MONTEBELLO

CITY OF MONTEBELLO
LOCAL HAZARD MITIGATION PLAN
2024

Prepared by:

PREPARED BY:

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EXECUTIVE SUMMARY

This is the City of Montebello's Local Hazard Mitigation Plan (LHMP) update for 2024. Hazard mitigation plans are intended to serve as a guide for communities to reduce adverse impacts from natural and human-caused hazards. While not required under Federal law, preparation, adoption of an LHMP gives communities access to Federal Emergency Management Agency (FEMA) grant programs to help pay for mitigation actions specified in the LHMP.

FEMA requires that LHMPs be updated every five (5) years to remain active and eligible for funding projects. The City's last update was completed in XXXX. This present update of the LHMP has been thoroughly revised from earlier updates, with particular attention given to FEMA's recent guidance requiring a focus on climate impacts and equity.

The LHMP consists of the following sections:

- An overview of the purpose of hazard mitigation planning.
- A profile of Montebello, including its history, climate, demographics, infrastructure, and vulnerable communities.
- An examination of twelve hazards chosen in cooperation with the City:
    - Extreme Heat
    - Drought
    - Earthquake
    - High wind/storms
    - Fire
    - Power Outage
    - Cyberattack/IT outage
    - Flooding
    - Dam failure
    - Terrorism
    - Infectious disease/pandemic
- An assessment of Montebello's capabilities to mitigate these hazards.
- A list of potential mitigation actions to address these hazards, along with suggested strategies to prioritize mitigation efforts.
- A description of the planning process and how the LHMP will be maintained and updated in the future.

The update was submitted to California Governor's Office of Emergency Services (Cal OES) and the Federal Emergency Management Agency (FEMA) for plan approval on XXXXXXX. The Local Hazard Mitigation Plan was submitted to the Montebello City Council on XXXXXXX..

Copies of City Staff Reports to the Montebello City Council and City Council Resolutions are on file with the Montebello City Clerk's Office and available via the Montebello Community Safety Department.

PLANNING TEAM

Fire Department

Angelica Palmeros
Alfredo Estrada
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Stakeholder Group

TO BE FILLED IN AFTER SECOND STAKEHOLDER MEETING

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SECTION 1 – INTRODUCTION

Hazard Mitigation

The goal of hazard mitigation is to reduce the frequency and severity of disasters, minimize their impact on communities, and promote resilience and sustainability in the face of future emergencies. This can include measures such as building codes and standards, zoning regulations, evacuation plans, early warning systems, and disaster-resistant infrastructure. By taking a proactive approach to disaster risk reduction, we can help to save lives, reduce the economic impact of disasters, and ensure that communities are better prepared to respond to and recover from emergencies.

Hazard mitigation planning improves a community's ability to effectively respond to natural disasters by establishing plans for maintaining continuity of operations for both government and community entities. The process involves identifying attainable goals to reduce the risk of injury, loss of life, and property damage from hazardous events, and developing strategies and activities to mitigate their effects.

Hazard mitigation planning is intended to be a participatory process that involves government agencies, stakeholders, and the public. The planning process includes scheduled events that encourage participation and ensure that a comprehensive approach is taken to address current and future hazards. By incorporating a systematic and inclusive approach, the local hazard mitigation plan (LHMP) helps to reduce the community's vulnerability to disasters and promote resilience.

As the impacts of global climate change have become increasingly apparent, explicitly integrating climate concerns into hazard mitigation planning has become necessary to most fully understanding a jurisdiction’s future risk and designing effective strategies to mitigate that risk. The most recent update of FEMA’s local hazard mitigation planning guidance, effective as of April 2023, includes a deeper focus on climate impacts and adaptation.

Purpose and Authority

The City of Montebello’s 2024 Local Hazard Mitigation Plan (LHMP) outlines the potential natural and human-caused hazards that pose a threat to the citizens, resources, and property in the City. The plan also outlines the city's objectives and commitment to reducing the risks associated with these hazards.

The focus of this LHMP is on the hazards that pose the greatest risk to the city, as determined through a comprehensive hazard risk assessment and input from local officials. Hazards of lesser concern may still be evaluated but may not be fully addressed in this plan update. The updated risk assessment will help the city prioritize and update mitigation actions based on the hazards that pose the greatest risk to lives and property.

The LHMP has been developed in compliance with current federal and state regulations governing local hazard mitigation plans and has been adopted in accordance with standard local procedures. The plan will be monitored regularly and revised as necessary to maintain compliance with the provisions, rules, and legislation outlined in Section 322 of the Robert T. Stafford Disaster Relief and Emergency Assistance Act, FEMA's Final Rule published in the Federal Register, the Flood Insurance Reform Act of 2004 and 2012, and the Homeowner Flood Insurance Affordability Act.

The U.S. Congress passed the Disaster Mitigation Act of 2000 (DMA 2000), which amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act and emphasized the need for state and local governments to closely coordinate their mitigation planning activities. The development of a hazard mitigation plan is a specific eligibility requirement for any local government applying for federal mitigation grant funds. These funds include Building Resilient Infrastructure in Communities (BRIC), Hazard Mitigation Grant Program (HMGP) and Flood Mitigation Assistance (FMA), all administered by FEMA.

- Building Resilient Infrastructure in Communities (BRIC): The Building Resilient Infrastructure and Communities (BRIC) program prioritizes innovative projects that reduce risk and address climate change impacts, emphasizing the protection of critical infrastructure and public safety. Subapplicants must submit their proposals to their respective state, territory, or tribal government for review and submission to FEMA. Project requirements mandate that projects align with the goals of BRIC, focusing on hazard mitigation, resilience building, and addressing climate change impacts. Applicants and subapplicants must also have a FEMA-approved Hazard Mitigation Plan at the time of application and prior to receiving funding. The majority of BRIC funding is distributed through a national competition based on the merits of submitted projects, prioritizing innovative solutions, scalability, and significant risk reduction. BRIC funding typically requires a cost share from the applicant, with FEMA covering up to 75% of the project cost. The remaining 25% must be provided by the applicant, sourced from state, local, or tribal funds, or other non-federal sources.
- Hazard Mitigation Grant Program (HMGP): To qualify for post-disaster mitigation funds, local jurisdictions must have an approved mitigation plan from FEMA. HMGP provides funds to states, territories, Indian tribal governments, local governments, and eligible private non-profit organizations (such as hospitals and special needs populations) following a presidential disaster declaration.

- Flood Mitigation Assistance (FMA): A community must have an approved mitigation plan from FEMA to be eligible for FMA grants to implement flood mitigation, acquisition, or elevation of flood-prone homes. The community must also participate in the National Flood Insurance Program (NFIP) since one of the goals of FMA is to reduce or eliminate NFIP claims.
- Pre-Disaster Mitigation (PDM): PDM aids states, territories, Indian tribal governments, and local governments in implementing a sustained pre-disaster hazard mitigation program. To be eligible for PDM funding, communities must have an approved LHMP from FEMA. Although FEMA has discontinued the PDM program with the introduction of Building Resilient Infrastructure in Communities (BRIC), communities with projects currently funded by PDM through its most recent allocations must still be covered by a FEMA-approved LHMP.

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SECTION 2 – COMMUNITY PROFILE

This is an overview of the City of Montebello with information about the community's physical setting, history, economy and demographics, current and future land uses, and key infrastructure. The Community Profile establishes the baseline conditions that informs the development of hazard mitigation actions.

2.1 Setting and Location

The City of Montebello has a total land area of 8.25 square miles. The City of Montebello is located approximately 7 miles southeast of downtown Los Angeles and is bounded by the cities of Monterey Park and Rosemead on the north, the City of Commerce and unincorporated portions of Los Angeles County on the west, the Whittier Narrows Recreation area on the east, the City of Commerce on the southwest and the City of Pico Rivera on the southeast. With easy access to major highways like the I-5 and I-710, Montebello is well-connected to the broader metropolitan region.

Montebello's topography is a mix of flatlands and gently rolling hills. The northern part of Montebello features more pronounced hills and elevated areas, offering scenic views of the San Gabriel Mountains and the Greater Los Angeles basin. These hills are part of the Monterey Park Hills, which extend into neighboring cities. This hilly terrain includes residential neighborhoods with winding streets and hillside homes that take advantage of the picturesque vistas. The southern part of the city, in contrast, is relatively flatter, making it more suitable for commercial and industrial developments.

In addition to its hills and flatlands, Montebello is also home to the Rio Hondo River, which runs along its eastern boundary. The river and its accompanying greenbelt provide recreational opportunities and a natural habitat for local wildlife.

2.2 History

The land that would become the City of Montebello was originally named *Tovaangar*, inhabited by the Gabrielino-Tongva people. This area, characterized by flatlands and chaparral-studded hills, was a significant part of the indigenous world that stretched across what is now Southern California. The Gabrielino-Tongva were hunter-gatherers who lived in temporary villages near stable water sources.

The Spanish established Mission San Gabriel Arcangel in 1771 on what is now Montebello. However, the mission was soon moved due to a flood, leaving the original site as a historical landmark. During the Spanish and Mexican periods, the land that would become Montebello was part of several large ranchos. The most notable of these is Rancho La Merced, home to the still-standing Sanchez Adobe, the oldest structure in Montebello, which also played a role in the Mexican-American War during the Battle of Rio San Gabriel in 1847.

Following the Mexican-American War, much of the land around Montebello passed through several owners. In 1885, a group of Los Angeles businessmen, including Isaias Hellman and Harris Newmark, purchased large tracts of this land. By 1900, the Montebello Land and Water Company had been incorporated, and with the help of hydraulic engineer William Mulholland, a water system was constructed, making the area suitable for development.

The city was officially founded on October 16, 1920, by early settlers and developers who saw the potential for a thriving community. Initially named Newmark, the town was soon renamed Montebello, meaning "beautiful mountain" in Italian, reflecting the area's picturesque hills and landscapes. Originally an agricultural community, Montebello had an ideal climate, productive soil, and an abundance of water for farming. From the turn of the century continuing through the 1920's, the area was well known for its production of flowers, vegetables, berries, and fruits.

The discovery of oil by Standard Oil Company on the Anita Baldwin property in 1917, brought about a new era for the City. By 1920, Montebello Oil Fields accounted for one-eighth of total California crude oil production. On October 19, 1920, Montebello was incorporated as the 35th of the present cities in Los Angeles County. Since that time the Montebello Oil Fields continues to be in use in varying degrees based on location. Also, Montebello Gas Storage Facility (operated by Southern California Gas Company) is actively producing and processing natural gas. According to Southern California Gas Company in 2016, the site includes a total of 46 active wells producing 1 million cubic feet of natural gas from residual supplies and 100 barrels of oil every day.

The advent of the automobile and the construction of major roads, including Whittier Boulevard and Beverly Boulevard, shaped Montebello's development in the 1920s. The area also became an industrial hub, with the establishment of the Simons Brick Company and other factories, which created demand for housing and spurred further residential development. By the mid-20th century, the city's landscape was transformed by suburbanization, with the construction of new residential subdivisions and public institutions, such as a new civic center.

In recent decades, Montebello has focused on redevelopment, particularly in the Montebello Hills, where new residential and commercial developments have been planned and constructed. The city's population has become increasingly diverse, with a significant majority identifying as Hispanic or Latino, alongside a notable Armenian American community.

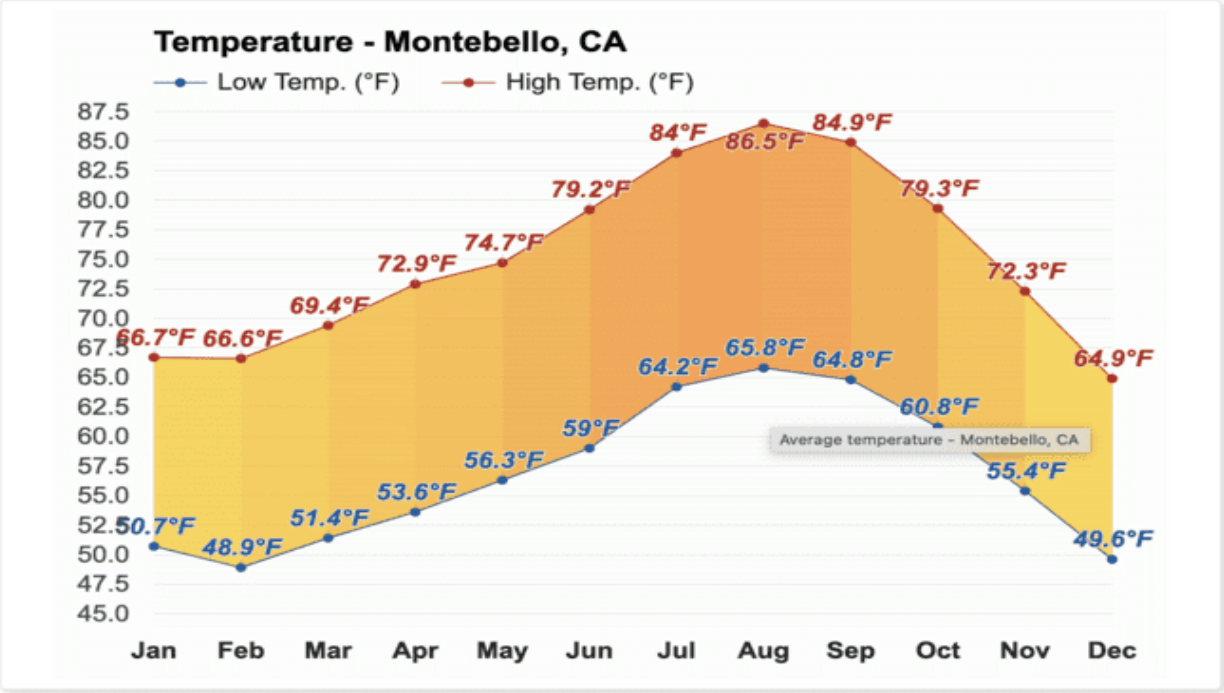
Today, Montebello is a vibrant city with a diverse economy that has evolved from its historical roots in oil production to a more varied economic base. The city's economy is now driven by retail, manufacturing, healthcare, and education sectors. The Montebello Town Center, a major shopping mall, serves as a significant retail destination in the area. Additionally, the city is home to several healthcare facilities, including the Beverly Hospital, which provides essential medical services to the community.

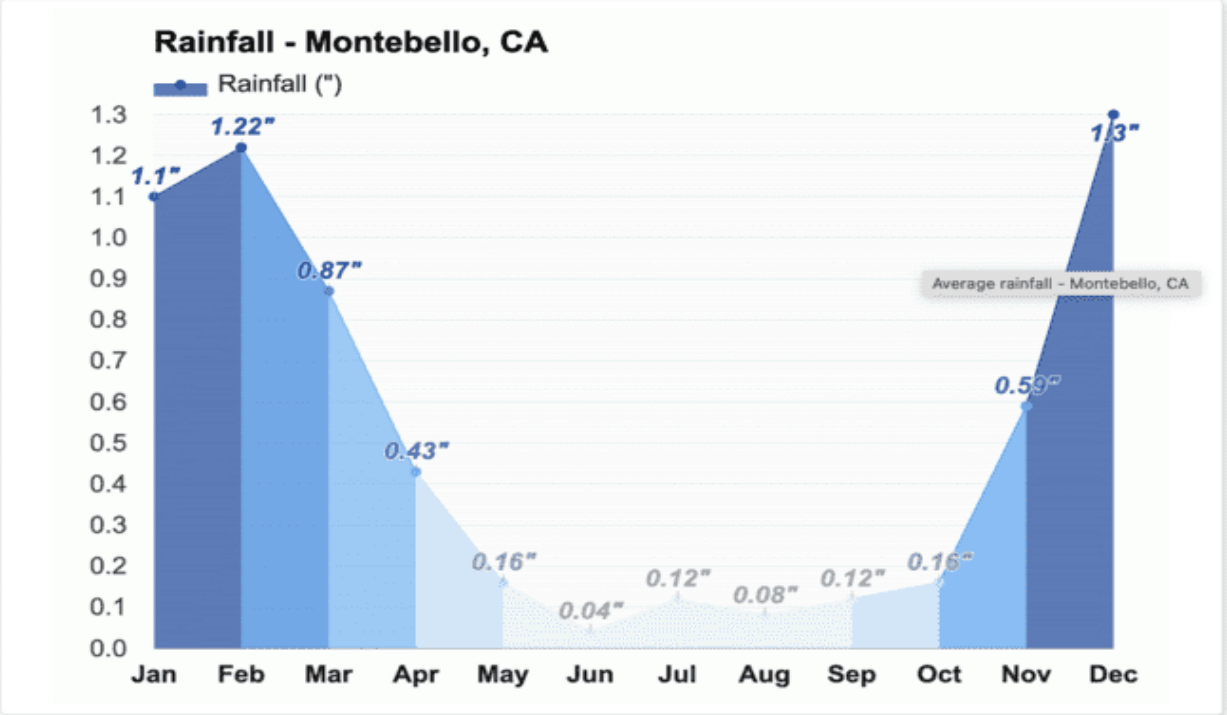
2.3 Climate

The City of Montebello is located 15 miles inland from the Pacific Ocean. Montebello experiences a Mediterranean climate characterized by mild, wet winters and hot, dry summers. The city's climate is classified as Csa according to the Köppen climate classification system. Average high temperatures in Montebello range from around 68°F (20°C) in January to approximately 89°F (32°C) in August. During the summer months, temperatures can occasionally soar above 100°F (38°C), particularly during heatwaves. Winters are generally mild, with average low temperatures fluctuating between 46°F (8°C) in January to 63°F (17°C) in July.

Annual precipitation in Montebello averages about 15 inches (380 mm), with the majority of rainfall occurring between November and March. December, January, and February are typically the wettest months, with each month receiving approximately 3 inches (76 mm) of rain. In contrast, the summer months are exceptionally dry, often experiencing little to no rainfall. Montebello enjoys approximately 284 sunny days per year, significantly higher than the national average of 205 sunny days, contributing to its warm and inviting climate.

Marine layer clouds are common early in the day, and the City’s proximity to the Pacific Ocean helps moderate temperatures and provides a cooling effect, particularly in the evenings. The coastal influence means that while daytime temperatures can be quite high during summer, the evenings are usually cooler and more comfortable. The region rarely experiences extreme weather events such as heavy snowfall or severe storms.





Source:: https://www.weather-us.com/en/california-usa/montebello-climate (retrieved August 2024)

2.4 Climate Change

Like much of Southern California, the Los Angeles area, including Montebello, is projected to experience rising temperatures due to climate change. The National Climate Assessment notes that by the mid-century, the average annual temperature in California is expected to increase by 5-8°F (2.8-4.4°C) compared to the historical average. The city's average summer temperatures, which currently peak around 89°F (32°C), will increase, leading to a higher incidence of days exceeding 100°F (38°C). These extreme heat events pose health risks, particularly for vulnerable populations such as the elderly, children, and those with preexisting health conditions. Increased heat can also exacerbate the urban heat island effect, making the city even hotter and increasing energy demand for cooling.A sustained power outage during an extreme heat event could be life-threatening.

The IPCC reports suggest that climate change could bring changes in precipitation patterns to the region. Although the city currently receives about 15 inches (380 mm) of rain annually, climate models predict more variability in rainfall, with an increased likelihood of both severe droughts and intense rainfall events. Prolonged drought conditions could strain water resources, impacting agriculture, landscaping, and everyday water use. Conversely, when heavy rainfall occurs, it can lead to flooding, particularly in low-lying areas and regions near the Rio Hondo River. Flooding can damage homes, infrastructure, and disrupt transportation systems, necessitating costly repairs and mitigation efforts.

Higher temperatures can lead to increased ground-level ozone formation, exacerbating smog and worsening respiratory conditions such as asthma and bronchitis. Additionally, the frequency and intensity of wildfires in California are projected to rise, increasing the likelihood of smoke and particulate matter impacting air quality in Montebello, even if the fires occur at a distance.

Reduced snowpack in the nearby Sierra Nevada mountains, combined with increased evaporation rates, can impact the availability of water supply, as California relies on snowmelt for its water sources. Water scarcity can affect the local economy, particularly sectors that rely heavily on water, such as agriculture and landscaping.

Changes in temperature and precipitation can alter local ecosystems, affecting plant and animal species. Urban green spaces and natural habitats may experience shifts in vegetation types, with some native species struggling to survive while invasive species become more prevalent. This can reduce biodiversity and disrupt the balance of local ecosystems.

The increased need for energy during heatwaves can drive up utility costs for residents and businesses. The costs associated with climate adaptation and mitigation measures, such as

upgrading infrastructure to withstand extreme weather or implementing water conservation programs, can strain municipal budgets.

2.5 Demographics

Montebello experienced steady population growth in its earlier days and a boom after the end of World War II. Population growth continued into the 1980's though the rate of growth slowed in the decade following 2000 due to demographic trends and limited new housing development. The average annual growth rate from 2000 to 2023 was minimal, around 0.17% per year, with more years of decline than growth, particularly following the COVID-19 pandemic. Between 2020 and 2023, Montebello's population decreased by about 2,418 people, a significant drop of 3.87% during this period.

As of 2024, the city's population is estimated to be around 59,209, representing a decrease of approximately 5.16% since the 2020 census when the population was recorded at 62,433. This decline is part of a broader trend over the last decade, with the population peaking in 2015 at 63,641 before gradually decreasing.

Population and Racial/Ethnic Composition

Population Data	Estimate
Total population (estimate as of July 1, 2024)	59,209
SEX	
Male	48.74%
Female	51.26%
AGE	
Under 18 years	21.72%
65 years and over	16.31%
RACE AND HISPANIC ORIGIN	
Two or more races	10.41%
One race	89.59%
Caucasian	31.03%
Black or African American	0.88%
American Indian and Alaska Native	2.65%
Asian	13.64%
Native Hawaiian and Other Pacific Islander	0.07%
Hispanic or Latino (of any race)	84.36%

Education

Label	Estimate
High school graduate or higher; percentage of persons age 25+	82.7%
Bachelor's degree or higher; percentage of persons age 25+	21.5%

Income

According to data from the U.S. Census Bureau and the latest available statistics, the estimated median household income in Montebello, CA, as of 2024 is $72,317. The per capita income in Montebello as of 2024 is estimated to be $26,320.

2.6 Housing and Development

Montebello has a housing history that spans over a century. The city was incorporated in 1920, and its early housing stock primarily consisted of single-family homes built in the popular Craftsman and California Bungalow styles of the 1920s and 1930s. Following World War II, Montebello experienced a significant housing boom. By 1960, the population had grown to 32,097, spurring rapid expansion of the housing stock, with many ranch-style homes being constructed throughout the 1950s and 1960s.

