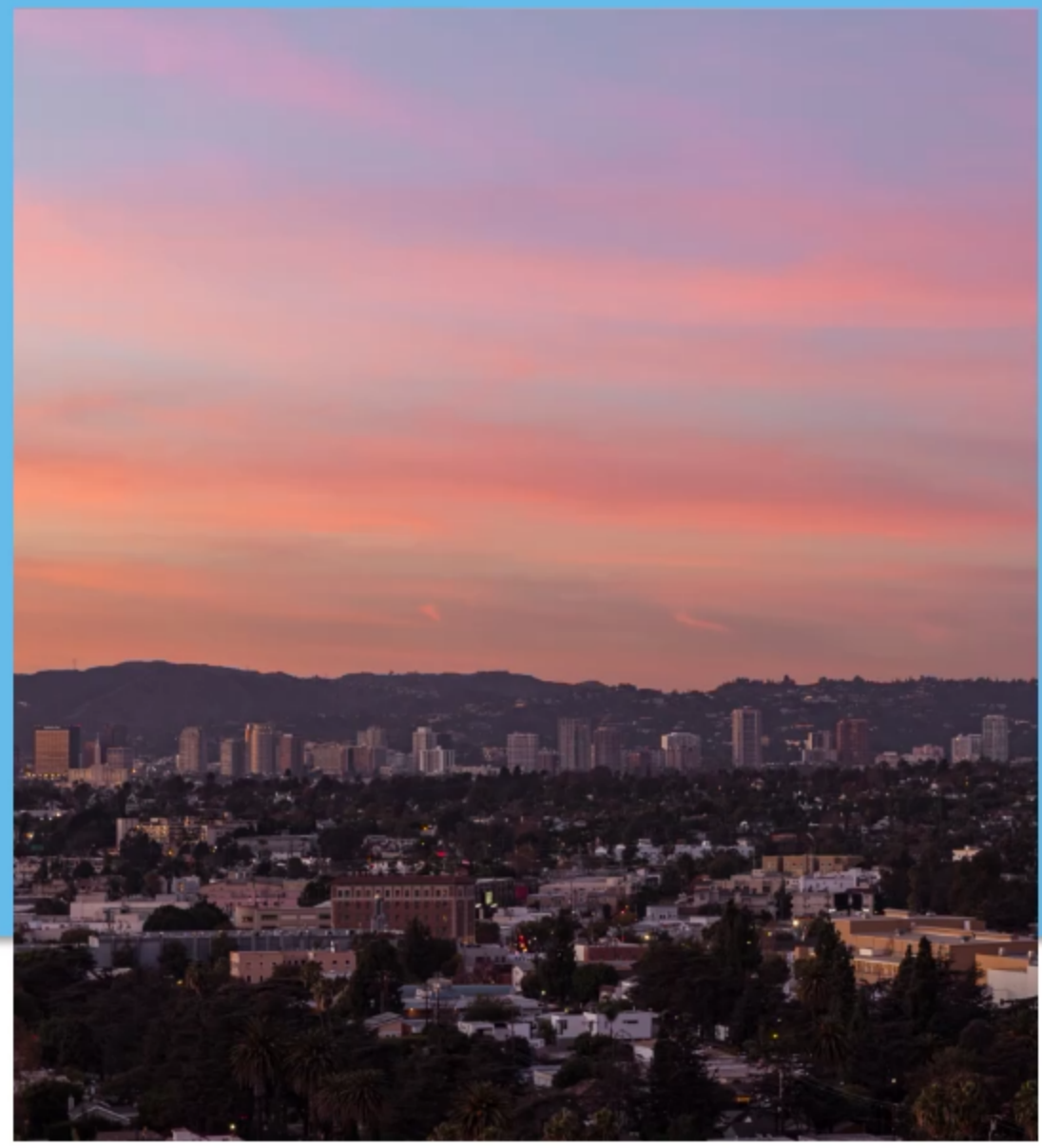
Participants



Presenters (29) Mute all

- Meeting guest
- Margarita Kustanovich External
- Mike Korgan (Guest) Meeting guest
- Parra, Christine External
- Singletary, Sean External
- Steele, Noelle Organizer
- Stokes, Brian (External) External
- Susca, Joe External
- Vanscoy, Brandon External
- Vidra, Lisa External
- Washington, Terr... (External) External
- Wrenn, Lauren External
- Yaffe, Michael

INTRODUCTION AND BACKGROUND



Multi - Jurisdictional Hazard Mitigation Plan Update

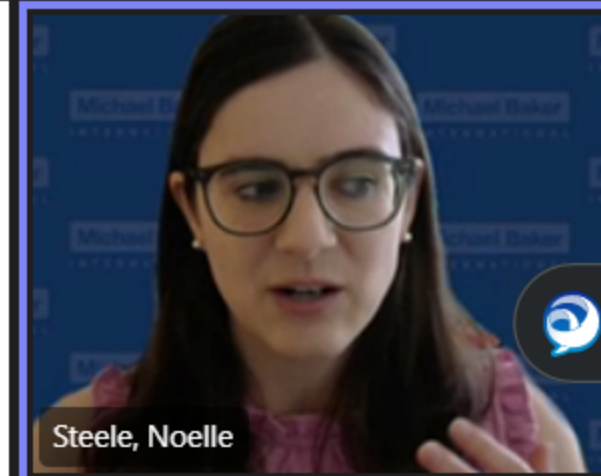
Michael Baker INTERNATIONAL

Steele, Noelle

Windows taskbar with search bar, task icons, and system tray showing 10:17 AM 4/6/2023.

HMP Planning Team Meetings

- Four Planning Team meetings:
 - Meeting #1: April 6, 2023
 - Introductions, MJHMP Plan Process/Development, Goals, Hazard Prioritization Exercise
 - Meeting #2: May 25, 2023
 - Crucial Facilities/Community Lifeline Updates, Hazard Prioritization Findings, Introduction to Vulnerability
 - Meeting #3: June 15, 2023
 - Vulnerability Assessment Findings, Mitigation Action Development
 - Meeting #4: July 13, 2023
 - Mitigation Action Development and Finalization
- Anticipated review of draft plan – August



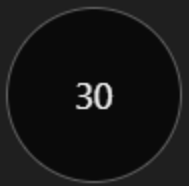
Steele, Noelle



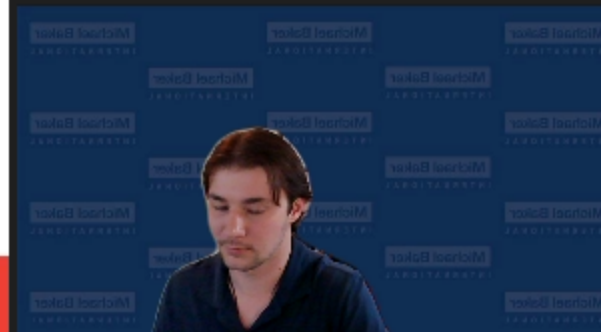
Mike Korgan (Guest)



Margarita ...



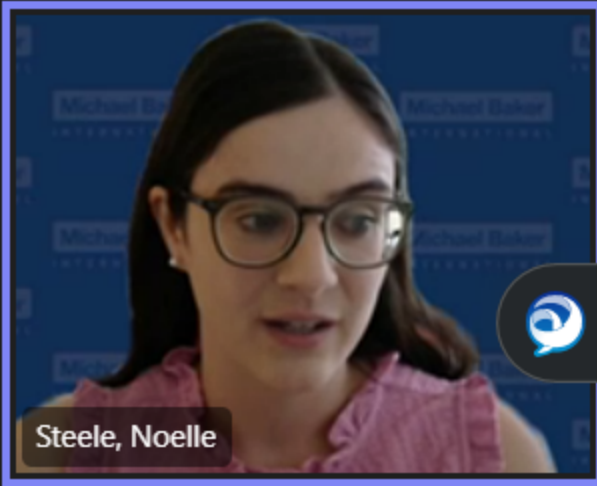
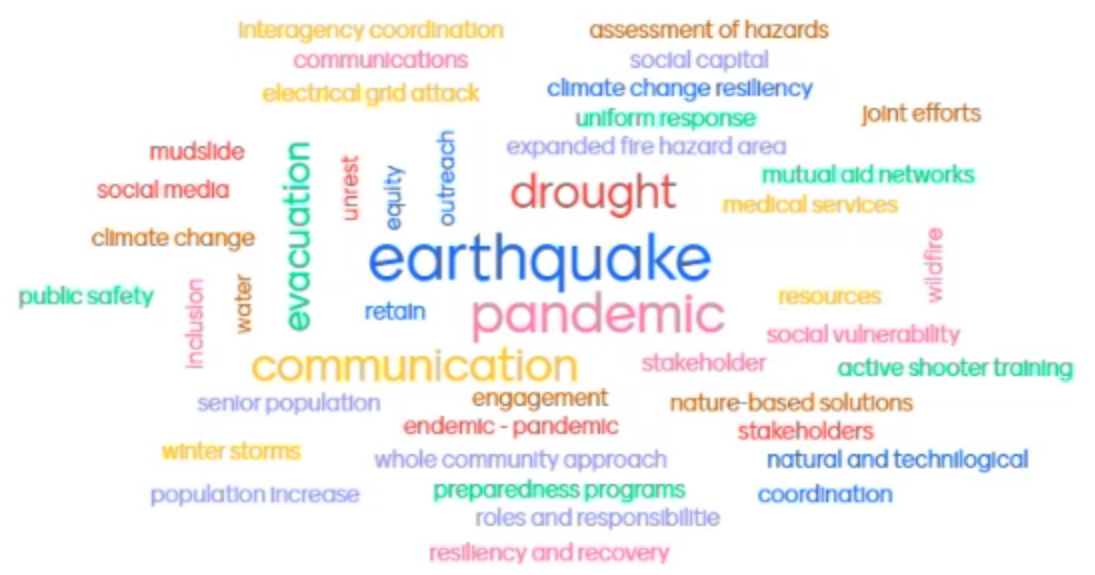
Participants



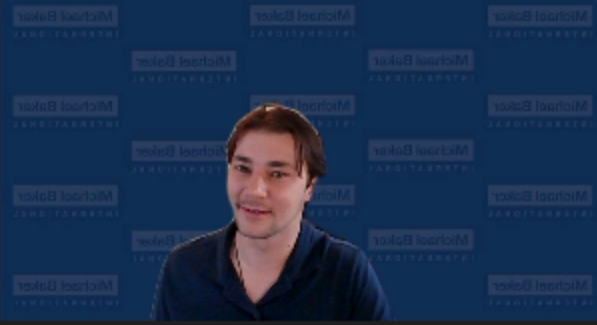
Steele, Noelle

Go to www.menti.com and use the code 2872 1167

What are some key words/phrases for consideration and incorporation into HMP goals?

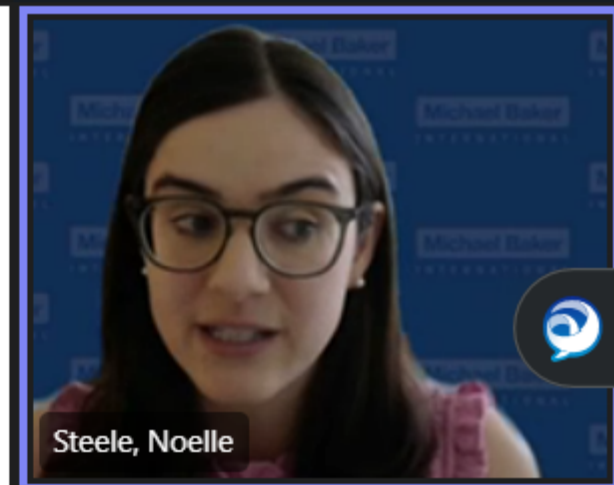


JS 29
 Susca, Joe Participants

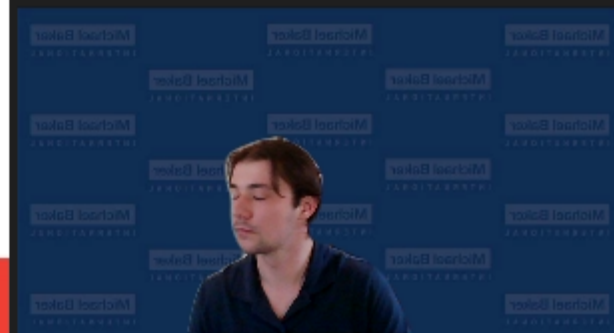


LHMP Potential Hazards

Avalanche	Flood	Sea level rise
Climate change	Geological hazards	Seismic hazards
Coastal erosion	Hailstorm	Severe winter storm
Coastal storm	Hazardous materials	Tornado
Dam/Reservoir failure	Human-Caused hazards	Tsunami
Disease/pest management	Hurricane	Volcano
Drought	Land subsidence	Wildfire
Earthquake fault rupture	Landslide and mudflow	Wind
Expansive soils	Lightning	Windstorm (& Power Outage)
Extreme heat	Liquefaction	Pandemic



JS 29
Susca, Joe Participants



01:13:37

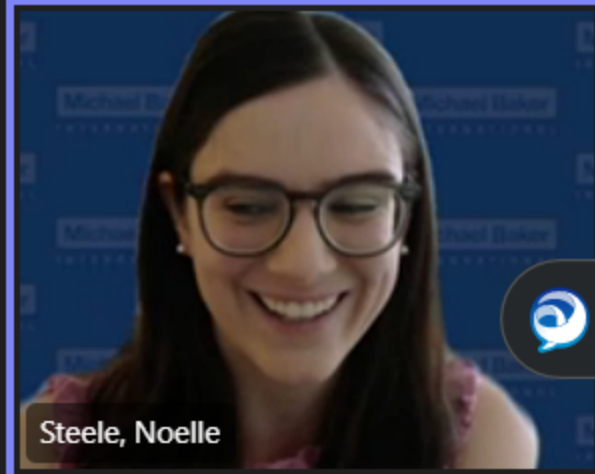
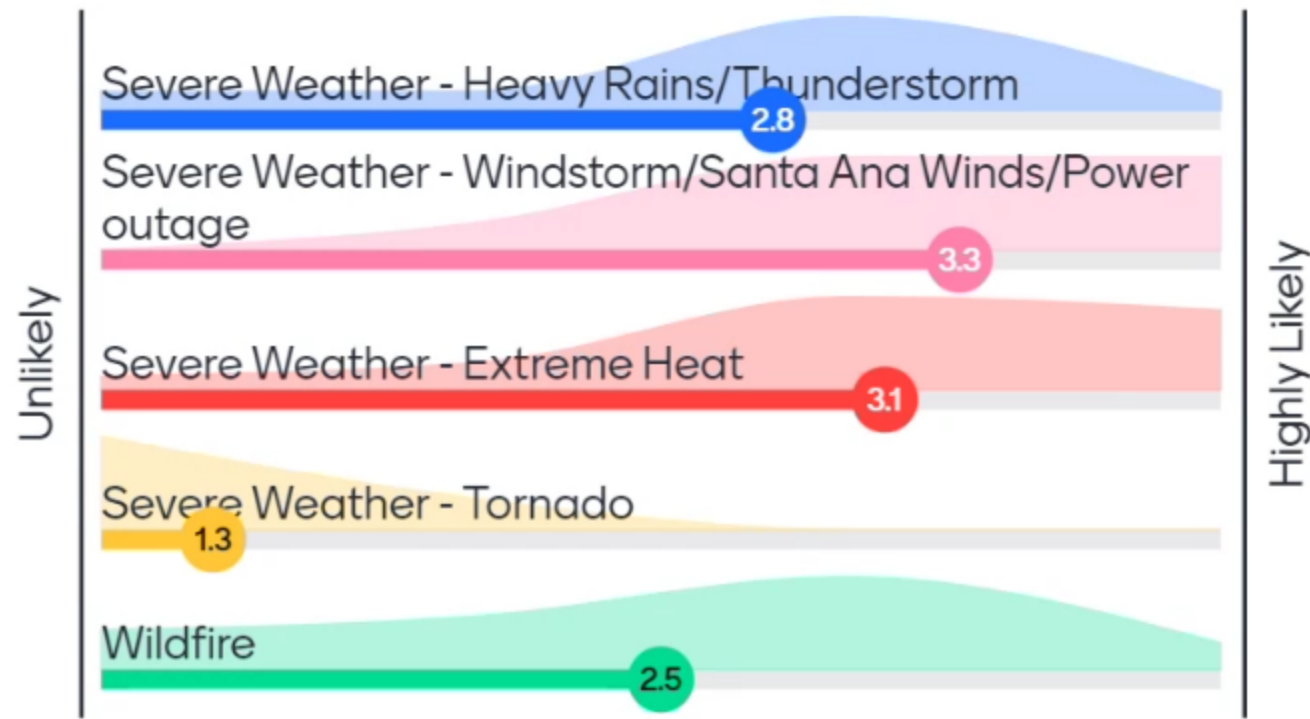
Take control Pop out Chat People Raise React View Apps More Camera Mic Share **Leave**

Culver City MJHMP - Mentimeter Voting
 mentimeter.com/app/presentation/alp8ss6rmx1icqegimm6y6fba57yxn9n/omr2s9syr158
 USC | Login Pre-Disaster Mitiga... Benefits to Use Agenda FY 2020/2021 Adop... 2020 Census Demo... California Coastal C... Starting Bare Root... How to Make & Us...

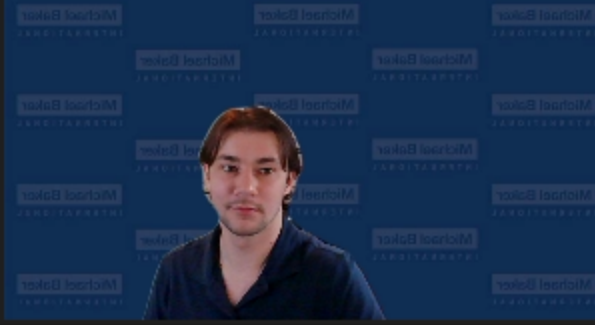
Go to www.menti.com and use the code 2872 1167

Probability: Likelihood of Occurrence within the Next Year

Mentimeter



TE 29
 Evangelho, ... Participants



Steele, Noelle 11:08 AM 4/6/2023

Type here to search 11:08 AM 4/6/2023

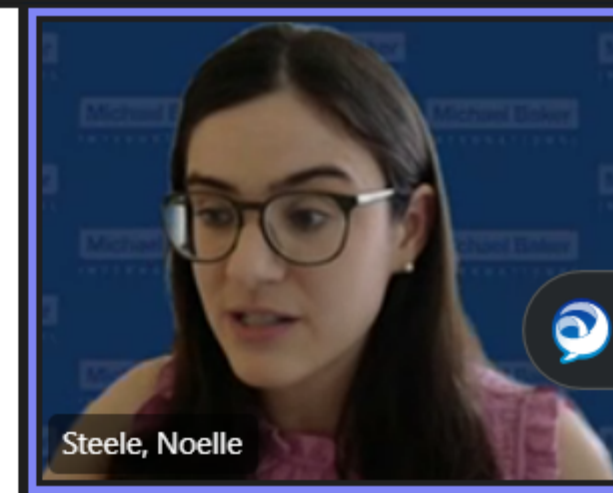
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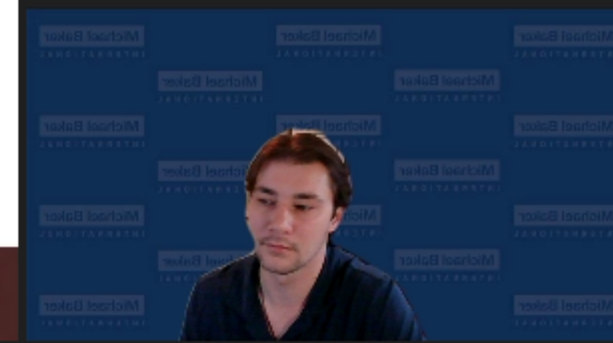
Data Needs & Capabilities

- Plans/studies
- Policies/programs
- Technical and GIS data
- Intrinsic/historic knowledge
- Photos
- Asset inventory for loss estimations

Provide any information/resources to Joe Susca – April 18th



TE 26
Evangelho, ... Participants



Windows taskbar with search bar, task view, and various application icons (Chrome, Edge, Word, PowerPoint, Teams, etc.). System tray shows date and time: 11:32 AM 4/6/2023.

B.1 - 3

Planning Team Meeting #2 Documentation



CULVER CITY & CCUSD MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN



PLANNING TEAM MEETING #2
Thursday, May 25th, 2023
10:00 AM – 12:00 PM via Microsoft Teams

AGENDA

Attendees: Refer to Sign-in Sheet

Presentation/Discussion:

- Introductions
 - Sign in sheet

- Hazard Mitigation Goals Discussion
 - Previous HMP Goals
 - Hazard Ranking Results

- Critical Facilities (See Microsoft Teams Document)

- Capabilities Assessment (See Microsoft Teams Document)
 - Previously identified plan capabilities
 - Additional recommended capabilities
 - Planning & regulatory, admin & tech, financial, education & outreach
 - FEMA wants to know how hazard mitigation is integrated into your planning mechanisms

- Summary of Previously Identified Hazards and Mitigation Actions
 - Mapped Hazards:
 - *Seismic – Fault Rupture, Liquefaction, Landslide/Mudflow*
 - *Flood*
 - *Wildfire*
 - Unmapped Hazards:
 - *Drought*
 - *Severe Weather (High Winds, Tornadoes, Thunderstorm)*

Next Steps/Action Items:

- Complete capabilities assessment
- Update Critical facilities values
- Finalize Hazard profiles
- Prepare vulnerability/risk assessment
 - Risk assessment
 - Hazard mitigation strategies

Marchese, Casey

From: Steele, Noelle
Sent: Monday, May 22, 2023 1:55 PM
To: DisabilityAdvisoryCommittee@culvercity.org; oifhelpsla@aol.com; community@stjosephctr.org; info@shareselfhelp.org
Cc: Susca, Joe; Mike Korgan
Subject: Culver City & CCUSD - Multi-Jurisdictional Hazard Mitigation Plan, Meeting Series

Hello,

You have been selected and notified by the City of Culver City and Culver City Unified School District as a member of the **Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) Planning Committee**. The Hazard Mitigation Plan is a key City document that evaluates risk to natural and human-caused hazards, and identifies mitigation actions to reduce vulnerability from these hazards. Updated guidance from the Federal Emergency Management Agency require our team to engage and solicit feedback from nonprofits, NGOs, or governmental liaisons tasked with serving underserved or marginalized communities. Michael Baker International is the City's consultant, charged with preparing the MJHMP update.

This Planning Committee will be the core group responsible for providing MJHMP input/updates, guiding the planning process, and agreeing upon the final contents of the plan. A series of four meetings will be hosted for two hours each, via Microsoft Teams. We understand the importance of your time – meetings will be structured to maximize results and minimize “homework” outside of the meeting block. Your attendance and feedback at one or all of these meetings would be greatly appreciated.

The schedule for the four planning team meetings includes:

- Thursday, April 6, 2023 (2 hours, 10AM – 12PM)
- **Thursday, May 25, 2023 (2 hours, 10AM – 12PM)**
- Thursday, June 15, 2023 (2 hours, 10AM – 12PM)
- Thursday, July 13, 2023 (2 hours, 10AM – 12PM)

Agendas will be provided prior to each meeting via this email chain.

The 2017 MJHMP is linked here for your convenience:

<https://www.culvercity.org/files/assets/public/documents/community-development/multijurisdictionalhazardm.pdf>

We appreciate your time and commitment. Your involvement will ensure a comprehensive and robust plan update that meets Cal OES/FEMA requirements. Please reach out if you have any questions regarding the MJHMP or update process.

Thank you,
Noelle

Noelle Steele | Project Manager – Planning

5 Hutton Centre Drive, Suite 500 | Santa Ana, CA 92707 | [O] (949) 855-3683 | [M] (949) 633-6183
noelle.steele@mbakerintl.com | www.mbakintl.com     

Marchese, Casey

Subject: Culver City & CCUSD - Multi-Jurisdictional Hazard Mitigation Plan, Meeting #2
Location: Microsoft Teams Meeting

Start: Thu 5/25/2023 10:00 AM
End: Thu 5/25/2023 12:00 PM

Recurrence: (none)

Meeting Status: Meeting organizer

Organizer: Steele, Noelle

Required Attendees: Steele, Noelle; Susca, Joe; Marchese, Casey; adam.ferguson@culvercity.org; Sims, Jason; Soghor, Lisa; Koutsouros, Tim; Diep, Hoa; Calvinisti, Hector; Barnes, Tevis; Vidra, Lisa; Evangelho, Troy; Singletary, Sean; Demitri, Yanni; Parra, Christine; Mike Korgan; Sean Kearney; steven.torrence@santamonica.gov; kristin_cavanaugh@spe.sony.com; Savanna.Fiehler@Redcross.org; mkustanovich; mjanmohamed; Jillian De Vela; sGWilliams@ceo.lacounty.gov; diane.forte@sce.com; sdiaz@semprautilities.com; Fredy.Ceja@ladwp.com; LindaCunningham@gswater.com; edwardc@westbasin.org; darrel+downtownculvercity.com@ccsend.com; samlevi@amazon.com; Jovel, Mario; MarieKathryna.Aragon@altacorp.com; Gymeka Williams; DisabilityAdvisoryCommittee@culvercity.org; oifhelpsla@aol.com; community@stjosephctr.org; info@shareselfhelp.org

Optional Attendees: Yaffe, Michael; Diaz, Silvia A.; Cavanaugh, Kristin; Stokes, Brian; Wing Ng

Hello,

You have been selected and notified by the City of Culver City and Culver City Unified School District (2017) as a member of the Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) Planning Committee. Michael Baker International is the City's consultant, charged with preparing the MJHMP update. This Planning Committee will be the core group responsible for providing MJHMP input/updates, guiding the planning process, and agreeing upon the final contents of the plan. A series of four meetings will be hosted for two hours each, via Microsoft Teams. We understand the importance of your time – meetings will be structured to maximize results and minimize “homework” outside of the meeting block.

The schedule for the four planning team meetings includes:

- Thursday, April 6, 2023 (2 hours, 10AM – 12PM)
- **Thursday, May 25, 2023 (2 hours, 10AM – 12PM)**
- Thursday, June 15, 2023 (2 hours, 10AM – 12PM)
- Thursday, July 13, 2023 (2 hours, 10AM – 12PM)

Agendas will be provided prior to each meeting via this email chain.

The 2017 MJHMP is linked here for your convenience:

<https://www.culvercity.org/files/assets/public/documents/community-development/multijurisdictionalhazardm.pdf>

We appreciate your time and commitment. Your involvement will ensure a comprehensive and robust plan update that meets Cal OES/FEMA requirements. Please reach out if you have any questions regarding the MJHMP or update process.

Thank you,
Noelle

Microsoft Teams meeting

Join on your computer, mobile app or room device

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CULVER CITY & CCUSD MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN



PLANNING TEAM MEETING #2
Thursday, May 25th, 2023
10:00 AM – 12:00 PM via Microsoft Teams

Meeting Minutes

Attendees: Refer to Sign-in Sheet

Presentation/Discussion:

- Introductions
 - Sign in sheet

- Hazard Mitigation Goals Discussion
 - Previous HMP Goals
 - *Question From Joe Susca (Senior Management Analyst, Culver City) – Aren't these established by FEMA?*
 - *Answer from Noelle Steele (Project Manager, Michael Baker) – No, these are based on the SHMP, but we do have some flexibility to cater them to the needs of the City.*
 - *Joe Susca (Senior Management Analyst, Culver City) – Your redline edits look good to me so far.*
 - Hazard Ranking Results
 - *Joe Susca (Senior Management Analyst, Culver City) – No suggested changes right now, but the changes in hazard rankings from the 2017 HMP to now appear to be accurate.*
 - *Noelle Steele (Project Manager, Michael Baker) – If the City is interested in grant funding for a specific hazard category (e.g., a seismic retrofit grant application), you may want to prioritize or rank hazards that reflect your highest concerns.*
 - *Joe Susca (Senior Management Analyst, Culver City) – That's a good point, we might want to restore the fault rupture and ground shaking to a High planning consideration as it was in the 2017 HMP.*
 - *Linda Cunningham (Capital Programs, Golden State Water Company) – On behalf of GSWC, for drought and power outage during wildfire or wind, we have upgraded all of our systems, so we don't rely on power during PSPS.*
 - *Noelle Steele (Project Manager, Michael Baker) – We can increase the earthquake hazards to high.*
 - *Troy Evangelho (Advanced Planning Manager, Culver City) – There was a landslide and mudflow recently in the Baldwin Hills Conservancy; it's not city-controlled land but we may want to address that and point it out.*



- *Linda Cunningham (Capital Programs, Golden State Water Company) – Golden State Water company is in the confines of that park, and we have been mitigating that hazard by designing and putting in curbs to deal with runoff.*
- *Noelle Steele (Project Manager, Michael Baker) – Lets flag landslide and mudflow for further discussion. If we want to prioritize that and categorize it as a high hazard planning consideration, we can.*

- **Critical Facilities (See Microsoft Teams Document)**
 - *Question from Christine Parra (Emergency Preparedness Coordinator, Culver City) – On the update will you discuss updates to the previously included facilities?*
 - *Answer from Noelle Steele (Project Manager, Michael Baker) – Yes, we have the list of the previous critical facilities, and we have a list of recommended additions.*
 - *Christine Parra (Emergency Preparedness Coordinator, Culver City) – There are quite a few oil wells on our side up on the hill, and I'm not seeing those.*
 - *Noelle Steele (Project Manager, Michael Baker) – Are those active oil facilities?*
 - *Christine Parra (Emergency Preparedness Coordinator, Culver City) – I can confirm that. I know they were active, and I can follow up and get you more information on those facilities.*
 - *Question from Noelle Steele (Project Manager, Michael Baker) – Is there any potable water facilities that should be listed as critical?*
 - *Linda Cunningham (Capital Programs, Golden State Water Company) – Yes, we have them. We have where we receive our water, MET connection WB 23, 24, ; Pump Stations: ranch road, Bernardo; Reservoirs: Baldwin hills, Perham, Sentney. I can email all the locations, addresses.*
 - *Question from Noelle Steele (Project Manager, Michael Baker) – Is there anyone from LADWP on the call that has information on critical facilities?*
 - *Answer from Jillian De Vela (Emergency Management Coordinator, City of Los Angeles) – I can forward that question on to LADWP. Let me reach out to them and see if they have critical infrastructure in the City.*
 - *Question from Noelle Steele (Project Manager, Michael Baker) – Are there any NGOs or non-profits that CCUSD works with?*
 - *Answer from Mike Korgan (MOT Director, CCUSD) – There are some preschools and afterschool activities, but we are not directly partnered with them. They are small organizations though.*
 - *Noelle Steele (Project Manager, Michael Baker) – We can leave them out as stakeholders if we think they will not play a large role in the planning and implementation of the HMP.*



- *Question from Noelle Steele (Project Manager, Michael Baker) – Which facilities are used as emergency shelters?*
 - *Answer from Christine Parra (Emergency Preparedness Coordinator, Culver City) – Veterans Memorial building, the teen center, and senior center.*
 - *Joe Susca (Senior Management Analyst, Culver City) – Some of the City's larger parks have been identified in our debris removal contracts. We would use these parks as a debris removal areas and that's why they are listed on this critical facilities list.*
 - *Christine Parra (Emergency Preparedness Coordinator, Culver City) – The Municipal Plunge are used for hazard materials showers.*
- *Noelle Steele (Project Manager, Michael Baker) – We can confirm with SCE that we have all their critical facilities on our list. We will also note that we may list SoCal Gas facilities, but we may not map them for security reasons.*
- *Noelle Steele (Project Manager, Michael Baker) – For Marycrest Manor, this is a skilled nursing facility in a hazard zone; evacuation would be a special consideration because this is a vulnerable population. This is something we may want to incorporate into the plan and include considerations accordingly.*
 - *Christine Parra (Emergency Preparedness Coordinator, Culver City) – We have done considerable amount of training with them and the fire department.*
 - *Noelle Steele (Project Manager, Michael Baker) – Lets document what you've already done and what we can continue to do so we can note how we are addressing vulnerable populations.*
- **Capabilities Assessment (See Microsoft Teams Document)**
 - Previously identified plan capabilities
 - Additional recommended capabilities
 - Planning & regulatory, admin & tech, financial, education & outreach
 - FEMA wants to know how hazard mitigation is integrated into your planning mechanisms
 - *Question from Noelle Steele (Project Manager, Michael Baker) – We have some questions regarding Parks and Rec Master Plan and Water Conservation Plan have these been updated since our last HMP?*
 - *Answer from Joe Susca (Senior Management Analyst, Culver City) – I can comment on water Conservation plan, this is the only one we ever made, there is not an updated version.*
 - *Adam Ferguson (Senior Management Analyst, Culver City) – We just received approval from City Council to do a new parks and rec master plan, starting in the fall. City Council set aside two sites to do feasibility studies for, Bill Botts and veterans center. It includes veterans park and veterans center, it does not include the plunge or teen center.*
 - *Question from Noelle Steele (Project Manager, Michael Baker) – What about the Annual Catch Basin Clearing Program, can we assume that is continuing?*



- *Answer from Joe Susca (Senior Management Analyst, Culver City) – Just before the rainy season we remove all debris from our drainage system, we do that at least once a year.*
- *Question from Noelle Steele (Project Manager, Michael Baker) – Also, there were two mutual aid agreements, does the mutual aid agreement between the fire department and Sony still exist for emergency response/evacuation?*
 - *Answer from Edson Ramos (Crisis Management, Sony Pictures) – Yes, I believe so, I can check and follow up.*
 - *Christine Parra (Emergency Preparedness Coordinator, Culver City) – This says it's an informal agreement, which I believe is something we have always had but not sure if there is a written agreement.*
- *Question from Noelle Steele (Project Manager, Michael Baker) – What about the Memo of Understanding with Smart and Final?*
 - *Answer from Christine Parra (Emergency Preparedness Coordinator, Culver City) – There was no expiration date on that, I can follow up and let you know.*
- *Question from Noelle Steele (Project Manager, Michael Baker) – We also have a question about the Smart 911 service, we couldn't find examples of this. Was this replaced?*
 - *Answer from Christine Parra (Emergency Preparedness Coordinator, Culver City) – That has been replaced, it is now called Culver City Community Connect.*
- *Question from Noelle Steele (Project Manager, Michael Baker) – Is there an update to the CCUSD Facilities Master Plan ongoing?*
 - *Answer from Mike Korgan (MOT Director, CCUSD) – There is a new master plan that is more recent, I haven't looked at it, but it is their remodel and construction master plan. They are looking into moving forward with that next year.*
 - *Noelle Steele (Project Manager, Michael Baker) – Can you provide that? Not sure if that may include retrofits and remodels but if so, we want to connect that to mitigation actions if possible.*
 - *Mike Korgan (MOT Director, CCUSD) – I can provide that.*
- **Funding for Mitigation Projects**
 - *Noelle Steele (Project Manager, Michael Baker) – I can do some research into funding for mitigation projects similar to the Berkeley Seismic Retrofit Project and see if that is something the City is interested in pursuing.*
- **Summary of Previously Identified Hazards and Mitigation Actions**
 - **Mapped Hazards:**
 - *Seismic – Fault Rupture, Liquefaction, Landslide/Mudflow*
 - *Flood*
 - *Wildfire*
 - **Unmapped Hazards:**



- *Drought*
- *Severe Weather (High Winds, Tornadoes, Thunderstorm)*
 - *Question from Noelle Steele (Project Manager, Michael Baker) – Are there mitigation actions that have been completed or new ones to add?*
 - *Answer from Joe Susca (Senior Management Analyst, Culver City) – The Seismic Retrofit Ordinance identified soft story buildings and identifies some low interest loans and other incentives to retrofit buildings.*
 - *Noelle Steele (Project Manager, Michael Baker) – We saw that establishing a Alquist-Priolo hazard overlay zone was a previous mitigation action.*
 - *Question from Joe Susca (Senior Management Analyst, Culver City) – On these redlines and changes, will we need to evaluate and make suggestions? People who are not present may want to review and suggest new mitigation actions.*
 - *Answer from Noelle Steele (Project Manager, Michael Baker) – I imagine we will have that conversation as part of meeting number 3. We can upload this to the Teams so anyone who was not able to attend this meeting can have a chance to review and propose new actions.*
 - *Noelle Steele (Project Manager, Michael Baker) – This is our opportunity to identify big picture projects that may be applicable for grant funding.*
 - *Question from Tim Koutsouras (Building Official, Culver City) – Would we be able to identify a City-wide study for liquefaction hazards? Looking at mitigation action 37, 38, 39, those are all interrelated.*
 - *Answer from Noelle Steele (Project Manager, Michael Baker) – Yes, we can include that as a mitigation action.*
 - *Question from Noelle Steele (Project Manager, Michael Baker) – Are there actions like vegetation management or evacuation or other projects to mitigate fire hazard risks?*
 - *Answer from Joe Susca (Senior Management Analyst, Culver City) – I can't think of anything to enhance accessibility off the top of my head.*
 - *Adam Ferguson (Senior Management Analyst, Culver City) – Me neither.*
 - *Joe Susca (Senior Management Analyst, Culver City) – We have a meeting to go over this topic as it is required by the State, we can keep the MJHMP in mind during that meeting.*
 - *Noelle Steele (Project Manager, Michael Baker) – We see a lot of funding going towards vegetation management and evacuation especially in the urban/wildfire interface, so if that is something we want to address we can.*
 - *Joe Susca (Senior Management Analyst, Culver City) – Putting together a program to address vegetation management sounds good to me we can connect with Christine Parra on that.*
 - *Adam Ferguson (Senior Management Analyst, Culver City) – We currently address vegetation on a case-by-case basis, Culver City park is where that is typically an issue. But we don't have a program other than dealing with it on a case-by-case basin.*



- *Joe Susca (Senior Management Analyst, Culver City) – Culver City Park/Bills Botts Field is very hilly and has a lot of vegetation which may increase its vulnerability to wildfire even if it's not in a mapped wildfire zone.*
- *Noelle Steele (Project Manager, Michael Baker) – We can address wildfire and develop mitigation actions for facilities not in a mapped zone, especially for facilities adjacent to mapped hazard zones because wildfires do not abide by wildfire map boundaries.*
- *Adam Ferguson (Senior Management Analyst, Culver City) – We are in the process of using goats for vegetation management.*
- *Noelle Steele (Project Manager, Michael Baker) – I think Cal Fire helped Yorba Linda with their goats, but we can look into other funding sources for that kind of project, they can also fund multi-year vegetation removal and management.*

Next Steps/Action Items:

- Complete capabilities assessment
- Update Critical facilities values
- Finalize Hazard profiles
- Prepare vulnerability/risk assessment
 - Risk assessment
 - Hazard mitigation strategies

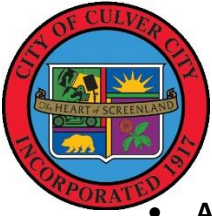
Action Items:

Culver City and CCUSD

- **Action Item:** Christine Parra (Emergency Preparedness Coordinator, Culver City) to follow up on oil wells as critical facilities.
- **Action Item:** Christine Parra (Emergency Preparedness Coordinator, Culver City) to confirm Memo of Understanding with Smart & Final.
- **Action Item:** Mike Korgan (MOT Director, CCUSD) to provide current CCUSD Facilities Master Plan.

Michael Baker International

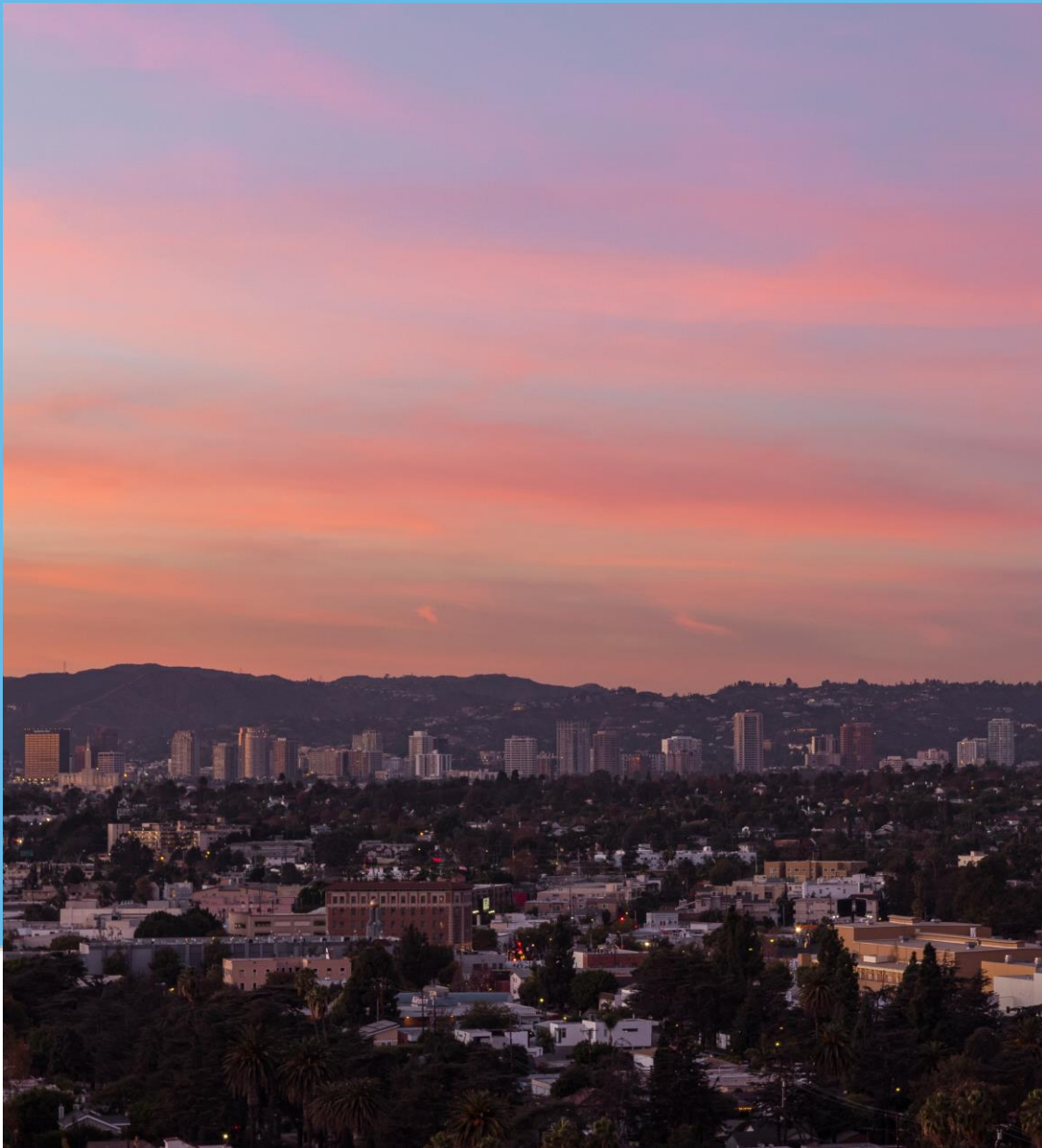
- **Action Item:** MBI to categorize fault rupture and ground shaking as high hazard planning consideration. Landslide/mud flow and liquefaction to be further discussed.
- **Action Item:** MBI to confirm critical facilities with SCE and SoCalGas.
- **Action Item:** MBI to research funding for mitigation projects like the Berkeley Seismic Retrofit Project.
- **Action Item:** MBI to upload mitigation actions to Teams for stakeholder review/comment.
- **Action Item:** MBI to identify City-wide liquefaction study as a mitigation action.



- **Action Item:** MBI to identify vegetation removal program and funding as a potential mitigation action.

External Stakeholders

- **Action Item:** Linda Cunningham (Capital Programs, Golden State Water Company) to provide locations/addresses of Golden State Water Company Critical Facilities (MET connections, pump stations, reservoirs).
- **Action Item:** Jillian De Vela (Emergency Management Coordinator, City of Los Angeles) to reach out to LADWP to confirm critical infrastructure in Culver City.
- **Action Item:** Edson Ramos (Crisis Management, Sony Pictures) to confirm mutual aid agreement between Fire Department and Sony



Multi-Jurisdictional Hazard Mitigation Plan Update

Stakeholder Meeting #2

Culver City and
Culver City Unified School District



Michael Baker
INTERNATIONAL

Agenda

- Hazard Mitigation Goals and Hazard Ranking
- Critical Facilities Review and Discussion
- Capabilities Assessment
- Summary of Previously Identified Hazards and Introduction to Mitigation Actions
- Next steps
- Questions/additional discussion

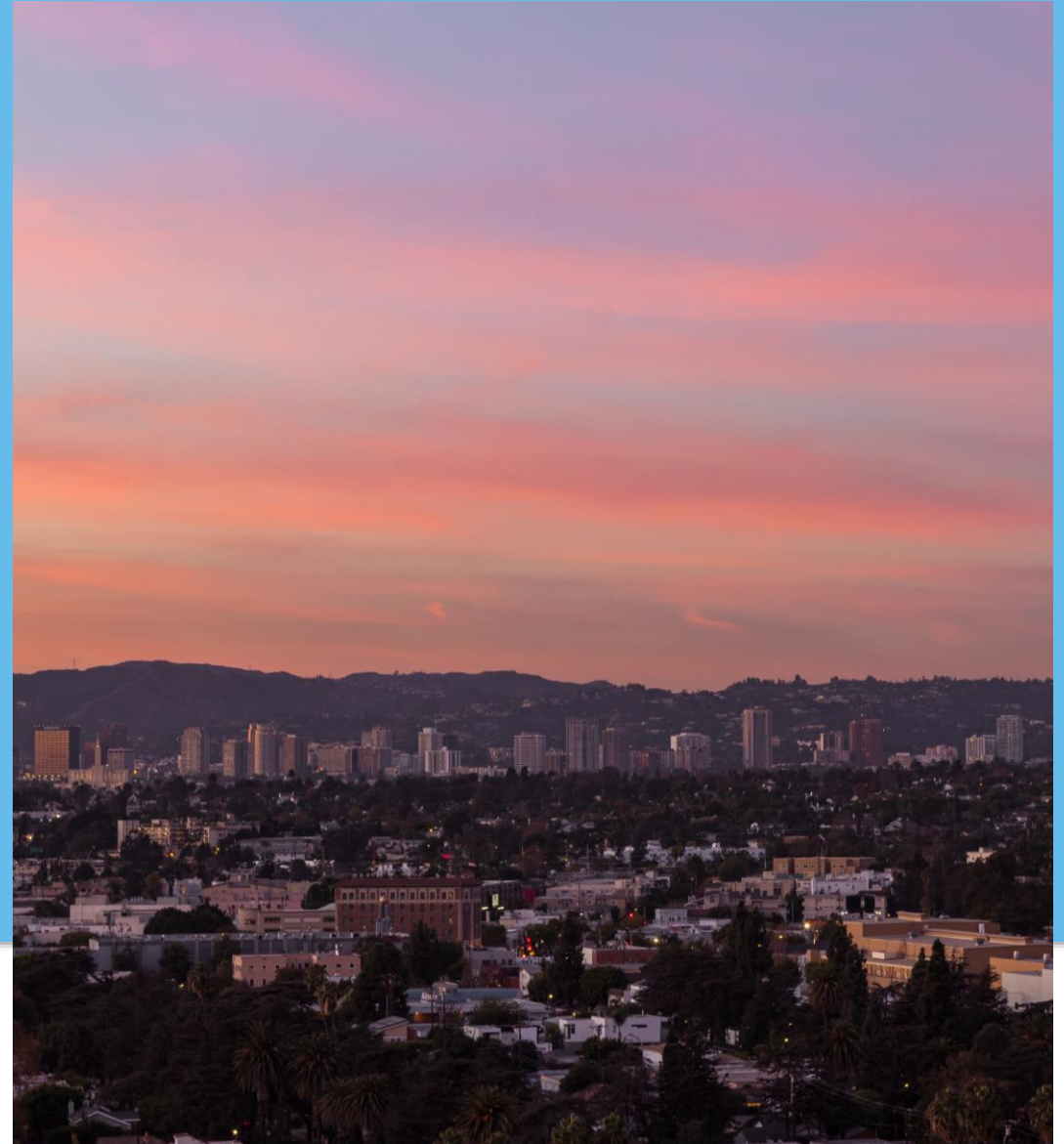


Meeting #1 Recap

- Project Background
- Purpose and requirements of the MJHMP
- Project goals, objectives & expectations
- Hazard Identification and Prioritization
- Data Needs & Capabilities



HAZARD MITIGATION GOALS



Previous 2017 Hazard Mitigation Goals

- Protect Life and Property:
 - Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resilient ~~resistant to losses from hazards~~.
 - Reduce losses and repetitive damages from chronic hazard events ~~while promoting insurance coverage for catastrophic hazards~~.
 - Improve hazard assessment information to make recommendations for ~~new~~ development in high-risk or areas ~~and encouraging preventive measures for existing development in areas~~ vulnerable to hazards.



Previous 2017 Hazard Mitigation Goals

- Public Awareness:
 - Develop and implement educational outreach programs to increase public awareness of the risks associated with hazards.
 - Provide information on tools, partnership opportunities, and funding resources to assist in implementing mitigation activities.
- Natural Systems:
 - Balance natural resource management and land use planning with nature-based solutions ~~natural~~ hazard mitigation to protect life, property, and the environment.
 - Preserve, rehabilitate, and enhance natural systems to mitigate natural hazards.



Previous 2017 Hazard Mitigation Goals

- Partnerships and Implementation:
 - Strengthen communication and coordinate participation among and within public agencies, residents, nonprofit organizations, business, and industry to develop a vested interest in implementation.
 - Encourage leadership within public and private sector organizations to prioritize and implement ~~local and regional~~ hazard mitigation activities.
- Emergency Services:
 - Establish policy to ensure mitigation projects for critical facilities, services, and infrastructure.
 - ~~Strengthen emergency operations by increasing coordination among public agencies, nonprofit organizations, business, and industry.~~
 - Where appropriate, coordinate and integrate hazard mitigation activities with emergency operations plans and procedures.

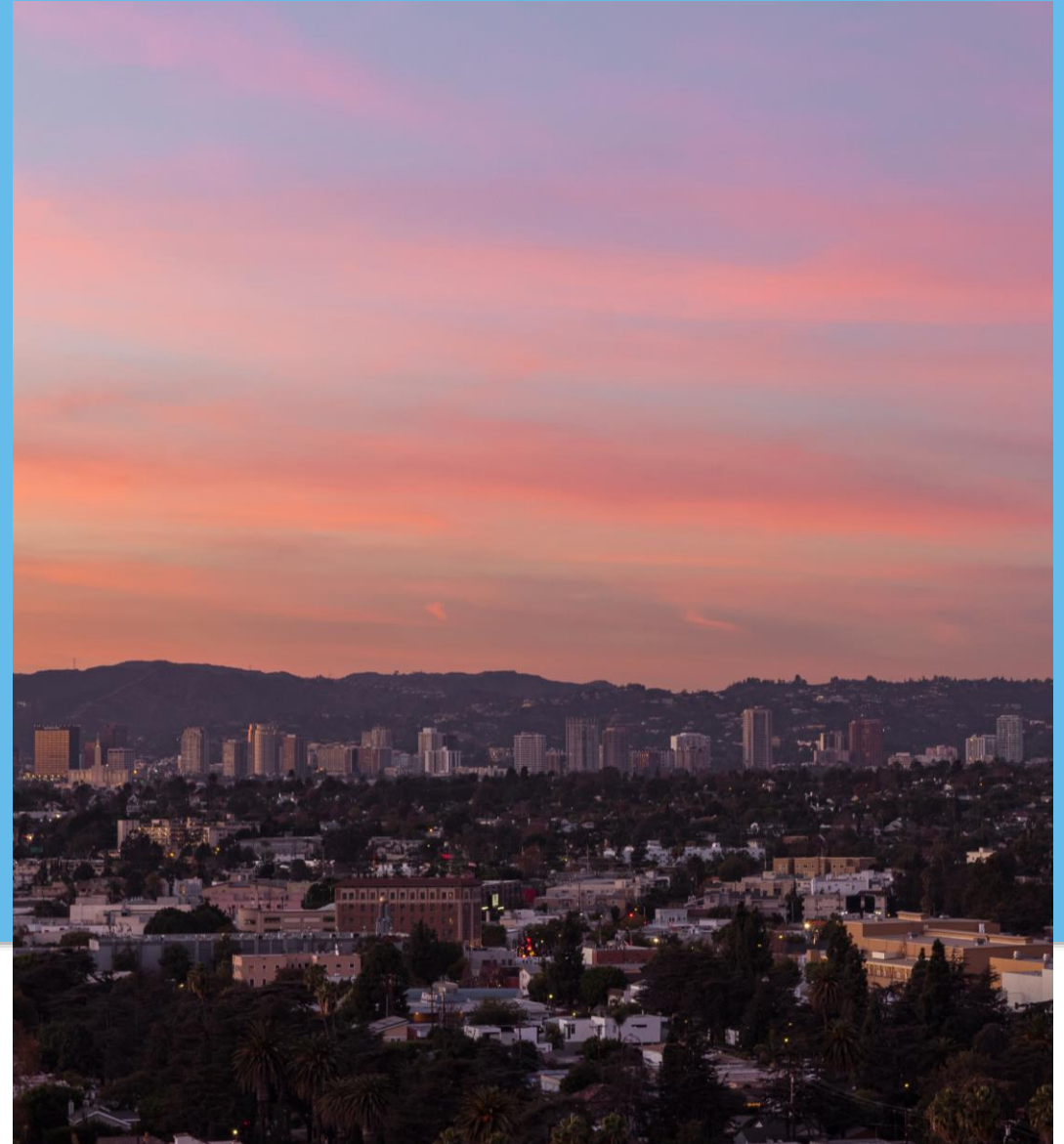


Hazard Ranking Worksheet

Hazard Type	Probability	Impact			Total Score	Hazard Planning Consideration	2017 Previous Hazard Planning Consideration
		Location	Primary Impact	Secondary Impacts			
Dam/Reservoir Failure	1.21	1.44	2.17	2.24	9.17	Low	-
Drought	2.79	3.50	2.00	2.12	29.35	Medium	High
Flood	1.84	2.11	2.17	2.59	16.57	Medium	Medium
Human Caused Hazards - Hazardous Materials Spill	2.05	2.22	2.28	2.41	18.77	Medium	-
Human Caused Hazards - Terrorism/Active Shooter	2.37	2.33	2.72	2.59	24.00	Medium	-
Human Caused Hazards - Civil Disturbance/Civil Unrest	2.42	2.61	2.50	2.71	25.13	Medium	-
Human Caused Hazards - Pandemic	1.89	3.33	2.33	2.59	21.13	Medium	-
Seismic Hazards - Landslide/Mudflow	2.33	1.94	2.35	2.56	20.86	Medium	Medium
Seismic Hazards - Fault Rupture	2.22	3.00	2.47	3.50	26.10	Medium	High
Seismic Hazards - Ground Shaking	3.06	3.67	3.06	3.06	40.44	Medium	High
Seismic Hazards - Liquefaction	2.00	2.17	2.35	2.56	18.64	Medium	Medium
Severe Weather - Heavy Rains/Thunderstorm	2.71	3.32	2.35	2.21	29.30	Medium	Medium
Severe Weather - Windstorm/Santa Ana Winds/Power Outage	3.35	3.11	2.18	2.21	34.30	Medium	Medium
Severe Weather - Extreme Heat	3.06	3.53	2.06	2.00	32.23	Medium	-
Severe Weather - Tornado	1.24	1.53	1.88	1.64	8.33	Low	Medium
Wildfire	2.47	2.05	2.41	2.14	21.72	Medium	High



CRITICAL FACILITIES



What is a Critical Facility?

- **Critical Facilities – Community Lifelines**
 - Facilities that are critical to support the basic livelihood of citizens and businesses.
 - Risk assessment will look at what facilities are in hazard zones
 - Considers replacement cost and community value
 - Mitigation strategies reflect vulnerabilities of critical facilities
 - Strengthen existing vulnerable facilities
 - Avoid building new ones in at-risk areas



Critical Facilities

- Focused on facilities that may be vital to evacuations, serve as assembly points or temporary shelters, or provide a supportive role in preparing for and recovering from hazard events
- Critical facilities include essential public buildings, police and fire stations, schools and public parks, transportation infrastructure, and essential public utility assets



Community Lifelines

Community lifelines are defined by FEMA, a construct for objectives-based post-disaster stabilization efforts. A lifeline enables the continuous operation of critical government and business functions and is essential to human health and safety or economic security.

- Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function.
- Lifelines are the integrated network of assets, services, and capabilities that are used day-to-day to support the recurring needs of the community.
- When disrupted, decisive intervention (e.g., rapid service re-establishment or employment of contingency response solutions) is required to stabilize the incident.



SAFETY AND SECURITY

- Law Enforcement/Security (stations, staff, site security)
- Fire Service (stations, staff, resources)
- Search and Rescue
- Government Service (emergency operations centers, essential functions, schools, gov't offices)
- Community Safety (flood control, protective actions, other hazards)



FOOD, WATER, SHELTER

- Food (commercial food distribution, supply chains, food distribution programs)
- Water (drinking water utilities, wastewater systems, water supply chain)
- Shelter (housing, shelters, commercial facilities such as hotels)
- Agriculture (animals and agriculture)



HEALTH AND MEDICAL

- Medical Care (hospitals, dialysis, pharmacies, care facilities, vet services, home care)
- Public Health (epidemiological monitoring, labs, clinical guidance, behavioral health)
- Patient Movement (emergency medical services)
- Medical Supply Chain (products, manufacturing, distribution, research, sterilization)
- Fatality Management (mortuary and post-mortuary services)



ENERGY

- Power Grid (generation, transmission, distribution systems)
- Fuel (refineries, processing, storage, pipelines, distribution)



COMMUNICATIONS

- Infrastructure (wireless, cable, broadcast, satellite, internet, data centers)
- Responder Communications (LMR networks)
- Alerts, Warnings, and Messages (local and regional alerts)
- Finance (banking services, electronic payment processing)
- 911 and Dispatch



TRANSPORTATION

- Highway, Roadway, Motor Vehicle (roads, bridges)
- Mass Transit (bus, rail, ferry)
- Railway (freight, passenger)
- Aviation (commercial, general, military)
- Maritime (waterways, ports, port facilities)

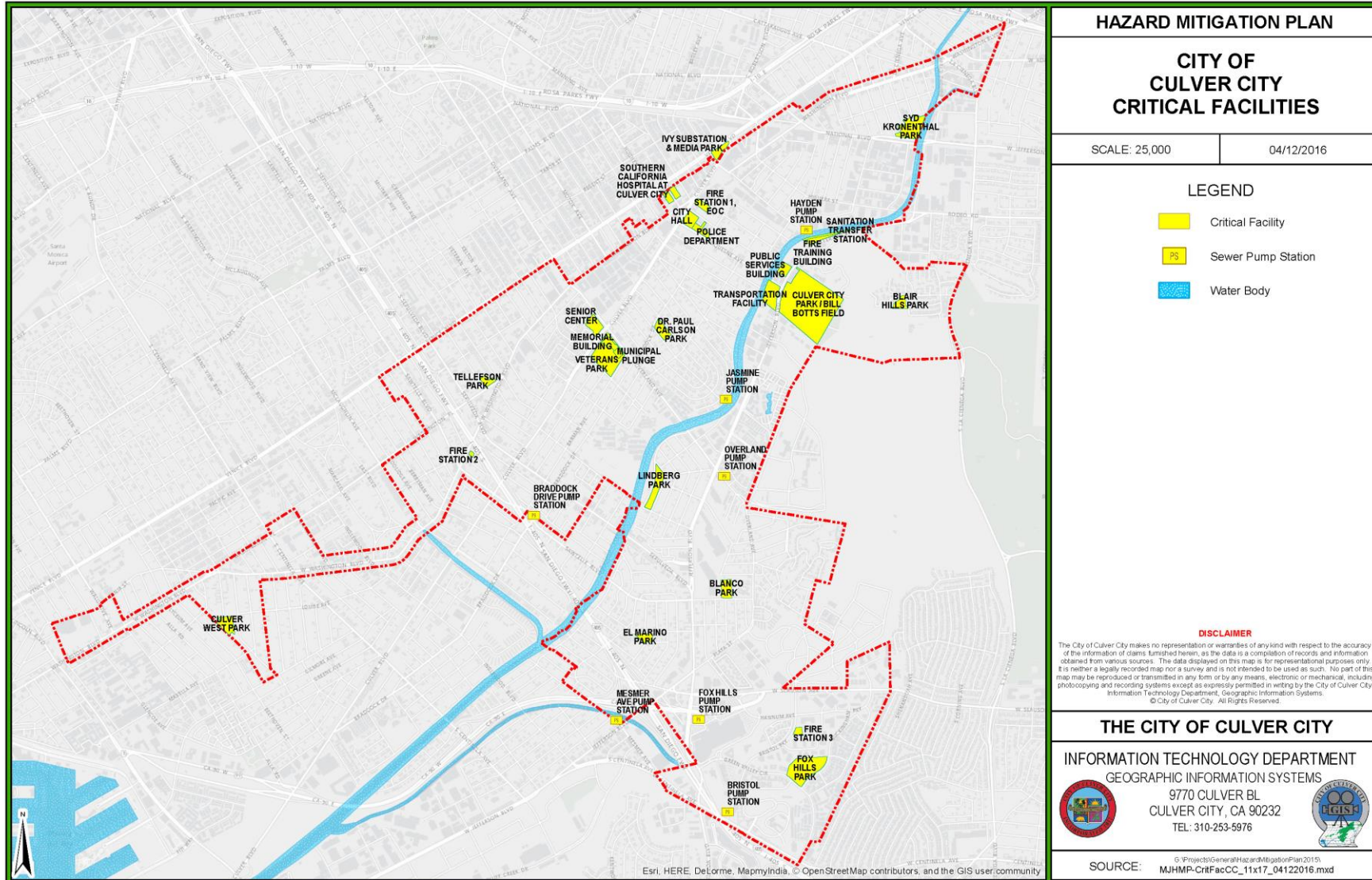


HAZARDOUS MATERIALS

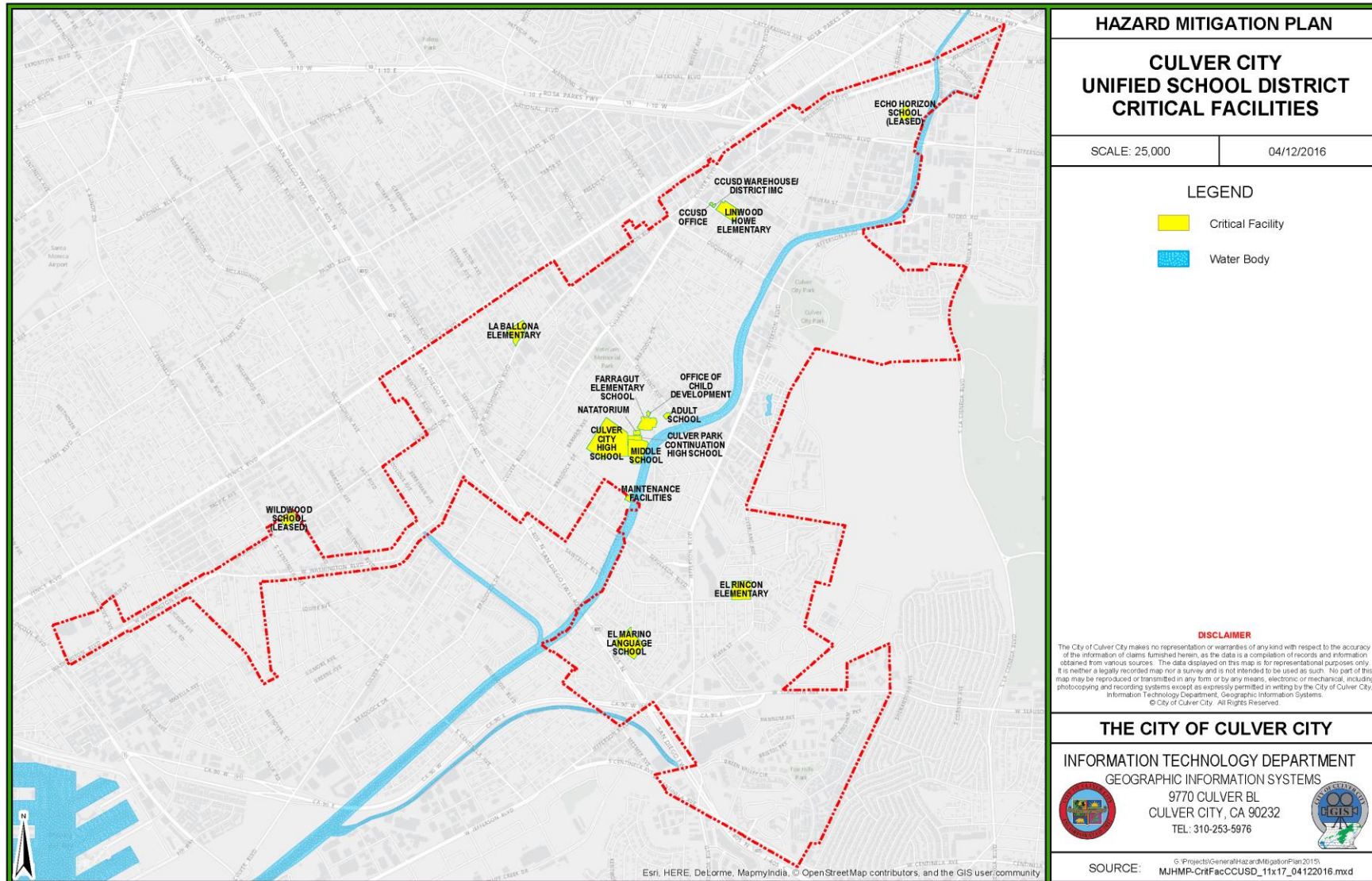
- Oil/HAZMAT Facilities (facilities, toxic incidents from facilities)
- Oil/HAZMAT, Pollutants, Contaminants (toxic incidents from non-fixed facilities)



2017 - Culver City Critical Facilities



2017 - CCUSD Critical Facilities



Critical Facilities

- Microsoft Teams Link and Channel
 - [General](#) – Draft Critical Facilities List, Update



Capabilities Assessment



Capabilities Assessment

- Two components
 - Inventory of existing resources and tools to accomplish mitigation and reduce long-term vulnerability, and understanding of ability to use them effectively
 - Identification of gaps, conflicts, and/or weaknesses that may need to be addressed through mitigation
- Types of capabilities
 - Planning and regulatory
 - Administrative and technical
 - Financial
 - Education and outreach



Capabilities Identification Worksheets

- Planning and regulatory
 - Ordinances
 - Policies
 - Local laws and state statutes
 - Plans and program that guide and manage growth
- Questions to consider:
 - Does the plan address hazards?
 - Does the plan identify projects to include in the mitigation strategy?
 - Can the plan be used to implement mitigation actions?
 - How can the capabilities be expanded and improved to reduce risk?



Capabilities Identification Worksheets

- Administrative and technical
 - City staff – skills/tools and capacity
 - Public and private resources
 - Ability to access and coordinate resources effectively
- Questions to consider:
 - Is coordination effective?
 - Is staffing adequate to enforce regulations?
 - Is staff trained on hazards and mitigation?
 - Is coordination between agencies and staff effective?
 - Has the capability been used to assess/mitigate risk in the past?
 - How can the capabilities be expanded and improved to reduce risk?



Capabilities Identification Worksheets

- Financial
 - Resources have or eligible to use to fund mitigation
 - Staff time, existing operating budgets, impact fees
 - Local, state and federal funding sources
- Questions to consider:
 - Has the funding resource been used in the past and for what types of activities?
 - Could the resource be used to fund future mitigation actions?
 - How can the capabilities be expanded and improved to reduce risk?



Capabilities Identification Worksheets

- Education and outreach
 - Programs and methods in place to implement mitigation actions and communicate hazard-related information
 - Fire safety programs, education programs
 - Public information or communication activities
- Questions to consider:
 - Could the program/organization help to implement future mitigation activities?
 - How can the capabilities be expanded and improved to reduce risk?

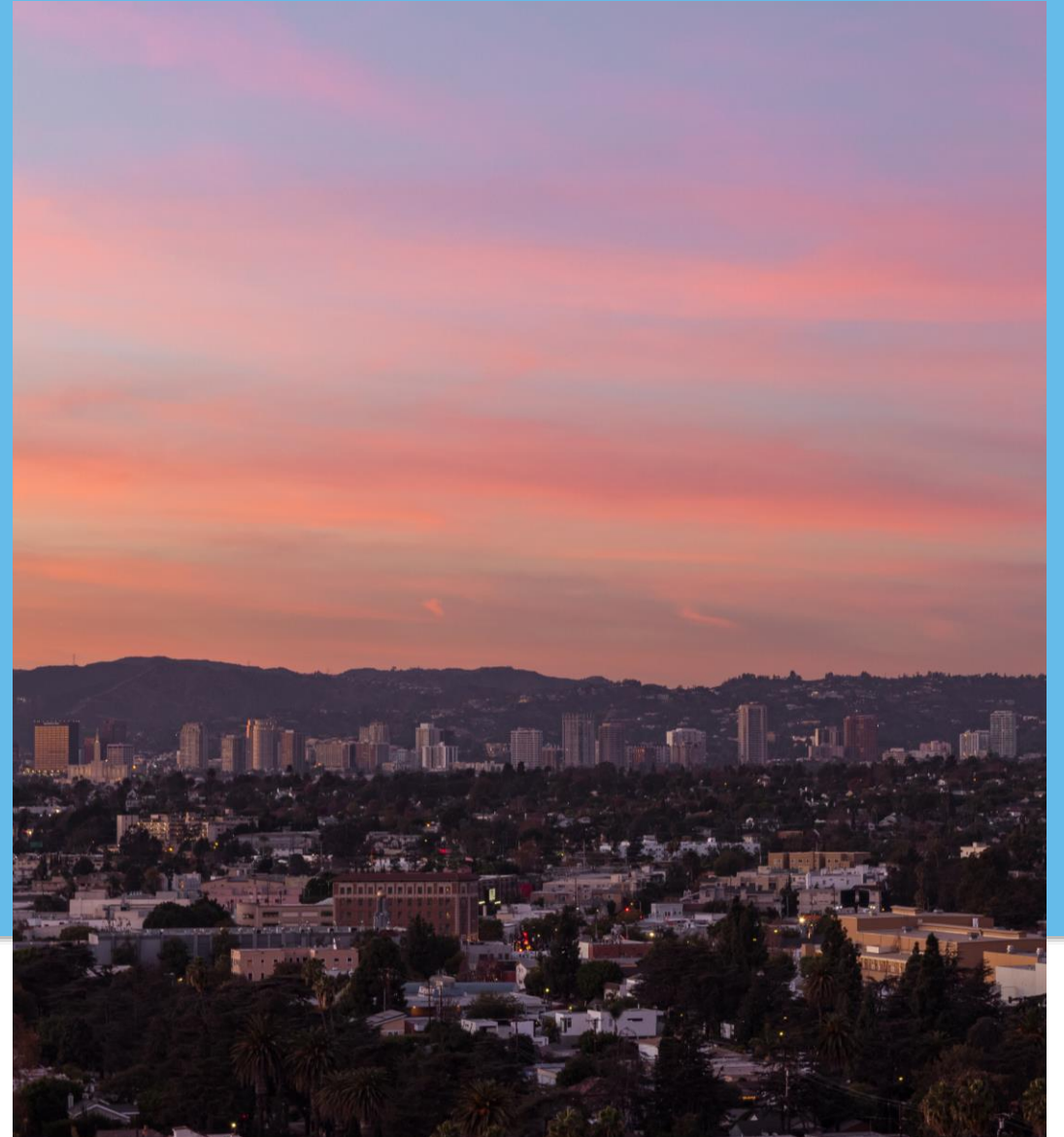


Capabilities Assessment

- Microsoft Teams Link and Channel
 - [General](#) – Draft Capabilities Assessment, Update

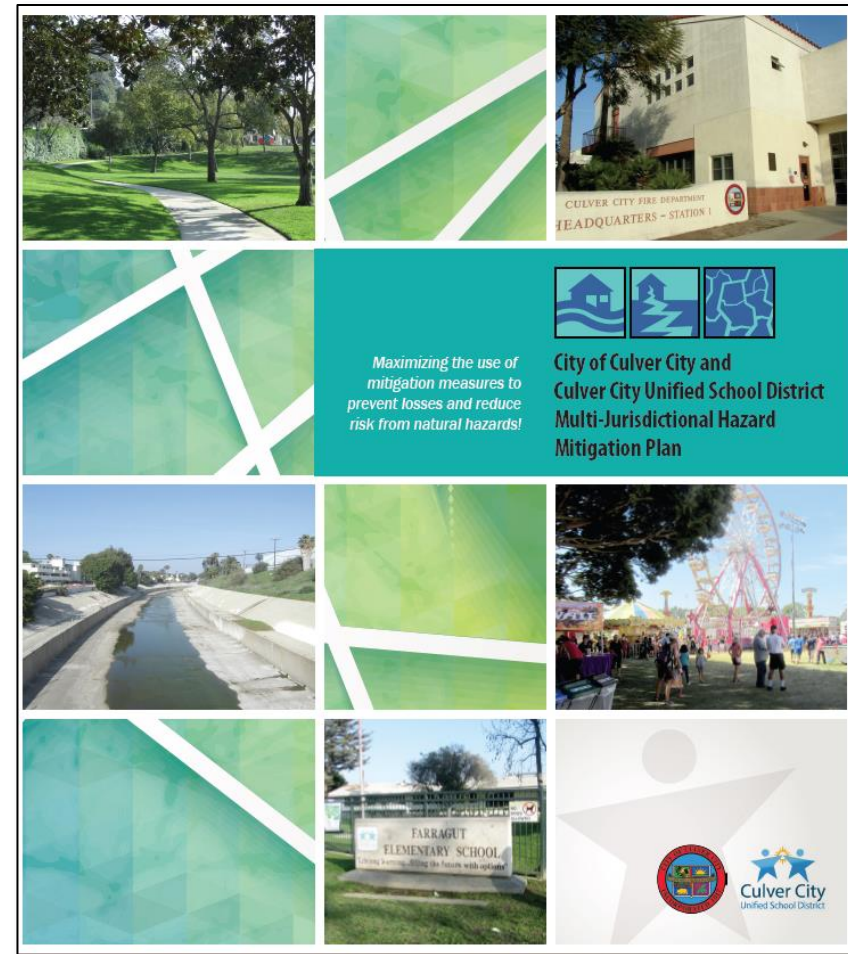


SUMMARY OF HAZARDS AND INTRODUCTION TO MITIGATION ACTIONS



Background – 2017 Culver City/CCUSD MJHMP

- Prepared in 2016
- Approved May 21, 2017
 - Profiled 5 natural hazards
 - Identified 60 mitigation actions
- Current MJHMP Update process funded by the Hazard Mitigation Grant Program (HMGP)
- Evacuation Route Mapping and Capacity AB 747/SB 99 – separate task order



Previously Identified Hazards (2017)

- Drought
- Seismic – Including Fault Rupture, Ground Shaking, Liquefaction, Landslide/Mudflow
- Flood
- Severe Weather – Windstorm, Thunderstorm
- Wildfire



Proposed Hazards List

- Climate Change (integrated into each hazard)
- Dam/reservoir failure
- Drought
- Flood
- Human caused hazards – hazardous materials spills/release, terrorism/active shooter, civil unrest, pandemic
- Seismic hazards – Landslide/mudflow, fault rupture, ground shaking, liquefaction
- Severe Weather – heavy rains, thunderstorm, extreme heat, tornado, windstorm (secondary effect, power outage)
- Wildfire/urban fire



Mitigation Strategies Grant Overview and Example Projects



FEMA Hazard Mitigation Assistance Grants

Building Resilient
Infrastructure and
Communities
(BRIC)

Hazard Mitigation
Assistance Program
(HMGP)

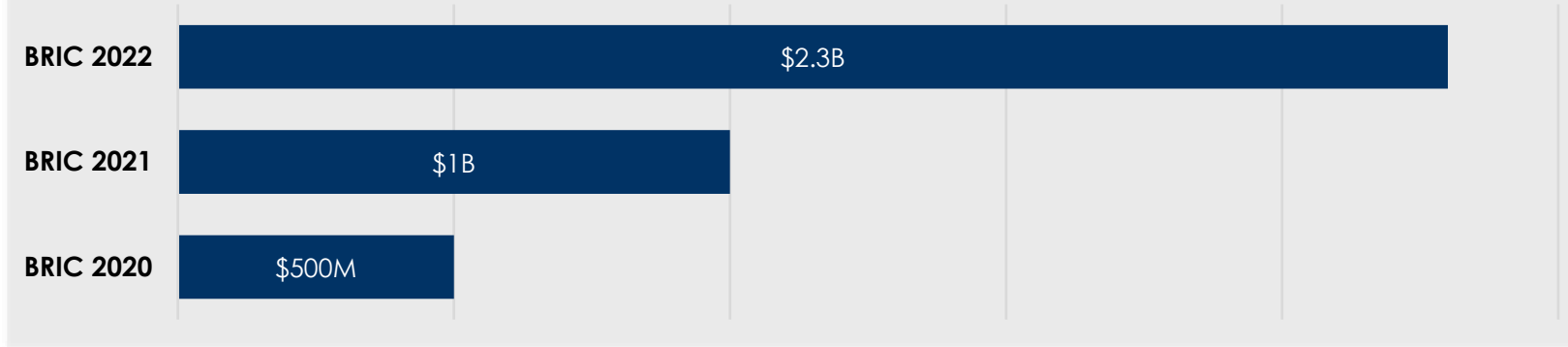
Flood Mitigation
Assistance (FMA)

HMGP Post-Fire
Assistance

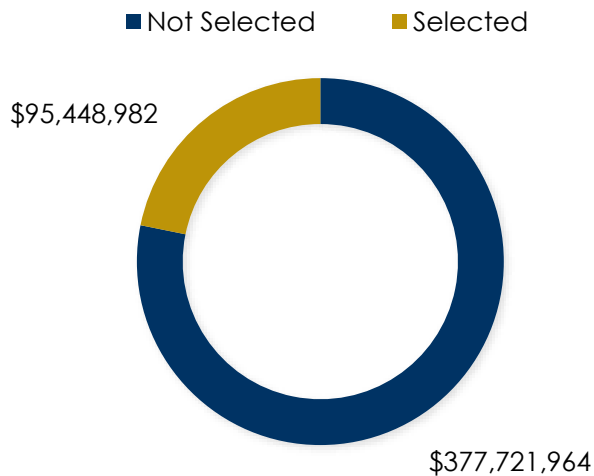


BRIC Funding Evolution

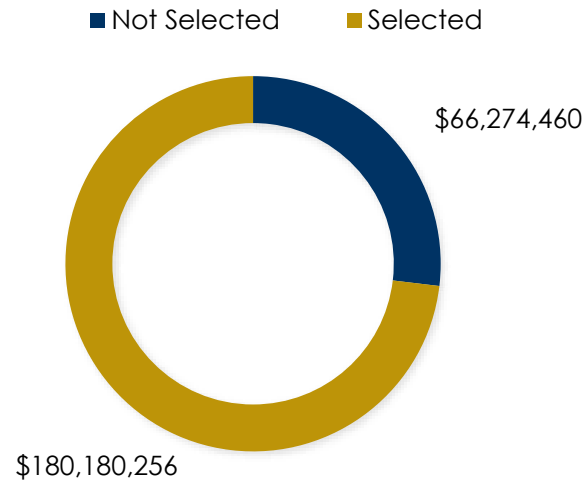
Mitigation Funding Available by Year



CA BRIC 2020 (Fed Share)



CA BRIC 2021 (Fed Share)



California Numbers:

❖ BRIC 2020 (Competitive)

- Projects Submitted
 - 26
- Projects Selected
 - 4

❖ BRIC 2021 (Competitive)

- Projects Submitted
 - 11
- Projects Selected
 - 9

Total Funding per Project:

❖ BRIC 2020

- \$50 million (Max. Project)
- \$600 thousand (C&CB)

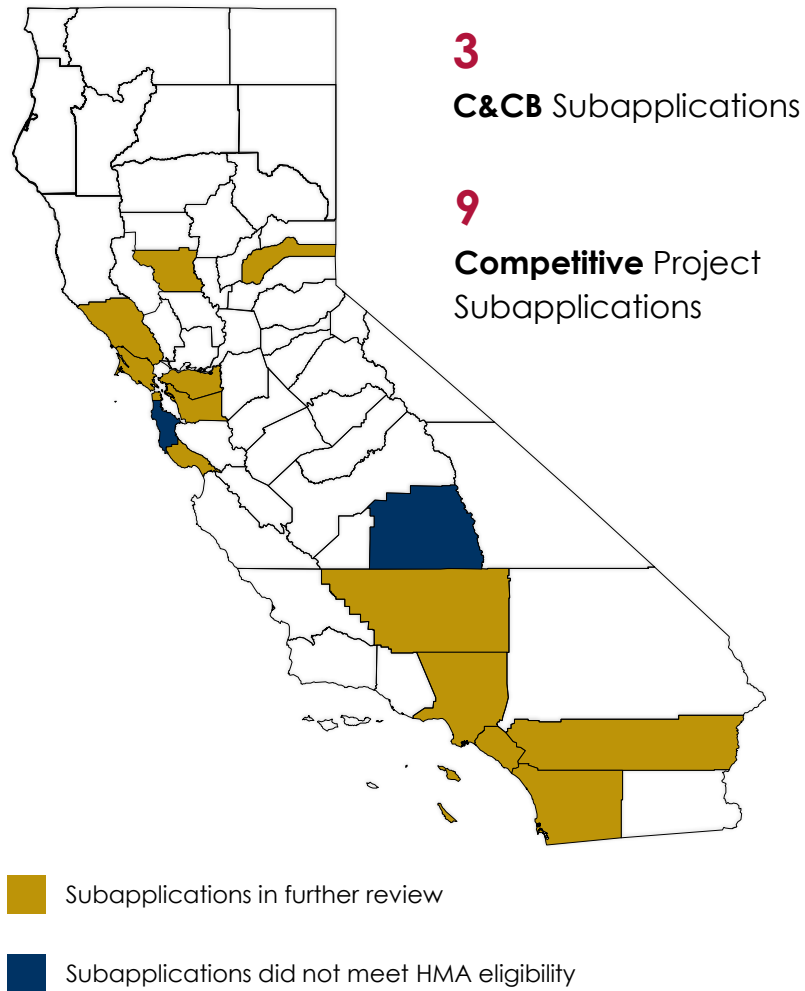
❖ BRIC 2021

- \$50 million (Max. Project)
- \$1 million (C&CB)

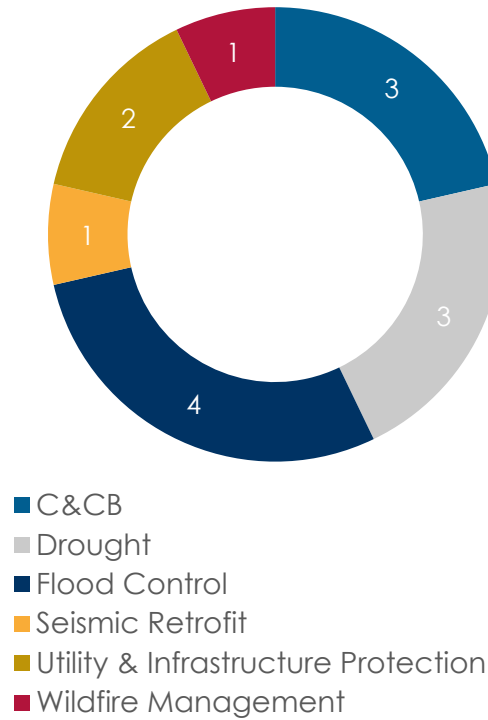
❖ BRIC 2022

- NOFO ~ Mid-August

BRIC 2021 – California Submitted Projects



Submitted Project Types



California BRIC 2021 by the Numbers:

- ❖ Largest identified for review: Kern County Willow Springs Water Bank Drought Mitigation Project
 - **\$39,496,828**
- ❖ Smallest identified for review: City of Healdsburg Water Resiliency Integrating Groundwater in Healdsburg Through ASR
 - **\$6,066,080**
- ❖ Average dollar amount of identified for review projects:
 - **\$20,020,028**

BRIC 2020 / 2021 – Nature Based Solutions (NBS)

- Detention basin pools provide salmonid species with a low-flow sanctuary
- Enhance approximately 5 acres of western snowy plover breeding habitat by placing oyster shells or pea gravel to enhance the breeding habitat of endangered bird species
- Create wildfire buffers near dense urban communities
- Earthen berm, hybrid dune, eco-revetments in areas where the beach width is limited, green infrastructure, and a restored wetland

Remember

Nature-based solutions are approaches that include, but are not limited to, restoration of grasslands, rivers, floodplains, wetlands, dunes, and reefs; living shorelines; soil stabilization; aquifer storage and recovery; and bioretention systems.