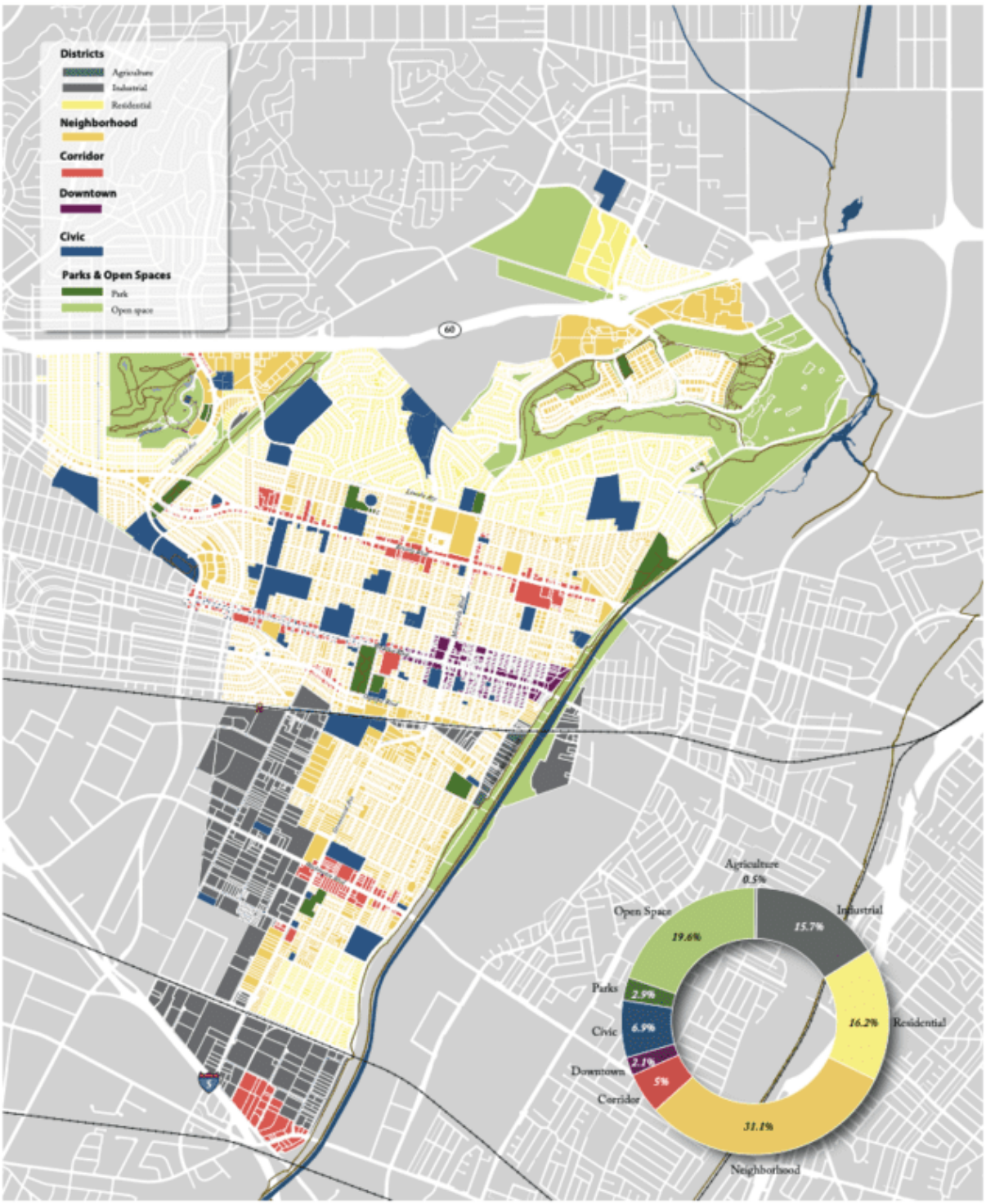
The late 20th century saw a diversification of Montebello's housing types. More multi-family units were built in the 1970s and 1980s to accommodate the growing population. According to the 1990 census, Montebello had 19,000 housing units, with a median home value of $195,800. By 2000, the number of housing units had increased to 19,800. The 2000 census also reported that 60.0% of housing units were owner-occupied, while 40.0% were renter-occupied.

As of the 2020 census, Montebello's housing stock had grown modestly to approximately 20,100 units. The city's housing mix includes single-family homes, townhouses, condominiums, and apartment complexes. Like much of the Los Angeles area, Montebello has experienced significant home value appreciation over the past decades. As of early 2024, the median home value in Montebello was estimated to be around $710,000. However, this figure can fluctuate based on market conditions.

The rental market in Montebello remains strong. As of 2024, the average rent for a one-bedroom apartment was $1,879 per month, varying based on location and amenities. The city's proximity to downtown Los Angeles, about 8 miles east, makes it attractive to commuters, contributing to high demand and low inventory in recent years. Approximately 46.1% of housing units were owner-occupied, while 53.9% were renter-occupied, showing a continued shift towards renting compared to the 2000 census figures.

As of the latest U.S. Census Bureau data (2023):

- Owner-occupied housing rate: 46.1%
- Median value of owner-occupied housing units: $710,000
- Median selected monthly owner costs with a mortgage: $2,855
- Median gross rent: $1,879
- Number of households: 19,241
- Persons per household: 3.2



Source: 2024-2040 Montebello General Plan

2.7 Economy

Montebello, California, boasts a diverse and dynamic economy that has evolved significantly from its early roots in agriculture and oil production. Montebello's economy is now driven by various sectors, including retail, manufacturing, healthcare, education, and energy.

Retail

The Montebello Town Center, a major regional shopping mall, serves as a significant retail hub, attracting visitors from throughout the area. This retail center includes a variety of stores, restaurants, and entertainment options, contributing to local employment and economic activity. Additionally, the city features numerous small businesses, restaurants, and service-oriented establishments that cater to the needs of residents and visitors alike. The retail sector not only provides jobs but also generates substantial sales tax revenue, which supports municipal services and infrastructure.

Manufacturing and Industrial

The city hosts several manufacturing companies that produce a wide range of goods, from consumer products to industrial components. These businesses benefit from Montebello's strategic location near major transportation routes, including highways and railroads, which facilitate the efficient movement of goods.

Healthcare

The city is home to several healthcare facilities, including Beverly Hospital, a key provider of medical services in the region. Beverly Hospital offers a range of healthcare services, from emergency care to specialized treatments, and employs a significant number of healthcare professionals. In addition to Beverly Hospital, Montebello has various clinics, medical offices, and senior care facilities that collectively support the health and well-being of the community while contributing to the local economy.

Education

The Montebello Unified School District (MUSD) is the largest employer in the City, with multiple schools providing jobs for administrators, teachers, and custodians, as well jobs located at the central administration offices. MUSD operates numerous elementary, middle, and high schools, providing education to thousands of students. The district also offers adult education programs, vocational training, and special education services.

Energy

The Montebello Oil Fields, discovered in 1917, were once a major source of crude oil production in California. While oil production has decreased over the years, the Montebello Gas Storage Facility, operated by the Southern California Gas Company, remains an active site. This facility includes 46 active wells producing 1 million cubic feet of natural gas and 100 barrels of oil daily as of 2016.

City of Montebello Industry
(Source: American Community Survey - 2024)

Industry	2024	
	Number	Percent %
Agriculture, forestry, fishing and hunting, and mining	98	0.40%
Construction	1,457	5.70%
Manufacturing	2,830	11.00%
Wholesale Trade	1,350	5.20%
Retail Trade	2,940	11.40%
Transportation and Warehousing, and Utilities	1,900	7.40%
Information	590	2.30%
Finance and insurance, and real estate and rental and leasing	1,600	6.20%
Professional, scientific, and management, and administrative and waste management services	2,520	9.80%
Educational services, and health care and social assistance	5,690	22.00%
Arts, entertainment, and recreation, and accommodation and food services	2,340	9.10%
Other services, except public administration	1,740	6.70%
Public administration	1,320	5.10%

Table: City of Montebello Occupation
(Source: American Community Survey - 2014)

Occupation	2014	
	Number	Percent
Civilian employed population (16 years and over)	27,040	100.00%
Management, business, science, and arts occupations	7,950	29.40%
Service occupations	4,580	16.90%
Sales and office occupations	7,460	27.60%
Natural resources, construction, and maintenance occupations	2,100	7.80%
Production, transportation, and material moving	4,950	18.30%

2.8 Infrastructure

Electricity and Natural Gas: Montebello's electricity infrastructure is a critical component of its urban framework, ensuring reliable power supply to its approximately 63,000 residents and numerous businesses. The city's electricity needs are primarily served by Southern California Edison (SCE), which is one of the largest electric utilities in the United States. SCE's extensive service area covers a large portion of Southern California, including Montebello, and serves millions of customers. The local electricity distribution network consists of several substations, transformers, and distribution lines that convert high-voltage electricity from transmission lines into lower voltages suitable for residential and commercial use.

The natural gas infrastructure in Montebello is managed by Southern California Gas Company (SoCalGas), the largest natural gas distribution utility in the United States. SoCalGas provides natural gas services to Montebello and a vast area of Southern California, serving millions of residential, commercial, and industrial customers. The natural gas infrastructure in Montebello includes an extensive network of high-pressure transmission pipelines and lower-pressure distribution pipelines that transport natural gas from processing facilities to end users. A significant component of this infrastructure is the Montebello Gas Storage Facility, operated by SoCalGas. As of 2016, this facility includes 46 active wells that have produced up to 1 million cubic feet of natural gas and 100 barrels of oil per day.

Water Infrastructure: According to the City of Montebello General Plan, water service for the City is provided by five service providers in five different districts: California Water Service

Company, Central Basin/Metropolitan Water District (MWD), Montebello Land and Water, San Gabriel Valley Water Company, and the South Montebello Irrigation District

The primary sources of water for Montebello are groundwater and imported water. Groundwater is drawn from the Central Basin and the San Gabriel Basin, which are significant aquifers in the region. These basins are managed to ensure sustainable water extraction and maintain water quality. The city operates several wells that extract groundwater, which is then treated to meet state and federal water quality standards. In addition to groundwater, Montebello imports water from the Metropolitan Water District of Southern California (MWD), which sources water from the Colorado River and the State Water Project. This imported water supplements the local supply, particularly during dry periods or when groundwater levels are low.

Montebello's water distribution system comprises over 100 miles of pipelines, ensuring that water reaches every corner of the city. The system includes multiple reservoirs with a combined storage capacity of millions of gallons, providing a buffer to meet peak demand and emergency needs. For example, the city has several storage tanks and reservoirs, such as the Montebello Hills Reservoir, which has a capacity of approximately 5 million gallons. These storage facilities are strategically located to maintain consistent water pressure and supply throughout the city.

Wastewater Infrastructure: The wastewater system is managed by the Sanitation Districts of Los Angeles County, specifically the Los Angeles County Sanitation District No. 2, which oversees wastewater collection and treatment for Montebello and the surrounding areas.

The city's wastewater collection system includes an extensive network of over 100 miles of sewer pipelines, ranging in diameter to accommodate varying volumes of wastewater. These pipelines transport wastewater from residential, commercial, and industrial sources to regional treatment facilities. The system also includes several pumping stations that help move wastewater through the system, particularly in areas where gravity flow is insufficient.

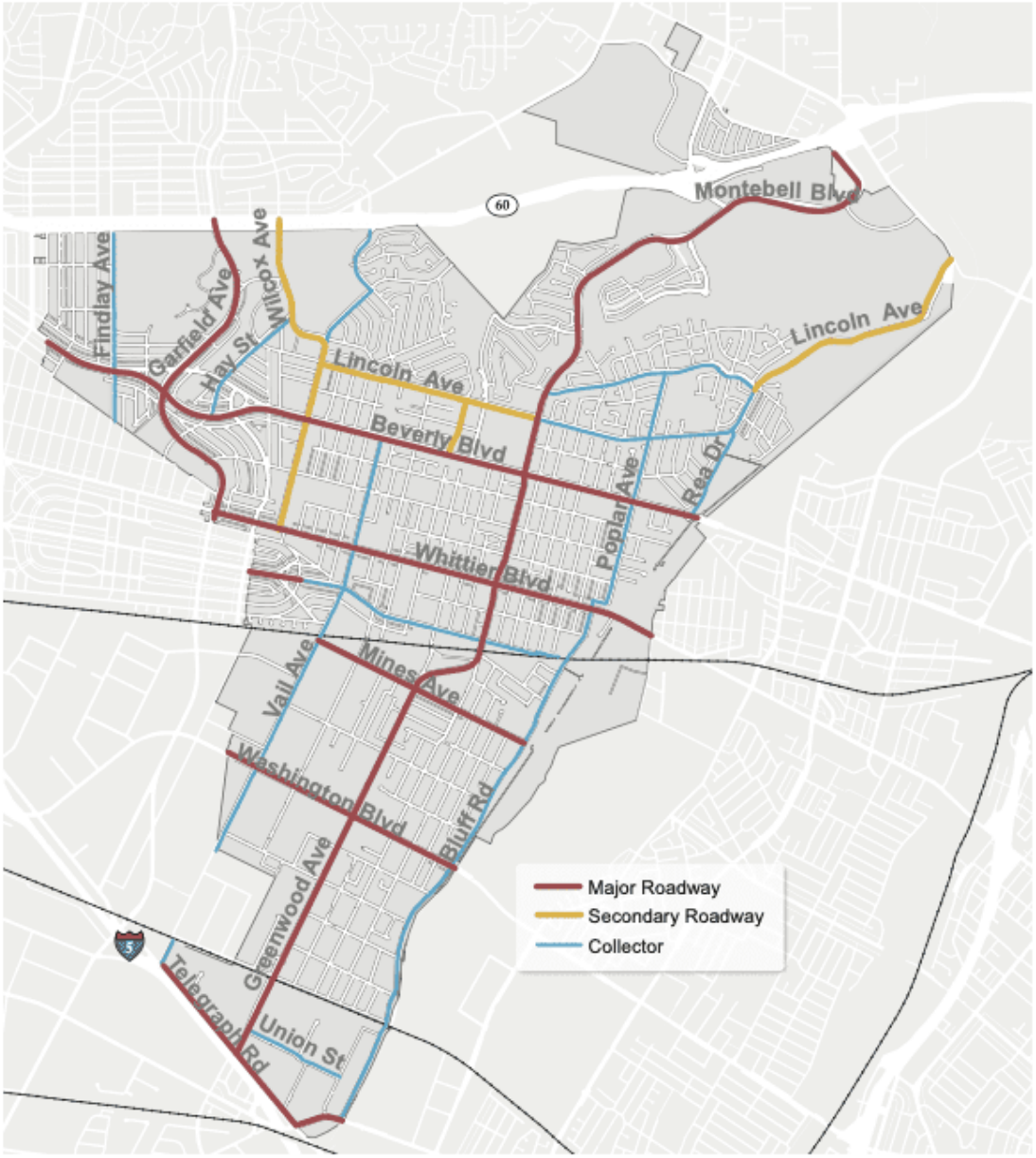
Wastewater from Montebello is primarily treated at the Joint Water Pollution Control Plant (JWPCP) in Carson, one of the largest wastewater treatment plants in the world. This facility, operated by the Sanitation Districts of Los Angeles County, treats an average of 330 million gallons of wastewater per day. The treatment process at JWPCP involves several stages, including primary, secondary, and tertiary treatment, to remove solids, organic matter, and other contaminants. Advanced treatment processes, such as biological nutrient removal and disinfection, ensure that the treated effluent meets stringent regulatory standards before being discharged into the Pacific Ocean or reused for various purposes.

In addition to centralized treatment at JWPCP, Montebello's wastewater infrastructure includes local initiatives to manage stormwater and reduce inflow and infiltration (I&I) into the sewer system. I&I can significantly impact the capacity and efficiency of the wastewater system, particularly during heavy rain events. The city implements regular maintenance programs, such

as sewer line cleaning, inspections, and repairs, to minimize I&I and ensure the system operates effectively.

Montebello is also involved in regional efforts to promote water recycling and reuse. The Sanitation Districts of Los Angeles County operate several water reclamation plants that treat wastewater to a high standard, making it suitable for non-potable uses such as landscape irrigation, industrial processes, and groundwater recharge.

Road and Highway Network



Source: 2024-2040 Montebello General Plan

Montebello's road network includes a mix of local streets, arterial roads, and major highways. Key thoroughfares such as Beverly Boulevard, Whittier Boulevard, and Montebello Boulevard are critical for local traffic, providing direct routes to commercial, residential, and industrial areas. The city is bounded by the Santa Ana Freeway (Highway 5) on the south and the Pomona Freeway (605 Freeway) on the east. These freeways are major north-south transportation routes. The city is also served by the Pomona Freeway (State Route 60) and the San Gabriel River Freeway (Interstate 605), which runs east-west through the southern part of Montebello, while the San Gabriel River Freeway provides north-south access, linking the city to other parts of Los Angeles County and beyond.

Public Transit

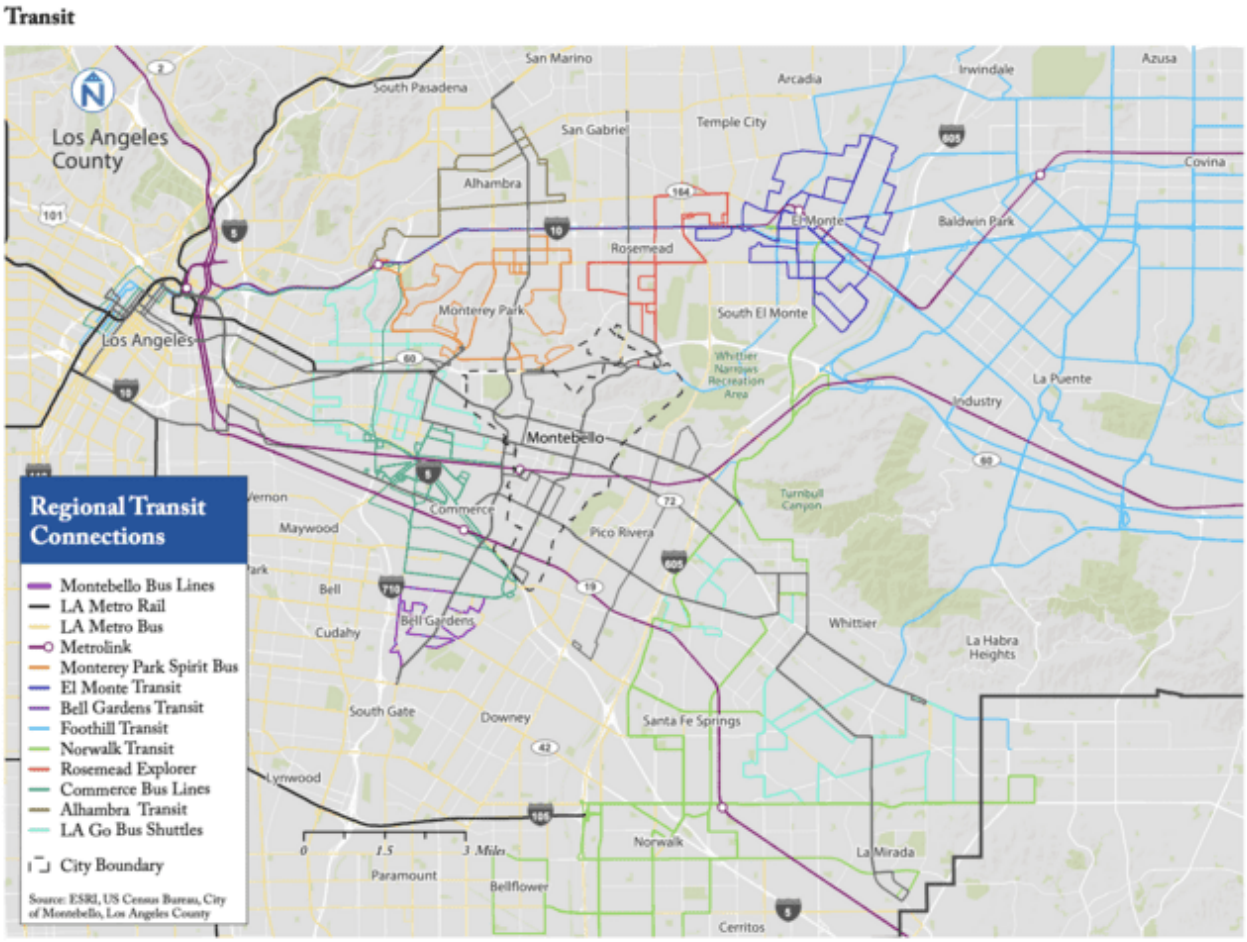


Figure A.9. Montebello Bus Lines and Connecting Transit Providers. Source Nelson\Nygaard.

Source: 2024-2040 Montebello General Plan

Public transportation in Montebello is primarily provided by Montebello Bus Lines (MBL), the third-largest municipal bus system in Los Angeles County. MBL operates a fleet of over 66 buses that serve 8 local and express routes, covering approximately 1.2 million miles annually and providing over 8 million passenger trips each year. Key routes include the Line 10 and Line 20, which offer direct connections to downtown Los Angeles and neighboring cities.

Additionally, Montebello is served by the Los Angeles County Metropolitan Transportation Authority (Metro), which provides bus and rail services that connect the city to the wider Los Angeles metropolitan area. The Metro Gold Line, with a station in nearby East Los Angeles, offers light rail service to downtown Los Angeles and Pasadena.

Pedestrian and Bicycle Infrastructure

The city has implemented several initiatives to enhance walkability and bikeability, including the construction of dedicated bike lanes, improved sidewalks, and pedestrian crossings. The Montebello Boulevard Bikeway and the Rio Hondo Bike Path are notable examples, providing safe and convenient routes for cyclists.

Rail and Freight Transportation

Montebello is also a key hub for freight transportation, with several rail lines operated by Union Pacific Railroad and BNSF Railway passing through the city. These rail lines are crucial for the movement of goods, connecting Montebello to major industrial and distribution centers across the region. South Montebello is home to 10 major trucking company terminals.

2.9 Historically Vulnerable Populations

Low-Income Residents (Major Hazards: Extreme Heat, Drought, Earthquake, High Wind/Storms)

Low-income residents in Montebello are particularly vulnerable to disasters due to limited financial resources, which restrict their ability to prepare for, respond to, and recover from emergencies. Approximately 15% of Montebello's population lives below the poverty line, which is higher than the national average. These residents often reside in older housing stock that may not meet current building codes for disaster resilience, making their homes more susceptible to damage from earthquakes, floods, and other hazards. Additionally, low-income families may lack access to insurance, savings, and other financial resources necessary for recovery, prolonging their displacement and hardship following a disaster.

Elderly Individuals (Major Hazards, Earthquake, Power Outages, Infectious Disease/Pandemic)

Elderly individuals in Montebello, who make up about 13.6% of the city's population, face unique challenges in disaster situations. Older adults are particularly vulnerable to the health impacts of natural disasters due to factors such as existing health conditions (heart disease, diabetes, dementia), reliance on caregivers, decreased physical mobility, and dependence on

medications and medical equipment. These conditions can complicate their ability to respond to emergencies, making them more susceptible to injury, illness, and even death during extreme weather events. Additionally, climate change can exacerbate air quality issues, increase exposure to heatwaves, and lead to the spread of infectious diseases, all of which pose significant risks to older populations .

Economically, the increase in frequency and severity of extreme weather events results in higher living costs, especially for insurance, potentially leaving many older adults uninsured or financially strained. Housing challenges also arise as the aging infrastructure may not be resilient to the effects of climate change, and many older adults live in areas more susceptible to these events. Social isolation, which is more common in older age, further increases risk during disasters .

People with Disabilities (Major Hazards: Earthquake, Power Outages)

People with disabilities represent another vulnerable group in Montebello. Disabilities can affect mobility, communication, and the ability to perform daily activities, all of which are critical during emergencies. Approximately 10.3% of Montebello's population has a disability. These individuals may require special accommodations, such as accessible transportation and communication aids, to receive emergency notifications and evacuate safely. Emergency shelters and response plans must be inclusive to address the needs of individuals with physical, sensory, and cognitive disabilities, ensuring they receive adequate care and support during disasters.

Minority Communities (Major Hazards: Earthquake, Fire, Power Outage)

Montebello is a diverse city, with Hispanic or Latino residents comprising over 75% of the population. Minority communities often face systemic barriers that increase their vulnerability to disasters, including language barriers, lower income levels, and limited access to healthcare and social services. Language barriers can hinder the ability to receive and understand emergency communications, while economic disadvantages limit their capacity to prepare for and recover from disasters. Minority communities may also experience discrimination and social inequities that exacerbate the impacts of disasters.

Unhoused (Major Hazards: Extreme Heat, Drought, Fire, High Wind/Storms, Infectious Disease/Pandemic):

As of the latest data, Los Angeles County, which includes Montebello, has one of the highest numbers of unhoused individuals in the United States, with estimates suggesting that there are over 66,000 people experiencing homelessness countywide. While specific numbers for Montebello are not always readily available, the city, like many in the region, faces challenges related to homelessness.

Unhoused populations are uniquely vulnerable to many of the natural hazards mentioned in this Plan, most notably extreme heat and wildfire. The unhoused population in Montebello faces severe impacts from natural disasters due to their continuous exposure to the elements, limited access to information, and inadequate shelter. Extreme weather conditions, such as heatwaves and heavy rains, pose significant health risks, including heat exhaustion and the spread of diseases. These individuals often lack basic emergency supplies and access to healthcare, exacerbating their vulnerability during emergencies. Communication barriers mean many are not promptly informed about impending disasters, while evacuation challenges arise from the lack of personal transportation and resources.

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SECTION 3 – HAZARD IDENTIFICATION AND RISK ASSESSMENT

Element B: Risk Assessment Requirements
B1. Does the plan include a description of the type, location and extent of all natural hazards that can affect the jurisdiction? Does the plan also include information on previous occurrences of hazard events and on the probability of future hazard events? (Requirement 44 CFR § 201.6(c)(2)(i))

This section discusses the types of hazards that might reasonably impact the City of Montebello. It describes how they are measured, a history of these hazards and the future risk they pose. This chapter also discusses how hazards in the plan were selected and prioritized.

3.1 Historic Disaster Declarations

Since 1969, Los Angeles County has received 81 total Federal disaster declarations. The following data comes from FEMA's Disaster Declarations for States and Counties (https://www.fema.gov/data-visualization/disaster-declarations-states-and-counties)

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Flood	Los Angeles County	DR-253-CA	1969	January	1/26/1969	SEVERE STORMS & FLOODING	CA
Fire	Los Angeles County	DR-295-CA	1970	September	9/29/1970	FOREST & BRUSH FIRES	CA
Other	Los Angeles County	DR-299-CA	1971	February	2/9/1971	SAN FERNANDO EARTHQUAKE	CA
Flood	Los Angeles County	DR-547-CA	1978	February	2/15/1978	COASTAL STORMS, MUDSLIDES & FLOODING	CA
Fire	Los Angeles County	EM-3067-CA	1978	October	10/29/1978	BRUSH FIRES	CA

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Flood	Los Angeles County	DR-615-CA	1980	February	2/21/1980	SEVERE STORMS, MUDSLIDES & FLOODING	CA
Fire	Los Angeles County	DR-635-CA	1980	November	11/27/1980	BRUSH & TIMBER FIRES	CA
Tropical Storm	Los Angeles County	DR-677-CA	1983	February	2/9/1983	COASTAL STORMS, FLOODS, SLIDES & TORNADOES	CA
Other	Los Angeles County	DR-799-CA	1987	October	10/7/1987	EARTHQUAKE & AFTERSHOCKS	CA
Flood	Los Angeles County	DR-812-CA	1988	February	2/5/1988	SEVERE STORMS, HIGH TIDES & FLOODING	CA
Fire	Los Angeles County	DR-872-CA	1990	June	6/30/1990	FIRES	CA
Freezing Temperature	Los Angeles County	DR-894-CA	1991	February	2/11/1991	SEVERE FREEZE	CA
Flood	Los Angeles County	DR-935-CA	1992	February	2/25/1992	RAIN/SNOW/WIND STORMS, FLOODING, MUDSLIDES	CA
Fire	Los Angeles County	DR-942-CA	1992	May	5/2/1992	FIRE DURING A PERIOD OF CIVIL UNREST	CA
Flood	Los Angeles County	DR-979-CA	1993	February	2/3/1993	SEVERE WINTER STORM, MUD & LAND SLIDES, & FLOODING	CA

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Fire	Los Angeles County	DR-1005-CA	1993	October	10/28/1993	FIRES, MUD/LANDSLIDES, FLOODING, SOIL EROSION	CA
Other	Los Angeles County	DR-1008-CA	1994	January	1/17/1994	NORTHRIDGE EARTHQUAKE	CA
Severe Storm	Los Angeles County	DR-1046-CA	1995	March	3/12/1995	SEVERE WINTER STORMS, FLOODING LANDSLIDES, MUD FLOW	CA
Severe Storm	Los Angeles County	DR-1044-CA	1995	January	1/10/1995	SEVERE WINTER STORMS, FLOODING, LANDSLIDES, MUD FLOWS	CA
Fire	Los Angeles County	EM-3120-CA	1996	October	10/23/1996	SEVERE FIRESTORMS	CA
Severe Storm	Los Angeles County	DR-1203-CA	1998	February	2/9/1998	SEVERE WINTER STORMS AND FLOODING	CA
Fire	Los Angeles County	FM-2417-CA	2002	June	6/6/2002	CA - COPPER FIRE - 06-06-2002	CA
Fire	Los Angeles County	FM-2464-CA	2002	September	9/24/2002	WILLIAMS FIRE	CA
Fire	Los Angeles County	FM-2462-CA	2002	September	9/4/2002	LEONA FIRE	CA
Fire	Los Angeles County	DR-1498-CA	2003	October	10/27/2003	WILDFIRES, FLOODING, MUDFLOW AND DEBRIS FLOW DIRECTLY RELATED T	CA

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Fire	Los Angeles County	FM-2502-CA	2003	October	10/25/2003	CA-VERDALE FIRE 10-25-2003	CA
Fire	Los Angeles County	FM-2466-CA	2003	January	1/7/2003	CA - WILDFIRE (PACIFIC FIRE) - 01-06-2003	CA
Fire	Los Angeles County	FM-2534-CA	2004	July	7/18/2004	CA-FOOTHILL WILDFIRE-07-18-2004	CA
Fire	Los Angeles County	FM-2535-CA	2004	July	7/21/2004	CA-CROWN WILDFIRE-07-21-2004	CA
Fire	Los Angeles County	FM-2528-CA	2004	July	7/14/2004	CA - PINE FIRE - 7-13-2004	CA
Fire	Los Angeles County	FM-2583-CA	2005	September	9/28/2005	TOPANGA FIRE	CA
Tropical Storm	Los Angeles County	EM-3248-CA	2005	September	9/13/2005	HURRICANE KATRINA EVACUATION	CA
Severe Storm	Los Angeles County	DR-1577-CA	2005	February	2/4/2005	SEVERE STORMS, FLOODING, DEBRIS FLOWS, AND MUDSLIDES	CA
Severe Storm	Los Angeles County	DR-1585-CA	2005	April	4/14/2005	SEVERE STORMS, FLOODING, LANDSLIDES, AND MUD AND DEBRIS FLOWS	CA
Fire	Los Angeles County	DR-1731-CA	2007	October	10/24/2007	WILDFIRES, FLOODING, MUD FLOWS, AND DEBRIS FLOWS	CA
Fire	Los Angeles County	FM-2736-CA	2007	October	10/22/2007	RANCH FIRE	CA

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Fire	Los Angeles County	FM-2732-CA	2007	October	10/21/2007	CANYON FIRE	CA
Fire	Los Angeles County	FM-2733-CA	2007	October	10/21/2007	BUCKWEED FIRE	CA
Fire	Los Angeles County	FM-2708-CA	2007	July	7/8/2007	CANYON FIRE	CA
Fire	Los Angeles County	FM-2694-CA	2007	May	5/10/2007	ISLAND FIRE	CA
Fire	Los Angeles County	FM-2691-CA	2007	May	5/9/2007	GRIFFITH PARK FIRE	CA
Fire	Los Angeles County	EM-3279-CA	2007	October	10/23/2007	WILDFIRES	CA
Freezing Temperature	Los Angeles County	DR-1689-CA	2007	March	3/13/2007	SEVERE FREEZE	CA
Fire	Los Angeles County	DR-1810-CA	2008	November	11/18/2008	WILDFIRES	CA
Fire	Los Angeles County	FM-2788-CA	2008	October	10/12/2008	MAREK FIRE	CA
Fire	Los Angeles County	FM-2792-CA	2008	November	11/15/2008	FREEWAY FIRE COMPLEX	CA
Fire	Los Angeles County	FM-2789-CA	2008	October	10/13/2008	SESNON FIRE	CA
Fire	Los Angeles County	FM-2791-CA	2008	November	11/15/2008	SAYRE FIRE	CA
Fire	Los Angeles County	FM-2763-CA	2008	April	4/27/2008	SANTA ANITA FIRE	CA
Fire	Los Angeles County	FM-2828-CA	2009	August	8/28/2009	PV FIRE	CA
Fire	Los Angeles County	FM-2830-CA	2009	August	8/28/2009	STATION FIRE	CA
Fire	Los Angeles County	FM-2851-CA	2010	July	7/30/2010	CROWN FIRE	CA
Severe Storm	Los Angeles County	DR-1884-CA	2010	March	3/8/2010	SEVERE WINTER STORMS, FLOODING, AND DEBRIS AND MUD FLOWS	CA

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Fire	Los Angeles County	FM-5025-CA	2013	June	6/2/2013	POWERHOUSE FIRE	CA
Fire	Los Angeles County	FM-5051-CA	2014	January	1/16/2014	COLBY FIRE	CA
Fire	Los Angeles County	FM-5124-CA	2016	June	6/5/2016	OLD FIRE	CA
Fire	Los Angeles County	FM-5129-CA	2016	June	6/21/2016	FISH FIRE	CA
Fire	Los Angeles County	FM-5132-CA	2016	July	7/9/2016	SAGE FIRE	CA
Fire	Los Angeles County	FM-5135-CA	2016	July	7/23/2016	SAND FIRE	CA
Flood	Los Angeles County	DR-4305-CA	2017	March	3/16/2017	SEVERE WINTER STORMS, FLOODING, AND MUDSLIDES	CA
Fire	Los Angeles County	EM-3396-CA	2017	December	12/8/2017	WILDFIRES	CA
Fire	Los Angeles County	FM-5201-CA	2017	September	9/2/2017	LA TUNA FIRE	CA
Fire	Los Angeles County	FM-5225-CA	2017	December	12/5/2017	CREEK FIRE	CA
Fire	Los Angeles County	FM-5226-CA	2017	December	12/5/2017	RYE FIRE	CA
Fire	Los Angeles County	FM-5227-CA	2017	December	12/6/2017	SKIRBALL FIRE	CA
Fire	Los Angeles County	DR-4407-CA	2018	November	11/12/2018	WILDFIRES	CA
Fire	Los Angeles County	DR-4353-CA	2018	January	1/2/2018	WILDFIRES, FLOODING, MUDFLOWS, AND DEBRIS FLOWS	CA
Fire	Los Angeles County	EM-3409-CA	2018	November	11/9/2018	WILDFIRES	CA
Fire	Los Angeles County	FM-5280-CA	2018	November	11/9/2018	WOOLSEY FIRE	CA

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Fire	Los Angeles County	FM-5293-CA	2019	October	10/11/2019	SADDLE RIDGE FIRE	CA
Fire	Los Angeles County	FM-5296-CA	2019	October	10/24/2019	TICK FIRE	CA
Fire	Los Angeles County	FM-5297-CA	2019	October	10/28/2019	GETTY FIRE	CA
Fire	Los Angeles County	DR-4569-CA	2020	October	10/16/2020	WILDFIRES	CA
Fire	Los Angeles County	FM-5374-CA	2020	September	9/13/2020	BOBCAT FIRE	CA
Other	Los Angeles County	DR-4482-CA	2020	March	3/22/2020	COVID-19 PANDEMIC	CA
Other	Los Angeles County	EM-3428-CA	2020	March	3/13/2020	COVID-19	CA
Flood	Los Angeles County	EM-3592-CA	2023	March	3/10/2023	SEVERE WINTER STORMS, FLOODING, LANDSLIDES, AND MUDSLIDES	CA
Flood	Los Angeles County	EM-3591-CA	2023	January	1/9/2023	SEVERE WINTER STORMS, FLOODING, AND MUDSLIDES	CA
Flood	Los Angeles County	DR-4683-CA	2023	January	1/14/2023	SEVERE WINTER STORMS, FLOODING, LANDSLIDES, AND MUDSLIDES	CA

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Severe Storm	Los Angeles County	DR-4699-CA	2023	April	4/3/2023	SEVERE WINTER STORMS, STRAIGHT-LINE WINDS, FLOODING, LANDSLIDES, AND MUDSLIDES	CA
Severe Storm	Los Angeles County	DR-4769-CA	2024	April	4/13/2024	SEVERE WINTER STORMS, TORNADOES, FLOODING, LANDSLIDES AND MUDSLIDES	CA

3.1.1 Hazard Selection

Hazards for the 2024 LHMP were determined by examining hazards previously analyzed in the most recent LHMP revision as well as additional hazards identified by the City through internal solicitation from participants in the internal interview process for the LHMP.

The National Risk Index identifies 18 specific hazards that may affect communities across the United States. Not all of these hazards were included in the 2023 LHMP. Each hazard is addressed below along with justifications as to why they may not have been included.

Hazard	Included	Explanation
Avalanche	No	The City of Montebello does not experience significant snowfall; therefore, this hazard Is not applicable to the City.
Coastal Flooding	No	The City of Montebello does not have any coastline; therefore, this hazard is not applicable to the City.
Cold Wave	No	Southern California is known for its temperate and warm climate; therefore, this hazard is not applicable to the City.
Drought	Yes	This hazard is included in the LHMP.
Earthquake	Yes	This hazard is included in the LHMP.
Hail	No	This hazard was not identified through any of the interviews with City staff; therefore, this hazard was not determined to be significant enough to include in the LHMP. Related hazards are included as “High wind/storms
Heat Wave	Yes	This hazard is included under “Extreme Heat”.
Hurricane	No	Hurricanes rarely impact Southern California; therefore, this hazard is not applicable to the City. Similar impacts are examined under “Heavy Rain” and “Extreme Wind”.
Ice Storm	No	Southern California is known for its temperate and warm climate; therefore, this hazard is not applicable to the City.
Landslide	No	Due to its topography, the City of Montebello does not face significant threats from landslide; therefore, this hazard is not applicable to the City.
Lightning	No	This hazard was not determined to be significant enough to include in the LHMP. Related hazards are included as “High wind/storms”.

Riverine Flooding	Yes	This hazard is included as “Flooding”
Strong Wind	Yes	This hazard is included as “High wind/storms”.
Tornado	No	Tornadoes are extremely rare in Southern California; therefore, this hazard is not applicable to the City.
Tsunami	No	The City of Montebello does not border a major body of water and is sufficiently inland to be insulated from immediate tsunami impacts; therefore, this hazard is not applicable to the City.
Volcanic Activity	No	There are no active volcanos in Southern California; therefore, this hazard is not applicable to the City.
Wildfire	Yes	This hazard is included under “Fire”.
Winter Weather	No	Southern California is known for its temperate and warm climate; therefore, this hazard is not applicable to the City.

3.2 Hazard Scoring, Prioritization and Probability

On June 12, 2024, a hazards and vulnerability assessment workshop was conducted with the City of Montebello and with local stakeholders. During the workshop, attendees evaluated the risk of hazards included in previous LHMP documents as well as additional hazards suggested by attendees.

The following hazards were evaluated in Montebello's local hazard mitigation plan update:

- Extreme Heat
- Drought
- Earthquake
- High wind/storms
- Fire
- Power outage
- Cyberattack/IT disruption
- Flooding
- Dam failure
- Terrorism
- Infectious disease

Based in part on elements of the Critical Priority Risk Index, modified for an increased emphasis on future risks using standard climate risk assessment categorization, participants were asked to give their opinion on the assigned scores for each hazard.

This information was used to calculate the Modified Calculated Probability Risk Index score. The CPRI is a common methodology used in hazard mitigation plans to quantify risk. However, it does not give sufficient weight to risks from climate change or other future events.

The Modified CPRI is calculated in the following manner:

*((Severity (Present)*0.3)+(Probability (Present)*0.45)+(Severity (Future)*0.3)+(Probability (Future)*0.45))*

Score values assigned are listed below, and the highest possible score was 75:

- 1 – Negligible
- 2 – Minor
- 3 – Moderate
- 4 – Major
- 5 - Extreme

	Severity (present)	Probability (present)	Present Risk Score	Severity (future)	Probability (future)	Future Risk Score	Modified CPRI
Extreme heat	3	4	12	5	5	25	6.45
Drought	3	4	12	4	5	20	6.15
Earthquake	4	3	12	4	3	12	5.1
High wind/storms	4	3	12	4	3	12	5.1
Fire	3	3	9	3	4	12	4.95
Power outage	4	2	8	5	3	15	4.95
Cyberattack/IT disruption	3	2	6	5	3	15	4.65
Flooding	3	3	9	3	3	9	4.5
Dam Failure	3	2	6	3	2	6	3.6
Terrorism	3	2	6	3	2	6	3.6
Infectious disease/pandemic	3	2	6	3	2	6	3.6
Severity & Probability Scores	1 - Negligible						
	2 - Minor						
	3 - Moderate						
	4 - Major						
	5 - Extreme						
Modified CPRI	((Severity (present)*0.3)+(Probability (present)*0.45)+(Severity (future)*0.3)+(Probability (future)*0.45))						

This LHMP will use the following definitions throughout Section 3 to allow policymakers and planners to use the LHMP to inform City priorities and planning decisions.

Probability	Definition
Very Unlikely	Less than 5% probability of occurrence
Unlikely	Greater than 5% and less than 30% probability of occurrence
Moderate	Greater than 30% and less than 60% probability of occurrence
Likely	Greater than 60% and less than 95% probability of occurrence
Very Likely	Greater than 95% probability of occurrence

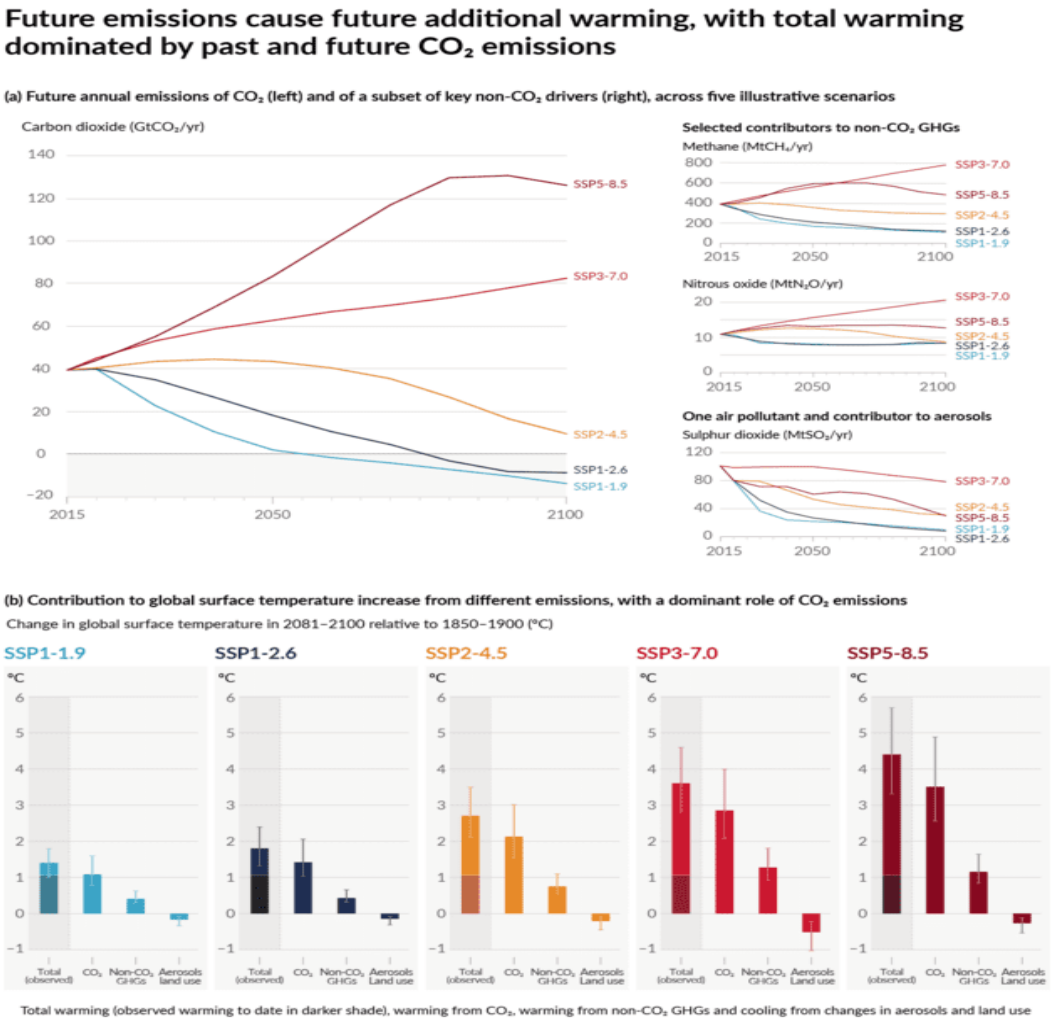
For the purposes of this LHMP, the timescale for probability, unless otherwise specified, will be 5 years, the current duration of an approved LHMP.