NEIGHBORHOOD OR SITE SCALE

RAIN GARDENS
A rain garden is a shallow, vegetated basin that collects and absorbs runoff from rooftops, sidewalks, and streets. Rain gardens can be added around homes and businesses to reduce and treat stormwater runoff.



VEGETATED SWALES
A vegetated swale is a channel leading plants or mulch that treats and absorbs stormwater as it flows down a slope. Vegetated swales can be placed along streets and in parking lots to soak up and treat their runoff, improving water quality.



Illustration of a vegetated swale in a parking lot setting.



RAINWATER HARVESTING
Rainwater harvesting systems collect and store rainfall for later use. They slow runoff and can reduce the demand for potable water. Rainwater systems include rain barrels that store tens of gallons and rainwater cisterns that store hundreds or thousands of gallons.



PERMEABLE PAVEMENT
Permeable pavements allow more runoff to soak into the ground. Common types include porous concrete, porous asphalt, and interlocking pavers. Permeable pavements are most commonly used for parking lots and roadway shoulders.



TREE CANOPY
The canopy can reduce stormwater runoff by catching rainfall on branches and leaves and increasing evapotranspiration. By keeping neighborhoods cooler in the summer, tree canopy can also reduce the "urban heat island effect." Because of these many benefits, many cities have set urban tree canopy goals.



TREE TRENCHES
A stormwater tree trench is a row of trees planted in an underground infiltration structure made to store and filter stormwater. Tree trenches can be added to streets and parking lots with limited space to manage stormwater.




GREEN STREETS
Green streets use a suite of green infrastructure practices to manage stormwater runoff and improve water quality. Adding green infrastructure features to a street corridor can also contribute to a safer and more attractive environment for walking and biking.




High-resolution versions of these graphics are available in the FEMA Media Library.

COASTAL AREAS

COASTAL WETLANDS
Coastal wetlands are found along ocean, estuary, or freshwater coastlines. They are often referred to as "sponges" because of their ability to absorb wave energy during storms or normal tide cycles.



OYSTER REEFS
Oysters are often referred to as "ecosystem engineers" because of their tendency to attach to hard surfaces and create large reefs made of thousands of individuals. In addition to offering shelter and food to coastal species, oyster reefs buffer coasts from waves and filter surrounding waters.




DUNES
Dunes are coastal features made of blown sand. Healthy dunes often have dune grasses or other vegetation to keep their shape. Dunes can serve as a barrier between the water's edge and inland areas, buffering waves as a first line of defense.



WATERFRONT PARKS
Waterfront parks in coastal areas can be intentionally designed to flood during extreme events, reducing flooding elsewhere. Waterfront parks can also absorb the impact from tidal or storm flooding and improve water quality.




LIVING SHORELINES
Living shorelines stabilize a shore by containing living components, such as plants, with structural elements, such as seawalls. Living shorelines can slow waves, reduce erosion, and protect coastal property.




WATERSHED SCALE


LAND CONSERVATION
Land conservation is one way of preserving interconnected systems of open space that sustain healthy communities. Land conservation projects begin by prioritizing areas of land for acquisition. Land or conservation easements can be bought or acquired through donation.




GREENWAYS
Greenways are corridors of protected open space managed for both conservation and recreation. Greenways often follow rivers or other natural features. They link habitats and provide networks of open space for people to explore and enjoy.




WETLAND RESTORATION AND PROTECTION
Restoring and protecting wetlands can improve water quality and reduce flooding. Healthy wetlands filter, absorb, and slow runoff. Wetlands also sustain healthy ecosystems by recharging groundwater and providing habitat for fish and wildlife.



STORMWATER PARKS
Stormwater parks are recreational spaces that are designed to flood during extreme events and to withstand flooding. By storing and treating floodwaters, stormwater parks can reduce flooding elsewhere and improve water quality.



FLOODPLAIN RESTORATION
Undisturbed floodplains help keep waterways healthy by storing floodwaters, reducing erosion, filtering water pollution, and providing habitat. Floodplain restoration rebuilds some of these natural functions by reconnecting the floodplain to its waterway.





Colorado Springs Wildfire Mitigation



FEMA released a Story Map on Colorado Springs' Wildfire Mitigation in the wake of the 2012 Waldo Canyon Fire. This Story Map provides an interactive summary of the wildfire mitigation activities in Colorado Springs, CO. Prior to the 2012 fire, Colorado Springs used Pre-Disaster Mitigation grants to implement a wildfire mitigation plan, saving an estimated \$75 million and 250 homes. However, even with these efforts, 346 homes were destroyed by the Waldo Canyon Fire. Since then, the community has taken more actionable steps to mitigate against future damage by adopting a stronger fire-resistant building code, mapping wildfire risk, and participating in strategic community engagement.

Wildfire Mitigation Through Education, Planning, and Stronger Building Codes
 This innovative educational program, spurred by the adoption of enhanced building code ordinances, has resulted in web-mapping upgrades and the development of outreach and informational campaigns. These non-structural mitigation activities have been credited with saving the community over \$75 million in damages and over 250 families from losing their homes in the 2012 Waldo Canyon Fire.

The City of Colorado Springs Fire Department collaborated with the Colorado Springs Housing and Building Association to identify ways to mitigate the impacts of wildfires on residential buildings. This information led to Ordinance No. 18-50, which amended the International Fire Code to address wildland/urban interface mitigation requirements for high-risk areas. The Story Map covers codes and guidelines for design, construction, and structural elements, including roofing, exterior siding, overhangs and projections, doors and windows, and decks.

Colorado Springs put collaboration at the heart of all wildfire mitigation activities by partnering internally, as well as with residents and business owners. Colorado Springs developed a Wildfire Risk webmap to help residents understand and mitigate their own individual risk. This webmap supports the idea of "sharing the responsibility" that the City keeps central to its work.



Wildfire mitigation flyer
 Source: FEMA

Addressed Hazards
PRIMARY HAZARD
 Wildfires

Community Lifelines
 Hover over the Primary Lifeline to learn more.

PRIMARY LIFELINE



Safety & Security



Food, Water, Sheltering



Health & Medical

Berkeley Seismic Vulnerability Retrofits



In 2018, the City of Berkeley received a \$1.2 million Hazard Mitigation Grant Program (HMGP) grant from FEMA to create a grant program for building owners to retrofit seismically vulnerable buildings to better withstand earthquake impacts. The program provides grants, paid out as reimbursements, for upgrades for certain types of commercial and multi-family residential buildings (including buildings with nonductile concrete, tilt-up, soft story, and unreinforced masonry).

Incentivizing Retrofits to Reduce Vulnerability
 By leveraging federal funds, this program incentivizes proactive mitigation measures for commercial and multi-family building owners who want to make their buildings safer and more resilient to earthquakes.

The program is designed to encourage property owners to be proactive, rather than reactive, in implementing seismic retrofits by offering direct compensation for a large percentage of total costs incurred to the building owner. Grants from the program pay for up to 75 percent of design and 40 percent of construction costs, depending on the project. If implemented properly, this program could not only prevent serious property damage from earthquakes, but also prevent injuries and even loss of life due to structures not being properly secured against earthquake impacts. To date, the program has contributed to seismic retrofits of 48 buildings containing over 400 apartment units.



Berkeley, CA
 Source: Shutterstock

Addressed Hazards
PRIMARY HAZARD
 Earthquakes

Community Lifelines
 Hover over the Primary Lifeline to learn more.



Safety & Security

PRIMARY LIFELINE



Food, Water, Sheltering



Mitigation Action

- **Reduce the Potential for Damage** – Reduce damage to critical assets from natural and man-made hazards;
- **Create a Decision Tool for Management** – To provide information so that the City may act to address vulnerabilities; and
- **Promote Coordination & Compliance with State and Federal Program Requirements** – To ensure that the City can develop a relationship with surrounding agencies and take full advantage of state and federal grant programs, policies, and regulations.



Mitigation Actions

- Mitigation actions – reduce or eliminate long-term risk
 - **Different from actions to prepare or respond to an event**
- Mitigation activities lessen or eliminate the need for preparedness or response resources
- Emphasis on the impact or vulnerabilities – not on the hazard itself



STAPLE/E Review and Selection Criteria

Social
<ul style="list-style-type: none">• Is the proposed action socially acceptable to the jurisdiction and surrounding community?• Are there equity issues involved that would mean that one segment of the jurisdiction and/or community is treated unfairly?• Will the action cause social disruption?
Technical
<ul style="list-style-type: none">• Will the proposed action work?• Will it create more problems than it solves?• Does it solve a problem or only a symptom?• Is it the most useful action in light of other jurisdiction goals?
Administrative
<ul style="list-style-type: none">• Can the jurisdiction implement the action?• Is there someone to coordinate and lead the effort?• Is there sufficient funding, staff, and technical support available?• Are there ongoing administrative requirements that need to be met?
Political
<ul style="list-style-type: none">• Is the action politically acceptable?• Is there public support both to implement and to maintain the project?



STAPLE/E Review and Selection Criteria

Legal

- Is the jurisdiction authorized to implement the proposed action?
- Are there legal side effects? Could the activity be construed as a taking?
- Will the jurisdiction be liable for action or lack of action?
- Will the activity be challenged?

Economic

- What are the costs and benefits of this action?
- Do the benefits exceed the costs?
- Are initial, maintenance, and administrative costs taken into account?
- Has funding been secured for the proposed action? If not, what are the potential funding sources (public, nonprofit, and private)?
- How will this action affect the fiscal capability of the jurisdiction?
- What burden will this action place on the tax base or local economy?
- What are the budget and revenue effects of this activity?
- Does the action contribute to other jurisdiction goals?
- What benefits will the action provide?

Environmental

- How will the action affect the environment?
- Will the action need environmental regulatory approvals?
- Will it meet local and state regulatory requirements?
- Are endangered or threatened species likely to be affected?



Mitigation Prioritization & Timeframe

Category	Comments
High	Top organizational priority and is generally a well-detailed project idea. Protects population, resource or property at high risk, Uses feasible methods, techniques or technology.
Medium	A good idea that needs more information or is an action that addresses a moderate hazard.
Low	An idea that needs a lot more information or will take a lot of preliminary action to build support.

Category	Timeframe
Short-term	1-2 years
Mid-term	3-4 years
Long-term	5+ years
Ongoing	1-2 years and ongoing thereafter



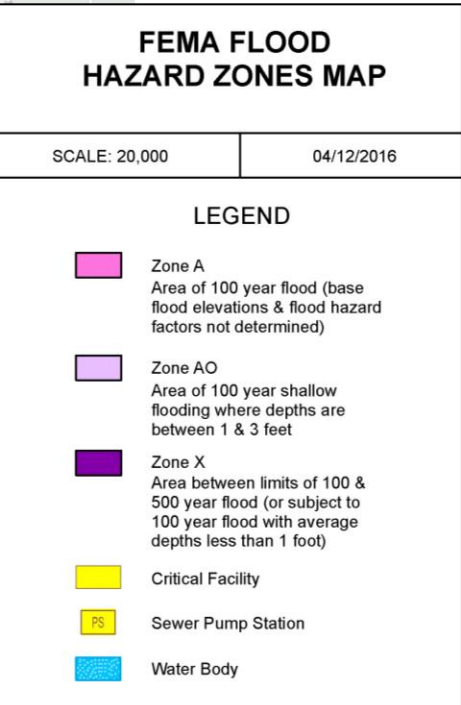
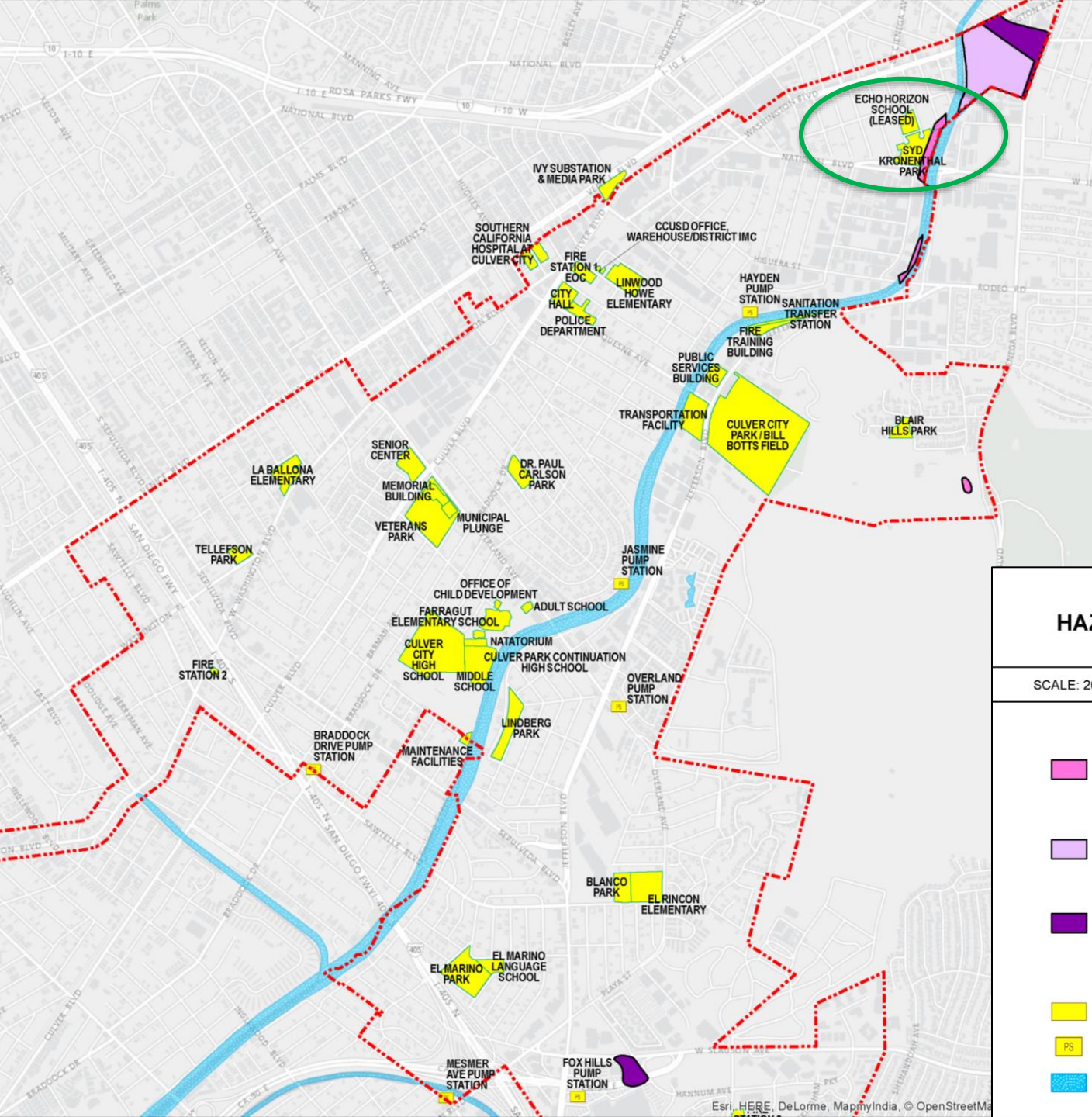
Previously Identified Hazards (2017)

- Drought
- Seismic – Including Fault Rupture, Ground Shaking, Liquefaction, Landslide/Mudflow
- Flood
- Severe Weather – Windstorm, Thunderstorm
- Wildfire



2017 - Flood

Critical Facility Name	Location
Syd Kronenthal Park (City)	3459 McManus Avenue

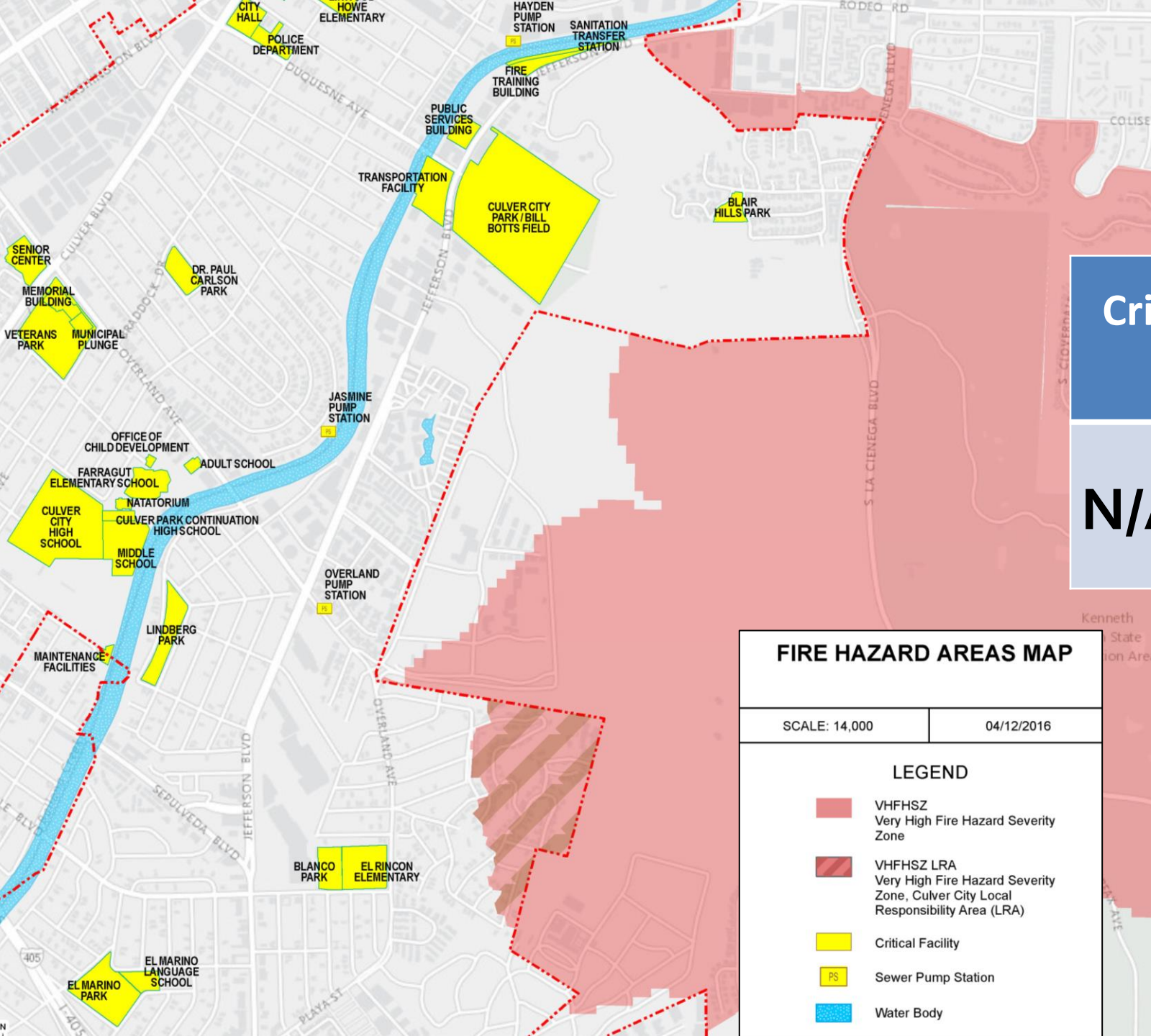


2017 – Flood Mitigation Actions

#	Mitigation Action	Hazard(s) Assessed	NOTES
42	City: Continue to evaluate the effectiveness of City-owned drain systems and carry out improvements as needed. Monitor City-owned drainage infrastructure during rain <u>events</u> , and take emergency action as necessary to avoid or minimize flooding.	Flood	
43	City: Encourage property owners to improve drainage on their properties through low-impact development features, particularly property owners in and adjacent to flood hazard areas.	Flood	
44	City: Update the Stormwater Master Plan to address drainage and flood control.	Flood	<u>DONE. This was completed in 2021. Recommend updated mitigation action to identify key implementation actions.</u>
45	City: Maintain an adequate supply of sandbags and other low-cost flood control measures to protect City facilities and to meet public demand.	Flood	
46	City: <u>Continue to r</u> Retrofit public spaces, including sidewalks and parking lots, to include permeable paving and other low-impact development features <u>as funding sources become available.</u>	Flood	<u>Confirm with City if this was completed or needs to continue. Recommend this as an ongoing action, as funding becomes available.</u>
47	City: Continue to participate in the National Flood Insurance Program.	Flood	
48	CCUSD: <u>Continue to i</u> Identify and upgrade deficient drainage systems on school property, <u>as funding sources become available.</u> Use low-impact development features to supplement drainage features as appropriate.	Flood	<u>Confirm with the City if this was completed or needs to continue. Recommend this as an ongoing action, as funding becomes available.</u>
NEW	City: <u>Implement Concept Plans from the Mitigation Action Plan (Blue Ocean, prepared May 2022) at key Critical Facilities known to be susceptible to flooding. Prioritize capital improvements based on criteria outlined within the Mitigation Action Plan as funding sources become available. Pursue grant funding for capital improvements, as appropriate.</u>	<u>Flood</u>	



2017 - Wildfire



Critical Facility Name	Location
N/A	N/A

FIRE HAZARD AREAS MAP

SCALE: 14,000 04/12/2016

LEGEND

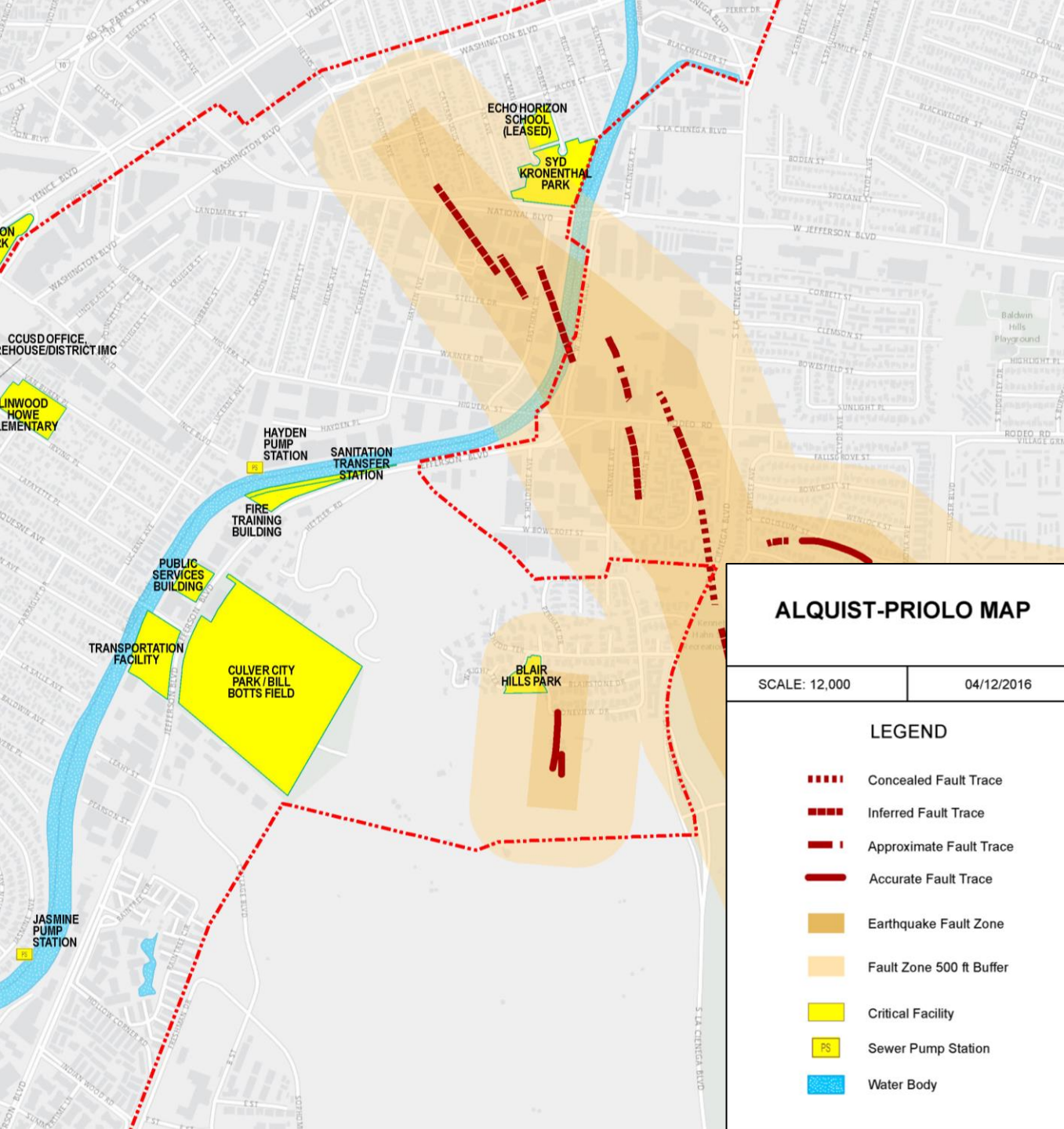
- VHFHSZ
Very High Fire Hazard Severity Zone
- VHFHSZ LRA
Very High Fire Hazard Severity Zone, Culver City Local Responsibility Area (LRA)
- Critical Facility
- PS
Sewer Pump Station
- Water Body

2017 - Wildfire Mitigation Actions

#	Mitigation Action	Hazard(s) Assessed	NOTES
57	City: Adopt and enforce the most up-to-date California Building Code and California Fire Code, with local amendments as appropriate.	Wildfire	
58	City: Continue to maintain cooperative fire protection and fire prevention mutual aid agreements with relevant agencies.	Wildfire	
59	City: Continue to support the Culver City Fire Department, California State Fire Marshal, and other relevant agencies to promote the implementation and awareness of fire prevention programs.	Wildfire	
60	City: Identify inadequate access roadways. Develop a program to address inadequacies by altering the roadway design if possible. Identify roadways in high wildfire hazard risk with insufficient evacuation or emergency vehicle access, in accordance with AB 747 and SB 99. Identify and prioritize roadway capital improvement projects to enhance access, and seek grant funding opportunities as appropriate.	Wildfire	Recommend clarification regarding ongoing efforts on evacuation route mapping and capacity.

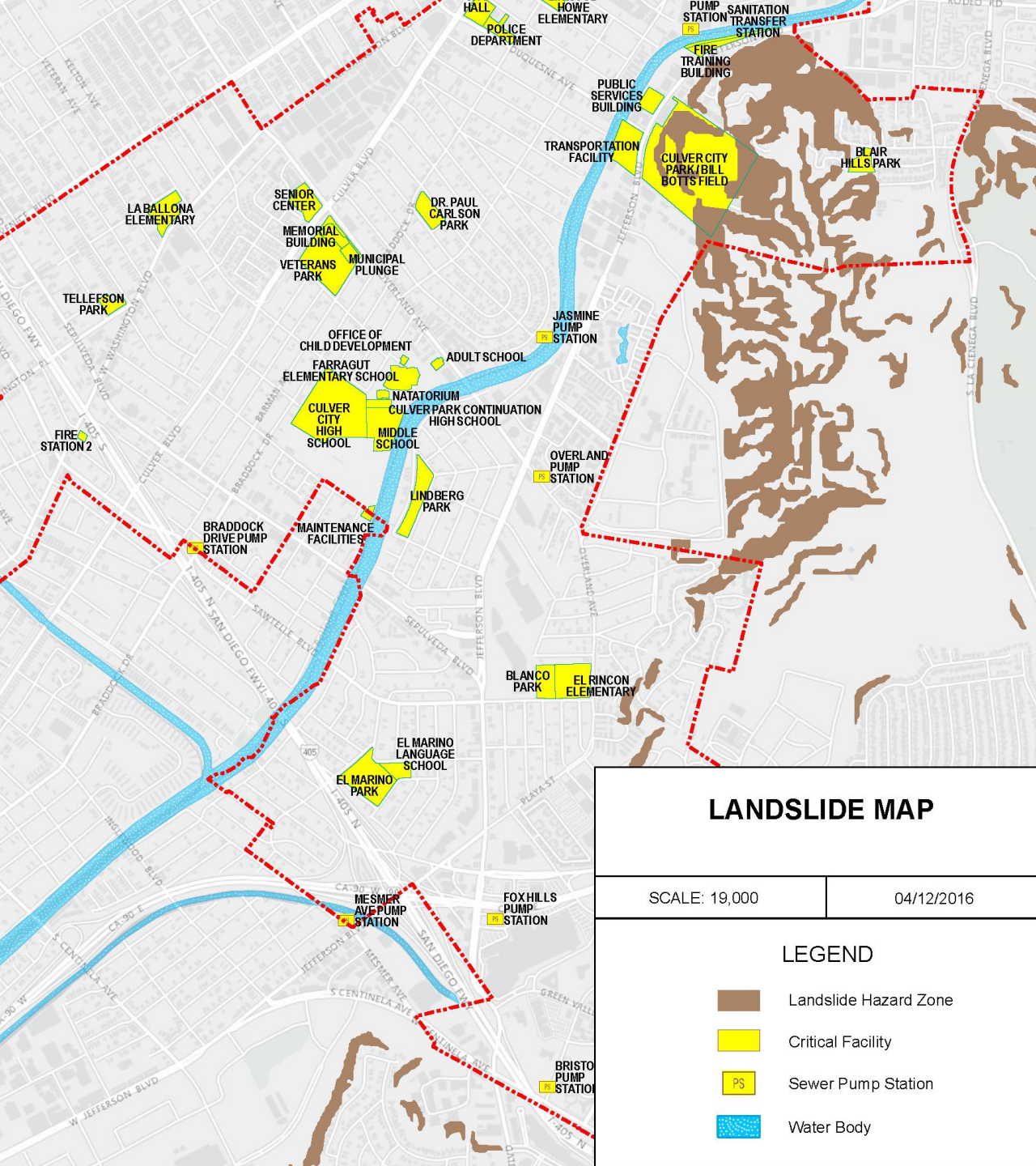


2017 – Seismic, Fault Rupture



Critical Facility Name	Location
Echo Horizon School (CCUSD)*	3430 McManus Avenue
Syd Kronenthal Park (City)	3459 McManus Avenue
Blair Hills Park (City)	5950 Wrightcrest Drive

2017 – Seismic, Landslide

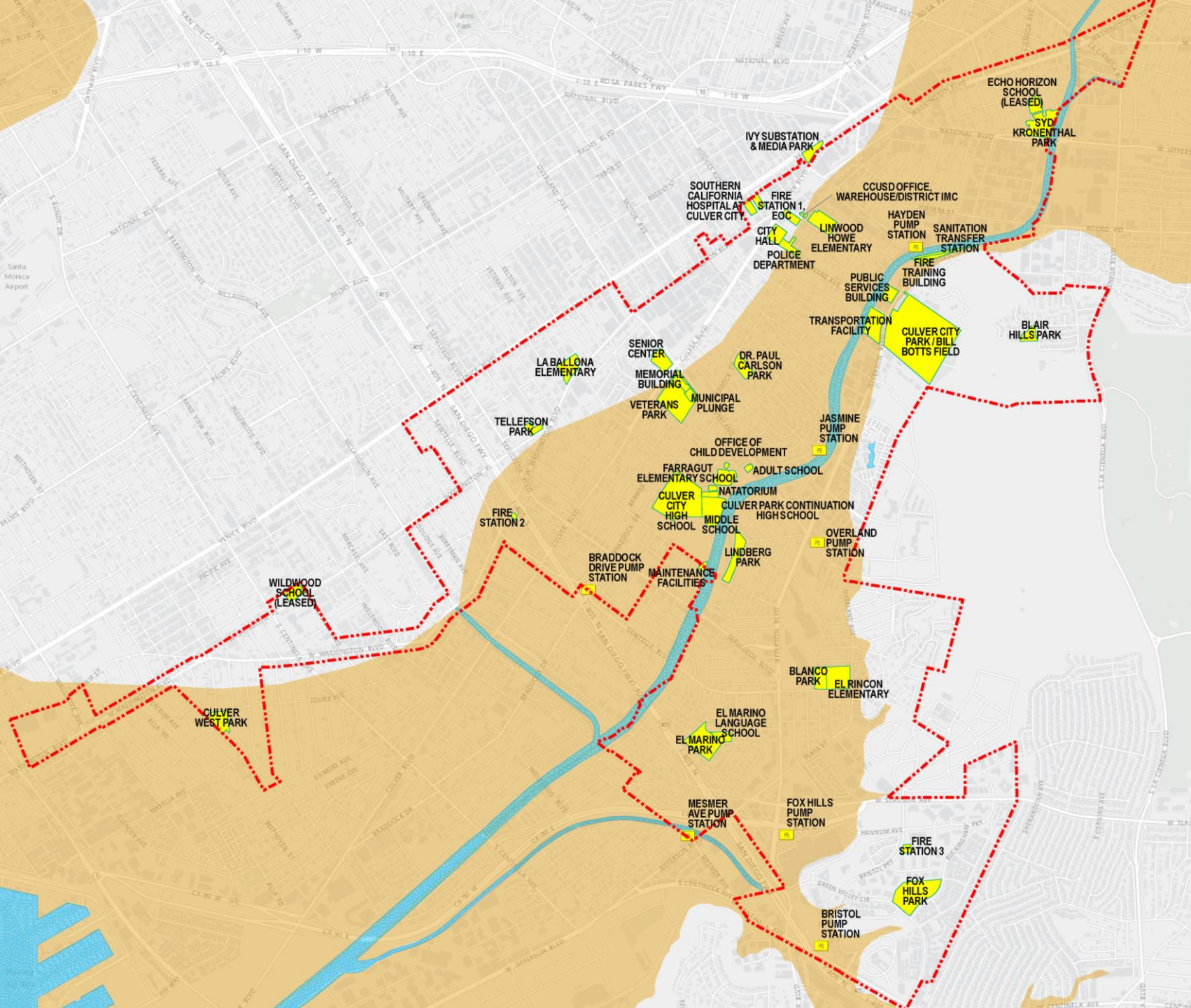


LANDSLIDE MAP

SCALE: 19,000	04/12/2016
LEGEND	
	Landslide Hazard Zone
	Critical Facility
PS	Sewer Pump Station
	Water Body

Critical Facility Name	Location
Blair Hills Park (City)	5950 Wrightcrest Drive
Culver City Park (Botts Field) (City)	9690 Jefferson Boulevard

2017 – Seismic, Liquefaction



LIQUEFACTION MAP	
SCALE: 25,000	04/12/2016
LEGEND	
	Liquefaction Hazard Zone
	Critical Facility
	Sewer Pump Station
	Water Body

2017 – Seismic, Liquefaction

Critical Facility Name	Location
Unified School District Office	4034 Irving Place
High School	4401 Elenda Street
Culver Park Continuation High School	4601 Elenda Street
Middle School	4601 Elenda Street
El Marino Language School	11450 Port Road
El Rincon Elementary	11177 Overland Avenue
Farragut Elementary	10820 Farragut Drive
Linwood E. Howe	4100 Irving Place
Office of Child Development	10800 Farragut Drive
Adult School	4909 Overland Avenue
Maintenance Facilities	11102 Lucerne Avenue
Natatorium	4601 Elenda Street
Warehouse/ District IMC	4034 Irving Place
Echo Horizon School*	3430 McManus Avenue

Critical Facility Name	Location
Police Department	4040 Duquesne Avenue
Fire Station No. 2	11252 Washington Boulevard
Fire Training Building	9275 Jefferson Boulevard
Public Works Yard	9505 Jefferson Boulevard
Sanitation Transfer Station	9255 Jefferson Boulevard
Transportation Facility	4343 Duquesne Avenue
Veterans Park & Memorial Building	4117 Overland Avenue
Syd Kronenthal Park	3459 McManus Avenue
Blanco Park	5801 Sawtelle Boulevard
Culver West Park	4162 Wade Street
El Marino Park	5301 Berryman Avenue
Dr. Paul Carlson Park	4233 Motor Avenue
Culver City Park (Botts Field)	9690 Jefferson Boulevard
Lindberg Park	5401 Rhoda Way
Municipal Plunge	4175 Overland Avenue



2017 – Seismic Mitigation Actions

#	Mitigation Action	Hazard(s) Assessed	NOTES
35	City: Conduct an inventory of seismically vulnerable private buildings, including unreinforced masonry and soft first story structures, and prioritize retrofits for more vulnerable structures and lower income housing. Identify potential funding sources to assist with seismic retrofits.	Seismic Hazards	<u>Seismic survey was conducted in 2018/2019, and the Seismic Retrofit Ordinance was adopted in September 2021. Recommend marking mitigation action as done.</u>
36	City: Explore creating an ordinance requiring seismically vulnerable structures to conduct earthquake resistant retrofitting over a phased period and/or when major renovation occurs.	Seismic Hazards	<u>Seismic Retrofit Ordinance was adopted in September 2021. Recommend marking mitigation action as done.</u>
<u>NEW</u>	<u>City: Continue the implementation of the implementation of the Seismic Retrofit Ordinance, and explore funding opportunities for</u>		
37	City: Require new development in the liquefaction vulnerability zone to conduct liquefaction vulnerability studies and conduct liquefaction mitigation activities as needed.	Seismic Hazards	
38	City: Require new development in landslide-prone areas to include landslide resiliency features to minimize the risk of damage.	Seismic Hazards	
39	City: Establish a zoning overlay for the Alquist-Priolo hazard <u>zone, and</u> create and enforce development standards for new construction activities in this hazard zone to improve the resiliency of new structures to seismic hazards.	Seismic Hazards	<u>Was this incorporated into the Seismic Retrofit Ordinance?</u>
40	City and CCUSD: Ensure that all tall furniture in City and school property is securely fastened to the wall to reduce damage during an earthquake. When purchasing furniture or reconfiguring rooms in City/CCUSD buildings, consider the potential impacts to seismic vulnerability.	Seismic Hazards	
41	City and CCUSD: <u>Continue hosting</u> Hold seismic preparation workshops to educate community residents and businesses about securing property <u>and</u> to reducing damage during an earthquake. Consider <u>advertising events</u> coordination of the events to be advertised through the City and CCUSD <u>and hold at their facilities.</u>	Seismic Hazards	



Next Steps



Next Steps

- Publish community survey and web content
- Finalize hazard profiles
- Critical facilities list finalization and hazard mapping
- Prepare vulnerability/risk assessment
- Attend Meeting #3
 - June 15, 2023 at 10:00 AM



Questions/Additional Discussion?





**Table 5-3A
City of Culver City Planning and Regulatory Capabilities Summary**

Ordinance/Plan/ Policy/Program	Responsible Agency or Department	Description/Comments
Zoning Ordinances	Community Development Department	<u>The means by which land use is controlled and public health, welfare and safety is protected. Allows the City to control and limit the type and density of development. The Culver City Zoning Code implements the General Plan by establishing regulations for land use control within the City, including where and how development occurs. Zoning is used to protect the public health, safety, and welfare of a community. The City can use the Zoning Code to implement mitigation actions to reduce risks associated with future development.</u>
Subdivision Ordinance	Community Development Department	<u>The City's subdivision ordinance regulates the development of housing, commercial, industrial, and other uses, including associated public infrastructure, as land is subdivided into buildable lots for sale or future development. The subdivision ordinance can ensure future subdivisions account for the risk of hazards on future development.</u>
Building Codes, Permitting and Inspections	Community Development Department	<u>The City Building Code regulates how buildings are constructed. The City adopts the State Building Code with amendments, as applicable. Mitigation actions to construct buildings at safer standards to enhance resilience could be considered as part of future building code updates. Regulates construction standards and ensures enforcement of City's adopted standards. The City enforces the California Building Code with modifications.</u>
<u>Mitigation Action Plan (MAP): Drought, Wildfire, & Flood</u>	<u>Public Works Department</u>	<u>The MAP was developed based on the 2017 MJHMP to provide the City and CCUSD with a prioritized list of mitigation actions to address drought, wildfire, and flood hazards in the upcoming MJHMP update process. The plan provides a brief summary of drought, wildfire, and flood hazards, as well as a detailed summary of the prioritization metrics identification and method, and a summary of prioritized projects and concept plans. This plan was used to inform drought, wildfire, and flood hazard profiles and to develop mitigation actions in this MJHMP Update.</u>
<u>Hazard Mitigation Plan</u>	<u>Public Works Department</u>	<u>Identifies how the City intends to reduce the impact of natural hazards on residents and assets in the City.</u>
Emergency Operations Plan	Fire Department	<u>The Emergency Operations Plan (EOP) establishesAddresses the City's planned response to extraordinary emergency situations associated with natural disasters, technological incidents, and national security emergencies. The plan outlines strategies for various processes and actions that enable the City to prepare for, respond to, and recover from a disaster and/or emergency. The EOP identifies components of the Culver City emergency response organization and describes the overall responsibilities of the City in protecting life and development. Together, the EOP and LHMP provide a mitigation and response strategy to hazard events.</u>
General Plan	Community Development Department	<u>The Culver City General Plan establishesEstablishes the overall vision for growth and development in the City and</u>



City of Culver City and Culver City Unified School District
Multi-Jurisdictional Hazard Mitigation Plan



		<p>provides goals/policies to guide municipal decision-making. <u>Culver City is currently conducting a comprehensive update of the General Plan including all nine General Plan Elements. Each General Plan Element has an associated Existing Conditions Report that was referenced during MJHMP development. The General Plan provides the framework for the implementation of the MJHMP mitigation actions. The Safety Element identifies hazards that could impact the community and establishes policy for the preparation and update of the MJHMP. – After the MJHMP is approved, the City will formally update the Safety Element to incorporate the MJHMP by reference to ensure compliance with California Assembly Bill 2140.</u></p>
Capital Improvement Plan	Public Works Department	<p><u>The Capital Improvement Plan (CIP) guides the scheduling of spending of construction, maintenance and repair of City facilities and infrastructure. The plan encompasses projects associated with public infrastructure and equipment such as roads, urban runoff facilities, and traffic signals. Projects are based on improvement, maintenance, and renovation of infrastructure. The CIP can identify and fund mitigation actions related to City facilities and infrastructure. Guides the scheduling of spending on Capital Improvement Projects (CIP), and serves as a mechanism to guide future development. The City updates projects on an annual basis.</u></p>
<u>Dam Emergency Action Plans and Inundation Maps</u>	<u>City of Los Angeles Department of Water and Power</u>	<p><u>Dam Emergency Action Plans (EAPs) identify incidents that can lead to emergency conditions at the dam, identifies areas that could be affected by inundation, and specifies pre-planned actions to be followed to minimize property damage, loss of infrastructure/water resources, and loss of life. The EAP is reviewed and approved by the California Office of Emergency Services (Cal OES), and the inundation maps are approved by the California Department of Water Resources, Division of Safety of Dams (DSOD). The EAPs identify specific vulnerabilities that have been incorporated into the LHMP, and dam specific risk evaluations coordinate with identified mitigation actions. EAPs also identify regular training and emergency preparedness exercises.</u></p>
<u>Community Guide to Public Alerts and Warnings</u>	<u>Fire Department</u>	<p><u>The Community Guide to Public Alerts and Warnings informs the public about the City's warning and notification systems and facilitates communication with the community in the event of an emergency or disaster. Mitigation actions that rely on effective emergency warning, community preparedness and response may use the existing alerts and warning systems outlined in this document.</u></p>
<u>Bicycle and Pedestrian Master Action Plan</u>	Public Works Department	<p><u>The Bicycle and Pedestrian Action Plan guides future development of bicycle and pedestrian facilities, as well as education, enforcement, and encouragement programs to encourage walking and biking that result in reduced congestion, lower greenhouse gas emissions, and promote healthier lifestyles and improved quality of life. This plan informs the MJHMP of existing and proposed bike and pedestrian facilities. The development of these facilities can be coordinated with mitigation actions and optimized to ensure safety, efficiency and resilience of active transportation within the City.</u></p>



City of Culver City and Culver City Unified School District
DRAFT - CONFIDENTIAL – DO NOT PUBLISH



Parks and Recreation Master Plan	Parks, Recreation, and Community Services Department	<u>The Parks and Recreation Master Plan g</u> Guides open space and recreational planning within the City, including park/recreation facilities and the use of CCUSD facilities. <u>Mitigation actions can be implemented in coordination with park/recreation projects and facilities improvements identified in the Parks and Recreation Master Plan.</u>
Water Conservation Plan	Public Works Department, in cooperation with Parks, Recreation, and Community Services Department	<u>The Water Conservation Plan e</u> Establishes a plan for the City to achieve targeted water reductions in City facilities and guides residents to adhere to mandatory water use restrictions in order to respond to continuous drought conditions and resulting potable water shortage in California. <u>The tools and strategies of the Water Conservation Plan can be used to develop MJHMP drought mitigation actions.</u>
Urban Forest Master Plan	Public Works Department	<u>The Urban Forest Master Plan d</u> Designates tree species for public street parkways and medians, including the use of drought-tolerant species that have low maintenance needs. City trees are continually maintained with trimming occurring once every three to four years. -Also provides for the long-term management of the urban forest through tree planting, preservation, and maintenance. The plan is designed to support Culver City's environmental goals in regards to stormwater management and carbon sequestration; it also envisions increased shade for pedestrians and motorists, improved air quality, and increased opportunity for healthy recreation. <u>Mitigation actions, specifically those related to landscaping and stormwater management can be implemented in coordination with the designations of the Urban Forest Master Plan.</u>

Commented [SN1]: QUESTION FOR CITY: Is there a more recent plan from the 2009 iteration?

Commented [SN2]: QUESTION FOR CITY: Is there a more recent plan from the 2015/16 iteration?

**Table 5-3A [continued]
City of Culver City Planning and Regulatory Capabilities Summary**

Ordinance/Plan/Policy/Program	Responsible Agency or Department	Description/Comments
Economic Development Implementation Plan	Community Development	<u>The Economic Development Implementation Plan p</u> Provides strategies to improve economic development opportunities within the City including creating jobs, eliminating blight, revitalizing communities, and constructing affordable housing in order to provide a more sustainable economy. <u>The plan a technical analysis of the City's economy; this document can be used to inform the MJHMP Community Profile as well as identify opportunities to incorporate mitigation actions into the City's existing economic development strategies and implementation plan.</u>
Annual Catch Basin Cleaning Program	Public Works Department	The City provides regular maintenance and cleaning of its catch basins. —There are more than 1,000 automatic retractable and connector pipe trash screens in storm drain catch basins to help prevent trash, leaves, and other debris from flowing into the storm drain system. <u>Catch basin cleaning and maintenance procedures can be incorporated into MJHMP mitigation actions to address stormwater and surface runoff concerns.</u>
Stormwater Quality Master Plan	Public Works Department	<u>The Stormwater Quality Master Plan guides proposed actions for compliance with the MS4 permit and Enhanced Watershed Management Programs and ensures the TMDL</u>

Commented [SN3]: QUESTION FOR CITY: Confirm this basin cleaning program is ongoing.



City of Culver City and Culver City Unified School District
Multi-Jurisdictional Hazard Mitigation Plan



		requirements that drive these regulations are met. This plan outlines and implements projects that manage stormwater, mitigate water quality concerns and flooding. Mitigation actions of the MJHMP can be coordinated with the Stormwater Quality Master Plan projects to efficiently address stormwater management and resilience.
Enhanced Watershed Management Programs and Coordinated Integrated Monitoring Plans	Public Works Department	The City joined the Ballona Creek Watershed Management Group in preparing the Enhanced Watershed Management Program for the Ballona Creek Watershed. Additionally, the City participated in the Marina Del Rey Enhanced Watershed Management Program. Participating in these watershed management programs, and their associated Coordinated Integrated Monitoring Program provide an opportunity to identify mitigation actions to monitor and maintain watersheds in the area in such a way that addresses water quality concerns, storm water management and flooding.
Community and Municipal Greenhouse Gas Inventory Reports	Community Development Department	The City's Greenhouse Gas (GHG) inventory reports present the greenhouse gas emissions inventories for municipal operations and community-wide activities. These inventories guide policymakers in applying cost-effective GHG reduction strategies and can be used to inform climate change and related hazard mitigation strategies.
Southern California Gas 2021 Gas Safety Plan	SoCalGas	The Southern California Gas 2021 Gas Safety Plan provides procedures to review, change, optimize or enhance operations to protect public safety and worker safety from gas-related risks and incidents. This plan can be used to identify opportunities for coordinating mitigation actions and safety strategies between the City and SoCal Gas.
West Basin Municipal Water Urban Water Management Plan	West Basin Municipal Water District	The Urban Water Management Plan (UWMP) provides a detailed summary of present and future water supplies and demands within West Basin's service area and assesses West Basin's water resource needs. The UWMP informs action on managing and mitigating the effects of drought and climate change.
West Basin Municipal Water District Water Shortage Contingency Plan	West Basin Municipal Water District	The Water Shortage Contingency Plan serves as an operating manual for West Basin Municipal Water District to prevent significant service disruptions through proactive management and guide operations to address water shortages caused by drought, climate change, or catastrophic events. Drought and climate change mitigation actions are informed by the management strategies of the Water Shortage Contingency Plan.
Mutual Aid Agreements	Police Department; Public Works Department; Transportation Department; and Fire Department	The City maintains various mutual aid agreements with surrounding jurisdictions and agencies to provide services and assistance in the event of a disaster.
Memorandum of Understanding (MOU) with Smart & Final	Fire Department	Access to emergency supplies in bulk quantities.
Informal Mutual Aid Agreement with Sony Pictures Studios	Fire Department	Sony has its own fire department on-site that works directly with the City's Fire Department. It has a dedicated emergency manager. The studio's emergency response infrastructure includes storing water in underground tanks and pumping out in pop-up tanks, sanitizers, pump system, emergency supplies, and an emergency app for mobile

Commented [SN4]: QUESTION FOR CITY: Confirm this MOU still exists.

Commented [SN5]: QUESTION FOR CITY and SONY: Confirm Mutual Aid Agreement still exists.



City of Culver City and Culver City Unified School District
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		devices. Sony has a signed agreement with the American Red Cross to be a potential shelter station.
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Table 5-3D
City of Culver City Education and Outreach Capabilities Summary

Resource/Programs	Department/Agency	Description/Comments
Staff Training	Fire Department	The City provides staff training on emergency response and preparedness 1-2 times per year (typically held in September and December). <u>Mitigation actions may include updating or enhancing staff training on emergency response and preparedness.</u>
City Website	Information Technology Department	The website provides news and announcements to the community, including community events related to safety and emergency preparedness and mitigation. It maintains information and resources pertaining to hazards and mitigation. <u>The City Website provides an opportunity to convey information and implement mitigation actions specific to educating and informing the community regarding all hazards and ways to reduce impacts from the hazards.</u>
Social Media	City Manager; Fire Department; Police Department; Information Technology Department	The City and some individual departments have Facebook and Twitter accounts to provide information to the community. <u>Social media channels provide an opportunity to convey information and implement mitigation actions pertaining community education/outreach.</u>
<u>Everbridge (i.e., Nixle)</u>	City Manager; Fire Department; Police Department; Public Works Department	The City utilizes <u>Everbridge (or Nixle)</u> as its <u>official</u> emergency notification system <u>to communicate urgent alerts, community events, and traffic-related information to the Culver City community. Mitigation actions may continue to rely on Everbridge for emergency notification.</u>
<u>Smart 911</u>	Fire Department; Police Department	Allows residents to add information about their household that would help first responders in the event of an emergency.
Alert LA, Notify LA	County of Los Angeles	Emergency mass notification system to contact County residents and businesses in case of an emergency. <u>The system sends shelter-in-place instructions, evacuation information, and other emergency messages.— Mitigation actions may encourage or promote Alert LA as an emergency notification tool.</u>
Community Emergency Response Team (CERT)	Fire Department	<u>The Culver City Community Emergency Response Team (CERT) e</u> ducates people about disaster preparedness for hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. <u>Mitigation actions may utilize</u>

Commented [SN6]: QUESTION FOR CITY: Is this service still used?



City of Culver City and Culver City Unified School District
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		<u>CERT to continue or enhance community emergency preparedness.</u>
Communitywide Disaster Drill	Fire Department	The City's annual disaster drill takes place on the same day as the Great California ShakeOut, the 3 rd Thursday in October. <u>The purpose of this drill is to give community members an opportunity to prepare and practice their "disaster plan."</u> An effective mitigation and preparedness strategy may include continuing and promoting participation in this or similar disaster drills.
Culver City Amateur Radio Emergency Service Volunteer (CCARES)	Coordination with Fire Department	<u>The Culver City Amateur Radio Emergency Service (CCARES) is a volunteer organization of area residents that work with the Culver City Fire Department and Culver City Community Emergency Response Team (CERT) to provide communication in case of emergencies. This service provides redundancy and resilience in the case of emergencies that might disable telephone or cellular service. Mitigation actions may include continued support from the City and Fire Department.</u>
Culver City Citizens Police Academy	Police Department	<u>The Culver City Police Department Citizens Police Academy is a program designed to educate residents and local citizens on the various aspects of law enforcement. The program consists of two types of volunteers, the Volunteers in Patrol (VIP) and the Senior Volunteer Program (SVP), who are trained by the Police Department to provide support to both the department and the community. The goal is to open lines of communication and encourage interaction between police officers and the community. Education and outreach may serve as a mitigation action to increase communication and interaction under this program.</u>
American Red Cross	Coordination with Fire Department	Provide access to natural hazard information and resources, as well as educational and training programs. <u>Promoting participation in American Red Cross educational and training programs would serve to mitigate hazards by increasing awareness and preparedness.</u>
<u>American Red Cross Disaster Preparedness Programs</u>		<u>Provides free disaster preparedness presentations in-person or virtually to the community that show participants how to make an emergency kit, family plan, and be informed. Educates participants on the correct actions to take during a disaster such as an earthquake, home fires, and wildfires.</u>



**Table 5-4A
Culver City Unified School District Planning and Regulatory Capabilities Summary**

Plan/Regulations/Program	Responsible Agency or Department	Description/Comments
Culver City Unified School District Facilities Master Plan	Business Services Department	The 2013/2014 CCUSD Master Facility Plan is designed to inform, engage, and guide in developing an action plan that addresses CCUSD's district-wide capital needs. The plan offers a detailed list of both needs and estimated costs of the identified projects. <u>Mitigation actions can be coordinated with planned district facility improvement projects.</u>
Hazard Mitigation Plan	Business Services Department	<u>Identifies how the school districts intends to reduce the impact of natural hazards on staff/students and school assets.</u>
The Field Act	Division of the State Architect (DSA)	<u>The Field Act was enacted in 1933 following the Long Beach Earthquake that destroyed and damaged many schools. The Field Act and has been updated many times since its inception and r</u> Requires all school buildings be built using more stringent standards than those required for other building construction. <u>Provisions under the field act may be relied on to guide seismic hazard mitigation actions.</u>
Comprehensive School Safety Plan (CSSP)	Safety and Security Department	<u>CCUSD developed the CSSP for use as a template in the preparation of emergency procedures for each of the CCUSD schools and facilities. All schools maintain a school safety plan. School Safety Plans and the CSSP present specific procedures using Incident Command System (ICS) principles to prepare for and respond to school emergencies. Mitigation actions may rely on or enhance the procedures found in the CSSP.</u>
School Safety Plan	Security Department	<u>All schools maintain a school safety plan.</u>

Commented [SN7]: QUESTION FOR CCUSD: Is there a new facilities master plan in preparation process right now?



**Table 5-4D
Culver City Unified School District Education and Outreach Capabilities Summary**

Resource/Programs	Department/Agency	Description/Comments
Staff Training	Business Services Department; Security Department	CCUSD is required to plan for earthquakes, drills, hazard mitigation, and training.
CCUSD Website	Business Services Department; Security Department	The website provides information to staff, parents, and students regarding the school district, including school events and announcements, as well as emergency preparedness.
Culver Currents	Superintendent's Office	Monthly newsletter distributed to families.
Emergency Preparedness Newsletter	Security Department	Periodic newsletter focusing on emergency preparedness.
Social Media	Superintendent's Office	CCUSD maintains Twitter and Facebook accounts and subscriptions to CCUSD news feed.
Disaster Drills	Security Department	CCUSD conducts disaster drills (fire, earthquake, and lock downs) periodically throughout the year.
Community Emergency Response Team (CERT)	Culver City Fire Department; Security Department	The CCUSD Security Team has completed the CERT training course made available through the City. Staff members are encouraged to obtain certification.
<u>American Red Cross Youth Preparedness Programs</u>		<u>Provides free disaster preparedness presentations ("The Pillowcase Project" and "Prepare with Pedro") in person or virtually to students that prepares children for disasters, teaches coping skills and general preparedness information.</u>

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Facility		Facility Category - Community Lifelines	Owner/Responsible Agency	Location	Source
Previously Included					
City Buildings					
1	City Hall	Safety and Security; Communications	City of Culver City		
2	Police Department	Safety and Security; Communications	City of Culver City		
3	Fire Station No. 1/Emergency Operations Center (EOC)	Safety and Security; Communications	City of Culver City		
4	Fire Station No. 2	Safety and Security; Communications	City of Culver City		
5	Fire Station No. 3	Safety and Security; Communications	City of Culver City		
6	Fire Training Building	Safety and Security; Hazardous Material	City of Culver City		
7	Public Works Yard	Safety and Security; Hazardous Material	City of Culver City		
8	Sanitation Transfer Station	Safety and Security; Hazardous Material	City of Culver City		
9	Transportation Facility/Department	Transportation; Safety and Security	City of Culver City		
City Parks and Recreation					
10	Veterans Park & Memorial Building	Safety and Security	City of Culver City		
11	Syd Kronenthal Park	Safety and Security	City of Culver City		
12	Blanco Park	Safety and Security	City of Culver City		
13	Culver West Alexander Park	Safety and Security	City of Culver City		
14	Ivy Substation & Media Park	Safety and Security	City of Culver City		
15	El Marino Park	Safety and Security	City of Culver City		
16	Blair Hills Park	Safety and Security	City of Culver City		
17	Dr. Paul Carlson Park	Safety and Security	City of Culver City		
18	Culver City Park (Botts Field)	Safety and Security	City of Culver City		
19	Fox Hills Park	Safety and Security	City of Culver City		
20	Lindberg Park	Safety and Security	City of Culver City		
21	Tellefson Park	Safety and Security	City of Culver City		
22	Senior Center	Safety and Security; Food, Water, Shelter	City of Culver City		
23	Municipal Plunge	Safety and Security	City of Culver City		
City Pump Stations					
24	Braddock Sewer Pump Station	Safety and Security; Hazardous Material	City of Culver City		
25	Bristol Sewer Pump Station	Safety and Security; Hazardous Material	City of Culver City		
26	Hayden Sewer Pump Station	Safety and Security; Hazardous Material	City of Culver City		
27	Fox Hills Sewer Pump Station	Safety and Security; Hazardous Material	City of Culver City		
28	Jasmine Sewer Pump Station	Safety and Security; Hazardous Material	City of Culver City		
29	Mesmer Sewer Pump Station	Safety and Security; Hazardous Material	City of Culver City		
30	Overland Sewer Pump Station	Safety and Security; Hazardous Material	City of Culver City		
Medical					
31	Southern California Hospital at Culver City	Health and Medical			
Recommended Additions					
32	Culver City Community and Social/Teen Center	Safety and Security; Food, Water, Shelter	City of Culver City	4153 Overland Ave, Culver City, CA 90230	
33	Combs Parkette		City of Culver City		
34	Culver City Skate Park		City of Culver City		
35	Fox Hills Parkette		City of Culver City		
36	The Boneyard Dog Park		City of Culver City		
37	Culver City Light Rail Station	Transportation	Los Angeles County Metropolitan Transportation Authority	8817 Washington Blvd, Culver City, CA 90232	
38	Sawtelle Blvd over Ballona Creek	Transportation			

39	Sepulveda Blvd over Ballona Creek	Transportation			
40	Ballona Creek Bridge	Transportation			
41	Overland Ave over Ballona Creek	Transportation			
42	Duquesne Ave over Ballona Creek	Transportation			
43	Washinton Blvd over Ballona Creek	Transportation			
44	National Blvd over Ballona Creek	Transportation			
45	MWD Venice Substation	Energy	SCE		
46	Sony Substation	Energy	SCE		
47	Culver Substation	Energy	SCE		
48	Movie Substation	Energy	SCE		
49	Natural Gas Transmission Line along Inglewood Boulevard	Energy	SoCalGas		
50	Golden State Water Company - Culver City Office	Food, Water, Shelter	Golden State Water Company		
51	Culver - Palms YMCA	Food, Water, Shelter	Culver - Palms YMCA		
52	Marycrest Manor - Skilled Nursing Facility	Food, Water, Shelter	Marycrest Manor		

Facility		Facility Type	Owner/Responsible Agency	Location	Source
Previously Included					
1	School District Office	Safety and Security; Communications	CCUSD		
2	High School	Safety and Security	CCUSD		
3	Culver Park Continuation High School	Safety and Security	CCUSD		
4	Middle School	Safety and Security	CCUSD		
5	El Marino Language School	Safety and Security	CCUSD		
6	El Rincon Elementary	Safety and Security	CCUSD		
7	Farragut Elementary	Safety and Security	CCUSD		
8	La Ballona Elementary	Safety and Security	CCUSD		
9	Linwood E. Howe Elementary	Safety and Security	CCUSD		
10	Office of Child Development	Safety and Security	CCUSD		
11	Adult School	Safety and Security	CCUSD		
12	Maintenance Facilities	Safety and Security	CCUSD		
13	Natatorium	Safety and Security	CCUSD		
14	Warehouse/District IMC	Safety and Security	CCUSD		
15	Echo Horizon School (leased)	Safety and Security	CCUSD		
16	Wildwood School (leased)	Safety and Security	CCUSD		

NEEDS

Golden State Water Company - Potable Infrastructure/Critical Facilities, such as pump stations.

LA Department of Water and Power - Please confirm no substation infrastructure within the City.

School District - Any additional external partners serving children in the City in partnership with the school district?

City - Which City buildings/infrastructure would be used for emergency shelter?

#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline
1	City: Continue to use emergency alert systems, such as Nixle and Reverse 911, and coordinate with CCARES and CERT members to notify community members in the event of an imminent threat or a need to evacuate.	Multiple Hazards	City Manager; Fire; Police; Information Technology; Transportation; PRCS	General Fund; grant opportunities for disaster preparedness, resiliency, etc.	High	Ongoing
2	City and CCUSD: Continue to provide back-up power and supplies at critical facilities and identify any critical facilities that may not currently have them in order to maintain basic functions during emergency situations.	Multiple Hazards	Public Works; Information Technology; Transportation; CCUSD	General Fund; grant funding for disaster preparedness, resiliency, public health, etc.	High	Ongoing
3	City: Establish alternative bus routes as part of City Bus emergency planning efforts to maintain service in the event that key roads are blocked.	Multiple Hazards	Transportation	General Fund	Medium	2017
4	City: Develop and maintain an evacuation plan for the City to effectively distribute evacuation notices, and to ensure that evacuating traffic flows smoothly.	Multiple Hazards	Fire; Police; Public Works; Transportation	General Fund	Medium	2017
5	City and CCUSD: Continue to distribute information about ways to reduce the threat of hazards to all community members through mailings, printed notifications, television and digital devices, and in-person events and workshops. This strategy would mitigate impacts from all priority hazards.	Multiple Hazards	City Manager; Fire; Police; Community Development; Information Technology; Public Works; PRCS; CCUSD	General Fund; grant opportunities for disaster preparedness, public health, community engagement and outreach, etc.	Medium	Ongoing
6	City and CCUSD: Continue to incorporate hazards in the Plan into agency emergency planning and programs.	Multiple Hazards	Fire; Public Works; Community Development; Police; CCUSD	General Fund	Medium	Ongoing
7	City: Review and update the City's Municipal Code and applicable ordinances, as appropriate, to implement the strategies identified in this Plan and other emergency planning efforts.	Multiple Hazards	Community Development; Public Works; City Attorney	General Fund; grant opportunities for planning, disaster preparedness, resiliency, etc.	Medium	2021
8	City and CCUSD: Coordinate with regional and state agencies to monitor potential changes in severity, frequency, and affected areas from future emergency situations, especially due to climate change.	Multiple Hazards	Fire; Public Works; Community Development; Police; CCUSD	General Fund; grant opportunities for resiliency.	Medium	Ongoing
9	City and CCUSD: Continue to conduct assessments of agency buildings, facilities, and infrastructure to identify vulnerabilities. Secure funding to retrofit vulnerable structures such as soft story and masonry buildings constructed prior to 1976. Encourage adjacent jurisdictions to conduct assessments of buildings, facilities, and infrastructure located adjacent to or serving the City.	Multiple Hazards	Public Works; Community Development; CCUSD	General Fund; Capital Improvements Plan; grant opportunities for disaster preparedness, resiliency, seismic hazard mitigation, etc.	High	Ongoing
10	City and CCUSD: Avoid locating any new critical facilities within or immediately adjacent to hazard areas. If no reasonable alternative is available, use extensive mitigation features to reduce the impact.	Multiple Hazards	Community Development; Public Works; CCUSD	General Fund; Capital Improvements Plan; bond financing	Medium	Ongoing
11	City and CCUSD: Conduct energy efficiency retrofits, expand energy conservation efforts, and pursue the use of renewable energy at agency facilities to help avoid service disruptions during emergency situations. Explore the use of microgrids (localized grids that disconnect from the traditional grid to mitigate grid disturbances) to support energy resiliency at key facilities.	Multiple Hazards	Public Works; Transportation; CCUSD	General Fund; Capital Improvements Plan; grant funding; bond financing	Medium	2021
12	City and CCUSD: Conduct hazard vulnerability studies when constructing new City/CCUSD buildings /infrastructure. Based on study results, construct new buildings/infrastructure with features that improve resiliency to all applicable hazards. Encourage hazard vulnerability studies be conducted for new infrastructure/ development activities proposed in surrounding areas, especially when subject to natural hazards.	Multiple Hazards	Public Works; Community Development; CCUSD	General Fund; Capital Improvements Plan; bond financing; grant opportunities for disaster preparedness, resiliency, seismic hazard mitigation, etc.	High/Medium	Ongoing
13	City and CCUSD: Continue to coordinate with the American Red Cross to maintain the list of City/CCUSD-owned facilities approved as community shelter sites, and ensure that such facilities continue to be equipped with shelter carts.	Multiple Hazards	Fire; Public Works; PRCS; CCUSD	General Fund; grant opportunities for disaster preparedness.	Medium	Ongoing
14	City: Partner with the local community and other organizations, such as the American Red Cross, to work directly with vulnerable populations (elderly, homeless, low income, special needs, etc.) to identify opportunities to mitigate impacts in the event of a natural disaster, including the identification of available resources and how to access and implement those resources.	Multiple Hazards	City Manager; Fire; Police; Community Development; Information Technology; Public Works; PRCS	General Fund; grant opportunities for disaster preparedness, public health, community engagement and outreach, etc.	High	2017/ Ongoing
15	City: Coordinate with the Southern California Hospital and West Los Angeles College to understand their capabilities and opportunities to partner in hazard mitigation activities.	Multiple Hazards	Public Works	General Fund	Medium	2017/ Ongoing
16	City: Work with regional utility companies and service agencies, including electricity and natural gas providers, telecommunication providers, and transit agencies, to ensure that services remain fully active as much as safely possible during emergency events and that full service is fully restored as quickly as possible following an emergency.	Multiple Hazards	Public Works; Community Development; Fire; Police; Transportation	General Fund	High	2018/ Ongoing

Commented [MC1]: 2019 Community Guide to Public Alerts and Warnings identifies the following alert systems: Everbridge (Nixle), Integrated Public Alert and Warning System (IPAWS), media releases & social media, City Website, Culver City TV, Radio, PA System, and Electronic Changeable Message Signs. We may want to update this policy with those in mind.

Commented [MC2]: Confirm that crit. facilities without back-up power have been identified.

Commented [MC3]: Confirm with City if this has been completed.

Commented [MC4]: Was not able to find a City evacuation plan other than what's in the 2016 EOP.

Commented [MC5]: Recommend keeping this.

Commented [MC6]: Recommend keeping this.

Commented [MC7]: Confirm Municipal Code was updated. We may want to keep this action if there are new mitigation actions to codify in the Municipal Code.

Commented [MC8]: Recommend keeping this.

Commented [MC9]: Confirm if City/ CCUSD conducted these kinds of vulnerability assessments.

Commented [MC10]: Recommend keeping this.

Commented [MC11]: Culver City joined the Clean Power Alliance in 2017, we should confirm if they have taken other steps toward renewable energy and resilience.

Commented [MC12]: Recommend keeping this.

Commented [MC13]: Recommend keeping this.

Commented [MC14]: Confirm if this collaboration took place and if resources/actions were identified.

Commented [MC15]: Confirm if this collaboration took place and if resources/actions were identified.

Commented [MC16]: Confirm if this collaboration took place and if resources/actions were identified.

#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline
17	City and CCUSD: Continue to update emergency-related planning documents every five years to ensure consistency with state and federal law, best practices, local conditions, and recent science.	Multiple Hazards	Fire; Police; Public Works; Community Development; CCUSD	General Fund; grant opportunities for disaster preparedness, hazard mitigation, resiliency, etc.	Medium	Ongoing
18	City and CCUSD: Work to continue to improve estimates of potential casualties and property damage under various emergency scenarios, and incorporate findings into emergency planning efforts as appropriate.	Multiple Hazards	Fire; Police; Public Works; Community Development; CCUSD	General Fund, grant opportunities for disaster preparedness, hazard mitigation, resiliency, etc.	Medium	Ongoing
19	City: In coordination with state and regional agencies and other key stakeholders, continue to participate in and conduct disaster training events and drills.	Multiple Hazards	Fire; Police; Public Works; Transportation	General Fund	Medium	2017/ Ongoing
20	City: Work with local real estate agents and landlords to require the disclosure of the presence of any natural hazard risk zones prior to the sale or lease of buildings.	Multiple Hazards	Community Development	General Fund	Low	2019/ Ongoing
21	CCUSD: Conduct regular drills for students and school employees to ensure an effective response to emergency situations.	Multiple Hazards	CCUSD	General Fund	High	2017/ Ongoing
22	CCUSD: Stock school facilities with supplies to meet the short-term basic needs of students and staff in the event of an emergency situation.	Multiple Hazards	CCUSD	General Fund	High	2017/ Ongoing
NEW	<u>When updating the City's general plan, review natural hazard information and mapping (e.g., liquefaction, landslide, fire hazard zones) to ensure the most current information is reflected and updated as necessary. Incorporate new and/or revised goals and policies specific to reducing vulnerability to natural hazards. Integrate the adopted LHMP into the City Safety Element by reference to ensure compliance with AB 2140.</u>	<u>Wildfire</u>				

Commented [MC17]: Recommend keeping this.

Commented [MC18]: Confirm if these estimates were improved.

Commented [MC19]: Recommend keeping this.

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Commented [MC22]: Confirm if this was done, we may edit this to say maintain supplies...