3.3 Global Climate Change

Global climate change is one of the defining phenomena of the 21st century and is emphasized in FEMA's revised hazard mitigation planning guidance as of April 19, 2023. Climate change is caused by increasing emissions of specific gasses, primarily carbon dioxide (CO2) and the feedback loops caused by those emissions increasing overall global temperatures. As of 2023, current concentrations of CO2 in the atmosphere are equivalent to those last seen in the Pliocene era between 2 and 5 million years ago before the Ice Ages, where global sea levels were on average 20 feet higher than today.

Climate change is not, by itself, a discrete hazard, and will not be considered as such in this LHMP. Instead, climate will be considered in each individual hazard description, as well as within individual mitigation actions. Climate change is best thought of as, in security parlance, a threat multiplier, or as "loading the dice", amplifying the impacts of existing hazards, shifting the probability of extreme events, and extending new hazards to regions that previously have not experienced them.

National and intergovernmental efforts to establish consensus climate projections include the Intergovernmental Panel on Climate Change and the National Climate Assessment in the United States (the Fifth Assessment is currently in preparation). The IPCC uses a representative concentration pathway (RCP) and associated shared socioeconomic pathways (SSP) to illustrate likely outcomes of varying emissions levels.



At the time of writing (2023), given national pledges and observed trends in measurable emissions, the most probably emission scenario is the upper end of RCP4.5, which results in an increase of between 2.2 and 3.5 degrees Celsius over preindustrial temperatures. By 2100, a significant increase by any measure over the 1.5 degree Celsius boundary set by the 2015 Paris Accords. This outcome is subject to several significant caveats:

- This assumes that all national pledges are followed through upon, which is highly questionable given political realities.
- This also neglects the potential for feedback loops or unpredictable events such as major methane releases due to arctic thawing that may temporarily significantly increase greenhouse gases in the atmosphere.
- Many projections assume the development and widespread use of carbon capture and sequestration (CCS) technology to draw down carbon out of the atmosphere. As of yet, CCS technology has not been proven to scale, and the extent of deployment required for CCS to impact projections will be extraordinarily broad and expensive.

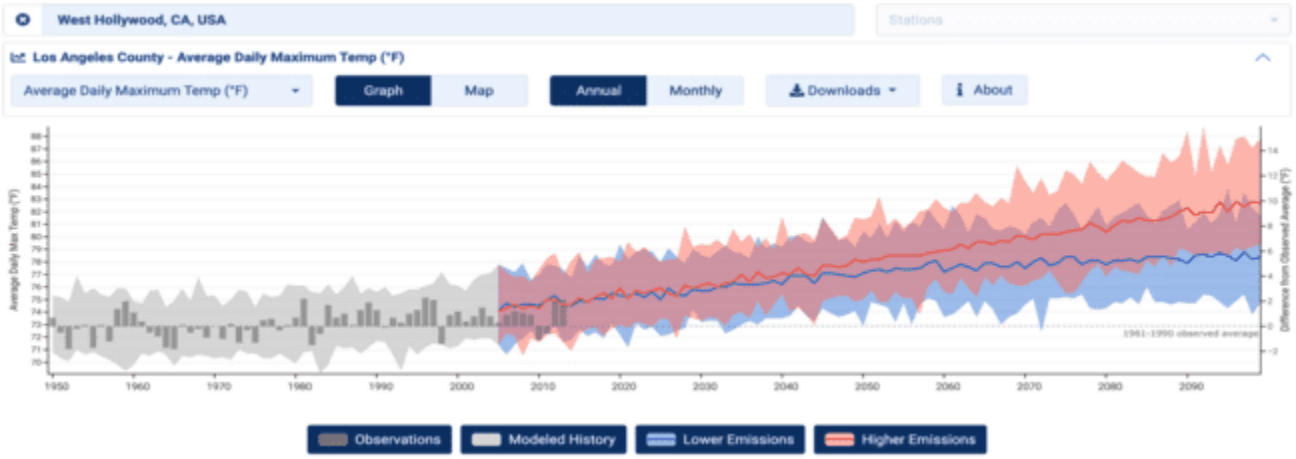
- Finally, a consensus is not a prediction – it is a product of a scientific process that is heavily impacted by political considerations. It can be thought of as a set of ranges, not as a hard number.

Many climate risk analyses today use RCP8.5, or "business as usual" projections as their baseline, which was the most likely outcome as of as little as three years ago. More recent projections have shifted to RCP4.5, but RCP8.5 is still completely in the realm of possibility and is more likely than the extremely optimistic projection of RCP1.9.

For the City of Montebello:

- Under RCP 4.5, future model-average temperature values in Montebello are projected to increase by 4.1°F by mid-century (2035-2064) and 5.2°F by end of century (2070-2099).
- Under RCP 8.5, future model-average temperature values are projected to increase by 4.9°F by mid-century and 8.2°F by end of century.

Below are a few of the most relevant aspects of climate change for hazard mitigation planning:



Source: U.S. Climate Resilience Toolkit Climate Explorer for Montebello, California

- Many of climate change's impacts have resulted in greater unpredictability. For example, many regions are projected to experience both too little rain (increasing droughts) and too much rain (in severe events such as rain bombs or atmospheric rivers). Averages tend to obscure these kinds of extremes. Increasingly over the past several years, these kinds of almost stochastic events have increased all over the world.
- Projections by their nature tend to assume steady, linear change. Given what has been observed above, this is unlikely on either a local scale or a macrolevel scale. Planners should assume that surprises are likely to occur and plan accordingly.

- While overall climate projections have been remarkably accurate in terms of global temperature, many of the impacts of these temperature rises have been faster than expected, in some cases significantly so, with observed phenomena occurring today that researchers expected to see decades later. Planners should assume that impacts will occur on shorter time scales than anticipated – acting sooner will save money, time, and effort later.

This is important for planners and decision makers to keep in mind. Past conditions are no longer as reliable as guides to future conditions as they once might have been.

3.4 Hazard Profiles

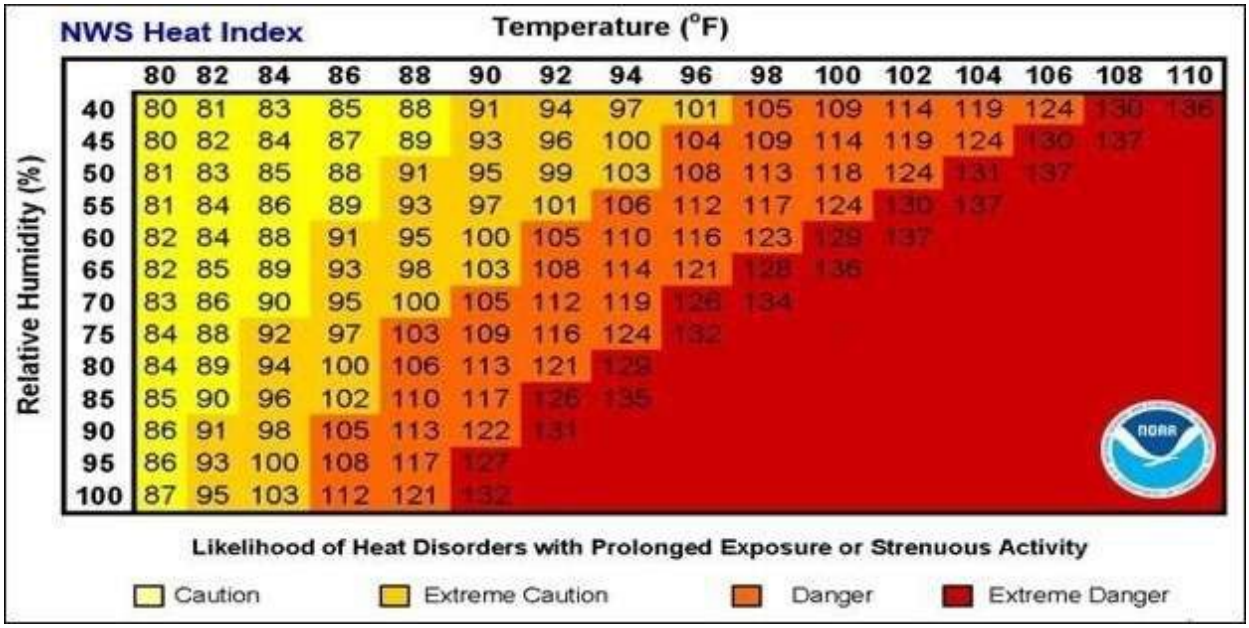
3.4.1 Extreme Heat

Hazard Description

Extreme heat refers to a period of abnormally high temperatures in a specific location. As defined by CalAdapt (https://cal-adapt.org/tools/extreme-heat/), there are three major types of extreme heat events:

- Extreme heat days, which exceed 98% of all historic high temperatures for the area between April and October from 1961 to 1990.
- Warm nights, which exceed 98% of all historic minimum daytime temperatures observed between April and October from 1961 to 1990.
- Extreme heat waves, a successive series of extreme heat days and warm nights defined as a minimum of four successive extreme heat days and warm nights.

Different regions will experience extreme heat events differently due to variations in historic high temperatures. For example, an extreme heat day on the coast will feel distinct from an extreme heat day in the high desert due to the impact of humidity on people's perception of heat. Humid conditions make a day feel hotter than non-humid conditions, even if the temperature is the same, resulting in a difference known as the heat index. A 90-degree day with 50 percent humidity feels like 95°F, whereas a 90°F day with 90 percent humidity feels like 122°F.



National Weather Service Extreme Heat Index

Prolonged exposure to extreme heat can be hazardous to public health, as the human body is less able to withstand high temperatures for extended periods of time. This can result in heat exhaustion and dehydration, which may progress to heat stroke and organ failure if internal body temperature surpasses 105 degrees Fahrenheit. Without intervention, this can be fatal.

While Montebello and the Los Angeles area experience moderate temperatures throughout the year, citizens are still vulnerable to unusually hot weather during the summer or early fall months.

Location and Extent

Extreme heat events occur with the same intensity and duration across all locations in Montebello and are not limited to any specific part of the City. Extreme heat does have disproportionate impacts depending on the type and age of building, however. Many older buildings may not have the same cooling capacity or may be more vulnerable to power outages and loss or air conditioning. Residential buildings of this age in Montebello are disproportionally occupied by lower income tenants.

Previous Occurrences

Extreme heat events are not unusual in the Los Angeles metropolitan area, which the City of Montebello is a part of. Some recent examples include:

- **2006 North American Heat Wave**
    - **Date**: July 2006
    - **Duration**: Approximately two weeks
    - **Peak Temperatures**: Temperatures soared above 100°F (38°C), with some days reaching 112°F (44°C).
- **2010 California Heat Wave**
    - **Date**: September 2010
    - **Duration**: Several days
    - **Peak Temperatures**: Temperatures reached up to 113°F (45°C) in parts of Los Angeles County.
- **2017 Western North America Heat Wave**
    - **Date**: June - September 2017
    - **Duration**: Multiple heat waves throughout the summer
    - **Peak Temperatures**: Temperatures consistently exceeded 100°F (38°C), with peaks around 108°F (42°C).
- **2018 Southern California Heat Wave**
    - **Date**: July 2018
    - **Duration**: Several days
    - **Peak Temperatures**: Temperatures peaked at 111°F (44°C).
- **2020 Labor Day Weekend Heat Wave**
    - **Date**: September 2020
    - **Duration**: Labor Day weekend
    - **Peak Temperatures**: Temperatures soared to 121°F (49°C) in parts of Los Angeles County.
- **2021 Western North America Heat Wave**
    - **Date**: June 2021
    - **Duration**: Several days
    - **Peak Temperatures**: Temperatures reached up to 115°F (46°C).

Probability of Future Events and Impacts of Climate Change

Overall probability over next five years: ***Likely.***

The following illustration from NOAA's Climate Explorer details the probability of days in Montebello with high temperatures over 95 degrees Fahrenheit to 2100 under multiple emissions scenarios.

The frequency and intensity of extreme heat events is growing. According to California's Fourth Climate Assessment for the Los Angeles Region:

> *The average hottest day of the year is expected to increase roughly 4-7°F under RCP4.5 and 7-10°F under RCP8.5 by the late 21st century. Similar to the spatial pattern in annual max temperature changes, the largest changes in extremes are found in the interior of the region, and particularly the valleys, while the smallest changes are generally confined to coastal regions.*
>
> *The number of extremely hot days Is expected to Increase In the future. For instance, LA International Airport (LAX) historically experiences less than 15 days per year with temperatures equal to or greater than 90°F (Cayan et al. 2018). By the end of the century under RCP8.5, LAX is projected to experience 50–90 such days per year (Pierce et al. 2018). Sun et al. (2015) similarly found that land locations are projected to experience 60–90 additional extremely hot days (greater than or equal to 95°F) per year by the end of the century, with the exception of the highest elevations and regions along the coast, where increases are only a few days.*

3.4.2 Drought

Hazard Description

By one count, there are over 150 definitions for "drought". The National Weather Service describes drought as "*a deficiency of moisture that results in adverse impacts on people, animals, or vegetation over a sizeable area.*" For the purposes of this LHMP, drought will be defined as a deficiency of precipitation over an extended period of time, usually a season or more. This deficiency results in a water shortage,

Drought is a natural occurrence in all climates, both in regions with high and low average rainfall. Droughts typically are declared when lasting for a calendar season or longer and can be categorized into five different types: meteorological, agricultural, hydrologic, socioeconomic, and ecological.

- **Meteorological**: This type of drought refers to a decrease in rainfall that deviates from the normal precipitation pattern. It includes changes in the amount, intensity, or timing of rainfall, as well as changes in temperature, humidity, and wind patterns. The threshold for defining meteorological drought varies from country to country. In the United States, a meteorological drought is declared if there is less than 2.5mm of rainfall in 48 hours. This type of drought is the first stage to be detected. Broader multi-year precipitation patterns can give rise to drought conditions. In California, the El Niño Southern Oscillation (ENSO) cycle, a regional meteorological event in the Pacific Ocean, is important in the region's hydrologic regime. The ENSO cycle consists of changes in ocean water and air temperature and results in two phases: El Niño, a warm and wet phase, and La Niña, a dry and cold phase. When La Niña is active, it can lead to below-normal precipitation levels in California and frequently lead to drought conditions.
- **Agricultural:** This type of drought is characterized by insufficient moisture conditions that cause lasting damage to crops and other vegetation. It is dependent on factors such as rainfall, temperature, topography, soil permeability, evapotranspiration, vegetative demand, and more. Agricultural drought begins when the available soil moisture only supports a fraction of the actual evapotranspiration rate.
- **Hydrological:** This type of drought is related to the effects of reduced precipitation on the surface or subsurface water supply. During the latter part of the hydrological cycle, water infiltrates into the groundwater. The subsurface water supply is the last component to return to normal when meteorological conditions and aquifer recharge return to normal.
- **Socioeconomic:** This type of drought occurs when the consequences of drought start to impact social and economic systems. It arises when the demand for an economic good is greater than the available supply due to drought-related weather conditions.

Examples of such goods include water, food grains, dairy products, hydroelectric power, and more. Socioeconomic drought affects both individuals and the population as a whole.

- **Ecological:** This type of drought is defined as a widespread and prolonged deficit in naturally available water supplies that leads to multiple stressors across ecosystems. This includes changes in both natural and managed hydrology.

Determining the onset and end of a drought can be challenging compared to sudden and discrete weather events such as hurricanes, tornadoes, and thunderstorms. Early signs of a drought can be difficult to detect, and it may take some time, perhaps even weeks, or months, before it is recognized. The conclusion of a drought is also challenging to identify for the same reasons. Droughts can range in duration from a few weeks to several years and in some cases, even persist for a decade or more.

Drought primes the conditions for a variety of other hazards by drying soil out, which reduces its capacity to absorb water. Thus, when precipitation returns, the soil is less able to hold onto water, increasing runoff and the risk of floods. Due to the soil's reduced ability to bond together, dry earth is more prone to erosion and landslides. In addition, the lack of participation effects plants and other vegetation in natural places as the lack of nutrients makes them more vulnerable to pests and diseases and the lack of internal water raises the possibility of wildfires.

Drought should not be viewed as merely a physical phenomenon or natural event. Its impacts on society result from the interplay between a natural event (less precipitation than expected resulting from natural climatic variability) and the demand people place on water supply. Human beings often exacerbate the impact of drought. Recent droughts in both developing and developed countries and the resulting economic and environmental impacts and personal hardships have underscored the vulnerability of all societies to this "natural" hazard.

California's extensive system of water supply infrastructure - its reservoirs, groundwater basins, and inter-regional conveyance facilities - mitigates the effect of short-term dry periods for most water users. Defining when a drought begins is a function of drought impacts to water users. Hydrologic conditions constituting a drought for water users in one location may not constitute a drought for water users elsewhere, or for water users having a different water supply. Individual water suppliers may use criteria such as rainfall/runoff, amount of water in storage, or expected supply from a water wholesaler to define their water supply conditions.

Location and Extent

The entirety of the City of Montebello is susceptible to drought. The impact of drought is regional in nature, and typically would extend far beyond the city limits of Montebello to include the whole of southern California.

Of the many varied indexes used to measure drought, the Palmer Drought Severity Index (PDSI) is the most commonly used drought index in the United States. Developed by meteorologist Wayne Palmer, the PDSI is used to measure dryness based on recent temperature compared to the amount of precipitation. It utilizes a number range, 0 as normal, drought shown in terms of minus numbers, and wetness shown in positive numbers. The PDSI is most effective at analyzing long-range drought forecasts or predications. Thus, the PDSI is very effective at evaluation trends in the severity and frequency of prolonged periods of drought, and conversely wet weather. The National Oceanic and Atmospheric Administration (NOAA) publish weekly Palmer maps, which are also used by other scientists to analyze the long-term trends associated with global warming and how this has affected drought conditions.

Category	Description	Example Percentile Range for Most Indicators	Values for Standard Precipitation Index and Standardized Precipitation-Evapotranspiration Index
None	Normal or wet conditions	31 or above	-0.49 or above
D0	Abnormally Dry	21 to 30	-0.5 to -0.79
D1	Moderate Drought	11 to 20.99	-0.8 to -1.29
D2	Severe Drought	6 to 10.99	-1.3 to -1.59
D3	Extreme Drought	3 to 5.99	-1.6 to -1.99
D4	Exceptional Drought	0 to 2.99	-2.0 or less

US Drought Monitor Classification Scheme.
Source: https://droughtmonitor.unl.edu/About/AbouttheData/DroughtClassification

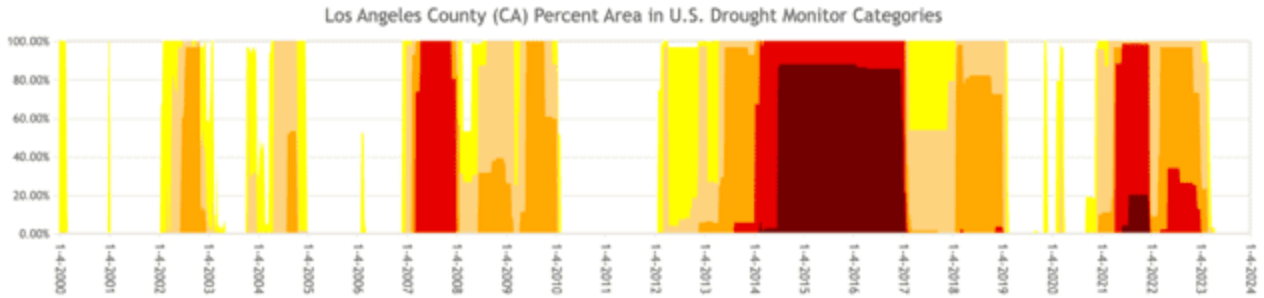
Previous Occurrences

The region's Mediterranean climate makes it especially susceptible to variations in rainfall. Severe water shortages could have a bearing on the economic well-being of the community. Comparison of climate (rainfall) records from Los Angeles with water well records beginning in 1930 from the San Gabriel Valley indicates the existence of wet and dry cycles on a 10-year scale as well as for much longer periods. The climate record for the Los Angeles region beginning in 1890 suggests drying conditions over the last century.

With respect to the present day, climate data also suggests that the last significant wet period was the 1940s. Well level data and other sources seem to indicate the historic high groundwater levels (reflecting recharge from rainfall) occurred in the same decade. Since that

time, rainfall (and groundwater level trends) appears to be in decline. This slight declining trend, however, is not believed to be significant. Climatologists compiled rainfall data from 96 stations in the State that spanned a 100-year period between 1890 and 1990. An interesting note is that during the first 50 years of the reporting period, there was only one year (1890) that had more than 35 inches of rainfall, whereas the second 50-year period recording of 5 year intervals (1941, 1958, 1978, 1982, and 1983) that exceeded 35 inches of rainfall in a single year. The year of maximum rainfall was 1890 when the average annual rainfall was 43.11 inches. The second wettest year on record occurred in 1983 when the State's average was 42.75 inches.

Montebello, like the rest of California, has experienced many drought events throughout its history. California was in some form of drought for 376 consecutive weeks from December 20, 2011, until March 14, 2017. By summer of 2014, almost all of California was experiencing level D2 (severe drought) conditions. By 2015, emergency water saving mandates were enacted, which required all jurisdictions to reduce water use by no less than 25 percent. In late 2016 and early 2017, consecutive occurrences of heavy rain helped end the drought conditions in the state. The following winter, in late 2017 and early 2018, rains did not occur to the same level and slight drought conditions again affected the state. This moderate drought was again abated in the winter season of late 2018 and early 2019, when heavy rains ended any existing drought conditions. Drought conditions returned shortly thereafter, with water restrictions being eased after the intense precipitation events of early 2023.



Los Angeles County Percent Area in Drought Categories

Source: https://droughtmonitor.unl.edu/dmData/Timeseries.aspx

Probability of Future Events and Impacts of Climate Change

Overall probability over next five years: ***Likely.***

Periodic drought has been a fact of life in California since before written records were kept. However, global climate change has already had a significant impact, in part fueling the North American West's "megadrought", as of 2023 in its 23rd year and being the driest period in over 1,200 years. October 2019 through September 2022 were California's driest years on record.

Paradoxically, climate change has also brought historic rainstorms and flood events, as conditions whipsaw between drought and flooding. This increased variability and oscillation between too little rain and too much rain is a hallmark of climate projections and is playing out in real time.

Atmospheric rivers (narrow corridors of concentrated moisture in the atmosphere) are largely responsible for precipitation patterns across the southern California region, and coupled with topographical influences, can create intense storms. Cal-Adapt climate projections predict that the likelihood and duration of atmospheric rivers will increase, leading to increased likelihoods of flood events.

Predictions for extreme weather events show that no major trend changes are expected under either scenario. However, as noted above for patterns in precipitation, whiplash events are expected to increase. When years with elevated numbers of extreme rain events follow dry years, the likelihood and severity of mudslides and flooding increases. This is largely due to reductions in vegetation during dry years, which otherwise stabilize soil. Conversely, dry years that follow upticks in extreme rain events can lead to wildfires. This is due to increased presence of fuel sources for wildfire in the form of dry vegetation.

These whiplash events will increase vulnerability to both fire and floods. A tragic example the Hawai'i fires on the island of Maui that consumed the historic royal capital of Lahaina in August 2023, killing large numbers of people. The compounding nature of this disaster – high winds driving fires on an island experiencing extended drought conditions – illustrates that drought is not only an absence of water but can be an accelerant for devastating wildfires.

According to California's Fourth Climate Change Assessment's Los Angeles Region survey, published in 2019:

> *Anthropogenic warming has increased the probability that low-precipitation years coincide with warm years, increasing the current risk and severity of droughts and low snowpack in California (Difenbaugh et al. 2015; Berg and Hall 2017; Williams et al. 2015). Atmospheric conditions conducive to California droughts, such as a persistent*

region of high pressure in the northeastern Pacific Ocean, may have also become more frequent in recent decades (Swain et al. 2016). GCMs (global climate models) project significantly drier soils in the future over the Southwest (including California), with more than an 80% chance of a multidecadal drought during 2050–2099 under RCP8.5 (Cook et al. 2015).

The effects of climate change on drought are expected to be mixed. For Instance, in some years, climate change-enhanced weather patterns such as those during the El Nino Southern Oscillation (ENSO) phase may bring more rainfall to California and Montebello, alleviating drought conditions. On the other hand, it may also extend the La Niña phase of ENSO, leading to longer periods without precipitation. Furthermore, climate change is projected to cause more frequent and prolonged heat waves in California, increasing the average temperature. During such events, the water supply may be diverted for essential cooling needs, including those of the elderly and to maintain critical City operations, leading to greater water consumption. If a heat wave were to occur during a drought, it would place even more strain on the water supply.

3.4.3 Earthquake

Hazard Description

An earthquake is a sudden, violent movement of the earth's surface that is caused by volcanic activity or tectonic movement along fault lines and the subsequent release of energy in the form of seismic waves. The effects of an earthquake can be widespread and include surface faulting, shaking of the ground, landslides, soil liquefaction, changes in the earth's tectonic structure, tsunamis, and oscillations in large bodies of water.

The point where two tectonic plates meet is called a fault line, and earthquakes often occur along these lines. In California, the San Andreas Fault is the most well-known fault line, where the North American Plate and the Pacific Plate come together. Over time, the constant friction between these two plates has caused the intersection to break into smaller faults, making the area more prone to earthquakes. The Earth's surface may show visible signs of fault lines in the form of sudden changes or breaks in the landscape.

Earthquakes strike suddenly, without warning. Earthquakes can occur at any time of the year and at any time of the day or night. On a yearly basis, 70 to 75 damaging earthquakes occur throughout the world. To this point, a 5.1 earthquake occurred on Sunday, August 20, 2023 during the landfall of Hurricane Hilary, the first tropical storm to arrive in California in 84 years.

The two main types of earthquakes that can occur in each region are strike-slip and dip-slip earthquakes. Strike-slip earthquakes occur on vertical or nearly vertical faults, where the plates of the Earth's crust move mostly horizontally. The direction of movement across the fault determines if it is a right lateral fault or a left lateral fault. Dip-slip earthquakes occur on slanted faults where the blocks of the Earth's crust shift mostly vertically. If the Earth above the fault moves downward, it is called a normal fault, and if it moves upward, it is known as a reverse fault. If the reverse fault has a dip of 45 degrees or less, it is referred to as a thrust fault.

The region close to a fault line is vulnerable to damage due to the possibility of a fault rupture, resulting in the shifting and displacement of the land on either side of the fault, which may move a few inches to several feet in opposite directions. Buildings and infrastructure near, on top of, or crossing a fault line may be severely damaged or even destroyed. Some faults have only recently formed in geological history and are known as Quaternary faults. These faults, which have developed within the past 1.8 million years, are a concern as they are most likely to be active and cause future earthquakes. The Alquist-Priolo Earthquake Fault Zoning Act permits the California State Geologist to identify zones around active faults as Alquist-Priolo Special Study Zones, which are designated as special regulatory areas. These zones require further study to determine the location of the fault and the extent of the area prohibited from surface construction above the known location of an active fault.

Common effects of earthquakes are ground motion and shaking, surface fault ruptures, and ground failure. Ground motion is the vibration or shaking of the ground during an earthquake. When a fault ruptures, seismic waves radiate, causing the ground to vibrate. 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 motions. The severity of these effects is dependent on the amount of energy released from the fault or epicenter. One way to express an earthquake's severity is to compare its acceleration to the normal acceleration due to gravity. The acceleration due to gravity is often called "g". A ground motion with a peak ground acceleration of 100%g is very severe. Peak Ground Acceleration (PGA) is a measure of the strength of ground motion. PGA is used to project the risk of damage from future earthquakes by showing earthquake ground motions that have a specified probability (10%, 5%, or 2%) of being exceeded in 50 years. These ground motion values are used for reference in construction design for earthquake resistance. The ground motion values can also be used to assess relative hazard between sites, when making economic and safety decisions.

An earthquake generates different types of seismic shock waves that travel outward from the focus or point of rupture on a fault. Seismic waves that travel through the earth's crust are called body waves and are divided into primary (P) and secondary (S) waves. Because P waves move faster (1.7 times) than S waves, they arrive at the seismograph first. By measuring the time delay between arrival of the P and S waves and knowing the distance to the epicenter, seismologists can compute the magnitude for the earthquake.

The Richter magnitude scale, named after seismologist Charles F. Richter, measures the amount of energy released by an earthquake at its source. The scale ranges from 0 to 10, with each increase of one representing an earthquake 10 times stronger than the previous one. However, because it is a logarithmic scale, the energy released increases by a factor of 32 for each one-point increase in magnitude. For example, an earthquake with a magnitude of 6.0 releases 32 times more energy than an earthquake with a magnitude of 5.0. In terms of actual energy released, however, each one-point increase on the Richter scale corresponds to about a 32-fold increase in energy released. Therefore, a Magnitude 7 (M7) earthquake is 100 times (10 X 10) more powerful than a M5 earthquake and releases 1,024 times (32 X 32) the energy.

The Modified Mercalli Scale (MMI) is another means for rating earthquakes, but one that attempts to quantify intensity of ground shaking. Intensity under this scale is a function of distance from the epicenter (the closer to the epicenter the greater the intensity), ground acceleration, duration of ground shaking, and degree of structural damage. The Mercalli intensity scale measures the effects of an earthquake on people, structures, and the

environment. It is based on observations of damage and shaking intensity rather than on instrumental measurements. The scale ranges from I to XII, with each level representing a different level of damage and impact. For example, an earthquake with an intensity of I would be felt only by a few people under very special circumstances, while an earthquake with an intensity of XII would cause total destruction of buildings and infrastructure.

The Richter Magnitude Scale

Richter Magnitudes	Earthquake Effects
Less than 3.5	Generally, not felt but recorded.
3.5-5.4	Often felt, but rarely causes damage.
Under 6.0	At most slight damage to well-designed buildings. Can cause major damage to poorly constructed buildings over small regions.
6.1-6.9	Can be destructive in areas up to about 100 kilometers across where people live.
7.0-7.9	Major earthquake. Can cause serious damage over larger areas.
8 or greater	Great earthquake. Can cause serious damage in areas several hundred kilometers across.

Source: https://www.usgs.gov/natural-hazards/earthquake

Modified Mercalli Intensity Scale for Earthquakes

Scale	Intensity	Description of Effects	Corresponding Richter Scale Magnitude
I	Instrumental	Detected only on seismographs	
II	Feeble	Some people feel it	<4.2
III	Slight	Felt by people resting; like a truck rumbling by	
IV	Moderate	Felt by people walking	
V	Slightly Strong	Sleepers awake; church bells ring	<4.8

Scale	Intensity	Description of Effects	Corresponding Richter Scale Magnitude
VI	Strong	Trees sway: suspended objects swing, objects fall off shelves	<5.4
VII	Very Strong	Mild alarm; walls crack; plaster falls	<6.1
VIII	Destructive	Moving cars uncontrollable; masonry fractures; poorly constructed buildings damaged.	
IX	Ruinous	Some houses collapse; ground cracks; pipes break open	<6.9
X	Disastrous	Ground cracks profusely; many buildings destroyed; liquefaction and landslides widespread	<7.3
XI	Very Disastrous	Most buildings and bridges collapse; roads, railways, pipes, and cables destroyed	
XII	Catastrophic	Total destruction: trees fall; ground rises and falls in waves	>8.1

Source: https://www.usgs.gov/natural-hazards/earthquake

Earthquake Related Hazards

Ground shaking, landslides, liquefaction, and amplification are the specific hazards associated with earthquakes. The severity of these hazards depends on several factors, including soil and slope conditions, proximity to the fault, earthquake magnitude, and the type of earthquake.

Ground Shaking

Ground shaking is the motion felt on the earth's surface caused by seismic waves generated by the earthquake. It is the primary cause of earthquake damage.

While not all earthquakes are strong enough to cause noticeable shaking, the intensity of ground shaking is proportional to the amount of energy released from the earthquake, which is determined by the length and depth of the fault that caused it. Typically, areas closest to the fault rupture experience stronger ground shaking, while areas farther away experience weaker shaking. Buildings on poorly consolidated and thick soils will typically see more damage than buildings on consolidated soils and bedrock. Ground shaking can result in structural damage or

collapse, and it can also harm underground utilities or pipelines, leading to flooding if water lines are broken.

Earthquake-Induced Landslide Potential

Generally, these types of failures consist of rock falls, disrupted soil slides, rock slides, soil lateral spreads, soil slumps, soil block slides, and soil avalanches. Areas having the potential for earthquake-induced landslides generally occur in areas of previous landslide movement, or where local topographic, geological, geotechnical, and subsurface water conditions indicate a potential for permanent ground displacements.

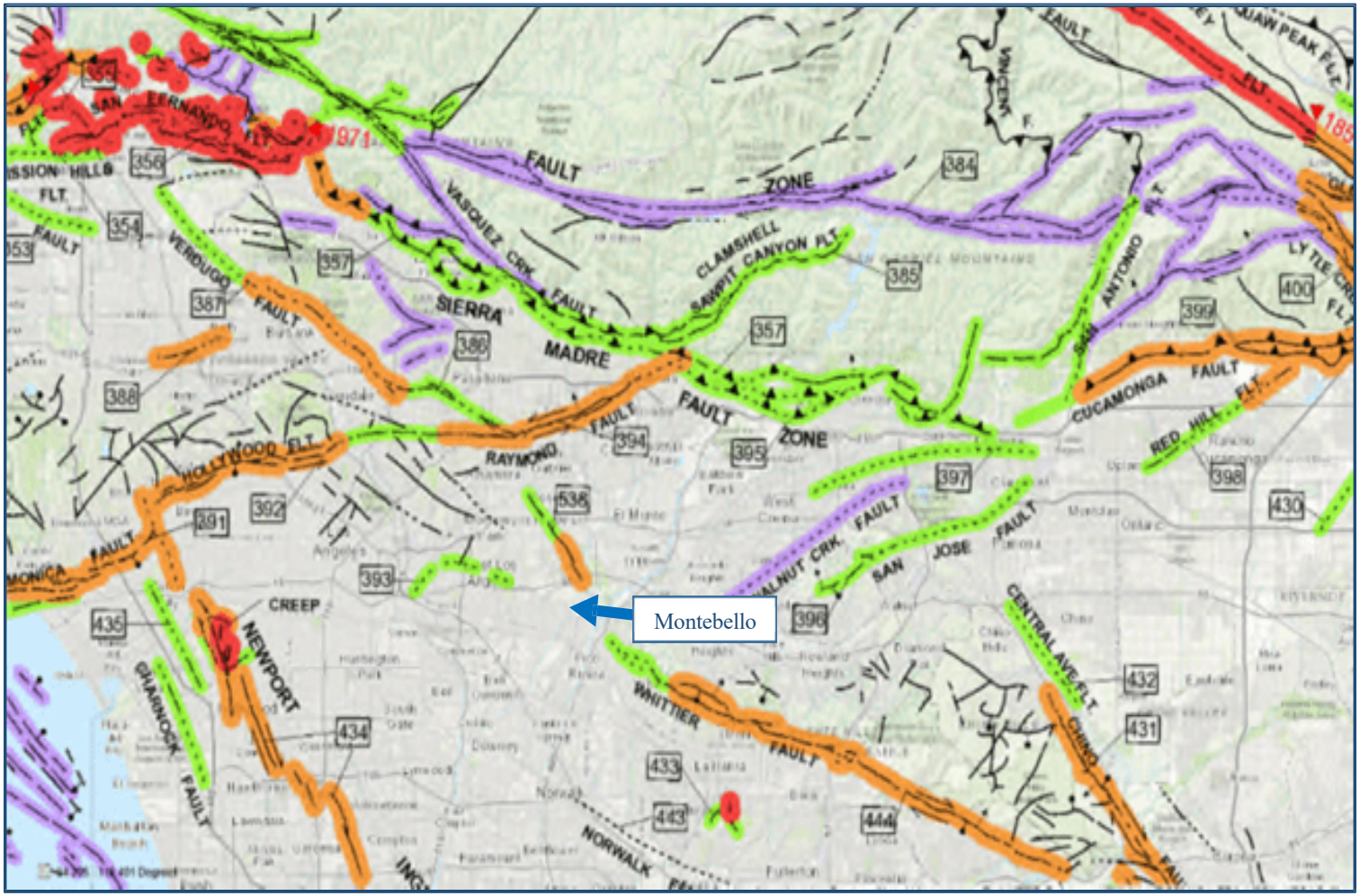
Liquefaction

Liquefaction occurs when ground shaking causes wet granular soils to change from a solid state to a liquid state. This results in the loss of soil strength and the soil's ability to support weight. Buildings and their occupants are at risk when the ground can no longer support these structures. Liquefaction generally occurs during significant earthquake activity, and structures located on soils such as silt or sand may experience significant damage during an earthquake due to the instability of structural foundations and the moving earth. Many communities in Southern California are built on ancient river bottoms and have sandy soil. In some cases, the soil may be subject to liquefaction, depending on the depth of the water table.

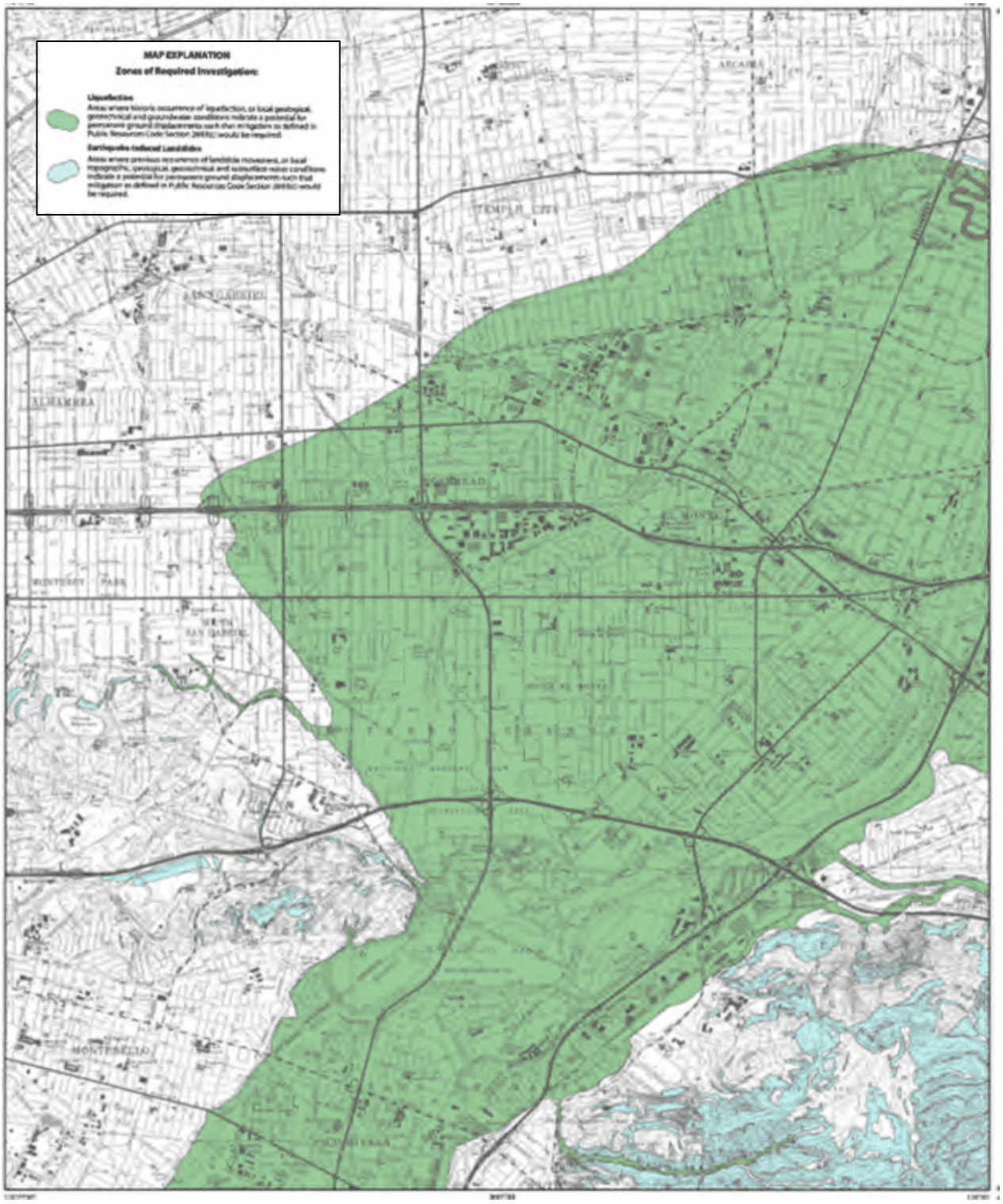
Although there is no standard method for measuring the scale of liquefaction, other factors can be used to gauge the extent of damage caused by it. These include the type of soil, the strength of the seismic shaking in the affected area, the size of the affected region, and the degree of destruction caused by the liquefaction.

Location and Extent

Regional Faults - Source: State of California Department of Conservation



Landslide and Liquefaction Zones in Montebello



Earthquakes that could affect the City would most likely originate from the Newport-Inglewood, San Andreas, Whittier, Puente Hills, or Sierra Madre Faults. These faults are close enough in proximity or expected to generate strong enough shaking that could significantly impact the City.

- **Newport-Inglewood:** The Newport-Inglewood Fault Zone lies approximately 14 miles southwest of Montebello. The Newport-Inglewood Fault System is a nearly linear alignment of faults extending 45 miles along the southwestern side of the Los Angeles basin. It can be traced as a series of topographic hills, ridges, and mesas from the Santa Monica Mountains to Newport Beach, where it trends offshore. Structures along the zone of deformation act as groundwater barriers and, at greater depths, as petroleum traps. Continuing seismic activity has been evidenced most prominently in recent times by the 1920 Inglewood and 1933 Long Beach earthquakes.
- **San Andreas** The San Andreas Fault Zone is located approximately 34 miles northeast of the City of Montebello. This fault zone extends from the Gulf of California northward to the Cape Mendocino area where it continues northward along the ocean floor. The total length of the San Andreas Fault Zone is approximately 750 miles. The activity of the fault has been recorded during historic events, including the 1906 (M8.0) event in San Francisco and the 1857 (M7.9) event between Cholame and San Bernardino, where at least 250 miles of surface rupture occurred. These seismic events are among the most significant earthquakes in California history. Geologic evidence suggests that the San Andreas Fault has a 50 percent chance of producing a magnitude 7.5 to 8.5 earthquake (comparable to the great San Francisco earthquake of 1906) within the next 30 years.
- **Whittier:** The Whittier fault zone lies approximately 7 miles southeast of Montebello. The Whittier Fault is a 25 mile right-lateral strike-slip fault that runs along the Chino Hills range between the cities of Chino Hills and Whittier. It is estimated that this fault could generate up to a magnitude 7.2 earthquake.
- **Puente Hills:** The Puente Hills Fault is located approximately 8 miles south of the City. According to USGS, the Puente Hills Fault was most recently responsible for the M5.1 La Habra earthquake on March 28, 2014 which caused an estimated $2.6 million in damage. The USGS estimates that a future, larger M7.5 earthquake along the Puente Hills Fault could kill 3,000 to 18,000 people and cause up to $250 billion in Southern California region. In contrast, a larger M8.0 quake along the San Andreas would cause an estimated 1,800 deaths.
- **Sierra Madre:** The Sierra Madre Fault Zone lies approximately 12 miles northeast of Montebello. This fault zone is a series of moderate angle, north-dipping, reverse faults (thrust faults). Movement along these frontal faults has resulted in the uplift of the San Gabriel Mountains. According to the Southern California Earthquake Data Center, rupture on the Sierra Madre Fault Zone (theoretically) could be limited to one segment at a time, it has recently been suggested that a large event on the San Andreas Fault to

the north (like that of 1857) could cause simultaneous rupture on reverse faults south of the San Gabriel Mountains – the Sierra Madre Fault Zone being a prime example of such. Whether this could rupture multiple Sierra Madre Fault Zone segments simultaneously is unknown. Seismic activity on the Sierra Madre Fault is expected to have a maximum magnitude of 7.2.

Beyond these known faults, there are a potentially large number of "blind" faults that underlie the surface of Southern California. One such blind fault was involved in the Whittier Narrows earthquake in October 1987.

Although the most famous of the faults, the San Andreas, can produce an earthquake with a magnitude of 8+ on the Richter scale, some of the "lesser" faults have the potential to inflict greater damage on the urban core of the Los Angeles Basin. Seismologists believe that a 6.0 earthquake on the Newport-Inglewood would result in far more damage than a "great" quake on the San Andreas, because the San Andreas is relatively remote from the urban centers of Southern California.

Previous Occurrences

The following data comes from FEMA's Disaster Declarations for States and Counties (https://www.fema.gov/data-visualization/disaster-declarations-states-and-counties).:

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Other	Los Angeles County	DR-299-CA	1971	February	2/9/1971	SAN FERNANDO EARTHQUAKE	CA
Other	Los Angeles County	DR-799-CA	1987	October	10/7/1987	EARTHQUAKE & AFTERSHOCKS	CA
Other	Los Angeles County	DR-1008-CA	1994	January	1/17/1994	NORTHRIDGE EARTHQUAKE	CA

Paleoseismological research indicates that large magnitude (8.0+) earthquakes occur on the San Andreas Fault at intervals between 45 and 332 years with an average interval of 140 years. Other lesser faults have also caused very damaging earthquakes since 1857. Notable earthquakes include the 1933 Long Beach Earthquake, the 1971 San Fernando Earthquake, the 1987 Whittier Earthquake and the 1994 Northridge Earthquake.

In the past several decades, earthquakes of magnitude 5.0 or greater occurred in the Los Angeles Area, with the most recent being the La Habra earthquake (magnitude 5.1) March 28th, 2014. For the La Habra earthquake, the epicenter was one mile east of La Habra and four miles north of Fullerton. An aftershock (magnitude 4.1) centered near the Los Angeles County community of Rowland Heights the following day. The second most recent earthquake with a magnitude of 5.0 or greater in the Los Angeles Area was the July 29th, 2008 Chino Hills earthquake, with the epicenter located 28 miles east-southeast of downtown Los Angeles.