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#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline
23	City: Work in coordination with the West Basin Municipal Water District to implement increased water conservation strategies that maximize the use of existing water resources.	Drought	Public Works; Community Development	General Fund; grant opportunities for drought mitigation and resiliency.	Medium	2018/ Ongoing
24	City: Identify and pursue alternative water sources to supplement imported West Basin Municipal Water District deliveries from the Metropolitan Water District in the event of regional drought conditions, including expanding groundwater recharge and making recycled water available in Culver City.	Drought	Public Works	Grant opportunities for drought mitigation, disaster preparedness, resiliency, climate change, sustainability, etc.	Medium	2021
25	City: Explore constructing additional water storage facilities and additional emergency connections to supplement water supplies during drought conditions or short-term shortages.	Drought	Public Works	General Fund; grant opportunities for disaster preparedness, drought mitigation, resiliency, etc.	Medium	2021
26	City and CCUSD: Develop and implement long-term strategies to reduce community water use, including mandatory use of drought-tolerant plants in new or replacement landscapes, and requirements to install water fixtures in new buildings that exceed minimum code requirements.	Drought	Community Development; Public Works, CCUSD	General Fund; grant opportunities for drought mitigation, resiliency, climate change, sustainability, etc.	Medium	2018/ Ongoing
27	City: Coordinate with the West Basin Municipal Water District to inform the public of water conservation restrictions and drought conditions.	Drought	Public Works	Water Conservation Plan; General Fund	Medium	2017/ Ongoing
28	City and CCUSD: Hold water saving workshops, drought-tolerant courses, and smart gardening classes, and educate community residents and businesses about available rebates for water-efficient and water-conserving equipment. CCUSD will support these City-lead workshops by notifying parents/students of the events and encouraging their attendance.	Drought	Public Works; CCUSD	Water Conservation Plan; General Fund; grant opportunities for drought mitigation, resiliency, climate change, sustainability, etc.	Low	2017/ Ongoing
29	City: Consider implementing additional mandatory restrictions on water use during drought conditions.	Drought	Public Works; Community Development	General Fund	Low	Ongoing
30	City and CCUSD: Incorporate drought-tolerant landscaping and materials at City park and recreation facilities and CCUSD properties where feasible.	Drought	PRCS; Public Works; CCUSD	General Fund; grant opportunities for drought mitigation, resiliency, climate change, etc.	Medium	2021
31	City: Continue to seek funding and provide rebate opportunities for residents and businesses to incorporate drought-tolerant landscaping.	Drought	Public Works	Water Conservation Plan; Turf Removal Rebate Program, grant opportunities for drought mitigation,	Medium	2018/ Ongoing
32	City and CCUSD: Add compost and mulch to landscaped areas as feasible to reduce water evaporation.	Drought	PRCS; Community Development; Public Works; CCUSD	General Fund; grant opportunities for drought mitigation, Water Conservation Plan	Medium	2021
33	City: Coordinate with water purveyors to ensure accurate land use and growth information is incorporated into projected water supply analyses as part of Urban Water Management Plan updates.	Drought	Community Development; Public Works	General Fund	Medium	2019
34	City: Partner with local organizations to offer low-cost or free water audits to residents and businesses.	Drought	Public Works	General Fund; grant opportunities for drought mitigation	Low	2018

Commented [MC23]: Confirm water conservations efforts between City and West Basin, revise policy to maintain water conservation efforts.

Commented [MC24]: West Basin 2020 Urban Water Management Plan and 2021 Water Shortage Contingency Plan can be used to update this policy based on water current water sources.

Commented [MC25]: Confirm if this has been done, refer to 2022 Mitigation Action Plan for Drought, Wildfire, and Flood for runoff and storage projects.

Commented [MC26]: Municipal Code Ch. 5.03 has conservation requirements, I didn't find anything on mandatory drought tolerant landscaping. Confirm with City and revise to say continue, maintain, or enforce.

Commented [MC27]: Recommend keeping this.

Commented [MC28]: Confirm with City/CCUSD if these were held, City website has a water conservation page that may be helpful.

Commented [MC29]: Municipal Code CH 5.03 has Level 1,2 and 3 Water Shortage limits.

Commented [MC30]: Can revise to say maintain/continue or delete this if it has been completed.

Commented [MC31]: City website has rebate information from West Basin and Metropolitan Water District. Policy could be changed to: Continue to advertise rebate opportunities on City website...

Commented [MC32]: Confirm with City/CCUSD if this has been done and wants to continue doing so.

Commented [MC33]: Recommend keeping this.

Commented [MC34]: Confirm, may revise to say continue if desired.

#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline	NOTES
35	City: Conduct an inventory of seismically vulnerable private buildings, including unreinforced masonry and soft first-story structures, and prioritize retrofits for more vulnerable structures and lower-income housing. Identify potential funding sources to assist with seismic retrofits.	Seismic Hazards	Public Works; Community Development	General Fund; development fees; grant opportunities for disaster preparedness, resiliency, seismic hazard mitigation, etc.	Medium	2020	Seismic survey was conducted in 2018/2019, and the Seismic Retrofit Ordinance was adopted in September 2021. Recommend marking mitigation action as done.
36	City: Explore creating an ordinance requiring seismically vulnerable structures to conduct earthquake-resistant retrofitting over a phased period and/or when major renovation occurs.	Seismic Hazards	Community Development; City Attorney	General Fund	Low	2020	Seismic Retrofit Ordinance was adopted in September 2021. Recommend marking mitigation action as done.
NEW	City: Continue the implementation of the implementation of the Seismic Retrofit Ordinance. Consider modeling a seismic retrofit grant program after the City of Berkeley HMGP-funded program and seek FEMA grant funding as appropriate.						
37	City: Require new development in the liquefaction vulnerability zone to conduct liquefaction vulnerability studies and conduct liquefaction mitigation activities as needed.	Seismic Hazards	Community Development	Development fees	High	2017	
38	City: Require new development in landslide-prone areas to include landslide resiliency features to minimize the risk of damage.	Seismic Hazards	Community Development	Development fees	High	2017	
39	City: Establish a zoning overlay for the Alquist-Priolo hazard zone, and create and enforce development standards for new construction activities in this hazard zone to improve the resiliency of new structures to seismic hazards.	Seismic Hazards	Community Development	Development fees; General Fund	Medium	2017	<u>Was this incorporated into the Seismic Retrofit Ordinance?</u>
40	City and CCUSD: Ensure that all tall furniture in City and school property is securely fastened to the wall to reduce damage during an earthquake. When purchasing furniture or reconfiguring rooms in City/CCUSD buildings, consider the potential impacts to seismic vulnerability.	Seismic Hazards	Public Works; CCUSD	General Fund; grant opportunities for seismic hazard mitigation	High/Medium	2017 -Ongoing	
41	City and CCUSD: Continue hosting Hold seismic preparation workshops to educate community residents and businesses about securing property and to reduce damage during an earthquake. Consider advertising event se coordination of the events to be advertised through the City and CCUSD and held at their facilities.	Seismic Hazards	Public Works; CCUSD	General Fund; grant opportunities for seismic hazard mitigation	Medium	2017 -Ongoing	
NEW	City: Conduct a city-wide liquefaction, landslide, and slope failure vulnerability assessment. Use findings to determine future mitigation actions, or potential integration into the existing Seismic Retrofit Ordinance.	Seismic Hazards					

#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline	NOTES
42	City: Continue to evaluate the effectiveness of City-owned drain systems and carry out improvements as needed. Monitor City-owned drainage infrastructure during rain events, and take emergency action as necessary to avoid or minimize flooding.	Flood	Public Works	General Fund; Capital Improvements Plan; bond financing	Medium	Ongoing	
43	City: Encourage property owners to improve drainage on their properties through low-impact development features, particularly property owners in and adjacent to flood hazard areas.	Flood	Community Development; Public Works	General Fund	Medium	Ongoing 2017	
44	City: Update the Stormwater Master Plan to address drainage and flood control.	Flood	Public Works	General Fund; grant opportunities for hazard mitigation	Medium	2021	DONE. This was completed in 2021. Recommend updated mitigation action to identify key implementation actions.
45	City: Maintain an adequate supply of sandbags and other low-cost flood control measures to protect City facilities and to meet public demand.	Flood	Public Works; Fire	General Fund	High/Medium	2017 -Ongoing	
46	City: Continue to r Retrofit public spaces, including sidewalks and parking lots, to include permeable paving and other low-impact development features <u>as funding sources become available.</u>	Flood	Public Works	General Fund; Capital Improvements Plan; bond financing, grant opportunities for flood hazard mitigation	Medium	2020	Confirm with City if this was completed, or needs to continue. Recommend this as an ongoing action, as funding becomes available.
47	City: Continue to participate in the National Flood Insurance Program.	Flood	Public Works	General Fund	Medium	Ongoing	
48	CCUSD: Continue to i Identify and upgrade deficient drainage systems on school property, <u>as funding sources become available.</u> Use low-impact development features to supplement drainage features as appropriate.	Flood	CCUSD	General Fund; Capital Improvements Plan; bond financing, grant opportunities for flood hazard mitigation	Medium	2020	Confirm with the City if this was completed or needs to continue. Recommend this as an ongoing action, as funding becomes available.
<u>NEW</u>	City: Implement Concept Plans from the Mitigation Action Plan (Blue Ocean, prepared May 2022) at key Critical Facilities known to be susceptible to flooding. Prioritize capital improvements based on criteria outlined within the Mitigation Action Plan as funding sources become available. Pursue grant funding for capital improvements, as appropriate.	Flood					

#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline
49	City and CCUSD: Design future critical infrastructure to withstand wind events beyond minimum building code standards.	Severe Weather	Community Development; Public Works; CCUSD	General Fund; grant opportunities for disaster preparedness, resiliency, etc.	Low	2021
50	City: Continue to work with Southern California Edison and the Los Angeles Department of Water and Power to relocate above-ground power lines and associated infrastructure underground in order to reduce damage from fallen power lines during severe wind events.	Severe Weather	Community Development; Public Works	General Fund, grant opportunities for disaster preparedness, hazard mitigation, resiliency, etc.	Low	Ongoing
51	City and CCUSD: Continue to coordinate with Southern California Edison and the Los Angeles Department of Water and Power to implement an ongoing tree trimming program for trees located in close proximity to overhead power lines.	Severe Weather	Public Works; CCUSD	General Fund	Medium	Ongoing
52	City and CCUSD: Monitor trees, limbs, and other vegetation near power lines, and promptly inform Southern California Edison and the Los Angeles Department of Water and Power of the need for any tree trimming.	Severe Weather	Public Works; CCUSD	General Fund	Medium	Ongoing
53	City: Continue to coordinate with the National Weather Service Decision Support program to be advised of upcoming weather conditions in a manner that enables smart decisions and disaster preparedness.	Severe Weather	Fire; Public Works; Police	General Fund	High/Medium	Ongoing
54	City and CCUSD: Continue to regularly monitor El Niño Southern Oscillation (ENSO) conditions, and incorporate forecasted conditions into short-term emergency planning.	Severe Weather	Fire; Public Works; Police; CCUSD	General Fund	Medium	Ongoing
55	City: Monitor slope stability in landslide-prone areas, and issue evacuation notices if slopes appear unstable.	Severe Weather	Fire; Public Works; Police;	General Fund	Medium	Ongoing
56	City: As part of regular emergency preparedness education, continue to notify community members of current or future El Niño conditions, the anticipated impacts, and appropriate ways to prepare.	Severe Weather	Fire; Community Development; Public Works; Police	General Fund	Medium	Ongoing

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#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline	NOTES
57	City: Adopt and enforce the most up-to-date California Building Code and California Fire Code, with local amendments as appropriate.	Wildfire	Community Development; Fire	General Fund	Medium	Ongoing 2019	
58	City: Continue to maintain cooperative fire protection and fire prevention mutual aid agreements with relevant agencies.	Wildfire	Fire	General Fund	Medium	Ongoing	
59	City: Continue to support the Culver City Fire Department, California State Fire Marshal, and other relevant agencies to promote the implementation and awareness of fire prevention programs.	Wildfire	Fire	General Fund	Medium	2017 -Ongoing	
60	City: Identify inadequate access roadways. Develop a program to address inadequacies by altering the roadway design if possible. Identify roadways in high wildfire hazard risk with insufficient evacuation or emergency vehicle access, in accordance with AB 747 and SB 99. Identify and prioritize roadway capital improvement projects to enhance access, and seek grant funding opportunities as appropriate.	Wildfire	Public Works; Community Development; Fire; Transportation	General Fund; FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC); CalFire: Wildfire Prevention Grants Program.	Medium	2023; Ongoing2024	Recommend clarification regarding ongoing efforts on evacuation route mapping and capacity.
<u>NEW</u>	City: Establish a standardized vegetation management and clearing program, focused on open space areas within the City. Consider alternative vegetation management clearing opportunities, such as grazing goats. Explore grant funding to establish and implement the vegetation management program.						

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Culver City & Culver City Unified School District
 Multi-Jurisdictional Hazard Mitigation Plan
 Meeting #2
 May 25, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present
Joe Susca	Sr. Management Analyst	Culver City Public Works	9770 Culver Blvd. Culver City, CA 90232	Joe.susca@culvercity.org	310-253-5636	✓
Mike Korgan	MOT Director	Culver City Unified School District	4034 Irving Place Culver City, CA 90232	mikekorgan@ccusd.org	310-842-4220	✓
Noelle Steele	Project Manager	Michael Baker International	5 Hutton Centre Drive, Suite 500 Santa Ana, CA 92707	Noelle.Steele@mbakerintl.com	(949) 855-3683	✓
Michael Yaffe	Resilience Lead	Michael Baker International	5 Hutton Centre Drive, Suite 500 Santa Ana, CA 92707	Michael.yaffe@mbakerintl.com	(949) 472-3483	
Casey Marchese	Project Planner	Michael Baker International	5 Hutton Centre Drive, Suite 500 Santa Ana, CA 92707	Casey.Marchese@mbakerintl.com	(949) 472-3494	✓
Adam Ferguson	Sr. Management Analyst	Culver City-Parks & Recreation	4175 Overland Ave. Culver City, CA 90230	adam.ferguson@culvercity.org	310-253-6685	✓
Jason Sims	Interim Police Chief	Culver City-Police Department	4040 Duquesne Ave. Culver City, CA 90230	Jason.sims@culvercity.org	310-253-6208	
Lisa Soghor	Chief Financial Officer	Culver City-Finance	97700 Duquesne Ave. Culver City, CA 90230	Lisa.soghor@culvercity.org	310-253-6016	
Tim Koutsouros	Building Official	Culver City-Building Safety	9770 Culver Blvd. Culver City, CA 90232	Tim.koutsouros@culvercity.org	310-253-5802	✓
Hoa Diep	IT Manager	Culver City Information Technology	9770 Culver Blvd. Culver City, CA 90232	Hoa.diep@culvercity.org	310-253-6266	✓

Culver City & Culver City Unified School District
Multi-Jurisdictional Hazard Mitigation Plan
Meeting #2
May 25, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present
Hector Calvinisti	Safety & Training Coord.	Culver City Transportation	4343 Duquesne Ave. Culver City, CA	hector.calvinisti@culvercity.org	310-253-6572	
Tevis Barnes	Director	Culver City Housing and Human Services	9770 Culver Blvd. Culver City, CA 90232	Tevis.barnes@culvercity.org	310-253-5782	
Lisa Vidra	Assistant City Attorney	Culver City - City Attorney	9770 Culver Blvd. Culver City, CA 90232	Lisa.vidra@culvercity.org	310-253-5673	✓
Troy Evangelho	Advanced Planning Manager	Culver City-Advanced Planning	9770 Culver Blvd. Culver City, CA 90232	troy.evangelho@culvercity.org	310-253-5744	✓
Sean Singletary	Environmental Programs & Operations Manager	Culver City-Public Works	9505 Jefferson Blvd. Culver City, CA 90232	Sean.singletary@culvercity.org	310-253-6457	
Yanni Demitri	Public Works Director/City Engineer	Culver City Public Works	9770 Culver Blvd. Culver City, CA 90232	Yanni.demitri@culvercity.org	310-253-5630	✓
Christine Parra	Emergency Prep. Coordinator	Culver City Fire Department	9770 Culver Blvd. Culver City, CA 90232	Christine.parra@culvercity.org	310-253-5909	✓
Sean Kearney	Director of Fiscal Services	Culver City Unified School District	4034 Irving Place Culver City, CA 90232	seankearney@ccusd.org	310-842-4220 ext. 4234	
Steven Torrence	Emergency Services Coordinator	City of Santa Monica	333 Olympic Blvd. Santa Monica, CA 90401	steven.torrence@santamonica.gov	(310) 458-8686	

Culver City & Culver City Unified School District
Multi-Jurisdictional Hazard Mitigation Plan
Meeting #2
May 25, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present
Kristin Cavanaugh	Director of Studio Relations	Sony Pictures Entertainment	10202 Washington Blvd. Culver City, CA 90232	kristin_cavanaugh@spe.sony.com	(310) 244-5368	
Savanna Fiehler	Disaster Program Manager	American Red Cross	1450 11 th St. Santa Monica, Ca 90405	Savanna.Fiehler@Redcross.org	(213) 266-1003	✓
Margarita Kustanovich	Emergency Management Coordinator	West Hollywood	8300 Santa Monica Blvd., West Hollywood, CA 90069-6216	mkustanovich@weho.org	(310) 657-4009	
Meena Janmohamed	Emergency Management Manager	Beverly Hills	455 N. Rexford Drive Beverly Hills, CA 90210	mjanmohamed@beverlyhills.org	(310) 285-1021	✓
Ms. Jillian De Vela	Emergency Management Coordinator	City of Los Angeles	201 N Figueroa St, Los Angeles, CA 90012	jillian.de.vela@lacity.org		✓
Gymeka Williams	Emergency Management Coordinator	County of Los Angeles OEM	1275 N. Eastern Avenue, Los Angeles, CA 90063	sGWilliams@ceo.lacounty.gov		✓
Diane Forte	Government Relations Manager	Southern California Edison	1721 22nd Street Santa Monica CA 90404	diane.forte@sce.com	(310) 310-5262	
Sylvia Diaz		Southern California Gas	9240 East firestone Blvd. Downey, CA 90241	sdiaz@semprautilities.com	(562) 803-7484	
Fredy Ceja	Legislative Representative	Los Angeles Department of Water and Power	1394 S. Sepulveda Boulevard Los Angeles, CA 90025	Fredy.Ceja@ladwp.com	(213)367-1051	

Culver City & Culver City Unified School District
 Multi-Jurisdictional Hazard Mitigation Plan
 Meeting #2
 May 25, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present
Linda Cunningham	Capital Programs -- Project Coordinator, Culver City	Golden State Water	5839 Green Valley Circle #106, Culver City, CA 90232	LindaCunningham@gswater.com	(562) 522-8835	✓
Edward Caldwell	Government Affairs Program Manager	West Basin Municipal Water District	17140 S. Avalon Blvd., Suite 210 Carson, CA 90746	edwardc@westbasin.org	(310) 660-6286 office (213) 500-0379 cell	
Darrel Menthe	Executive Director	Downtown Business Association	PO Box 1322 Culver City, CA. 90232	darrel+downtownculvercity.com@ccsend.com	(310) 202-6060	
Sam Levitt	Facilities Manager	Amazon Studios	9336 Washington Blvd. Culver City, CA 90232	samlevi@amazon.com	(310) 202-1234	
Mark Jovel		Culver-Palms Family YMCA	4500 Sepulveda Blvd. Culver City, CA 90230	mariojovel@ymcala.org	(310) 390-3604	
Marie Aragon, MSN, BSN, RN	Chief Nursing Officer Regional Administrator	Southern California Hospital	3828 Delmas Terrace Culver City, CA 90232	MarieKathryna.Aragon@altacorp.com	310-991-9439	✓
Rick Blackburn	Emergency Services Advisor	SoCalGas	1801 S. Atlantic Blvd. Monterey Park, CA 91754	RBlackbu@socalgas.com	(626) 482-2217	
Timothy Dahlum	Pacific Division Information and Planning Lead Los Angeles Region Information and	American Red Cross	1450 S. Central Avenue Los Angeles, CA 90021	timothy.dahlum@redcross.org	310-780-5828	

Culver City & Culver City Unified School District
 Multi-Jurisdictional Hazard Mitigation Plan
 Meeting #2
 May 25, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present
	Planning Regional Program Lead					
Brian Stokes, Ed.D.	Vice President, Administrative Services	West Los Angeles College	9000 Overland Avenue Culver City, CA 90230	Stokesb@wlaac.edu		✓
Brandon Vanscoy	Lieutenant	Culver City Police Dept.	4040 Duquesne Ave, Culver City, CA 90232	brandon.vanscoy@culvercity.org	(310) 253-6109	
Lauren Wrenn	Associate Planner	Culver City Advance Planning Division	9770 Culver Blvd. Culver City, CA 90232	Lauren.wrenn@culvercity.org	(310) 253-5766	✓
Terrance Washington	Emergency Services Coordinator	California Governor's Office of Emergency Services	601 Sequoia Pacific Blvd, Sacramento, CA 95811	Terrance.Washington@caloes.ca.gov	916-917-4540	
Edson Ramos	Crisis Management	Sony Pictures				✓
"Representative"		Culver City Disability Advisory Committee	9770 Culver Blvd, Culver City, California 90232	DisabilityAdvisoryCommittee@culvercity.org		
"Representative"		One Incredible Family – Homeless and At Risk Advocacy	P. O. Box 2837 Culver City, CA 90231-2837	oifhelpsla@aol.com	(310) 313-0123 EXT. 1	
"Representative"		St. Joseph Center – Homeless and Mental Health Services	204 Hampton Dr, Venice, CA 90291	community@stjosephctr.org	(310) 396-6468	

Culver City & Culver City Unified School District
Multi-Jurisdictional Hazard Mitigation Plan
Meeting #2
May 25, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present
Jessica Miller		Share! – Housing, Self-Help, Mental Health Services	6666 Green Valley Circle Culver City CA, 90230	info@shareselfhelp.org	(310) 305-8878	

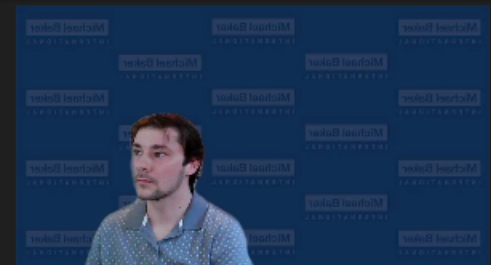
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+1 562-52... Meena (Gu... Ramos, Eds... Demitri, Ya... Evangelho, ... Participants



Participants

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- Marchese, Casey
- +1 562-522-8835 (External)
- YD Demitri, Yanni External
- HD Diep, Hoa External
- TE Evangelho, Troy External
- AF Ferguson, Adam External
- SF Fiehler, Savanna External
- GW Gymeka Williams (External) External
- TK Koutsouros, Tim External
- M Meena (Guest) Meeting guest
- CP Parra, Christine External

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CULVER CITY & CCUSD
MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

PLANNING TEAM MEETING #2
 Thursday, May 25th, 2023
 10:00 AM - 12:00 PM via Microsoft Teams

AGENDA

Attendees: Refer to Sign-in Sheet

Presentation/Discussion:

- Introductions
 - Sign in sheet
- Hazard Mitigation Goals Discussion
 - Previous HMP Goals
 - Hazard Ranking Results
- Critical Facilities (See Microsoft Teams Document)
- Capabilities Assessment (See Microsoft Teams Document)
 - Previously identified plan capabilities
 - Additional recommended capabilities
 - Planning & regulatory, admin & tech, financial, education & outreach
 - FEMA wants to know how hazard mitigation is integrated into your planning mechanisms
- Summary of Previously Identified Hazards and Mitigation Actions
 - Mapped Hazards:
 - Seismic - Fault Rupture, Liquefaction, Landslide/Mudflow
 - Flood
 - Wildfire
 - Unmapped Hazards:
 - Drought
 - Severe Weather (High Winds, Tornadoes, Thunderstorm)

Next Steps/Action Items:

- Complete capabilities assessment
- Update Critical facilities values
- Finalize Hazard profiles
- Prepare vulnerability/risk assessment
 - Risk assessment
 - Hazard mitigation strategies

1 Page

Steele, Noelle

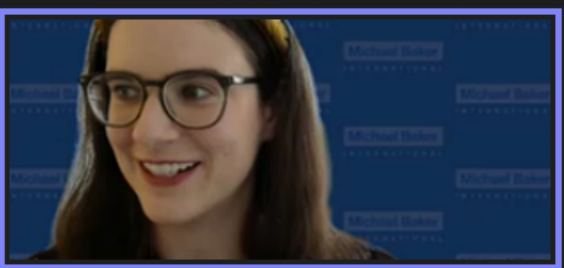
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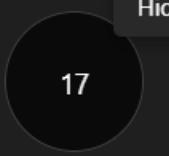
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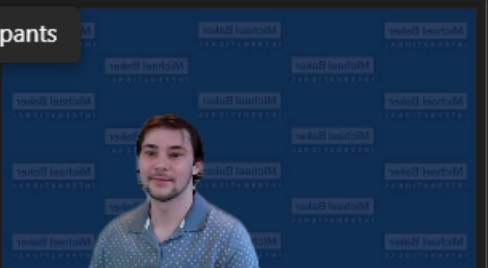
Koutsouros...



Meena (Gu...)



Participants



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Participants

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External

TK Koutsouros, Tim External

M Meena (Guest) Meeting guest

MK Mike Korgan (Guest) Meeting guest

CP Parra, Christine External

ER Ramos, Edson External

Steele, Noelle Organizer

BS Stokes, Brian (External) External

JS Susca, Joe External

LW Wrenn, Lauren External

Others invited (10)




Yaffe, Michael No response

Steven Torrence

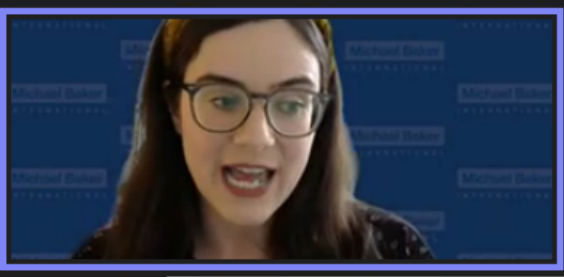
Multi-Jurisdictional Hazard Mitigation Plan Update

Stakeholder Meeting #2

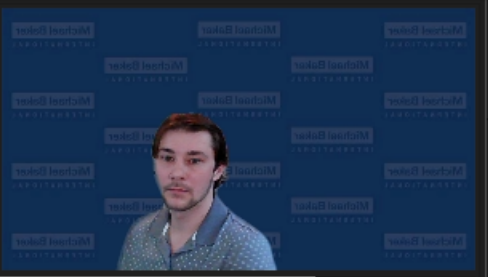
Culver City and Culver City Unified School District

Steele, Noelle



TK Koutsouros... JS Susca, Joe 19 Participants



Participants

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In this meeting (19) Mute all

- Marchese, Casey
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- YD Demitri, Yanni External
- HD Diep, Hoa External
- TE Evangelho, Troy External
- AF Ferguson, Adam External
- SF Fiehler, Savanna External
- GW Gymeka Williams (External) External
- JV Jillian de Vela (LA City EMD) (G... Meeting guest
- TK Koutsouros, Tim External
- M Meena (Guest) Meeting guest

Community Lifelines

Community lifelines are defined by FEMA, a construct for objectives-based post-disaster stabilization efforts. A lifeline enables the continuous operation of critical government and business functions and is essential to human health and safety or economic security.

- Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function.
- Lifelines are the integrated network of assets, services, and capabilities that are used day-to-day to support the recurring needs of the community.
- When disrupted, decisive intervention (e.g., rapid service re-establishment or employment of contingency response solutions) is required to stabilize the incident.



SAFETY AND SECURITY

- Law Enforcement/Security (stations, staff, site security)
- Fire Service (stations, staff, resources)
- Search and Rescue
- Government Service (emergency operations centers, essential functions, schools, gov't offices)
- Community Safety (flood control, protective actions, other hazards)



FOOD, WATER, SHELTER

- Food (commercial food distribution, supply chains, food distribution programs)
- Water (drinking water utilities, wastewater systems, water supply chain)
- Shelter (housing, shelters, commercial facilities such as hotels)
- Agriculture (animals and agriculture)



HEALTH AND MEDICAL

- Medical Care (hospitals, dialysis, pharmacies, care facilities, vet services, home care)
- Public Health (epidemiological monitoring, labs, clinical guidance, behavioral health)
- Patient Movement (emergency medical services)
- Medical Supply Chain (products, manufacturing, distribution, research, sterilization)
- Fatality Management (mortuary and post-mortuary services)



ENERGY

- Power Grid (generation, transmission, distribution systems)
- Fuel (refineries, processing, storage, pipelines, distribution)



COMMUNICATIONS

- Infrastructure (wireless, cable, broadcast, satellite, internet, data centers)
- Responder Communications (LMR networks)
- Alerts, Warnings, and Messages (local and regional alerts)
- Finance (banking services, electronic payment processing)
- 911 and Dispatch



TRANSPORTATION

- Highway, Roadway, Motor Vehicle (roads, bridges)
- Mass Transit (bus, rail, ferry)
- Railway (freight, passenger)
- Aviation (commercial, general, military)
- Maritime (waterways, ports, port facilities)



HAZARDOUS MATERIALS

- Oil/HAZMAT Facilities (facilities, toxic incidents from facilities)
- Oil/HAZMAT, Pollutants, Contaminants (toxic incidents from non-fixed facilities)

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48 2017 - Seismic Mitigation Actions

49 Next Steps

50 Next Steps

- Publish community survey and web content
- Finalize hazard profiles
- Critical facilities list finalization and hazard mapping
- Prepare vulnerability/risk assessment
- Attend Meeting #3

51 Questions/Additional Discussion?

Next Steps

- Publish community survey and web content
- Finalize hazard profiles
- Critical facilities list finalization and hazard mapping
- Prepare vulnerability/risk assessment
- Attend Meeting #3
 - June 15, 2023 at 10:00 AM

Multi - Jurisdictional Hazard Mitigation Plan Update

Michael Baker INTERNATIONAL

Steele, Noelle

Mike Korgan (Guest)

AF Ferguson, Adam

13 Participants

11:47 AM 5/25/2023

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Planning Team Meeting #3 Documentation



CULVER CITY & CCUSD MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN



PLANNING TEAM MEETING #3
Thursday, June 15th, 2023
10:00 AM – 12:00 PM via Microsoft Teams

AGENDA

1) Risk Assessment/Vulnerability Overview & Mitigation Action Discussion

- Hazards Profiled – Mapped Hazards
 - a. Dam/Reservoir Failure**
 - (1) Vulnerability Summary
 - (2) Mitigation Action Discussion
 - b. Flood**
 - (1) Vulnerability Summary
 - (2) Mitigation Action Discussion
 - c. Seismic Hazards – Fault Rupture**
 - (1) Vulnerability Summary
 - (2) Mitigation Action Discussion
 - d. Seismic Hazards – Landslide/Debris Flow**
 - (1) Vulnerability Summary
 - (2) Mitigation Action Discussion
 - e. Seismic Hazards – Liquefaction**
 - (1) Vulnerability Summary
 - (2) Mitigation Action Discussion
 - f. Wildfire**
 - (1) Vulnerability Summary
 - (2) Mitigation Action Discussion
- Hazards Profiled – Not Mapped Hazards
 - a. Drought**
 - (1) Mitigation Action Discussion
 - b. Human-Caused Hazards (Hazardous Materials, Pandemic, Terrorism/Active Shooter, Civil Disturbance)**
 - (1) Mitigation Action Discussion
 - c. Severe Weather (Heavy Rains/Thunderstorm, Extreme Heat, Santa Ana Winds, Power Outage)**
 - (1) Mitigation Action Discussion

2) Public Involvement – Next Steps

3) Next Steps

- Mitigation actions and prioritization
- Meeting 4 - Thursday, July 13th

Marchese, Casey

Subject: Culver City & CCUSD - Multi-Jurisdictional Hazard Mitigation Plan, Meeting #3
Location: Microsoft Teams Meeting

Start: Thu 6/15/2023 10:00 AM
End: Thu 6/15/2023 12:00 PM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Steele, Noelle

Required Attendees: Susca, Joe; Marchese, Casey; adam.ferguson@culvercity.org; Sims, Jason; Soghor, Lisa; Koutsouros, Tim; Diep, Hoa; Calvinisti, Hector; Barnes, Tevis; Vidra, Lisa; Evangelho, Troy; Singletary, Sean; Demitri, Yanni; Parra, Christine; Mike Korgan; Sean Kearney; steven.torrence@santamonica.gov; kristin_cavanaugh@spe.sony.com; Savanna.Fiehler@Redcross.org; mkustanovich; mjanmohamed; Jillian De Vela; sGWilliams@ceo.lacounty.gov; diane.forte@sce.com; sdiaz@semprautilities.com; Fredy.Ceja@ladwp.com; LindaCunningham@gswater.com; edwardc@westbasin.org; darrel+downtownculvercity.com@ccsend.com; samlevi@amazon.com; Jovel, Mario; MarieKathryna.Aragon@altacorp.com; Gymeka Williams; DisabilityAdvisoryCommittee@culvercity.org; oifhelpsla@aol.com; community@stjosephctr.org; info@shareselfhelp.org; Ramos, Edson

Optional Attendees: Yaffe, Michael; Diaz, Silvia A.; Cavanaugh, Kristin; Stokes, Brian; Dahlum, Timothy; Jessica Miller

Please find the Culver City Meeting #3 agenda attached to this email for your use. Key items for conversation will include:

- ***Vulnerability Assessment Findings***
- ***Mitigation Action Discussion***
- ***Community Outreach Updates***

Looking forward to meeting on Thursday. Thank you!

Noelle

Hello,

You have been selected and notified by the City of Culver City and Culver City Unified School District (2017) as a member of the Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) Planning Committee. Michael Baker International is the City's consultant, charged with preparing the MJHMP update. This Planning Committee will be the core group responsible for providing MJHMP input/updates, guiding the planning process, and agreeing upon the final contents of the plan. A series of four meetings will be hosted for two hours each, via Microsoft Teams. We understand the importance of your time – meetings will be structured to maximize results and minimize “homework” outside of the meeting block.

The schedule for the four planning team meetings includes:

- Thursday, April 6, 2023 (2 hours, 10AM – 12PM)

- Thursday, May 25, 2023 (2 hours, 10AM – 12PM)
- **Thursday, June 15, 2023 (2 hours, 10AM – 12PM)**
- Thursday, July 13, 2023 (2 hours, 10AM – 12PM)

Agendas will be provided prior to each meeting via this email chain.

The 2017 MJHMP is linked here for your convenience:

<https://www.culvercity.org/files/assets/public/documents/community-development/multijurisdictionalhazardm.pdf>

We appreciate your time and commitment. Your involvement will ensure a comprehensive and robust plan update that meets Cal OES/FEMA requirements. Please reach out if you have any questions regarding the MJHMP or update process.

Thank you,
Noelle

Microsoft Teams meeting

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CULVER CITY & CCUSD MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN



PLANNING TEAM MEETING #3

Thursday, June 15th, 2023
10:00 AM – 12:00 PM via Microsoft Teams

Meeting Minutes

1) Risk Assessment/Vulnerability Overview & Mitigation Action Discussion

- Hazards Profiled – Mapped Hazards

a. Dam/Reservoir Failure

(1) Vulnerability Summary

(2) Mitigation Action Discussion

- *Question from Noelle Steele (Project Manager, Michael Baker) – Is there anything else we would like to see or do to plan for this hazard?*
 - *Answer from Christine Parra (Emergency Preparedness Coordinator, Culver City) – We have participated in tabletop exercises, and we have an upcoming one with the county, but other than that no. I can get back to you with info on those exercises and other potential mitigation.*
 - *Noelle Steele (Project Manager, Michael Baker) – Keep in mind that mitigation actions do not have to be capital improvement projects, they can be training, coordination and/or supplies.*
- *Question from Joe Susca (Senior Management Analyst, Culver City) – Do we know how many feet to expect in these mapped inundation zones?*
 - *Answer from Noelle Steele (Project Manager, Michael Baker) – That is something we can do but it is not included in the publicly accessible data on inundation zones.*
 - *Joe Susca (Senior Management Analyst, Culver City) – We should have that so we know what we're dealing with and how to mitigate, the EAPs should have that information.*
 - *Noelle Steele (Project Manager, Michael Baker) – We can look into the EAPs and coordinate on how best to include the inundation zone depth.*
 - *Christine Parra (Emergency Preparedness Coordinator, Culver City) – In terms of mitigation actions, I'm not sure how best to address dam failure. We may want to look into having access to pumps or something similar.*
- *Question from Mike Yaffe (Resilience Lead, Michael Baker) – Were there any issues with flooding following the recent rains this winter, sunny day flooding, etc.? Do you feel prepared with staging equip and debris storage?*
 - *Answer from Christine Parra (Emergency Preparedness Coordinator, Culver City) – There tends to be some flooding along the border of Culver City and Los Angeles and that tends to get pumped out as well.*
 - *Linda Cunningham (Capital Programs, Golden State Water Company) – Flooding does occur along the McDonald Street area as well.*



- *Noelle Steele (Project Manager, Michael Baker) – Is that handled by pump stations identified on our critical facilities map? Keep in mind that localized flooding doesn't necessarily show up on FEMA maps, but we can still mitigate. Staging equipment, debris storage, etc. we can certainly add equipment as a mitigation action.*

b. Flood

(1) Vulnerability Summary

(2) Mitigation Action Discussion

- *Question from Noelle Steele (Project Manager, Michael Baker) – What is driving any flood issues, and how can we solve it?*
 - *Mike Yaffe (Resilience Lead, Michael Baker) – Some mitigation actions may address multiple hazards. Retention basins, maintenance for green streets and other projects may have multiple benefits and there may be a link there with extreme heat as well.*
 - *Noelle Steele (Project Manager, Michael Baker) – Improvements could be at local parks.*
 - *Joe Susca (Senior Management Analyst, Culver City) – Blue Ocean prepared the ability to capture stormwater and percolate into a cistern, which may reduce flooding.*
- *Question from Noelle Steele (Project Manager, Michael Baker) – For HMP mitigation actions, would you like our team to identify each project from Blue Ocean as their own mitigation action?*
 - *Answer from Joe Susca (Senior Management Analyst, Culver City) – I think we want to reference all of them and apply them to each of their three categories.*
 - *Noelle Steele (Project Manager, Michael Baker) – I'll split them up and apply them separately.*
- *Question from Noelle Steele (Project Manager, Michael Baker) – Any actions that are specific to the school district that we should think about?*
- *Question from Noelle Steele (Project Manager, Michael Baker) – What about potential partnerships with utility providers? There is the possibility to partner with them and identify mitigation actions to increase resilience.*
 - *Answer from Joe Susca (Senior Management Analyst, Culver City) – There is an opportunity to partner with GSWC for grants to implement mitigation actions and projects. The city would take the lead.*
 - *Linda Cunningham (Capital Programs, Golden State Water Company) – We built a \$3M retaining wall at Baldwin Hills Park to protect our reservoirs, it's a state park and they have not built curbs/gutters so that continues to flood out. We really need to the state to build those curbs to stop the erosion we're trying to avoid. The problem seems to be the state is not making moves to fund this. This is at the scenic overlook.*
- *Question from Noelle Steele (Project Manager, Michael Baker) – Is that retaining wall in the City?*



- *Answer from Linda Cunningham (Capital Programs, Golden State Water Company) – We have a piece of property and its completed surrounded by the state park. 6301 Hetzler Rd.*
- *Question from Noelle Steele (Project Manager, Michael Baker) – That is in the City. You said it's threatening the road?*
 - *Answer from Linda Cunningham (Capital Programs, Golden State Water Company) – It's threatening the hillside. But they have closed that road several times for flooding and erosion and slope failure.*
 - *Noelle Steele (Project Manager, Michael Baker) – It seems like there is a multi-hazard nexus there and we can look at partnering with the state park.*
 - *Linda Cunningham (Capital Programs, Golden State Water Company) – We have a partnership with the City Fire Dept. because that facility is used for wildfire access, response and staging.*
 - *Joe Susca (Senior Management Analyst, Culver City) – I'll send the invitation to apply for grants partnered with the utilities to each of the utility providers.*
- *Linda Cunningham (Capital Programs, Golden State Water Company) – Along the Sawtelle Blvd. and McDonald St. area, for flooding you may want to work with DWP to update their facilities in that area.*
 - *Noelle Steele (Project Manager, Michael Baker) – We can look into that and make sure LADWP doesn't have facilities in that area that are being impacted or have potential to impact the City.*

c. Seismic Hazards – Fault Rupture

(1) Vulnerability Summary

(2) Mitigation Action Discussion

- *Question from Noelle Steele (Project Manager, Michael Baker) – Are there any City facilities or school facilities that we know are old or at risk for fault?*
 - *Answer from Joe Susca (Senior Management Analyst, Culver City) – We completed a soft story inventory and none of the City facilities are soft story buildings.*
 - *Noelle Steele (Project Manager, Michael Baker) – Sounds good, we can also take a look at the facilities master plan we received from CCUSD and take a look for vulnerabilities.*
- *Question from Noelle Steele (Project Manager, Michael Baker) – Any earthquake education programs or anything that we could expand?*
 - *Answer from Christine Parra (Emergency Preparedness Coordinator, Culver City) – We have been active with outreach for many years including disaster outreach. We would want to continue those efforts including disaster fairs, drills, and other programs (e.g., Rain Barrel Delivery Program).*
 - *Linda Cunningham (Capital Programs, Golden State Water Company) – The City also did a resiliency program with the nonprofits this year.*
 - *Joe Susca (Senior Management Analyst, Culver City) – Christine has a webpage set up to prepare for earthquakes and make preparedness kits etc.*



- Noelle Steele (Project Manager, Michael Baker) – These would be our capacity building items and we could tie in mitigation actions to continue those.
- Christine Parra (Emergency Preparedness Coordinator, Culver City) – Dr. Lucy Jones (seismologist) put out an SOS to cities; she created a framework to increase resiliency and she wanted to share. I applied and Culver City was granted an opportunity to participate. We joined as stakeholders, and she walked us through this framework over a number of weeks. The framework was mostly about creating a network of resiliency. It got people thinking about their community networks and who they can call on during emergencies and the network/framework we created is now on the website for people to reference and pass on.
- Question from Mike Yaffe (Resilience Lead, Michael Baker) – Do you have any needs to be able to upkeep this webpage and framework, because we can identify that? This is the kind of thing that makes projects stand out in a grant application.
 - Answer from Christine Parra (Emergency Preparedness Coordinator, Culver City) – It was a real grassroots operation, but I could always use more help.
 - Linda Cunningham (Capital Programs, Golden State Water Company) – We were the pilot program and the first city to do it and it was well received.
 - Noelle Steele (Project Manager, Michael Baker) – We can include it in the plan and document but if there is anything else we can identify to continue or move that effort forward we can include that as well.
- Question from Noelle Steele (Project Manager, Michael Baker) – We noted the seismic inventory, but are there other seismic retrofits or projects we want to identify?
 - Answer from Tim Koutsouras (Building Official, Culver City) – The seismic inventory is great as far as City buildings go. Beyond that it's soft story grants for private owners and addressing nonductile concrete, large concrete buildings without enough rebar, things like that. The state tends to address bridges and retrofits themselves.
 - Yanni Demitri (Public Works Director, Culver City) – All the bridges over Ballona Creek are City owned and operated, they are constantly inspected by the county.
- Question from Noelle Steele (Project Manager, Michael Baker) – Are there any ongoing projects where grant funding for the bridges may be beneficial.
 - Answer from Yanni Demitri (Public Works Director, Culver City) – We just put an RFP out to have the bridges inspected and repaired, we are in the process of pursuing funding, mostly through Caltrans. They typically fund 88% with a 12% local agency match. There are no restrictions on applying for additional grants.
 - Mike Yaffe (Resilience Lead, Michael Baker) – They usually do not allow funding to be doubled up from the same source, but you should be able to mix and match in order to cover the local match.
- Question from Linda Cunningham (Capital Programs, Golden State Water Company) – The bridges have recently been impacted by homeless encampments; they have been compromising structure with fires. Is that something we can address?
 - Answer from Noelle Steele (Project Manager, Michael Baker) – We may be able to talk about that under urban fire.



- *Linda Cunningham (Capital Programs, Golden State Water Company) – We’ve had a few fires where the utilities have been affected under the bridges.*
- *Yanni Demitri (Public Works Director, Culver City) –We alerted the county about the incident you’re referencing, and they confirmed that the fires are not impacting the integrity of the bridge. We also report those encampments to the HHS (housing human services) and partner with St. Johns in these situations. But we address those situations as soon as they come up.*
- *Mike Yaffe (Resilience Lead, Michael Baker) – It’s may be helpful to keep in mind that there is federal funding for post disaster housing and displacement. It wouldn’t be under a competitive grant but it’s something to keep in mind.*
- *Noelle Steele (Project Manager, Michael Baker) – We have identified in the HMP areas that would serve as post disaster shelters, especially for vulnerable populations.*

d. Seismic Hazards – Landslide/Debris Flow

(1) Vulnerability Summary

(2) Mitigation Action Discussion

- *Question from Joe Susca (Senior Management Analyst, Culver City) – Is there a project going on at Bill Botts since it was previously a landfill and there is a settling issue?*
 - *Answer from Yanni Demitri (Public Works Director, Culver City) – About a year ago we hired a Geotech, we will be doing something in the future to prevent any further settlement. We would remove soil, replace and compact it. Also, we would include membranes to reduce water coming up through the soil.*
 - *Noelle Steele (Project Manager, Michael Baker) – We can address this in the plan, certainly under liquefaction if ground saturation is a concern. Would it be possible for us to see that Geotech report?*
 - *Answer from Yanni Demitri (Public Works Director, Culver City) – It’s not confidential I can send that to you right away.*
 - *Joe Susca (Senior Management Analyst, Culver City) – This sounds like it may be a good fit for a FEMA grant.*
 - *Noelle Steele (Project Manager, Michael Baker) – We can look into that.*
- *Adam Ferguson (Senior Management Analyst, Culver City) – Bill Botts Field is about to have an RFP released to have a feasibility study for a full modernization and improvement. It may also include land stabilization to address the land settling issue.*
- *Question from Joe Susca (Senior Management Analyst, Culver City) – A lot of the land is dedicated to baseball; do you expect that to change?*
 - *Answer from Adam Ferguson (Senior Management Analyst, Culver City) – I believe it will remain primarily a baseball park. Also, just keep in mind that this is a sealed landfill, so any work up there has additional considerations. The Geotech report has more information about the depth and where the contents of the landfill are.*



e. Seismic Hazards – Liquefaction

(1) Vulnerability Summary

(2) Mitigation Action Discussion

- *Question from Noelle Steele (Project Manager, Michael Baker) – Any mitigation actions that specifically address liquefaction?*
 - *Answer from Tim Koutsouras (Building Official, Culver City) – Liquefaction is a tough one to address, I’m not sure that is usually the top target for retrofits.*
 - *Noelle Steele (Project Manager, Michael Baker) – We didn’t identify any previous liquefaction incidents. It may not be a big issue if there weren’t any, particularly after the Northridge earthquake and ground shaking.*
- *Linda Cunningham (Capital Programs, Golden State Water Company) – We have facilities in Simi Valley, and after the Northridge earthquake we upgraded all of our facilities to flexible piping (FLEX-TEND). All of that has been addressed in Culver City. That is something the City may want to consider for their pipes or pump stations.*
 - *Noelle Steele (Project Manager, Michael Baker) – We can look at improvements and upgrades at the City’s sewer pump stations.*
- *Question from Joe Susca (Senior Management Analyst, Culver City) – Is the Bankfield sewer pump facility listed as critical? We have seven sewage pumping and lifting stations, Bankfield replaces 2 of the seven.*
 - *Answer from Noelle Steele (Project Manager, Michael Baker) – Lets revisit that offline.*
 - *Joe Susca (Senior Management Analyst, Culver City) – Okay, I’ll reach out with some information on those for inclusion.*

f. Wildfire

(1) Vulnerability Summary

(2) Mitigation Action Discussion

- Hazards Profiled – Not Mapped Hazards

a. Drought

(1) Mitigation Action Discussion

b. Human-Caused Hazards (Hazardous Materials, Pandemic, Terrorism/Active Shooter, Civil Disturbance)

(1) Mitigation Action Discussion

c. Severe Weather (Heavy Rains/Thunderstorm, Extreme Heat, Santa Ana Winds, Power Outage)

(1) Mitigation Action Discussion

- *Question from Noelle Steele (Project Manager, Michael Baker) – Any mitigation actions that specifically address drought, human-caused hazards and/or severe weather?*



- *Answer from Joe Susca (Senior Management Analyst, Culver City) – The City recently underwent an active shooter training, that was for City staff, and we can include that in the plan and say that we can continue to do that.*
- *Answer from Christine Parra (Emergency Preparedness Coordinator, Culver City) – Our response to the pandemic, as an organization we have learned a lot and have been able to come together. I think we are prepared if there were another pandemic but preventing one is difficult. Externally, we did well with communication and making sure we worked with our vulnerable populations early on. We also had our assistant chief who is connected with our public health doctors and EMS staff and we plugged him in early on and were able to get reliable information and implement those with our first responders and staff.*
- *Answer from Joe Susca (Senior Management Analyst, Culver City) – For technology, our IT department came through allowing us to work from home and to continue to have commissions and city council meetings. We also did a program in reaching out to our business community and we won an award for being a business-friendly city. We also implemented temporary outdoor dining, road closures, etc.*
- *Question from Mike Yaffe (Resilience Lead, Michael Baker) – In response to the pandemic, I've heard some community express interest in having more space to act as storage or operations centers. Does the City have a need for that?*
 - *Answer from Christine Parra (Emergency Preparedness Coordinator, Culver City) – Potentially yes, we converted some spaces for supplies storage, we took over our training facilities and storage bins. One of the main producers for masks is in our city and we were able to call upon that relationship early on.*
- *Question from Mike Yaffe (Resilience Lead, Michael Baker) – Linking that to terrorism, sometimes we see extra security or backup servers? Should that be in the plan?*
 - *Answer from Christine Parra (Emergency Preparedness Coordinator, Culver City) – We just participated in the county cybersecurity tabletop exercise. We also have insurance for cybersecurity issues.*
 - *Mike Yaffe (Resilience Lead, Michael Baker) – What about target hardening, communications, extra bollards, etc.? These can be included in the HMP even if funding would potentially come from other sources.*
 - *Christine Parra (Emergency Preparedness Coordinator, Culver City) – I would need to get back to you on whether or not we have done that or see a need for it.*
- *Question from Mike Yaffe (Resilience Lead, Michael Baker) – Are there roadways or rail carrying hazardous materials? If there are any mitigation actions to respond to that we can identify those.*
 - *Noelle Steele (Project Manager, Michael Baker) – I'm assuming the fire dept has a hazardous materials team to address spills.*
 - *Christine Parra (Emergency Preparedness Coordinator, Culver City) – We can handle small incidents but for larger ones we contact with the county. We only have light industrial uses and nothing of particular concern for hazardous*



materials. However, for terrorism we have a lot of studios and high-profile people that come here. Apple, amazon, etc. These may be targets.

- *Noelle Steele (Project Manager, Michael Baker) – We can include these as culturally significant places/industries including major economic centers and film studios.*
- *Mike Yaffe (Resilience Lead, Michael Baker) – The City would specifically want to call those out if you are looking to partner or pursue funding with those businesses.*
- *Noelle Steele (Project Manager, Michael Baker) – We specifically include or invite these private entities as stakeholders so they have the opportunity to provide input as major employers etc.*
- *Question from Noelle Steele (Project Manager, Michael Baker) – For civil unrest, the EOC was activated in 2020 due to the election and George Floyd, that was documented in the plan. Are there mitigation actions to address those kinds of things?*
 - *Mike Yaffe (Resilience Lead, Michael Baker) – Mitigation could include any equipment that you may need to address these hazards (mobile lighting, mobile generators).*
 - *Answer from Christine Parra (Emergency Preparedness Coordinator, Culver City) – We have mobile solar lighting; mobile generators would be nice. A mobile command unit is what we are trying to work on right now, we have some trailers and we are trying to convert that into a mobile command unit.*
- *Question from Mike Yaffe (Resilience Lead, Michael Baker) – Do you know if the traffic lights have backup power sources?*
 - *Answer from Yanni Demitri (Public Works Director, Culver City) – We have a backup battery system, it keeps the traffic signals operational for 6 hours before it goes into flashing red.*
- *Question from Joe Susca (Senior Management Analyst, Culver City) – Do we have enough, are they getting old?*
 - *Answer from Yanni Demitri (Public Works Director, Culver City) – We have about 20 locations without them, but we are addressing those.*
 - *Noelle Steele (Project Manager, Michael Baker) – We may be able to identify funding for those backup battery systems for traffic lights that don't have them.*

2) Public Involvement – Next Steps

3) Next Steps

- Complete Vulnerability Assessment
- Mitigation actions and prioritization
- Prepare draft plan components
- Meeting 4 - Thursday, July 13th



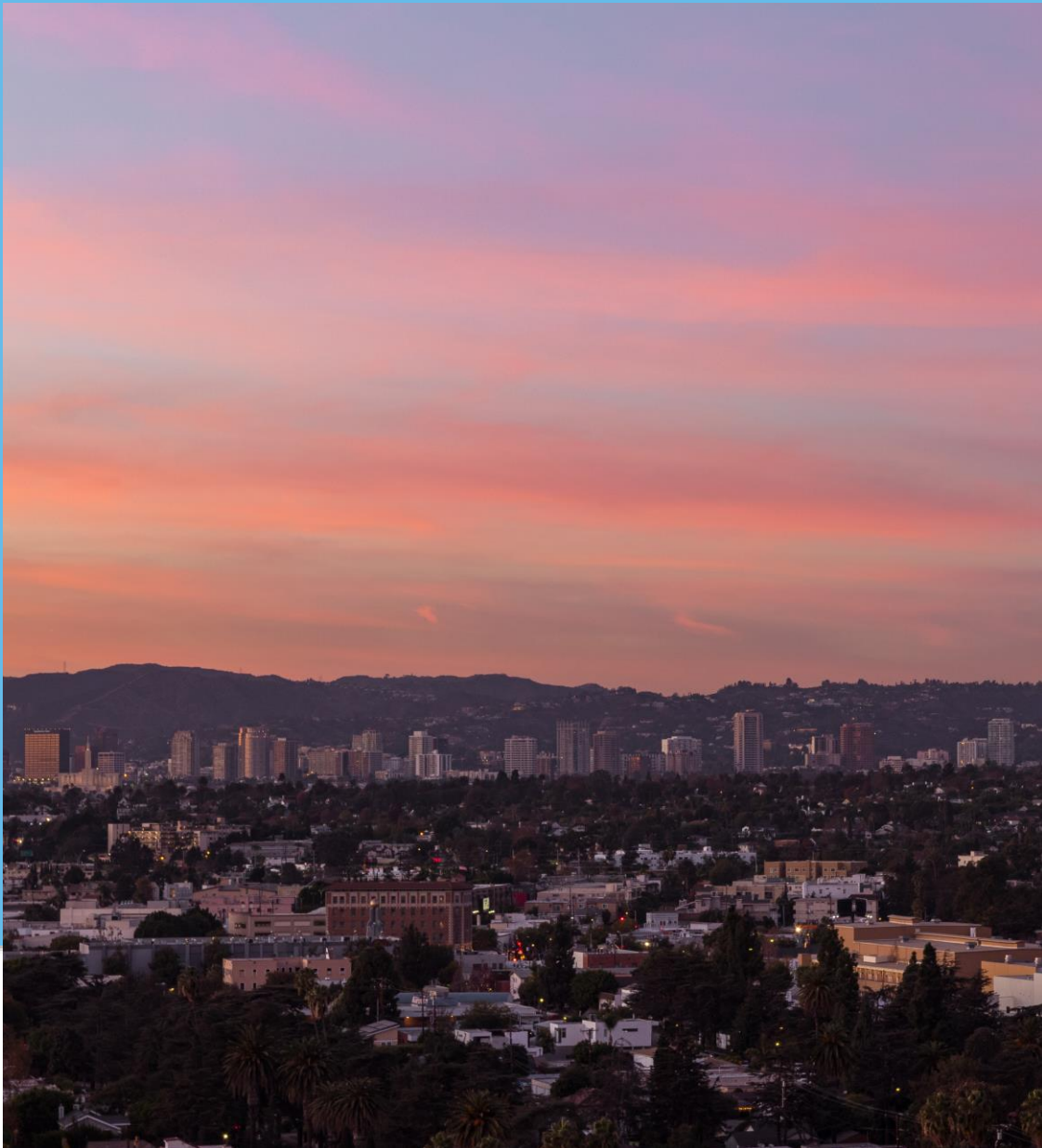
4) Action Items:

Culver City and CCUSD

- Action Item: Joe Susca to reach out to utility providers to inquire about partnering on grant applications.
- Action Item: Joe Susca to confirm with MBI that Bankfield sewer pump facility is included as a critical facility.
- Action Item: *Yanni Demitri to provide Bill Botts Field geotechnical report.*

Michael Baker International

- Action Item: MBI to review Dam EAPs and coordinate with City on how to incorporate inundation depth into the Vulnerability Assessment.
- Action Item: MBI to include Blue Ocean Mitigation Action Plan projects as mitigation actions.
- Action Item: MBI to look into LADPW facilities in the City to identify flood vulnerability and capabilities.
- Action Item: MBI to review CCUSD Facilities Master Plan for seismic vulnerability.



Multi-Jurisdictional Hazard Mitigation Plan Update

Stakeholder Meeting #3

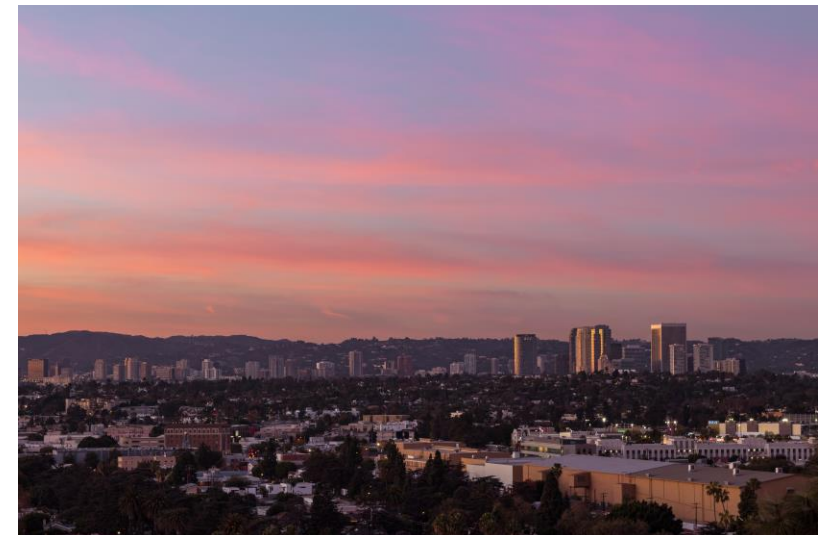
Culver City and
Culver City Unified School District



Michael Baker
INTERNATIONAL

Agenda

- Risk Assessment/Vulnerability Overview
 - Mapped Hazards
 - Non-Mapped Hazards
- Public Involvement Update
- Next Steps
- Questions/Additional Discussion



Meeting #2 Recap

- Hazard Mitigation Goals and Hazard Ranking
- Critical Facilities Review and Discussion
- Capabilities Assessment
- Summary of Previously Identified Hazards and Introduction to Mitigation Actions
- Mitigation Strategies
 - Example Projects



Risk Assessment/Vulnerability Overview



Hazards Profiled

- Dam/Reservoir Failure
- Drought
- Flood
- Human Caused Hazards
 - Hazardous Materials
 - Pandemic
 - Terrorism/Active Shooter
 - Civil Disturbance
- Seismic Hazards
 - Fault Rupture
 - Ground Shaking
 - Landslide/Mudflow
 - Liquefaction
- Severe Weather
 - Heavy Rains/Thunderstorm
 - Extreme Heat
 - Windstorm (Santa Ana winds)
 - Tornado
 - Power Outage (secondary impact)
- Wildfire
- Climate Change (integrated into each hazard)



Hazards Profiled

Mapped

- Dam/Reservoir Failure
- Flood
- Seismic (Fault Rupture, Landslide, Liquefaction)
- Wildfire

Non-Mapped

- Drought
- Human Caused Hazards (Hazardous Materials, Pandemic, Terrorism/Active Shooter, Civil Disturbance)
- Seismic Ground Shaking
- Severe Weather (Heavy Rains/Thunderstorm, Extreme Heat, Santa Ana Winds, Tornado, Power Outage)



Critical Facilities

■ Critical Facilities – Community Lifelines

- Facilities that are **critical** to support the basic livelihood of citizens and businesses.
 - Risk assessment will look at what facilities are in hazard zones
 - Considers replacement cost and community value
- Focused on facilities that may be vital to evacuations, serve as assembly points or temporary shelters, or provide a supportive role in preparing for and recovering from hazard events
- Critical facilities include essential public buildings, police and fire stations, schools and public parks, transportation infrastructure, and essential public utility assets



Community Lifelines

Community lifelines are defined by FEMA, a construct for objectives-based post-disaster stabilization efforts. A lifeline enables the continuous operation of critical government and business functions and is essential to human health and safety or economic security.

- Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function.
- Lifelines are the integrated network of assets, services, and capabilities that are used day-to-day to support the recurring needs of the community.
- When disrupted, decisive intervention (e.g., rapid service re-establishment or employment of contingency response solutions) is required to stabilize the incident.



SAFETY AND SECURITY

- Law Enforcement/Security (stations, staff, site security)
- Fire Service (stations, staff, resources)
- Search and Rescue
- Government Service (emergency operations centers, essential functions, schools, gov't offices)
- Community Safety (flood control, protective actions, other hazards)



FOOD, WATER, SHELTER

- Food (commercial food distribution, supply chains, food distribution programs)
- Water (drinking water utilities, wastewater systems, water supply chain)
- Shelter (housing, shelters, commercial facilities such as hotels)
- Agriculture (animals and agriculture)



HEALTH AND MEDICAL

- Medical Care (hospitals, dialysis, pharmacies, care facilities, vet services, home care)
- Public Health (epidemiological monitoring, labs, clinical guidance, behavioral health)
- Patient Movement (emergency medical services)
- Medical Supply Chain (products, manufacturing, distribution, research, sterilization)
- Fatality Management (mortuary and post-mortuary services)



ENERGY

- Power Grid (generation, transmission, distribution systems)
- Fuel (refineries, processing, storage, pipelines, distribution)



COMMUNICATIONS

- Infrastructure (wireless, cable, broadcast, satellite, internet, data centers)
- Responder Communications (LMR networks)
- Alerts, Warnings, and Messages (local and regional alerts)
- Finance (banking services, electronic payment processing)
- 911 and Dispatch



TRANSPORTATION

- Highway, Roadway, Motor Vehicle (roads, bridges)
- Mass Transit (bus, rail, ferry)
- Railway (freight, passenger)
- Aviation (commercial, general, military)
- Maritime (waterways, ports, port facilities)

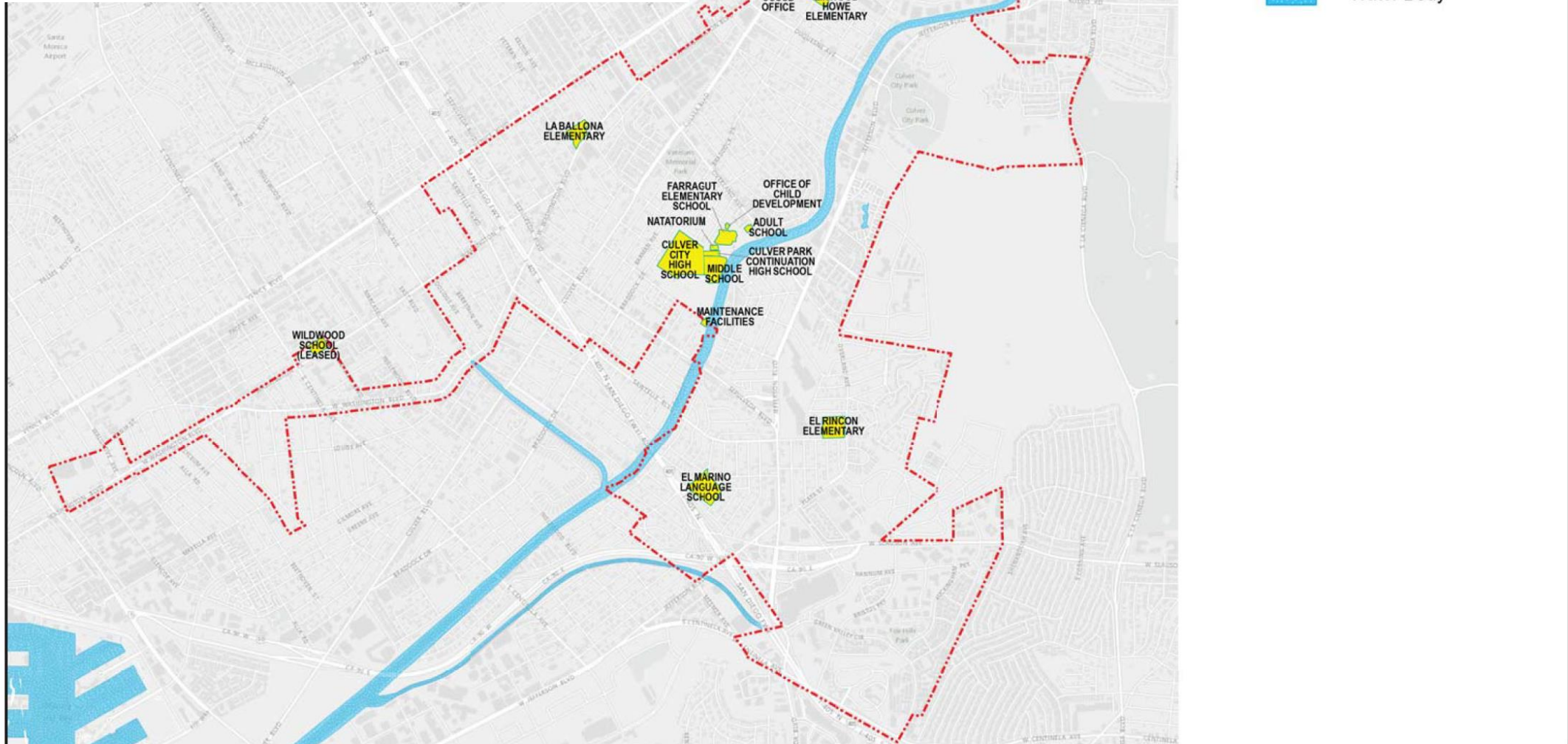


HAZARDOUS MATERIALS



- Oil/HAZMAT Facilities (facilities, toxic incidents from facilities)
- Oil/HAZMAT, Pollutants, Contaminants (toxic incidents from non-fixed facilities)



CCUSD CRITICAL FACILITIES



LEGEND

-  Critical Facility
-  Water Body

DAM INUNDATION

Historic Baldwin Hills Dam Failure (1963)

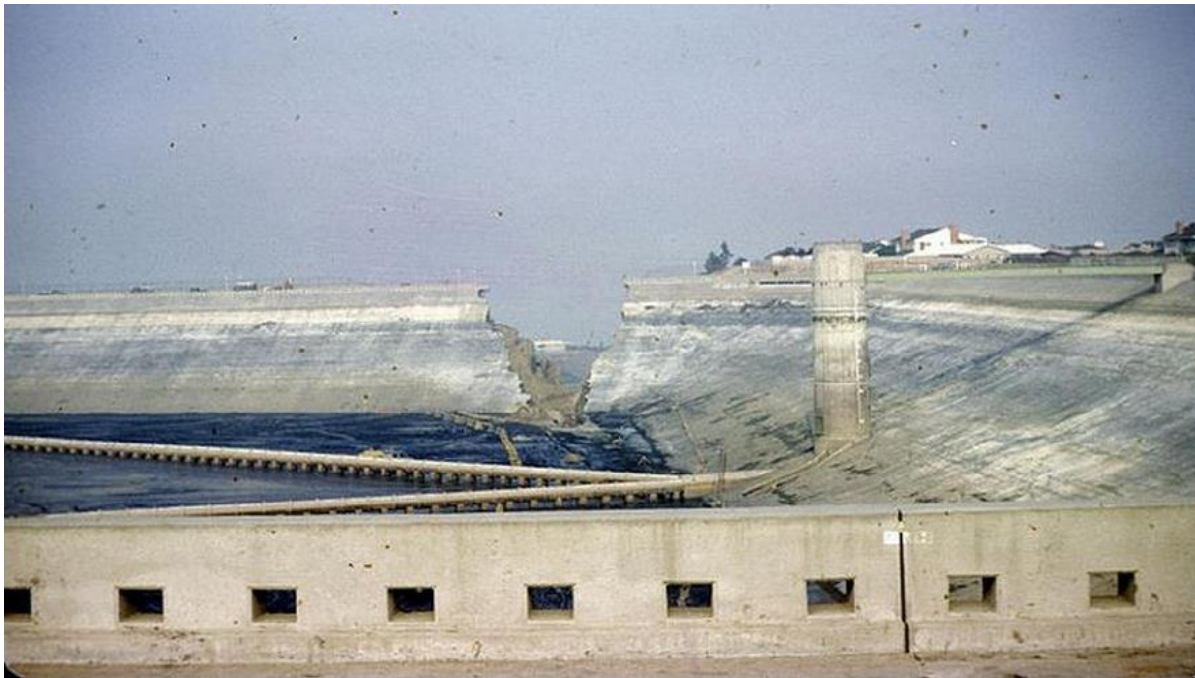
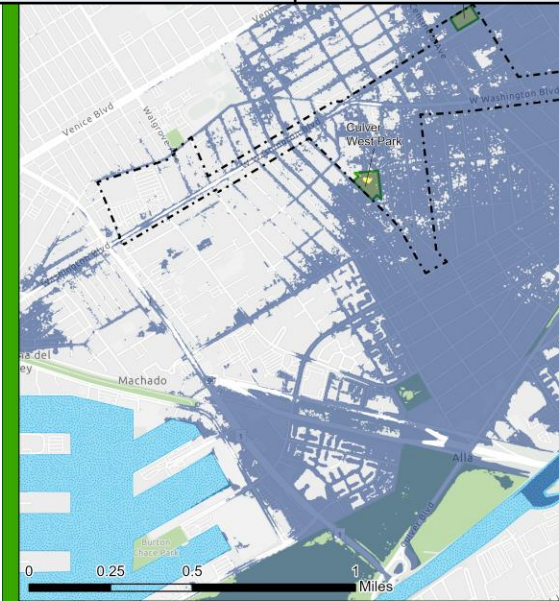
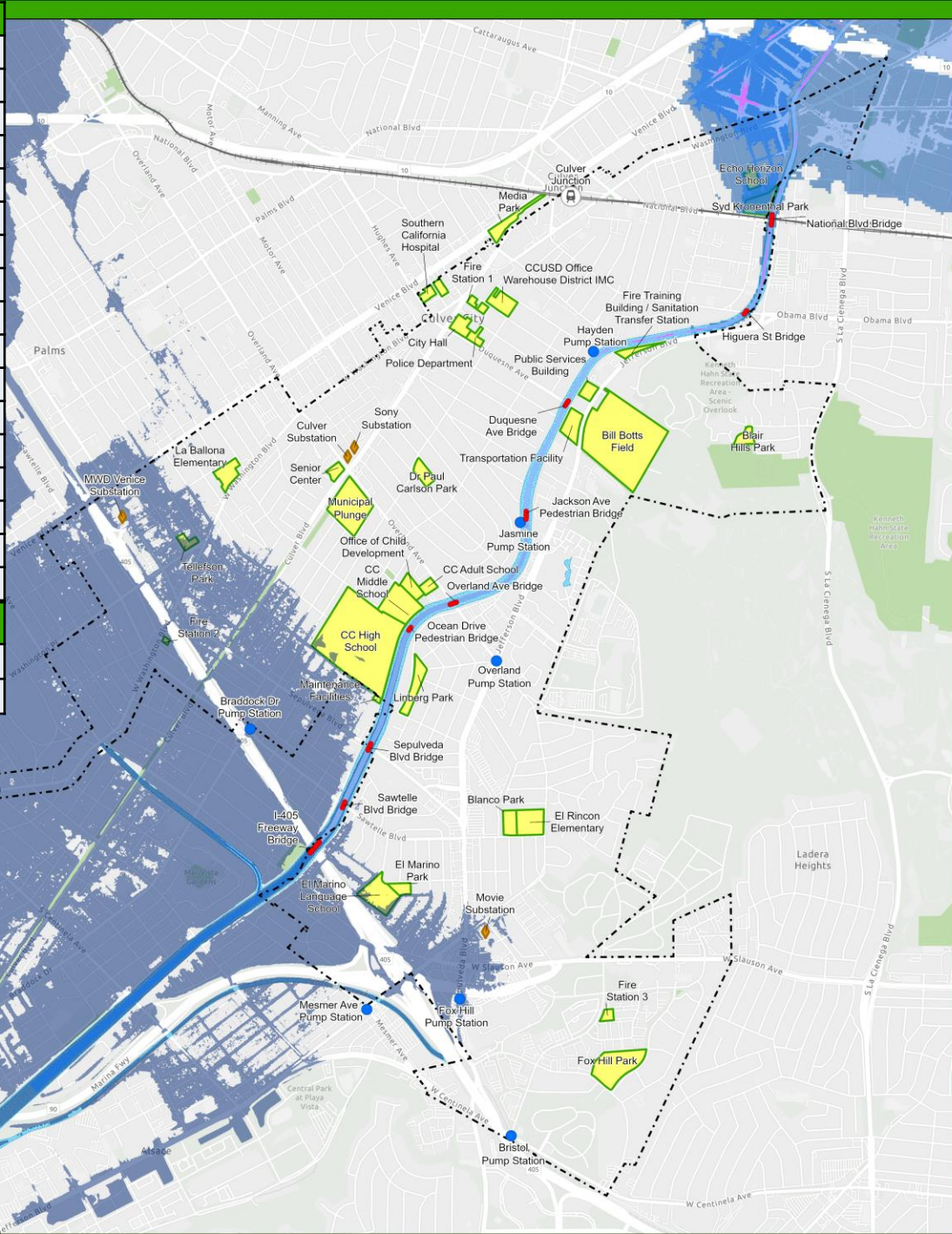


Image Courtesy of the Association of State Dam Safety Officials



#	Culver City Critical Facility	Category
4	Fire Station No. 2	Government Building
11	Culver - Palms YMCA	Non-Profit/NGO
14	Syd Kronenthal Park	Parks and Recreation
16	Culver West Alexander Park	Parks and Recreation
24	Tellefson Park	Parks and Recreation
33	MWD Venice Substation	Utility - Electric
37	Braddock Sewer Pump Station	Utility - Wastewater
40	Fox Hills Sewer Pump Station	Utility - Wastewater
44	National Boulevard Bridge over Ballona Creek	Transportation - Bridge
45	Higuera Street Bridge over Ballona Creek	Transportation - Bridge
46	Duquesne Avenue Bridge over Ballona Creek	Transportation - Bridge
47	Jackson Avenue Pedestrian Bridge over Ballona Creek	Transportation - Bridge
48	Overland Avenue Bridge over Ballona Creek	Transportation - Bridge
49	Ocean Drive Pedestrian Bridge over Ballona Creek	Transportation - Bridge
50	Sepulveda Boulevard Bridge over Ballona Creek	Transportation - Bridge
51	Sawtelle Boulevard Bridge over Ballona Creek	Transportation - Bridge
52	I-405 Freeway Bridge over Ballona Creek	Transportation - Bridge
#	CCUSD Facility	Category
15	Echo Horizon School	Public School
16	Wildwood School	Public School



Hazard Mitigation Plan

Culver City Dam Inundation Areas

Scale: 17,000 June 9, 2023

Legend

- City Boundary
- Critical Facility
- Bridge
- Electric Substation
- Sewer Pump Station
- Waterbody
- Park or Open Space
- Metro Station
- Metro Rail
- Dam Inundation Area**
- Greystone Reservoir
- Silver Lake
- Lower Franklin
- Mulholland
- Stone Canyon

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 TEL: 310-253-5976

Source: CA DWR 2023

FLOOD

Ballona Creek – Dry Weather Flows compared to 2023 Rains



Image Courtesy of Los Angeles Conservancy, ABC7 Eyewitness News











Culver City Flood Hazard Areas

Scale: 17,000

June 9, 2023

Legend

-  City Boundary
-  Critical Facility
-  Bridge
-  Electric Substation
-  Sewer Pump Station
-  Waterbody
-  Park or Open Space
-  Metro Station
-  Metro Rail
-  Special Flood Hazard Area

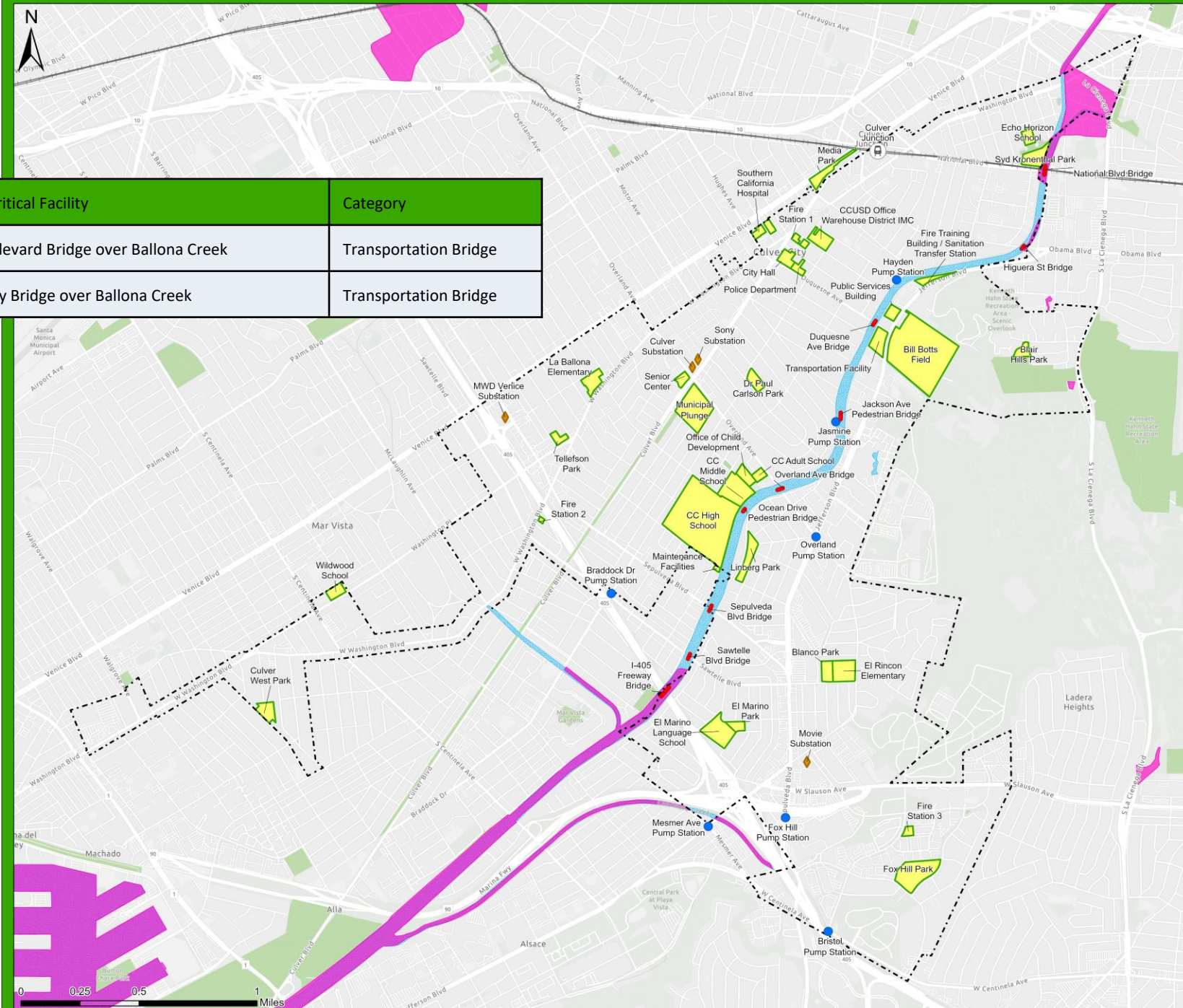
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Source: FEMA 2021