Earthquakes in southern California have been frequent, with many impacting the City of Montebello and surrounding communities. Among the more notable area:

- **1933 Long Beach Earthquake**
  - **Date**: March 10, 1933
  - **Magnitude**: 6.4
  - **Epicenter**: Near Long Beach, California
  - **Impact on Montebello**: This earthquake caused extensive damage across the Los Angeles Basin. Montebello experienced structural damage to buildings, particularly older structures and unreinforced masonry buildings.
- **1971 San Fernando Earthquake**
  - **Date**: February 9, 1971
  - **Magnitude**: 6.6
  - **Epicenter**: Near Sylmar in the San Fernando Valley, California
  - **Impact on Montebello**: Montebello felt strong shaking, leading to minor to moderate structural damage. The earthquake caused widespread damage in the greater Los Angeles area, including collapsed buildings, freeway overpasses, and utility disruptions.
- **1987 Whittier Narrows Earthquake**
  - **Date**: October 1, 1987
  - **Magnitude**: 5.9
  - **Epicenter**: Near Rosemead, California, approximately 10 miles from Montebello
  - **Impact on Montebello**: The close proximity of the epicenter to Montebello resulted in significant shaking and damage to buildings and infrastructure. Several structures in Montebello suffered cracks and other structural issues, and there were reports of gas leaks and minor injuries.
- **1994 Northridge Earthquake**
  - **Date**: January 17, 1994
  - **Magnitude**: 6.7
  - **Epicenter**: Northridge, in the San Fernando Valley, California

    - **Impact on Montebello**: Although the epicenter was farther from Montebello, the city still experienced strong shaking. The earthquake caused structural damage, including cracked walls and foundations. It also disrupted utilities and services.
- **2014 La Habra Earthquake**
    - **Date**: March 28, 2014
    - **Magnitude**: 5.1
    - **Epicenter**: La Habra, California, approximately 15 miles from Montebello
    - **Impact on Montebello**: Montebello experienced noticeable shaking, which resulted in minor structural damage such as cracked walls and fallen items within buildings.
- **2019 Ridgecrest Earthquakes**
    - **Dates**: July 4 and July 5, 2019
    - **Magnitudes**: 6.4 and 7.1
    - **Epicenters**: Near Ridgecrest, California, approximately 150 miles from Montebello
    - **Impact on Montebello**: Despite the distance, Montebello felt the shaking from these significant earthquakes. There was no major damage reported, but the events highlighted the widespread reach of seismic activity in Southern California and the necessity for ongoing preparedness.

Probability of Future Events and Impacts of Climate Change

Overall probability over next five years: ***Moderate.***

There is a higher likelihood of large earthquakes occurring in the Los Angeles region compared to other parts of California, due to the presence of multiple faults that can cause multi-fault ruptures. On average, it is expected that a quake measuring 6.0 or greater in magnitude will occur in Southern California every few years. It is not possible to predict when a major earthquake will occur, but the USGS has estimated that there is a 75% chance that one or more earthquakes with a magnitude of 7.5 or greater will occur within the next thirty years.

3.4.4 High Wind/Storms

Hazard Description

High wind

High winds can result from thunderstorm inflow and outflow or downburst winds when the storm cloud collapses, and can result from strong frontal systems, or gradient winds (high or low pressure systems) moving across the land. High winds are speeds reaching 50 mph or greater, either sustaining or gusting.

Windstorms can damage buildings, power lines, and other property and infrastructure due to falling trees and branches. For example, tree limbs breaking in winds of 45 mph can be thrown over 75 feet. During wet winters, saturated soils cause trees to become less stable and more vulnerable to uprooting from high winds. In addition, windstorm activity can negatively impact transportation routes and power outages.

Perhaps the greatest danger from windstorm activity in Southern California comes from the combination of the Santa Ana winds with the major fires that occur every few years in the urban/wildland interface. With the Santa Ana winds driving the flames, the speed and reach of the flames is even greater than in times of calm wind conditions. The higher fire hazard raised by a Santa Ana wind condition requires that even more care and attention be paid to proper brush clearances on property in the wildland/urban interface areas.

Storms

When heavy rain occurs, it can fall at a rate so high that the water is unable to drain away quickly enough. This can result in flooding, causing inundation and potential damage to buildings, road networks, public areas, utilities, critical infrastructure, and other assets. In California, heavy rainfall events are typically brief and intense bursts of rain, although in some instances, heavy rain can persist for several days.

Precipitation levels in California fluctuate from year to year, largely dependent on the amount of moisture the state receives from atmospheric rivers. These rivers are pathways along which moist air travels from the tropics to the continents, and when this moisture reaches California, it can fall as either rain or snow. One of the most well-known atmospheric rivers in California is the "Pineapple Express," which brings wet air from the ocean surrounding Hawaii to California. In some years, a substantial amount of moisture can be transported by atmospheric rivers, resulting in heavy rainfall events in California.

The weather pattern known as El Niño, or the Southern Oscillation, is another factor that can influence rainfall in southern California, especially during winter. El Niño occurs when the

surface of the eastern tropical Pacific Ocean warms, causing warm, moist air to evaporate into the atmosphere. This moisture is then carried by winds to the eastern Pacific and the American continents, where it can result in increased rainfall. While El Niño doesn't always lead to increased rainfall, it generally increases the likelihood of a winter with above-average precipitation. Anomalous events such as Hurricane Hilary in 2023 are another example of extreme weather that could cause flooding

Location and Extent

The entirety of the City of Montebello is susceptible to severe wind and storm events.

The complex topography of Southern California combined with various atmospheric conditions creates numerous scenarios that may cause widespread or isolated Santa Ana events. Commonly, Santa Ana winds develop when a region of high pressure builds over the Great Basin (the high plateau east of the Sierra Mountains and west of the Rocky Mountains including most of Nevada and Utah). Clockwise circulation around the center of this high pressure area forces air downslope from the high plateau. The air warms as it descends toward the California coast at the rate of 5 degrees Fahrenheit per 1000 feet due to compressional heating. Thus, compressional heating provides the primary source of warming. The air is dry since it originated in the desert, and it dries out even more as it is heated.

Santa Ana winds generally occur below the passes and canyons of the coastal ranges of Southern California and in the Los Angeles Basin. Santa Ana winds often blow with exceptional speed in the Santa Ana Canyon (the canyon from which it derives its name). Forecasters at the National Weather Service in Oxnard and San Diego usually place speed minimums on these winds and reserve the use of "Santa Ana" for winds greater than 25 knots.

Santa Ana winds commonly occur between October and February with December having the highest frequency of events. Summer events are rare. Wind speeds are typically north to east at 35 knots through and below passes and canyons with gusts to 50 knots. Stronger Santa Ana winds can have gusts greater than 60 knots over widespread areas and gusts greater than 100 knots in favored areas. Frequently, the strongest winds in the basin occur during the night and morning hours due to the absence of a sea breeze. The sea breeze which typically blows onshore daily, can moderate the Santa Ana winds during the late morning and afternoon hours.

The measurement of winds typically employs the Beaufort scale, which was created in 1805 and sorts wind occurrences based on their speed and effects on a force scale ranging from 0 to 12. Wind events classified as force 9 or higher are typically recognized as severe wind events.

Beaufort Scale

Beaufort number	Wind Speed (mph)	Seaman's term		Effects on Land
0	Under 1	Calm		Calm; smoke rises vertically.
1	1-3	Light Air		Smoke drift indicates wind direction; vanes do not move.
2	4-7	Light Breeze		Wind felt on face; leaves rustle; vanes begin to move.
3	8-12	Gentle Breeze		Leaves, small twigs in constant motion; light flags extended.
4	13-18	Moderate Breeze		Dust, leaves and loose paper raised up; small branches move.
5	19-24	Fresh Breeze		Small trees begin to sway.
6	25-31	Strong Breeze		Large branches of trees in motion; whistling heard in wires.
7	32-38	Moderate Gale		Whole trees in motion; resistance felt in walking against the wind.
8	39-46	Fresh Gale		Twigs and small branches broken off trees.
9	47-54	Strong Gale		Slight structural damage occurs; slate blown from roofs.
10	55-63	Whole Gale		Seldom experienced on land; trees broken; structural damage occurs.
11	64-72	Storm		Very rarely experienced on land; usually with widespread damage.
12	73 or higher	Hurricane Force		Violence and destruction.

Source:

Table 8-1. Intensity of Rain or Ice Pellets Based on Rate-of-Fall

Intensity	Criteria
Light	Up to 0.10 inch per hour; maximum 0.01 inch in 6 minutes.
Moderate	0.11 inch to 0.30 inch per hour; more than 0.01 inch to 0.03 inch in 6 minutes.
Heavy	More than 0.30 inch per hour; more than 0.03 inch in 6 minutes.

Table 8-2. Estimating Intensity of Rain

Intensity	Criteria
Light	From scattered drops that, regardless of duration, do not completely wet an exposed surface up to a condition where individual drops are easily seen.
Moderate	Individual drops are not clearly identifiable; spray is observable just above pavements and other hard surfaces.
Heavy	Rain seemingly falls in sheets; individual drops are not identifiable; heavy spray to height of several inches is observed over hard surfaces.

https://www.icams-portal.gov/resources/ofcm/fmh/FMH1/fmh1_2019.pdf

Previous Occurrences

The following data comes from FEMA's Disaster Declarations for States and Counties (https://www.fema.gov/data-visualization/disaster-declarations-states-and-counties).

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Severe Storm	Los Angeles County	DR-1046-CA	1995	March	3/12/1995	SEVERE WINTER STORMS, FLOODING LANDSLIDES, MUD FLOW	CA
Severe Storm	Los Angeles County	DR-1044-CA	1995	January	1/10/1995	SEVERE WINTER STORMS, FLOODING, LANDSLIDES, MUD FLOWS	CA
Severe Storm	Los Angeles County	DR-1203-CA	1998	February	2/9/1998	SEVERE WINTER STORMS AND FLOODING	CA
Severe Storm	Los Angeles County	DR-1577-CA	2005	February	2/4/2005	SEVERE STORMS, FLOODING, DEBRIS FLOWS, AND MUDSLIDES	CA
Severe Storm	Los Angeles County	DR-1585-CA	2005	April	4/14/2005	SEVERE STORMS, FLOODING, LANDSLIDES, AND MUD AND DEBRIS FLOWS	CA

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Severe Storm	Los Angeles County	DR-1884-CA	2010	March	3/8/2010	SEVERE WINTER STORMS, FLOODING, AND DEBRIS AND MUD FLOWS	CA
Severe Storm	Los Angeles County	DR-4699-CA	2023	April	4/3/2023	SEVERE WINTER STORMS, STRAIGHT-LINE WINDS, FLOODING, LANDSLIDES, AND MUDSLIDES	CA
Tropical Storm	Los Angeles County	DR-677-CA	1983	February	2/9/1983	COASTAL STORMS, FLOODS, SLIDES & TORNADOES	CA
Tropical Storm	Los Angeles County	EM-3248-CA	2005	September	9/13/2005	HURRICANE KATRINA EVACUATION	CA

Probability of Future Events and Impacts of Climate Change

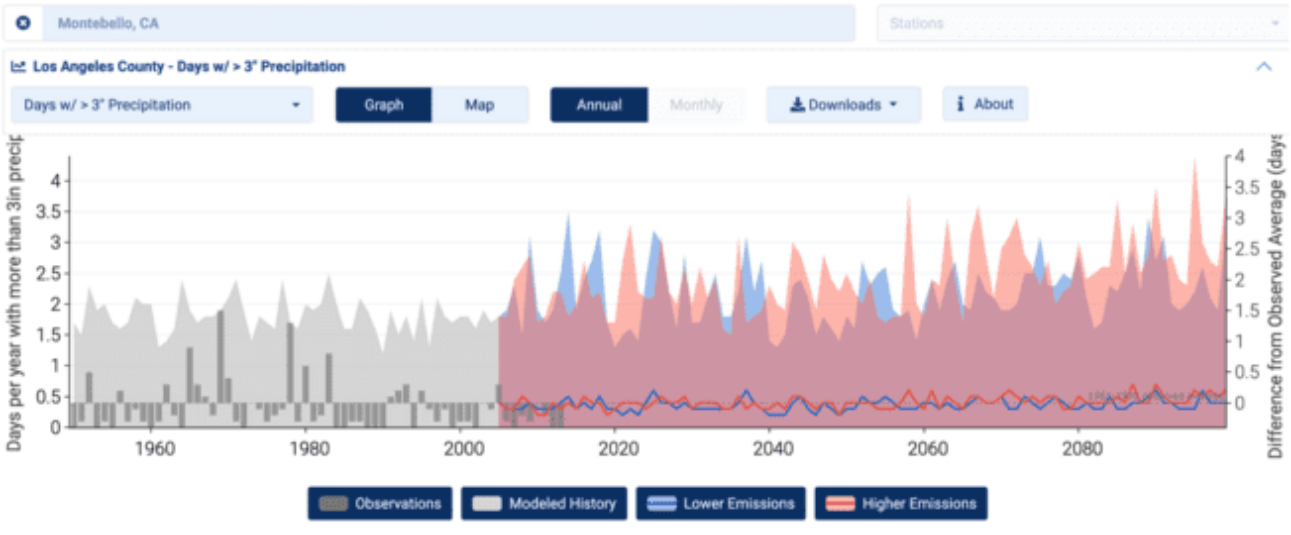
Overall probability over next five years: ***Likely.***

The probability of high wind events in Montebello and the surrounding areas depends on several factors, including atmospheric conditions, the location and topography of the region, and the season. The probability of high wind events is highest during the fall and winter months, when the Santa Ana winds are most likely to occur. However, these events can occur at any time of year and can vary in intensity and duration.

It is difficult to predict exactly how climate change will impact high wind events in the Montebello area and surrounding region. Conflicting research points to possibilities of both decreasing or increasing frequencies of Santa Ana wind events overall. One 2019 study posits that Santa Ana winds will decrease in frequency during the fall, while a follow-up 2022 study finds that only the so-called "cold" winds that bring snow to mountains are likely to measurably decrease.

In either scenario, however, while the chronological distribution of severe winds may shrink overall, changes in precipitation patterns may result in increased danger from high winds. Due to increased periods of dryness between precipitation in summer and a shift in fall precipitation later in the year towards winter, there is a possibility that the window for wildfires will follow the Santa Ana winds. With increased dryness in vegetation, this has the potential for more damaging fires.

The following chart from NOAA's Climate Explorer describes trends in the number of days with rainfall greater than 3 inches to 2100.



Montebello can expect to experience more frequent and intense heavy rainstorms due to the expected increase in the frequency and overall amount of rainfall in California. According to California's Fourth Climate Assessment for the Los Angeles Region:

> *Atmospheric rivers are regions of high water vapor transport from the tropics to the Pacific Coast of the U.S. that can produce intense topographic-induced precipitation along southern California mountain ranges (Neiman et al. 2008; J. Kim et al. 2012; Harris and Carvalho 2017; Guan et al. 2013; Payne and Magnusdottir 2014). Such events have helped pull the region out of droughts, although they are also responsible for devastating floods and mudslides (Ralph et al. 2006; Guan et al. 2013; M. D. Dettinger 2013). Between 1979-2013, 72 atmospheric rivers were identified as landfalling along the coast of southern California, approximately 2-3 events each year, though significant interannual variability exists. The frequency of atmospheric rivers over southern California has a potential connection to some natural climate variability patterns (Neiman et al. 2008; J. Kim et al. 2012; Harris and Carvalho 2017; Guan et al. 2013; Payne and Magnusdottir 2014).*
>
> *Analysis of several previous-generation GCMs by (Dettinger 2011a) suggest that the frequency of atmospheric river events may increase in the future, and that the storms themselves will be associated with higher water vapor transport rates compared to historical conditions. Moreover, the peak season of atmospheric rivers may also lengthen, which could extend the food-hazard season in California. The current generation of GCMs project a nearly 40% increase in precipitation during atmospheric river events over southern California by the late-21st century under RCP8.5. The number of atmospheric river events is also projected to increase in the future, possibly around a doubling of days by the end of the century (Warner et al. 2015; Hagos et al. 2016; Gao et al. 2015). Understanding future characteristics of atmospheric rivers, particularly over local spatial scales in California, remains an active area of research.*

Increased periods of little to no rainfall and associated drying out of soils could also contribute to reduced absorptive capacity and increased surface transport of water from heavy rainfall, intensifying localized flooding.

3.4.5 Fire

Hazard Description

A wildfire is an uncontrolled fire spreading through vegetative fuels and exposing or possibly consuming structures. They often begin unnoticed and spread quickly. Naturally occurring and non-native species of grasses, brush, and trees fuel wildfires. A wildland fire is a wildfire in an area in which development is essentially nonexistent, except for roads, railroads, power lines and similar facilities. A wildland/urban interface fire is a wildfire in a geographical area where structures and other human development meet or intermingle with wildland or vegetative fuels.

Wildfire behavior is based on three primary factors: fuel, topography, and weather. The type, and amount of fuel, as well as its burning qualities and level of moisture affect wildfire potential and behavior. The continuity of fuels, expressed in both horizontal and vertical components is also a determinant of wildfire potential and behavior. Topography is important because it affects the movement of air (and thus the fire) over the ground surface. The slope and shape of terrain can change the speed at which the fire travels, and the ability of firefighters to reach and extinguish the fire. Weather affects the probability of wildfire and has a significant effect on its behavior. Temperature, humidity and wind (both short and long term) affect the severity and duration of wildfires.

Wildfires tend to occur most frequently in the summer when dry brush provides fuel for flames to spread rapidly. Ignition sources for wildfires can include campfires that were not properly extinguished, discarded cigarettes, burning debris, lightning strikes, or intentional acts of arson. Wildfires can start as slow burns along the forest floor, damaging and killing trees. As they spread to the tops of trees, wind can carry the flames from one tree to another, causing the fire to spread more rapidly. Typically, the first indication of a wildfire is the presence of dense smoke.

For thousands of years, fires have been a natural part of the ecosystem in Southern California. Wildfires can occur anywhere, with variation in size, intensity, location, and duration. People start more than 80 percent of wildfires, usually as debris burns, arson, or carelessness. Lightning strikes are the next leading cause of wildfires.

The danger to people and property is particularly high in the wildland urban interface (WUI), where development meets undeveloped open grassland or fire-adapted forest ecosystems, and during conditions, when vegetation is especially susceptible to fire. The classic wildland/urban interface exists where well-defined urban and suburban development presses up against open expanses of wildland areas; the mixed wildland/urban interface is characterized by isolated homes, subdivisions, and small communities situated predominantly in wildland settings. The occluded wildland/urban interface exists where islands of wildland vegetation occur inside a largely urbanized area.

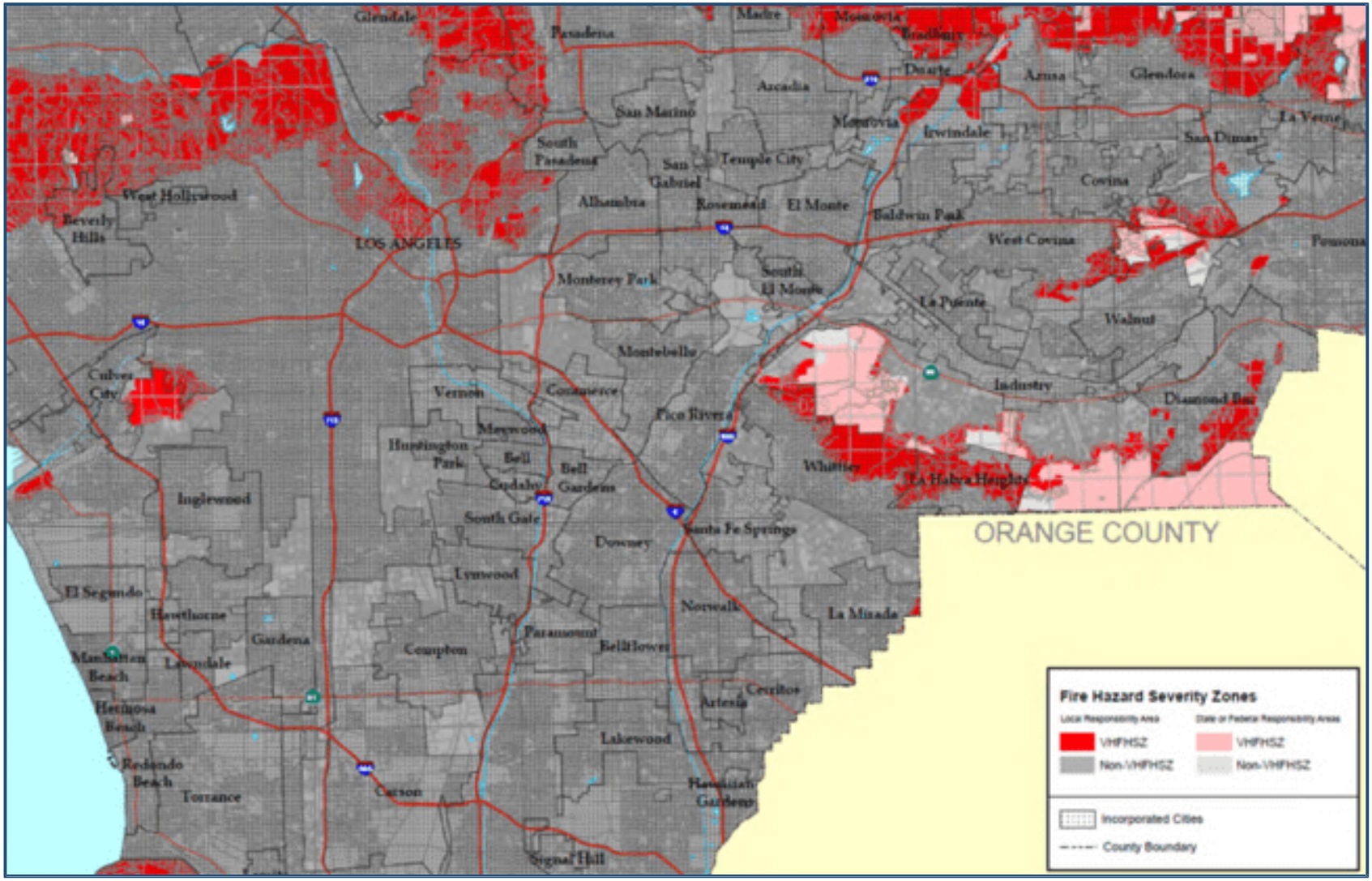
One challenge Southern California faces regarding the wildfire hazard is from the increasing number of houses being built on the urban/wildland interface. Every year the growing population expands further into the hills and mountains, including forest lands. The increased "interface" between urban/suburban areas, and the open spaces created by this expansion, produces a significant increase in threats to life and property from fires, and pushes existing fire protection systems beyond original or current design and capability.