#	Culver City Critical Facility	Category
44	National Boulevard Bridge over Ballona Creek	Transportation Bridge
52	I-405 Freeway Bridge over Ballona Creek	Transportation Bridge



SEISMIC HAZARDS – FAULT RUPTURE

1994 Northridge Earthquake in Los Angeles County



Image Courtesy of Fox 11 News, The Hollywood Reporter














Culver City Fault Zones

Scale: 17,000

June 9, 2023

Legend

-  City Boundary
-  Critical Facility
-  Bridge
-  Electric Substation
-  Sewer Pump Station
-  Waterbody
-  Park or Open Space
-  Metro Station
-  Metro Rail
-  Fault Zone
-  Fault Trace

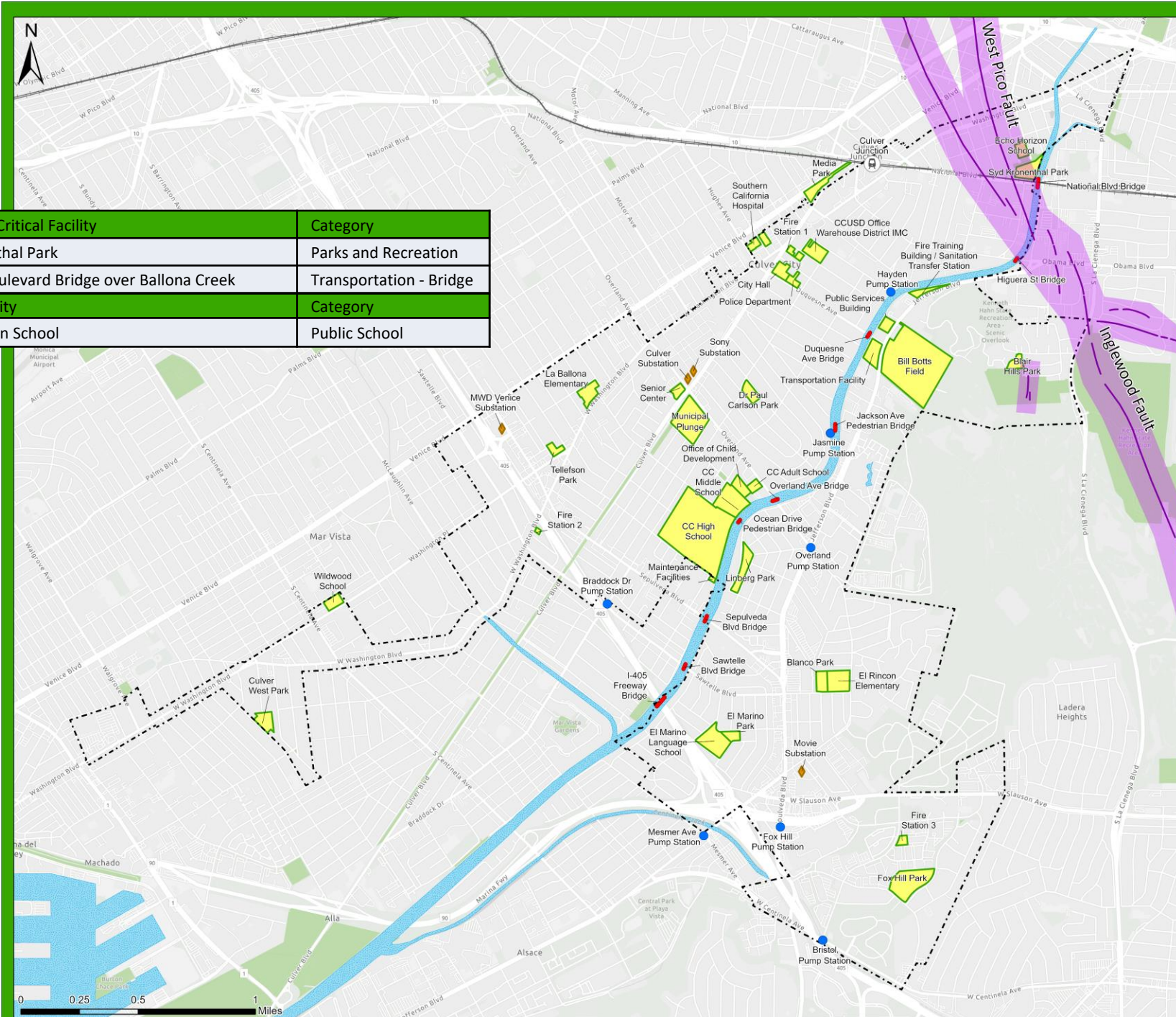
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TEL: 310-253-5976

Source: CGS 2017

#	Culver City Critical Facility	Category
14	Syd Kronenthal Park	Parks and Recreation
44	National Boulevard Bridge over Ballona Creek	Transportation - Bridge
#	CCUSD Facility	Category
15	Echo Horizon School	Public School

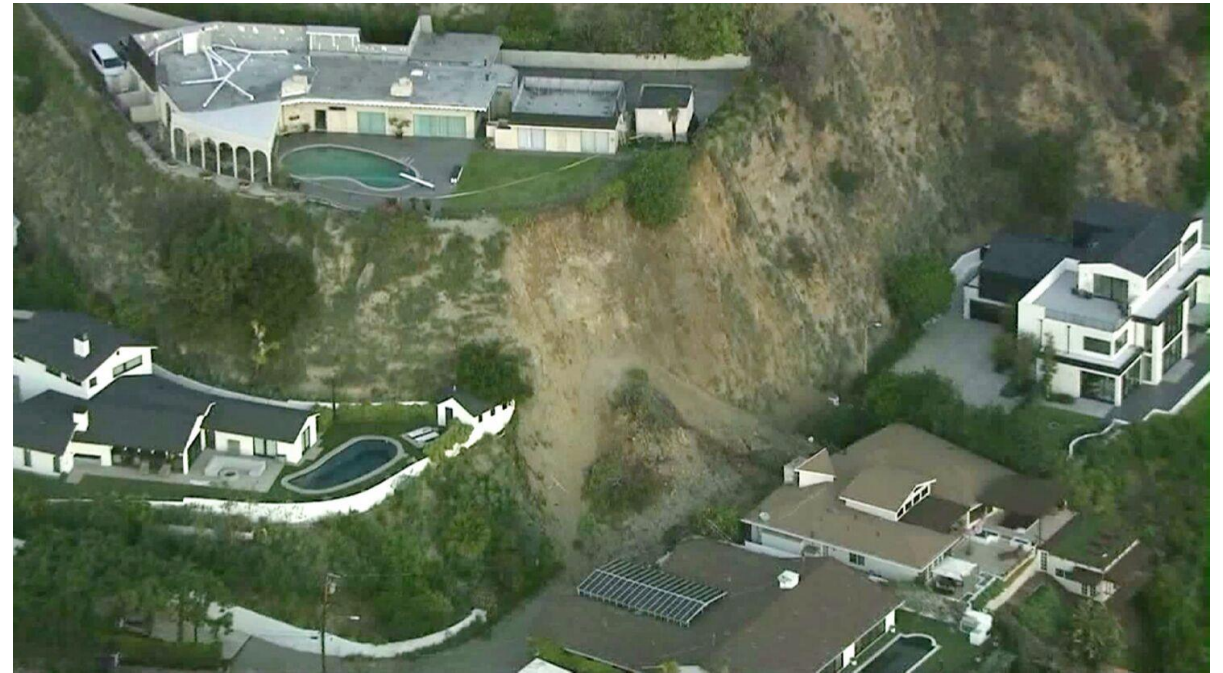


SEISMIC HAZARDS – LANDSLIDE

Ground failure from oversaturation in Los Angeles County



Image Courtesy of Los Angeles Times



Hazard Mitigation Plan











Culver City

Landslide Hazard Zones

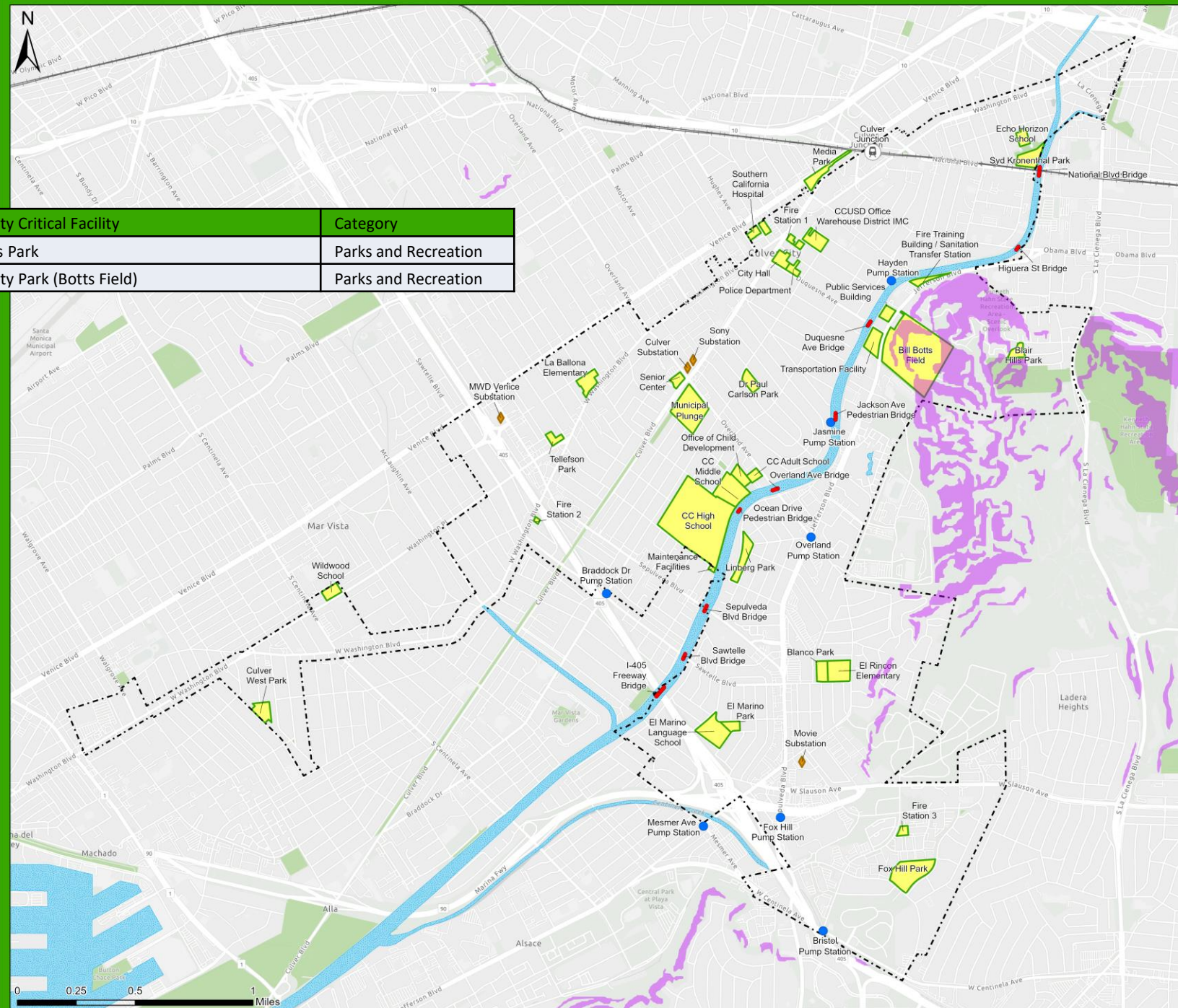
Scale: 17,000

June 9, 2023

Legend

-  City Boundary
-  Critical Facility
-  Bridge
-  Electric Substation
-  Sewer Pump Station
-  Waterbody
-  Park or Open Space
-  Metro Station
-  Metro Rail
-  Landslide Hazard Zone

#	Culver City Critical Facility	Category
19	Blair Hills Park	Parks and Recreation
21	Culver City Park (Botts Field)	Parks and Recreation



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Source: CGS 2022

SEISMIC HAZARDS – LIQUEFACTION

1994 Northridge Earthquake in Los Angeles County



Image Courtesy of ResearchGate, Los Angeles Times



Hazard Mitigation Plan

Culver City Liquefaction Zone

Scale: 17,000

June 9, 2023

Legend

 City Boundary

 Critical Facility

 Bridge

 Electric Substation

 Sewer Pump Station

 Waterbody

 Park or Open Space

 Metro Station

 Metro Rail

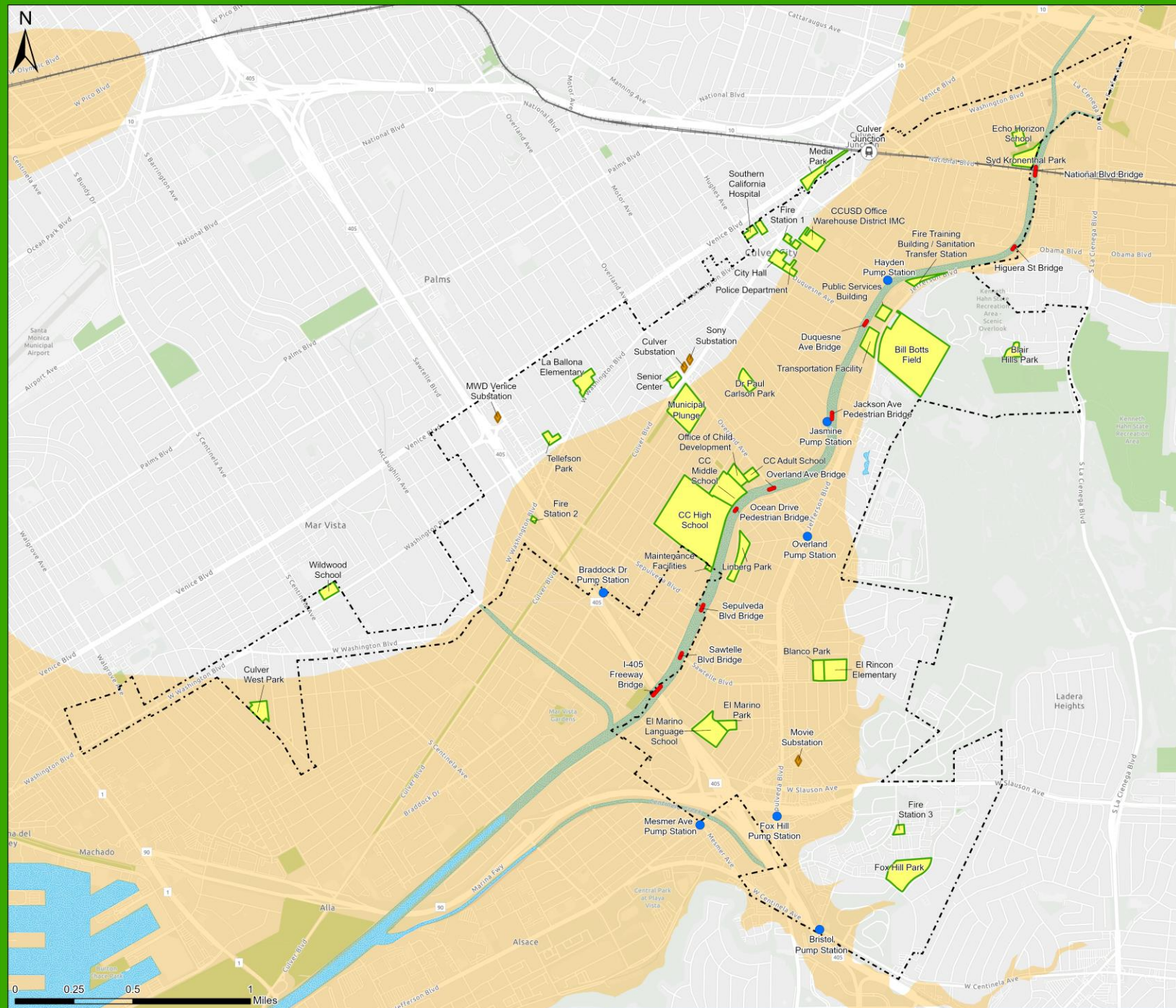
 Liquefaction Zone

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TEL: 310-253-5976

Source: CGS 2017



Critical Facilities in a Liquefaction Zone

#	Culver City Critical Facility	Category
2	Police Department	Government Building
4	Fire Station No. 2	Government Building
6	Fire Training Building	Government Building
7	Public Works Yard	Government Building
8	Sanitation Transfer and Recycling Station	Government Building
9	Transportation Facility/Department	Government Building
11	Culver - Palms YMCA	Non-Profit/NGO
13	Veterans Park & Memorial Building	Parks and Recreation
14	Syd Kronenthal Park	Parks and Recreation
15	Blanco Park	Parks and Recreation
16	Culver West Alexander Park	Parks and Recreation
18	El Marino Park	Parks and Recreation
20	Dr. Paul Carlson Park	Parks and Recreation
23	Lindberg Park	Parks and Recreation
26	Municipal Plunge	Parks and Recreation
27	Culver City Community and Social/Teen Center	Parks and Recreation
28	Combs Parkette	Parks and Recreation
36	Movie Substation	Utility - Electric
37	Braddock Sewer Pump Station	Utility - Wastewater
38	Bristol Sewer Pump Station	Utility - Wastewater
39	Hayden Sewer Pump Station	Utility - Wastewater
40	Fox Hills Sewer Pump Station	Utility - Wastewater
41	Jasmine Sewer Pump Station	Utility - Wastewater
42	Mesmer Sewer Pump Station	Utility - Wastewater
43	Overland Sewer Pump Station	Utility - Wastewater
44	National Boulevard Bridge over Ballona Creek	Transportation - Bridge
45	Higuera Street Bridge over Ballona Creek	Transportation - Bridge
46	Duquesne Avenue Bridge over Ballona Creek	Transportation - Bridge
47	Jackson Avenue Pedestrian Bridge over Ballona Creek	Transportation - Bridge
48	Overland Avenue Bridge over Ballona Creek	Transportation - Bridge
49	Ocean Drive Pedestrian Bridge over Ballona Creek	Transportation - Bridge
50	Sepulveda Boulevard Bridge over Ballona Creek	Transportation - Bridge
51	Sawtelle Boulevard Bridge over Ballona Creek	Transportation - Bridge
52	I-405 Freeway Bridge over Ballona Creek	Transportation - Bridge

#	CCUSD Critical Facility	Category
1	School District Office	Public School
2	High School	Public School
3	Culver Park Continuation High School	Public School
4	Middle School	Public School
5	El Marino Language School	Public School
6	El Rincon Elementary	Public School
7	Farragut Elementary	Public School
9	Linwood E. Howe Elementary	Public School
10	Office of Child Development	Public School
11	Adult School	Public School
12	Maintenance Facilities	Public School
14	Warehouse/District IMC	Public School
15	Echo Horizon School (leased)	Public School



WILDFIRE

Recent Wildfires in Los Angeles County



Image Courtesy of ABC News and CNN




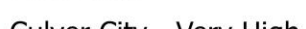
Culver City

Fire Hazard Zones

Scale: 17,000

June 9, 2023

Legend

-  City Boundary
-  Critical Facility
-  Bridge
-  Electric Substation
-  Sewer Pump Station
-  Waterbody
-  Park or Open Space
-  Metro Station
-  Metro Rail
-  Culver City - Very High Fire Hazard Severity Zone
-  LA County - Very High Fire Hazard Severity Zone

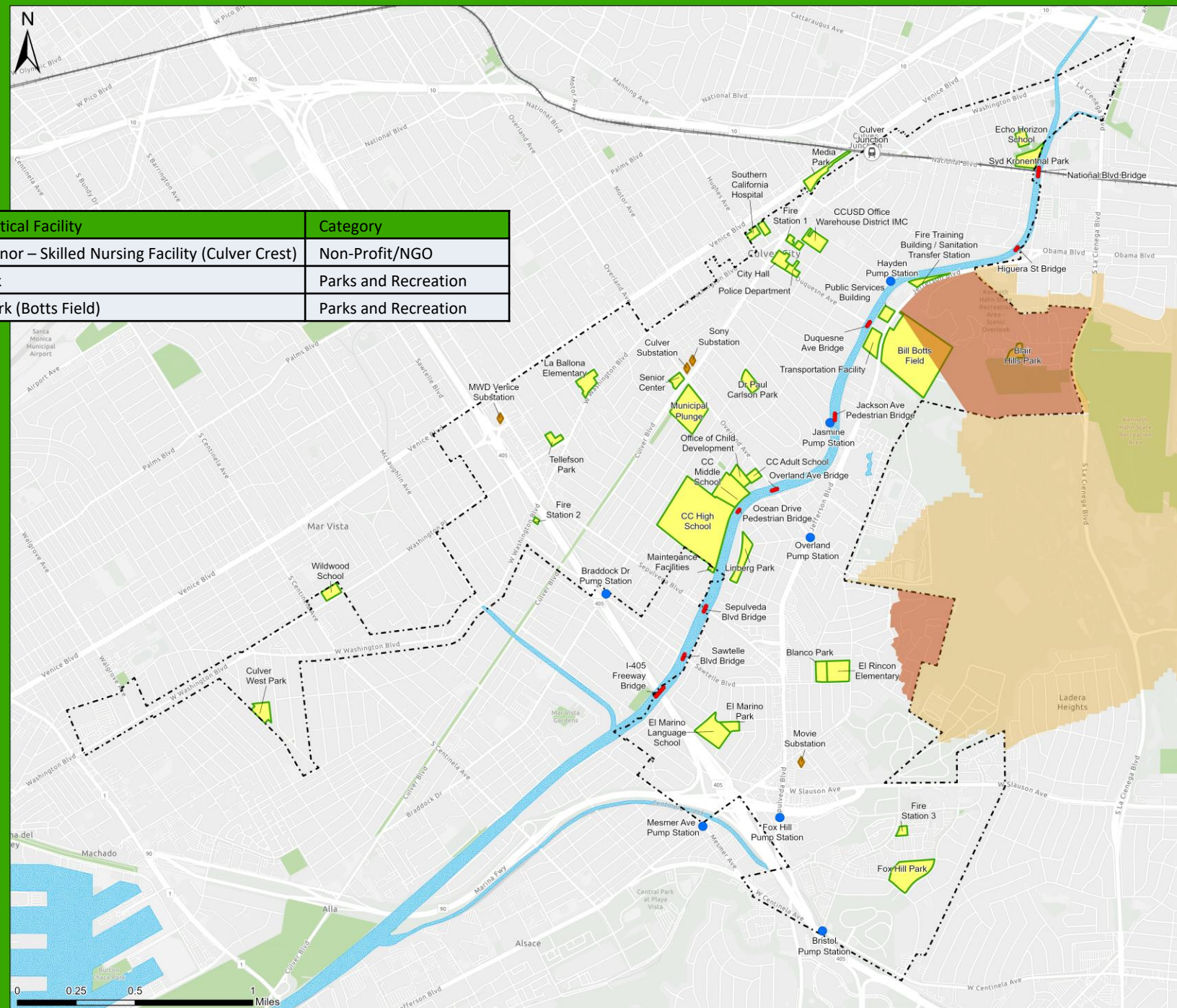
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Source: CAL FIRE 2022

#	Culver City Critical Facility	Category
12	Marycrest Manor – Skilled Nursing Facility (Culver Crest)	Non-Profit/NGO
19	Blair Hills Park	Parks and Recreation
21	Culver City Park (Botts Field)	Parks and Recreation



Not Mapped Hazards

- Drought
- Human Induced Hazards
 - Hazardous Materials
 - Pandemic
 - Terrorism/Active Shooter
 - Civil Disturbance
- Seismic Ground Shaking
- Severe Weather
 - Heavy Rains/Thunderstorm
 - Extreme Heat
 - Santa Ana Winds
 - Tornado
 - Power Outage



Mitigation Actions for Culver City



Mitigation Strategy Discussion

- Dam/Reservoir Failure
- Drought
- Flood
- Human Caused Hazards
 - Hazardous Materials
 - Pandemic
 - Terrorism/Active Shooter
 - Civil Disturbance
- Seismic Hazards
 - Fault Rupture
 - Ground Shaking
 - Landslide/Mudflow
 - Liquefaction
- Severe Weather
 - Heavy Rains/Thunderstorm
 - Extreme Heat
 - Windstorm (Santa Ana winds)
 - Tornado
 - Power Outage (secondary impact)
- Wildfire
- Climate Change (integrated into each hazard)



Public Involvement Update



Public Involvement Update

- Website Content and Survey
 - To be published prior to Meeting #4
- Community Outreach Event
 - Tentatively Scheduled for August 26 at the Fiesta La Ballona Festival
 - Scheduled along with the release of the public review LHMP



Next Steps



Next Steps

- Complete vulnerability assessment
- Mitigation actions and prioritization
- Prepare draft plan components
- Attend Meeting #4
 - July 13, 10:00 AM – 12:00 PM via Microsoft Teams



Questions/Additional Discussion?



Summary of Vulnerability

Map ID	Facility	Dam/Reservoir Failure	Drought	Flood	Human-Caused Hazards	Seismic Hazards – Fault Rupture	Seismic Hazards – Ground Shaking	Seismic Hazards – Landslide/Mudslide	Seismic Hazards – Liquefaction	Severe Weather	Wildfire
1	City Hall	N	Y	N	Y	N	Y	N	N	Y	N
2	Police Department	N	Y	N	Y	N	Y	N	Y	Y	N
3	Fire Station No. 1/Emergency Operations Center (EOC)	N	Y	N	Y	N	Y	N	N	Y	N
4	Fire Station No. 2	Y	Y	N	Y	N	Y	N	Y	Y	N
5	Fire Station No. 3	N	Y	N	Y	N	Y	N	N	Y	N
6	Fire Training Building	N	Y	N	Y	N	Y	N	Y	Y	N
7	Public Works Yard	N	Y	N	Y	N	Y	N	Y	Y	N
8	Sanitation Transfer and Recycling Station	N	Y	N	Y	N	Y	N	Y	Y	N
9	Transportation Facility/Department	N	Y	N	Y	N	Y	N	Y	Y	N
10	Southern California Hospital at Culver City	N	Y	N	Y	N	Y	N	N	Y	N
11	Culver - Palms YMCA	Y	Y	N	Y	N	Y	N	Y	Y	N
12	Marycrest Manor - Skilled Nursing Facility (Culver Crest)	N	Y	N	Y	N	Y	N	N	Y	Y
13	Veterans Park & Memorial Building	N	Y	N	Y	N	Y	N	Y	Y	N
14	Syd Kronenthal Park	Y	Y	N	Y	Y	Y	N	Y	Y	N
15	Blanco Park	N	Y	N	Y	N	Y	N	Y	Y	N
16	Culver West Alexander Park	Y	Y	N	Y	N	Y	N	Y	Y	N
17	Ivy Substation & Media Park	N	Y	N	Y	N	Y	N	N	Y	N
18	El Marino Park	N	Y	N	Y	N	Y	N	Y	Y	N
19	Blair Hills Park	N	Y	N	Y	N	Y	Y	N	Y	Y
20	Dr. Paul Carlson Park	N	Y	N	Y	N	Y	N	Y	Y	N
21	Culver City Park (Botts Field)	N	Y	N	Y	N	Y	Y	N	Y	Y
22	Fox Hills Park	N	Y	N	Y	N	Y	N	N	Y	N
23	Lindberg Park	N	Y	N	Y	N	Y	N	Y	Y	N
24	Tellefson Park	Y	Y	N	Y	N	Y	N	N	Y	N
25	Senior Center	N	Y	N	Y	N	Y	N	N	Y	N



Map ID	Facility	Dam/Reservoir Failure	Drought	Flood	Human-Caused Hazards	Seismic Hazards – Fault Rupture	Seismic Hazards – Ground Shaking	Seismic Hazards – Landslide/Mudslide	Seismic Hazards – Liquefaction	Severe Weather	Wildfire
26	Municipal Plunge	N	Y	N	Y	N	Y	N	Y	Y	N
27	Culver City Community and Social/Teen Center	N	Y	N	Y	N	Y	N	Y	Y	N
28	Combs Parkette	N	Y	N	Y	N	Y	N	Y	Y	N
29	Culver City Skate Park	N	Y	N	Y	N	Y	N	N	Y	N
30	Fox Hills Parkette	N	Y	N	Y	N	Y	N	N	Y	N
31	The Boneyard Dog Park	N	Y	N	Y	N	Y	N	N	Y	N
32	Culver City Light Rail Station	N	Y	N	Y	N	Y	N	N	Y	N
33	MWD Venice Substation	Y	Y	N	Y	N	Y	N	N	Y	N
34	Sony Substation	N	Y	N	Y	N	Y	N	N	Y	N
35	Culver Substation	N	Y	N	Y	N	Y	N	N	Y	N
36	Movie Substation	N	Y	N	Y	N	Y	N	Y	Y	N
37	Braddock Sewer Pump Station	Y	Y	N	Y	N	Y	N	Y	Y	N
38	Bristol Sewer Pump Station	N	Y	N	Y	N	Y	N	Y	Y	N
39	Hayden Sewer Pump Station	N	Y	N	Y	N	Y	N	Y	Y	N
40	Fox Hills Sewer Pump Station	Y	Y	N	Y	N	Y	N	Y	Y	N
41	Jasmine Sewer Pump Station	N	Y	N	Y	N	Y	N	Y	Y	N
42	Mesmer Sewer Pump Station	N	Y	N	Y	N	Y	N	Y	Y	N
43	Overland Sewer Pump Station	N	Y	N	Y	N	Y	N	Y	Y	N
44	National Boulevard Bridge over Ballona Creek	Y	Y	Y	Y	Y	Y	N	Y	Y	N
45	Higuera Street Bridge over Ballona Creek	Y	Y	N	Y	N	Y	N	Y	Y	N
46	Duquesne Avenue Bridge over Ballona Creek	Y	Y	N	Y	N	Y	N	Y	Y	N
47	Jackson Avenue Pedestrian Bridge over Ballona Creek	Y	Y	N	Y	N	Y	N	Y	Y	N
48	Overland Avenue Bridge over Ballona Creek	Y	Y	N	Y	N	Y	N	Y	Y	N
49	Ocean Drive Pedestrian Bridge over Ballona Creek	Y	Y	N	Y	N	Y	N	Y	Y	N
50	Sepulveda Boulevard Bridge over Ballona Creek	Y	Y	N	Y	N	Y	N	Y	Y	N
51	Sawtelle Boulevard Bridge over Ballona Creek	Y	Y	N	Y	N	Y	N	Y	Y	N
52	I-405 Freeway Bridge over Ballona Creek	Y	Y	Y	Y	N	Y	N	Y	Y	N



Map ID	Facility	Dam/Reservoir Failure	Drought	Flood	Human-Caused Hazards	Seismic Hazards – Fault Rupture	Seismic Hazards – Ground Shaking	Seismic Hazards – Landslide/Mudslide	Seismic Hazards – Liquefaction	Severe Weather	Wildfire
CCUSD-1	School District Office	N	Y	N	Y	N	Y	N	Y	Y	N
CCUSD-2	High School	N	Y	N	Y	N	Y	N	Y	Y	N
CCUSD-3	Culver Park Continuation High School	N	Y	N	Y	N	Y	N	Y	Y	N
CCUSD-4	Middle School	N	Y	N	Y	N	Y	N	Y	Y	N
CCUSD-5	El Marino Language School	N	Y	N	Y	N	Y	N	Y	Y	N
CCUSD-6	El Rincon Elementary	N	Y	N	Y	N	Y	N	Y	Y	N
CCUSD-7	Farragut Elementary	N	Y	N	Y	N	Y	N	Y	Y	N
CCUSD-8	La Ballona Elementary	N	Y	N	Y	N	Y	N	N	Y	N
CCUSD-9	Linwood E. Howe Elementary	N	Y	N	Y	N	Y	N	Y	Y	N
CCUSD-10	Office of Child Development	N	Y	N	Y	N	Y	N	Y	Y	N
CCUSD-11	Adult School	N	Y	N	Y	N	Y	N	Y	Y	N
CCUSD-12	Maintenance Facilities	N	Y	N	Y	N	Y	N	Y	Y	N
CCUSD-14	Warehouse/District IMC	N	Y	N	Y	N	Y	N	Y	Y	N
CCUSD-15	Echo Horizon School (leased)	Y	Y	N	Y	Y	Y	N	Y	Y	N
CCUSD-16	Wildwood School (leased)	Y	Y	N	Y	N	Y	N	N	Y	N



Culver City & Culver City Unified School District
Multi-Jurisdictional Hazard Mitigation Plan
Meeting #3
June 15, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present
Joe Susca	Sr. Management Analyst	Culver City Public Works	9770 Culver Blvd. Culver City, CA 90232	Joe.susca@culvercity.org	310-253-5636	✓
Mike Korgan	MOT Director	Culver City Unified School District	4034 Irving Place Culver City, CA 90232	mikekorgan@ccusd.org	310-842-4220	✓
Noelle Steele	Project Manager	Michael Baker International	5 Hutton Centre Drive, Suite 500 Santa Ana, CA 92707	Noelle.Steele@mbakerintl.com	(949) 855-3683	✓
Michael Yaffe	Resilience Lead	Michael Baker International	5 Hutton Centre Drive, Suite 500 Santa Ana, CA 92707	Michael.yaffe@mbakerintl.com	(949) 472-3483	✓
Casey Marchese	Project Planner	Michael Baker International	5 Hutton Centre Drive, Suite 500 Santa Ana, CA 92707	Casey.Marchese@mbakerintl.com	(949) 472-3494	✓
Adam Ferguson	Sr. Management Analyst	Culver City-Parks & Recreation	4175 Overland Ave. Culver City, CA 90230	adam.ferguson@culvercity.org	310-253-6685	✓
Jason Sims	Interim Police Chief	Culver City-Police Department	4040 Duquesne Ave. Culver City, CA 90230	Jason.sims@culvercity.org	310-253-6208	
Lisa Soghor	Chief Financial Officer	Culver City-Finance	97700 Duquesne Ave. Culver City, CA 90230	Lisa.soghor@culvercity.org	310-253-6016	
Tim Koutsouros	Building Official	Culver City-Building Safety	9770 Culver Blvd. Culver City, CA 90232	Tim.koutsouros@culvercity.org	310-253-5802	✓
Hoa Diep	IT Manager	Culver City Information Technology	9770 Culver Blvd. Culver City, CA 90232	Hoa.diep@culvercity.org	310-253-6266	✓

Culver City & Culver City Unified School District
Multi-Jurisdictional Hazard Mitigation Plan
Meeting #3
June 15, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present
Hector Calvinisti	Safety & Training Coord.	Culver City Transportation	4343 Duquesne Ave. Culver City, CA	hector.calvinisti@culvercity.org	310-253-6572	
Tevis Barnes	Director	Culver City Housing and Human Services	9770 Culver Blvd. Culver City, CA 90232	Tevis.barnes@culvercity.org	310-253-5782	
Lisa Vidra	Assistant City Attorney	Culver City - City Attorney	9770 Culver Blvd. Culver City, CA 90232	Lisa.vidra@culvercity.org	310-253-5673	✓
Troy Evangelho	Advanced Planning Manager	Culver City-Advanced Planning	9770 Culver Blvd. Culver City, CA 90232	troy.evangelho@culvercity.org	310-253-5744	
Sean Singletary	Environmental Programs & Operations Manager	Culver City-Public Works	9505 Jefferson Blvd. Culver City, CA 90232	Sean.singletary@culvercity.org	310-253-6457	
Yanni Demitri	Public Works Director/City Engineer	Culver City Public Works	9770 Culver Blvd. Culver City, CA 90232	Yanni.demitri@culvercity.org	310-253-5630	✓
Christine Parra	Emergency Prep. Coordinator	Culver City Fire Department	9770 Culver Blvd. Culver City, CA 90232	Christine.parra@culvercity.org	310-253-5909	✓
Sean Kearney	Director of Fiscal Services	Culver City Unified School District	4034 Irving Place Culver City, CA 90232	seankearney@ccusd.org	310-842-4220 ext. 4234	
Steven Torrence	Emergency Services Coordinator	City of Santa Monica	333 Olympic Blvd. Santa Monica, CA 90401	steven.torrence@santamonica.gov	(310) 458-8686	

Culver City & Culver City Unified School District
Multi-Jurisdictional Hazard Mitigation Plan
Meeting #3
June 15, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present
Kristin Cavanaugh	Director of Studio Relations	Sony Pictures Entertainment	10202 Washington Blvd. Culver City, CA 90232	kristin_cavanaugh@spe.sony.com	(310) 244-5368	
Savanna Fiehler	Disaster Program Manager	American Red Cross	1450 11 th St. Santa Monica, Ca 90405	Savanna.Fiehler@Redcross.org	(213) 266-1003	✓
Margarita Kustanovich	Emergency Management Coordinator	West Hollywood	8300 Santa Monica Blvd., West Hollywood, CA 90069-6216	mkustanovich@weho.org	(310) 657-4009	
Meena Janmohamed	Emergency Management Manager	Beverly Hills	455 N. Rexford Drive Beverly Hills, CA 90210	mjanmohamed@beverlyhills.org	(310) 285-1021	
Ms. Jillian De Vela	Emergency Management Coordinator	City of Los Angeles	201 N Figueroa St, Los Angeles, CA 90012	jillian.de.vela@lacity.org		✓
Gymeka Williams	Emergency Management Coordinator	County of Los Angeles OEM	1275 N. Eastern Avenue, Los Angeles, CA 90063	sGWilliams@ceo.lacounty.gov		
Diane Forte	Government Relations Manager	Southern California Edison	1721 22nd Street Santa Monica CA 90404	diane.forte@sce.com	(310) 310-5262	
Sylvia Diaz		Southern California Gas	9240 East firestone Blvd. Downey, CA 90241	sdiaz@semprautilities.com	(562) 803-7484	
Fredy Ceja	Legislative Representative	Los Angeles Department of Water and Power	1394 S. Sepulveda Boulevard Los Angeles, CA 90025	Fredy.Ceja@ladwp.com	(213)367-1051	✓

Culver City & Culver City Unified School District
Multi-Jurisdictional Hazard Mitigation Plan
Meeting #3
June 15, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present
Linda Cunningham	Capital Programs -- Project Coordinator, Culver City	Golden State Water	5839 Green Valley Circle #106, Culver City, CA 90232	LindaCunningham@gswater.com	(562) 522-8835	✓
Edward Caldwell	Government Affairs Program Manager	West Basin Municipal Water District	17140 S. Avalon Blvd., Suite 210 Carson, CA 90746	edwardc@westbasin.org	(310) 660-6286 office (213) 500-0379 cell	
Darrel Menthe	Executive Director	Downtown Business Association	PO Box 1322 Culver City, CA. 90232	darrel+downtownculvercity.com@ccsend.com	(310) 202-6060	
Sam Levitt	Facilities Manager	Amazon Studios	9336 Washington Blvd. Culver City, CA 90232	samlevi@amazon.com	(310) 202-1234	
Mark Jovel		Culver-Palms Family YMCA	4500 Sepulveda Blvd. Culver City, CA 90230	mariojovel@ymcala.org	(310) 390-3604	
Marie Aragon, MSN, BSN, RN	Chief Nursing Officer Regional Administrator	Southern California Hospital	3828 Delmas Terrace Culver City, CA 90232	MarieKathryna.Aragon@altacorp.com	310-991-9439	
Rick Blackburn	Emergency Services Advisor	SoCalGas	1801 S. Atlantic Blvd. Monterey Park, CA 91754	RBlackbu@socalgas.com	(626) 482-2217	
Timothy Dahlum	Pacific Division Information and Planning Lead Los Angeles Region Information and	American Red Cross	1450 S. Central Avenue Los Angeles, CA 90021	timothy.dahlum@redcross.org	310-780-5828	

Culver City & Culver City Unified School District
Multi-Jurisdictional Hazard Mitigation Plan
Meeting #3
June 15, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present
	Planning Regional Program Lead					
Brian Stokes, Ed.D.	Vice President, Administrative Services	West Los Angeles College	9000 Overland Avenue Culver City, CA 90230	Stokesb@wlaac.edu		
Brandon Vanscoy	Lieutenant	Culver City Police Dept.	4040 Duquesne Ave, Culver City, CA 90232	brandon.vanscoy@culvercity.org	(310) 253-6109	
Lauren Wrenn	Associate Planner	Culver City Advance Planning Division	9770 Culver Blvd. Culver City, CA 90232	Lauren.wrenn@culvercity.org	(310) 253-5766	
Terrance Washington	Emergency Services Coordinator	California Governor's Office of Emergency Services	601 Sequoia Pacific Blvd, Sacramento, CA 95811	Terrance.Washington@caloes.ca.gov	916-917-4540	
Edson Ramos	Crisis Management	Sony Pictures				
"Representative"		Culver City Disability Advisory Committee	9770 Culver Blvd, Culver City, California 90232	DisabilityAdvisoryCommittee@culvercity.org		
"Representative"		One Incredible Family – Homeless and At Risk Advocacy	P. O. Box 2837 Culver City, CA 90231-2837	oifhelpsla@aol.com	(310) 313-0123 EXT. 1	
"Representative"		St. Joseph Center – Homeless and Mental Health Services	204 Hampton Dr, Venice, CA 90291	community@stjosephctr.org	(310) 396-6468	

Culver City & Culver City Unified School District
Multi-Jurisdictional Hazard Mitigation Plan
Meeting #3
June 15, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present
Jessica Miller		Share! – Housing, Self-Help, Mental Health Services	6666 Green Valley Circle Culver City CA, 90230	info@shareselfhelp.org	(310) 305-8878	

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Take control Pop out Chat People Raise React View Apps More Camera Mic Share

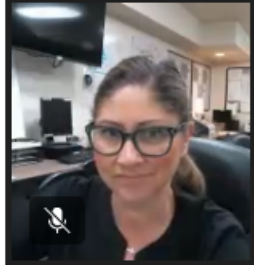
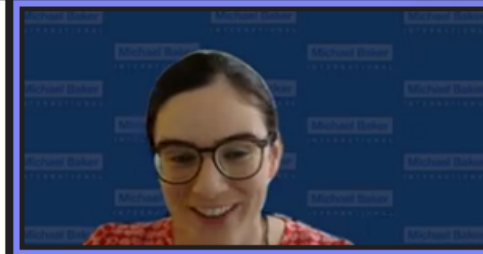
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SEISMIC HAZARDS – FAULT RUPTURE

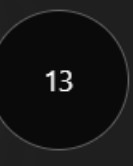
1994 Northridge Earthquake in Los Angeles County



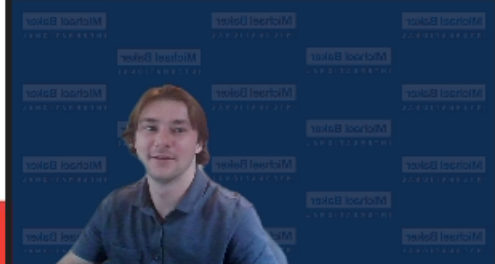
Image Courtesy of Fox 11 News, The Hollywood Reporter



Koutsouros, Tim



Participants



Steele, Noelle

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Windows taskbar icons: File Explorer, Outlook, Chrome, Excel, Edge, Word, PowerPoint, Teams, OneDrive, Calendar, Internet Explorer, Calculator, Teams, Search.

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Planning Team Meeting #4 Documentation



CULVER CITY & CCUSD MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN



PLANNING TEAM MEETING #4
Thursday, July 13th, 2023
10:00 AM – 12:00 PM via Microsoft Teams

AGENDA

- 1) **Introduction**
- 2) **Community Outreach – Updates and Upcoming**
 - **Community Outreach Survey Link:** <https://www.surveymonkey.com/r/PSRYHY6>
- 3) **Risk Assessment/Vulnerability – Minor Updates from Meeting #3**
- 4) **Mitigation Strategy**
 - Mitigation Goals – Summarize and Review
 - Mitigation Actions
 - Previous MJHMP Mitigation Actions (2017)
 - New MJHMP Mitigation Actions
 - Mitigation Prioritization & Timeframe
- 5) **Next Steps**
 - Complete Draft LHMP for Planning Team Review
 - Planning Team Review of LHMP
 - Revise LHMP for Public Review
 - Public Review
 - Cal OES/FEMA Submittal

Marchese, Casey

Subject: Culver City & CCUSD - Multi-Jurisdictional Hazard Mitigation Plan, Meeting #4
Location: Microsoft Teams Meeting

Start: Thu 7/13/2023 10:00 AM
End: Thu 7/13/2023 12:00 PM

Recurrence: (none)

Meeting Status: Accepted

Organizer: Anderson, Noelle

Required Attendees: Anderson, Noelle; Susca, Joe; Marchese, Casey; adam.ferguson@culvercity.org; Sims, Jason; Soghor, Lisa; Koutsouros, Tim; Diep, Hoa; Calvinisti, Hector; Barnes, Tevis; Vidra, Lisa; Evangelho, Troy; Singletary, Sean; Demitri, Yanni; Parra, Christine; Mike Korgan; Sean Kearney; steven.torrence@santamonica.gov; kristin_cavanaugh@spe.sony.com; Savanna.Fiehler@Redcross.org; mkustanovich; mjanmohamed; Jillian De Vela; sGWilliams@ceo.lacounty.gov; diane.forte@sce.com; sdiaz@semprautilities.com; Fredy.Ceja@ladwp.com; LindaCunningham@gswater.com; edwardc@westbasin.org; darrel+downtownculvercity.com@ccsend.com; samlevi@amazon.com; Jovel, Mario; MarieKathryna.Aragon@altacorp.com; Gymeka Williams; DisabilityAdvisoryCommittee@culvercity.org; oifhelpsla@aol.com; community@stjosephctr.org; info@shareselfhelp.org; Ramos, Edson

Optional Attendees: Yaffe, Michael; Diaz, Silvia A.; Stokes, Brian; Hernandez, Peter

Team – Friendly reminder that our last stakeholder meeting for the Culver City/CCUSD MJHMP will be hosted this Thursday, 7/13 from 10 AM – 12 PM via Microsoft Teams. The meeting agenda is attached to this email, including our community outreach survey linked here: <https://www.surveymonkey.com/r/PSRYHY6>.

A key topic of conversation will be our draft mitigation actions, updated based on content/feedback received during Meeting #2 and #3. Please review the attached document, and bring mitigation action comments, additions and ideas to Meeting #4 for incorporation into the draft MJHMP. If you have comments during your review, please incorporate into our Word file on Microsoft Teams for further discussion on 7/13 – link here: [Mitigation Action Draft Update Meeting #4 Draft.docx](#)

Please note the mitigation actions are still in draft form, and are not for public distribution at this time.

Thank you! – Noelle

Hello,

You have been selected and notified by the City of Culver City and Culver City Unified School District (2017) as a member of the Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) Planning Committee. Michael Baker International is the City's consultant, charged with preparing the MJHMP update. This Planning Committee will be the core group responsible for providing MJHMP input/updates, guiding the planning process, and agreeing upon the final contents of the plan. A series of four meetings will be hosted for two hours each, via Microsoft Teams. We understand the importance of your time – meetings will be structured to maximize results and minimize “homework” outside of the meeting block.

The schedule for the four planning team meetings includes:

- Thursday, April 6, 2023 (2 hours, 10AM – 12PM)

- Thursday, May 25, 2023 (2 hours, 10AM – 12PM)
- Thursday, June 15, 2023 (2 hours, 10AM – 12PM)
- **Thursday, July 13, 2023 (2 hours, 10AM – 12PM)**

Agendas will be provided prior to each meeting via this email chain.

The 2017 MJHMP is linked here for your convenience:

<https://www.culvercity.org/files/assets/public/documents/community-development/multijurisdictionalhazardm.pdf>

We appreciate your time and commitment. Your involvement will ensure a comprehensive and robust plan update that meets Cal OES/FEMA requirements. Please reach out if you have any questions regarding the MJHMP or update process.

Thank you,
Noelle

Microsoft Teams meeting

Join on your computer, mobile app or room device

[Click here to join the meeting](#)

Meeting ID: 272 602 522 512

Passcode: Dz6rBL

[Download Teams](#) | [Join on the web](#)

Join with a video conferencing device

mbakerintl@m.webex.com

Video Conference ID: 114 402 226 6

[Alternate VTC instructions](#)

Or call in (audio only)

[+1 213-336-0348,615634277#](tel:+12133360348615634277#) United States, Los Angeles

Phone Conference ID: 615 634 277#

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CULVER CITY & CCUSD MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN



PLANNING TEAM MEETING #4

Thursday, July 13th, 2023
10:00 AM – 12:00 PM via Microsoft Teams

MEETING MINUTES

1) Introduction

2) Community Outreach – Updates and Upcoming

- **Community Outreach Survey Link:** <https://www.surveymonkey.com/r/PSRYHY6>
 - *Note from Joe Susca (Senior Management Analyst, Culver City) – We're working together to print post cards with the survey QR code, to be passed out at the Culver City Movies in the Park on July 29th.*
 - *Noelle Anderson (Project Manager, Michael Baker) – We should get good feedback with those post cards, and we can use the QR code in other distributions if needed.*

3) Risk Assessment/Vulnerability – Minor Updates from Meeting #3

4) Mitigation Strategy

- Mitigation Goals – Summarize and Review
- Mitigation Actions
 - Previous MJHMP Mitigation Actions (2017)
 - New MJHMP Mitigation Actions
- Mitigation Prioritization & Timeframe
 - *Question from Joe Susca (Senior Management Analyst, Culver City) – I see that my comments on the mitigation actions have been incorporated, but could we give all the stakeholders the opportunity to review them over the next few weeks?*
 - *Answer from Noelle Anderson (Project Manager, Michael Baker) – Absolutely, we can keep this as a living document on Microsoft Teams for stakeholders to review over the next 2 weeks.*
 - *Question from Noelle Anderson (Project Manager, Michael Baker) – Mitigation Action #3, alternative bus routes, has the City made movement on this since the 2017 MJHMP and do we still want to pursue this? We may be able to eliminate this mitigation action based on the evacuation planning the City is working on.*
 - *Joe Susca (Senior Management Analyst, Culver City) – Who from transportation is on the stakeholder list? We may want to ask Transportation about that, but it's difficult to plan ahead because it's hard to know what routes will be down in a hazard event.*
 - *Noelle Anderson (Project Manager, Michael Baker) – We can say that it was identified as a mitigation action in 2017, but it has been removed because the City is pursuing other evacuation planning efforts.*
 - *Question from Joe Susca (Senior Management Analyst, Culver City) – Is this something FEMA requires/desires?*



- Answer from Noelle Anderson (Project Manager, Michael Baker) – No, this is not required since there are other evacuation requirements (e.g., AB747 and SB99).
- Joe Susca (Senior Management Analyst, Culver City) – Lets follow up with Transportation and see if we can remove this.
- Question from Noelle Anderson (Project Manager, Michael Baker) – Mitigation Action #24 and #25, drought, alternative water sources, and constructing additional storage facilities. Would the City be taking responsibility for these actions, and what is the integration between the City and the water districts? Should we reword these mitigation actions to focus on coordination here?
 - Answer from Joe Susca (Senior Management Analyst, Culver City) – For item #24, we have the Blue Ocean plan to capture, store and reuse water for drought purposes. That’s one measure that can be included.
 - Noelle Anderson (Project Manager, Michael Baker) – Would the City be responsible for identifying water sources, storage and irrigation? It seems like you would rely on the water purveyors.
 - Joe Susca (Senior Management Analyst, Culver City) – Correct, we would rely on LADWP and GSW to identify alternative or additional water sources. Let’s ask Linda Cunningham at GSW and LADWP and follow up on those actions.
- Question from Noelle Anderson (Project Manager, Michael Baker) – Severe Weather, Mitigation Action #49, our research for the hazard profile didn’t show damage from wind events beyond downed trees or common impacts of a particular rainy season. Is there any movement in identifying critical facilities for improvements to withstand wind events?
 - Answer from Joe Susca (Senior Management Analyst, Culver City) – The typical outcome of wind events is limb failure. But Tim Koutsouras may know about facility related issues.
 - Tim Koutsouras (Building Official, Culver City) – The only essential buildings I would be concerned with are emergency shelters, but the current minimum building code should be enough to mitigate wind and severe weather events.
 - Noelle Anderson (Project Manager, Michael Baker) – I recommend deleting this language and including a mitigation action to get ahead of limb failure before the rainy season.
 - Joe Susca (Senior Management Analyst, Culver City) – The parkway trees are City owned and trimming the trees is adequate maintenance, depending on availability of. We can eliminate this measure if that is the suggestion.
 - Noelle Anderson (Project Manager, Michael Baker) – I have some good tree trimming and mitigation actions from a previous LHMP, I can review and see if they may be applicable here.
- Question from Noelle Anderson (Project Manager, Michael Baker) – We identified and recommend eliminating some previous mitigation actions for various reasons. For example, the seismic retrofit work you’re doing goes beyond the previously included mitigation action. Does anyone have feedback on the mitigation actions recommended for removal?
 - Answer from Tim Koutsouras (Building Official, Culver City) – I agree that some of these can be deleted if we have otherwise addressed the issue.
- Note from Noelle Anderson (Project Manager, Michael Baker) – We recently attended the CalOES grant webinar; we want to reiterate that for infrastructure that should be hardened or made more resilient, there are funding opportunities for partnerships between the City and utilities.



- *Joe Susca (Senior Management Analyst, Culver City) – Want to point out that if our utility companies have mitigation actions, the City can apply on behalf of the utility companies. Noelle and I have reached out to utility companies to evaluate if they want to partner.*
- *Rick Blackburn (Emergency Services Advisor, SoCalGas) – We are happy to consider partnerships to identify funding for capital improvement projects.*
- *Joe Susca (Senior Management Analyst, Culver City) – Rick, please look at the list of mitigation actions and let us know if there are additional projects to add and partner on.*
- *Question from Rick Blackburn (Emergency Services Advisor, SoCalGas) – What timeframe or grant period are we looking at?*
 - *Answer from Noelle Anderson (Project Manager, Michael Baker) – 2024 to 2029. Our anticipated schedule is to submit the HMP around mid-September and adopt in early 2024. At that point the plan is live for 5 years. CalOES and FEMA are interested in cooperative projects between multiple stakeholders for BRIC. Those cooperative projects can strengthen your grant application.*
- *Note from Noelle Anderson (Project Manager, Michael Baker) – I will recirculate the Mitigation Action Draft, requesting edits, in the meantime we will identify the responsible departments, prioritization and timeline.*
 - *Joe Susca (Senior Management Analyst, Culver City) – Stakeholders, feel free to update or make suggestions on the timeline/priority columns of the mitigation actions.*

5) Next Steps

- Complete Draft LHMP for Planning Team Review
- Planning Team Review of LHMP
- Revise LHMP for Public Review
- Public Review
- Cal OES/FEMA Submittal

6) Action Items:

Michael Baker International

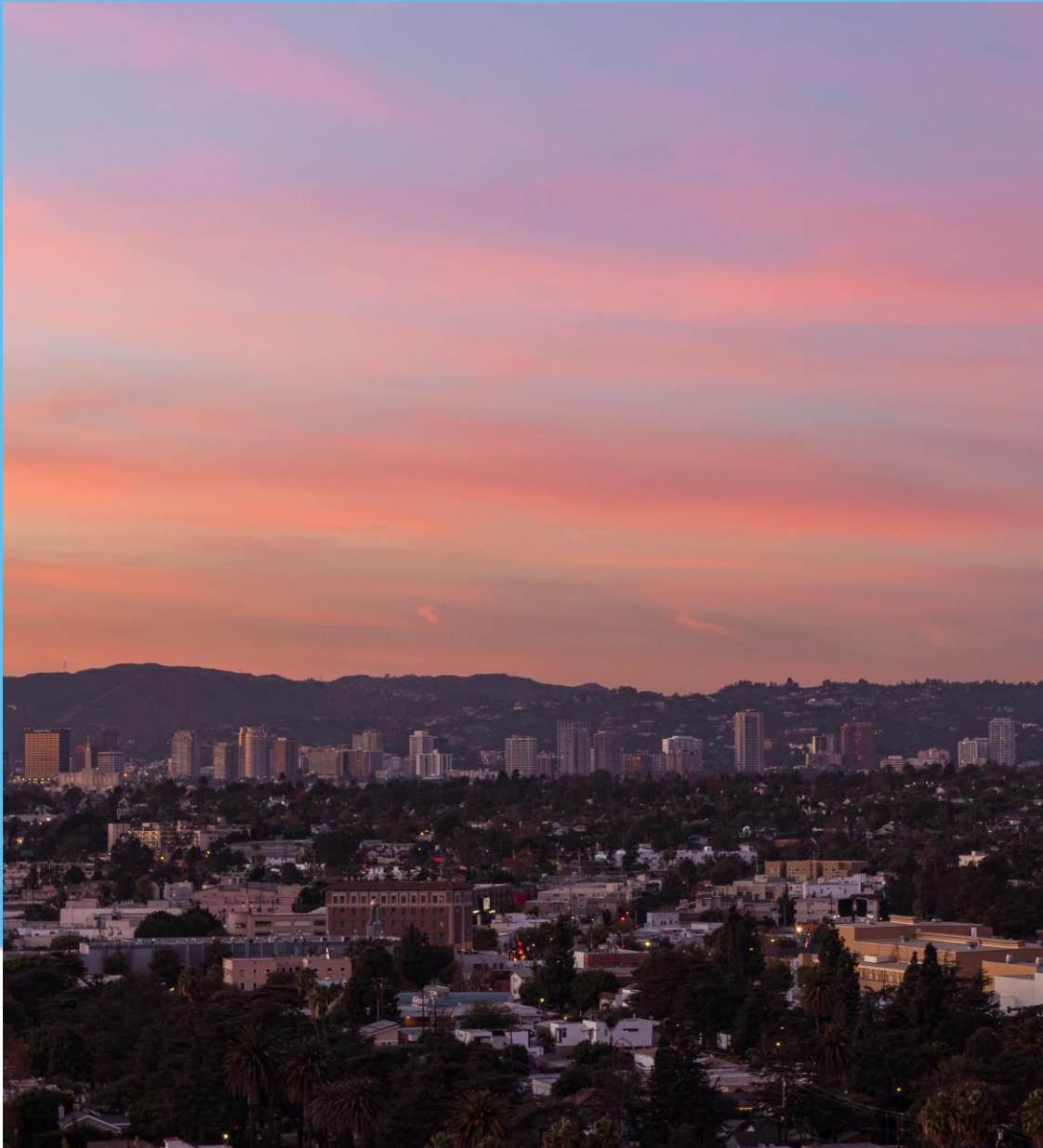
- Action Item: MBI to provide mitigation actions on Microsoft Teams for stakeholder review/edits.
- Action Item: MBI to review Mitigation Action #49 and identify potential additional mitigation actions for tree trimming, severe weather, etc.

Culver City and CCUSD

- Action Item: City to follow up with Transportation on Mitigation Action #3.
- Action Item: City and MBI to follow up with GSW and LADWP on Mitigation Actions #24 and #25.

External Stakeholders

- Action Item: Stakeholders to review mitigation actions on Teams and provide comments/suggestions. Consider partnerships with the City and available grant funding.



Multi-Jurisdictional Hazard Mitigation Plan Update

Stakeholder Meeting #4

Culver City and
Culver City Unified School District



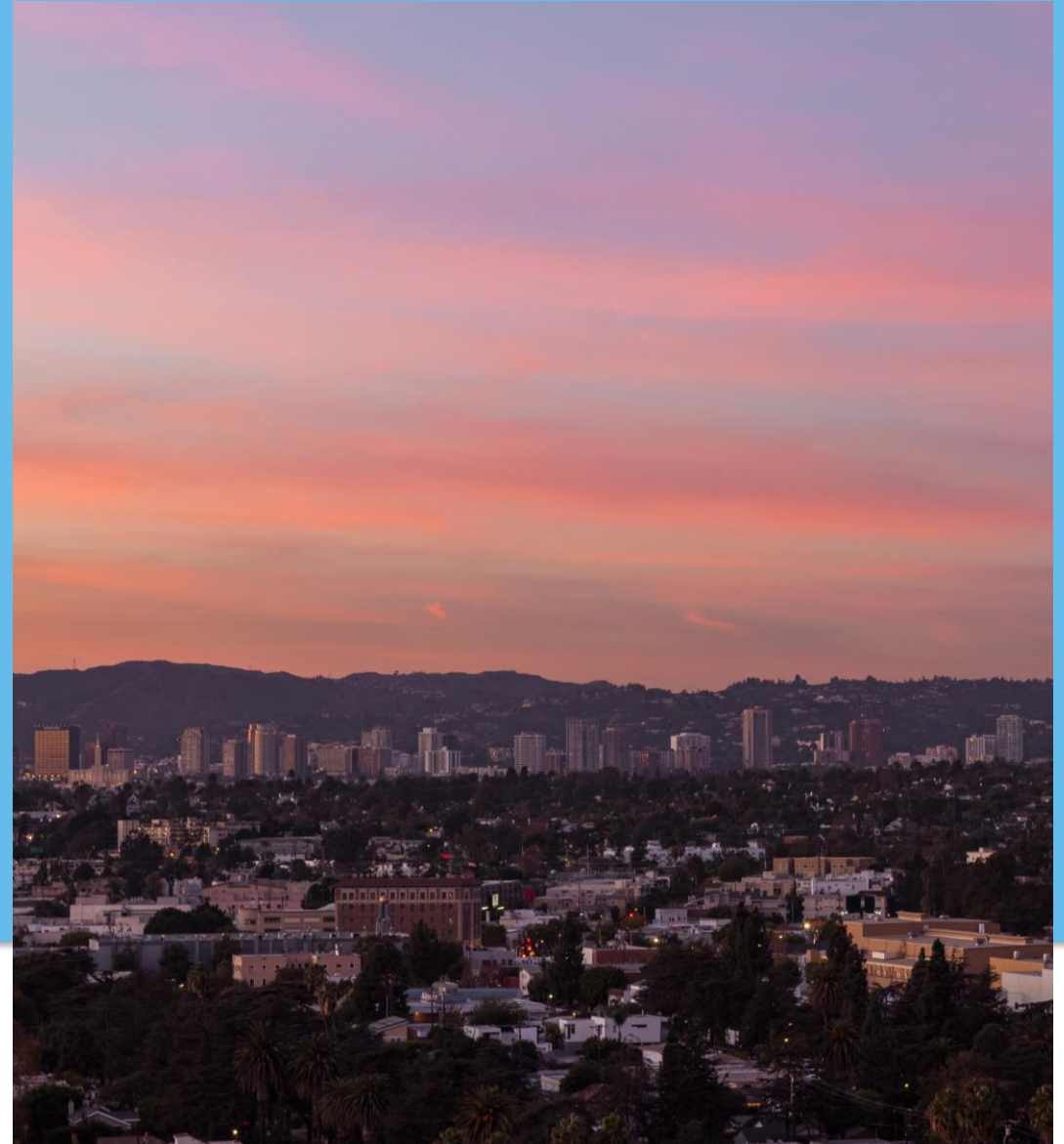
Michael Baker
INTERNATIONAL

Agenda

- Community Outreach Update
- Risk assessment/vulnerability overview
 - Minor updates from Meeting #3
- Mitigation strategy
- Mitigation action discussion
- Next steps
- Questions/additional discussion



COMMUNITY OUTREACH UPDATE



Save the Date – Community Outreach Event

- **Update from Meeting #3!**
- MJHMP Booth at Culver City Movie at the Park
 - July 29, 2023 from 7:00 PM – 9:00 PM
 - Culver City Park, Field #1
- MJHMP Public Review Materials at Fiesta La Ballona
 - August 25 – August 27, 2023
 - Handouts and Information at City's booth



Community Survey – Open Until Sept. 3rd

- Link here:

<https://www.surveymonkey.com/r/PSRYHY6>

- Distribute amongst your colleagues and jurisdiction



Multi - Jurisdictional



MULTI-JURISDICTIONAL
HAZARD MITIGATION PLAN UPDATE

Take our Survey!

CITY OF
CULVER
CITY

CULVER CITY
UNIFIED
SCHOOL
DISTRICT

Risk Assessment/Vulnerability Follow-Up



Hazards Profiled

- Dam/Reservoir Failure
- Drought
- Flood
- Human Caused Hazards
 - Hazardous Materials
 - Pandemic
 - Terrorism/Active Shooter
 - Civil Disturbance
- Seismic Hazards
 - Fault Rupture
 - Ground Shaking
 - Landslide/Mudflow
 - Liquefaction
- Severe Weather
 - Heavy Rains/Thunderstorm
 - Extreme Heat
 - Windstorm (Santa Ana winds)
 - Tornado
 - Power Outage (secondary impact)
- Wildfire
- Climate Change (integrated into each hazard)



Hazards Profiled

Mapped

- Dam/Reservoir Failure
- Flood
- Seismic (Fault Rupture, Landslide, Liquefaction)
- Wildfire

Non-Mapped

- Drought
- Human Caused Hazards (Hazardous Materials, Pandemic, Terrorism/Active Shooter, Civil Disturbance)
- Seismic Ground Shaking
- Severe Weather (Heavy Rains/Thunderstorm, Extreme Heat, Santa Ana Winds, Tornado, Power Outage)



Critical Facilities

■ Critical Facilities – Community Lifelines

- Facilities that are **critical** to support the basic livelihood of citizens and businesses.
 - Risk assessment will look at what facilities are in hazard zones
 - Considers replacement cost and community value
- Focused on facilities that may be vital to evacuations, serve as assembly points or temporary shelters, or provide a supportive role in preparing for and recovering from hazard events
- Critical facilities include essential public buildings, police and fire stations, schools and public parks, transportation infrastructure, and essential public utility assets



Community Lifelines

Community lifelines are defined by FEMA, a construct for objectives-based post-disaster stabilization efforts. A lifeline enables the continuous operation of critical government and business functions and is essential to human health and safety or economic security.

- Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function.
- Lifelines are the integrated network of assets, services, and capabilities that are used day-to-day to support the recurring needs of the community.
- When disrupted, decisive intervention (e.g., rapid service re-establishment or employment of contingency response solutions) is required to stabilize the incident.



SAFETY AND SECURITY

- Law Enforcement/Security (stations, staff, site security)
- Fire Service (stations, staff, resources)
- Search and Rescue
- Government Service (emergency operations centers, essential functions, schools, gov't offices)
- Community Safety (flood control, protective actions, other hazards)



FOOD, WATER, SHELTER

- Food (commercial food distribution, supply chains, food distribution programs)
- Water (drinking water utilities, wastewater systems, water supply chain)
- Shelter (housing, shelters, commercial facilities such as hotels)
- Agriculture (animals and agriculture)



HEALTH AND MEDICAL

- Medical Care (hospitals, dialysis, pharmacies, care facilities, vet services, home care)
- Public Health (epidemiological monitoring, labs, clinical guidance, behavioral health)
- Patient Movement (emergency medical services)
- Medical Supply Chain (products, manufacturing, distribution, research, sterilization)
- Fatality Management (mortuary and post-mortuary services)



ENERGY

- Power Grid (generation, transmission, distribution systems)
- Fuel (refineries, processing, storage, pipelines, distribution)



COMMUNICATIONS

- Infrastructure (wireless, cable, broadcast, satellite, internet, data centers)
- Responder Communications (LMR networks)
- Alerts, Warnings, and Messages (local and regional alerts)
- Finance (banking services, electronic payment processing)
- 911 and Dispatch



TRANSPORTATION

- Highway, Roadway, Motor Vehicle (roads, bridges)
- Mass Transit (bus, rail, ferry)
- Railway (freight, passenger)
- Aviation (commercial, general, military)
- Maritime (waterways, ports, port facilities)



HAZARDOUS MATERIALS

- Oil/HAZMAT Facilities (facilities, toxic incidents from facilities)
- Oil/HAZMAT, Pollutants, Contaminants (toxic incidents from non-fixed facilities)



Hazard Mitigation Plan

Culver City

Base Map

Scale: 17,000

June 23, 2023

Legend

 City Boundary

 Critical Facility

 Bridge

 Electric Substation

 Sewer Pump Station

 Waterbody

 Park or Open Space

 Metro Station

 Metro Rail

THE CITY OF CULVER CITY



INFORMATION TECHNOLOGY DEPARTMENT
GEOGRAPHIC INFORMATION SYSTEMS
9770 CULVER BLVD
CULVER CITY, CA 90232
TEL: 310-253-5976

Source: Culver City 2023



Mitigation Strategy



Mitigation Action

- **Reduce the Potential for Damage** – Reduce damage to critical assets from natural and man-made hazards;
- **Create a Decision Tool for Management** – To provide information so that the City may act to address vulnerabilities; and
- **Promote Coordination & Compliance with State and Federal Program Requirements** – To ensure that the City can develop a relationship with surrounding agencies and take full advantage of state and federal grant programs, policies, and regulations.



Mitigation Actions

- Mitigation actions – reduce or eliminate long-term risk
 - **Different from actions to prepare or respond to an event**
- Mitigation activities lessen or eliminate the need for preparedness or response resources
- Emphasis on the impact or vulnerabilities – not on the hazard itself



STAPLE/E Review and Selection Criteria

Social
<ul style="list-style-type: none">• Is the proposed action socially acceptable to the jurisdiction and surrounding community?• Are there equity issues involved that would mean that one segment of the jurisdiction and/or community is treated unfairly?• Will the action cause social disruption?
Technical
<ul style="list-style-type: none">• Will the proposed action work?• Will it create more problems than it solves?• Does it solve a problem or only a symptom?• Is it the most useful action in light of other jurisdiction goals?
Administrative
<ul style="list-style-type: none">• Can the jurisdiction implement the action?• Is there someone to coordinate and lead the effort?• Is there sufficient funding, staff, and technical support available?• Are there ongoing administrative requirements that need to be met?
Political
<ul style="list-style-type: none">• Is the action politically acceptable?• Is there public support both to implement and to maintain the project?



STAPLE/E Review and Selection Criteria

Legal

- Is the jurisdiction authorized to implement the proposed action?
- Are there legal side effects? Could the activity be construed as a taking?
- Will the jurisdiction be liable for action or lack of action?
- Will the activity be challenged?

Economic

- What are the costs and benefits of this action?
- Do the benefits exceed the costs?
- Are initial, maintenance, and administrative costs taken into account?
- Has funding been secured for the proposed action? If not, what are the potential funding sources (public, nonprofit, and private)?
- How will this action affect the fiscal capability of the jurisdiction?
- What burden will this action place on the tax base or local economy?
- What are the budget and revenue effects of this activity?
- Does the action contribute to other jurisdiction goals?
- What benefits will the action provide?

Environmental

- How will the action affect the environment?
- Will the action need environmental regulatory approvals?
- Will it meet local and state regulatory requirements?
- Are endangered or threatened species likely to be affected?



Mitigation Prioritization & Timeframe

Category	Comments
High	Top organizational priority and is generally a well-detailed project idea. Protects population, resource or property at high risk, Uses feasible methods, techniques or technology.
Medium	A good idea that needs more information or is an action that addresses a moderate hazard.
Low	An idea that needs a lot more information or will take a lot of preliminary action to build support.

Category	Timeframe
Short-term	1-2 years
Mid-term	3-4 years
Long-term	5+ years
Ongoing	1-2 years and ongoing thereafter



Mitigation Action Discussion



Next Steps



Next Steps

- **MJHMP for Planning Team Review**
 - August 11 – August 18 (one week)
- **Revise MJHMP for Public Review**
- **Public Review**
 - August 25 – September 8
- **Anticipated Cal OES/FEMA Submittal**
 - September 15, 2023



Questions/Additional Discussion?

Thank you for Participating!