Property owners in the interface are often not aware of the problems and fire hazards or risks on their own property. A house surrounded by brushy growth rather than cleared space allows for greater continuity of fuel and increases the fire's ability to spread. After decades of fire suppression "dog-hair" thickets have accumulated, which enable high intensity fires to flare and spread rapidly.

Topography influences the movement of air, thereby directing a fire course. For example, if the percentage of uphill slope doubles, the rate of spread in wildfire will likely double. Gulches and canyons can funnel air and act as chimneys, which intensify fire behavior and cause the fire to spread faster. Solar heating of dry, south-facing slopes produces up slope drafts that can complicate fire behavior. Unfortunately, hillsides with hazardous topographic characteristics are also desirable residential areas in many communities. Owners often prefer homes that are private with scenic views, nestled in vegetation, and use natural materials. A private setting is usually far from public roads, or hidden behind a narrow, curving driveway. These conditions, however, make evacuation and firefighting difficult.

Areas where annual precipitation is less than 30 inches per year are extremely fire susceptible. High-risk areas in Southern California share a hot, dry season in late summer and early fall when high temperatures and low humidity favor fire activity. The so-called "Santa Ana" winds, which are heated by compression as they flow down to Southern California from Utah, create a particularly high risk, as they can rapidly spread what might otherwise be a small fire.

Map: Local, State, and Federal Responsibility Areas - Very High Fire Hazard Severity Zones (Source: CAL FIRE)



Location and Extent

The City of Montebello is not within a designated very high fire hazard severity zone (VHFHSZ). However, the immediate areas due east of Montebello including the City of Whittier and the unincorporated community of Hacienda Heights are at severe risk to wildfires. These areas are at significant risk during the summer months, extended periods of heat, and long periods of no rain. Strong, easterly Santa Ana winds have the potential to direct wildfires from the west into the City of Montebello.

Regardless of whether fire itself spreads, smoke is very likely to impact the City, whether from adjacent fires or more severe fires further away. Smoke from fires can severely impact air quality and increase health risks for vulnerable populations, including children and the elderly.

Fire Danger Rating System

Fire Danger Rating	Description
Low (L)	Fuels do not ignite readily from small firebrands, although a more intense heat source, such as lightning, may start fires in duff or punky wood. Fires in open cured grasslands may burn freely a few hours after rain, but woods fires spread slowly by creeping or smoldering, and burn in irregular fingers. There is little danger of spotting.
Moderate (M)	Fires can start from most accidental causes, but except for lightning fires in some areas, the number of starts is generally low. Fires in open cured grasslands will burn briskly and spread rapidly on windy days. Timber fires spread slowly to moderately fast. The average fire is of moderate intensity, although heavy concentrations of fuel, especially draped fuel, may burn hot. Short-distance spotting may occur but is not persistent. Fires are not likely to become serious and control is relatively easy.
High (H)	All fine dead fuels ignite readily, and fires start easily from most causes. Unattended brush and campfires are likely to escape. Fires spread rapidly and short-distance spotting is common. High intensity burning may develop on slopes or in concentrations of fine fuels. Fires may become serious and their control difficult unless they are attacked successfully while small.
Very High (VH)	Fires start easily from all causes and, immediately after ignition, spread rapidly and increase quickly in intensity. Spot fires are a constant danger. Fires burning in light fuels may quickly develop high intensity characteristics, such as long-distance spotting and fire whirlwinds when they burn into heavier fuels.

Extreme (E)	Fires start quickly, spread furiously, and burn intensely. All fires are potentially serious. Development into high intensity burning will usually be faster and occur from smaller fires than in the very high fire danger class. Direct attack is rarely possible and may be dangerous except immediately after ignition. Fires that develop headway in heavy slash or in conifer stands may be unmanageable while the extreme burning condition lasts. Under these conditions the only effective and safe control action is on the flanks until the weather changes, or the fuel supply lessens.

Source: U.S. Forest Service's Wildland Fire Assessment System (USFS WFAS)

Urban Fires due to Seismic Events

Urban fires are a constant threat in the City, given the seismic hazards of fault rupture, strong ground shaking, and liquefaction. In the United States, fires following earthquakes have caused the largest losses associated with earthquakes. Urban fires following earthquakes are driven by two key features: 1) the earthquake is likely to ignite multiple, nearly simultaneous fires; and 2) the earthquake is likely to damage and disrupt fire suppression by severing water pipelines and delaying the arrival of adequate fire-fighting equipment and personnel.

There have been no recent fires due to seismic events in the City of Montebello.

Previous Occurrences

The following data comes from FEMA's Disaster Declarations for States and Counties (https://www.fema.gov/data-visualization/disaster-declarations-states-and-counties; retrieved November 18, 2023).

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Fire	Los Angeles County	DR-295-CA	1970	September	9/29/1970	FOREST & BRUSH FIRES	CA
Fire	Los Angeles County	EM-3067-CA	1978	October	10/29/1978	BRUSH FIRES	CA
Fire	Los Angeles County	DR-1005-CA	1993	October	10/28/1993	FIRES, MUD/LANDSLIDES, FLOODING, SOIL EROSION	CA

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Fire	Los Angeles County	DR-635-CA	1980	November	11/27/1980	BRUSH & TIMBER FIRES	CA
Fire	Los Angeles County	DR-872-CA	1990	June	6/30/1990	FIRES	CA
Fire	Los Angeles County	DR-942-CA	1992	May	5/2/1992	FIRE DURING A PERIOD OF CIVIL UNREST	CA
Fire	Los Angeles County	EM-3120-CA	1996	October	10/23/1996	SEVERE FIRESTORMS	CA
Fire	Los Angeles County	FM-2417-CA	2002	June	6/6/2002	CA - COPPER FIRE - 06-06-2002	CA
Fire	Los Angeles County	FM-2464-CA	2002	September	9/24/2002	WILLIAMS FIRE	CA
Fire	Los Angeles County	FM-2462-CA	2002	September	9/4/2002	LEONA FIRE	CA
Fire	Los Angeles County	DR-1498-CA	2003	October	10/27/2003	WILDFIRES, FLOODING, MUDFLOW AND DEBRIS FLOW DIRECTLY RELATED T	CA
Fire	Los Angeles County	FM-2502-CA	2003	October	10/25/2003	CA-VERDALE FIRE 10-25-2003	CA
Fire	Los Angeles County	FM-2466-CA	2003	January	1/7/2003	CA - WILDFIRE (PACIFIC FIRE) - 01-06-2003	CA
Fire	Los Angeles County	FM-2534-CA	2004	July	7/18/2004	CA-FOOTHILL WILDFIRE-07-18-2004	CA
Fire	Los Angeles County	FM-2535-CA	2004	July	7/21/2004	CA-CROWN WILDFIRE-07-21-2004	CA

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Fire	Los Angeles County	FM-2528-CA	2004	July	7/14/2004	CA - PINE FIRE - 7-13-2004	CA
Fire	Los Angeles County	FM-2583-CA	2005	September	9/28/2005	TOPANGA FIRE	CA
Fire	Los Angeles County	DR-1731-CA	2007	October	10/24/2007	WILDFIRES, FLOODING, MUD FLOWS, AND DEBRIS FLOWS	CA
Fire	Los Angeles County	FM-2736-CA	2007	October	10/22/2007	RANCH FIRE	CA
Fire	Los Angeles County	FM-2732-CA	2007	October	10/21/2007	CANYON FIRE	CA
Fire	Los Angeles County	FM-2733-CA	2007	October	10/21/2007	BUCKWEED FIRE	CA
Fire	Los Angeles County	FM-2708-CA	2007	July	7/8/2007	CANYON FIRE	CA
Fire	Los Angeles County	FM-2694-CA	2007	May	5/10/2007	ISLAND FIRE	CA
Fire	Los Angeles County	FM-2691-CA	2007	May	5/9/2007	GRIFFITH PARK FIRE	CA
Fire	Los Angeles County	EM-3279-CA	2007	October	10/23/2007	WILDFIRES	CA
Fire	Los Angeles County	DR-1810-CA	2008	November	11/18/2008	WILDFIRES	CA
Fire	Los Angeles County	FM-2788-CA	2008	October	10/12/2008	MAREK FIRE	CA
Fire	Los Angeles County	FM-2792-CA	2008	November	11/15/2008	FREEWAY FIRE COMPLEX	CA
Fire	Los Angeles County	FM-2789-CA	2008	October	10/13/2008	SESNON FIRE	CA

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Fire	Los Angeles County	FM-2791-CA	2008	November	11/15/2008	SAYRE FIRE	CA
Fire	Los Angeles County	FM-2763-CA	2008	April	4/27/2008	SANTA ANITA FIRE	CA
Fire	Los Angeles County	FM-2828-CA	2009	August	8/28/2009	PV FIRE	CA
Fire	Los Angeles County	FM-2830-CA	2009	August	8/28/2009	STATION FIRE	CA
Fire	Los Angeles County	FM-2851-CA	2010	July	7/30/2010	CROWN FIRE	CA
Fire	Los Angeles County	FM-5025-CA	2013	June	6/2/2013	POWERHOUSE FIRE	CA
Fire	Los Angeles County	FM-5051-CA	2014	January	1/16/2014	COLBY FIRE	CA
Fire	Los Angeles County	FM-5124-CA	2016	June	6/5/2016	OLD FIRE	CA
Fire	Los Angeles County	FM-5129-CA	2016	June	6/21/2016	FISH FIRE	CA
Fire	Los Angeles County	FM-5132-CA	2016	July	7/9/2016	SAGE FIRE	CA
Fire	Los Angeles County	FM-5135-CA	2016	July	7/23/2016	SAND FIRE	CA
Fire	Los Angeles County	EM-3396-CA	2017	December	12/8/2017	WILDFIRES	CA
Fire	Los Angeles County	FM-5201-CA	2017	September	9/2/2017	LA TUNA FIRE	CA
Fire	Los Angeles County	FM-5225-CA	2017	December	12/5/2017	CREEK FIRE	CA
Fire	Los Angeles County	FM-5226-CA	2017	December	12/5/2017	RYE FIRE	CA
Fire	Los Angeles County	FM-5227-CA	2017	December	12/6/2017	SKIRBALL FIRE	CA
Fire	Los Angeles County	DR-4407-CA	2018	November	11/12/2018	WILDFIRES	CA

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Fire	Los Angeles County	DR-4353-CA	2018	January	1/2/2018	WILDFIRES, FLOODING, MUDFLOWS, AND DEBRIS FLOWS	CA
Fire	Los Angeles County	EM-3409-CA	2018	November	11/9/2018	WILDFIRES	CA
Fire	Los Angeles County	FM-5280-CA	2018	November	11/9/2018	WOOLSEY FIRE	CA
Fire	Los Angeles County	FM-5293-CA	2019	October	10/11/2019	SADDLE RIDGE FIRE	CA
Fire	Los Angeles County	FM-5296-CA	2019	October	10/24/2019	TICK FIRE	CA
Fire	Los Angeles County	FM-5297-CA	2019	October	10/28/2019	GETTY FIRE	CA
Fire	Los Angeles County	DR-4569-CA	2020	October	10/16/2020	WILDFIRES	CA
Fire	Los Angeles County	FM-5374-CA	2020	September	9/13/2020	BOBCAT FIRE	CA

Large fires have been part of the Southern California landscape for millennia. Indigenous communities used controlled fires to shape the landscape to their benefit. In the aftermath of Mexican and later American colonization, California's fire regime was significantly altered. Early US forest management practices centered around the idea of fire suppression, which reduced the frequency of fires in proximity to settlements but ultimately increased their intensity by allowing vegetation to build up and fuel more intense fires.

Notable fires outside of Montebello that have nevertheless impacted the City's air quality include:

- **1989 Montebello Hills Fire**
  - **Date**: October 3, 1989
  - **Location**: Montebello Hills
  - **Impact**: This wildfire burned approximately 300 acres in the Montebello Hills area. The fire threatened several homes and caused evacuations in nearby neighborhoods. Firefighters were able to contain the blaze within a day, but not before it caused significant damage to local vegetation and disrupted daily life for many residents. T

- **2008 Montebello Brush Fire**
    - **Date**: June 16, 2008
    - **Location**: Montebello Hills
    - **Impact**: The fire broke out in the brushy areas of the Montebello Hills, burning around 150 acres. It required a substantial firefighting effort, including ground crews and aerial support, to bring it under control. The fire threatened nearby homes, prompting temporary evacuations and road closures. While no homes were lost, the fire underscored the ongoing risk posed by the dry, brush-covered hills in and around Montebello.
- **2016 Garfield Fire**
    - **Date**: October 19, 2016
    - **Location**: South Garfield Avenue and Via San Clemente
    - **Impact**: The Garfield Fire burned approximately 40 acres in a residential area of Montebello. The fire started in a vacant lot and quickly spread due to high winds and dry conditions. Several homes were threatened, and residents were evacuated as a precaution. The firefighting effort involved multiple agencies and was successful in preventing any structural damage to homes.
- **2020 Whittier Narrows Fire**
    - **Date**: August 13, 2020
    - **Location**: Whittier Narrows Recreation Area, near Montebello
    - **Impact**: Although the fire started in the Whittier Narrows Recreation Area, its proximity to Montebello meant that the city was affected by smoke and air quality issues. The fire burned over 80 acres and required extensive firefighting efforts, including water-dropping helicopters and ground crews.
- **2021 Montebello Hills Fire**
    - **Date**: June 15, 2021
    - **Location**: Montebello Hills
    - **Impact**: A fire broke out in the Montebello Hills, burning approximately 50 acres of brush. The fire was driven by high winds and dry vegetation, making it challenging to contain. Firefighters from multiple agencies responded, utilizing both ground crews and aerial support. Evacuations were ordered for homes in the immediate vicinity, and several roads were closed.
- **2022 Montebello Industrial Fire**
    - **Date**: April 10, 2022
    - **Location**: Industrial area near Greenwood Avenue and Olympic Boulevard
    - **Impact**: This fire broke out in an industrial area of Montebello, affecting several warehouses and storage facilities. The blaze caused significant property damage and released large plumes of smoke, affecting air quality in the surrounding neighborhoods.

Also, in 2015, an unhoused man sparked a 384-acre wildfire in the Rio Hondo Riverbed while cooking food in the brush. Although no structures were damaged, four firefighters suffered minor injuries while fighting the fire.

Probability of Future Events and Impacts of Climate Change

Overall probability over next five years: ***Moderate.***

Wildfires can occur at any time of the year, although over the past two decades, wildfire season has begun to extend into the cooler months. The frequency and severity of fires are increasing due to higher temperatures and drier climates. Climate change is projected to lead to increased temperatures and more frequent/intense droughts, resulting in more dry plant matter available and a higher risk of wildfires statewide.

In a low-emissions (conservative) scenario, burned acreage in Los Angeles County is expected to increase 16% by 2050. According to California's Fourth Climate Assessment for the Los Angeles Region:

> *Future projections by Jin et al. (2015) using statistical models indicate that southern California may experience a larger number of wildfires and burned area by the mid-21st century under RCP8.5. Overall burned area is projected to increase over 60% for Santa Ana-based fires and over 75% for non-Santa Ana fires. New wildfire projections were developed for the Assessment (Westerling et al. 2018) using different statistical models than those used by Jin et al. (2015), which also incorporated new datasets of future climate data and land use. Compared to the observed 1950- 2009 historical average area burned of 53,300 hectares (Jin et al. 2015), the modeled 1976-2005 historical average area burned is roughly 16,000 hectares (Westerling et al. 2018). This discrepancy highlights that large uncertainties remain in current wildfire models and is an area where further research is required. Based on the projections developed by Westerling et al. (2018), the annual burned area over the LA region may increase over 2000 hectares by the mid-21st century under RCP4.5 or RCP8.5 compared to simulated historical conditions. Similar, yet potentially slightly lower, increases are projected by the late-21st century, as continued warming (even with moderate precipitation increases) could lead to overall fuel declines necessary for wildfire.*

And in August 2023, *Nature* published "Climate warming increases extreme daily wildfire growth risk in California" (https://www.nature.com/articles/s41586-023-06444-3.epdf) that further attempted to quantify future wildfire risk. Brown et al. conclude that as of the time of publication (August 2023), aggregate expected frequency of extreme wildfire events has grown by 25% over pre-industrial conditions. Under lower emissions scenarios, the aggregate expected frequency of extreme wildfire events more than doubles from today to 59% relative to pre-industrial conditions, and under very high-emissions scenarios increases by 172%.

3.4.6 Power Outage

Hazard Description

A power outage is a temporary loss of electricity to a home or business due to a disruption in the power supply. There are several causes of power outages, including severe weather conditions such as thunderstorms, high winds, and extreme heat. In Southern California, power outages can also be caused by wildfires, earthquakes, and equipment failures.

During times of extreme heat, power outages can be particularly hazardous to a city. High temperatures can cause increased demand for electricity as people turn up their air conditioning units, leading to strain on the power grid. This can result in blackouts or brownouts, which can lead to several hazards.

Location and Extent

The entirety of the City of Montebello is vulnerable to power outages.

The location and duration of power outages can vary depending on the cause of the outage. For example, power outages caused by weather events such as thunderstorms or wildfires may be localized, affecting only a few neighborhoods or communities. On the other hand, power outages caused by equipment failures or grid overloads may be more widespread and impact larger areas or even entire regions.

Previous Occurrences

Minor power outages are a not-infrequent occurrence in any grid system. Several major incidents that impacted Los Angeles County include:

- **1987 Whittier Narrows Earthquake Power Outage**
  - **Date**: October 1, 1987
  - **Cause**: Earthquake
  - **Impact**: The Whittier Narrows Earthquake caused widespread power outages across the Los Angeles area, including Montebello. The shaking damaged power lines and transformers, leading to prolonged outages. Many residents were without electricity for hours to days as utility crews worked to repair the damage and restore service.
- **2006 Heat Wave Power Outage**
  - **Date**: July 2006
  - **Cause**: Extreme heat and high electricity demand

    - **Impact**: During the 2006 heat wave, record-high temperatures led to a surge in electricity usage as residents and businesses relied heavily on air conditioning. The increased demand overwhelmed the power grid, causing rolling blackouts and localized power outages throughout Southern California, including Montebello. Thousands of residents experienced power cuts, which in some cases lasted for several hours.
- **2011 Windstorm Power Outage**
    - **Date**: November 30 - December 1, 2011
    - **Cause**: High winds
    - **Impact**: A powerful windstorm with gusts up to 100 mph caused extensive damage to the power infrastructure in Montebello and surrounding areas. Downed trees and power lines led to widespread outages affecting thousands of residents. Some areas were without power for several days as crews worked to clear debris and repair the damaged lines.
- **2014 Santa Ana Winds Power Outage**
    - **Date**: October 2014
    - **Cause**: Santa Ana winds
    - **Impact**: Strong Santa Ana winds brought gusts of up to 60 mph to Montebello, causing trees to fall and power lines to snap. The high winds led to power outages affecting thousands of households and businesses. Restoration efforts were complicated by the widespread nature of the damage and the continuing high winds.
- **2016 Pineapple Express Storms Power Outage**
    - **Date**: January 2016
    - **Cause**: Heavy rain and high winds
    - **Impact**: The Pineapple Express weather pattern brought heavy rainfall and strong winds to Montebello, leading to significant power outages. Flooding and wind damage caused power lines to fail, leaving many residents without electricity. The outages lasted from several hours to days, depending on the severity of the damage in different areas.
- **2017 Heat Wave Power Outage**
    - **Date**: September 2017
    - **Cause**: Extreme heat and high electricity demand
    - **Impact**: A severe heat wave in September 2017 led to record temperatures in Montebello and the surrounding areas. The increased demand for air conditioning put immense pressure on the power grid, resulting in rolling blackouts and power outages. Thousands of residents were affected, experiencing disruptions that lasted several hours.
- **2020 Labor Day Weekend Heat Wave Power Outage**
    - **Date**: September 2020
    - **Cause**: Extreme heat and high electricity demand

    - **Impact**: Over the Labor Day weekend, Montebello and much of Southern California faced an intense heat wave, with temperatures soaring above 100°F. The excessive heat led to a spike in electricity use, causing strain on the power grid and resulting in rolling blackouts and power outages. Many residents experienced interruptions in their electricity supply, lasting from a few hours to more than a day in some areas.
- **2021 Wind Event Power Outage**
    - **Date**: January 2021
    - **Cause**: High winds
    - **Impact**: A severe wind event in January 2021 brought gusts up to 60 mph, causing extensive damage to the power infrastructure in Montebello. The high winds knocked down trees and power lines, leading to widespread outages. Thousands of residents and businesses were affected, with some areas experiencing power cuts lasting several days.

One particularly dangerous scenario, exemplified by the 2006 summer heat wave, is a power outage amid a severe heat wave. This scenario, which is likely to result in fatalities, is unfortunately becoming more probable as climate impacts grow.

Probability of Future Events and Impacts of Climate Change

Overall probability over next five years: ***Moderate.***

The likelihood of future power outages impacting the City of Montebello may increase because of climate change and the associated risks of wildfires and extreme heat events.

Wildfires have become increasingly common and severe in California beyond the traditional fire season in recent years, with record-breaking fires causing widespread damage and disruption to power infrastructure. Power lines and equipment damaged by wildfires can lead to power outages and disruptions to essential services, such as hospitals and emergency response systems. Los Angeles County, with its dry climate and high wildfire risk, may be particularly vulnerable to these types of power outages.

In addition to the risk of wildfires, extreme heat events associated with climate change can also increase the likelihood of power outages. High temperatures can put strain on the power grid, leading to equipment failures and blackouts. In Los Angeles County, which experiences hot and dry summers, this risk is particularly acute.

To mitigate the risks of future power outages, Los Angeles County, and utility providers such as Southern California Edison (SCE) have implemented measures such as grid upgrades, equipment maintenance, and emergency response plans. SCE has also implemented Public Safety Power Shutoffs (PSPS) to reduce the risk of wildfire-related power outages. PSPS is a

proactive measure in which SCE intentionally shuts off power to certain areas during periods of high fire risk to reduce the risk of equipment-related fires. While these measures can help reduce the risk of power outages, they may not eliminate the risk, especially during extreme weather events.

3.4.7 Cyberattack/IT Disruption

Hazard Description

A cyberattack is a malicious attempt to damage, disrupt, or gain unauthorized access to a computer system, network, or device. These attacks can take many forms and can be launched from anywhere in the world. However, IT disruptions can also occur due to non-malicious reasons such as software failures, hardware malfunctions, power outages, and natural disasters. Regardless of their origin, an IT disruption can be extremely problematic for a modern community.

Cyberattacks on local governments and businesses are becoming increasingly common as more services move online and more data is stored in digital formats. These attacks can include phishing scams, ransomware attacks, and distributed denial-of-service (DDoS) attacks. In a phishing scam, an attacker sends a legitimate-looking email or message to trick the target into revealing sensitive information like usernames and passwords. In a ransomware attack, malware encrypts a victim's data, with attackers demanding payment for the decryption key. A DDoS attack involves flooding a website or server with traffic, making it unavailable to legitimate users.