Culver City & Culver City Unified School District – Multi-Jurisdictional Hazard Mitigation Plan Update
DRAFT MITIGATION ACTIONS – DO NOT DISTRIBUTE

#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline
1	<i>City: Continue to use emergency alert systems, such as Everbridge (Nixle), Integrated Public Alert and Warning System (IPAWS), Nixle and Reverse 911, and coordinate with CCARES and CERT members to notify community members in the event of an imminent threat or evacuation order a need to evacuate.</i>	Multiple Hazards All Hazards	<i>[Pending]</i>	<i>[Pending]</i>	High	Ongoing
2	<i>City and CCUSD: Continue to provide back-up power and supplies at critical facilities through permanent or portable generators. Continue to identify and identify any critical facilities in need of new or expanded generator capacity that may not currently have them in order to maintain basic functions during emergency situations.</i>	Multiple Hazards: Dam/Reservoir Failure; Flood; Seismic Hazards; Severe Weather; Wildfire	<i>[Pending]</i>	<i>[Pending]</i>	High	Ongoing
3	<i>City: Establish alternative bus routes as part of City Bus emergency planning efforts to maintain service in the event that key roads are blocked.</i>	Multiple Hazards: Dam/Reservoir Failure; Flood; Seismic Hazards	<i>[Pending]</i>	<i>[Pending]</i>	Medium	2017
5	<i>City and CCUSD: Continue to distribute information about ways on how to reduce hazard risk/vulnerability-the threat of hazards to to all community members through mailings, printed notifications, television, and digital devices, and in-person events and workshops. This strategy would mitigate impacts from all priority hazards. Continue focused outreach with underserved or vulnerable populations, and consider the unique communication needs of these groups to ensure meaningful engagement. Continue to consult and solicit feedback for opportunities to improve communication/engagement procedures.</i>	Multiple Hazards All Hazards	<i>[Pending]</i>	<i>[Pending]</i>	Medium	Ongoing
7	<i>City: Conduct regular Review and update the City's Municipal Code reviews- for relevant updates to implement and applicable ordinances, as appropriate, to implement the strategies identified in this Plan and other hazard mitigation emergency planning efforts.</i>	Multiple Hazards All Hazards	<i>[Pending]</i>	<i>[Pending]</i>	Medium	2024
8	<i>City and CCUSD: Coordinate with local, regional and state agencies to monitor potential changes in hazard severity and -frequency, and affected areas from future emergency situations, especially due to as related to climate change.</i>	Multiple Hazards: Drought; Flood; Severe Weather; Wildfire	<i>[Pending]</i>	<i>[Pending]</i>	Medium	Ongoing
10	<i>City and CCUSD: Avoid locating any new critical facilities within or immediately adjacent to mapped hazard zones areas, where feasible. If no reasonable alternative is available, use extensive mitigation features to reduce the impact. If no feasible alternative exists, integrate best-practices into the development to reduce vulnerability and risk to the maximum extent.</i>	Multiple Hazards: Dam/Reservoir Failure; Flood; Seismic Hazards; Wildfire	<i>[Pending]</i>	<i>[Pending]</i>	Medium	Ongoing
11	<i>City and CCUSD: Continue to conduct energy efficiency retrofits, expand energy conservation efforts, and pursue the use of renewable energy at agency facilities to help avoid service disruptions during emergency situations. -Explore the use of microgrids (localized grids that disconnect from the traditional grid to mitigate grid disturbances) to support energy resiliency-resilience at key facilities.</i>	Multiple Hazards All Hazards	<i>[Pending]</i>	<i>[Pending]</i>	Medium	2024 Ongoing
12	<i>City and CCUSD: Conduct hazard vulnerability studies when constructing new City and CCUSD buildings infrastructure or infrastructure. Based on vulnerability findings study results, construct new buildings/infrastructure in accordance with resilience best-practices and integrate mitigation into the building design, with features that improve resiliency to all applicable hazards. Encourage hazard vulnerability studies be conducted for new infrastructure/development activities proposed in surrounding areas, especially when subject to natural hazards.</i>	Multiple Hazards All Hazards	<i>[Pending]</i>	<i>[Pending]</i>	High/Medium	Ongoing
13	<i>City and CCUSD: Continue to coordinate with the American Red Cross to maintain an active the list of City/CCUSD-owned facilities approved as community shelter sites, and ensure that community shelter sites such facilities continue to be are equipped with shelter carts and other required supplies.</i>	Multiple Hazards All Hazards	<i>[Pending]</i>	<i>[Pending]</i>	Medium	Ongoing
14	<i>City: -Continue to Partner with local nonprofits and non-governmental organizations (NGOs) the local community and other organizations, (such as the American Red Cross, and homelessness services providers) to identify targeted mitigation actions to support vulnerable or underserved populations. to work directly with vulnerable populations (elderly, homeless, low income, special needs, etc.) to identify opportunities to mitigate impacts in the event of a natural disaster, including the identification of available resources and how to access and implement these resources.</i>	Multiple Hazards All Hazards	<i>[Pending]</i>	<i>[Pending]</i>	High	2017 Ongoing
17	<i>City and CCUSD: Comprehensively Continue to update City emergency-related planning documents every five years, to ensure consistency with state and federal law, best practices, local conditions, and recent science.</i>	Multiple Hazards All Hazards	<i>[Pending]</i>	<i>[Pending]</i>	Medium	Ongoing
18	<i>City and CCUSD: Work to continue Continue to improve estimates of potential casualties and property damage under various emergency scenarios, and incorporate findings into emergency planning efforts as appropriate.</i>	Multiple Hazards All Hazards	<i>[Pending]</i>	<i>[Pending]</i>	Medium	Ongoing
19	<i>City: In coordination with state and regional agencies and other key stakeholders, cContinue to regularly to participate in and conduct emergency preparedness trainings, exercises disaster training events and drills. Participate in emergency preparedness trainings hosted by external partners, such as local dam owners.</i>	Multiple Hazards All Hazards	<i>[Pending]</i>	<i>[Pending]</i>	Medium	2017 Ongoing
20	<i>City: Work with local real estate agents and landlords to require the disclosure of the presence of any natural hazard risk zones prior to the sale or lease of buildings.</i>	Multiple Hazards: Dam/Reservoir Failure; Flood; Seismic Hazards; Wildfire	<i>[Pending]</i>	<i>[Pending]</i>	Low	2019 Ongoing
21	<i>CCUSD: Continue to regularly Cconduct regular emergency preparedness drills at all CCUSD facilities for the benefit of for students and school employees. The purpose of emergency preparedness drills will be to practice procedure and response during to ensure an effective response to emergency situations.</i>	Multiple Hazards All Hazards	<i>[Pending]</i>	<i>[Pending]</i>	High	2017 Ongoing
22	<i>CCUSD: Continue to Sstock school facilities with supplies to meet the short-term basic needs of students and employees staff in the event of an emergency situation.</i>	Multiple Hazards All Hazards	<i>[Pending]</i>	<i>[Pending]</i>	High	2017 Ongoing
NEW	<i>CCUSD: Incorporate the findings of the CCUSD Integrated Energy Master Plan Campus Reports into the Energy Master Plan Zero Energy Report. Consider natural hazard vulnerability and increased resilience when developing capital improvement projects and design standards for CCUSD facilities, and seek funding sources where appropriate.</i>	Multiple Hazards (Climate Change); Drought; Flood; Severe Weather; Wildfire	<i>[Pending]</i>	<i>[Pending]</i>		

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Culver City & Culver City Unified School District – Multi-Jurisdictional Hazard Mitigation Plan Update
DRAFT MITIGATION ACTIONS – DO NOT DISTRIBUTE

#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline
NEW	<u>City and CCUSD: Identify the communication systems and procedures that facilitated remote work and remote learning during the COVID-19 Pandemic. Maintain, enhance and codify those systems and procedures to enhance communication and connectivity during future hazard incidents or disaster recovery.</u>	All Hazards	[Pending]	[Pending]		
NEW	<u>CCUSD: Continue to maintain and update individual school safety plans, and incorporate into the CCUSD Comprehensive School Safety Plan annually. Implement the goals and policies of the school safety plans, monitor progress those goals, and seek funding for major projects as appropriate.</u>	All Hazards	[Pending]	[Pending]		
NEW	<u>CCUSD: Conduct a comprehensive update of the CCUSD Emergency Preparedness web content and outreach materials. Work with the Fire Department and the American Red Cross as necessary to ensure that emergency preparedness educational materials and documents on the webpage are current and reflect up-to-date preparedness and response information. Consider language translation or other accessible web content to ensure outreach to vulnerable or underserved communities. Ensure the MJHMP update is linked on the webpage.</u>	All Hazards	[Pending]			
NEW	<u>City: Integrate natural hazard information and mapping (e.g., liquefaction, landslide, fire hazard zones) into the City General Plan, to ensure the most current information is reflected and updated as necessary. Incorporate new and/or revised goals and policies specific to reducing vulnerability to natural hazards. Integrate the adopted LHM into the City Safety Element by reference to ensure compliance with AB 2140.</u>	Multiple Hazards: Dam/Reservoir Failure; Flood; Seismic Hazards; Wildfire	[Pending]	[Pending]		
NEW	<u>City: Coordinate with California State Parks and Golden State Water Company to redirect drainage flows away from the Baldwin Hills Reservoir and retaining walls. Identify key areas for curb and gutter improvements on State Parks property to collect and divert drainage. Seek grant funding for improvements, as appropriate.</u>	Multiple Hazards: Dam/Reservoir Failure; Flood; Seismic Hazards (Landslide)	[Pending]	[Pending]		
NEW	<u>City/CCUSD: Build upon the Community Resilience Framework initiated by the City Fire Department and Dr. Lucy Jones Center through the Connected Communities Resilience Program. Continue to expand connections amongst community leaders, deepen the local understanding of risk/vulnerability, and refine the communication strategy for members of the community. Expand opportunity for grassroots participation in resilience and hazard mitigation.</u>	All Hazards	[Pending]	[Pending]		
NEW	<u>City: Continue regular bridge structural inspections in coordination with Los Angeles County Public Works and California Department of Transportation. If a bridge deficiency is found, identify a corrective plan of action and funding source (including grant funding).</u>	All Hazards	[Pending]	[Pending]		
NEW	<u>City: Pursue landfill remediation efforts at Culver City Park - Critical Facility #21 (former Hetzler Landfill, operated between 1959 – 1961) to prevent further differential settlement and groundwater intrusion, and reduce risk for future soil instability. Implement recommendations as outlined in the Geotechnical Design Report, including overexcavation to 3.5 feet below the proposed final grade, construction of a geogrid-reinforced raft, and placement of general soil fill to form the new surface. Seek grant funding sources, as appropriate.</u>	Multiple Hazards: Flood; Seismic Hazards; Severe Weather	[Pending]	[Pending]		
NEW	<u>City/CCUSD: Explore opportunities to expand emergency supply storage and capacity across the jurisdiction, and seek funding sources as appropriate.</u>	All Hazards	[Pending]	[Pending]		
NEW	<u>City: Explore funding opportunities to convert and equip trailers into a mobile command units, allowing local police and fire departments greater flexibility in monitoring emergency situations in progress.</u>	All Hazards	[Pending]	[Pending]		
NEW	<u>City: Explore funding opportunities for mobile generators to support mobile command units and other facilities involved in emergency response, allowing local police and fire departments greater flexibility in monitoring emergency situations in progress.</u>	All Hazards	[Pending]	[Pending]		
NEW	<u>City: Explore funding opportunities to purchase battery systems for City traffic signals without backup power.</u>	All Hazards	[Pending]	[Pending]		
NEW	<u>City: Encourage residents to sign up for emergency warning systems through their preferred notification approach. Promote emergency warning system sign-up with underserved or vulnerable populations, who may not be aware of existing notification programs or may require additional coordination/support during evacuation scenarios.</u>	Multiple Hazards All Hazards	[Pending]	[Pending]		
NEW	<u>City: Continue to update and maintain City evacuation plans and maps, in accordance with updated state and federal regulations. Identify roadways in high wildfire hazard risk with insufficient evacuation or emergency vehicle access, in accordance with AB 747 and SB 99. Document findings in a technical Evacuation Study. Identify and prioritize roadway capital improvement projects to enhance access, and seek grant funding opportunities as appropriate.</u>	Multiple Hazards: Dam/Reservoir Failure; Flood; Seismic Hazards; Wildfire	[Pending]	[Pending]		
NEW	<u>City: Continue participating in the Clean Power Alliance (CPA) in coordination with Southern California Edison (SCE). Support CPA climate change mitigation actions in making the energy supply more resilient and sustainable.</u>	All Hazards	[Pending]	[Pending]		
NEW	<u>City: Implement Concept Plans from the Culver City Stormwater Quality Master Plan (prepared 2021) to capture and manage stormwater in the Ballona Creek Watershed. Prioritize capital improvements based on criteria outlined in the Stormwater Quality Master Plan as funding sources become available. Pursue grant funding for capital improvements, as appropriate.</u>	Multiple Hazards (Flood, Drought, Wildfire)	[Pending]	[Pending]		
23	<u>City: Work in coordination with potable water utilities the West Basin Municipal Water District to implement increased water conservation strategies that maximize the use of existing water resources.</u>	Drought	[Pending]	[Pending]	Medium	2018/ Ongoing
24	<u>City: Identify and pursue alternative water sources to supplement imported West Basin Municipal Water District deliveries from the Metropolitan Water District in the event of regional drought conditions, including expanding groundwater recharge and making recycled water available in Culver City.</u>	Drought	[Pending]	[Pending]	Medium	2024
25	<u>City: Explore constructing additional water storage facilities and additional emergency connections to supplement water supplies during drought conditions or short-term shortages.</u>	Drought	[Pending]	[Pending]	Medium	2024

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#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline
26	City and CCUSD: Develop and implement long-term strategies to reduce community water use, including mandatory use of drought-tolerant plants and water efficient irrigation in new/ or-replacement landscapes, and requirements to install water fixtures in new buildings that exceed minimum code requirements.	Drought	<u>[Pending]</u>	<u>[Pending]</u>	Medium	2018/ Ongoing
27	City: Coordinate with local water purveyors the West Basin Municipal Water District to inform the public of water conservation restrictions and drought conditions. Join public outreach efforts regarding drought and water conservation. Develop communication methods targeted to underserved communities or vulnerable populations, who may be uniquely impacted by water surcharged or other drought-related fee increases.	Drought	<u>[Pending]</u>	<u>[Pending]</u>	Medium	2017/ Ongoing
28	City and CCUSD: Hold water saving workshops, drought-tolerant courses, and smart gardening classes, and educate community residents and businesses about available rebates for water-efficient and water-conserving equipment. CCUSD will support these City-lead workshops by notifying parents/students of the events and encouraging their attendance.	Drought	<u>[Pending]</u>	<u>[Pending]</u>	Low	2017/ Ongoing
30	City and CCUSD: Incorporate drought-tolerant landscaping and materials at City park and recreation facilities and CCUSD properties where feasible. Plant drought tolerant/climate adapted landscape at City-owned property or City-maintained easements. Replace/renovate landscape irrigation systems with water efficient devices such as drip irrigation.	Drought	<u>[Pending]</u>	<u>[Pending]</u>	Medium	2021
31	City: Continue to seek funding and provide rebate opportunities for residents and businesses to incorporate drought-tolerant landscaping.	Drought	<u>[Pending]</u>	<u>[Pending]</u>	Medium	2018/ Ongoing
32	City and CCUSD: Add compost and mulch to landscaped areas as feasible to reduce water evaporation.	Drought	<u>[Pending]</u>	<u>[Pending]</u>	Medium	2021
33	City: Coordinate with water purveyors to ensure accurate land use and growth information is incorporated into projected water supply analyses as part of Urban Water Management Plan updates.	Drought	<u>[Pending]</u>	<u>[Pending]</u>	Medium	2019
34	City: Partner with local water purveyors organizations to offer low-cost or free water audits to residents and businesses.	Drought	<u>[Pending]</u>	<u>[Pending]</u>	Low	2018
NEW	City: Proactively monitor drought conditions and water conservation warnings issued by State agencies or local water purveyors.	Drought	<u>[Pending]</u>	<u>[Pending]</u>		
37	City: Require new development in the liquefaction vulnerability zone to conduct liquefaction vulnerability studies and conduct liquefaction mitigation activities as needed.	Seismic Hazards (Liquefaction)	<u>[Pending]</u>	<u>[Pending]</u>	High	2017
38	City: Require new development in landslide-prone areas to include landslide resiliency features to minimize the risk of damage.	Seismic Hazards (Landslide)	<u>[Pending]</u>	<u>[Pending]</u>	High	2017
40	City and CCUSD: Ensure that all tall furniture in City and school property is <u>securely anchored securely fastened to the wall</u> to reduce damage during an earthquake. When purchasing furniture or reconfiguring rooms in City/CCUSD buildings, consider the potential impacts to seismic vulnerability.	Seismic Hazards	<u>[Pending]</u>	<u>[Pending]</u>	High/Medium	2017/ Ongoing
41	City and CCUSD: Continue to conduct earthquake safety outreach, including hosting Hold seismic preparation workshops to educate community residents and businesses about securing property and to reducing damage during an earthquake. Consider advertising events coordination of the events to be advertised through the City and CCUSD and held at their facilities. Continue to engage the public through disaster fairs, drills and other programming.	Seismic Hazards	<u>[Pending]</u>	<u>[Pending]</u>	Medium	2017/ Ongoing
NEW	City: Conduct a city-wide liquefaction, landslide, and slope failure vulnerability assessment. Use findings to determine future mitigation actions, or potential integration into the existing Seismic Retrofit Ordinance.	Seismic Hazards	<u>[Pending]</u>	<u>[Pending]</u>		
NEW	City: Continue the implementation of the implementation of to implement the Seismic Retrofit Ordinance. Consider modeling a seismic retrofit grant program after the City of Berkeley HMGP-funded program and seek FEMA grant funding as appropriate.	Seismic Hazards	<u>[Pending]</u>	<u>[Pending]</u>		
NEW	City: Continue to follow and implement the Alquist Priolo Earthquake Fault Zone regulations, to mitigate the risk of surface fault rupture.	Seismic Hazards	<u>[Pending]</u>	<u>[Pending]</u>		
NEW	City: Maintain the City Debris Management Plan as an active and up-to-date resource, for use in post-disaster planning and actions. Continue to contract with debris removal and project management teams to ensure availability for debris clean-up post seismic disasters.	Seismic Hazards	<u>[Pending]</u>	<u>[Pending]</u>		
NEW	City and CCUSD: Annually inspect critical facilities to identify structural deficiencies or seismic concerns. If vulnerabilities or deficiencies are identified, document a retrofit plan, schedule, and funding source.	Seismic Hazards	<u>[Pending]</u>	<u>[Pending]</u>		
NEW	City and CCUSD: Continue monitoring changes/updates to building codes and seismic regulations to determine if critical facilities require seismic retrofits as structures age.	Seismic Hazards	<u>[Pending]</u>	<u>[Pending]</u>		
NEW	City: Investigate opportunities for seismic retrofits at City pump stations, including flexible pipeline.	Seismic Hazards	<u>[Pending]</u>	<u>[Pending]</u>		
42	City: Continue to evaluate the effectiveness of City-owned drain systems and carry out improvements as needed. Monitor City-owned drainage infrastructure during rain events, and take emergency action as necessary to avoid or minimize flooding.	Flood	<u>[Pending]</u>	<u>[Pending]</u>	Medium	Ongoing
43	City: Encourage property owners to improve drainage on their properties through low-impact development features, particularly property owners in and adjacent to flood hazard areas.	Flood	<u>[Pending]</u>	<u>[Pending]</u>	Medium	Ongoing 2017
45	City: Maintain an adequate supply of sandbags and other low-cost flood control measures to protect City facilities and to meet public demand.	Flood	<u>[Pending]</u>	<u>[Pending]</u>	High/Medium	2017/ Ongoing
46	City: Continue to retrofit public spaces, including sidewalks and parking lots, to include permeable paving and other low-impact development features as funding sources become available.	Flood	<u>[Pending]</u>	<u>[Pending]</u>	Medium	2020
47	City: Continue to participate in the National Flood Insurance Program, including regular building code updates to reflect changes required by FEMA.	Flood	<u>[Pending]</u>	<u>[Pending]</u>	Medium	Ongoing

Culver City & Culver City Unified School District – Multi-Jurisdictional Hazard Mitigation Plan Update

DRAFT MITIGATION ACTIONS – DO NOT DISTRIBUTE

#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline
48	CCUSD: Continue to identify and upgrade deficient drainage systems on school property, as funding sources become available. Use low-impact development features to supplement drainage features as appropriate.	Flood	[Pending]	[Pending]	Medium	2020
NEW	City: Implement Concept Plans from the Mitigation Action Plan (Blue Ocean, prepared May 2022) at key Critical Facilities known to be susceptible to flooding. Prioritize capital improvements based on criteria outlined within the Mitigation Action Plan as funding sources become available. Pursue grant funding for capital improvements, as appropriate.	Flood	[Pending]	[Pending]		
NEW	City: Coordinate with the Los Angeles Department of Water and Power to identify the cause of localized flooding around Sawtelle Boulevard and McDonald Street (adjacent to Ballona Creek). Identify a plan of corrective action, and seek funding sources as appropriate.	Flood	[Pending]	[Pending]		
49	City and CCUSD: Design future critical infrastructure to withstand wind events beyond minimum building code standards.	Severe Weather	[Pending]	[Pending]	Low	2024
50	City: Continue to work with Southern California Edison and the Los Angeles Department of Water and Power to relocate above-ground power lines and associated infrastructure underground in order to reduce damage from fallen power lines during severe weather events.	Severe Weather	[Pending]	[Pending]	Low	Ongoing
51	City and CCUSD: Continue to coordinate with Southern California Edison and the Los Angeles Department of Water and Power to implement an ongoing tree trimming program for trees located in close proximity to overhead power lines.	Severe Weather	[Pending]	[Pending]	Medium	Ongoing
52	City and CCUSD: Monitor trees, limbs, and other vegetation near power lines, and promptly inform Southern California Edison and the Los Angeles Department of Water and Power of the need for any tree trimming.	Severe Weather	[Pending]	[Pending]	Medium	Ongoing
53	City: Continue to coordinate with the National Weather Service Decision Support program to be advised of upcoming weather conditions in a manner that enables smart decisions and disaster preparedness.	Severe Weather	[Pending]	[Pending]	High/Medium	Ongoing
55	City: Monitor slope stability in landslide-prone areas, and issue evacuation notices if slopes appear unstable.	Severe Weather	[Pending]	[Pending]	Medium	Ongoing
NEW	City: Continue to proactively monitor and track projected storms where heavy rains may occur. Stage response equipment and materials in areas at risk of flooding, debris flow, or other associated secondary hazards.	Severe Weather	[Pending]	[Pending]		
NEW	City/CCUSD: Educate citizens (particularly vulnerable populations) regarding the dangers of extreme heat, and proactive steps to stay safe when extreme heat events occur. Continue to publicize the locations of cooling centers in the community. Explore opportunities to further support vulnerable populations and underserved communities during extreme heat.	Severe Weather	[Pending]	[Pending]		
57	City: Adopt and enforce the most up-to-date California Building Code and California Fire Code, with local amendments as appropriate.	Wildfire	[Pending]	[Pending]	Medium	Ongoing 2019
58	City: Continue to maintain cooperative fire protection and fire prevention mutual aid agreements with relevant agencies.	Wildfire	[Pending]	[Pending]	Medium	Ongoing
59	City: Continue to support the Culver City Fire Department, California State Fire Marshal, and other relevant agencies to promote the implementation and awareness of fire prevention programs.	Wildfire	[Pending]	[Pending]	Medium	2017-Ongoing
NEW	City: Establish a standardized vegetation management and clearing program, focused on open space areas within the City. Consider alternative vegetation management clearing opportunities, such as grazing goats. Explore grant funding to establish and implement the vegetation management program.	Wildfire	[Pending]	[Pending]		
NEW	City: Communicate findings of the Evacuation Study to impacted residents in the Blair Hills and Culver Crest neighborhoods. Ensure ongoing awareness education regarding wildfire risk, safety, and preparedness actions.	Wildfire	[Pending]	[Pending]		
NEW	City: Continue coordination and communication with the Marcrest Manor (as a residential nursing home for vulnerable populations) regarding wildfire risk, evacuation procedures and general emergency preparation/preparedness.	Wildfire	[Pending]	[Pending]		
NEW	City: Continue to define the Blair Hills neighborhood as a local Very High Fire Hazard Severity Zone, as reflected in the Culver City General Plan Update.	Wildfire	[Pending]	[Pending]		
NEW	City: Evaluate early wildfire detection systems technology for implementation in Culver City. Evaluate wildfire detection systems by cost, installation considerations, required maintenance, and general feasibility. Identify grant funding opportunities to install and operate.	Wildfire	[Pending]	[Pending]		
NEW	City: Establish a comprehensive defensible space zone and fire breaks within Culver City and a regular monitoring schedule.	Wildfire	[Pending]	[Pending]		
NEW	City: Continue wildfire awareness campaigns before and during wildfire season. Develop communication methods and approaches that include underserved or vulnerable populations, who may be uniquely impacted by wildfire risk.	Wildfire	[Pending]	[Pending]		
NEW	City: Communicate dam inundation risk to the community, with a focus on emergency preparedness. To ensure the whole community is engaged, develop communication methods and approaches for underserved communities or vulnerable populations, who may require specific or concentrated outreach to achieve maximum engagement.	Dam/Reservoir Failure	[Pending]	[Pending]		
NEW	City: Continue to participate in emergency preparedness exercises with the Los Angeles Department of Water and Power for Mulholland, Lower Franklin, Stone Canyon, and Silver Lake Dams.	Dam/Reservoir Failure	[Pending]	[Pending]		
NEW	City/CCUSD: Coordinate with Culver City Police and Fire departments, along with Los Angeles County Sheriff and Fire Departments, to enhance communication and intelligence for political/social incidents that could result in civil disturbance or unrest.	Human Caused Hazards – Civil Disturbance	[Pending]	[Pending]		
NEW	City: Continue to educate the public regarding proper handling, storage, and disposal of hazardous materials.	Human Caused Hazards – Hazardous Materials	[Pending]	[Pending]		
NEW	City: Continue to communicate with the Los Angeles County Department of Public Health to follow the most recent guidance to address the COVID-19 pandemic.	Human Caused Hazards - Pandemic	[Pending]	[Pending]		
NEW	City: Prepare, adopt, and implement a Cybersecurity Plan in coordination with a consultant. Use the plan preparation process to identify specific vulnerabilities and actionable items that mitigate risk.	Human Caused Hazards – Terrorism/Cyber Attack	[Pending]	[Pending]		

Culver City & Culver City Unified School District – Multi-Jurisdictional Hazard Mitigation Plan Update

DRAFT MITIGATION ACTIONS – DO NOT DISTRIBUTE

#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline
NEW	City: <u>Encourage the reduction of greenhouse gas emissions by promoting targets outlined in Senate Bill 1383, including reducing disposal of organic waste in landfills and compost.</u>	Climate Change	<i>[Pending]</i>	<i>[Pending]</i>		
NEW	City/CCUSD: <u>Continue to conduct regular active shooter drills at the City and CCUSD schools, to ensure public safety officials and employees are properly prepared and trained.</u>	Human-Caused Hazards - Terrorism	<i>[Pending]</i>	<i>[Pending]</i>		

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OLD MITIGATION ACTIONS – Recommend to Eliminate (Refer to Notes, Below)

#	Mitigation Action	Hazard(s) Assessed	Responsible Department	Funding Sources	Priority	Timeline	NOTES
44	City: Update the Stormwater Master Plan to address drainage and flood control.	Flood	Public Works	General Fund; grant opportunities for hazard mitigation	Medium	2021	DONE. This was completed in 2021. Recommend updated mitigation action to identify key implementation actions. Ask Sean Singletary to respond.
35	City: Conduct an inventory of seismically vulnerable private buildings, including unreinforced masonry and soft first-story structures, and prioritize retrofits for more vulnerable structures and lower income housing. Identify potential funding sources to assist with seismic retrofits.	Seismic Hazards	Public Works; Community Development	General Fund; development fees; grant opportunities for disaster preparedness, resiliency, seismic hazard mitigation, etc.	Medium	2020	DONE. Seismic survey was conducted in 2018/2019, and the Seismic Retrofit Ordinance was adopted in September 2021. Recommend marking mitigation action as done.
36	City: Explore creating an ordinance requiring seismically vulnerable structures to conduct earthquake resistant retrofitting over a phased period and/or when major renovation occurs.	Seismic Hazards	Community Development; City Attorney	General Fund	Low	2020	DONE. Seismic Retrofit Ordinance was adopted in September 2021. Recommend marking mitigation action as done.
60	City: Identify inadequate access roadways. Develop a program to address inadequacies by altering the roadway design if possible.	Wildfire	Public Works; Community Development; Fire; Transportation	General Fund FEMA: Hazard Mitigation Grant Program (HMGP); Building Resilient Infrastructure and Communities (BRIC) , CalFire: Wildfire Prevention Grants Program .	Medium	2023; Ongoing2021	Recommend elimination of this action, in favor of new action more specifically referencing AB 747/SB 99.
4	City: Develop and maintain an evacuation plan for the City to effectively distribute evacuation notices, and to ensure that evacuating traffic flows smoothly.	Multiple Hazards	Fire; Police; Public Works; Transportation	General Fund	Medium	2017	DONE. The City has evacuation plans in place.
6	City and CCUSD: Continue to incorporate hazards in the Plan into agency emergency planning and programs.	Multiple Hazards	Fire; Public Works; Community Development; Police; CCUSD	General Fund	Medium	Ongoing	Recommend elimination – this type of mitigation action is vague, and there are more specific actions in the MJHMP that achieve the same goal/intent as this action. No longer relevant.
9	City and CCUSD: Continue to conduct assessments of agency buildings, facilities, and infrastructure to identify vulnerabilities. Secure funding to retrofit vulnerable structures such as soft story and masonry buildings constructed prior to 1976. Encourage adjacent jurisdictions to conduct assessments of buildings, facilities, and infrastructure located adjacent to or serving the City.	Multiple Hazards	Public Works; Community Development; CCUSD	General Fund; Capital Improvements Plan; grant opportunities for disaster preparedness, resiliency, seismic hazard mitigation, etc.	High	Ongoing	DONE. This was completed in 2021, assessment of vulnerable soft story properties is available through the City's Seismic Retrofit Program. New mitigation action will focus on the implementation of the program.
15	City: Continue to partner with the Southern California Hospital and West Los Angeles College to understand their capabilities and opportunities to partner in hazard mitigation activities.	Multiple Hazards	Public Works	General Fund	Medium	2017/ Ongoing	Recommend elimination – broad mitigation action to establish future mitigation actions. We used the stakeholder process to learn about the hospital and college, so we can identify more specific actions in the matrix.
16	City: Work with regional utility companies and service agencies, including electricity and natural gas providers, telecommunication providers, and transit agencies, to ensure that services remain fully active as much as safely possible during emergency events and that full service is fully restored as quickly as possible following an emergency.	Multiple Hazards	Public Works; Community Development; Fire; Police; Transportation	General Fund	High	2018/ Ongoing	Recommend elimination – this action is focused more on emergency planning over hazard mitigation. Replace with a utility specific action for future project partnerships.
29	City: Consider implementing additional mandatory restrictions on water use during drought conditions.	Drought	Public Works; Community Development	General Fund	Low	Ongoing	Recommend elimination – in the case of a drought declaration, the City would not be responsible for issuing restrictions on water. Water purveyors would communicate use restriction, and the City would be responsible for supporting in message dissemination.
39	City: Establish a zoning overlay for the Alquist-Priolo hazard zone, and create and enforce development standards for new construction activities in this hazard zone to improve the resiliency of new structures to seismic hazards.	Seismic Hazards	Planning and Community Development Services	Development fees; General Fund	Medium	2017	Recommend elimination – a separate zoning overlay is not required to implement the Alquist-Priolo hazard zone. Added a new mitigation action to reflect ongoing efforts of regulatory implementation more accurately.

DRAFT MITIGATION ACTIONS – DO NOT DISTRIBUTE

56	City: As part of regular emergency preparedness education, continue to notify community members of current or future El Niño conditions, the anticipated impacts, and appropriate ways to prepare.	Severe Weather	Fire; Community Development; Public Works; Police	General Fund	Medium	Ongoing	Recommend elimination – El Nino years are understood to increase the likelihood of a rainy year, California has experienced many rainy years outside of the El Nino cycle (for example, winter 2022-23 was anticipated to be a dry winter due to prevailing La Nina conditions). Replaced with general action to monitor track projected storms.
54	City and CCUSD: Continue to regularly monitor El Niño Southern Oscillation (ENSO) conditions, and incorporate forecasted conditions into short-term emergency planning.	Severe Weather	Fire; Public Works; Police; CCUSD	General Fund	Medium	Ongoing	

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Culver City & Culver City Unified School District
Multi-Jurisdictional Hazard Mitigation Plan
Meeting #4
July 13, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present
Joe Susca	Sr. Management Analyst	Culver City Public Works	9770 Culver Blvd. Culver City, CA 90232	Joe.susca@culvercity.org	310-253-5636	✓
Mike Korgan	MOT Director	Culver City Unified School District	4034 Irving Place Culver City, CA 90232	mikekorgan@ccusd.org	310-842-4220	✓
Noelle Anderson (née Steele)	Project Manager	Michael Baker International	5 Hutton Centre Drive, Suite 500 Santa Ana, CA 92707	Noelle.Anderson@mbakerintl.com	(949) 855-3683	✓
Michael Yaffe	Resilience Lead	Michael Baker International	5 Hutton Centre Drive, Suite 500 Santa Ana, CA 92707	Michael.yaffe@mbakerintl.com	(949) 472-3483	
Casey Marchese	Project Planner	Michael Baker International	5 Hutton Centre Drive, Suite 500 Santa Ana, CA 92707	Casey.Marchese@mbakerintl.com	(949) 472-3494	✓
Adam Ferguson	Sr. Management Analyst	Culver City-Parks & Recreation	4175 Overland Ave. Culver City, CA 90230	adam.ferguson@culvercity.org	310-253-6685	✓
Jason Sims	Interim Police Chief	Culver City-Police Department	4040 Duquesne Ave. Culver City, CA 90230	Jason.sims@culvercity.org	310-253-6208	
Lisa Soghor	Chief Financial Officer	Culver City-Finance	97700 Duquesne Ave. Culver City, CA 90230	Lisa.soghor@culvercity.org	310-253-6016	
Tim Koutsouros	Building Official	Culver City-Building Safety	9770 Culver Blvd. Culver City, CA 90232	Tim.koutsouros@culvercity.org	310-253-5802	✓
Hoa Diep	IT Manager	Culver City Information Technology	9770 Culver Blvd. Culver City, CA 90232	Hoa.diep@culvercity.org	310-253-6266	✓

Culver City & Culver City Unified School District
Multi-Jurisdictional Hazard Mitigation Plan
Meeting #4
July 13, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present
Hector Calvinisti	Safety & Training Coord.	Culver City Transportation	4343 Duquesne Ave. Culver City, CA	hector.calvinisti@culvercity.org	310-253-6572	
Tevis Barnes	Director	Culver City Housing and Human Services	9770 Culver Blvd. Culver City, CA 90232	Tevis.barnes@culvercity.org	310-253-5782	
Lisa Vidra	Assistant City Attorney	Culver City - City Attorney	9770 Culver Blvd. Culver City, CA 90232	Lisa.vidra@culvercity.org	310-253-5673	
Troy Evangelho	Advanced Planning Manager	Culver City-Advanced Planning	9770 Culver Blvd. Culver City, CA 90232	troy.evangelho@culvercity.org	310-253-5744	
Sean Singletary	Environmental Programs & Operations Manager	Culver City-Public Works	9505 Jefferson Blvd. Culver City, CA 90232	Sean.singletary@culvercity.org	310-253-6457	
Yanni Demitri	Public Works Director/City Engineer	Culver City Public Works	9770 Culver Blvd. Culver City, CA 90232	Yanni.demitri@culvercity.org	310-253-5630	✓
Christine Parra	Emergency Prep. Coordinator	Culver City Fire Department	9770 Culver Blvd. Culver City, CA 90232	Christine.parra@culvercity.org	310-253-5909	
Sean Kearney	Director of Fiscal Services	Culver City Unified School District	4034 Irving Place Culver City, CA 90232	seankearney@ccusd.org	310-842-4220 ext. 4234	
Steven Torrence	Emergency Services Coordinator	City of Santa Monica	333 Olympic Blvd. Santa Monica, CA 90401	steven.torrence@santamonica.gov	(310) 458-8686	

Culver City & Culver City Unified School District
Multi-Jurisdictional Hazard Mitigation Plan
Meeting #4
July 13, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present
Kristin Cavanaugh	Director of Studio Relations	Sony Pictures Entertainment	10202 Washington Blvd. Culver City, CA 90232	kristin_cavanaugh@spe.sony.com	(310) 244-5368	
Savanna Fiehler	Disaster Program Manager	American Red Cross	1450 11 th St. Santa Monica, Ca 90405	Savanna.Fiehler@Redcross.org	(213) 266-1003	
Margarita Kustanovich	Emergency Management Coordinator	West Hollywood	8300 Santa Monica Blvd., West Hollywood, CA 90069-6216	mkustanovich@weho.org	(310) 657-4009	
Meena Janmohamed	Emergency Management Manager	Beverly Hills	455 N. Rexford Drive Beverly Hills, CA 90210	mjanmohamed@beverlyhills.org	(310) 285-1021	
Ms. Jillian De Vela	Emergency Management Coordinator	City of Los Angeles	201 N Figueroa St, Los Angeles, CA 90012	jillian.de.vela@lacity.org		✓
Gymeka Williams	Emergency Management Coordinator	County of Los Angeles OEM	1275 N. Eastern Avenue, Los Angeles, CA 90063	sGWilliams@ceo.lacounty.gov		✓
Diane Forte	Government Relations Manager	Southern California Edison	1721 22nd Street Santa Monica CA 90404	diane.forte@sce.com	(310) 310-5262	
Sylvia Diaz		Southern California Gas	9240 East firestone Blvd. Downey, CA 90241	sdiaz@semprautilities.com	(562) 803-7484	
Fredy Ceja	Legislative Representative	Los Angeles Department of Water and Power	1394 S. Sepulveda Boulevard Los Angeles, CA 90025	Fredy.Ceja@ladwp.com	(213)367-1051	✓

Culver City & Culver City Unified School District
Multi-Jurisdictional Hazard Mitigation Plan
Meeting #4
July 13, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present
Linda Cunningham	Capital Programs -- Project Coordinator, Culver City	Golden State Water	5839 Green Valley Circle #106, Culver City, CA 90232	LindaCunningham@gswater.com	(562) 522-8835	
Edward Caldwell	Government Affairs Program Manager	West Basin Municipal Water District	17140 S. Avalon Blvd., Suite 210 Carson, CA 90746	edwardc@westbasin.org	(310) 660-6286 office (213) 500-0379 cell	
Darrel Menthe	Executive Director	Downtown Business Association	PO Box 1322 Culver City, CA. 90232	darrel+downtownculvercity.com@ccsend.com	(310) 202-6060	
Sam Levitt	Facilities Manager	Amazon Studios	9336 Washington Blvd. Culver City, CA 90232	samlevi@amazon.com	(310) 202-1234	
Mark Jovel		Culver-Palms Family YMCA	4500 Sepulveda Blvd. Culver City, CA 90230	mariojovel@ymcala.org	(310) 390-3604	
Marie Aragon, MSN, BSN, RN	Chief Nursing Officer Regional Administrator	Southern California Hospital	3828 Delmas Terrace Culver City, CA 90232	MarieKathryna.Aragon@altacorp.com	310-991-9439	
Rick Blackburn	Emergency Services Advisor	SoCalGas	1801 S. Atlantic Blvd. Monterey Park, CA 91754	RBlackbu@socalgas.com	(626) 482-2217	✓
Timothy Dahlum	Pacific Division Information and Planning Lead Los Angeles Region Information and	American Red Cross	1450 S. Central Avenue Los Angeles, CA 90021	timothy.dahlum@redcross.org	310-780-5828	

Culver City & Culver City Unified School District
 Multi-Jurisdictional Hazard Mitigation Plan
 Meeting #4
 July 13, 2023

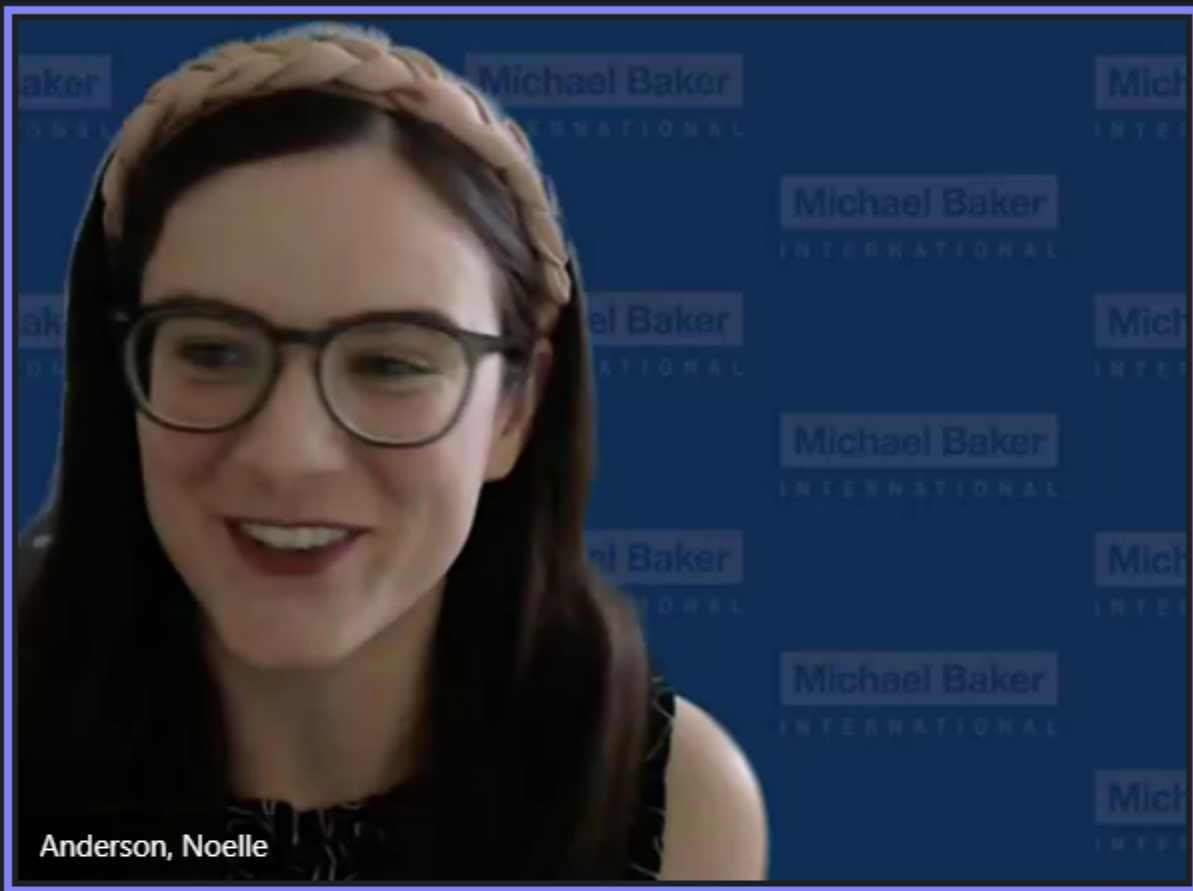
First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present
	Planning Regional Program Lead					
Brian Stokes, Ed.D.	Vice President, Administrative Services	West Los Angeles College	9000 Overland Avenue Culver City, CA 90230	Stokesb@wlaac.edu		
Brandon Vanscoy	Lieutenant	Culver City Police Dept.	4040 Duquesne Ave, Culver City, CA 90232	brandon.vanscoy@culvercity.org	(310) 253-6109	
Lauren Wrenn	Associate Planner	Culver City Advance Planning Division	9770 Culver Blvd. Culver City, CA 90232	Lauren.wrenn@culvercity.org	(310) 253-5766	
Terrance Washington	Emergency Services Coordinator	California Governor's Office of Emergency Services	601 Sequoia Pacific Blvd, Sacramento, CA 95811	Terrance.Washington@caloes.ca.gov	916-917-4540	
Edson Ramos	Crisis Management	Sony Pictures				
"Representative"		Culver City Disability Advisory Committee	9770 Culver Blvd, Culver City, California 90232	DisabilityAdvisoryCommittee@culvercity.org		
"Representative"		One Incredible Family – Homeless and At Risk Advocacy	P. O. Box 2837 Culver City, CA 90231-2837	oifhelpsla@aol.com	(310) 313-0123 EXT. 1	
"Representative"		St. Joseph Center – Homeless and Mental Health Services	204 Hampton Dr, Venice, CA 90291	community@stjosephctr.org	(310) 396-6468	

Culver City & Culver City Unified School District
 Multi-Jurisdictional Hazard Mitigation Plan
 Meeting #4
 July 13, 2023

First and Last Name	Title	Organization/Department	Mailing Address	E-Mail Address	Phone Number	Present
Jessica Miller		Share! – Housing, Self-Help, Mental Health Services	6666 Green Valley Circle Culver City CA, 90230	info@shareselfhelp.org	(310) 305-8878	
Ryan Thompson		Culver City Police Dept.	4040 Duquesne Ave, Culver City, CA 90232			✓
Alexandria Chwierut	Climate Adaptation and Resiliency Planning	Southern California Edison	1721 22nd Street Santa Monica CA 90404			✓

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Participant avatars and names:

- RB: Blackburn, Rick B (External)
- GW: Gymeka Williams (External)
- TK: Koutsouros, Tim
- AC: Alexandria Chwierut (External)
- YD: Demitri, Yanni
- AF: Adam Ferguson (Guest)

Participants

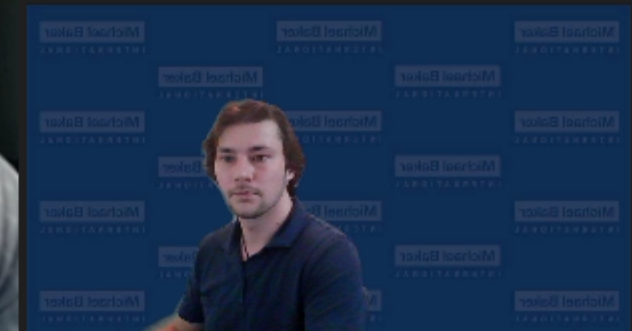
Type a name

[Share invite](#)

- AF Adam Ferguson (Guest) Meeting guest
- AC Alexandria Chwierut External
- Anderson, Noelle Organizer
- RB Blackburn, Rick B (External) External
- YD Demitri, Yanni External
- GW Gymeka Williams (External) External
- TK Koutsouros, Tim External
- MK Mike Korgan (Guest) Meeting guest
- RT Ryan Thompson (Guest) Meeting guest
- JS Susca, Joe (Guest)

Others invited (10)

- Yaffe, Michael No response



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AGENDA

- 1) Introduction
- 2) Community Outreach – Updates and Upcoming
 - Community Outreach Survey Link: <https://www.surveymonkey.com/r/PSRYHY6>
- 3) Risk Assessment/Vulnerability – Minor Updates from Meeting #3
- 4) Mitigation Strategy
 - Mitigation Goals – Summarize and Review
 - Mitigation Actions
 - Previous MJHMP Mitigation Actions (2017)
 - New MJHMP Mitigation Actions
 - Mitigation Prioritization & Timeframe
- 5) Next Steps
 - Complete Draft LHMP for Planning Team Review
 - Planning Team Review of LHMP
 - Revise LHMP for Public Review
 - Public Review
 - Cal OES/FEMA Submittal



RT 12

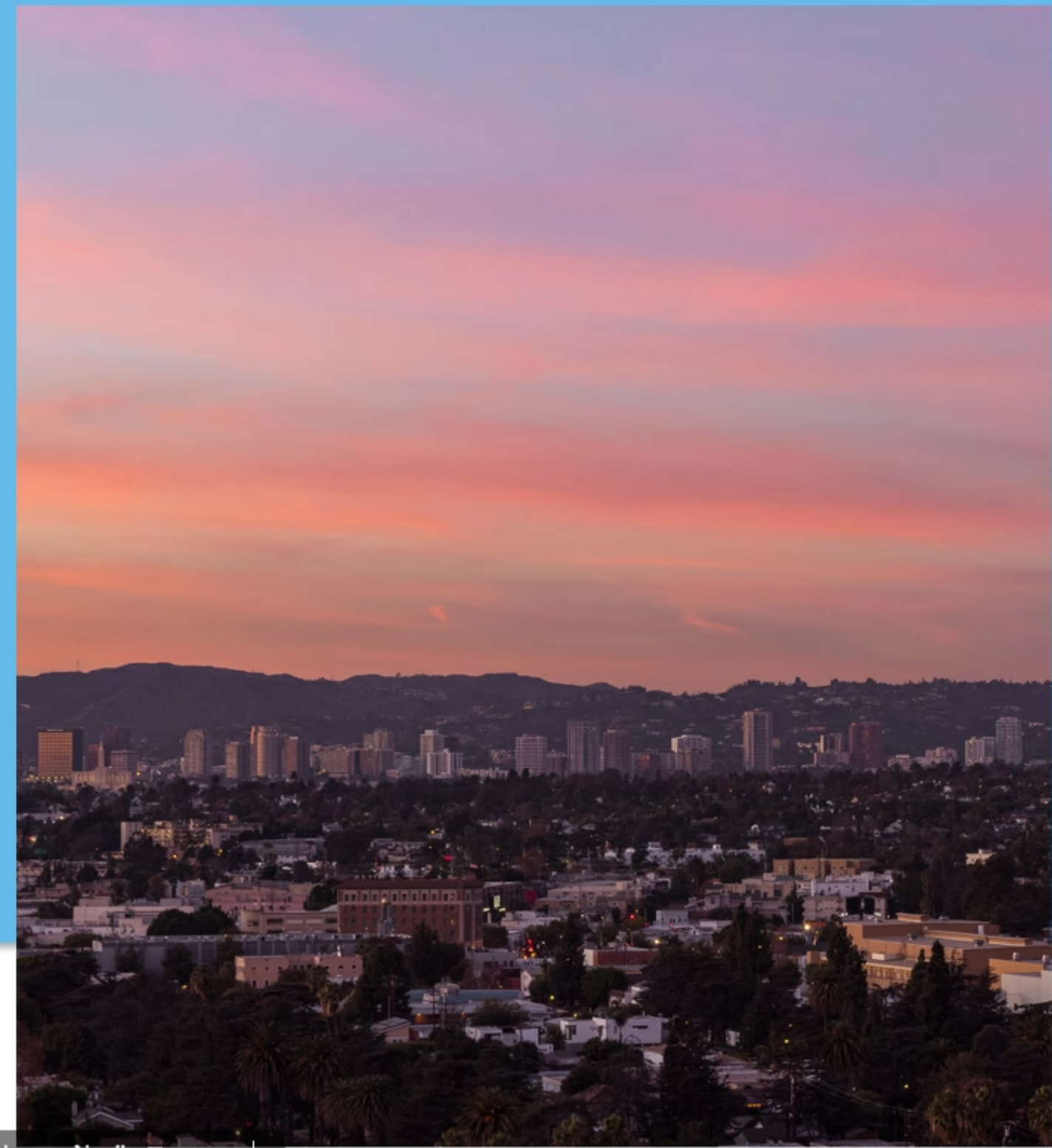
Ryan Thom... Participants



Anderson, Noelle

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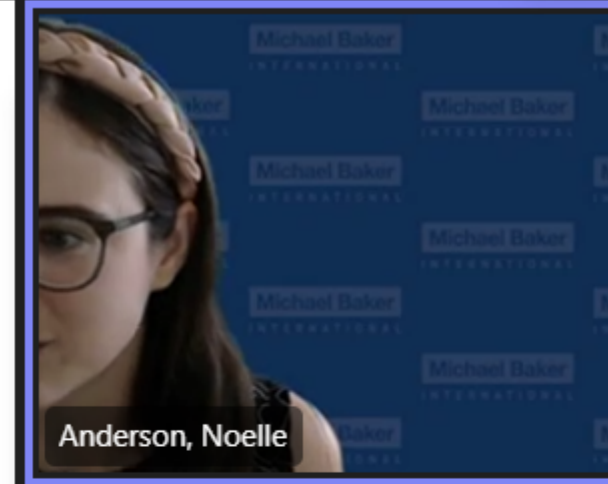
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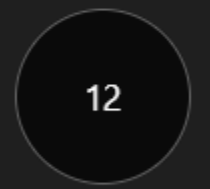
Multi-Jurisdictional Hazard Mitigation Plan Update

Stakeholder Meeting #4

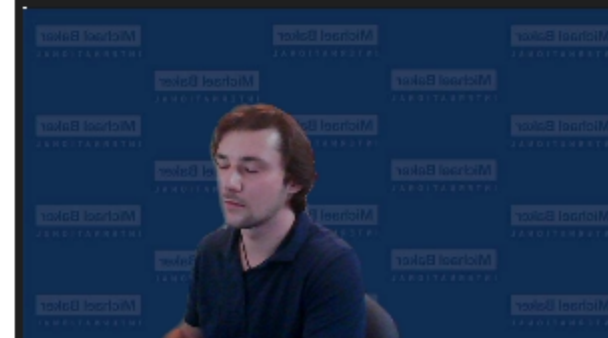
Culver City and
Culver City Unified School District



Ryan Thom...



Participants



Anderson, Noelle

Community Survey – Open Until Sept. 3rd

- Link here: <https://www.surveymonkey.com/r/PSRYHY6>
- Distribute amongst your colleagues and jurisdiction

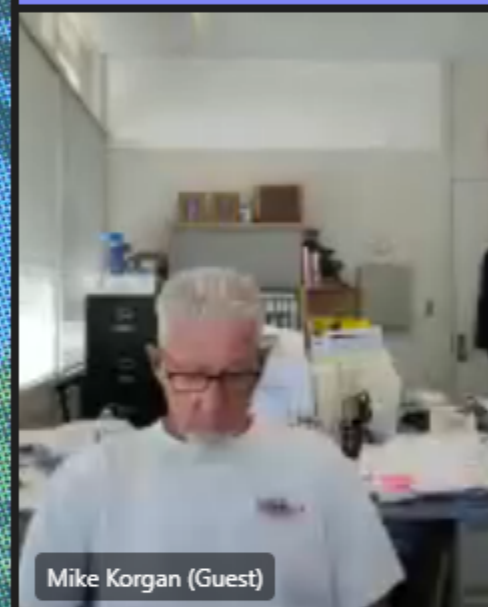
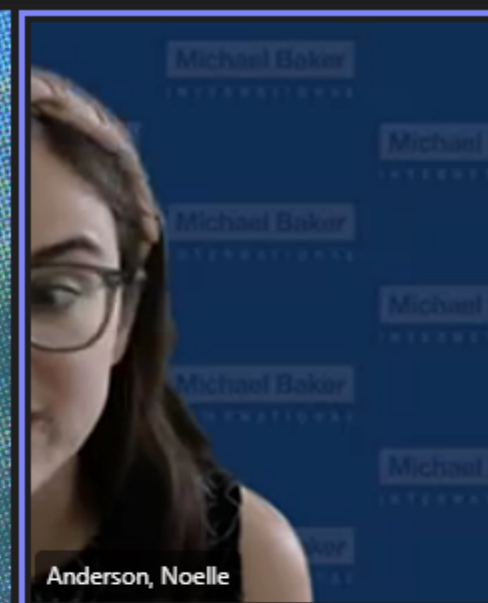


MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN UPDATE

Take our Survey!

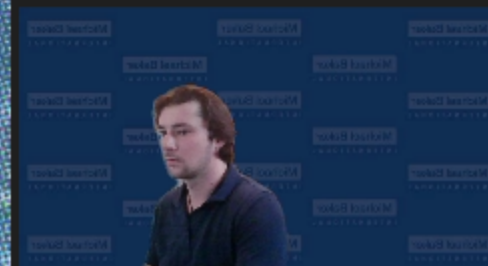
CITY OF CULVER CITY

CULVER CITY UNIFIED SCHOOL DISTRICT



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Ryan Thom... Participants

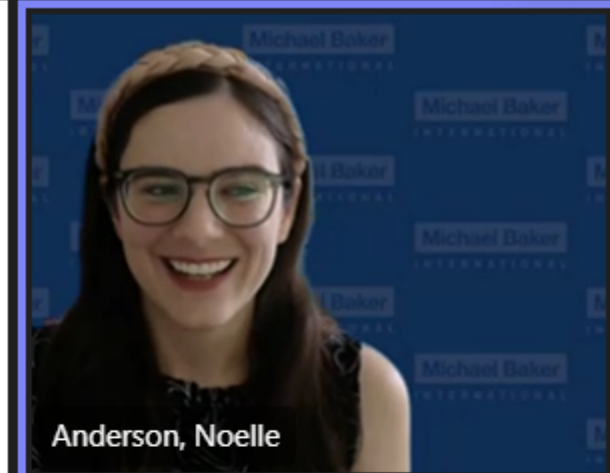


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Next Steps

- **MJHMP for Planning Team Review**
 - August 11 – August 18 (one week)
- **Revise MJHMP for Public Review**
- **Public Review**
 - August 25 – September 8
- **Anticipated Cal OES/FEMA Submittal**
 - September 15, 2023



RB 13

Blackburn, ... Participants

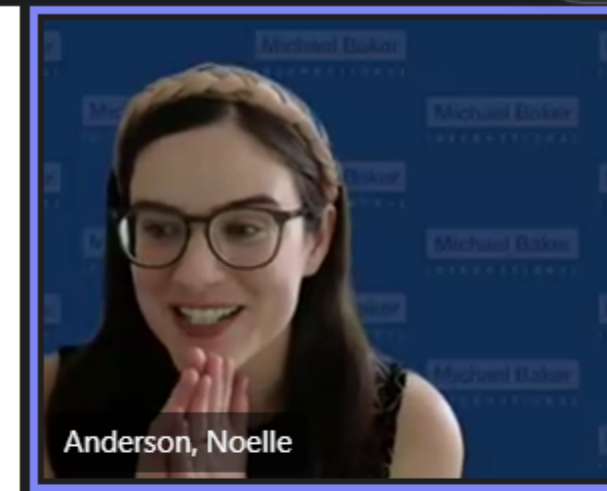


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Questions/Additional Discussion?

Thank you for Participating!

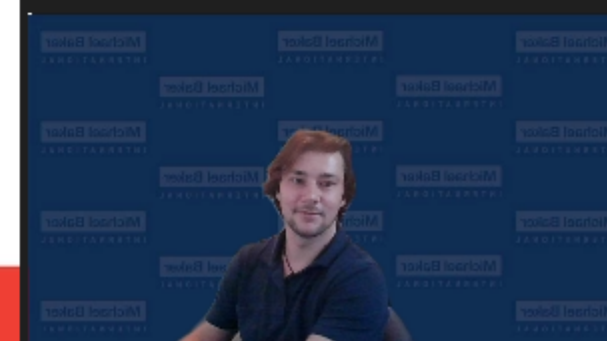


RB

Blackburn, ...

13

Participants



B.2

Community Outreach

B.2 - 1

Community Outreach Survey

CULVER CITY AND CCUSD MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN

Survey Summary September 7, 2023

As part of the outreach for the Multi-Jurisdictional Hazard Mitigation Plan (MJHMP), Culver City and the Culver City Unified School District (CCUSD) administered a survey to community members to help gauge the level of knowledge the community has about natural disaster issues and to obtain input about areas in Culver City that may be vulnerable to various types of natural disasters. The information gained from the survey will help the City and CCUSD identify and coordinate projects focused on reducing the risk of injury or damage to property from future hazard events (e.g., earthquakes, drought, wildfire).

The survey was available from July 6 to September 4, 2023 and received 99 responses. It included multiple choice questions with the opportunity to provide comments, and covered demographic information, types of disasters and threats the community might anticipate, how community members would respond, how governing agencies should respond, and community members' readiness in the event of a disaster. The results of the survey are summarized below. Detailed graphs for each question and raw data from the survey questions is located within [Appendix B](#).

Summary of Input

Key issues:

Approximately 93 percent of survey respondents live within Culver City, and approximately 26 percent of respondents work within Culver City. Earthquakes, power outages and pandemic were noted as the most common hazards that survey participants had previously experienced in Culver City. Respondents expressed highest levels of concern for earthquake, climate change, and drought as hazards with the greatest potential to impact Culver City. Hazards of lesser concern include dam/reservoir failure, tornado, and landslide/mudflow.

Preparedness:

In terms of preparedness, the majority of respondents indicated that they feel at least somewhat prepared for a natural hazard; less than 13 percent of respondents said they feel not at all prepared. Preparedness actions currently employed by community members primarily consist of smoke detectors, drought-tolerant landscaping, and anchored furniture.

Outreach:

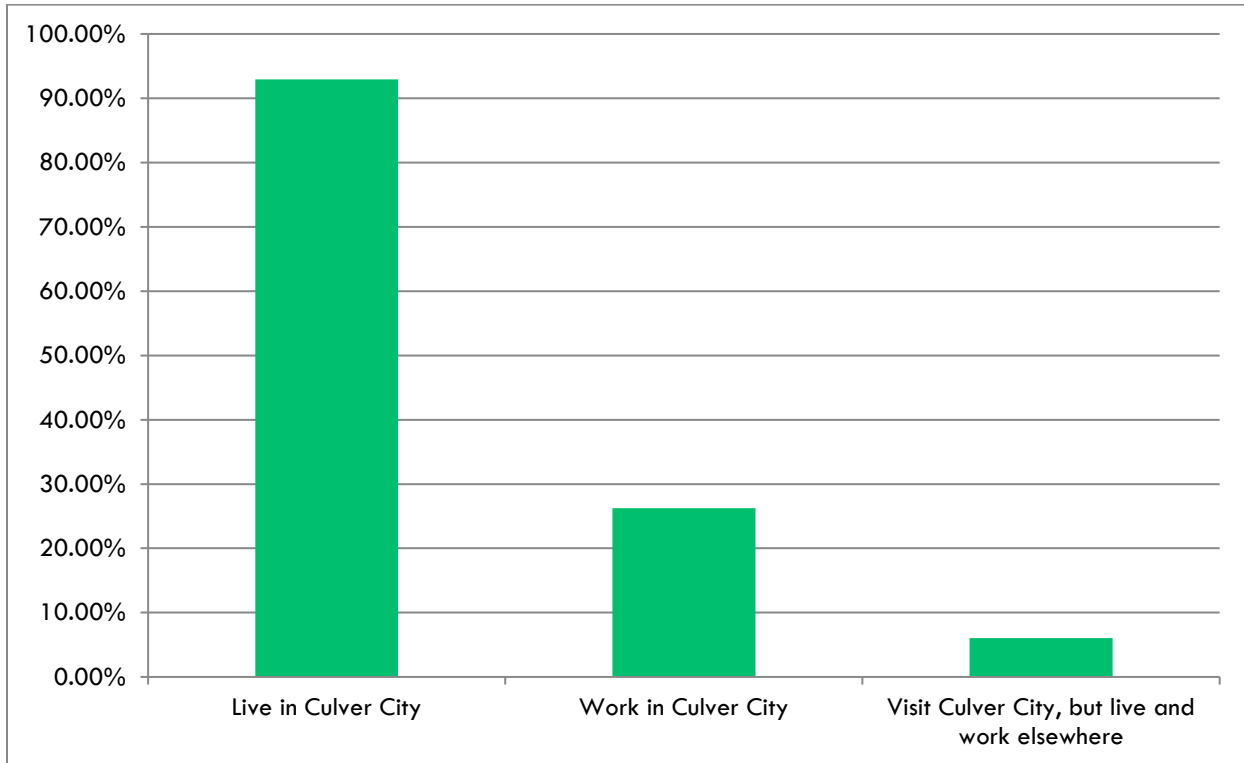
Responses to the most effective ways that respondents would like to receive information was fairly dispersed between the options provided, with Email being the most preferred option. The following are the eight most highly ranked options:

1. Email
2. Culver City/CCUSD website
3. Public meetings, workshops and/or classes
4. Public awareness campaigns
5. Culver City/CCUSD newsletters
6. Social media
7. Informational brochures
8. Direct mail

Appendix B: Survey Responses Raw Data

Question 1: Do you – Check all that apply

About 93 percent of respondents live in Culver City, and approximately 26 percent work within City. Only about 6 percent of respondents visit Culver City, but live and work elsewhere.



Question 2: What is your Zip Code?

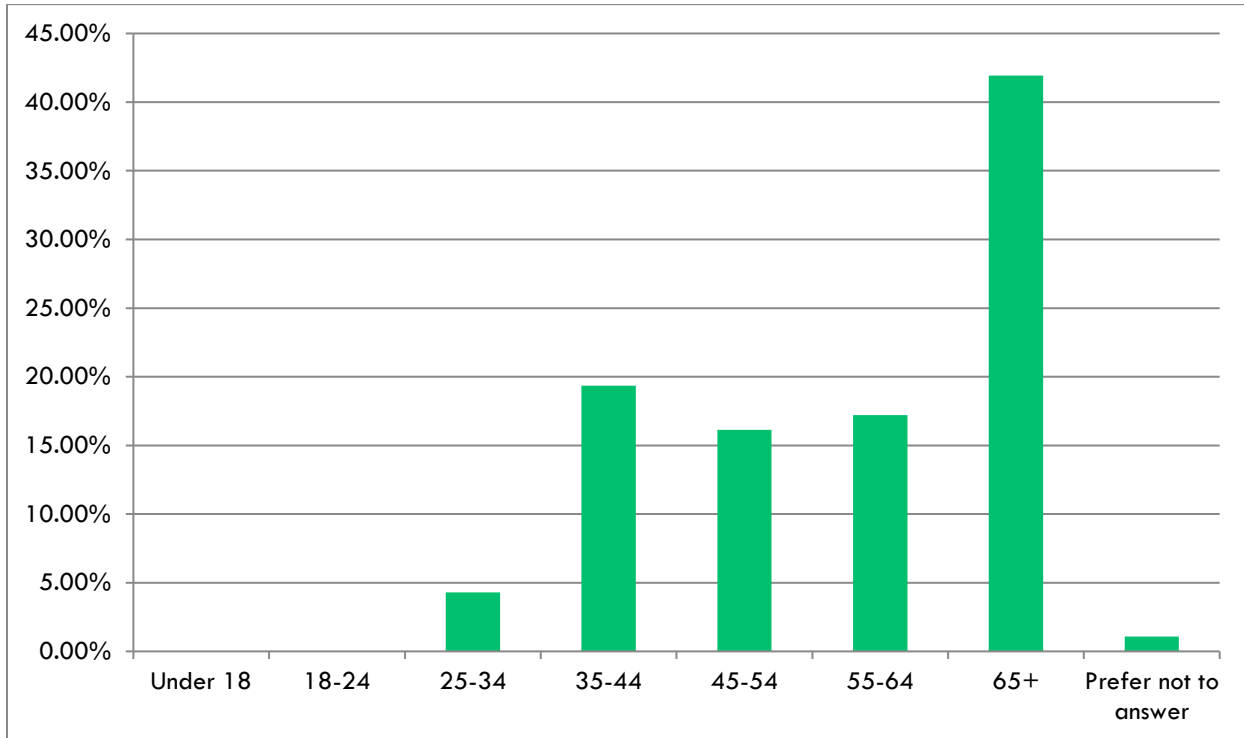
The majority of survey respondents live in the following Culver City zip codes: 90232 and 90230. Additional zip codes are listed in the table below.

Zip Code	Total Respondents
90232	42
90230	40
90066	7
90034	2
90011	1
90016	1
90036	1
90045	1
90291	1
93023	1

Appendix B: Survey Responses Summary

Question 3: What is your Age?

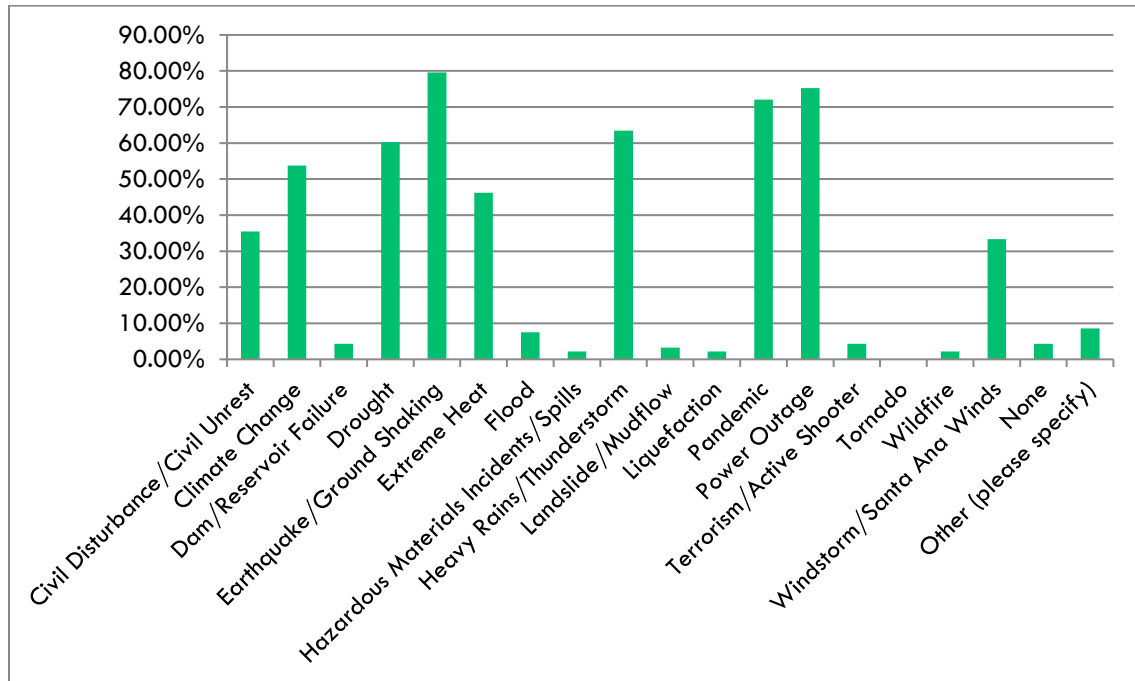
Over 40 percent of survey respondents were 65 years or older (41.94 percent). The majority of the remaining respondents were evenly distributed between the 35- to 64-year-old age groups. Zero respondents were under the age of 25.



Appendix B: Survey Responses Summary

Question 4: Which of the following types of natural disasters have you or someone in your household experienced while residing and/or working within Culver City?

Most survey respondents have experienced earthquakes (79.57 percent) and power outages (75.27 percent). A significant percentage of survey respondents have also experienced pandemic, heavy rains/thunderstorms, drought, climate change and extreme heat. No survey respondents reported having experienced a tornado. Violence and homelessness were common answer among respondents that specified hazards not included in this list; violence and homelessness was mentioned 3 times as a write-in response.



Additional Comments

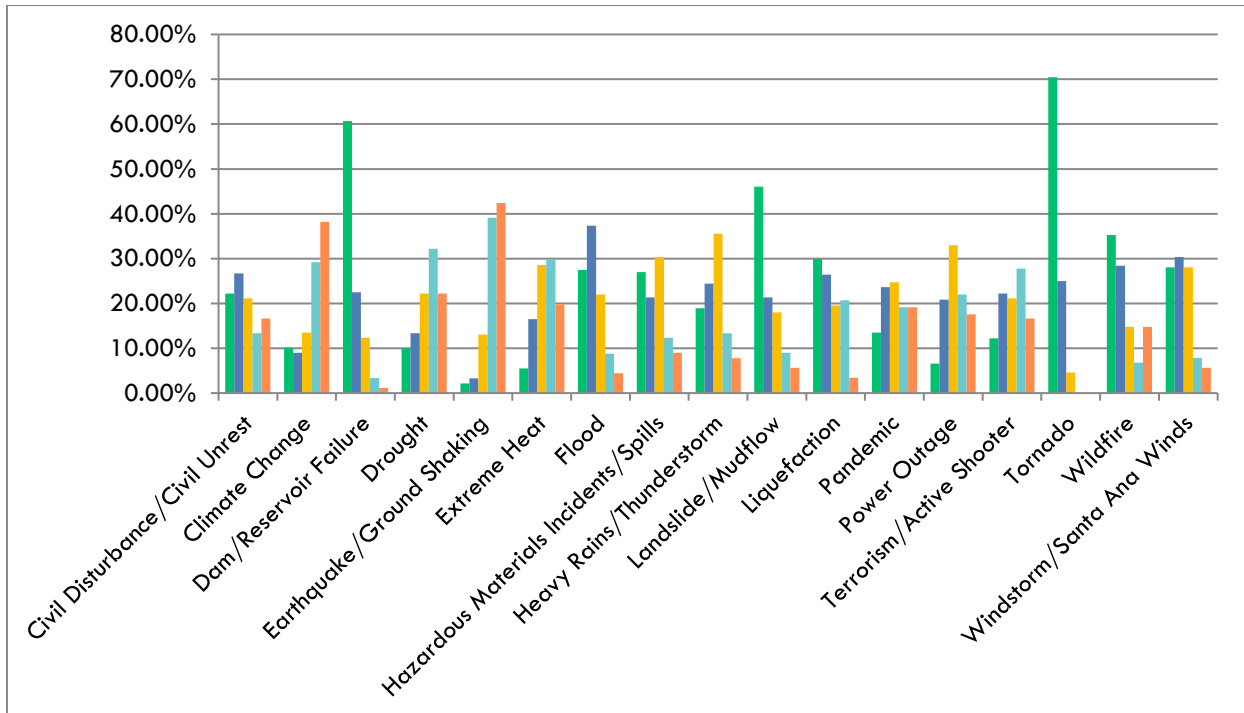
- Bad air from wildfire smoke
- Hail
- Homelessness*
- Neighbor fireworks for weeks
- Uneven streets and roadways due to TING fiber installation, potholes due to weather and city services repairing water and sewer lines.
- Violence*

**Repetitive comments were consolidated*

Appendix B: Survey Responses Summary

Question 5: The following hazards could potentially impact Culver City and may be addressed in the Hazard Mitigation Plan. Please indicate the level of concern you perceive for each hazard that may affect you and Culver City and CCUSD’s critical facilities and infrastructure. (Please check ONE response for each hazard)

Question 5 asks which hazards that could potentially impact Culver City are considered to be primary concerns for residents within the City. Earthquake/ground shaking was ranked as having the most concern (“Extremely Concerned”) for respondents. Hazards that are of least concern (“Not Concerned”) include tornado, dam/reservoir failure, and landslide/mudflow.



Additional Comments

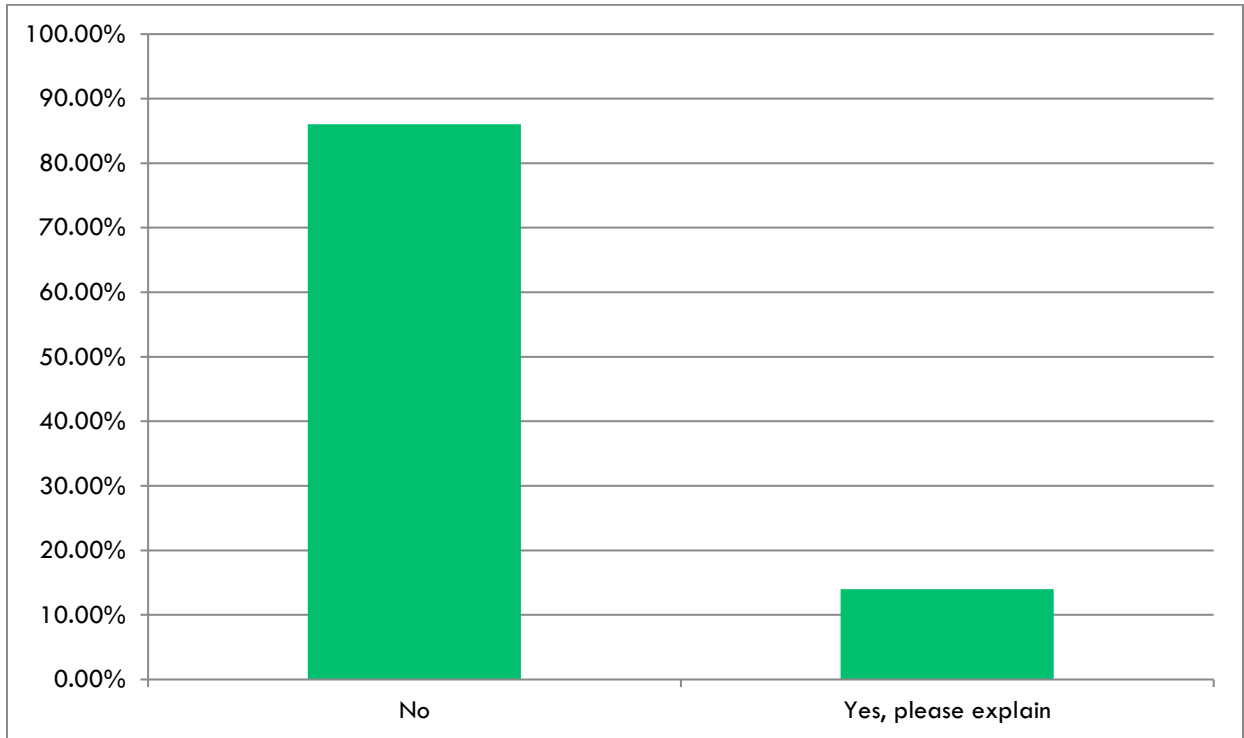
- Cyber event
- Homelessness*
- Low probability of tsunami but there's still a risk
- Over building residential units on R1 and R2 lots putting additional strain on city services and infrastructure (sewer, water, power).
- Very concerned about violent crimes

**Repetitive comments were consolidated*

Appendix B: Survey Responses Summary

Question 6: Do you have information on specific hazard issues or problem areas (localized flooding, power outages) that the planning committee should be aware of (please provide as much detail as possible, including location and type of hazard)?

The majority of respondents answered “No” to having information on specific hazard issues or problem areas.



Additional Comments

- 6000 PSI Oil/gas line below grade in the alley behind my house. Also, very large power transmission lines on poles directly over the pipe-line in the same alley.
- Area and house is on a landfill done at the turn of the century. Foundation problems occur and I cannot afford to fix.
- Back yard power lines and trees.
- I am on oxygen 24/7 so power outages are a concern. With COPD I am additionally concerned about a pandemic
- I was the Culver City CERT training manager up until the beginning of the pandemic.
- Law enforcement
- Living in West Lower Crest we are subject to wildfire and mudslides
- My neighbors and I had a major power outage in an apartment building at 10144 culver blvd. that wasn't resolved until the next morning. I suffer from a severe cardiac condition requiring medication throughout the day and night. I was using a flashlight to take my medications.

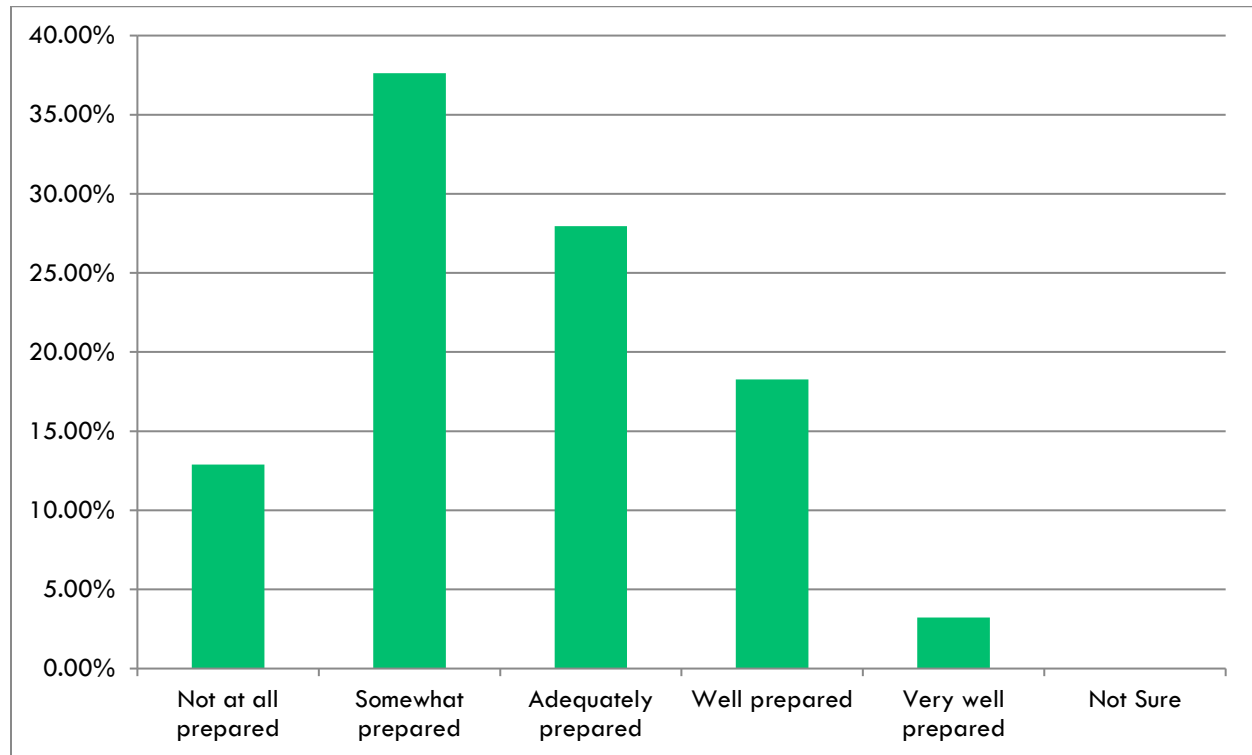
Appendix B: Survey Responses Summary

- Only what I've heard from CCFD during CCARES trainings (Culver City Amateur Radio Emergency Service). Mainly about liquefaction and flooding in the low areas in Culver City due to a major earthquake.
- Power outage. landslides
- Power Outages are common. There are buildings/land that should be optimized for Solar panels for City & Residential use in emergencies.
- South Central LA experience power outage
- There are many residential street intersections where when there is more than 3/4" of rain fall in a short period of time street corners, such as Vinton and Farragut, become flooded. City services try to keep up with clean out procedures however either there are not enough resources/manpower to sustain maximum efficiency for run off or its the condition of the streets themselves: slope, asphalt, potholes, etc.

Appendix B: Survey Responses Summary

Question 7: How prepared is your household for a natural hazard or disaster (for example, wildfire, flood, earthquake, extended power outage)?

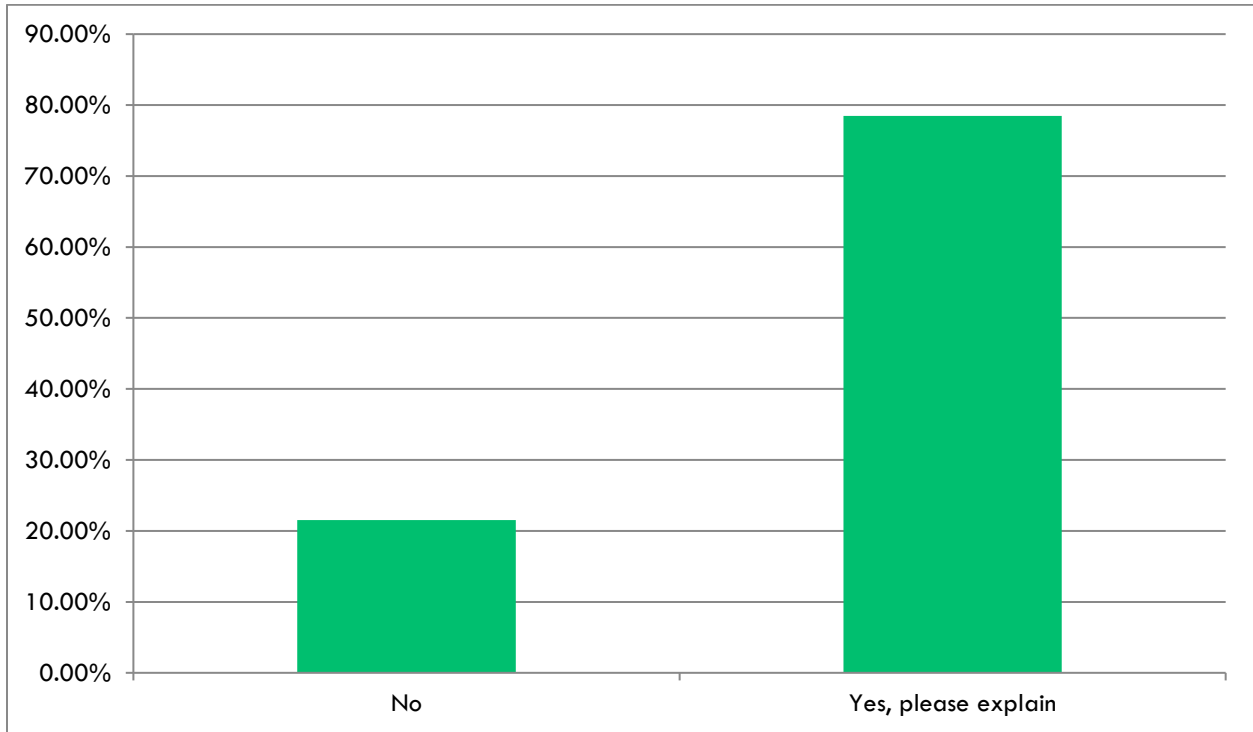
Only 3.23 percent of survey respondents stated that they felt “Very well prepared” to deal with a natural hazard event likely to occur in Culver City and/or the surrounding area. Approximately 13 percent of respondent stated that they felt “Not at all prepared”, and the majority of respondents stated that they felt “Somewhat prepared” to “Well prepared”.



Appendix B: Survey Responses Summary

Question 8: Have you taken actions to make your home, business, or neighborhood more resistant to hazards (such as anchored furniture and service utilities, installed smoke detectors, regularly trim trees, fire smart landscaping, install drought tolerant landscaping, etc.)?

A majority of respondents indicated that they had taken actions to make their home, business, or neighborhood more resistant to hazards.



Additional Comments

- All of the above*
- Anchored furniture*
- Food, water, and/or supplies*
- Basic prep
- Bolted my house
- Common sense measures
- Drought tolerant landscaping*
- Earthquake barrel and solar devices, camping equipment
- Earthquake kit, plans for evacuation, out of state contacts, cpr/and classes
- Fire smart landscaping*
- Foundation bolting for earthquake preparedness
- Go bag
- I live in a condo that has smoke detectors and the city trims trees regularly
- I live in a gated community and HOA is responsible for the safety of the tenants on the exterior.
- I live in a condo and they don't have drought resistant landscaping

Appendix B: Survey Responses Summary

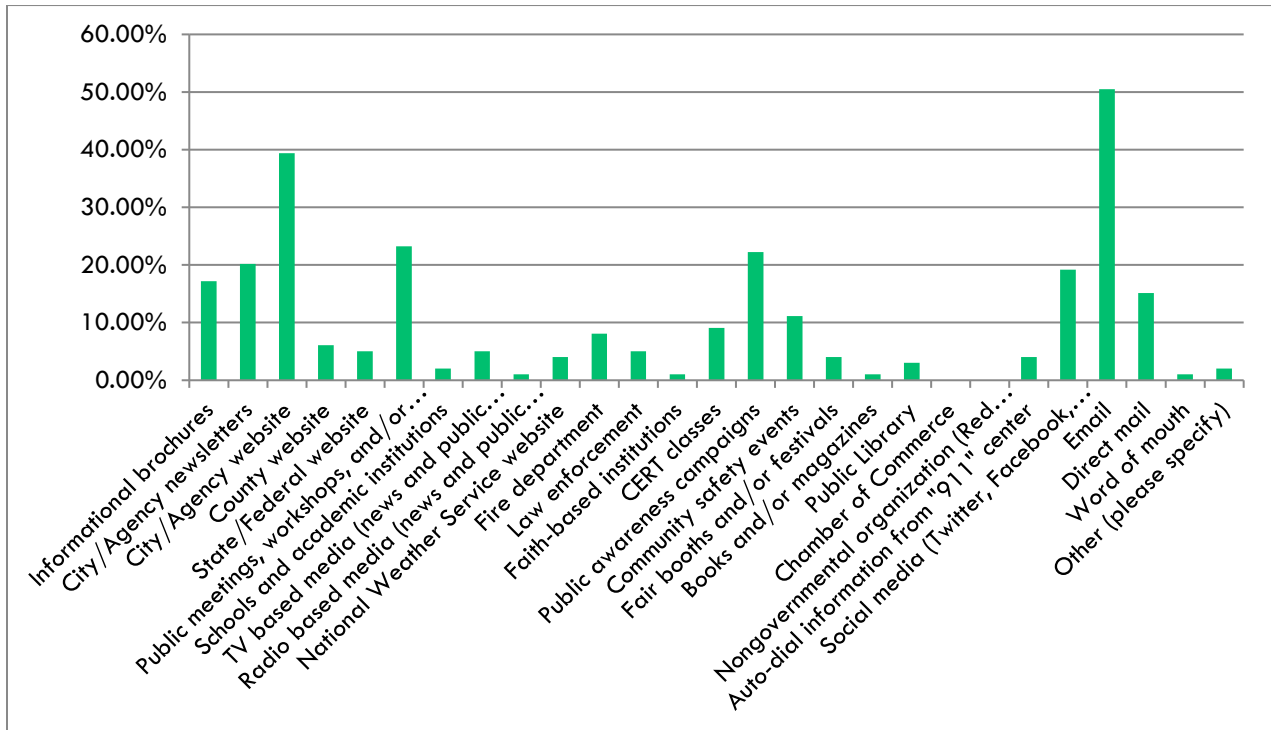
- I recently replaced and reinforced and added roof vents to a white composite roof. All book cases and display cases are tethered to the walls. 3 working smoke, Co2 detectors. I have 2 rain barrels. I have removed almost all my landscaping with the exception of 3 small trees I planted on the side of my house and I water them with the condensation from my portable A/C. We have an earthquake automatic gas cutoff. Water heater is strapped. I keep a fire axe next to my front door just incase a forced exit is an issue. Then again I have a working X Los Angeles City Fire Truck in my driveway so I am ready if needed.
- In our recent remodel we have done faux grass and mostly succulents for landscaping. We have smoke detectors and sprinklers on our home for fire.
- Install CO2 and smoke detectors*
- Maintain property, sump pumps/drains, installed solar with battery back-up. secured water heater, anchored HVAC compressors, eliminated use of sprinkles, increased drought tolerant plantings and shrubs, eliminated all use of grass, store hazardous materials such as paint, thinners, oils properly. Replace smoke detector batteries twice a year in every room, added fire alert monitoring to third party alarm system/monitoring. Have fire extinguishers for electrical, wood and grease fires. Have in place earthquake shut off valves at main gas line into home. Maintain water and food emergency supplies for up to two weeks.
- smoke detectors; CERT training leading to small adjustments indoors re earthquakes; about to start drought tolerant landscaping
- The house has been retrofitted for earthquakes. Large furniture pieces are secured. Our property is in the Blair Hills and we keep everything maintained to avoid brush fire. We have smoke and carbon monoxide detectors that are up to date and functioning. We have an earthquake kit. We have 5 fire extinguishers around the house. We are looking at plans to remove our grass and replace with non-vegetative landscaping, but have not done that yet. We have worked with professionals to make our home more energy efficient to reduce use of utilities.
- Took cert classes, have an earthquake kit, have food and water supplies, have a go backpack, I know how to turn off gas
- When we purchased our 1938 home in 2018, we had it retrofitted for earthquakes. We installed solar panels in 2022. All of our furniture is anchored for earthquakes. We have stickers on our windows to let the fire department know that we have pets that need rescuing, in case of emergency. We use wired smoke detectors that are up to code. We bring in professionals to do annual tree trimming. We have emergency water barrels and food supplies in storage. We have purposefully let our front lawn die. We look forward to installing drought tolerant landscaping as soon as we can afford to. I am CPR certified. I have been planning on getting CERT certified as soon as possible!

**Repetitive comments were consolidated*

Appendix B: Survey Responses Summary

Question 9: Choose the top 3 ways you prefer to receive information about how to make your home and neighborhood more resistant to hazards?

Over 50 percent of respondents listed email as one of their top three ways to receive information on making their homes safe. Other popular methods of communication include City/agency website, public meetings and public awareness campaigns.

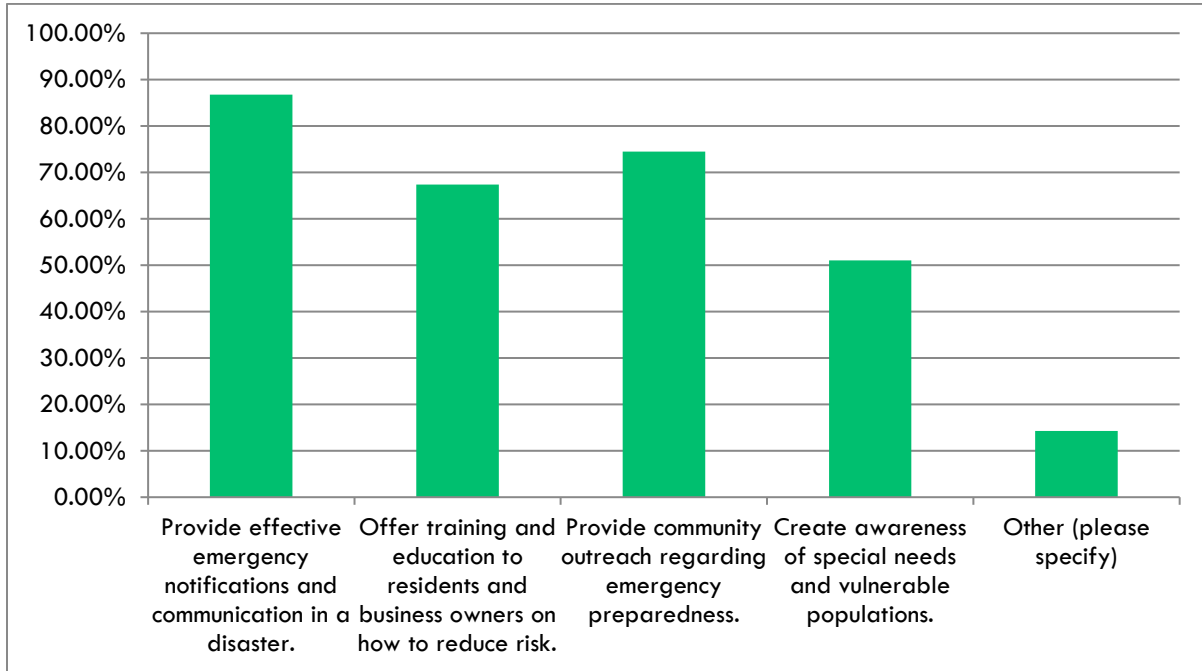


Additional Comments

- Would appreciate text alerts from local police and fire departments.
- Text

Question 10: How can Culver City help you become better prepared for a disaster? Choose all that apply.

Almost 87 percent of respondents indicated that providing emergency notifications in a disaster would be the best way for Culver City and its partners to prepare residents for a natural disaster.



Additional Comments¹

- A better partnership between the City and CCARES and CERT.
- Do not over-estimate risk of disaster to make everyone panic
- Ensure all communication is bi lingual and reaches vulnerable populations
- Increase police force
- Increase spending & dump bike lane spending
- Make sure vulnerable populations are checked for violence
- Need to repeat this info often!
- Not create problems by making it impossible to get out using main thoroughfares due to these hurdles to traffic that we have all over our city.
- Provide emergency kits
- Provide links to resources that assist or provide opportunities for better preparedness and readiness.
- Provide safety plans and protocols
- snail mail
- The best outreach is always when teams show up at local parks!

¹ Comments unrelated to the survey topic were not included in this summary, but can be viewed in [Appendix B](#).

Question 11: Please utilize the space below to provide any additional comments or insight into how local natural or human-caused hazards or disasters should be mitigated.

Comments received on Question 11 are provided in their entirety, below:²

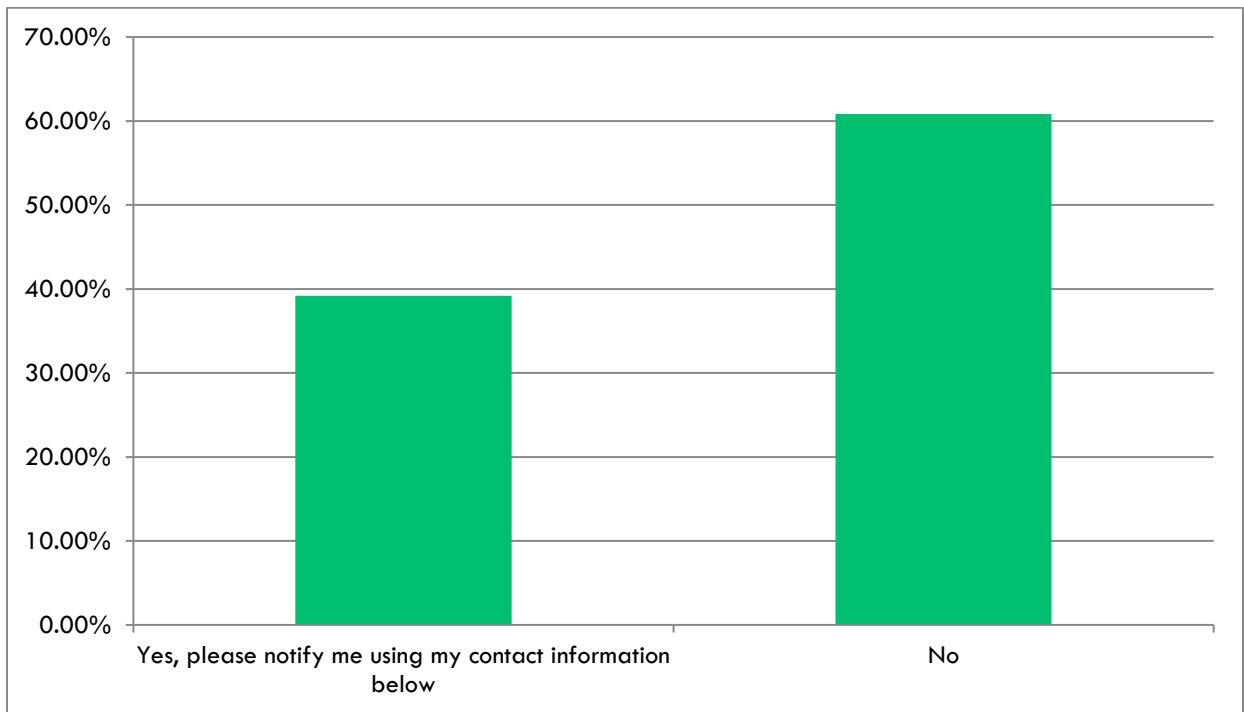
- A quarter of all fires after a major earthquake is due to gas leak. All buildings should either be no gas, or have automatic shutoff.
- As more EV make up travel on our city streets, it is important that the electrical grid be resilient. Also important that we have a well funded and staffed public safety workforce (police and Fire).
- Because we live as renters and not landlords on this planet, there is no way to completely remove or prepare for all possible incidents but luck does favor the prepared and the better informed we and our neighbors are, the more likely we could survive a massive incident.
- Brush clearing, do not relax water conservation just b/c it rained this year, GET RID OF GUNS, more mental health outreach and resources
- Cut back dead brush at the Baldwin Hills Overlook State Park. Fix sidewalks which are lifted by tree roots.
- Does "human-caused hazards" include the homeless camp on Virginia?
- Don't know
- Don't allow homeless encampments!
- Education, communication and regular drills
- Encourage and support CERT and Culver City Amateur Radio Emergency Services (CCARES), to encourage membership and recruitment.
- Everyone- ride more bikes, use transit now. and put a ban on fossil fuel extraction and make it illegal to use single use plastic.
- Facebook page
- Facilitate upgrades to power grid. Budget for burying power lines underground over time.
- Fire department! Volunteers.
- Focus on needy or low income ppl as they r the least prepared and do not have time and means to prepare
- Have police regularly patrolling the city for trouble makers. During the 4th of July, bored neighborhood kids were sticking light fire crackers into plastic bottles and running a few feet away to shoot video of the explosion to place on social media.
- Help homeless people who live in the Ballona Creek. They use the creek as a bathroom and are mentally ill and use drugs. They come to Kroenthal Park and use the bathrooms to bath. They are very dirty and there is a nursery school there. They need to be rounded up and helped. I cannot walk around the park without everyday without seeing them and am afraid because I am a senior citizen. There are not park police and the park person is very weak and will not help.
- Homeless encampments seem to create hazards such as fires, physical abuse, theft and should be a priority in protection of law abiding citizens and overuse of fire and police resources.
- I can't speak to the science about disaster mitigation but it would help if the City and CCUSD would learn more about CCARES and CERT. People are more likely to function better during emergencies if they are knowledgeable and prepared.

² Comments unrelated to the survey topic were not included in this summary, but can be viewed in [Appendix B](#).

Appendix B: Survey Responses Summary

- I have complete confidence in CCFD and CCPD handling of any emergency situation that arises. Having owned my home in CC for near 45 years, I have experienced a great deal of scary situations and both agencies have responded up and beyond expectations.
- I just want to say that the recent "sandbag" effort for the storm was an embarrassment. Putting out a pile of sand and a single shovel does nothing for the elderly and disabled. It's the absolute bare minimum of "support." Also saying that every household should only take 10 bags is meaningless if no one is there to enforce it. I was there around 6 p.m. on Aug. 19 and two men had backed their truck right up to the pile and took at least 50 bags worth of sand. The community deserves better than the bare minimum.
- Increase law enforcement. Do not permit camping at our parks, residential or shopping areas. Create programs to move homeless to appropriate zones where they can safely cook clean themselves if they want and use bathroom facilities. Provide social programs to treat chronic drug use and poverty.
- Is there a plan for communication if and when internet and cell service goes down??
- Is there adequate preparedness about staying in place in the event of a major earthquake?
- Make sure underground oil pipelines are receiving oversight from federal or state agencies
- Mitigate climate change by installation of solar panels over all large parking lots and on all big-box buildings. Prepare the local population by restarting and expanding the CERT training program.
- Motor vehicle accidents are exceedingly common. Many drivers speed on Bentley Ave (between Venice and Washington) to bypass the traffic on Sepulveda Blvd. There need to be stop signs and speed bumps placed. This street also does not have any street lights or sidewalks which make the street dangerous at night for pedestrians and enables trespassers (of which we've experienced plenty at our residence). I've previously submitted similar concerns to the city website and never received any responses.
- Neighborhood meetings would also be helpful... use of block captains or other contact
- Please consider relocate the homeless camp. Current location is too close to our schools! We see kids walking with parents/by themselves all the time on overland.
- Please keep us safe
- Provide information on the city piping and our house faucets fixtures
- Rain capture, keep overflow drains at roadsides clear of debris before rainy season to decrease risk of flooding. Crack down on illegal fireworks.
- Reduce traffic and transit, more bus lanes, do our part to reduce climate change
- Seems like all avenues were covered
- Thank you for taking this seriously.
- Thanks
- The City needs to require solar panels for all new builds, cover concrete in greenery & no more dark streets & roofs. Take advantage of new technology & resources to improve our 5 square miles that will have benefits beyond our 5 sq miles. The hills in CC needs to be monitored with rains, The goats should come for more areas. Think what the City can do that would benefit everyone without negatively impacting certain groups of citizens.
- Yes we disabled will need help but not necessarily will receive any extra.

Question 12: Would you like to review and comment on the draft of the Multi-Jurisdictional Hazard Mitigation Plan Update?



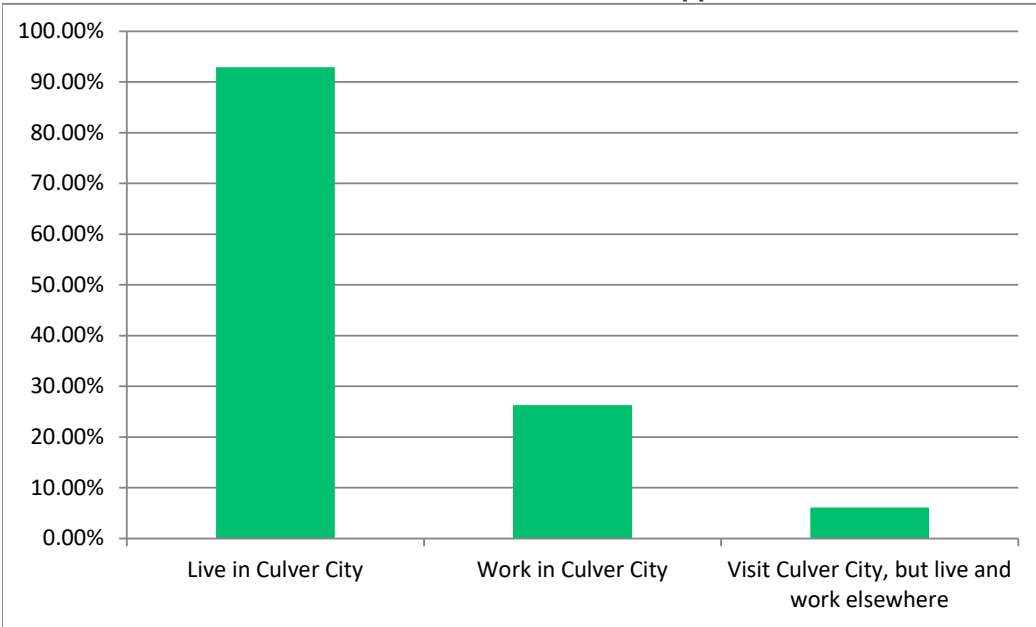
Question 13: If you would like to be notified of future opportunities to participate in hazard mitigation and resiliency planning, please provide your name and contact info

*Names and contact information of responses are included under a separate cover.

Culver City & CCUSD Multi-Jurisdictional Hazard Mitigation Plan Community Survey

Do you: (check all that apply)

Answer Choices	Responses	
Live in Culver City	92.93%	92
Work in Culver City	26.26%	26
Visit Culver City, but live and work elsewhere	6.06%	6
	Answered	99
	Skipped	0



Culver City & CCUSD Multi-Jurisdictional Hazard Mitigation Plan Community Survey

What is your home zip code?

Answered **97**

Skipped **2**

90232 42

90230 40

90066 7

90034 2

90011 1

90016 1

90036 1

90045 1

90291 1

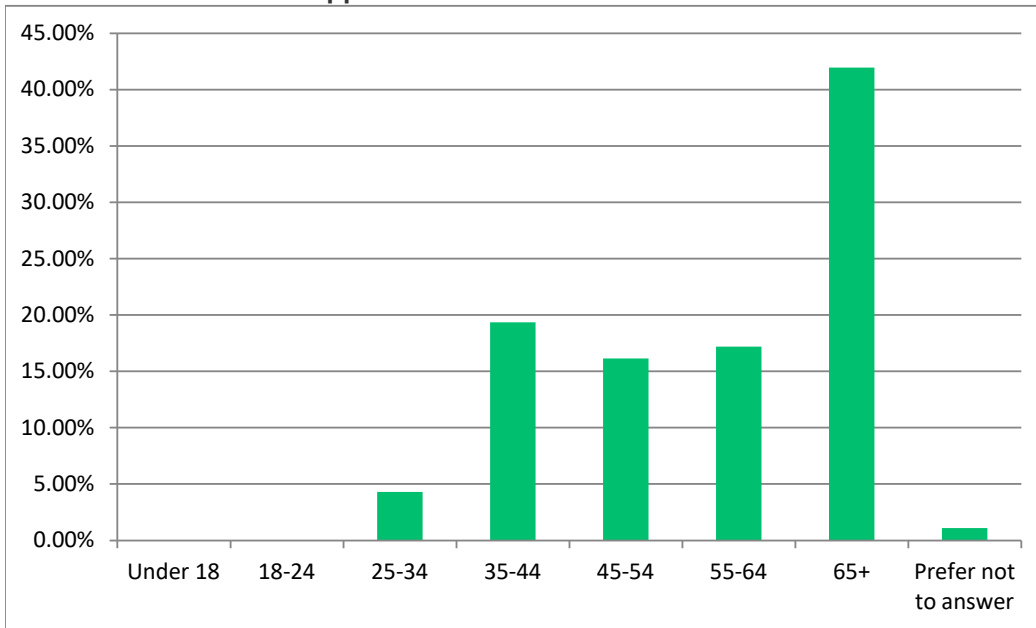
93023 1

Culver City & CCUSD Multi-Jurisdictional Hazard Mitigation Plan Community Survey

What is your age group? (Choose one)

Answer Choices	Responses	
Under 18	0.00%	0
18-24	0.00%	0
25-34	4.30%	4
35-44	19.35%	18
45-54	16.13%	15
55-64	17.20%	16
65+	41.94%	39
Prefer not to answer	1.08%	1

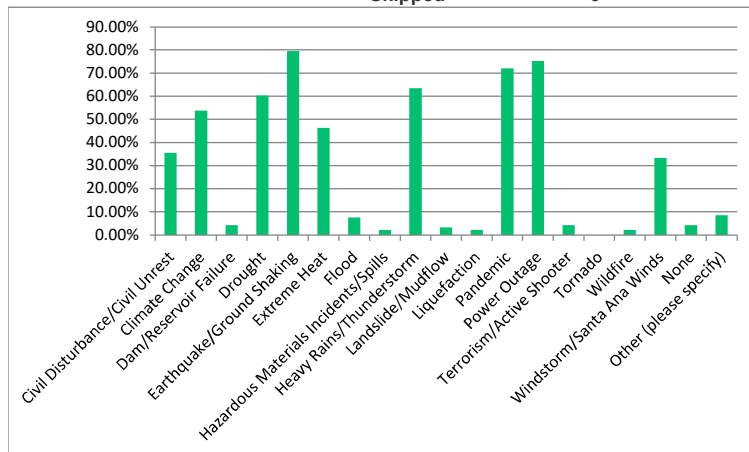
Answered 93
Skipped 6



Culver City & CCUSD Multi-Jurisdictional Hazard Mitigation Plan Community Survey

Which of the following types of disasters/hazards have you or someone in your household experienced while residing and/or working in Culver City? (Check all that apply) **HELPFUL DEFINITIONS:** Mudflow: a moving mass of loose mud, sand, soil, rock and water that travels down a slope under the influence of gravity. Liquefaction: a process by which water-saturated sediment temporarily loses strength and acts like a fluid; can be triggered by earthquake shaking.

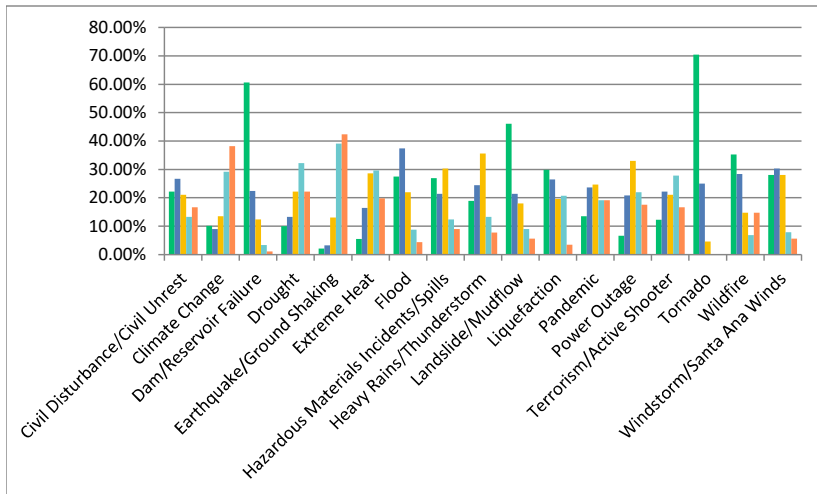
Answer Choices	Responses	Other (please specify)
Civil Disturbance/Civil Unrest	35.48% 33	Bad air from wildfire smoke
Climate Change	53.76% 50	hail
Dam/Reservoir Failure	4.30% 4	Homeless issue
Drought	60.22% 56	Homeless violence and destruction
Earthquake/Ground Shaking	79.57% 74	homeless violence with a weapon
Extreme Heat	46.24% 43	Neighbor fireworks for weeks
Flood	7.53% 7	Uneven streets and roadways due to TING fiber installation, pot holes due to weather and city services repairing water and sewer lines.
Hazardous Materials Incidents/Spills	2.15% 2	Violent crimes nearby
Heavy Rains/Thunderstorm	63.44% 59	
Landslide/Mudflow	3.23% 3	
Liquefaction	2.15% 2	
Pandemic	72.04% 67	
Power Outage	75.27% 70	
Terrorism/Active Shooter	4.30% 4	
Tornado	0.00% 0	
Wildfire	2.15% 2	
Windstorm/Santa Ana Winds	33.33% 31	
None	4.30% 4	
Other (please specify)	8.60% 8	
Answered	93	
Skipped	6	



Culver City & CCUSD Multi-Jurisdictional Hazard Mitigation Plan Community Survey

The following hazards could potentially impact Culver City or CCUSD and may be addressed in the Hazard Mitigation Plan. Please indicate the level of concern you perceive for each hazard that may affect you and the City/CCUSD critical facilities and infrastructure. (Please check ONE response for each hazard)

	Not Concerned	Somewhat Concerned	Concerned	Very Concerned	Extremely Concerned	Total
Civil Disturbance/Civil Unrest	22.22%	20 26.67%	24 21.11%	19 13.33%	12 16.67%	15 90
Climate Change	10.11%	9 8.99%	8 13.48%	12 29.21%	26 38.20%	34 89
Dam/Reservoir Failure	60.67%	54 22.47%	20 12.36%	11 3.37%	3 1.12%	1 89
Drought	10.00%	9 13.33%	12 22.22%	20 32.22%	29 22.22%	20 90
Earthquake/Ground Shaking	2.17%	2 3.26%	3 13.04%	12 39.13%	36 42.39%	39 92
Extreme Heat	5.49%	5 16.48%	15 28.57%	26 29.67%	27 19.78%	18 91
Flood	27.47%	25 37.36%	34 21.98%	20 8.79%	8 4.40%	4 91
Hazardous Materials Incidents/Spills	26.97%	24 21.35%	19 30.34%	27 12.36%	11 8.99%	8 89
Heavy Rains/Thunderstorm	18.89%	17 24.44%	22 35.56%	32 13.33%	12 7.78%	7 90
Landslide/Mudflow	46.07%	41 21.35%	19 17.98%	16 8.99%	8 5.62%	5 89
Liquefaction	29.89%	26 26.44%	23 19.54%	17 20.69%	18 3.45%	3 87
Pandemic	13.48%	12 23.60%	21 24.72%	22 19.10%	17 19.10%	17 89
Power Outage	6.59%	6 20.88%	19 32.97%	30 21.98%	20 17.58%	16 91
Terrorism/Active Shooter	12.22%	11 22.22%	20 21.11%	19 27.78%	25 16.67%	15 90
Tornado	70.45%	62 25.00%	22 4.55%	4 0.00%	0 0.00%	0 88
Wildfire	35.23%	31 28.41%	25 14.77%	13 6.82%	6 14.77%	13 88
Windstorm/Santa Ana Winds	28.09%	25 30.34%	27 28.09%	25 7.87%	7 5.62%	5 89
None or Other (please specify)						6
						Answered 92
						Skipped 7



None or Other (please specify)

Cyber event

Homeless (we should remove homeless camp right in the middle of our city and so close to our schools)

Homelessness expansion

Low probability of tsunami but there's still a risk

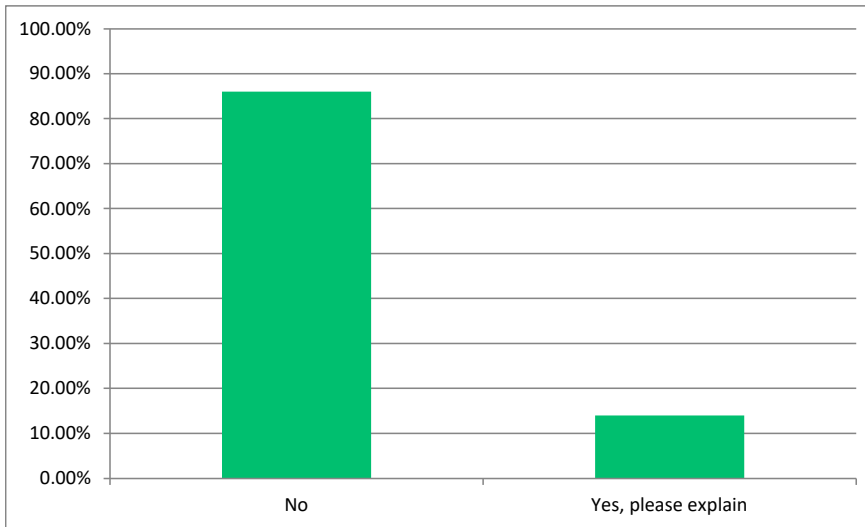
Over building residential units on R1 and R2 lots putting additional strain on city services and infrastructure (sewer, water, power).

Very concerned about violent crimes

Culver City & CCUSD Multi-Jurisdictional Hazard Mitigation Plan Community Survey

Do you have professional or personal information related to specific hazard issues or problem areas (localized flooding, power outages) that the planning committee should be aware of (please provide as much detail as possible, including location and type of hazard)?

Answer Choices	Responses	
No	86.02%	80
Yes, please explain	13.98%	13
Answered		93
Skipped		6



Yes, please explain

6000 PSI Oil/gas line below grade in the alley behind my house. Also very large power transmission lines on poles directly over the pipe-line in the same alley.

area and house is on a landfill done at the turn of the century. Foundation problems occur and I cannot afford to fix.

Back yard power lines and trees.

I am on oxygen 24/7 so power outages are a concern. With COPD I am additionally concerned about a pandemic

I was the Culver City CERT training manager up until the beginning of the pandemic.

Law enforcement

Living in West Lower Crest we are subject to wildfire and mudslides

My neighbors and I had a major power outage in an apartment building at 10144 culver blvd. that wasn't resolved until the next morning. I suffer from a severe cardiac condition requiring medication throughout the day and night. I was using a flashlight to take my medications.

Only what I've heard from CCFD during CCARES trainings (Culver City Amateur Radio Emergency Service). Mainly about liquefaction and flooding in the low areas in Culver City due to a major earthquake. power outage. landslides

Power Outages are common. There are buildings/land that should be optimized for Solar panels for City & Residential use in emergencies.

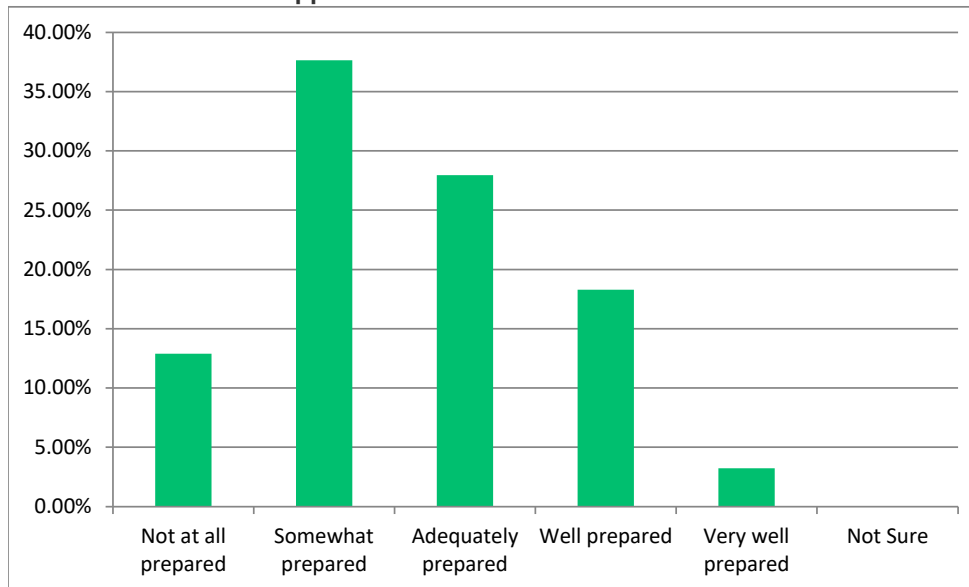
South Central LA experience power outage

There are many residential street intersections where when there is more than 3/4" of rain fall in a short period of time street corners, such as Vinton and Farragut, become flooded. City services try to keep up with clean out procedures however either there are not enough resources/manpower to sustain maximum efficiency for run off or its the condition of the streets themselves: slope, asphalt, potholes, etc.

Culver City & CCUSD Multi-Jurisdictional Hazard Mitigation Plan Community Survey

How prepared is your household for a natural hazard or disaster (for example, wildfire, flood, earthquake, extended power outage)?

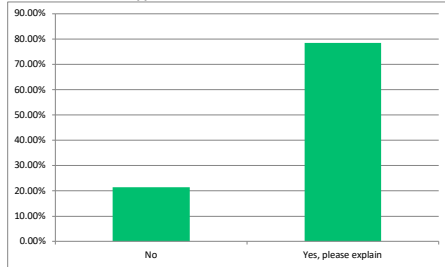
Answer Choices	Responses	
Not at all prepared	12.90%	12
Somewhat prepared	37.63%	35
Adequately prepared	27.96%	26
Well prepared	18.28%	17
Very well prepared	3.23%	3
Not Sure	0.00%	0
Answered		93
Skipped		6



Culver City & CCUSD Multi-Jurisdictional Hazard Mitigation Plan Community Survey

Have you taken actions to make your home, business, or neighborhood more resistant to hazards (such as anchored furniture and service utilities, installed smoke detectors, regularly trim trees, fire smart landscaping, install drought tolerant landscaping, etc.)?

Answer Choices	Responses
No	21.51% 20
Yes, please explain	78.49% 73
Answered	93
Skipped	6



Yes, please explain

- All
- All of the above
- all of the above
- all of the above
- All of the above, and have become an expert in CERT protocols and procedures.
- All of the above.
- Anchored cabinets shut in kitchen
- Anchored foundation. Smoke detectors
- Anchored furniture
- Anchored furniture
- Anchored furniture and bolted foundation. Have a 3 week supply of food and water.
- Anchored furniture, disaster kits, tree trimming
- Anchored furnitures, earthquake supplies, turned off gas permanently, smoke detectors, drought tolerant landscaping
- anchored service utilities, smoke detectors, trim tree, drought tolerant landscaping supply of food and water in the event of a natural disaster
- Anchored stuff
- Anchored TV; smoke detectors
- Basic prep
- Bolted foundation and smoke detectors
- bolted my house
- Brush clearance, smoke detectors
- common sense measures
- Drought tolerant gardens, rain barrels, anchored appliances and tall furniture, smoke detectors, earthquake shutoff valve
- drought tolerant landscaping, smoke detectors
- Drought tolerant landscaping; furniture secured to walls.
- Earthquake barrel and solar devices, camping equipment
- Earthquake kit, plans for evacuation, out of state contacts, cpr/and classes
- Earthquake retrofit, smoke detectors, drip irrigation
- Earthquake safe frame hooks, no frames above bed, smoke detectors, early earthquake app
- food & water storage, installed smoke & carbon monoxide detectors, out-of-area contact, emergency kit
- Foundation bolting for earthquake preparedness
- Go bag
- House bolted to foundation, large furniture anchored to walls, smoke detectors, low water usage, stock earthquake/power outage supplies
- I live in a condo that has smoke detectors and the city trims trees regularly

I live in a gated community and HOA is responsible for the safety of the tenants on the exterior. I love in a condo and they don't have drought resistant landscaping I recently replaced and reinforced and added roof vents to a white composite roof. All book cases and display cases are tethered to the walls. 3 working smoke, Co2 detectors. I have 2 rain barrels. I have removed almost all my landscaping with the exception of 3 small trees I planted on the side of my house and I water them with the condensation from my portable A/C. We have an earthquake automatic gas cutoff. Water heater is strapped. I keep a fire axe next to my front door just in case a forced exit is an issue. Then again I have a working X Los Angeles City Fire Truck in my driveway so I am ready if needed.

In our recent remodel we have done faux grass and mostly succulents for landscaping. We have installed smoke detector
 Installed smoke detectors. Put in drought tolerant plants. Anchored bookcases.
 Maintain property, sump pumps/drains, installed solar with battery back-up. secured water smoke and carbon monoxide detectors, earthquake retrofit, trim trees/shrubs
 smoke detectors
 Smoke detectors
 Smoke detectors
 Smoke detectors and anchored furniture (ie the bare minimum... need to do more)
 smoke detectors, anchor house, quake supplies
 Smoke detectors, CERT training, active CCARES membership
 smoke detectors, cutting down of trees and shrubs, draught tolerant landscaping

smoke detectors, drought resistant landscaping, bolted hot water heater

smoke detectors, drought tolerant landscape
 smoke detectors, drought tolerant yards, trim trees
 Smoke detectors, extinguishers, anchored furniture.
 Smoke detectors, fire extinguisher, carbon detector
 smoke detectors, fire-smart and drought-tolerant landscaping, some anchored furnishings.
 Smoke detectors, landscaping
 smoke detectors, some drought tolerant landscaping, emergency supplies like food, shelter, toilet, batteries
 smoke detectors, trim trees

smoke detectors; CERT training leading to small adjustments indoors re earthquakes; about to start drought tolerant landscaping
 Smoke detectors; trimming trees on regular basis
 some furniture is anchored. smoke detectors installed. trees trimmed.

Some of those, but not as many as I should
 the apartments come with smoke detectors. the garden areas are somewhat maintained by the apartment complex gardeners.
 The house has been retrofitted for earthquakes. Large furniture pieces are secured. Our property is in the Blair Hills and we keep everything
 Took cert classes, have an earthquake kit, have food and water supplies, have a go backpack, I know how to turn off gas
 Trees trimmed, drought tolerant plants, smoke detector, anchored furniture
 Trim trees smoke detectors
 Trim trees, service utilities, cannot afford foundation fixing even though I have anchored foundation. Cannot afford solar panels.

Upgraded home foundation anchors
 water, drought tolerant landscape, anchored furniture, emergency kit

When we purchased our 1938 home in 2018, we had it retrofitted for earthquakes. We installed solar panels in 2022. All of our furniture is anchored for earthquakes. We have stickers on our windows to let the fire department know that we have pets that need rescuing, in case of emergency. We use wired smoke detectors that are up to code. We bring in professionals to do annual tree trimming. We have emergency water barrels and food supplies in storage. We have purposefully let our front lawn die. We look forward to installing drought tolerant landscaping as soon as we can afford to. I am CPR certified. I have been planning on getting CERT certified as soon as possible!
 x

yes

Yes, most of the above. We also have a generator, lanterns for lighting, barrel of water, food, and we keep our vehicles fueled no lower than a half tank.

Culver City & CCUSD Multi-Jurisdictional Hazard Mitigation Plan Community Survey

Choose the top 3 ways you prefer to receive information about how to make your home and neighborhood more resistant to hazards?

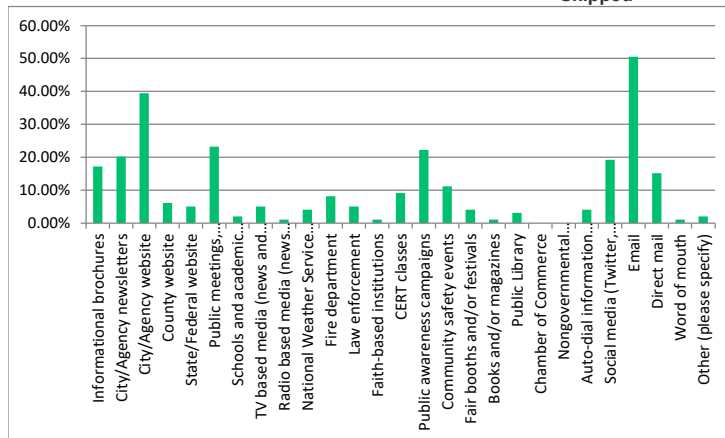
Answer Choices	Responses	Count
Informational brochures	17.17%	17
City/Agency newsletters	20.20%	20
City/Agency website	39.39%	39
County website	6.06%	6
State/Federal website	5.05%	5
Public meetings, workshops, and/or classes	23.23%	23
Schools and academic institutions	2.02%	2
TV based media (news and public service announcements)	5.05%	5
Radio based media (news and public service announcements)	1.01%	1
National Weather Service website	4.04%	4
Fire department	8.08%	8
Law enforcement	5.05%	5
Faith-based institutions	1.01%	1
CERT classes	9.09%	9
Public awareness campaigns	22.22%	22
Community safety events	11.11%	11
Fair booths and/or festivals	4.04%	4
Books and/or magazines	1.01%	1
Public Library	3.03%	3
Chamber of Commerce	0.00%	0
Nongovernmental organization (Red Cross)	0.00%	0
Auto-dial information from "911" center	4.04%	4
Social media (Twitter, Facebook, LinkedIn)	19.19%	19
Email	50.51%	50
Direct mail	15.15%	15
Word of mouth	1.01%	1
Other (please specify)	2.02%	2

Other (please specify)

Text

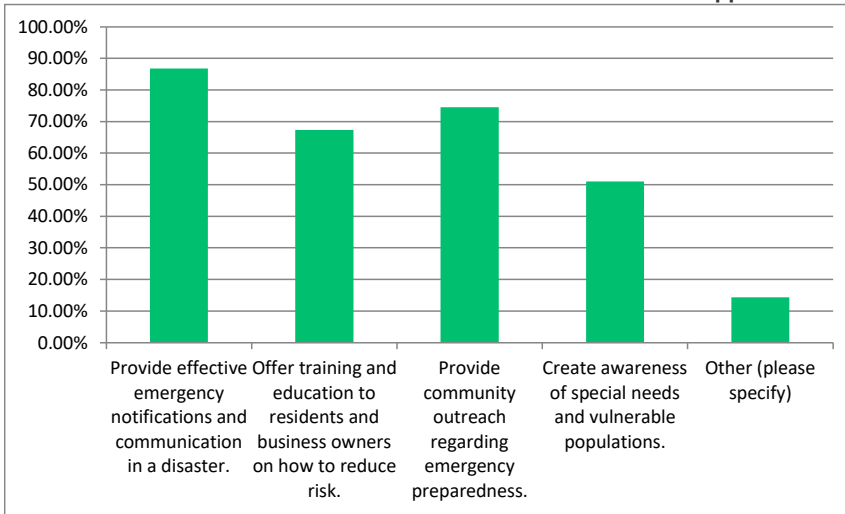
Would appreciate text alerts from local police and fire departments.

Answered 99
Skipped 0



Culver City & CCUSD Multi-Jurisdictional Hazard Mitigation Plan Community Survey
How can Culver City help you become better prepared for a disaster? Choose all that apply.

Answer Choices	Responses	
Provide effective emergency notifications and communication in a disaster.	86.73%	85
Offer training and education to residents and business owners on how to reduce risk.	67.35%	66
Provide community outreach regarding emergency preparedness.	74.49%	73
Create awareness of special needs and vulnerable populations.	51.02%	50
Other (please specify)	14.29%	14
	Answered	98
	Skipped	1



Other (please specify)

- A better partnership between the City and CCARES and CERT. We're well-tr
- Do not over-estimate risk of disaster to make everyone panic
- ensure all communication is bi lingual and reaches vulnerable populations
- Impeach Yasmine McMorrin and Freddy Puza from Council
- increase police force
- Increase spending & dump bike lane spending
- make sure vulnerable populations are checked for violency
- need to repeat this info often!
- not create problems by making it impossible to get out using main thoroughfares due to these idiotic hurdles to traffic that we have all over our city.
- Provide emergency kitts
- Provide links to resources that assist or provide opportunities for better preparedness and readiness.
- Provide safety plans and protocols
- snail mail
- The best outreach is always when teams show up at local parks!

Culver City & CCUSD Multi-Jurisdictional Hazard Mitigation Plan Community Survey

Please utilize the space below to provide any additional comments or insight into how local natural or human-caused hazards or disasters should be mitigated.

Answered 44

Skipped 55

We do not need soft story retrofit that costs over one hundred thousand dollars and reduces the size of the parking spaces. This is something that have should voted on by the constituents not by the city council which has made it impossible to turn a profit on our small property and has their habnd iun all our pockets. Shame on you!

A quarter of all fires after a major earthquake is due to gas leak. All buildings should either be no gas, or have automatic shutoff

As more EV make up travel on our city streets, it is important that the electrical grid be resilient. Also important that we have a well funded and staffed public safety workforce (police and Fire)

Because we live as renters and not landlords on this planet, there is no way to completely remove or prepare for all possible incidents but luck does favor the prepared and the better informed we and our neighbors are, the more likely we could survive a massive incident.

Brush clearing, do not relax water conservation just b/c it rained this year, GET RID OF GUNS, more mental health outreach and resource

Cut back dead brush at the Baldwin Hills Overlook State Park. Fix sidewalks which are lifted by tree roots

does "human-caused hazards" include the homeless camp on Virginia?

Don't know

don't allow homeless encampments!

Education, communication and regular drills

Encourage and support CERT and Culver City Amateur Radio Emergency Services (CCARES), to encourage membership and recruitment

Evryone- ride more bikes, use transit now. and put a ban on fossil fuel extraction and make it illegal to use single use plastic

Facebook page

Facilitate upgrades to power grid. Budget for burying power lines underground over time

Fire department! Volunteers.

Focus on needy or low income ppl as they r the least prepared and do not have time and means to prepare

have police regularly patrolling the city for trouble makers. During the 4th of July, bored neighborhood kids were sticking light fire crackers into plastic bottles and running a few feet away to shoot video of the explosion to place on social media.

Help homeless people who live in the Ballona Creek. They use the creek as a bathroom and are mentally ill and use drugs. They come to Kroenthal Park and use the bathrooms to bath. They are very dirty and there is a nursery school there. They need to be rounded up and helped. I cannot walk around the park without everyday without seeing them and am afraid because I am a senior citizen. There are not park Homeless encampments seem to create hazards such as fires, physical abuse, theft and should be a priority in protection of law abiding citizens and overuse of fire and police resource!

I can't speak to the science about disaster mitigation but it would help if the City and CCUSD would learn more about CCARES and CERT. People are more likely to function better during emergencies if they are knowledgeable and prepared.

I have complete confidence in CCFD and CCPD handling of any emergency situation that arises. Having owned my home in CC for near 45 years, I have experienced a great deal of scary situations and both agencies have responded up and beyond expectations.

I just want to say that the recent "sandbag" effort for the storm was an embarrassment. Putting out a pile of sand and a single shovel does nothing for the elderly and disabled. It's the absolute bare minimum of "support." Also saying that every household should only take 10 bags is meaningless if no one is there to enforce it. I was there around 6 p.m. on Aug. 19 and two men had backed their truck right up to the pile and took at least 50 bags worth of sand. The community deserves better than the bare minimum.

Increase law enforcement. Do not permit camping at our parks, residential or shopping areas. Create programs to move homeless to appropriate zones where they can safely cook clean themselves if they want and use bathroom facilities. Provide social programs to treat chronic drug use and poverty.

Is there a plan for communication if and when internet and cell service goes down?;

Is there adequate preparedness about staying in place in the event of a major earthquake?

Ma

Make sure underground oil pipelines are receiving oversight from federal or state agency!

Mitigate climate change by installation of solar panels over all large parking lots and on all big-box buildings. Prepare the local population by restarting and expanding the CERT training program

Motor vehicle accidents are exceedingly common. Many drivers speed on Bentley Ave (between Venice and Washington) to bypass the traffic on Sepulveda Blvd. There need to be stop signs and speed bumps placed. This street also does not have any street lights or sidewalks which make the street dangerous at night for pedestrians and enables trespassers (of which we've experienced plenty at our residence). I've previously submitted similar concerns to the city website and never received any responses.

n/a

Neighborhood meetings would also be helpful... use of block captains or other contact

none

Please consider relocate the homeless camp. Current location is too close to our schools! We see kids walking with parents/by themselves all the time on overland.

Please keep us safe

Provide information on the city piping and our house faucets fixtures

Rain capture, keep overflow drains at roadsides clear of debris before rainy season to decrease risk of flooding. Crack down on illegal fireworks

reduce traffic and transit, more bus lanes, do our part to reduce climate change

Seems like all avenues were covered

Stop waisting money on dumb projects

Thank you for taking this seriously.

Thanks

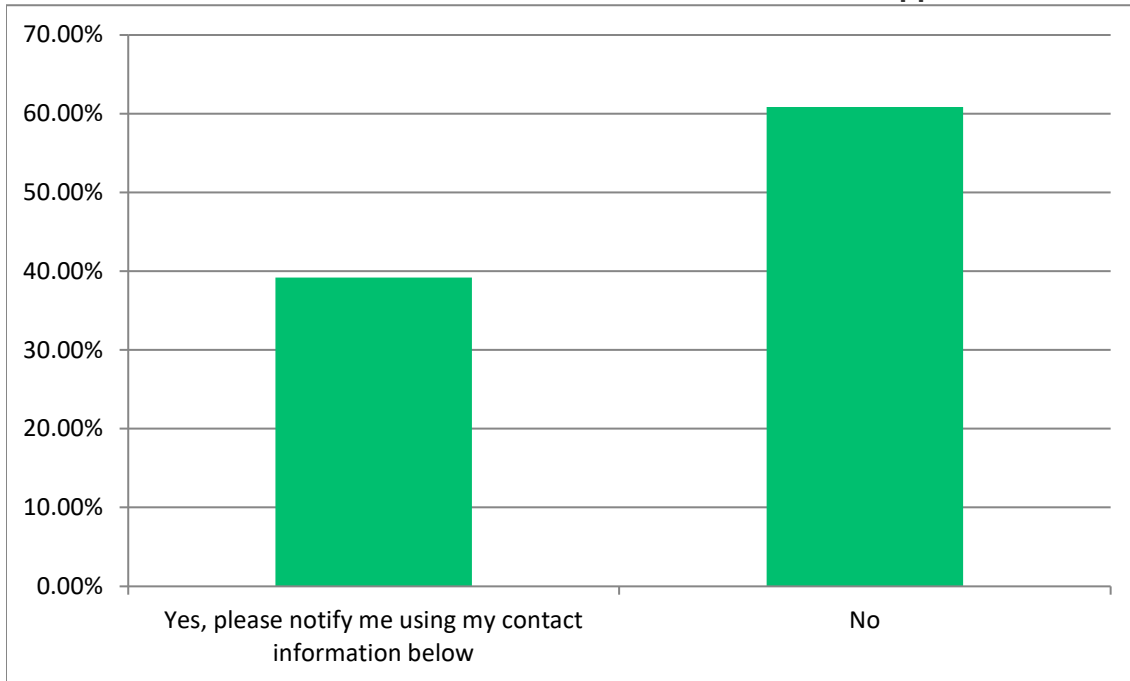
The City needs to require solar panels for all new builds, cover concrete in greenery & no more dark streets & roofs. Take advantage of new technology & resources to improve our 5 square miles that will have benefits beyond our 5 sq miles. The hills in CC needs to be monitored with rains, The goats should come for more areas. Think what the City can do that would benefit everyone without negatively impacting certain groups of citizens.

Yes we disabled will need help but not necessarily will receive any extra.

Culver City & CCUSD Multi-Jurisdictional Hazard Mitigation Plan Community Survey

Would you like to review and comment on the draft of the Multi-Jurisdictional Hazard Mitigation Plan Update?

Answer Choices	Responses	
Yes, please notify me using my contact information below	39.18%	38
No	60.82%	59
	Answered	97
	Skipped	2



Culver City & CCUSD Multi-Jurisdictional Hazard Mitigation Plan Community Survey

If you would like to be notified of future opportunities to participate in hazard mitigation and resiliency planning, please provide your name and contact info:

Answer Choices	Responses	
Name	100.00%	51
Email	100.00%	51
Phone	84.31%	43
	Answered	51
	Skipped	48

GovDelivery
Hazard Mitigation Plan -- Community Survey

Date: 7-12-23

3,804 Total recipients from the following distribution list topics: Public Notifications (2,728) and Hazard Mitigation Plan (2,012) and Sustainability and Environmental Issues (2,921) *[NOTE: The reason why there are only 3,804 recipients is because the GovDelivery system removes duplicate e-mails so if an individual profile includes signing up to receive notifications for more than one topic, the software automatically only sends them one copy of the e-mail.]*

This is a courtesy copy of an email bulletin sent by Joe Susca.

This bulletin was sent to the following groups of people:

Subscribers of Hazard Mitigation Plan, Public Notifications, or Sustainability/Environmental Issues (incl. Oil Drilling/Fracking), (3804 recipients)

COMMUNITY SURVEY



Updating the Hazard Mitigation Plan

[We need your input!](#)

The Federal Disaster Mitigation Act of 2000 requires every community to have an approved hazard mitigation plan to be eligible to apply for, and receive, certain Federal Emergency Management Agency (FEMA) hazard mitigation funds.

The City of Culver City (City) and the Culver City Unified School District (CCUSD) have initiated an update to their existing Hazard Mitigation Plan (Plan).

[View the existing Hazard Mitigation Plan here.](#)

The Plan provides a framework for our community to reduce its vulnerability to the impacts of natural hazard events such as earthquakes, drought, and wildfires and human-caused hazards (hazardous material spills, active shooters, pandemics). The purpose of mitigation planning is to identify policies and to take actions that can be implemented over the long term to reduce risk and future losses when an emergency or disaster occurs. Mitigation plans form the foundation for a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage.

Your participation in the planning process is extremely important and vital to the success of the Plan update.

[Take the Survey.](#)

In order to identify and prepare for future natural disasters, we need your feedback! This questionnaire is designed to help the City and CCUSD gauge the level of knowledge the community has about natural disasters and human-caused hazards, and to obtain your knowledge about areas that may be vulnerable. The information you provide will help us identify hazards of concern and coordinate projects focused on reducing the risk to community facilities.

The survey will take approximately 10 minutes to complete and is anonymous. *Your information will be kept confidential.* The results of the survey will be included within the updated Plan. [Please complete the survey by Sunday, September 3, 2023.](#)



Questions?
[Contact Us](#)

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[Translate](#)

From: City of Culver City <culvercity@public.govdelivery.com>
Sent: Wednesday, July 12, 2023 6:17 PM
To: Susca, Joe <joe.susca@culvercity.org>
Subject: Bulletin Detail Report: We need Your Input! Participate in the City's Hazard Mitigation Plan Update

EXTERNAL: This email originated from outside of the organization. Do not click links or open attachments unless you confirm the content is safe.

Having trouble viewing this email? [View this report in your account.](#)



Report Generated: 07/12/2023 06:17 PM PDT

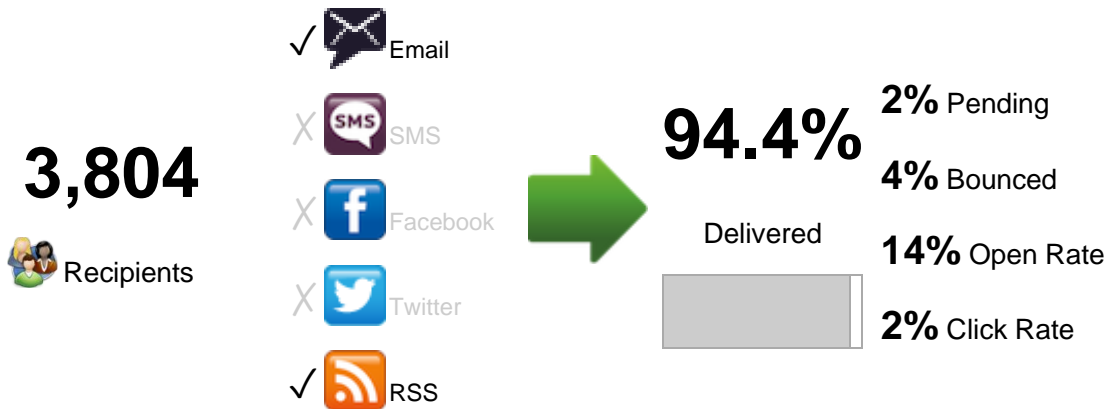
This report automatically generates after a bulletin is sent. [View the Bulletin Detail Report online](#) to see the most recent performance metrics for this bulletin.

Subject: We need Your Input! Participate in the City's Hazard Mitigation Plan Update

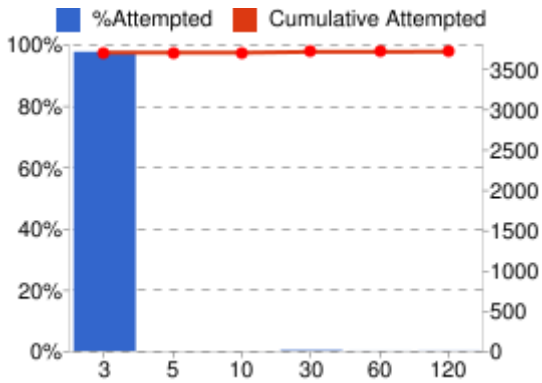
Sent: 07/12/2023 02:17 PM PDT

Sent By: joe.susca@culvercity.org

Sent To: Subscribers of Hazard Mitigation Plan, Public Notifications, or Sustainability/Environmental Issues (incl. Oil Drilling/Fracking),



Email Delivery Stats



Minutes	Cumulative Attempted
3	98%
5	98%
10	98%
30	98%
60	98%
120	98%

Delivery Metrics - Details

3,804 Total Sent

3,592 (94%) Delivered

67 (2%) Pending

145 (4%) Bounced

1 (0%) Unsubscribed

Bulletin Analytics

655 Total Opens

517 (14%) Unique Opens

95 Total Clicks

68 (2%) Unique Clicks

22 # of Links

Delivery and Performance

Channel	Progress	Percent Delivered	Number of Recipients	Number Delivered	Opened / Unique	Bounced / Failed	Unsubscribed
Email Bulletin	Sending...	93.2%	3,138	2,926	517 / 17.7%	145	1
SMS Message	Delivered	0.0%	0	0	n/a	0	n/a

Bulletin Link Overview

Link URL	Unique Clicks	Total Clicks
https://www.surveymonkey.com/r/PSRYHY6	42	67
https://www.culvercity.org/HAZARDMITIGATIONPLAN	11	13
https://www.culvercity.org/Contact-Us	6	6
https://twitter.com/CulverCityGov	2	2
https://www.linkedin.com/company-beta/38715/	1	1
https://www.instagram.com/CulverCityGov/	1	1
https://www.facebook.com/CityOfCulverCity/	1	1
https://www.culvercity.org	1	1
https://public.govdelivery.com/accounts/CACULVER/subscriber/edit?prefere...	1	1
https://subscriberhelp.granicus.com/	1	1
https://translate.google.com/translate?hl=en&sl=en&tl=es&u=https%3A%2F%2...	1	1
https://www.youtube.com/channel/UCJiFiwX9o1v7iEUqMwAMWFA	0	0
https://nextdoor.com/agency/city-of-culver-city	0	0
http://www.culvercity.org/	0	0
https://content.govdelivery.com/accounts/CACULVER/bulletins/364b5b3?reqf...	0	0
https://insights.govdelivery.com/Communications/Subscriber_Help_Center	0	0
https://public.govdelivery.com/accounts/CACULVER/subscriber/edit?prefere...	0	0

Need more reports? [Additional reporting is available in your account.](#) If you want additional information on reporting, please visit the [reporting help menu.](#)

Want to learn more about these metrics and the best practices for improving results? Contact your dedicated Client Success Consultant! Not sure who that is? Send us an email at support@granicus.com and we'll help you find out.



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B.2 - 2

MJHMP Web Content

Home (<https://www.culvercity.org/Home>) / Services (<https://www.culvercity.org/Services>) / Public Safety (<https://www.culvercity.org/Services/Public-Safety>) / Hazard Mitigation Plan

Hazard Mitigation Plan



Participate

WE NEED YOUR INPUT to prepare for future disasters!

Community participation in the Hazard Mitigation Plan planning process is vital to the success of the Plan update.

This survey will help the planning team better understand the community's concerns about natural hazards and identify policies and projects that can help reduce the risk and lessen the impact of future hazard events. The questionnaire is designed to help the City and CCUSD gauge the level of knowledge the community has about natural disasters and human-caused hazards and to obtain information about areas that may be vulnerable.

[Take the Survey by Sunday, September 3, 2023 \(https://www.surveymonkey.com/r/PSRYHY6\).](https://www.surveymonkey.com/r/PSRYHY6)

The survey will take approximately 10 minutes to complete and is anonymous. *Your information will be kept confidential.*

The final results of the survey will be included within the updated Plan.

JOIN A COMMUNITY OUTREACH EVENT

A community outreach event will be held in late summer/early fall 2023 to engage the public and gather additional community input about hazards and hazard mitigation in local areas. The planning team will also provide information about the progress status of the planning process.

Representatives from the planning team will be onsite to provide information and answer questions at the community event Movies in the Park on July 29, 2023 (<https://www.culvercity.org/Events-directory/Parks-Make-Life-Better-with-in-the-Park>).

More information to come.

REVIEW THE DRAFT PLAN

The Draft Plan will be made available for a two-week public review period (anticipated early fall 2023), when community questions will be welcomed.

More information to come.

Current Plan

The City of Culver City (City) and the Culver City Unified School District (CCUSD) prepared a Multi-Jurisdictional Hazard Mitigation Plan ("Plan" or "MJHMP") in 2017. The MJHMP was approved by the California Office of Emergency Services (Cal OES) and the Federal Emergency Management Agency (FEMA) on June 1, 2017.

[View the existing Multi-Jurisdictional Hazard Mitigation Plan](https://www.culvercity.org/files/assets/public/documents/planning-and-development/multijurisdictionalhazardm.pdf) ^(PDF, 25MB) [\(/files/assets/public/documents/planning-and-development/multijurisdictionalhazardm.pdf\)](https://www.culvercity.org/files/assets/public/documents/planning-and-development/multijurisdictionalhazardm.pdf).

Learn More

What is the Purpose of a Hazard Mitigation Plan?

A Hazard Mitigation Plan presents a strategy for reducing the vulnerability of the City and CCUSD to the impacts of natural hazards such as wildfire, earthquakes, and drought and human-caused hazards (hazardous materials spill, active shooter, pandemic). The plan identifies the types of hazards that threaten our community, evaluates our vulnerability to those threats, and identifies projects, actions, and partnerships for the City and CCUSD to undertake to become more resilient to hazards in the future.

What is a Hazard Mitigation Plan?

The Hazard Mitigation Plan is a framework that guides our community in making decisions and developing policies to reduce or eliminate risk to life and property. The plan identifies the types of hazards that threaten our community, evaluates our vulnerability to those threats, and outlines a strategy to reduce or eliminate the risk posed by those threats.

Why is a Hazard Mitigation Plan Important?

The Federal Disaster Mitigation Act of 2000 (DMA 2000) requires that a community have an approved hazard mitigation plan in order to be eligible to apply for and receive FEMA hazard mitigation funds. Receipt of these funds can be critical to implementation of identified hazard mitigation programs.

Plan Update – *Now Underway*

The City of Culver City (City) and the Culver City Unified School District (CCUSD) recently initiated a comprehensive update to the existing Multi-Jurisdictional Hazard Mitigation Plan ("Plan" or "MJHMP").

Why does the Hazard Mitigation Plan need to be updated?

Natural and human-made hazard risks change and evolve. Regular updates to Hazard Mitigation Plans are necessary to document recent incidents in the City and region, highlight any local or regional trends, and track ongoing progress on current or prior mitigation actions.

FEMA-approved Hazard Mitigation Plans remain active for five years. The current Culver City/CCUSD MJHMP approved in 2018 must be updated to remain active. Additionally, FEMA issued new policy guidance regarding the preparation and approval of HMPs so the update will be in compliance with all new state and federal regulatory requirements.

How is a Hazard Mitigation Plan developed?

The Hazard Mitigation Plan will identify hazards specific to Culver City and the CCUSD jurisdiction, assess vulnerability, and identify mitigation actions. Additionally, the Plan will identify how its implementation will be monitored, evaluated, and updated with a five-year cycle.

- Hazard Profiles: type, location, extent, previous occurrences, probability of future events.
- Vulnerability Assessment: impacts of hazards, vulnerability to each hazard, repetitive loss, potential dollar losses
- Mitigation Strategies: overarching goals, specific actions, and prioritization of those actions to reduce hazard impacts

The Hazard Mitigation Plan is developed from a process-oriented approach, utilizing the experience of community partners from neighboring cities and Los Angeles County, as well as utilities, hospitals, large employers, outside agencies, and nonprofit organizations. These community partners provide key stakeholder input on the hazard profiles, vulnerability assessment, and

mitigation strategies, which is documented and incorporated into the Plan. Public participation is also an important component of the planning process and will include opportunities for the community to provide input and then review/comment on draft documents.

Once completed, the Multi-Jurisdictional Hazard Mitigation Plan will be submitted to Cal OES and FEMA for review and conditional approval. Once conditional approval is received from Cal OES and FEMA, the Plan is approved locally by the Culver City Council and the CCUSD Board.

How will the public be involved in the Planning Process?

Public participation is an important component in the planning process. In addition, community participation helps raise awareness of the hazards facing Culver City and an understanding of the actions needed to mitigate those hazards.

Opportunities for the community to provide input, ask questions, and review/comment on draft documents will be provided throughout the planning process, including an online survey, community event, and online access to draft documents. Public comments, questions, ideas, and concerns will have a significant role in the Plan's preparation.

Participate

Representatives from the planning team will be onsite to answer questions about the survey at the community event: [Movies in the Park on July 29, 2023 \(https://www.culvercity.org/Events-directory/Parks-Make-Life-Better-with-Movies-in-Park\)](https://www.culvercity.org/Events-directory/Parks-Make-Life-Better-with-Movies-in-Park).



<https://www.culvercity.org/City-Hall/Departments/Publi>

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Contact Us

Joe Susca

Public Works Department

[\(310\) 253-5636 \(tel:3102535636\)](tel:3102535636)

[joe.susca@culvercity.org \(mailto:joe.susca@culvercity.org\)](mailto:joe.susca@culvercity.org)

Related Information

[Public Works Department \(https://www.culvercity.org/City-Hall/Departments/Public-Works\)](https://www.culvercity.org/City-Hall/Departments/Public-Works)

[CCUSD \(https://www.ccusd.org/\)](https://www.ccusd.org/)

[Fire Department \(https://www.culvercity.org/Services/Public-Safety/Fire-Department\)](https://www.culvercity.org/Services/Public-Safety/Fire-Department)

[Police Department \(https://www.culvercity.org/Services/Public-Safety/Police-Department\)](https://www.culvercity.org/Services/Public-Safety/Police-Department)

B.2 - 3

Community Outreach Event

Community Outreach Event Plan

Date: Saturday, July 29th, 2023

Time: 7:00 PM – 9:00 PM [arrive at 6 PM for set-up]

Location: Culver City/Bill Botts Park, Field #1 [9910 Jefferson Blvd, Culver City, CA 90232]

Staff:

- City: Joe Susca, Francisca Castillo, Dani Cullens
- Michael Baker International: Noelle Steele, Planner I [TBD]

Goal: Educate, Inform, Information Gathering, Garner Public Feedback

Objectives:

- Communicate components and benefits of on-going MJHMP update
 - MJHMP and Evacuation Planning
- Present safety, property protection, and other prevention/mitigation strategies
- Discuss continued and future safety/mitigation projects
- Solicit input as required by the MJHMP

Activity #1 – Natural Hazard Ranking

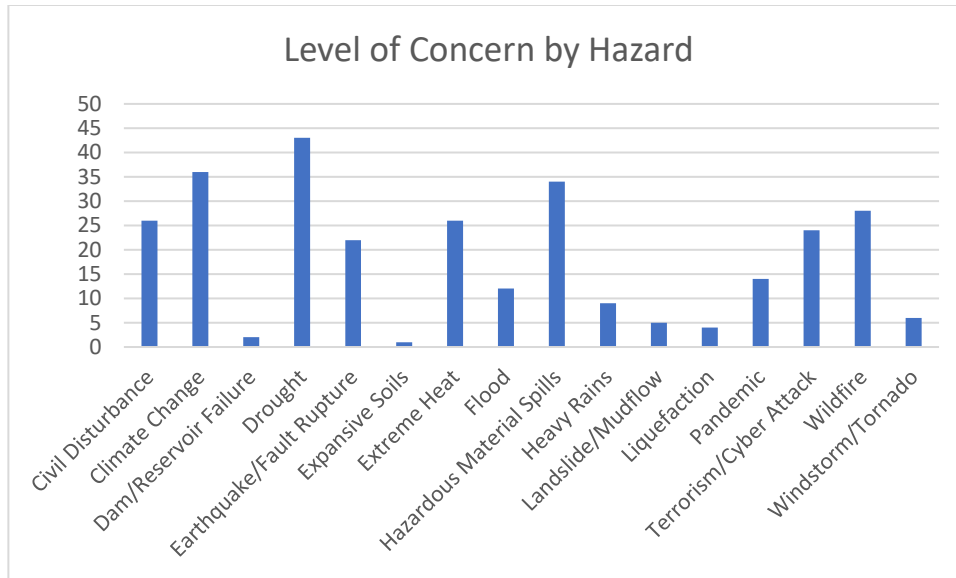
Activity Description: Participants will rank natural hazards included in the MJHMP by level of concern. Each participant will receive five dot stickers. Boards will include informational details about each natural hazard, including definitions and past occurrences in the City. Participants will place a dot sticker next to the five hazards they are most concerned about.

Station Equipment [MBI to Provide]

- Informational Boards: 2 – 3 boards (24x36) including details regarding each hazard and space for dot stickers; easels
- Dot Stickers: approximately 300, cut into strips of 5

Summary:

Participants were asked to place their stickers on the hazards they were most concerned about in Culver City. A total of 16 hazards were ranked and the results are included in the chart and table below.



Hazard	Number of Votes
Civil Disturbance	26
Climate Change	36
Dam/Reservoir Failure	2
Drought	43
Earthquake/Fault Rupture	22
Expansive Soils	1
Extreme Heat	26
Flood	12
Hazardous Material Spills	34
Heavy Rains	9
Landslide/Mudflow	5
Liquefaction	4
Pandemic	14
Terrorism/Cyber Attack	24
Wildfire	28
Windstorm/Tornado	6

The hazards with the most votes include drought, climate change, and hazardous materials spills indicating a high level of concern from participants. The results from our online community survey also indicated a high level of concern for climate change and drought. Hazards with a moderately high level of concern include wildfire, extreme heat, civil disturbance, terrorism/cyber attack and earthquake. Hazards with the lowest level of concern include expansive soils, dam/reservoir failure, liquefaction, landslide/mudflow and windstorm/tornado. The results of our online survey identified dam/reservoir failure, tornado and landslide/mudflow as hazards with the lowest level of concern. In general, the results of the community outreach event hazard ranking aligned with the results of the online community survey.

Activity #2 – Community Lifelines Information Board

Activity Description: Participants will review FEMA definitions of community lifelines, including key definitions and subcategories. MBI staff will be available to answer questions and provide context for the informational board.

Station Equipment [MBI to Provide]

- Informational Boards: 1 board (24x36) including details regarding each community lifeline.

Activity #3 – Survey QR Code Handout

Activity Description: Participants will receive a half-page handout with information regarding the MJHMP update with a survey QR code for participation.

Station Equipment [MBI to Provide]

- Half-page survey QR code hand-outs

Participation Incentives

- “We love Culver City” stickers
- Single-serving, individually packaged snacks (chips, cookies, fun-sized candy, etc.)
- Welcome sign

Miscellaneous Workshop Items: [MBI to Provide]

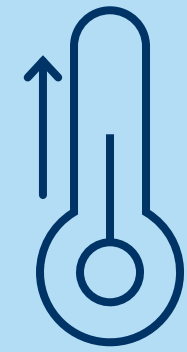
- Card table
- Easy Up
- Easels (4)
- Digital camera
- Comment cards
- 50-pens
- Duct tape

INSTRUCTIONS: Use the provided dot stickers to select 5 natural hazards you are most concerned about in Culver City.



Civil Disturbance

Mass public disturbance involving acts of violence



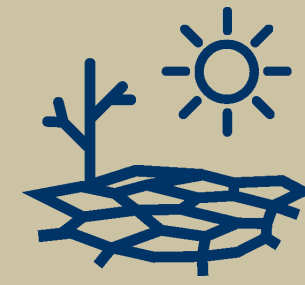
Climate Change

Long-term shifts in global temperature and weather patterns



Dam/Reservoir Failure

Sudden, rapid, uncontrolled release of impounded water



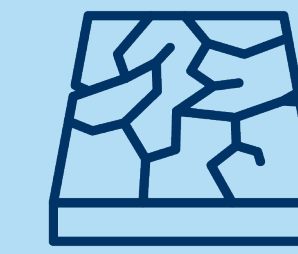
Drought

Prolonged period of abnormally low rainfall



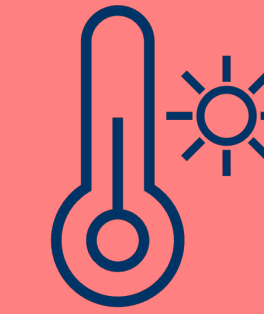
Earthquake/Fault Rupture

Sudden violent shaking of the ground due to seismic activity



Expansive Soils

Clay soils that shrink and swell due to water presence



Extreme Heat

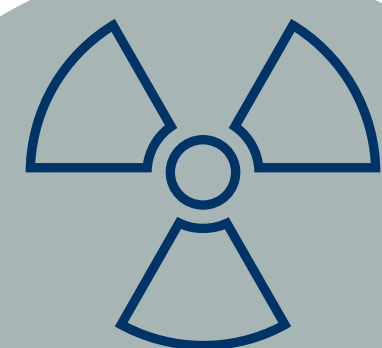
Period of high heat and humidity



Flood

Overflow of water beyond normal confines

INSTRUCTIONS: Use the provided dot stickers to select 5 natural hazards you are most concerned about in Culver City.



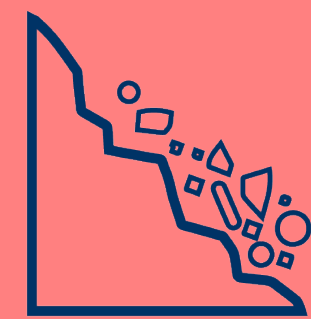
Hazardous Materials Spills

Uncontrolled release of material posing risk to humans or environment



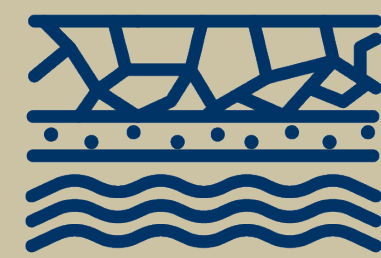
Heavy Rains

Period of uncharacteristically heavy precipitation



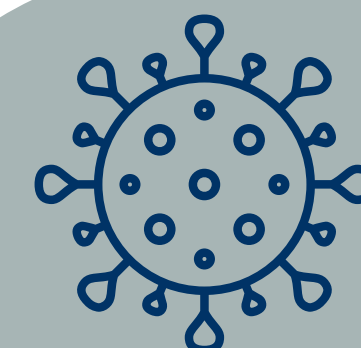
Landslide/Mud Flow

Sliding of earth or debris from a mountain or hillside



Liquefaction

When Earth's surface acts as a liquid because of seismic ground shaking



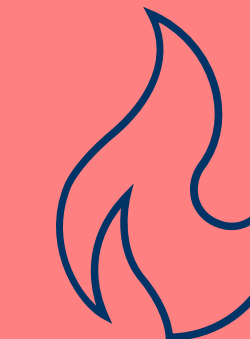
Pandemic

Outbreak of a prevalent disease over the country or world



Terrorism/Cyber Attack

Violence against civilians in the pursuit of political aims



Wildfire

Uncontrolled fire in forests or grasslands



Windstorm/Tornado

Period of uncharacteristically strong wind

Community lifelines are defined by FEMA, a construct for objectives-based post-disaster stabilization efforts. A lifeline enables the continuous operation of critical government and business functions and is essential to human health and safety or economic security.

- Lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society to function.
- Lifelines are the integrated network of assets, services, and capabilities that are used day-to-day to support the recurring needs of the community.
- When disrupted, decisive intervention (e.g., rapid service re-establishment or employment of contingency response solutions) is required to stabilize the incident.



Safety & Security

- Law Enforcement/Security (stations, staff, site security)
- Fire Service (stations, staff, resources)
- Search and Rescue
- Government Service (emergency operations centers, essential functions, schools, gov't offices)
- Community Safety (flood control, protective actions, other hazards)



Food, Water, Shelter

- Food (commercial food distribution, supply chains, food distribution programs)
- Water (drinking water utilities, wastewater systems, water supply chain)
- Shelter (housing, shelters, commercial facilities such as hotels)
- Agriculture (animals and agriculture)



Health & Medical

- Medical Care (hospitals, dialysis, pharmacies, care facilities, vet services, home care)
- Public Health (epidemiological monitoring, labs, clinical guidance, behavioral health)
- Patient Movement (emergency medical services)
- Medical Supply Chain (products, manufacturing, distribution, research, sterilization)
- Fatality Management (mortuary and post-mortuary services)



Energy

- Power Grid (generation, transmission, distribution systems)
- Fuel (refineries, processing, storage, pipelines, distribution)



Communications

- Infrastructure (wireless, cable, broadcast, satellite, internet, data centers)
- Responder Communications (LMR networks)
- Alerts, Warnings, and Messages (local and regional alerts)
- Finance (banking services, electronic payment processing)
- 911 and Dispatch (banking services, electronic payment processing)



Transportation

- Highway, Roadway, Motor Vehicle (roads, bridges)
- Mass Transit (bus, rail, ferry)
- Railway (freight, passenger)
- Aviation (commercial, general, military)
- Maritime (waterways, ports, port facilities)



Hazardous Materials

- Oil/HAZMAT Facilities (facilities, toxic incidents from facilities)
- Oil/HAZMAT, Pollutants, Contaminants (toxic incidents from non-fixed facilities)

Take our

Hazard Mitigation

Survey



The City of Culver City (City) and Culver City Unified School District (CCUSD) are updating the Multi-Jurisdictional Hazard Mitigation Plan (MJHMP). The MJHMP provides a framework for our community to reduce vulnerability from natural hazard events (such as earthquakes, drought, wildfires) and human-caused hazards (such as hazardous materials spill, active shooter, pandemic).

Your participation in the planning process is extremely important and vital to the success of the MJHMP. To plan for future natural and human-caused disasters, we need your feedback!

The survey should take approximately 10 minutes to complete and is anonymous. Your information will be kept confidential. The results of the survey will be included within the MJHMP.

Thank you for taking the time to participate in this information-gathering process.

welcome
Culver City & Culver City Unified School District
Hazard Mitigation
free snacks!

Hazard Ranking Activity

Hazard Ranking Activity





come
y Unified School District
**ard
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nacks!
Culver City

Michael Baker
INTERNATIONAL



welcome
Culver City & Culver City Unified School District
Hazard Mitigation
free snacks!

Baker
CONVENTIONAL





Natural Hazard Ranking Activity ★★ Culver City

INSTRUCTIONS: Use the provided dot stickers to select 5 natural hazards you are most concerned about in Culver City.

Hazardous Material Spills Uncontrolled release of hazardous materials from a tanker or transportation vehicle.	Drought Prolonged period of abnormally low rainfall.	Earthquake/Tsami/rupture Sudden shaking of the ground under natural causes.	Explosive Bombs Any bomb that is not a land mine or a nuclear device.	Extreme Heat Average temperature over a long period.	Flood Overflow of water beyond normal boundaries.
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Culver CITY Natural Hazard Ranking Activity ★★ Culver City

INSTRUCTIONS: Use the provided dot stickers to select 5 natural hazards you are most concerned about in Culver City.

Hazardous Material Spills Uncontrolled release of hazardous materials from a tanker or transportation vehicle.	Heavy Rains Period of continuous or heavy precipitation.	Landslide-Mud Flow Flow of soil or rocks down a slope, often as a result of saturation of the soil.	Liquefaction When water-saturated soil loses its strength during an earthquake.	Pandemic Outbreak of a contagious disease over the world or across several continents.	Terrorism/Cyber Attack Intentional act of violence or the threat of violence.	Wildfire Uncontrolled fire in a wooded or grassy area.	Windstorm/Tornado Tornado or other weather-related event.
--	--	---	---	--	---	--	---







Culver City Natural Hazard Ranking Activity

INSTRUCTIONS: Use the provided stickers to select 5 natural hazards you are most concerned about in Culver City.

Hazard	Description	Sticker Count
Wildfires	Uncontrolled fires in forests or grasslands	10
Earthquake	Ground shaking and ground displacement	8
Heavy Rain	Excessive rain that causes flooding	5
Power Outage	Loss of electrical power	3
Gas Leak	Leakage of natural gas	2
Other	Other natural hazards	1

Culver City Natural Hazard Ranking Activity

INSTRUCTIONS: Use the provided stickers to select 5 natural hazards you are most concerned about in Culver City.

Hazard	Description	Sticker Count
Wildfires	Uncontrolled fires in forests or grasslands	10
Earthquake	Ground shaking and ground displacement	8
Heavy Rain	Excessive rain that causes flooding	5
Power Outage	Loss of electrical power	3
Gas Leak	Leakage of natural gas	2
Other	Other natural hazards	1







Culver City What are Community Lifelines? ★ Culver City

Safety & Security Law Enforcement Fire Department Emergency Medical Services Public Safety Community Safety Plans Security Measures Disaster Preparedness Emergency Response Crime Prevention Public Safety Community Safety Plans Security Measures Disaster Preparedness Emergency Response Crime Prevention	Food, Water, Shelter Food Bank Water Treatment Shelter Services Food Security Water Conservation Shelter Services Food Security Water Conservation Shelter Services Food Security Water Conservation	Health & Medical Health Services Medical Facilities Public Health Health Insurance Medical Services Health Services Medical Facilities Public Health Health Insurance Medical Services	
Energy Power Grid Renewable Energy Energy Efficiency Energy Conservation Power Grid Renewable Energy Energy Efficiency Energy Conservation	Communications Internet Access Mobile Phone Service Public Safety Emergency Services Internet Access Mobile Phone Service Public Safety Emergency Services	Transportation Public Transit Roadways Bridges Traffic Management Public Transit Roadways Bridges Traffic Management	Hazardous Materials Hazardous Waste Chemical Safety Environmental Protection Hazardous Waste Chemical Safety Environmental Protection





welcome
Culver City & Culver City Unified School District
Hazard Mitigation
free snacks!

Culver City

Culver City



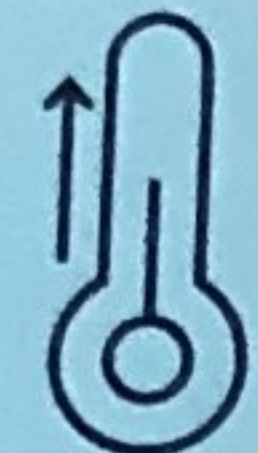
Natural Hazard Ranking Activity

INSTRUCTIONS: Use the provided dot stickers to select 5 natural hazards you are most concerned about in Culver City.



Civil Disturbance

Mass public disturbance involving acts of violence



Climate Change

Long-term shifts in global temperature and weather patterns



Dam/Reservoir Failure

Sudden, rapid, uncontrolled release of impounded water



Drought

Prolonged period of abnormally low rainfall



Earthquake/Fault Rupture

Sudden violent shaking of the ground due to seismic activity



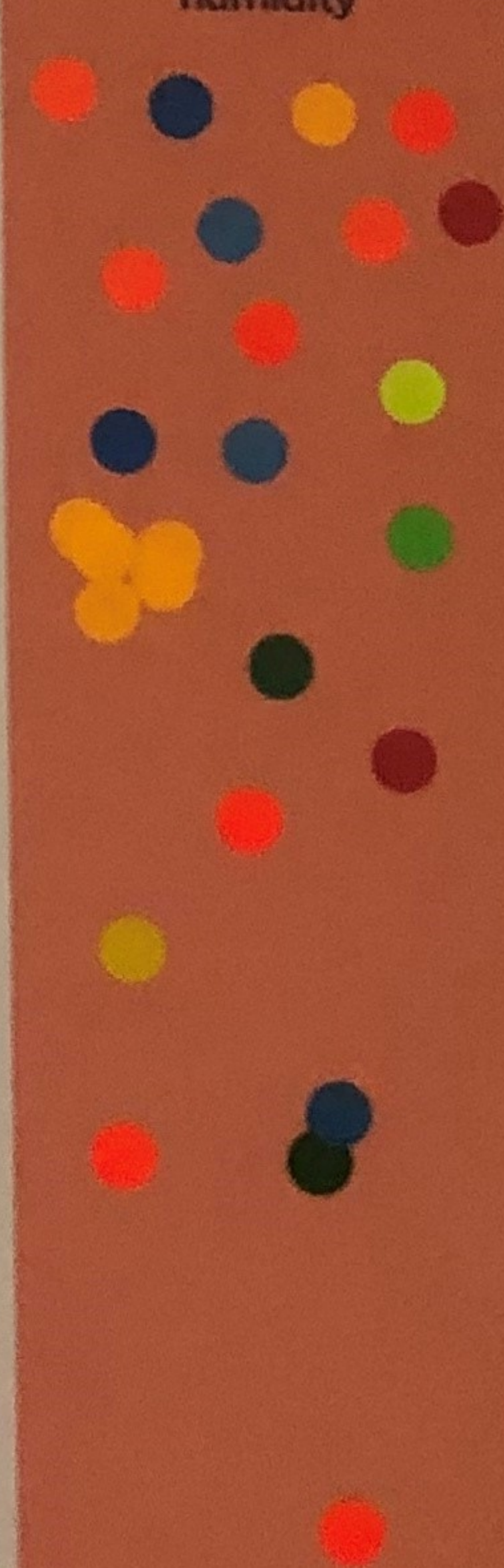
Expansive Soils

Clay soils that shrink and swell due to water presence



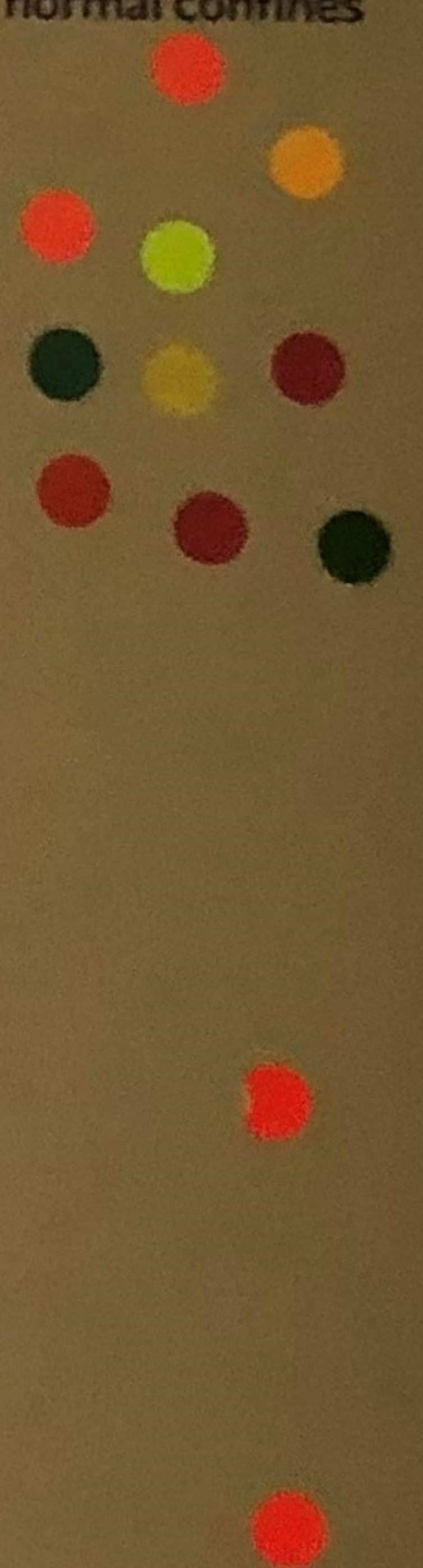
Extreme Heat

Period of high heat and humidity



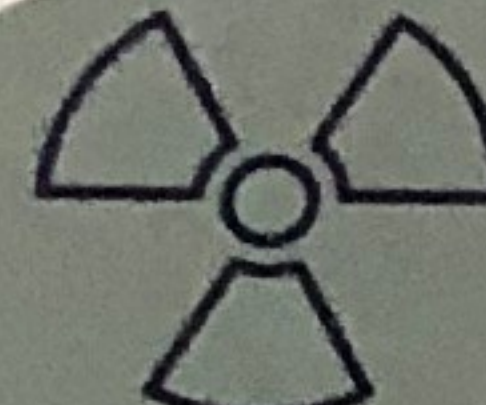
Flood

Overflow of water beyond normal confines



Natural Hazard Ranking Activity

INSTRUCTIONS: Use the provided dot stickers to select 5 natural hazards you are most concerned about in Culver City.

							
Hazardous Materials Spills	Heavy Rains	Landslide/Mud Flow	Liquefaction	Pandemic	Terrorism/Cyber Attack	Wildfire	Windstorm/Tornado
Uncontrolled release of material posing risk to humans or environment	Period of uncharacteristically heavy precipitation	Sliding of earth or debris from a mountain or hillside	When Earth's surface acts as a liquid because of seismic ground shaking	Outbreak of a prevalent disease over the country or world	Violence against civilians in the pursuit of political aims	Uncontrolled fire in forests or grasslands	Period of uncharacteristically strong wind
							

B.3

Public Review Documentation

Home (<https://www.culvercity.org/Home>) / Services (<https://www.culvercity.org/Services>) / Public Safety (<https://www.culvercity.org/Services/Public-Safety>) / Hazard Mitigation Plan

Hazard Mitigation Plan



Participate

WE NEED YOUR INPUT to prepare for future disasters!

Community participation in the Multi-Jurisdictional Hazard Mitigation Plan planning process is vital to the success of the Plan update.

The Draft Plan Update is now available for review. Questions and comments are welcomed and may be submitted no later than October 9, 2023.

to joe.susca@culvercity.org (<mailto:joe.susca@culvercity.org?subject=joe.susca%40culvercity.org>).

Current Plan

The City of Culver City (City) and the Culver City Unified School District (CCUSD) prepared a Multi-Jurisdictional Hazard Mitigation Plan ("Plan" or "MJHMP") in 2017. The MJHMP was approved by the California Office of Emergency Services (Cal OES) and the Federal Emergency Management Agency (FEMA) on June 1, 2017.

[View the existing Multi-Jurisdictional Hazard Mitigation Plan](#) ^(PDF, 25MB) [\(/files/assets/public/v/1/documents/planning-and-development/multijurisdictionalhazardm.pdf\)](#).

Plan Update

The City of Culver City (City) and the Culver City Unified School District (CCUSD) recently initiated a comprehensive update to the existing Multi-Jurisdictional Hazard Mitigation Plan ("Plan" or "MJHMP").

Why does the Hazard Mitigation Plan need to be updated?

Natural and human-made hazard risks change and evolve. Regular updates to Hazard Mitigation Plans are necessary to document recent incidents in the City and region, highlight any local or regional trends, and track ongoing progress on current or prior mitigation actions.

FEMA-approved Hazard Mitigation Plans remain active for five years. The current Culver City/CCUSD MJHMP approved in 2017 must be updated to remain active. Additionally, FEMA issued new policy guidance regarding the preparation and approval of Hazard Mitigation Plans, so the update will be in compliance with all new state and federal regulatory requirements.

How is a Hazard Mitigation Plan developed?

The Hazard Mitigation Plan will identify hazards specific to Culver City and the CCUSD jurisdiction, assess vulnerability, and mitigation actions. Additionally, the Plan will identify how its implementation will be monitored, evaluated, and updated with year cycle.

- Hazard Profiles: type, location, extent, previous occurrences, probability of future events.
- Vulnerability Assessment: impacts of hazards, vulnerability to each hazard, repetitive loss, potential dollar losses
- Mitigation Strategies: overarching goals, specific actions, and prioritization of those actions to reduce hazard impacts

The Hazard Mitigation Plan is developed from a process-oriented approach, utilizing the experience of community partners neighboring cities and Los Angeles County, as well as utilities, hospitals, large employers, outside agencies, and nonprofit organizations. These community partners provide key stakeholder input on the hazard profiles, vulnerability assessment, and mitigation strategies, which is documented and incorporated into the Plan. Public participation is also an important component of the planning process and will include opportunities for the community to provide input and then review/comment on draft documents.

Once completed, the Multi-Jurisdictional Hazard Mitigation Plan will be submitted to Cal OES and FEMA for review and conditional approval. Once conditional approval is received from Cal OES and FEMA, the Plan is approved locally by the Culver City Council and the CCUSD Board.

How will the public be involved in the Planning Process?

Public participation is an important component in the planning process. In addition, community participation helps raise awareness of the hazards facing Culver City and an understanding of the actions needed to mitigate those hazards.

Opportunities for the community to provide input, ask questions, and review/comment on draft documents will be provided throughout the planning process, including an online survey, community event, and online access to draft documents. Public comments, questions, ideas, and concerns will have a significant role in the Plan's preparation.

Learn More

What is the Purpose of a Hazard Mitigation Plan?

A Hazard Mitigation Plan presents a strategy for reducing the vulnerability of the City and CCUSD to the impacts of natural hazards such as wildfire, earthquakes, and drought and human-caused hazards (hazardous materials spill, active shooter, pandemic). The Plan identifies the types of hazards that threaten our community, evaluates our vulnerability to those threats, and identifies projects, actions, and partnerships for the City and CCUSD to undertake to become more resilient to hazards in the future.

What is a Hazard Mitigation Plan?

The Hazard Mitigation Plan is a framework that guides our community in making decisions and developing policies to reduce and eliminate risk to life and property. The plan identifies the types of hazards that threaten our community, evaluates our vulnerability to those threats, and outlines a strategy to reduce or eliminate the risk posed by those threats.

Why is a Hazard Mitigation Plan Important?

The Federal Disaster Mitigation Act of 2000 (DMA 2000) requires that a community have an approved hazard mitigation plan in order to be eligible to apply for and receive FEMA hazard mitigation funds. Receipt of these funds can be critical to implementation of identified hazard mitigation programs.

Participate

DRAFT PLAN UPDATE



<https://www.culvercity.org/City-Hall/Departments/Public-Safety/Hazard-Mitigation-Plan>

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Contact Us

Joe Susca

Public Works Department

[\(310\) 253-5636 \(tel:3102535636\)](tel:3102535636).

[joe.susca@culvercity.org \(mailto:joe.susca@culvercity.org\)](mailto:joe.susca@culvercity.org).

Related Information

[Public Works Department \(https://www.culvercity.org/City-Hall/Departments/Public-Works\)](https://www.culvercity.org/City-Hall/Departments/Public-Works).

[CCUSD \(https://www.ccusd.org/\)](https://www.ccusd.org/).

[Fire Department \(https://www.culvercity.org/Services/Public-Safety/Fire-Department\)](https://www.culvercity.org/Services/Public-Safety/Fire-Department).

[Police Department \(https://www.culvercity.org/Services/Public-Safety/Police-Department\)](https://www.culvercity.org/Services/Public-Safety/Police-Department).

Marchese, Casey

From: Susca, Joe <joe.susca@culvercity.org>
Sent: Thursday, September 21, 2023 8:38 AM
To: Anderson, Noelle; mikekorgan
Subject: EXTERNAL: Fw: Courtesy Copy: We need Your Feedback! Review a Draft of the Hazard Mitigation Plan

Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL EMAIL

Noelle/Mike, I just released the notice inviting the community to respond to the draft Plan.

Noelle, below is a receipt of the notice sent for your file.

Mike, feel free to create your own notification inviting parents to review the Plan by linking it to the City's webpage below. If you do so, then please let Noelle and I know about the number of recipients you sent it to and when.

Joe Susca, Senior Management Analyst
Public Works Department-Administration
9770 Culver Boulevard
Culver City, CA 90232
310-253-5636

Culver CITY

From: City of Culver City <culvercity@public.govdelivery.com>
Sent: Thursday, September 21, 2023 8:33 AM
Subject: Courtesy Copy: We need Your Feedback! Review a Draft of the Hazard Mitigation Plan

This is a courtesy copy of an email bulletin sent by Joe Susca.

This bulletin was sent to the following groups of people:

Subscribers of Hazard Mitigation Plan, Public Notifications, or Sustainability/Environmental Issues (incl. Oil Drilling/Fracking) (3863 recipients)



Culver
CITY

COMMUNITY FEEDBACK



Review a Draft of the Hazard Mitigation Plan

[We need your feedback!](#)

The Federal Emergency Management Agency requires every community to update their hazard mitigation plan once every five years to remain eligible to receive grant funding to implement the mitigation projects and programs it contains.

The City of Culver City (City) and the Culver City Unified School District (CCUSD) have completed a draft update to their Hazard Mitigation Plan (Plan).

[View the Draft Hazard Mitigation Plan here.](#)

The Plan provides a framework for our community to reduce its vulnerability to the impacts of natural hazard events such as earthquakes, drought, and wildfires and human-caused hazards (hazardous material spills, active shooters, pandemics). The purpose of mitigation planning is to identify policies and to take actions that can be implemented over the long term to reduce risk and future losses when an emergency or disaster occurs. Mitigation plans form the foundation for a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage.

Your participation in the planning process is extremely important and vital to the success of the Plan update.

[Please Complete Your Review the Draft Plan before October 9, 2023](#)

In order to prepare for future natural and human-caused disasters, we need your feedback **before October 9, 2023!** Please submit any comments or questions regarding the Draft Plan via e-mail to: joe.susca@culvercity.org. The feedback you provide will help us modify the draft Plan to better identify hazards of concern and to implement projects and programs focused on reducing the risk to community facilities.



STAY
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 SHARE

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Marchese, Casey

From: Susca, Joe <joe.susca@culvercity.org>
Sent: Thursday, September 21, 2023 1:37 PM
To: Anderson, Noelle
Subject: EXTERNAL: Fw: Bulletin Detail Report: We need Your Feedback! Review a Draft of the Hazard Mitigation Plan

Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL EMAIL

Noelle, GovDelivery has prepared the following delivery report for the public notice for your file.

Joe Susca, Senior Management Analyst
Public Works Department-Administration
9770 Culver Boulevard
Culver City, CA 90232
310-253-5636



From: City of Culver City <culvercity@public.govdelivery.com>
Sent: Thursday, September 21, 2023 12:33 PM
To: Susca, Joe <joe.susca@culvercity.org>
Subject: Bulletin Detail Report: We need Your Feedback! Review a Draft of the Hazard Mitigation Plan

Having trouble viewing this email? [View this report in your account.](#)








Report Generated: 09/21/2023 12:33 PM PDT

This report automatically generates after a bulletin is sent. [View the Bulletin Detail Report online](#) to see the most recent performance metrics for this bulletin.

Subject: We need Your Feedback! Review a Draft of the Hazard Mitigation Plan
Sent: 09/21/2023 08:33 AM PDT
Sent By: joe.susca@culvercity.org


Sent To: Subscribers of Hazard Mitigation Plan, Public Notifications, or Sustainability/Environmental Issues (incl. Oil Drilling/Fracking)

3,863 Recipients

- ✓  Email
- X  SMS
- X  Facebook
- X  Twitter
- ✓  RSS

93.9% Delivered

2% Pending
4% Bounced
14% Open Rate
1% Click Rate

Email Delivery Stats															
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Delivery Metrics - Details
3,863 Total Sent
3,627 (94%) Delivered
86 (2%) Pending
150 (4%) Bounced
2 (0%) Unsubscribed

Bulletin Analytics
702 Total Opens
490 (14%) Unique Opens
62 Total Clicks
50 (1%) Unique Clicks
21 # of Links

Delivery and Performance							
Channel	Progress	Percent Delivered	Number of Recipients	Number Delivered	Opened / Unique	Bounced / Failed	Unsubscribed
Email Bulletin	Sending...	92.6%	3,201	2,965	490 / 16.5%	150	2
SMS Message	Delivered	0.0%	0	0	n/a	0	n/a

Bulletin Link Overview

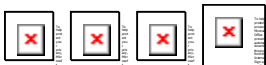
Link URL	Unique Clicks	Total Clicks
https://www.culvercity.org/HAZARDMITIGATIONPLAN	14	18
https://www.culvercity.org/hazardmitigationplan	12	17
https://www.surveymonkey.com/r/PSRYHY6	8	11
https://public.govdelivery.com/accounts/CACULVER/subscriber/edit?prefere...	2	3
https://public.govdelivery.com/accounts/CACULVER/subscriber/edit?prefere...	2	2
https://translate.google.com/translate?hl=en&sl=en&tl=es&u=https%3A%2F%2...	2	2
https://www.linkedin.com/company-beta/38715/	1	1
https://insights.govdelivery.com/Communications/Subscriber_Help_Center	1	1
https://www.youtube.com/channel/UCJiFiwX9o1v7iEUqMwAMWFA	1	1
https://twitter.com/CulverCityGov	1	1
https://www.facebook.com/CityOfCulverCity/	1	1
https://www.culvercity.org/Contact-Us	1	1
https://www.culvercity.org	1	1
http://www.culvercity.org/	1	1
https://www.instagram.com/CulverCityGov/	1	1
https://subscriberhelp.granicus.com/	1	1
https://nextdoor.com/agency/city-of-culver-city	0	0
https://content.govdelivery.com/accounts/CACULVER/bulletins/3711ae7?reqf...	0	0

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STAY CONNECTED:



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Marchese, Casey

From: Susca, Joe <joe.susca@culvercity.org>
Sent: Monday, September 25, 2023 5:49 PM
To: Anderson, Noelle
Cc: mikekorgan
Subject: EXTERNAL: Free Publicity

Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL EMAIL

Published by "Culver City Crossroads", a local news outlet:

[City Looks for Feedback on Emergency Management Plan](#)

Culver City Crossroads

The City of **Culver City** (City) and the **Culver City** Unified School District (CCUSD) have completed a draft update to their Hazard Mitigation Plan.

Joe Susca, Senior Management Analyst
Public Works Department-Administration
9770 Culver Boulevard
Culver City, CA 90232
310-253-5636

Culver CITY

The City of Culver City keeps a copy of all E-mails sent and received for a minimum of 2 years. All retained E-mails will be treated as a Public Record per the California Public Records Act, and may be subject to disclosure pursuant to the terms, and subject to the exemptions, of that Act.

City Looks for Feedback on Emergency Management Plan



The Federal Emergency Management Agency requires every community to update their hazard mitigation plan once every five years to remain eligible to receive grant funding to implement the mitigation projects and programs it contains. The City of Culver City (City) and the Culver City Unified School District (CCUSD) have completed a draft update to their Hazard Mitigation Plan.

The Plan provides a framework for our community to reduce its vulnerability to the impacts of natural hazard events such as earthquakes, drought, and wildfires and human-caused hazards (hazardous material spills, active shooters, pandemics). The purpose of mitigation planning is to identify policies and to take actions that can be implemented over the long term to reduce risk and future losses when an emergency or disaster occurs. Mitigation plans form the foundation for a community's long-term strategy to reduce disaster losses and break the cycle of disaster damage, reconstruction, and repeated damage.

Your participation in the planning process is extremely important and vital to the success of the Plan update.

Please Complete Your Review the Draft Plan before October 9, 2023

In order to prepare for future natural and human-caused disasters, we need your feedback before October 9, 2023! Please submit any comments or questions regarding the Draft Plan via e-mail to: joe.susca@culvercity.org. The feedback you provide will help us modify the draft Plan to better identify hazards of concern and to implement projects and programs focused on reducing the risk to community facilities.

[View the Draft Hazard Mitigation Plan here.](#)

City of Culver City

Marchese, Casey

From: Susca, Joe <joe.susca@culvercity.org>
Sent: Thursday, September 21, 2023 2:39 PM
To: Anderson, Noelle; Parra, Christine
Subject: EXTERNAL: Fw: Hazard Mitigation Plan

Follow Up Flag: Follow up
Flag Status: Completed

EXTERNAL EMAIL

We have our first comment to the Hazard Mitigation Plan Update below.

Christine, while I don't agree with Jeff's conclusion, please share his thoughts below with the Police Department staff member you feel is best suited to respond to it.

Noelle, feel free to jump in and comment in response.

Joe Susca, Senior Management Analyst
Public Works Department-Administration
9770 Culver Boulevard
Culver City, CA 90232
310-253-5636



From: Jeff Schwartz <jeff.lawrence.schwartz@gmail.com>
Sent: Thursday, September 21, 2023 1:32 PM
To: Susca, Joe <joe.susca@culvercity.org>
Subject: Hazard Mitigation Plan

EXTERNAL: This email originated from outside of the organization. Do not click links or open attachments unless you confirm the content is safe.

Thanks for soliciting community input on this document!

I ask that this section on p. 4-68 be altered:

"Civil unrest incidents occur throughout the nation for varying reasons and causes. In the current political and social climate, it is reasonable to assume that lawful protests and lawful assembly will continue. However, lawful assembly can quickly erupt into civil unrest making it difficult to predict when intervention from law enforcement will be necessary. The presence of law enforcement at protests is a standard preemptive measure to mitigate civil unrest. Additionally, increased vigilance and increased intelligence gathering methods can

be used by law enforcement in the City to better prepare for gatherings that may result in civil disturbance/civil unrest. Because of the nature of civil disturbance and civil unrest and the linkages to political, social, racial and or environmental movements, the probability and likelihood of future occurrences is considered medium."

As-is, it authorizes police surveillance and n of social movements. It does not recognize that every significant instance of civil unrest in Los Angeles has been in response to aggressive policing. i.e. 1965, 1992, and 2020. Please revise this section so that it cannot be used to justify an expansion of police power but rather recognizes the harmful historical role of police in these contexts.

Furthermore, I question whether this section makes sense without being more specific about different forms of "civil unrest." Contrast the fatal neo-Nazi rally in Charlottesville, Kyle Rittenhouse' murder of protestors in Kenousha, and recent violent disruptions of school board meetings in Glendale and elsewhere, where police worked to protect the "free speech" of Proud Boys and other right-wing terror groups with how police have handled progressive social movements throughout US history. Most recently, Beverly Hills police used the threat of harassment by anti-abortion extremists to deter a women's health clinic from opening in that city, rather than finding a way to protect that essential business from harassment and violence (<https://www.latimes.com/opinion/story/2023-08-24/editorial-hypocrisy-in-beverly-hills>).

Police have militarized continuously since the 1960s and in 2020 we saw their enthusiasm to use those techniques and technologies against critics of their power.

In short, while this policy sounds neutral, by endorsing police control of protests and surveillance of social movements, it gives them inappropriate power over public life, allowing them to impose their reactionary worldview on our diverse and progressive community through violence. Please do not reflexively reinforce this oppressive status quo.

Thanks again!

Jeff Schwartz

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Marchese, Casey

From: Susca, Joe <joe.susca@culvercity.org>
Sent: Monday, September 25, 2023 7:59 AM
To: Anderson, Noelle
Subject: EXTERNAL: Fw: Culver City Hazard Mitigation plan: Community Feedback

Follow Up Flag: Follow up
Flag Status: Completed

EXTERNAL EMAIL

Noelle, please consider Jon's desired changes and let me know your thoughts about them.

Joe Susca, Senior Management Analyst
Public Works Department-Administration
9770 Culver Boulevard
Culver City, CA 90232
310-253-5636



From: Susca, Joe <joe.susca@culvercity.org>
Sent: Monday, September 25, 2023 7:57 AM
To: Jon Melvin <jonm@vi-i.com>
Subject: Re: Culver City Hazard Mitigation plan: Community Feedback

Thank you for your feedback Jon. I will share these desired statistical and formatting changes with the team and ask that they consider them.

Joe Susca, Senior Management Analyst
Public Works Department-Administration
9770 Culver Boulevard
Culver City, CA 90232
310-253-5636



From: Jon Melvin <jonm@vi-i.com>
Sent: Sunday, September 24, 2023 5:12 PM
To: Susca, Joe <joe.susca@culvercity.org>
Subject: Culver City Hazard Mitigation plan: Community Feedback

EXTERNAL: This email originated from outside of the organization. Do not click links or open attachments unless you confirm the content is safe.

Thank you. A very impressive, and very comprehensive, document.

I wonder if it can be summarized in a more quantitative document

Hazard, #people affected, \$ vulnerable, % chance per year of occurring, mitigation, impact of mitigation on #people and \$, estimated time to complete mitigation, vulnerability per year until mitigation completed

Hazard, #people affected, \$ vulnerable, % chance per year of occurring, mitigation, impact of mitigation on #people and \$, estimated time to complete mitigation, vulnerability per year until mitigation completed

...

Also a chart of

Location of residence in culver city, hazard, , % chance of occurring, personal danger, \$ danger

Location of residence in culver city, hazard, , % chance of occurring, personal danger, \$ danger

...

Overall, thanks, a truly amazing reference to keep on hand as a Culver City resident!

Jon Melvin

jonm@vi-i.com

Blair Hills [former neighborhood co-president]

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Marchese, Casey

From: Susca, Joe <joe.susca@culvercity.org>
Sent: Monday, September 25, 2023 8:18 AM
To: Anderson, Noelle; Blackburn, Rick B
Subject: EXTERNAL: Fw: Hazard mitigation plan comments

Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL EMAIL

1. Rick, we released a draft of the Hazard Mitigation Plan to the public for review. Below, we received a comment about installation of auto-shutoff valves on natural gas pipes. Can you please comment about how many pipes are/are not equipped with shut-off valves in Culver City? Rick, do you agree with Chieh-Ru Chu that more shutoff valves should be installed in the City's high-wildfire zones?
2. Noelle, we already have several grey water projects contained in the Blue Ocean stormwater capture and reuse projects, so I believe we are well covered in this regard so I don't believe a response is necessary, other than letting Chieh-Ru Chu know where to view the mitigation measures.
3. Noelle, these ideas impact a few different City departments but before I share these with them, I wanted to obtain your view of them first. Specifically, have other HMP's contained similar mitigation measures and should we do the same? Have we already included these, only worded them a bit differently?

Thank you,

Joe Susca, Senior Management Analyst
Public Works Department-Administration
9770 Culver Boulevard
Culver City, CA 90232
310-253-5636

Culver CITY

From: Chieh Ru Chu <chiehru@icloud.com>
Sent: Sunday, September 24, 2023 3:11 PM
To: Susca, Joe <joe.susca@culvercity.org>

Cc: Joanna Chen <jojochen60@sbcglobal.net>

Subject: Hazard mitigation plan comments

EXTERNAL: This email originated from outside of the organization. Do not click links or open attachments unless you confirm the content is safe.

1) Per section 3.6.4 there is only one major gas transmission line into Culver City, therefore CC should require the gas company to install an automatic gas shut off, since 1/4 of all fires after a major earthquake are caused by gas leaks. If this is not feasible, then all buildings within "very high fire hazard zone" should be required to install an automatic gas shut off.

2) Drought mitigation: Install grey water system for all parks and city properties.

3) Heat mitigation: more trees should be planted (with help from grey water), and solar reflective coatings should be applied on street surfaces and city building roofs. Residents should be encouraged to install cool-roofs, or apply solar reflective coating.

Sincerely,

Chieh-Ru Chu

Culver City resident since 1989.

The City of Culver City keeps a copy of all E-mails sent and received for a minimum of 2 years. All retained E-mails will be treated as a Public Record per the California Public Records Act, and may be subject to disclosure pursuant to the terms, and subject to the exemptions, of that Act.

Marchese, Casey

From: Susca, Joe <joe.susca@culvercity.org>
Sent: Monday, October 9, 2023 3:26 PM
To: Anderson, Noelle
Subject: EXTERNAL: FW: Hazard Mitigation Plan comments

Follow Up Flag: Follow up
Flag Status: Flagged

EXTERNAL EMAIL

This just in

Joe Susca | *Senior Management Analyst* – Public Works Department
City of Culver City | 310.253.5636 | joe.susca@culvercity.org
City Hall: 9770 Culver Boulevard in Culver City, CA 90232

From: Joanna Chen <jojochen60@sbcglobal.net>
Sent: Monday, October 9, 2023 1:56 PM
To: Susca, Joe <joe.susca@culvercity.org>
Subject: Hazard Mitigation Plan comments

EXTERNAL: This email originated from outside of the organization. Do not click links or open attachments unless you confirm the content is safe.

- 1) 2.1.2 pg 2-3 How about Culver Palms Meals on Wheels?
- 2) Exhibit 3-5: pg 3-20: Title, legend? And all subsequent nice pictures with added hazards. Noticed they are pics from "Risk Assessment/Vulnerability Overview" starting on page 364, same?
- 3) Per section 3.6.4, there is only one major gas transmission line into Culver City, therefore CC should require the gas company to install an automatic gas shut off, since 1/4 of all fires after a major earthquake are caused by gas leaks. If this this not feasible, then all buildings within "very high fire hazard zone" should be required to install an automatic gas shut off.
- 4) Drought mitigation: Install grey water system for all parks and city properties.
- 5) Heat mitigation: more shady trees (not palm trees) should be planted (with help from grey water), and solar reflective coatings should be applied on street surfaces and city building roofs. Residents should be encouraged to install cool-roofs, or apply solar reflective coating; native gardens

Joanna (Jojo) Chen
jojochen60@sbcglobal.net
Culver City resident since 1997

The City of Culver City keeps a copy of all E-mails sent and received for a minimum of 2 years. All retained E-mails will be treated as a Public Record per the California Public Records Act, and may be subject to disclosure pursuant to the terms, and subject to the exemptions, of that Act.

APPENDIX C

Mitigation Action Plan: Drought, Wildfire, & Flood

An aerial photograph of a coastal city, likely Culver City, California, showing a dense urban grid, a major highway interchange, and a large body of water in the background. The image is overlaid with a semi-transparent dark blue filter.

Mitigation Action Plan

Drought, Wildfire, & Flood

Recommendations for the Multi-Jurisdictional Hazard Mitigation Plan

MAY 2022

SUBMITTED TO:

City of Culver City
Public Works Department
9505 W. Jefferson Blvd
Culver City, CA 90232

PREPARED BY:

Blue Ocean Civil Consulting
Michael Baker International

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Appendices

Appendix A – Concept Plans

Appendix B – West Basin Municipal Water District References

1 BACKGROUND

The City of Culver City (City) and Culver City Unified School District (CCUSD) developed the Multi-Jurisdictional Hazard Mitigation Plan (MJHMP) in April 2017 to identify natural hazard risks and for use as a tool to make decisions regarding mitigation actions and resources. As part of the MJHMP, a Steering Committee (with members from the City, CCUSD, and external partners), identified and prioritized potential hazards, as well as mitigation actions to reduce future loss of life and property resulting from disasters. Mitigation actions are intended to increase resiliency, allowing the City and CCUSD to return to “normal” sooner, with fewer impacts to people, facilities, and infrastructure. Based on rankings, drought and wildfire are identified as a high priority, and flood hazard is identified as a medium priority.

The City was awarded a Federal Emergency Management Agency (FEMA) grant administered by Cal OES to develop this Mitigation Action Plan (MAP). The purpose of the MAP is to provide the City and CCUSD with a prioritized list of mitigation actions to address drought, wildfire, and flood hazards in the upcoming MJHMP update process. The prioritization effort included development of meaningful metrics related to drought, flood, and wildfire hazards that can be compared across potential project locations at 34 identified Critical Facilities. These Critical Facilities include police and fire stations, public works buildings, sewer and water facilities, hospitals, schools, and parks. They provide essential products and services as well as public safety, emergency response, and/or disaster recovery functions to the general public.

This MAP assumes the reader has a working knowledge of the City’s MJHMP and provides a brief summary of drought, wildfire, and flood hazards, as well as a detailed summary of the prioritization metrics identification and method, and a summary of prioritized projects and concept plans. The MAP builds off the work done as part of the City’s Stormwater Quality Master Plan (SWQMP), and both plans identify several of the same high priority project locations at Critical Facilities. An online dashboard was also developed for the MJHMP as part of this effort and is available by request.

This MAP is intended to include input from the Steering Committee and can be considered for inclusion in the next MJHMP update, as appropriate.

2 HAZARD ASSESSMENT SUMMARY

Section 4.0 of the adopted MJHMP includes details of the hazard assessment, prioritization, and profiles. The following sections will summarize the hazard profiles for drought, wildfire, and flood.

2.1 Drought

A drought is a period of drier-than normal conditions that can result in decreases in water supplies. If dry weather persists and water-supply problems develop, the dry period can become a drought. Although climate is a primary contributor to hydrological drought, other factors such as changes in land use, land degradation, and human-made constructions (e.g., dams or diversions) can affect the hydrological characteristics of a region.

Although historic droughts in California occur periodically, recent droughts have prompted water use restrictions and legislation that apply to urban water use and supply:

- On January 4, 2022, the State Water Board adopted new temporary regulations that would prohibit overwatering yards, washing cars without a shutoff nozzle, hosing down sidewalks or water grass within 48 hours after rainfall. The new rules also prohibit using potable water to irrigate grass on public street medians or landscaped areas between street and sidewalks. Fines for non-compliance are \$500 per day and can be reported by the public.
- Drought executive orders have been signed into effect on April 21, 2021, May 10, 2021, June 8, 2021, and October 19, 2021. Most recently, on March 28, 2022, the newest executive order includes provisions for the State Water Resources Control Board to consider adopting emergency regulations that require Urban Water Suppliers to assess water demand, implement shortage response actions and contingency plans, and to define “non-functional” turf and ban irrigation of non-functional turf in the commercial, industrial, and institutional sectors.

The City is served by Golden State Water Company (GSWC), obtaining water by purchasing imported water supplies from the West Basin Municipal Water District (WBMWD). The WBMWD has invested in programs to increase recycled water supplies for irrigation, industrial use, and groundwater replenishment, find cost-effective water efficiencies and conservation, explore desalinated groundwater for potable use, and district-wide water education and outreach. The upcoming WBMWD Kenneth Hahn Recycled Water Pipeline project would provide recycled water to serve several of the Critical Facilities located in the City.

Although efforts to expand regional sources of water storage and groundwater are in progress, the City remains vulnerable to drought conditions. Facilities that would be vulnerable to drought include open space, parks, schools, and recreation facilities, though drought conditions could affect operations at all listed Critical Facilities. Drought conditions may cause loss of natural vegetations, potentially worsening the adverse effects of brushfires and floods, and may also cause economic impacts for commercial and residential property owners from landscape damage and tree loss due to water shortages or rationing. As of March 29, 2022, Los Angeles County is experiencing severe to exceptional drought as shown in Figure 1.

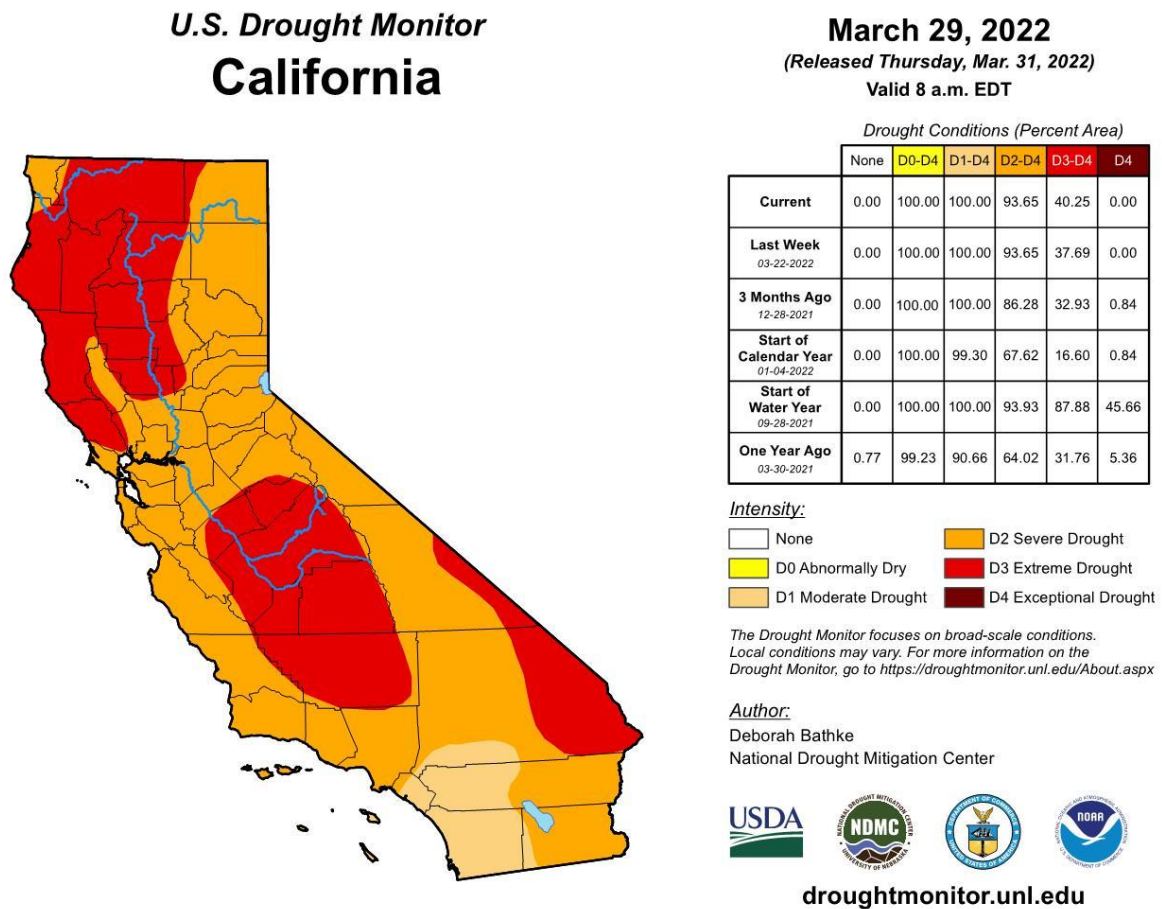


Figure 1 - Current Drought Conditions

2.2 Wildfire

Fires occur in wildland and urban areas and are a regular feature of California’s ecosystems. The eastern portion of the City is considered a wildland-urban interface area, including portions of the Blanco/Culver Crest neighborhood, and are designated as a Very High Fire Hazard Severity Zone (VHFHSZ) by Cal Fire. Although none of the Critical Facilities are located within the VHFHSZ, projects that can be implemented at these locations to address drought and flood could indirectly address wildfire risks. From a wholistic water resources perspective, projects that implement stormwater capture and/or recycled water replacement uses can help the City reduce potable irrigation demand to be more resilient

during drought conditions while continuing to adequately care for established vegetation and trees. Figure 2 shows the CalFire Hazard Severity Map.

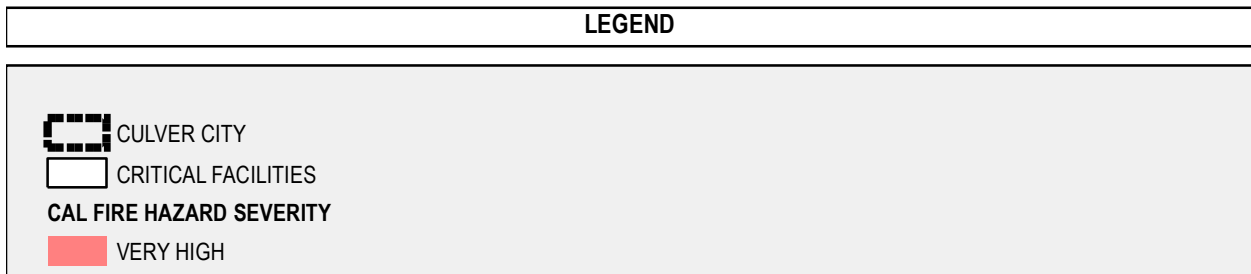
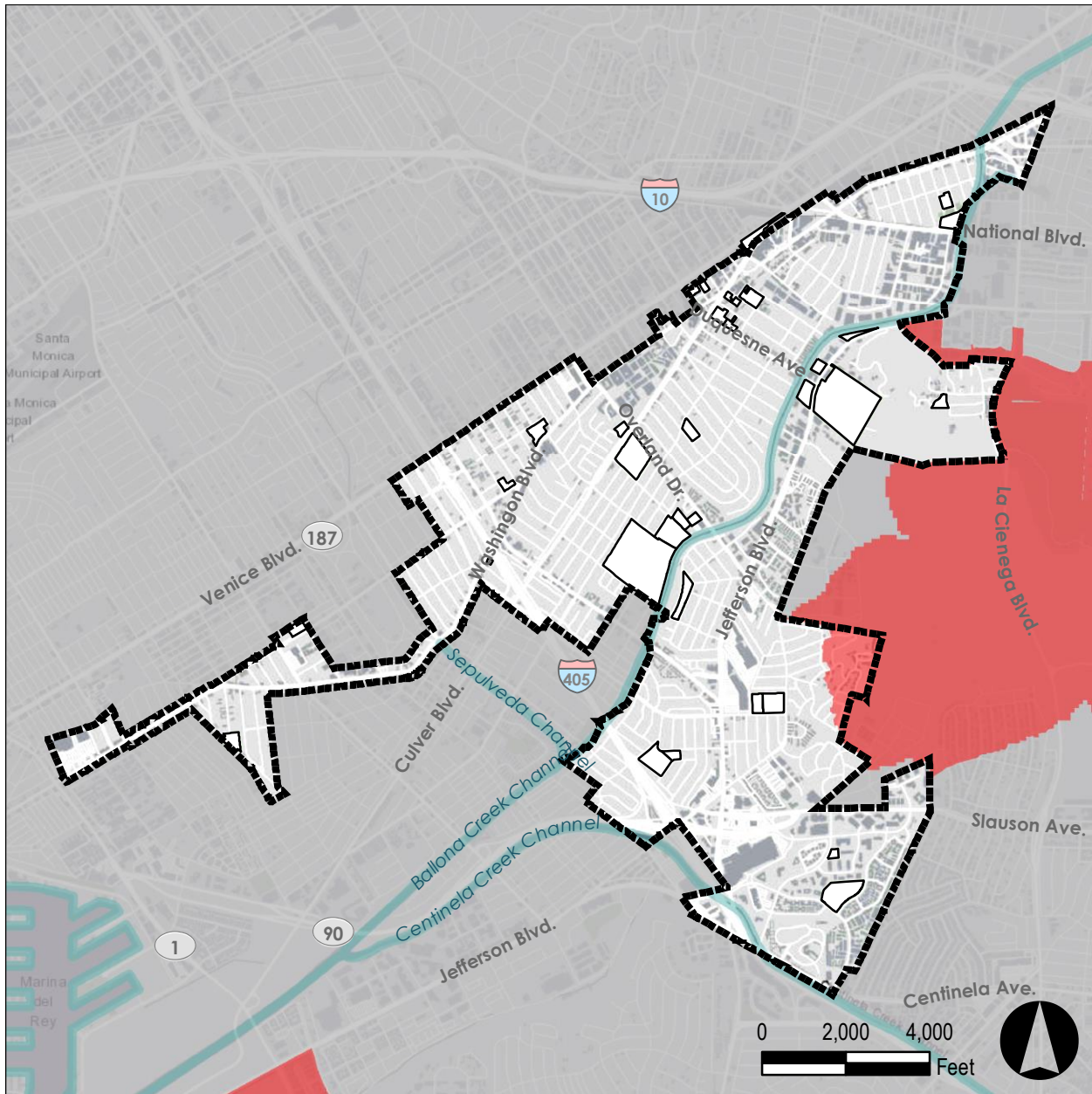


Figure 2 - CALFIRE Hazard Severity Map

2.3 Flood

The main waterway in the City is Ballona Creek, which runs approximately nine miles from the Mid-Wilshire neighborhood of Los Angeles through the City and out to the Pacific Ocean at Marina Del Rey. Ballona Creek was channelized, straightened and deepened in the 1930s to control flooding. The City has multiple storm drainage systems that discharge into Ballona Creek. A small portion of the City drains to the Marina del Rey Harbor.

FEMA Flood Insurance Rate Maps (FIRMs) for the City and surrounding areas reflect flood risks from the Ballona Creek or nearby waterways such as Centinela Creek and Sepulveda Channel. Flood risk from a riverine flooding source is introduced when the waterway receives more water than its conveyance capacity. Figure 3 shows the Special Flood Hazard Areas (SFHAs) in the City. Designated Zone AO with a one-foot depth indicates that there is a one percent chance each year that flooding will occur to a depth of one foot. Zone A indicates that there is a one percent chance each year that the area will experience flooding of more than one foot deep, but the depth has not been studied in detail.

Another type of flooding that is not reflected in available FEMA FIRMs is urban flooding. FEMA defines urban flooding as “the inundation of property in a built environment, particularly in more densely populated areas, caused by rain falling on increased amounts of impervious surfaces and overwhelming the capacity of drainage systems.” Loss of pervious surfaces in metropolitan areas due to population growth, combined with aging infrastructure and changing weather patterns can result in flooding risk that may not be tied to FEMA-defined floodplains. Urban flooding can occur during smaller, more frequently occurring rainfall events, as compared to the one-percent annual chance storm event. Ponding and localized flooding of less than one foot deep can impact a City’s economy, inhibit emergency response, and cause significant property damage. This MAP included a high-level urban flood study of the 10-year storm event (10% chance of occurring each year, 4.0 inches of rainfall in 24 hours) and the 100-year storm event (1% chance of occurring each year, 6.3 inches of rain in 24 hours) to define relative flood risk as a metric for prioritization. Results of the flood studies are shown in Figure 5 and Figure 6, and details of the flood study are included in Section 3.2.3. The results indicate where urban flooding may be more likely during a significant rain event when the storm drain system may be at capacity.

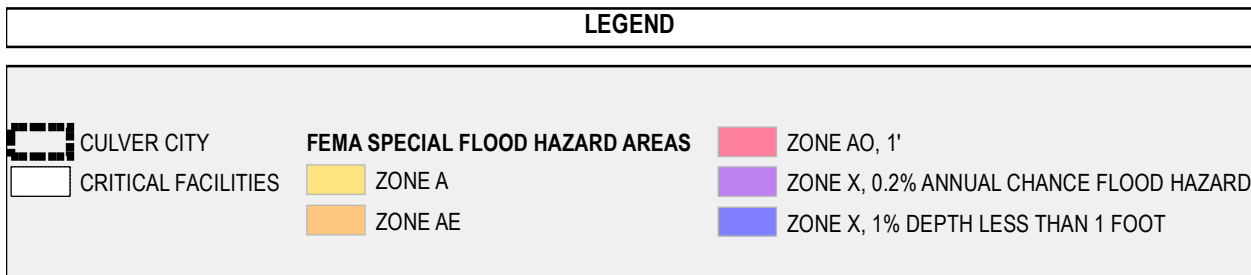
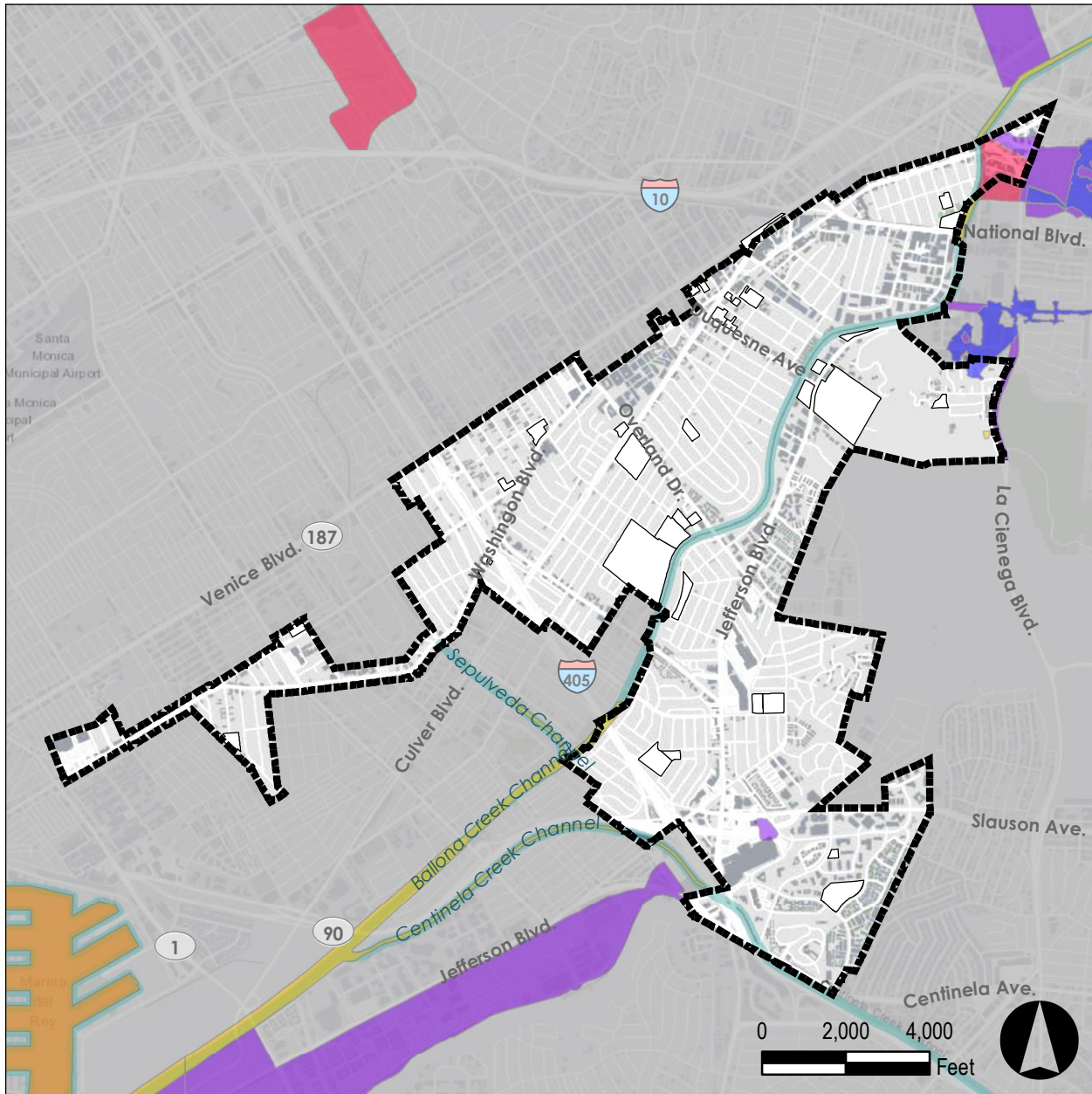


Figure 3 - FEMA Special Flood Hazard Areas

3 PROJECT PRIORITIZATION METHODOLOGY

The MJHMP identified 31 City Critical Facilities and 16 CCUSD Critical Facilities throughout the City. After an initial screening of these facilities for project potential, a list of 34 Critical Facilities were identified as potential project locations. Metrics were developed to evaluate and compare site suitability and potential impact that stormwater management projects may have on drought, wildfire, and flood hazard reduction.

3.1 Critical Facilities

Figure 4 shows the distribution of Critical Facility locations throughout the City.

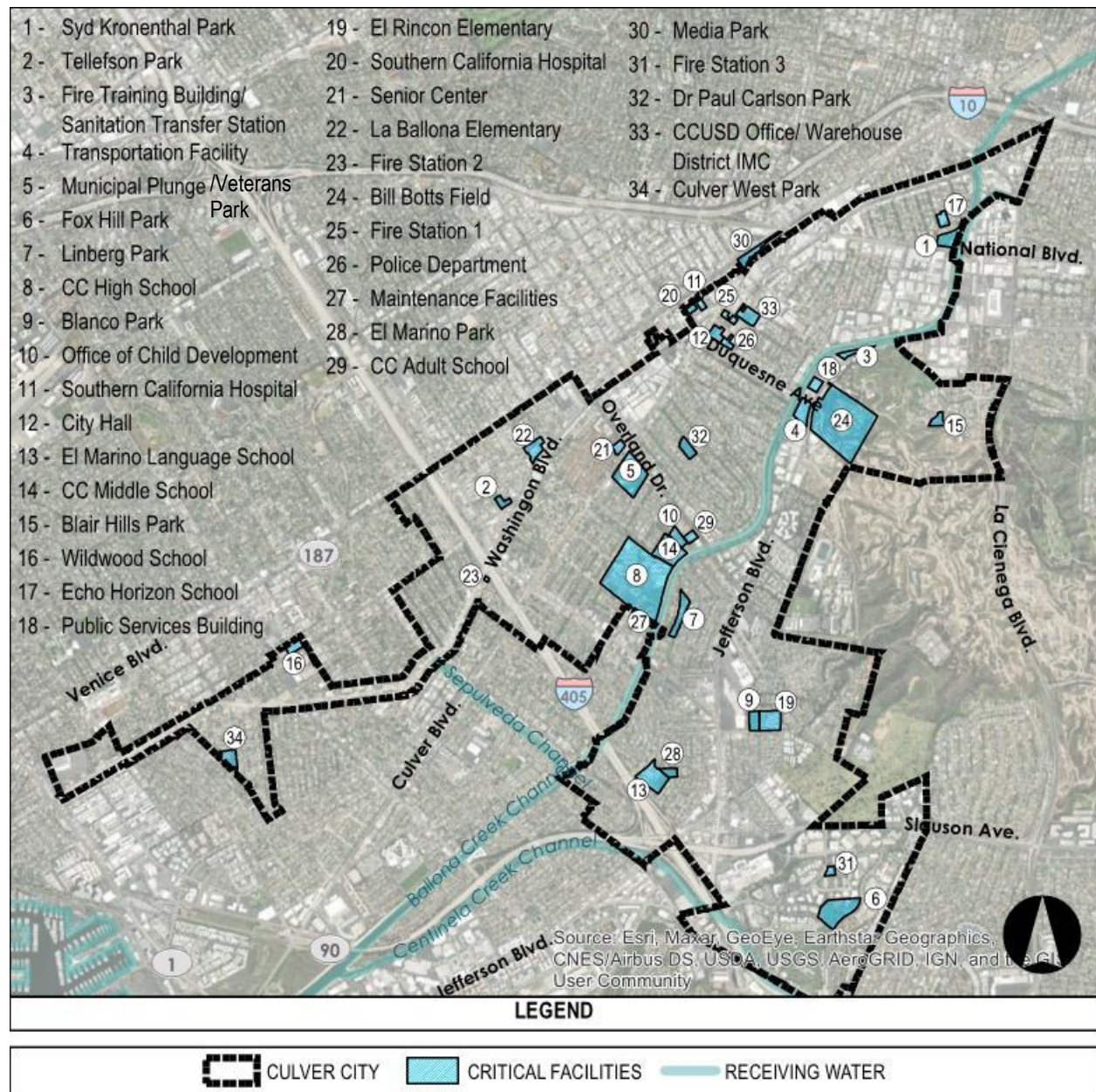


Figure 4 - Critical Facilities Map

The Team evaluated the list of Critical Facilities for feasibility and accessibility to implement stormwater projects to address flood, drought, and fire hazards. The analysis resulted in the following determinations:

- Seven City pump stations were identified as critical facilities. These were not included in the evaluation as stormwater projects at those sites were not applicable.
- The CCUSD Office and Warehouse/ District IMC are located on same parcel and were evaluated as one location.
- The Fire Training Building and Sanitation Transfer Station are located on the same parcel and were evaluated as one location.
- The CCUSD Natatorium has been demolished and was not considered as part of this MAP.
- The CCUSD Culver Park Continuation High School is now closed, but the location is evaluated as part of the El Marino Language School.

3.2 Prioritization Metrics

Each Critical Facility was considered as a potential location for a stormwater management or alternative water use mitigation action project to address drought, wildfire, and flood hazards. Metrics were developed to help compare the projects and prioritize a list. Key metrics were identified, a range of scores for each metric was developed, and each facility was scored across the metrics. The points awarded for each metric were summed up to provide a total facility score which was used to prioritize the project opportunities. The metrics used in the analysis are shown in Table 1 and described in the following sections in more detail. Each project is evaluated across each metric and assigned a score between zero (0) and five (5) points. The matrix identifies the number of points (columns) assigned to specific ranges of parameter values for each metric (rows). The total project score is calculated by tallying all the metric scores.

3.2.1 Hydrologic Soil Group

Hydrologic Soil Group was selected as a metric to prioritize sites that are located on soils that may be conducive to infiltration. Infiltration is the most efficient stormwater management treatment option when compared to other treatment options, pumping, and/or re-use. Group A represents the most well-drained soils and Group D represents the least well-drained soils. Because infiltration is a common mechanism of stormwater management and can reduce the amount of runoff to a downstream drainage system, highest priority was given to Soil Group A as it allows for the most options for stormwater projects. Each subsequent group is assigned fewer points. Infiltrated runoff replenishes depleting groundwater levels, returns more moisture to the soil, and reduces the amount of runoff to drainage systems. The combination of these benefits can reduce the risk of flooding and impacts from drought.

3.2.2 Groundwater Constraints

Underground stormwater Best Management Practices (BMPs) must maintain a required distance from the groundwater table to ensure proper drainage of the facility. Sites with greater groundwater separation (the distance between the groundwater table the ground surface) allow for deeper underground systems which can maximize capacity, and therefore, also increase flood and drought benefits. Sites with groundwater separation of at least 20 feet were given the most points in this category. Sites with groundwater separation of 10 to 20 feet were given fewer points. Sites with less than 10 feet of separation were given the fewest points.

Table 1 - Prioritization Metrics

Metric	Points					
	0	1	2	3	4	5
MJHMP Projects						
100-Yr Urban Flood Depth on Facility	Less than 0.6'	0.6' to 1.4'	1.4' to 1.8'	1.8' to 3.2'	3.2' to 4.0'	Greater than 4.0'
10-yr Urban Flood Depth within 500-ft radius of facility	Less than 1.8'	1.8' to 2.5'	2.5' to 3.2'	3.2' to 4.1'	4.1' to 5.0'	Greater than 5.0'
Does the project watershed include other critical facilities	No					Yes
Hydrologic Soil Group	D		C		B	A
Groundwater Constraints	Less than 10'	10' to 20'	20' to 25'	25' to 30'	30' to 35'	Greater than 35'
Disadvantaged Community (DAC) Benefit	Not a benefit to a DAC or Low Income Community			Within sphere of influence (500') to DAC or Low Income Community		Within DAC or Low Income Community
Urban Heat Island Index		UHI <20% of Census Tracts	UHI >20% of Census Tracts	UHI >40% of Census Tracts	UHI >60% of Census Tracts	UHI 820% of Census Tracts
Proximity to Major Interceptor or Primary Sewer Line (>12")	Greater than 500'	500' to 200'		200' to 100'		Less than 100'
Education opportunity		Located at a Public Facility		Located at a Park		Located at a School
Is the Project a Potential West Basin Recycled Water Destination	No					Yes

3.2.3 Potential for Urban Flooding

A high level, city-wide hydrology model was created to identify areas where runoff may collect throughout the City if the storm drain system is at capacity. This analysis was completed for the 10-year and 100-year storm events to determine relative flood risk to and near Critical Facilities. The hydraulic models did not take existing infrastructure into consideration. Because storm drain infrastructure was not accounted for, resulting depths do not necessarily represent actual flooding depths, but rather a general consensus about where localized ponding can be expected in the event of infrastructure failure or overcapacity. Stormwater management projects can reduce runoff which provides the benefit of maintaining capacity in the existing storm drain system. This can reduce the frequency and magnitude of localized ponding during rain events.

3.2.3.1 Flood Depths at a Critical Facility Location

Flooding at critical facilities has the potential to impact use and serviceability to the public. The analysis looked at the potential impacts of a 100-year storm event within the City. Deeper flood depths were given higher points, to represent

a greater need for flood mitigation. The maximum amount was given to locations with flood depths in the top 80 percentile. Points decreased in 20 percentile intervals. Figure 5 shows the results of the 100-year analysis.

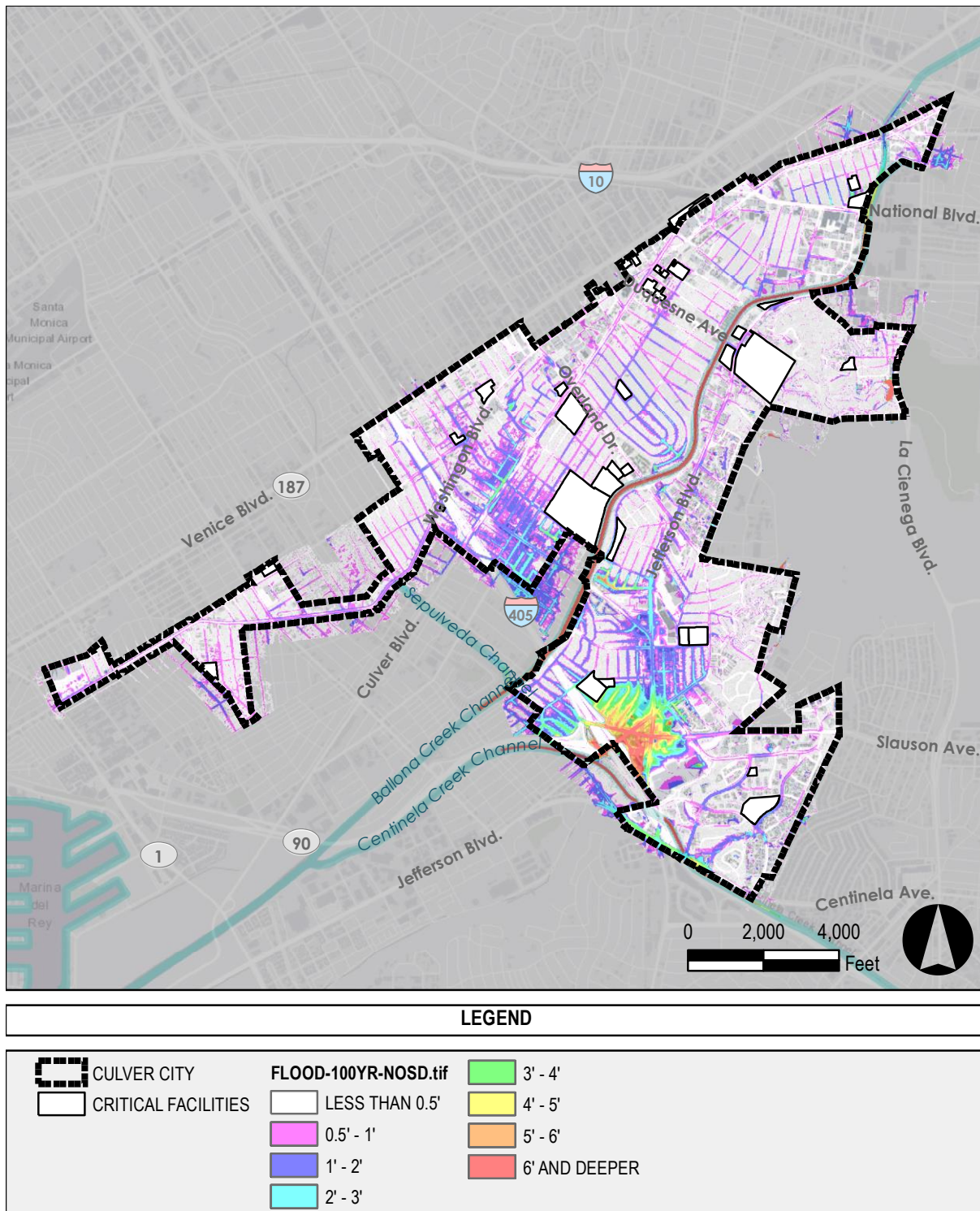


Figure 5 - 100-YR Urban Flood Study

3.2.3.2 Flood Depths Adjacent to Critical Facilities

Flooding within the streets surrounding a critical facility can limit accessibility during a rain event. Flooding in the surrounding streets may start to limit access to the facility. Deeper flood depths were given more points in this category to represent a greater need for flood mitigation. The maximum point was given to locations with flood depths in the top

80 percentile. Points decreased in 20 percentile intervals. Figure 6 shows the results of the 10-year storm event analysis.

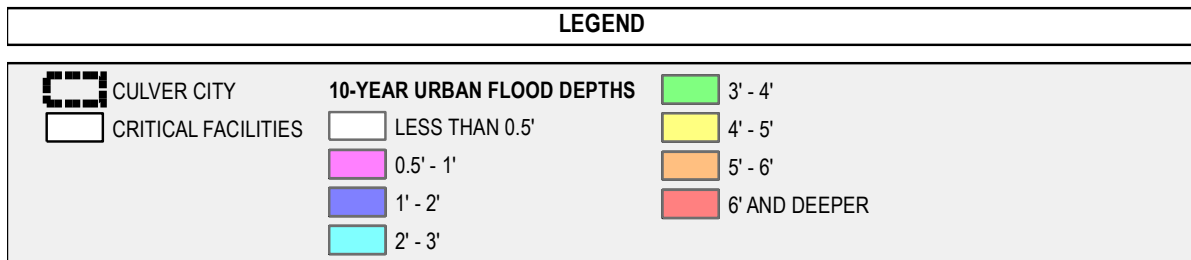
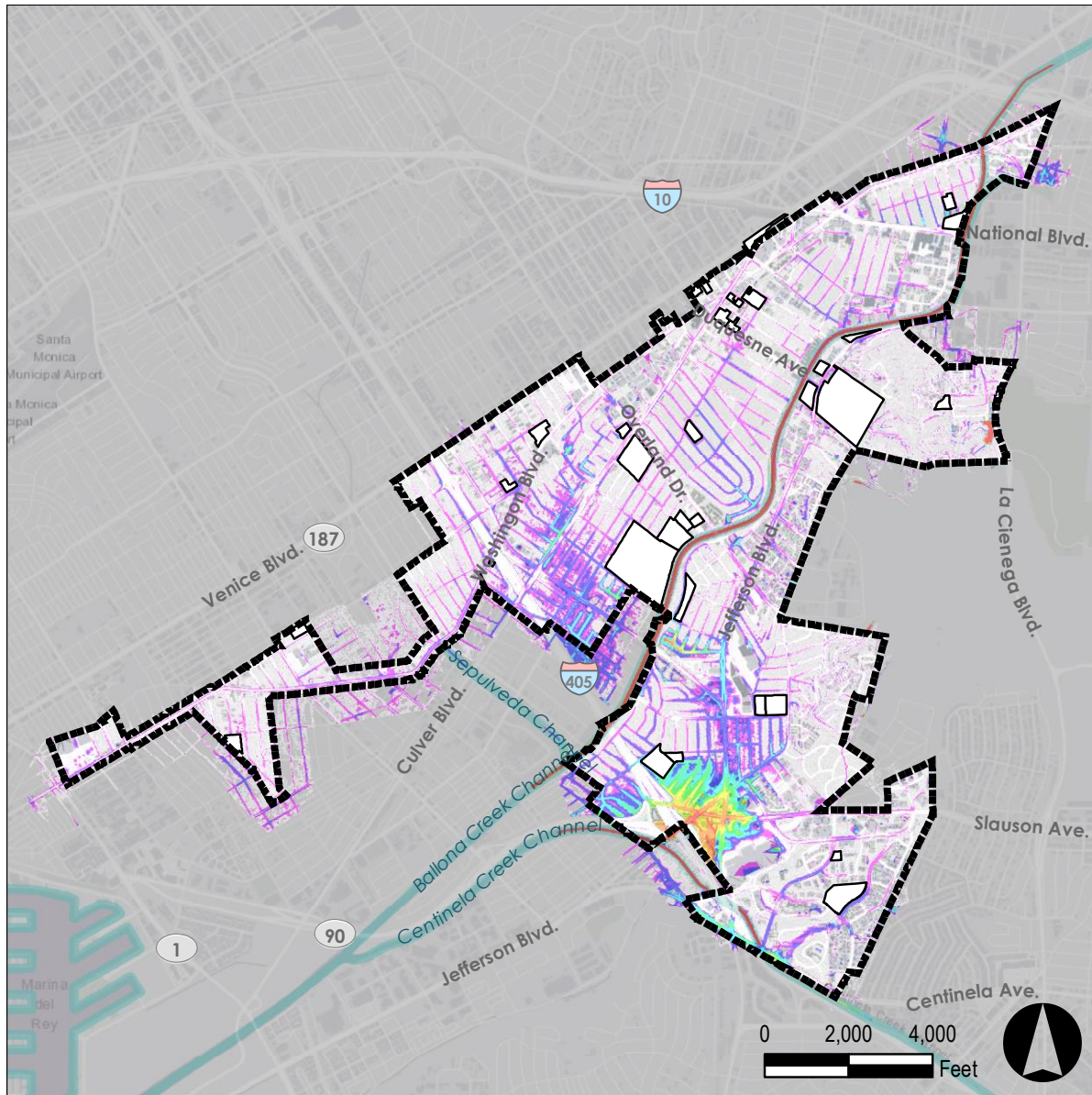


Figure 6 - 10-YR Urban Flood Study

3.2.4 Critical Facilities Within Drainage Area

This metric is used to evaluate whether a single project may benefit multiple Critical Facilities. Stormwater capture projects in a watershed with multiple critical facilities can increase opportunities for cost-sharing and maximizes multiple benefits that may not otherwise be achieved by a single project. When stormwater is retained rather than discharged,

the entire drainage system benefits from increased capacity. Project opportunities that may benefit multiple facilities were given more points in this category.

3.2.5 Disadvantaged Community Benefit

A project was considered a benefit to a disadvantaged community if located within or near a Disadvantaged Community as defined by California Senate Bill (SB) 535 or a Low-Income Community as defined by California Assembly Bill (AB) 1550. SB 535 and AB 1550 identify priority populations that may be disproportionately burdened by the challenges presented by climate change and pollution-related issues. Projects that are located within one of these communities are given the most points in this category. Projects that were considered to be within the Sphere of Influence of these communities (defined as 500 feet) were still considered a benefit to these communities and given some points in this category. Figure 7 shows a map of the disadvantaged communities across the City.

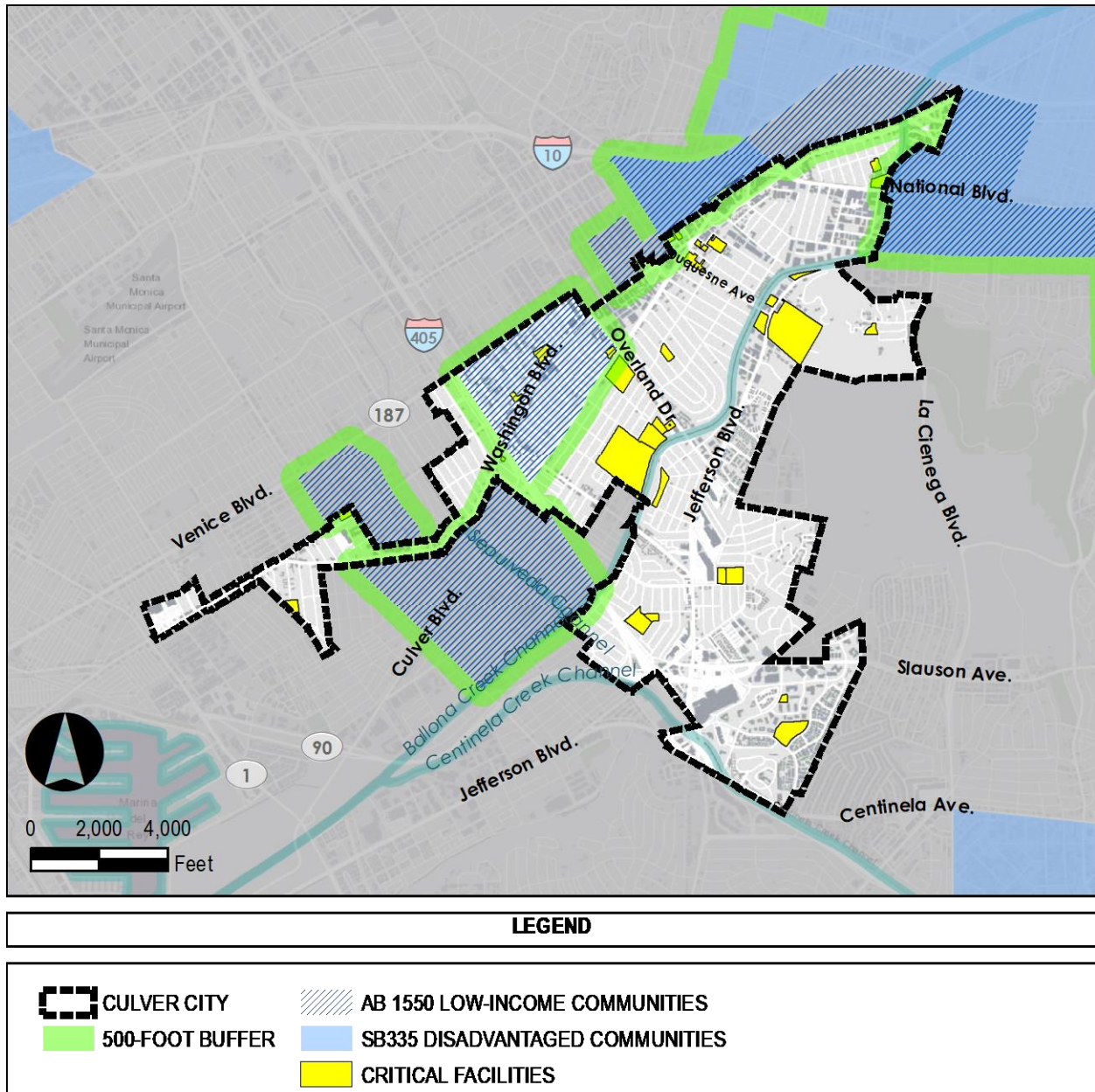


Figure 7 - DAC Map

3.2.6 Urban Heat Island Index

One common benefit associated with stormwater BMPs is increased pervious surfaces in urban areas, especially for vegetated practices like shallow reservoirs with landscaped areas for nature-based passive irrigation. Associated benefits include beautification of neighborhoods, increased shading, regulated field temperatures, water conservation and drought resiliency, and reduced urban heat island effect. Many of these may limit the impact of drought or the scope of wildfire. The California Environmental Protection Agency's urban heat island index (UHII) was used as a metric to prioritize projects (CalEPA 2015). Census tracts with higher UHII values indicate a higher urban heat island effect, and therefore projects located in higher UHII tracts were given more points.

3.2.7 Proximity to Sanitary Sewer

Even if Critical Facilities are in an area where infiltration is not feasible, many still have valuable potential for mitigation action projects due to the amount of open space available. Underground stormwater BMPs have the potential to detain runoff and discharge it to the sanitary sewer system. This option collects runoff from surrounding areas and provides a source of water for recycling at a reclamation facility to increase water supply. Project opportunities that are closer to a primary sewer line are given more points in this category due to the decrease in potential construction costs to make the connection. Figure 8 shows the sewer main lines with pipe diameters greater than 12 inches, most likely to have capacity for delayed-release stormwater.

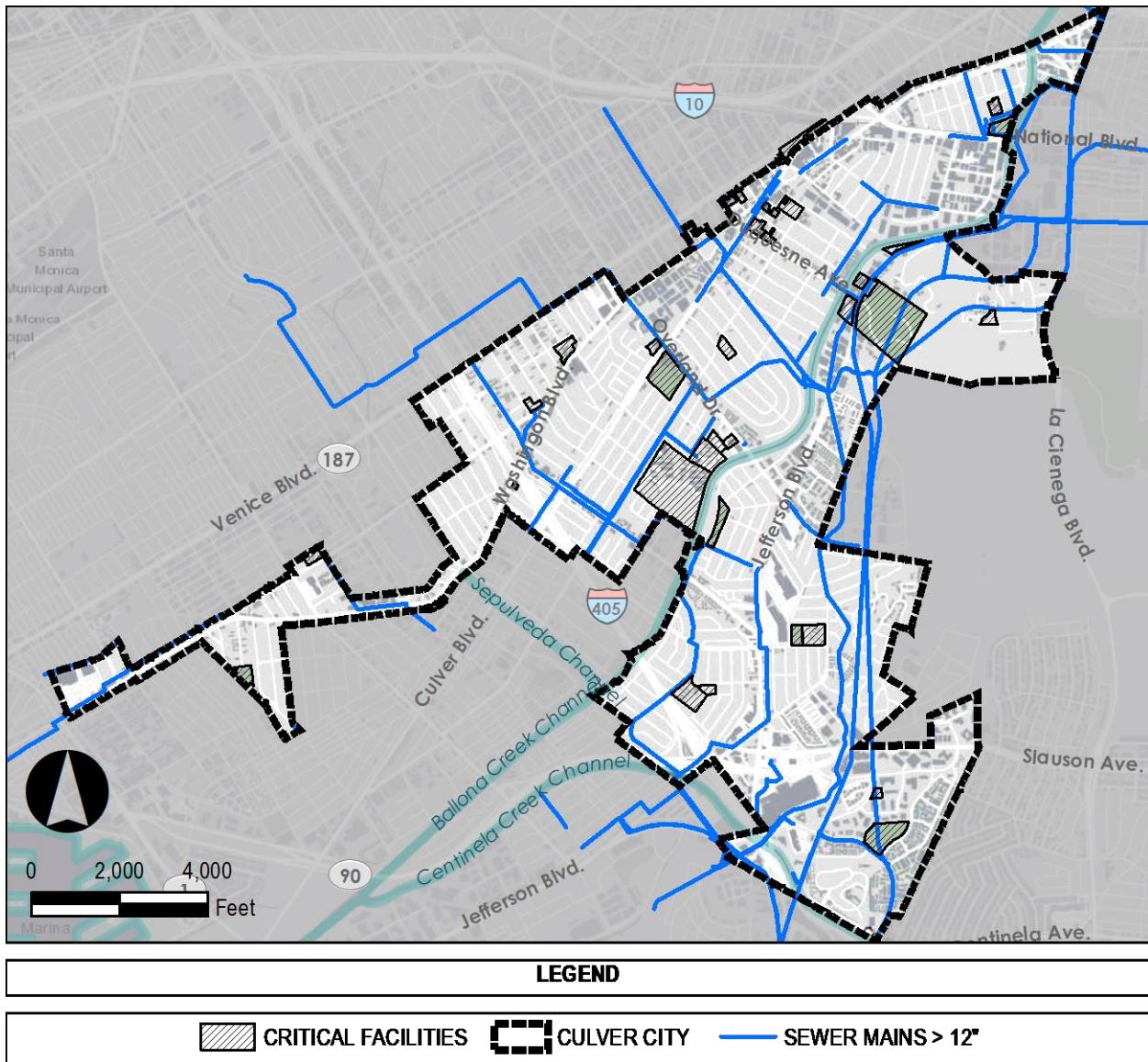


Figure 8 - Sanitary Sewer Map

3.2.8 Education Opportunity

Stormwater projects provide an opportunity for public education on the relationship between stormwater runoff, water quality in receiving waters, and the potential for water conservation and water supply benefits. Projects located at schools are given the most points in the category followed by projects located at public parks.

3.2.9 Future Recycled Water

West Basin Municipal Water District (WBMWD) is planning to expand its recycled water infrastructure to Culver City, as outlined in their Recycled Water Master Plan (RWMP) and a list of potential sites provided by WBMWD, included in Appendix B. The RWMP identifies many likely locations where future recycled water lines will provide service in the future. This project looked at those locations and recognized the value of those future connections by awarding points to Critical Facilities that could benefit from an alternative water source. Critical Facilities that were named in the RWMP as a place likely to receive recycled water received maximum points and those that are not received no point. Figure 9 shows the potential location where future recycled water lines may terminate.

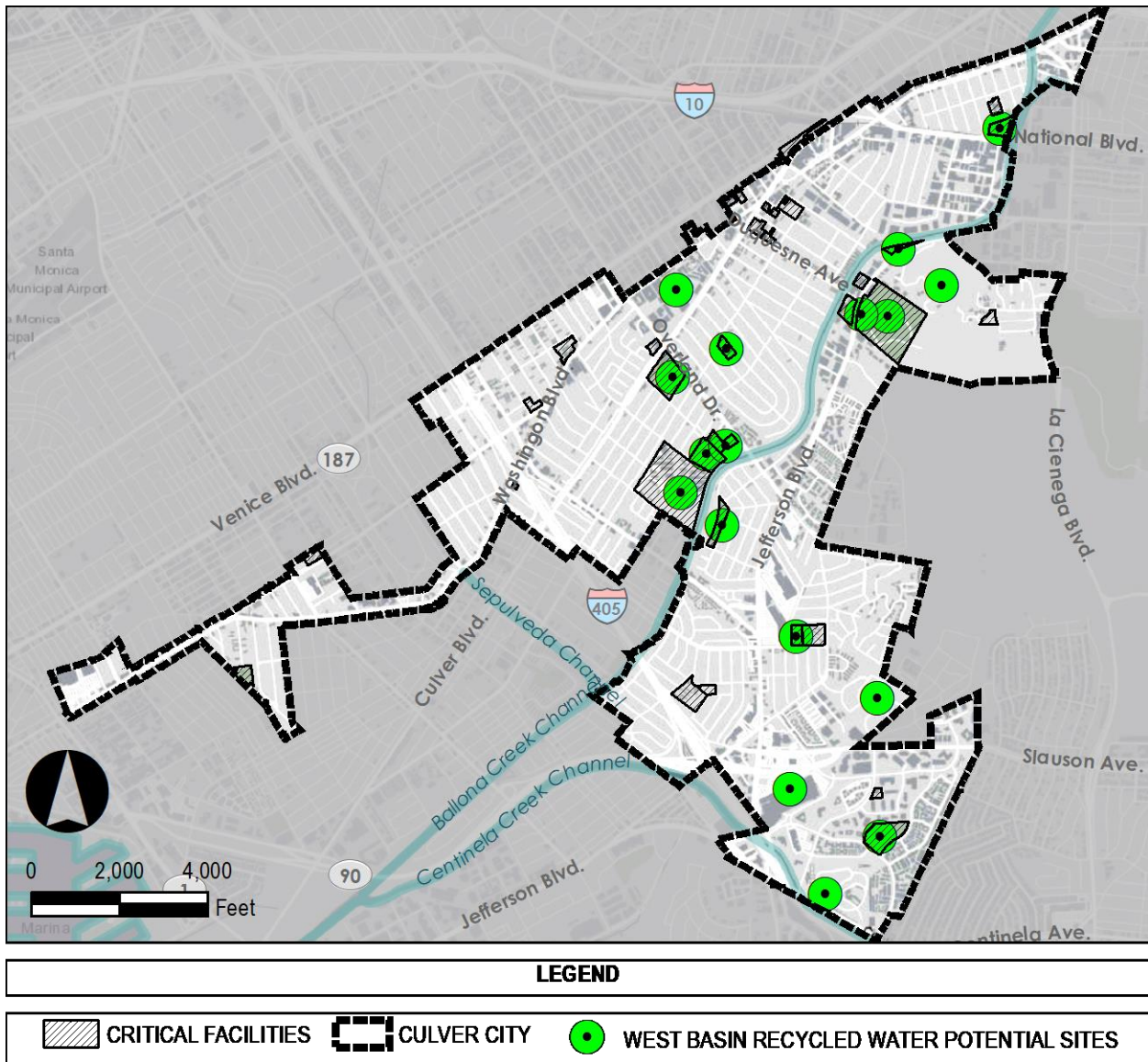
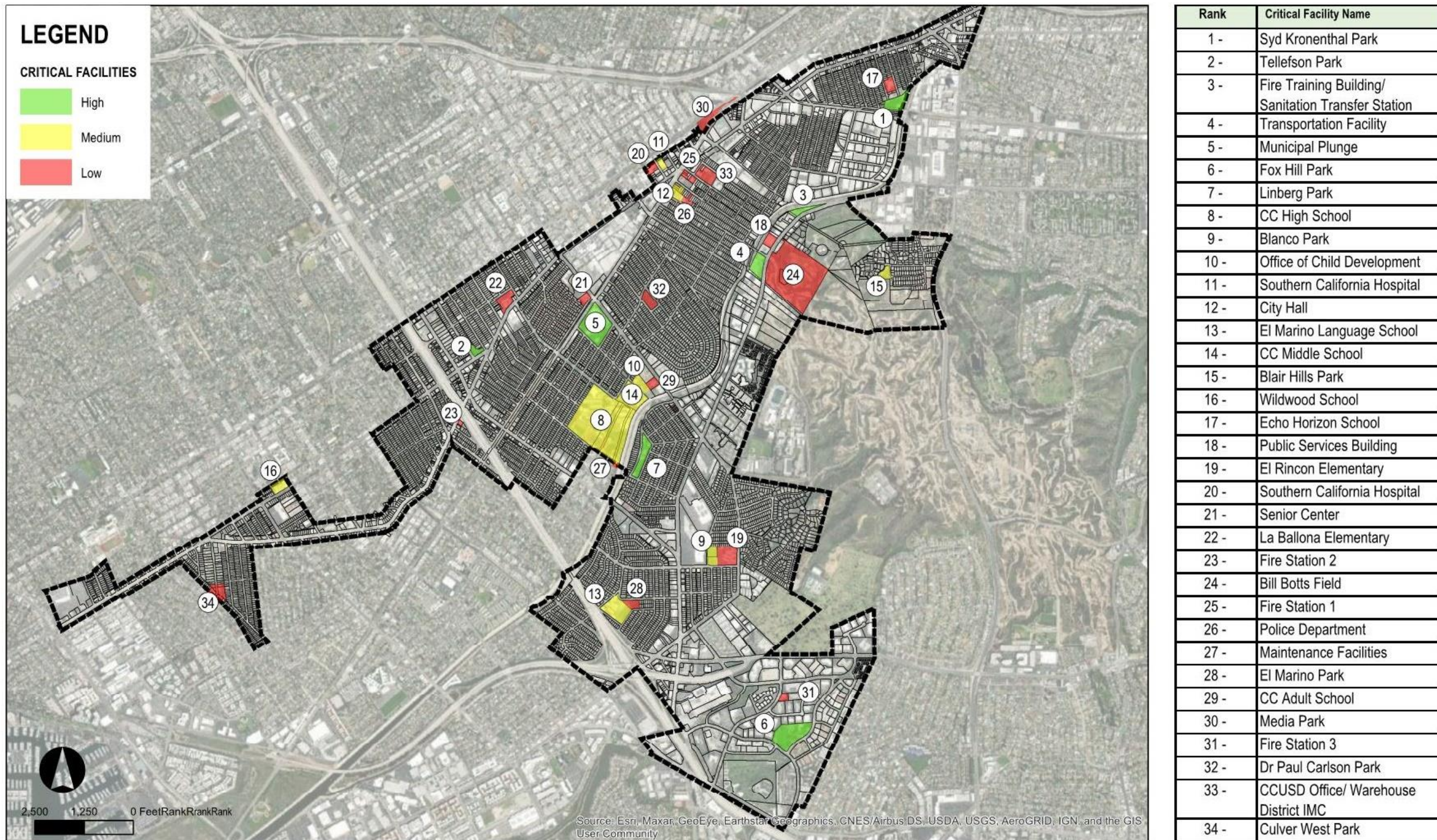


Figure 9 - West Basin Recycled Water Improvement Plan Map

3.3 Prioritization Results

The results of the prioritization are shown on Figure 10. High priority projects are defined as the top 80th percentile, medium priority project are defined as between 50th and 80th percentile, and low priority projects are defined as below the 50th percentile. Concept Plans were developed for 10 of the highest scoring projects, included in Appendix A.



**Culver City Multi Jurisdictional Hazard Mitigation Plan
Project Prioritization - Drought, Fire, Flood**

Figure 10 - Prioritization Results

4 MITIGATION ACTION PLAN NEXT STEPS

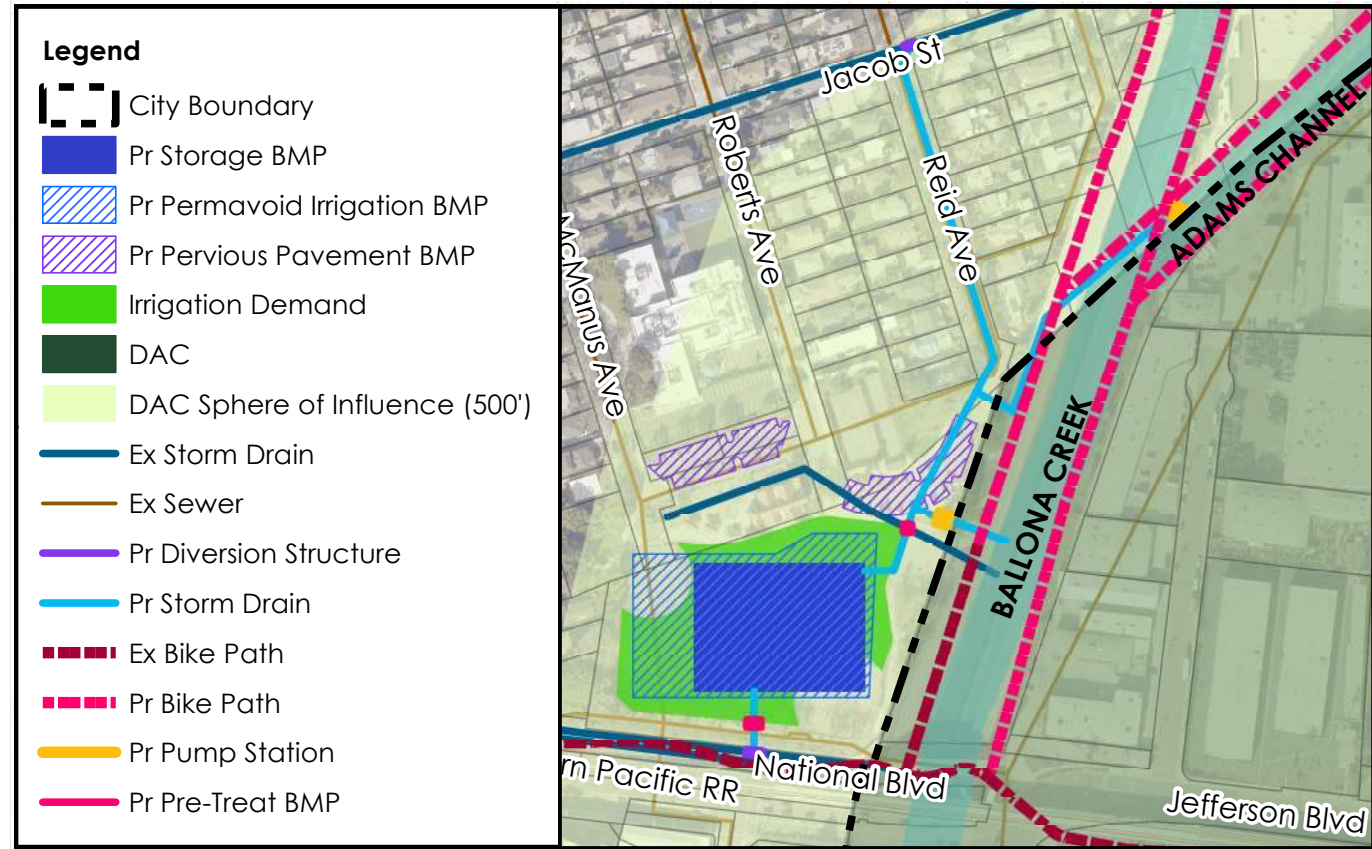
The purpose of the MAP is to add detailed potential actions the City and CCUSD can take to address the threat of flood, wildfire, and drought. Based on the prioritization of the potential projects located at Critical Facilities, concept plans for ten high scoring projects were developed. The intent is that these project concepts would be used in coordination with the SWQMP concept plans to obtain additional sources of funding from grant opportunities, incorporate into development proposals, and for consideration by the Steering Committee for inclusion into the MJHMP during the update. These project concepts are not intended to be the only potential actions in the MJHMP to address drought, wildfire, and flood but do offer significant projects that would address those threats while making progress toward additional requirements the City must meet. Ultimately these project concepts can serve as a guide for how to address these threats by retaining or detaining runoff, viewing stormwater as a resource, and encouraging the use of drought resistant or native vegetation.

Grant funding for projects that address drought, wildfire, flood, and multi-benefit projects can be pursued from the following sources:

- California Proposition 50 Funding for Public Water Systems
- California Proposition 1 Water Quality, Supply, and Infrastructure Improvement Act of 2014
- California Proposition 68 the California Drought, Water, Parks, climate, Coastal Protection, and Outdoor Access for All Act of 2018
- LA County Measure W Safe Clean Water
- Baldwin Hills Conservancy Climate Resilience, Wildfire Prevention, Community Access, and Natural Resource Protection fund of 2021-2022
- California Department of Water Resources
- California Office of Emergency Services
- Federal Emergency Management Agency
- Bureau of Reclamation Drought Response Program

APPENDIX A

CONCEPT SCHEMATIC



PROJECT DESCRIPTION

Syd Kronenthal park is located at the northern boundary of Culver City with the City of Los Angeles and along Ballona Creek. The project concept diverts 5.6 acre-feet of runoff from the storm drain in National Boulevard and retains or detains it in an underground storage system to achieve multiple benefits. To best address the threats posed by drought, fire, and flood this project would:

- Detain stormwater in underground storage and discharge to the sanitary sewer system to augment the recycled water supply.
- Create a system to use captured stormwater for irrigation within the park, with potential to replace approximately 70% of the potable irrigation demand. Water would be provided to plants using passive irrigation which would remove the need for costly treatment and increase efficiency.
- Evaluate the potential to use captured stormwater or recycled water for toilet flushing in the restrooms.
- Review the landscaping and transition to drought-tolerant and fire-resistant planting where feasible.
- Encourage extension of the recycled water line to the park as proposed in West Basin Municipal Water District's Master Plan Phase II.

Should discharge to sewer not be possible, captured stormwater could be treated and released back to the storm drain after the rain event or infiltrated onsite. Both alternatives would reduce flows to the storm drain system during a storm and reduce the risk of flooding.

Please refer to the Concept Plan in the Stormwater Quality Master Plan for additional proposed project details.

HAZARD MITIGATION ACTION SUMMARY

MITIGATION ACTIONS CATEGORY	HAZARD/ RISK			PROJECT SPECIFIC MITIGATION BENEFITS
	DROUGHT	FLOOD	FIRE	
Watershed Sustainability	X	X	X	This field renovation project would capture the water quality runoff volume from its 78-acre watershed. Runoff would be diverted from existing storm drain and pre-treated before being conveyed into the chamber and diverted to the sewer, infiltrated, or treated for release to the storm drain system.
Green Infrastructure	X	X	X	The stormwater capture system could use a shallow reservoir for nature-based passive irrigation for the field to augment water supply.
Water Supply Portfolio Diversification	X			Captured stormwater could be diverted to sewer and reclaimed as a source for recycled water. Potable water demand reduction by on-site use of rainwater for nature-based passive irrigation (up to 70% of potable water demand for the field).
Water Quality Benefit	X			Potential to capture of over 100% (118%) of water quality volume.
Community Resiliency and Equity		X	X	Improvement and preservation of parks, open space, and recreation services.
Social and Economic Resiliency		X		Potential cost savings from emergency response and infrastructure damage caused by flood.
Environmental Resiliency	X	X	X	Shallow irrigation reservoirs could help reduce heat island effect by regulating field temperature and could also improve tree, plant, and soil health.
Public Health and Public Safety		X	X	Quality of life benefits through community connectivity enhancement and decreased heat island impact.
Regional Partnerships and Collaboration	X	X	X	Coordinated effort between City departments, County agencies, and regional water initiatives to support integrated approach to infrastructure, resiliency, and sustainability planning.
Local Plans and Regulations/ Funding Opportunities	X	X	X	MJHMP & SWQMP project inclusion in the online City dashboard supports integration with various City Plans (Capital Improvement Plan, Ballona Creek Revitalization Plan, Bicycle & Pedestrian Plan, Urban Forest Plan, etc) with multi-benefit stormwater, water quality, and water supply projects that can compete for funding opportunities, including the Safe Clean Water program.
Education and awareness programs	X	X	X	Potential opportunities for public education in a public space on the relationship between water conservation and water supply, as well as heat hazards mitigation opportunities.

CONCEPT SCHEMATIC



PROJECT DESCRIPTION

Tellefson Park is located at the western edge of Culver City. The project concept diverts 3.29 acre-feet of runoff from the storm drain in Washington Boulevard and retains or detains it in an underground storage system to achieve multiple benefits. To best address the threats posed by drought, fire, and flood, this project would:

- Detain stormwater in underground storage and discharge to the sanitary sewer system to augment the recycled water supply.
- Create a system to use captured stormwater for irrigation within the park, with potential to replace approximately 48% of the potable irrigation demand. Water would be provided to plants using passive irrigation which would remove the need for costly treatment and increase efficiency.
- Review the landscaping and transition to drought-tolerant and fire-resistant planting where feasible.
- Encourage extension of the recycled water line to the park as proposed in West Basin Municipal Water District's Master Plan Phase II.

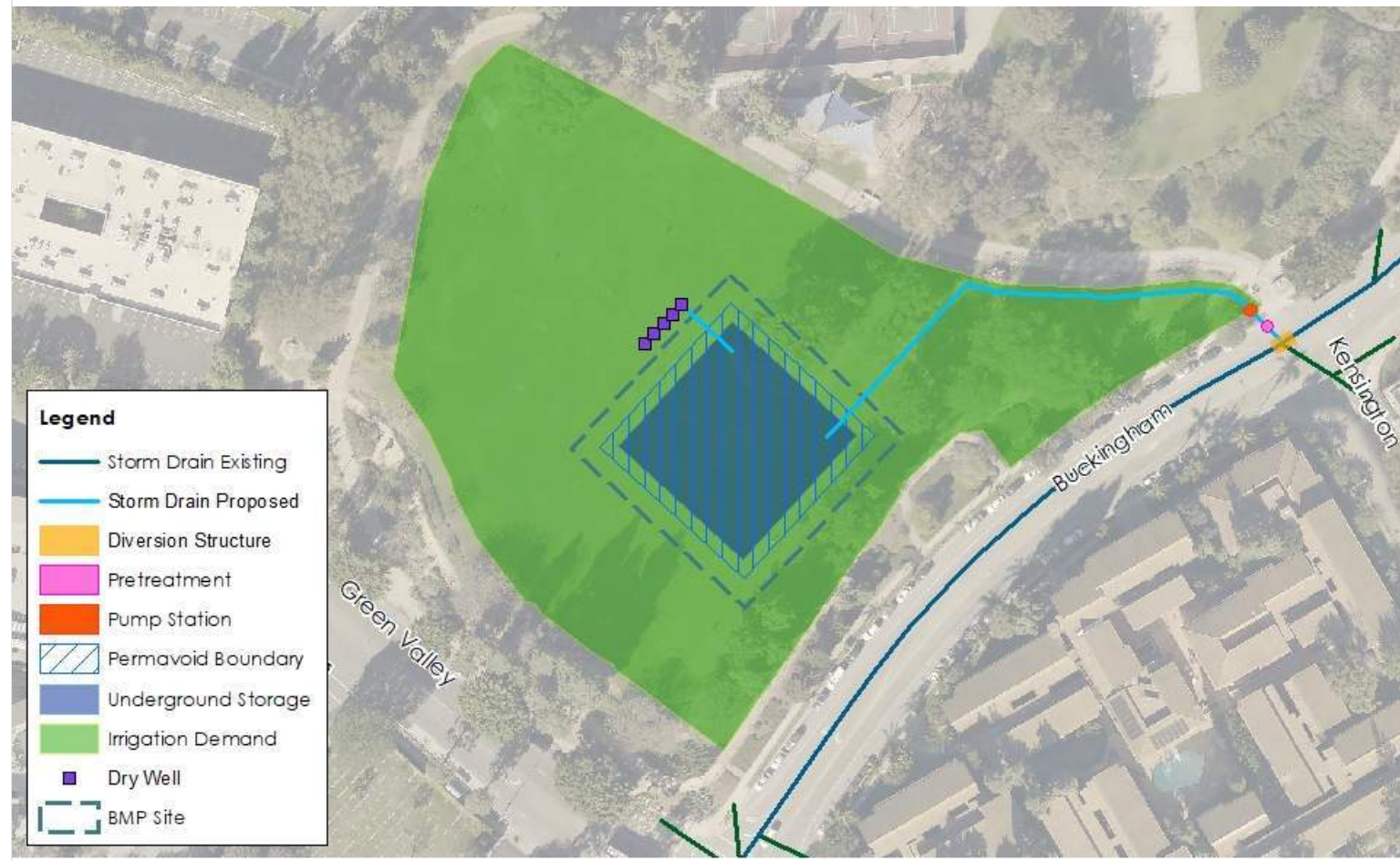
Should discharge to sewer not be possible, captured stormwater could be treated and released back to the storm drain after the rain event or infiltrated onsite. Both alternatives would reduce flows to the storm drain system during a storm and reduce the risk of flooding.

Please refer to the Concept Plan in the Stormwater Quality Master Plan for additional proposed project details.

HAZARD MITIGATION ACTION SUMMARY

MITIGATION ACTIONS CATEGORY	HAZARD/ RISK			PROJECT SPECIFIC MITIGATION BENEFITS
	DROUGHT	FLOOD	FIRE	
Watershed Sustainability	X	X	X	This project would capture the water quality runoff volume from its 72-acre watershed. Runoff would be diverted from existing storm drain and pre-treated before being conveyed into the chamber and diverted to the sewer, infiltrated, or treated for release to the storm drain system.
Green Infrastructure	X	X	X	The stormwater capture system could use a shallow reservoir for nature-based passive irrigation for the field to augment water supply.
Water Supply Portfolio Diversification	X			Captured stormwater could be diverted to sewer and reclaimed as a source for recycled water. Potable water demand reduction by on-site use of rainwater for nature-based passive irrigation (up to 48% of potable water demand for the field).
Water Quality Benefit	X			Potential to capture of 61% of water quality volume.
Community Resiliency and Equity		X	X	Improvement and preservation of parks, open space, and recreation services in vulnerable disadvantaged and underserved communities.
Social and Economic Resiliency		X		Potential cost savings from emergency response and infrastructure damage caused by flood.
Environmental Resiliency	X	X	X	Shallow irrigation reservoirs could help reduce heat island effect by regulating field temperature and could also improve tree, plant, and soil health.
Public Health and Public Safety		X	X	Quality of life benefits through community connectivity enhancement and decreased heat island impact.
Regional Partnerships and Collaboration	X	X	X	Coordinated effort between City departments, County agencies, and regional water initiatives to support integrated approach to infrastructure, resiliency, and sustainability planning.
Local Plans and Regulations/ Funding Opportunities	X	X	X	MJHMP & SWQMP project inclusion in the online City dashboard supports integration with various City Plans (Capital Improvement Plan, Ballona Creek Revitalization Plan, Bicycle & Pedestrian Plan, Urban Forest Plan, etc) with multi-benefit stormwater, water quality, and water supply projects that can compete for funding opportunities, including the Safe Clean Water program.
Education and awareness programs	X	X	X	Potential opportunities for public education in a public space on the relationship between water conservation and water supply, as well as heat hazards mitigation opportunities.

CONCEPT SCHEMATIC



PROJECT DESCRIPTION

Fox Hills Park is located at the southeastern edge of Culver City. The project concept diverts 2.4 acre-feet of runoff from the storm drain in Buckingham Parkway and retains or detains it in an underground storage system to achieve multiple benefits. To best address the threats posed by drought, fire, and flood, this project would:

- Detain stormwater in underground storage and discharge to the sanitary sewer system to augment the recycled water supply.
- Create a system to use captured stormwater for irrigation within the park, with potential to replace approximately 30% of the potable irrigation demand. Water would be provided to plants using passive irrigation which would remove the need for costly treatment and increase efficiency.
- Evaluate the potential to use captured stormwater or recycled water for toilet flushing in the restrooms.
- Review the landscaping and transition to drought-tolerant and fire-resistant planting where feasible.
- Encourage extension of the recycled water line to the park as proposed in West Basin Municipal Water District's Master Plan Phase II.

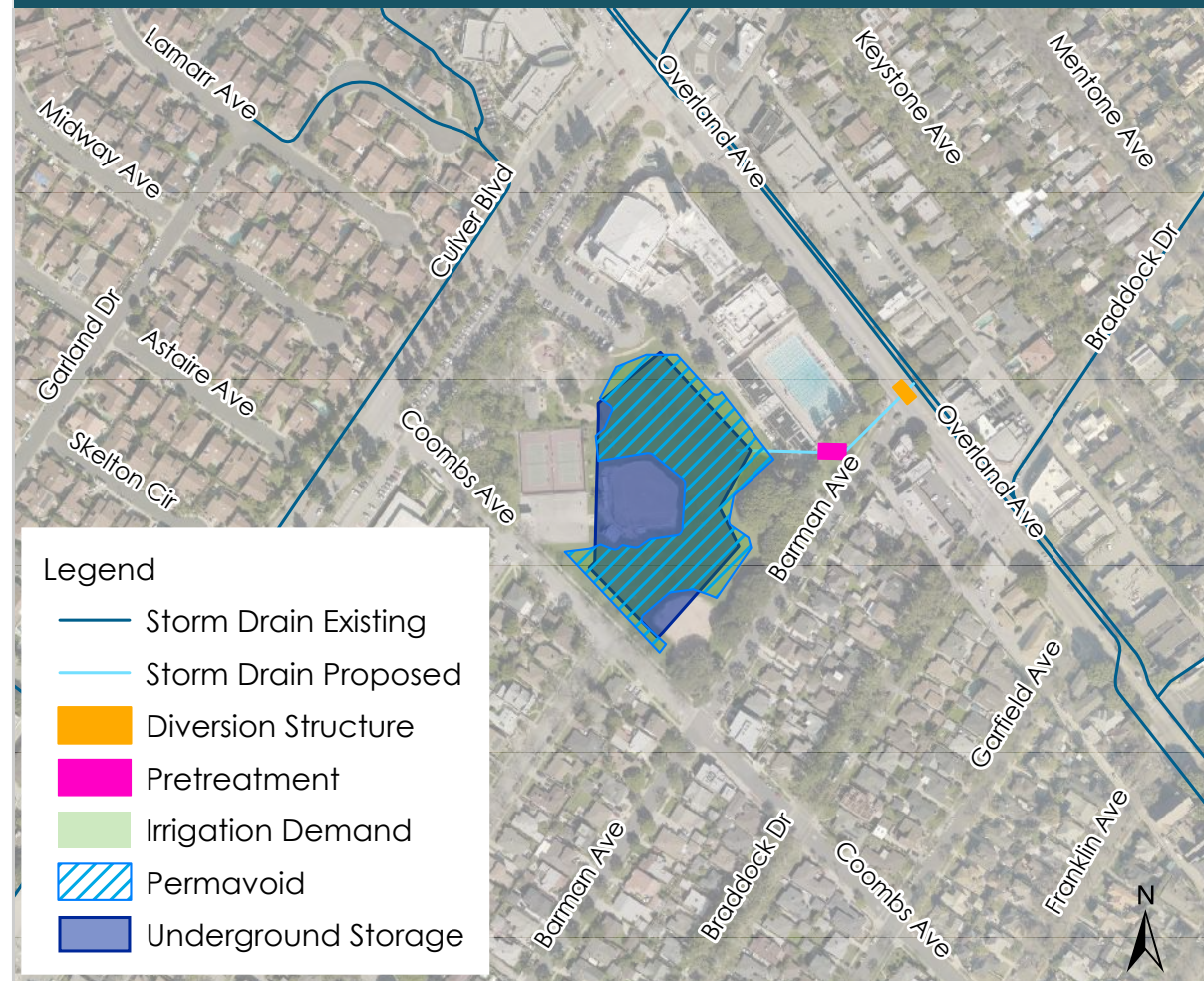
Should discharge to sewer not be possible, captured stormwater could be treated and released back to the storm drain after the rain event or infiltrated onsite. Both alternatives would reduce flows to the storm drain system during a storm and reduce the risk of downstream flooding.

Please refer to the Concept Plan in the Stormwater Quality Master Plan for additional proposed project details.

HAZARD MITIGATION ACTION SUMMARY

MITIGATION ACTIONS CATEGORY	HAZARD/ RISK			PROJECT SPECIFIC MITIGATION BENEFITS
	DROUGHT	FLOOD	FIRE	
Watershed Sustainability	X	X	X	This field renovation project would capture the water quality runoff volume from its 39-acre watershed. Runoff would be diverted from existing storm drain, pumped, and pre-treated before being conveyed into the chamber and diverted to the sewer, infiltrated, or treated for release to the storm drain system.
Green Infrastructure	X	X	X	The stormwater capture system could use a shallow reservoir for nature-based passive irrigation for the field to augment water supply.
Water Supply Portfolio Diversification	X			Captured stormwater could be diverted to sewer and reclaimed as a source for recycled water. Potable water demand reduction by on-site use of rainwater for nature-based passive irrigation (up to 30% of potable water demand for the field).
Water Quality Benefit	X			Potential to capture of 100% of water quality volume.
Community Resiliency and Equity		X	X	Improvement and preservation of parks, open space, and recreation services.
Social and Economic Resiliency		X		Potential cost savings from emergency response and infrastructure damage caused by flood.
Environmental Resiliency	X	X	X	Shallow irrigation reservoirs could help reduce heat island effect by regulating field temperature and could also improve tree, plant, and soil health.
Public Health and Public Safety		X	X	Quality of life benefits through community connectivity enhancement and decreased heat island impact.
Regional Partnerships and Collaboration	X	X	X	Coordinated effort between City departments, County agencies, and regional water initiatives to support integrated approach to infrastructure, resiliency, and sustainability planning.
Local Plans and Regulations/ Funding Opportunities	X	X	X	MJHMP & SWQMP project inclusion in the online City dashboard supports integration with various City Plans (Capital Improvement Plan, Ballona Creek Revitalization Plan, Bicycle & Pedestrian Plan, Urban Forest Plan, etc) with multi-benefit stormwater, water quality, and water supply projects that can compete for funding opportunities, including the Safe Clean Water program.
Education and Awareness Programs	X	X	X	Potential opportunities for public education in a public space on the relationship between water conservation and water supply, as well as heat hazards mitigation opportunities.

CONCEPT SCHEMATIC



PROJECT DESCRIPTION

The Municipal Plunge is located adjacent to Veterans Park at the western edge of Culver City. The project concept diverts 9.33 acre-feet of runoff from the storm drain in Overland Avenue and retains or detains it in an underground storage system to achieve multiple benefits. To best address the threats posed by drought, fire, and flood, this project would:

- Detain stormwater in underground storage and discharge to the sanitary sewer system to augment the recycled water supply.
- Create a system to use captured stormwater for irrigation within the park, with potential to replace approximately 80% of the potable irrigation demand. Water would be provided to plants using passive irrigation which would remove the need for costly treatment and increase efficiency.
- Evaluate the potential to use captured stormwater or recycled water for toilet flushing in the restrooms.
- Review the landscaping and transition to drought-tolerant and fire-resistant planting where feasible.
- Encourage extension of the recycled water line to the park as proposed in West Basin Municipal Water District's Master Plan Phase II.

Should discharge to sewer not be possible, captured stormwater could be treated and released back to the storm drain after the rain event or infiltrated onsite. Both alternatives would reduce flows to the storm drain system during a storm and reduce the risk of flooding.

Please refer to the Veterans Park Concept Plan in the Stormwater Quality Master Plan for additional proposed project details.

HAZARD MITIGATION ACTION SUMMARY

MITIGATION ACTIONS CATEGORY	HAZARD/ RISK			PROJECT SPECIFIC MITIGATION BENEFITS
	DROUGHT	FLOOD	FIRE	
Watershed Sustainability	X	X	X	This project would capture the water quality runoff volume from its 78-acre watershed. Runoff would be diverted from existing storm drain and pre-treated before being conveyed into the chamber and diverted to the sewer, infiltrated, or treated for release to the storm drain system.
Green Infrastructure	X	X	X	The stormwater capture system could use a shallow reservoir for nature-based passive irrigation for the field to augment water supply.
Water Supply Portfolio Diversification	X			Captured stormwater could be diverted to sewer and reclaimed as a source for recycled water. Potable water demand reduction by on-site use of rainwater for nature-based passive irrigation (up to 80% of potable water demand for the field).
Water Quality Benefit	X			Potential to capture of over 100% (158%) of water quality volume.
Community Resiliency and Equity		X	X	Improvement and preservation of parks, open space, and recreation services near vulnerable disadvantaged and underserved communities.
Social and Economic Resiliency		X	X	Potential cost savings from emergency response and infrastructure damage caused by flood.
Environmental Resiliency	X	X	X	Shallow irrigation reservoirs could help reduce heat island effect by regulating field temperature and could also improve tree, plant, and soil health.
Public Health and Public Safety		X	X	Quality of life benefits through community connectivity enhancement and decreased heat island impact.
Regional Partnerships and Collaboration	X	X	X	Coordinated effort between City departments, County agencies, and regional water initiatives to support integrated approach to infrastructure, resiliency, and sustainability planning.
Local Plans and Regulations/ Funding Opportunities	X	X	X	MJHMP & SWQMP project inclusion in the online City dashboard supports integration with various City Plans (Capital Improvement Plan, Ballona Creek Revitalization Plan, Bicycle & Pedestrian Plan, Urban Forest Plan, etc) with multi-benefit stormwater, water quality, and water supply projects that can compete for funding opportunities, including the Safe Clean Water program.
Education and awareness programs	X	X	X	Potential opportunities for public education in a public space on the relationship between water conservation and water supply, as well as heat hazards mitigation opportunities.

CONCEPT SCHEMATIC



PROJECT DESCRIPTION

The Transportation Facility is located between Jefferson Blvd and Ballona Creek. The project site watershed is limited, but could retain or detain runoff in an underground storage system to achieve multiple benefits. To best address the threats posed by drought, fire, and flood, this project would:

- Detain stormwater in underground storage and discharge to the sanitary sewer system located on the property to augment the recycled water supply.
- Depending on ability to construct BMPs onsite with manageable operational disruption, surface runoff from a portion of Jefferson Blvd could also be diverted into the storage areas and into dry wells.
- Evaluate the potential to use captured stormwater or recycled water for toilet flushing in the restrooms.
- Review the landscaping and transition to drought-tolerant and fire-resistant planting where feasible.

Should discharge to sewer not be possible, captured stormwater could be treated and released back to the storm drain after the rain event or infiltrated onsite. Both alternatives would reduce flows to the storm drain system during a storm and reduce the risk of downstream flooding.




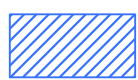






Lastly, this facility is covered under the Industrial General Permit. Implementation of capture and diversion of stormwater could benefit facility water quality compliance goals.

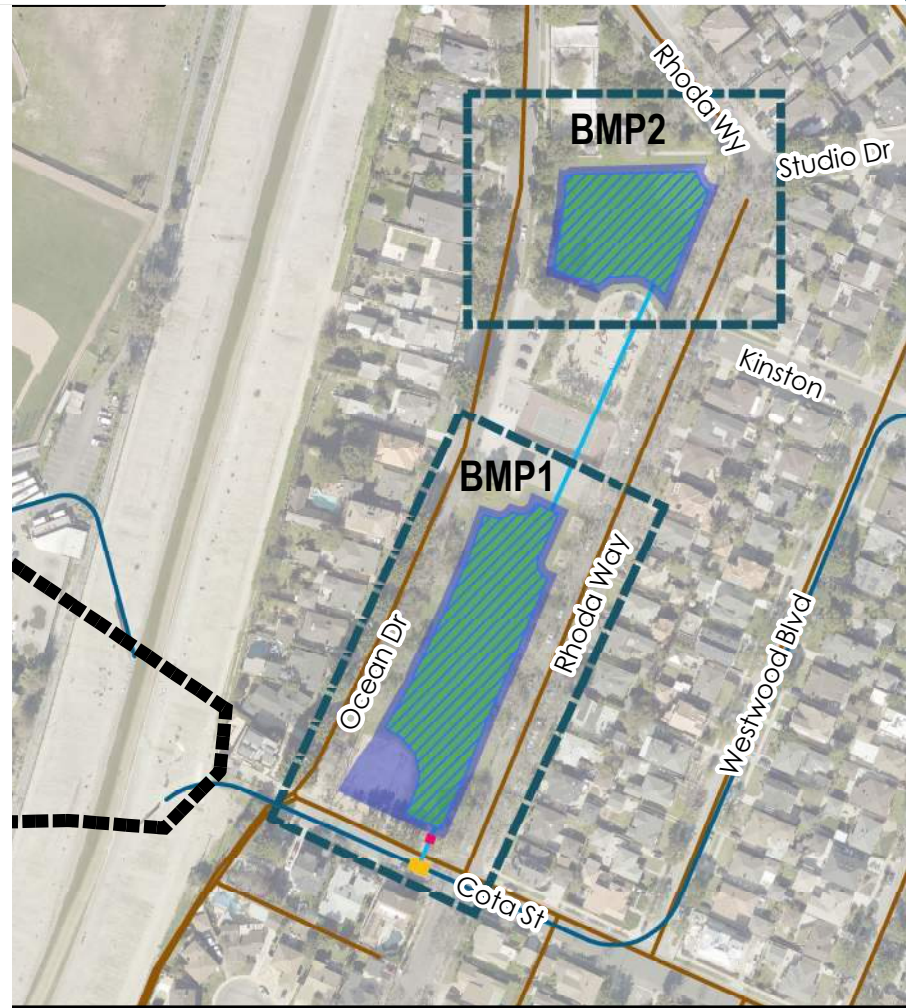
HAZARD MITIGATION ACTION SUMMARY

MITIGATION ACTIONS CATEGORY	HAZARD/ RISK			PROJECT SPECIFIC MITIGATION BENEFITS
	DROUGHT	FLOOD	FIRE	
Watershed Sustainability	X	X	X	This project could retain or detain runoff in a modular/phased storage implementation plan so that operation disruptions are manageable. Storage would provide additional capacity within the existing storm drain system. The project could be expanded to focus more on flood control, if needed.
Green Infrastructure	X	X	X	The stormwater capture system could use a shallow reservoir for nature-based passive irrigation for the field to augment water supply.
Water Supply Portfolio Diversification	X			Captured stormwater could be diverted to sewer and reclaimed as a source for recycled water.
Water Quality Benefit	X			Potential to capture of 100% of water quality volume onsite and additional offsite water.
Community Resiliency and Equity	X	X	X	Construction would provide opportunity for local job creation.
Social and Economic Resiliency		X		Potential cost savings from emergency response and infrastructure damage caused by flood.
Environmental Resiliency	X	X	X	Contributes to a distributed stormwater management system to manage rainwater near where it falls, as well as increase regional resiliency to drought by recycling stormwater.
Public Health and Public Safety		X	X	Water quality benefits for Ballona Creek, which is a regional recreation area.
Regional Partnerships and Collaboration	X	X	X	Coordinated effort between City departments, County agencies, and regional water initiatives to support integrated approach to infrastructure, resiliency, and sustainability planning.
Local Plans and Regulations/ Funding Opportunities	X	X	X	MJHMP project inclusion in the online City dashboard supports integration with various City Plans (Capital Improvement Plan, Ballona Creek Revitalization Plan, Bicycle & Pedestrian Plan, Urban Forest Plan, etc) with multi-benefit stormwater, water quality, and water supply projects that can compete for funding opportunities.
Education and awareness programs	X	X	X	Potential opportunities for public education in a public space on the relationship between water conservation and water supply.

CONCEPT SCHEMATIC

Legend

-  City Boundary
-  BMP Site
-  Diversion Structure
-  Permavoid
-  Irrigation Demand
-  Pre Treatment
-  Regional Infiltration
-  Proposed Storm Drain
-  Existing Storm Drain
-  Existing Sewer



PROJECT DESCRIPTION

Lindberg Park is located at the southern edge of Culver City near the eastern bank of Ballona Creek. This project concept diverts 6.67 acre-feet of runoff from the storm drain in Cota Street and retains or detains it in underground storage systems to achieve multiple benefits. To best address the threats posed by drought, fire, and flood, this project would:

- Detain stormwater in underground storage and discharge to the sanitary sewer system to augment the recycled water supply.
- Create a system to use captured stormwater for irrigation within the park, with potential to replace approximately 80% of the potable irrigation demand. Water would be provided to plants using passive irrigation which would remove the need for costly treatment and increase efficiency.
- Review the landscaping and transition to drought-tolerant and fire-resistant planting where feasible.
- Encourage extension of the recycled water line to the park as proposed in West Basin Municipal Water District's Master Plan Phase II.

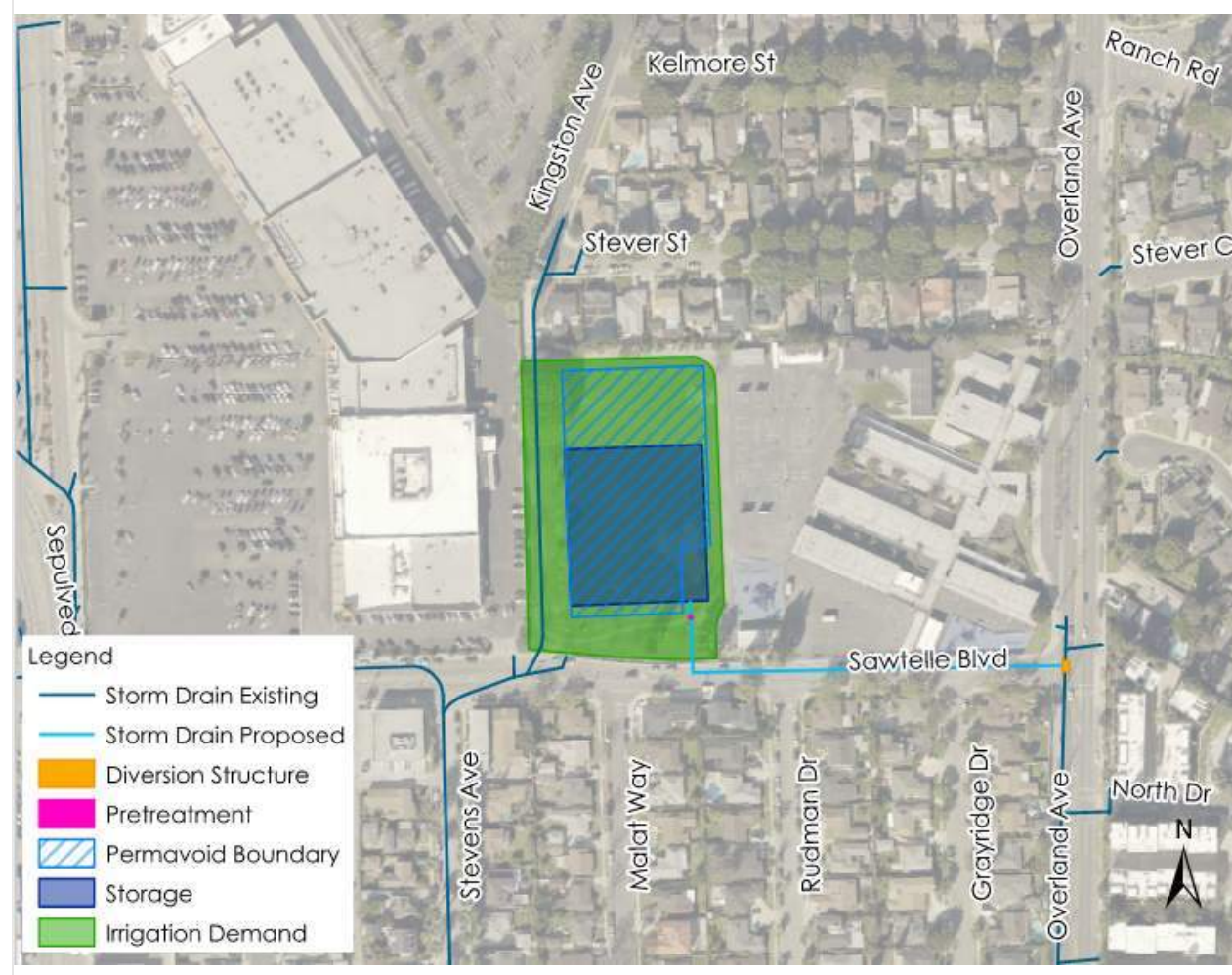
Should discharge to sewer not be possible, captured stormwater could be treated and released back to the storm drain after the rain event or infiltrated onsite. Both alternatives would reduce flows to the storm drain system during a storm and reduce the risk of flooding.

Please refer to the Concept Plan in the Stormwater Quality Master Plan for additional proposed project details.

HAZARD MITIGATION ACTION SUMMARY

MITIGATION ACTIONS CATEGORY	HAZARD/ RISK			PROJECT SPECIFIC MITIGATION BENEFITS
	DROUGHT	FLOOD	FIRE	
Watershed Sustainability	X	X	X	This project would capture the water quality runoff volume from its 75-acre watershed. Runoff would be diverted from existing storm drain and pre-treated before being conveyed into the chamber and diverted to the sewer, infiltrated, or treated for release to the storm drain system.
Green Infrastructure	X	X	X	The stormwater capture system could use a shallow reservoir for nature-based passive irrigation of for the field to augment water supply.
Water Supply Portfolio Diversification	X			Captured stormwater could be diverted to sewer and reclaimed as a source for recycled water. Potable water demand reduction by on-site use of rainwater for nature-based passive irrigation (up to 80% of potable water demand for the field).
Water Quality Benefit	X			Potential to capture of over 100% (151%) of water quality volume.
Community Resiliency and Equity		X	X	Improvement and preservation of parks, open space, and recreation services.
Social and Economic Resiliency		X		Potential cost savings from emergency response and infrastructure damage caused by flood.
Environmental Resiliency	X	X	X	Shallow irrigation reservoirs could help reduce heat island effect by regulating field temperature and could also improve tree, plant, and soil health.
Public Health and Public Safety		X	X	Quality of life benefits through community connectivity enhancement and decreased heat island impact.
Regional Partnerships and Collaboration	X	X	X	Coordinated effort between City departments, County agencies, and regional water initiatives to support integrated approach to infrastructure, resiliency, and sustainability planning.
Local Plans and Regulations/ Funding Opportunities	X	X	X	MJHMP & SWQMP project inclusion in the online City dashboard supports integration with various City Plans (Capital Improvement Plan, Ballona Creek Revitalization Plan, Bicycle & Pedestrian Plan, Urban Forest Plan, etc) with multi-benefit stormwater, water quality, and water supply projects that can compete for funding opportunities, including the Safe Clean Water program.
Education and awareness programs	X	X	X	Potential opportunities for public education in a public space on the relationship between water conservation and water supply, as well as heat hazards mitigation opportunities.

CONCEPT SCHEMATIC



PROJECT DESCRIPTION

Blanco Park is located on Sawtelle Blvd at Overland Drive just east of El Rincon Elementary school. This project concept diverts 4.51 acre-feet of runoff from the storm drain in Overland Drive and retains or detains it in an underground storage system to achieve multiple benefits. To best address the threats posed by drought, fire, and flood, this project would:

- Create a system to use captured stormwater for maximized infiltration and nature-based passive capillary irrigation under the turf field with potential to replace up to 30% of potable irrigation demand.
- Encourage extension of the recycled water line to the park as proposed in West Basin Municipal Water District's Master Plan Phase II.

A sanitary sewer connection is not locally available to discharge into so captured stormwater would be treated and released back to the storm drain after the rain event or infiltrated onsite. This will reduce flows to the storm drain system during a storm and reduce the risk of downstream flooding.

Please refer to the Concept Plan in the Stormwater Quality Master Plan for additional proposed project details.

HAZARD MITIGATION ACTION SUMMARY

MITIGATION ACTIONS CATEGORY	HAZARD/ RISK			PROJECT SPECIFIC MITIGATION BENEFITS
	DROUGHT	FLOOD	FIRE	
Watershed Sustainability	X	X	X	This project would capture the water quality runoff volume from its 65-acre watershed. Runoff would be diverted from existing storm drain and pre-treated before being conveyed into the underground chamber and infiltrated or treated for release to the storm drain system.
Green Infrastructure	X	X	X	The stormwater capture system could use a shallow reservoir for nature-based passive irrigation of for the field to augment water supply.
Water Supply Portfolio Diversification	X			Captured stormwater could be used for on-site for nature-based passive irrigation to reduce potable water demand (up to 30%).
Water Quality Benefit	X			Potential to capture of 133% of water quality volume.
Community Resiliency and Equity		X	X	Improvement and preservation of parks, open space, and recreation services.
Social and Economic Resiliency		X		Potential cost savings from emergency response and infrastructure damage caused by flood.
Environmental Resiliency	X	X	X	Shallow irrigation reservoirs could help reduce heat island effect by regulating field temperature and could also improve tree, plant, and soil health.
Public Health and Public Safety		X	X	Quality of life benefits through community connectivity enhancement and decreased heat island impact.
Regional Partnerships and Collaboration	X	X	X	Coordinated effort between City departments, County agencies, and regional water initiatives to support integrated approach to infrastructure, resiliency, and sustainability planning.
Local Plans and Regulations/ Funding Opportunities	X	X	X	MJHMP & SWQMP project inclusion in the online City dashboard supports integration with various City Plans (Capital Improvement Plan, Ballona Creek Revitalization Plan, Bicycle & Pedestrian Plan, Urban Forest Plan, etc) with multi-benefit stormwater, water quality, and water supply projects that can compete for funding opportunities, including the Safe Clean Water program.
Education and Awareness Programs	X	X	X	Potential opportunities for public education in a public space on the relationship between water conservation and water supply, as well as heat hazards mitigation opportunities.

CONCEPT SCHEMATIC



PROJECT DESCRIPTION

Culver City High School is located at the south boundary of Culver City with the City of Los Angeles along the west edge of Ballona Creek. The project concept diverts 17.9 acre-feet of runoff from the storm drain at two locations: Harter Avenue and along the Ballona Creek bike path to retain or detain it in an underground storage system to achieve multiple benefits. To best address the threats posed by drought, fire, and flood, this project would:

- Detain stormwater in underground storage and discharge to the sanitary sewer system to augment the recycled water supply.
- Create a system to use captured stormwater for irrigation within the sports fields to reduce approximately 48% of the potable irrigation demand. Water would be provided to plants using passive irrigation which would remove the need for costly treatment and increase efficiency.
- Evaluate the potential to use captured stormwater or recycled water for toilet flushing in the restrooms.
- Review the landscaping and transition to drought-tolerant and fire-resistant planting where feasible.
- Encourage extension of the recycled water line to the park as proposed in West Basin Municipal Water District's Master Plan Phase II.

Should discharge to sewer not be possible, captured stormwater could be treated and released back to the storm drain after the rain event or infiltrated onsite. Both alternatives would reduce flows to the storm drain system during a storm and reduce the risk of flooding.

Please refer to the Concept Plan in the Stormwater Quality Master Plan for additional proposed project details.

HAZARD MITIGATION ACTION SUMMARY

MITIGATION ACTIONS CATEGORY	HAZARD/ RISK			PROJECT SPECIFIC MITIGATION BENEFITS
	DROUGHT	FLOOD	FIRE	
Watershed Sustainability	X	X	X	This project would capture the water quality runoff volume from its 132-acre watershed. Runoff would be diverted from existing storm drain, pumped, and pre-treated before being conveyed into the chamber and diverted to the sewer, infiltrated, or treated for release to the storm drain system.
Green Infrastructure	X	X	X	The stormwater capture system could use a shallow reservoir for nature-based passive irrigation of for the field to augment water supply.
Water Supply Portfolio Diversification	X			Captured stormwater could be diverted to sewer and reclaimed as a source for recycled water. Potable water demand reduction by on-site use of rainwater for nature-based passive irrigation (up to 48% of potable water demand for the field).
Water Quality Benefit	X			Potential to capture of over 100% (228%) of water quality volume and would be a candidate for credit trading program opportunities.
Community Resiliency and Equity		X	X	Improvement and preservation of parks, open space, and recreation services.
Social and Economic Resiliency		X		Potential cost savings from emergency response and infrastructure damage caused by flood.
Environmental Resiliency	X	X	X	Shallow irrigation reservoirs could help reduce heat island effect by regulating pavement temperature and field temperature which could also improve tree, plant, and soil health.
Public Health and Public Safety		X	X	Quality of life benefits through community connectivity enhancement and decreased heat island impact.
Regional Partnerships and Collaboration	X	X	X	Coordinated effort between CCUSD, City departments, County agencies, and regional water initiatives to support integrated approach to infrastructure, resiliency, and sustainability planning.
Local Plans and Regulations/ Funding Opportunities	X	X	X	MJHMP & SWQMP project inclusion in the online City dashboard supports integration with various City Plans (Capital Improvement Plan, Ballona Creek Revitalization Plan, Bicycle & Pedestrian Plan, Urban Forest Plan, etc) with multi-benefit stormwater, water quality, and water supply projects that can compete for funding opportunities, including the Safe Clean Water program.
Education and Awareness Programs	X	X	X	Potential opportunities for public education in a public school on the relationship between water conservation and water supply, as well as heat hazards mitigation opportunities.

CONCEPT SCHEMATIC



PROJECT DESCRIPTION

CCUSD's Office of Child Development is located adjacent to Farragut Elementary School near the center of the City along the Ballona Creek. The project concept diverts 2.32 acre-feet of runoff from the storm drain in Overland Avenue and retains or detains it in an underground storage system to achieve multiple benefits. To best address the threats posed by drought, fire, and flood, this project would:

- Detain stormwater in underground storage and discharge to the sanitary sewer system to augment the recycled water supply.
- Create a system to use captured stormwater for irrigation within the park, with potential to replace approximately 46% of the potable irrigation demand. Water would be provided to plants using passive irrigation which would remove the need for costly treatment and increase efficiency.
- Evaluate the potential to use captured stormwater or recycled water for toilet flushing in the restrooms.
- Review the landscaping and transition to drought-tolerant and fire-resistant planting where feasible.
- Encourage extension of the recycled water line to the park as proposed in West Basin Municipal Water District's Master Plan Phase II.

Should discharge to sewer not be possible, captured stormwater could be treated and released back to the storm drain after the rain event or infiltrated onsite. Both alternatives would reduce flows to the storm drain system during a storm and reduce the risk of flooding.

Please refer to the Farragut Concept Plan in the Stormwater Quality Master Plan for additional proposed project details.

HAZARD MITIGATION ACTION SUMMARY

MITIGATION ACTIONS CATEGORY	HAZARD/ RISK			PROJECT SPECIFIC MITIGATION BENEFITS
	DROUGHT	FLOOD	FIRE	
Watershed Sustainability	X	X	X	This project would capture 47% of the water quality runoff volume from its 91-acre watershed. Runoff would be diverted from the existing storm drain and pre-treated before being conveyed into the chambers and diverted to sewer, infiltrated, or treated for release to the storm drain system.
Green Infrastructure	X	X	X	The stormwater capture system could use shallow reservoirs for nature-based passive irrigation for the field to augment water supply.
Water Supply Portfolio Diversification	X			Captured stormwater could be diverted to sewer and reclaimed as a source for recycled water. Potable water demand reduction by on-site use of rainwater for nature-based passive irrigation (up to 46% of potable water demand for the field).
Water Quality Benefit	X			Potential to capture of 43% of water quality volume.
Community Resiliency and Equity		X	X	Improvement and preservation of parks, open space, and recreation services.
Social and Economic Resiliency		X		Potential cost savings from emergency response and infrastructure damage caused by flood.
Environmental Resiliency	X	X	X	Shallow irrigation reservoirs could help reduce heat island effect by regulating pavement temperature and field temperature which could also improve tree, plant, and soil health.
Public Health and Public Safety		X	X	Quality of life benefits through community connectivity enhancement and decreased heat island impact.
Regional Partnerships and Collaboration	X	X	X	Coordinated effort between CCUSD, City departments, County agencies, and regional water initiatives to support integrated approach to infrastructure, resiliency, and sustainability planning.
Local Plans and Regulations/ Funding Opportunities	X	X	X	MJHMP & SWQMP project inclusion in the online City dashboard supports integration with various City Plans (Capital Improvement Plan, Ballona Creek Revitalization Plan, Bicycle & Pedestrian Plan, Urban Forest Plan, etc) with multi-benefit stormwater, water quality, and water supply projects that can compete for funding opportunities, including the Safe Clean Water program.
Education and Awareness Programs	X	X	X	Potential opportunities for public education in a public space on the relationship between water conservation and water supply, as well as heat hazards mitigation opportunities.

CONCEPT SCHEMATIC



PROJECT DESCRIPTION

Blair Hills Park is located on Wrightcrest Drive at the bottom of Kenneth Hahn State Recreation Area. The project site watershed is limited, but underground storage could retain or detain runoff to achieve multiple benefits. To best address the threats posed by drought, fire, and flood, this project would:

- Detain stormwater in underground storage and discharge to the sanitary sewer system located on the property to augment the recycled water supply.
- Create a system to use captured stormwater for irrigation within the park. Water would be provided to plants using passive irrigation which would remove the need for costly treatment and increase efficiency.
- Review the landscaping and transition to drought-tolerant and fire-resistant planting where feasible.
- Encourage extension of the recycled water line to the park as proposed in West Basin Municipal Water District's Master Plan Phase II.

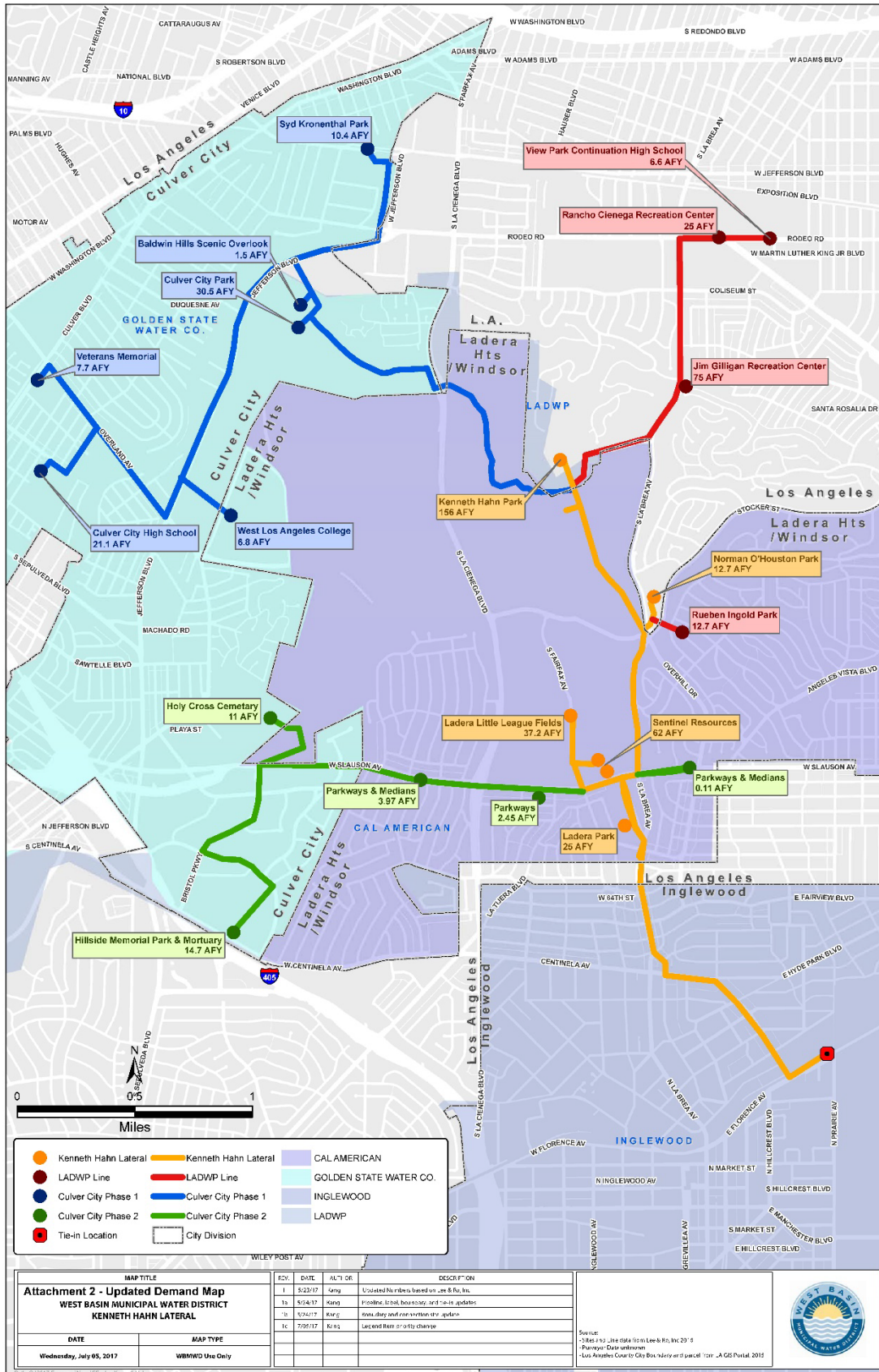
Should discharge to sewer not be possible, captured stormwater could be treated and released back to the storm drain after the rain event or infiltrated onsite. Both alternatives would reduce flows to the storm drain system during a storm and reduce the risk of flooding.

HAZARD MITIGATION ACTION SUMMARY

MITIGATION ACTIONS CATEGORY	HAZARD/ RISK			PROJECT SPECIFIC MITIGATION BENEFITS
	DROUGHT	FLOOD	FIRE	
Watershed Sustainability	X	X	X	This project would capture water quality runoff volume from its 20-acre watershed. Runoff would be diverted from the existing storm drain and pre-treated before being conveyed into the chambers and diverted to sewer, infiltrated, or treated for release to the storm drain system.
Green Infrastructure	X	X	X	The stormwater capture system could use shallow reservoirs for nature-based passive irrigation for the field to augment water supply.
Water Supply Portfolio Diversification	X			Captured stormwater could be diverted to sewer and reclaimed as a source for recycled water. Potable water demand reduction by on-site use of rainwater for nature-based passive irrigation.
Water Quality Benefit	X			Potential to capture runoff to offset increased volume as a result of impervious surfaces in the neighborhood. Some of the runoff would be collected from the Kenneth Hahn State Recreation Area hillside.
Community Resiliency and Equity		X	X	Improvement and preservation of parks, open space, and recreation services.
Social and Economic Resiliency		X		Potential cost savings from emergency response and infrastructure damage caused by flood.
Environmental Resiliency	X	X	X	Shallow irrigation reservoirs could help reduce heat island effect by regulating pavement temperature and field temperature which could also improve tree, plant, and soil health.
Public Health and Public Safety		X	X	Quality of life benefits through community connectivity enhancement and decreased heat island impact.
Regional Partnerships and Collaboration	X	X	X	Coordinated effort between CCUSD, City departments, County agencies, and regional water initiatives to support integrated approach to infrastructure, resiliency, and sustainability planning.
Local Plans and Regulations/ Funding Opportunities	X	X	X	MJHMP project inclusion in the online City dashboard supports integration with various City Plans (Capital Improvement Plan, Ballona Creek Revitalization Plan, Bicycle & Pedestrian Plan, Urban Forest Plan, etc) with multi-benefit stormwater, water quality, and water supply projects that can compete for funding opportunities, including the Safe Clean Water program.
Education and Awareness Programs	X	X	X	Potential opportunities for public education in a public space on the relationship between water conservation and water supply, as well as heat hazards mitigation opportunities.

APPENDIX B

Figure 2-8. Proposed Kenneth Hahn Recycled Water Lateral Alignment



Source: Lee & Ro, 2017, Attachment 2 – Updated Demand Map

Exhibit F

Potential Sites* for KHP Lateral

- 1 Baldwin Hills Sports Complex
- 2 Blanco Park
- 3 Culver City High School / Middle School / Elementary School
- 4 Culver City Park 9700 Jefferson Blvd
- 5 Dr. Paul Carlson Memorial Park
- 6 Fire Training Center
- 7 Fox Hills Mall
- 8 Fox Hills Park
- 9 Frank D. Parent Elementary School (Inglewood)
- 10 Highland School (Inglewood)
- 11 Hillside Memorial
- 12 Holy Cross Cemetery
- 13 Jim Gilliam Park / Recreation Center (Los Angeles)
- 14 Jewish Orphans Home (Los Angeles)
- 15 Kenneth Hahn Soccer Fields (Los Angeles)
- 16 Kenneth Hahn State Park (Los Angeles)
- 17 La Tijera School (Los Angeles)
- 18 Ladera Little League Fields (Los Angeles)
- 19 Ladera Park (Los Angeles)
- 20 Lindberg Park
- 21 National Guard Property (Los Angeles)
- 22 Norman Houston Park (Los Angeles)
- 23 FMOG future dust control (Freeport McMoRan Oil & Gas, Los Angeles)
- 24 FMOG underground injection (Freeport McMoRan Oil & Gas, Los Angeles)
- 25 Rancho Cienega (Los Angeles)
- 26 Rancho Cienega Sports Complex (Los Angeles)
- 27 Rubin Ingold Park (Los Angeles)
- 28 Sony Studios
- 29 State Park / Overlook
- 30 Stocker Resources (Los Angeles)
- 31 Syd K. Park
- 32 Vencor Hospital (Los Angeles)
- 33 Veteran's Memorial Park
- 34 View Park Continuation High School (Los Angeles)
- 35 West Los Angeles College (Los Angeles)

* List of potential sites comes from WBMWD / LADWP 2000 Master Plan, RMC Feasibility Study (2012), Cal Am Feasibility Study (2015), and various research by WBMWD Staff.

LADWP has a feasibility study that also includes Kenneth Hahn Park, and FMOG; but also brings the pipeline more directly west to serve Westwood, UCLA, LA Country Club, Brentwood Country Club, and Riviera Country Club. These sites are all beyond the reach of the feasibility study to Kenneth Hahn Park and are not included