Cyberattacks on local governments can be particularly damaging, disrupting critical services such as emergency response systems, public utilities, and transportation networks. They can also result in the theft of sensitive data, including personal information, financial data, and intellectual property. Similarly, businesses are vulnerable to cyberattacks, which can lead to significant financial losses, reputational damage, and legal liability. On the other hand, IT disruptions not resulting from malicious attacks can still cause severe impacts. For example, a software glitch could disable critical systems, a hardware failure could lead to data loss, and a power outage could interrupt services.

Location and Extent

The threat of cyberattacks and IT disruptions is ever-changing and growing as work processes become increasingly digitized. The vulnerability of cloud-based systems may lead to attempts to segregate parts of the cloud or create “mini-clouds.” Additionally, the proliferation of artificial intelligence (AI) may increase susceptibility to cyberattacks as AI becomes more pervasive and supplements or replaces human-based knowledge.

Cyberattacks and IT disruptions are generally not geographically confined to a single location. They can target specific organizations, departments, or entire municipal IT networks. For example, cloud storage used by a city may be physically distributed among many servers in various locations, some potentially far from the city itself. This distributed nature means that an

attack or disruption in one location can have widespread impacts, affecting services and operations across multiple areas.

Previous Occurrences

Cyberattacks are often not publicized, and as such, there is not a detailed record of cyberattacks potentially available to the public against Montebello city government or local businesses.

However, there have been several high-profile cyberattacks and IT disruptions that illustrate the nature of the threat:

- **2013 City of Detroit Cyberattack**
    - **Date**: April 2013
    - **Type**: Ransomware
    - **Impact**: Detroit experienced a ransomware attack where hackers demanded approximately $800,000 to unlock the city's data. The attack was discovered before any payment was made, highlighting the city's vulnerability. Detroit chose not to pay the ransom and instead focused on enhancing its cybersecurity defenses.
- **2018 City of Atlanta Cyberattack**
    - **Date**: March 2018
    - **Type**: Ransomware (SamSam)
    - **Impact**: Atlanta was hit by a SamSam ransomware attack that encrypted a significant portion of the city's data and disrupted various municipal services, including bill payments and court records. The attackers demanded a ransom of approximately $51,000 in Bitcoin. The attack caused major operational disruptions and led to a recovery cost estimated at $17 million, underscoring the severe financial and operational impact of such attacks.
- **2019 Baltimore Cyberattack**
    - **Date**: May 2019
    - **Type**: Ransomware (RobbinHood)
    - **Impact**: Baltimore was targeted by the RobbinHood ransomware, which paralyzed the city's computer systems and disrupted various services, including water billing, property transactions, and email systems. The attackers demanded a ransom of 13 Bitcoin (about $76,000 at the time), which the city refused to pay. The recovery efforts took months and cost the city an estimated $18 million, including system restoration and lost revenue.
- **2019 New Orleans Cyberattack**

    - **Date**: December 2019
    - **Type**: Ransomware
    - **Impact**: New Orleans experienced a ransomware attack that forced the shutdown of its IT systems to prevent the spread of the malware. The attack led to the declaration of a state of emergency and disrupted municipal operations, including email systems and public safety services. The city incurred significant costs related to recovery and system upgrades, estimated at several million dollars.
- **2020 Durham, North Carolina Cyberattack**
    - **Date**: March 2020
    - **Type**: Ransomware (Ryuk)
    - **Impact**: Durham's IT systems were compromised by the Ryuk ransomware, affecting various municipal services and operations. The attack disrupted the city's phone systems, email, and other critical services. The city worked with cybersecurity experts to restore systems and enhance security measures, incurring substantial recovery costs.
- **2020 Knoxville, Tennessee Cyberattack**
    - **Date**: June 2020
    - **Type**: Ransomware
    - **Impact**: Knoxville's computer systems were targeted by a ransomware attack that encrypted data and disrupted city operations. The attack affected internal services, including email and payment processing systems. The city worked with external consultants to restore systems and improve cybersecurity protocols.
- **2021 Oldsmar, Florida Water Treatment Plant Cyberattack**
    - **Date**: February 2021
    - **Type**: Unauthorized Access
    - **Impact**: Hackers gained access to the water treatment plant's control systems in Oldsmar, Florida, and attempted to increase the amount of sodium hydroxide (lye) in the water supply to dangerous levels. The attack was detected and halted before any harm could occur, highlighting the vulnerabilities in municipal infrastructure and the potential for cyberattacks to pose public safety risks.
- **2021 City of Tulsa Cyberattack**
    - **Date**: May 2021
    - **Type**: Ransomware
    - **Impact**: Tulsa's IT systems were affected by a ransomware attack that disrupted various municipal services, including online billing and utility payment systems. The city worked to contain the attack and restore services, implementing additional security measures to prevent future incidents.
- **2022 City of Quincy, Massachusetts Cyberattack**

    - **Date**: January 2022
    - **Type**: Ransomware
    - **Impact**: Quincy experienced a ransomware attack that affected several city departments, including the police department. The attack disrupted email systems and access to important records. The city collaborated with cybersecurity experts to recover data and enhance its cybersecurity infrastructure.
- **2022 City of Alexandria, Louisiana Cyberattack**
    - **Date**: March 2022
    - **Type**: Ransomware
    - **Impact**: Alexandria's computer systems were hit by a ransomware attack that encrypted data and disrupted city operations, including utility billing and emergency services. The city declared a state of emergency and worked with external consultants to recover data and secure its systems.
- **2024 CrowdStrike Update Incident**
    - **Date**: July 2024
    - **Type**: Software update problem
    - **Impact**: CrowdStrike, a prominent cybersecurity company, experienced a significant incident involving a faulty update to its Falcon Sensor security software. The update, part of their Rapid Response Content, was intended to enhance security by incorporating new data on hacking tactics. However, it inadvertently caused widespread crashes on Microsoft Windows systems running the software. This resulted in approximately 8.5 million systems worldwide being affected, causing significant disruptions for businesses and government entities alike. The faulty update triggered an "out-of-bounds memory read" error, leading to the infamous "blue screen of death" on affected systems. The incident was not caused by a cyberattack but rather by a defect that went undetected during CrowdStrike's validation process.

Probability of Future Events

Overall probability over next five years: ***Very Likely.***

The future probability of cyberattacks and IT disruptions impacting city governments is increasingly high, driven by the expanding digitalization of public services and the growing sophistication of cyber threats. According to a 2022 report by Cybersecurity Ventures, global cybercrime costs are expected to reach $10.5 trillion annually by 2025, up from $3 trillion in 2015. This significant rise underscores the escalating threat landscape facing city governments.

City governments are particularly vulnerable due to their reliance on digital infrastructure to manage critical services such as emergency response, public utilities, transportation, and

healthcare. A survey by the International City/County Management Association (ICMA) in 2020 found that 44% of local governments experienced a cyberattack within the previous year.

Ransomware attacks, in particular, pose a significant threat to city governments. In 2020, the FBI's Internet Crime Complaint Center (IC3) received nearly 2,500 ransomware complaints, with adjusted losses totaling over $29.1 million. The actual figures are likely higher, as many incidents go unreported. Moreover, the Center for Strategic and International Studies (CSIS) reported that ransomware attacks on state and local governments increased by 50% from 2019 to 2020.

IT disruptions, whether due to cyberattacks, system failures, or other causes, are also a growing concern. The Uptime Institute's 2021 Global Data Center Survey revealed that 69% of data center operators experienced an outage in the past three years, with 10% of those being classified as severe or serious. Given the increasing complexity and interconnectivity of city government IT systems, the likelihood of significant disruptions is expected to rise.

3.4.8 Flooding

Hazard Description

Floods are among the most common and most widespread of all natural disasters. Almost every community in the United States has, at some point, experienced flooding.

Floods are typically caused by excessive precipitation and can be influenced by various factors such as topography, weather patterns, soil moisture, vegetation, and impervious surfaces. Drainages and streams can overflow if their capacity is surpassed by rainwater. In urban areas, the presence of pavement and other impermeable surfaces reduces the ground's ability to absorb excess water, necessitating the use of storm channels or waterways.

Floods can cause secondary hazards such as erosion or scouring of stream banks, roadway embankments, foundations, footings for bridge piers, and other features. High-velocity flow and debris carried by floodwaters can also cause impact damage to structures, roads, bridges, culverts, and other features, with debris accumulating on bridge piers and in culverts. In addition, floods can lead to the release of sewage and hazardous or toxic materials when wastewater treatment plants are inundated, storage tanks are damaged, and pipelines are severed.

The standard for flooding is the so-called "100-year flood," a benchmark used by the Federal Emergency Management Agency to establish a standard of flood control in communities throughout the country. Thus, the 100-year flood is also referred to as the "regulatory" or "base" flood.

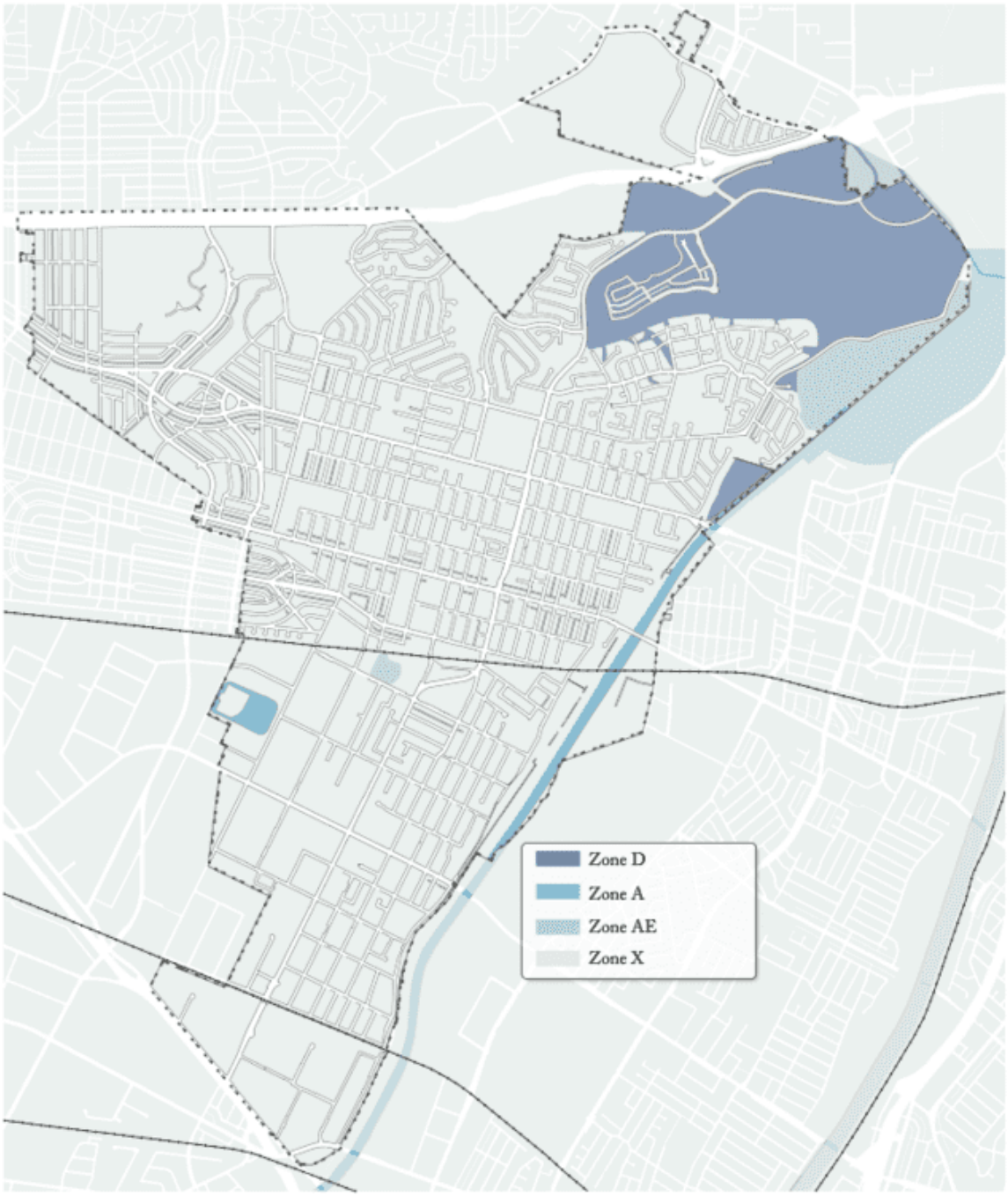
It is important to note that it does not mean that only one flood of that size will occur every 100 years. What it means is that there is a one percent chance of a flood of that intensity and elevation happening in any given year. In other words, it is the flood elevation that has a one percent chance of being equaled or exceeded each year. And it could occur more than once in a relatively short period of time. (By comparison, the 10-year flood means that there is a ten percent chance for a flood of its intensity and elevation to happen in any given year.) The three most prevalent categories described on FIRMs are:

- **Special Flood Hazard Area:** The area within a 100-year floodplain.
- **Moderate Flood Hazard Area:** The area outside of the 100-year floodplain but within the 500-year floodplain.
- **Minimum Flood Hazard Area:** The area outside of the 500-year floodplain.

Category	Description
A	*Within a 100-year flood plain, but the water height of the 100-year flood is not known.*
A1-30 or AE	*Within a 100-year flood plain and the water height of the 100-year flood is known.*
AO	*Within a 100-year flood plain, and the water height of the 100-year flood is between one and three feet but not specifically known.*
A99	*Within a 100-year flood plain, protected by flood protection infrastructure such as dams or levees.*
AH	*Within a 100-year flood plain, and the water height of the 100-year flood is between one and three feet and is specifically known.*
AR	*Within a 100-year flood plain, protected by flood protection infrastructure that is not currently effective, but is being rebuilt to provide protection.*
V	*Within a 100-year flood plain for coastal floods, but the water height of the flood is not known.*
V1-30 or VE	*Within a 100-year flood plain for coastal floods and the water height of the flood is known.*
VO	*Within a 100-year flood plain for shallow coastal floods with a height between one and three feet.*
B	*Within a 500-year flood plain, or within a 100-year flood plain with a water height less than one foot (found on older maps)*
C	*Outside of the 500-year flood plain (found on older maps)*
X	*Outside of the 500-year flood plain (found on newer maps)*
X500	*Within a 500-year flood plain, or within a 100-year flood plain with a water height less than one foot (found on newer maps)*
D	*Within an area with a potential and undetermined flood hazard.*
M	*Within an area at risk of mudslides from a 100-year flood event.*
N	*Within an area at risk of mudslides from a 500-year flood event.*
P	*Within an area at risk of mudslides from a potential and undetermined flood event.*
E	*Within an area at risk of erosion from a 100-year flood event.*

Flash floods typically occur during the rainy seasons of fall and winter. The region's dry soil makes matters worse since water has little chance to absorb the rainfall only adding to the problem. Flash floods occur suddenly, usually within 6 hours of the rain event, and result from heavy localized rainfall or levee failures. Flash floods can begin before the rain stops. Water level on small streams may rise quickly in heavy rainstorms, especially near the headwaters of river basins. Heavy rains can also cause flash flooding in areas where the floodplain has been urbanized.

Many people are killed by flash floods when driving or walking on roads and bridges that are covered by water. In fact, flash floods are the number one weather-related killer in the United States. Even six inches of fast-moving flood water can knock a person off their feet, and a depth of only two feet of water will float many of today's automobiles.


Zone D
Zone A
Zone AE
Zone X

Location and Extent

There are four major areas of the City that are susceptible to flash flooding:

- West side of Grant Rea Park along the Rio Hondo Channel
- Garfield Avenue between Via Paseo and Beverly Boulevard
- East side of Rio Hondo Channel from Beverly Terrace to Mines Avenue
- Mines Avenue from Maple Avenue to Greenwood Avenue
-

Additional low-lying portions of the city are susceptible to urban flooding, due to a combination of factors including debris accumulating in storm drains, aged drainage systems, and high concentrations of surface impermeability.

The vast majority of Montebello does not lie within a 100- or 500- year floodplain, as delineated by the Federal Emergency Management Agency (FEMA). However, the potential for a localized flood event still exists within Montebello.

Two types of flooding primarily affect the City of Montebello: slow-rise or flash flooding. Slow-rise floods in Montebello may be preceded by a warning period of hours or days. Evacuation and sandbagging for slow-rise floods have often effectively lessened flood related damage. Conversely, flash floods are most difficult to prepare for, due to extremely limited, if any, advance warning and preparation time. Unlike most of California, the areas of Los Angeles County that are subject to slow-rise flooding are not associated with overflowing rivers, aqueducts, canals or lakes. Slow-rise flooding in Montebello is usually the result of one or a combination of the following factors: extremely heavy rainfall, saturated soil, area recently burned in wildfires with inadequate new ground cover growth, or heavy rainfall with runoff from melting mountain snow.

Portions of the City of Montebello are prone to urban flooding, also sometimes referred to as ponding, due to debris accumulation on storm drains and in flood control channels and basins, overburdened pumping stations and aged drainage systems. Low-lying areas of the City are particularly susceptible to urban flooding.

Urban Flooding

As land is converted from fields or woodlands to roads and parking lots, it loses its ability to absorb rainfall. Urbanization of a watershed changes the hydrologic systems of the basin. Heavy rainfall collects and flows faster on impervious concrete and asphalt surfaces. The water moves from the clouds, to the ground, and into streams at a much faster rate in urban areas. Adding these elements to the hydrological systems can result in flood waters that rise very rapidly and peak with violent force.

The City of Montebello has a high concentration of impermeable surfaces that either collect water, or concentrate the flow of water in unnatural channels. During periods of urban flooding, streets can become swift moving rivers and basements can fill with water. Storm drains often back up with vegetative debris causing additional, localized flooding.

Riverine Flooding

Riverine flooding is the overbank flooding of rivers and streams. The natural processes of riverine flooding add sediment and nutrients to fertile floodplain areas. Flooding in large river systems typically results from large-scale weather systems that generate prolonged rainfall over a wide geographic area, causing flooding in hundreds of smaller streams, which then drain into the major rivers. Shallow area flooding is a special type of riverine flooding. FEMA defines shallow flood hazards as areas that are inundated by the 100-year flood with flood depths of only one to three feet. These areas are generally flooded by low velocity sheet flows of water.

Flood control channels and basins are at risk of overflowing their banks during times of heavy rainfall and reservoir water release, specifically the Rio Hondo Flood Control Channel which runs north to south through the length of City and the San Gabriel River basin, which runs along the east side of the City. The Los Angeles County Department of Public Works and the Army Corp of Engineers are responsible for notifying the jurisdiction at the onset of planned water releases.

Previous Occurrences

The following data comes from FEMA's Disaster Declarations for States and Counties (https://www.fema.gov/data-visualization/disaster-declarations-states-and-counties; retrieved November 18, 2023).

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Flood	Los Angeles County	DR-253-CA	1969	January	1/26/1969	SEVERE STORMS & FLOODING	CA
Flood	Los Angeles County	DR-547-CA	1978	February	2/15/1978	COASTAL STORMS, MUDSLIDES & FLOODING	CA
Flood	Los Angeles County	DR-615-CA	1980	February	2/21/1980	SEVERE STORMS, MUDSLIDES & FLOODING	CA

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Flood	Los Angeles County	DR-812-CA	1988	February	2/5/1988	SEVERE STORMS, HIGH TIDES & FLOODING	CA
Flood	Los Angeles County	DR-935-CA	1992	February	2/25/1992	RAIN/SNOW/WIND STORMS, FLOODING, MUDSLIDES	CA
Flood	Los Angeles County	DR-979-CA	1993	February	2/3/1993	SEVERE WINTER STORM, MUD & LAND SLIDES, & FLOODING	CA
Flood	Los Angeles County	DR-4305-CA	2017	March	3/16/2017	SEVERE WINTER STORMS, FLOODING, AND MUDSLIDES	CA
Flood	Los Angeles County	EM-3592-CA	2023	March	3/10/2023	SEVERE WINTER STORMS, FLOODING, LANDSLIDES, AND MUDSLIDES	CA
Flood	Los Angeles County	EM-3591-CA	2023	January	1/9/2023	SEVERE WINTER STORMS, FLOODING, AND MUDSLIDES	CA
Flood	Los Angeles County	DR-4683-CA	2023	January	1/14/2023	SEVERE WINTER STORMS, FLOODING, LANDSLIDES, AND MUDSLIDES	CA

Average annual precipitation in Los Angeles County ranges from 13 inches on the coast to approximately 40 inches on the highest point of the Peninsular Mountain Range that transects the County. Several factors determine the severity of floods, including rainfall intensity and duration. A large amount of rainfall over a short time span can result in flash flood conditions. A sudden thunderstorm or heavy rain, dam failure, or sudden spills can cause flash flooding. The

National Weather Service's definition of a flash flood is a flood occurring in a watershed where the time of travel of the peak of flow from one end of the watershed to the other is less than six hours.

The towering mountains that give the Los Angeles region its spectacular views also wring a great deal of rain out of the storm clouds that pass through. Because the mountains are so steep, the rainwater moves rapidly down the slopes and across the coastal plains on its way to the ocean.

Naturally, this rainfall moves rapidly downstream, often with severe consequences for anything in its path. In extreme cases, flood-generated debris flows will roar down a canyon at speeds near 40 miles per hour with a wall of mud, debris and water, tens of feet high. Flooding occurs when climate, geology, and hydrology combine to create conditions where water flows outside of its usual course.

Probability of Future Events and Impact of Climate Change

Overall probability over next five years: ***Unlikely.***

The probability of future flooding events in and around Montebello is difficult to predict with certainty, but climate change is expected to increase the frequency and severity of extreme weather events, including heavy rainfall and flooding. The topography of the City and the neighborhoods surrounding it make the potential damage from a future flood event more possible at some point.

According to the Fifth National Climate Assessment, Southern California is expected to experience more frequent and intense precipitation events, which can increase the risk of flash flooding and mudslides. Paradoxically, an increased likelihood of drought is likely to intensify flood events as ground absorptive capacity for water decreases.

In *Science* in August 2022, (https://www.science.org/doi/10.1126/sciadv.abq0995), Huang and Swain conclude that both regular and extreme flood events affecting California are becoming more likely:

> *Meanwhile, a growing body of research suggests that climate change is likely increasing the risk of extreme precipitation events along the Pacific coast of North America, including California,, and of subsequent severe flood events. The primary physical mechanism responsible for this projected regional intensification of extreme precipitation is an increase in the strength of cool-season atmospheric river (AR) events. Previous analyses have suggested that the thermodynamically driven increase in atmospheric water vapor with warming is directly responsible for most of this projected AR*

intensification, with the remainder contributed by shifts in regional atmospheric circulation. There is also evidence that increased radiative forcing may result in an eastward shifted expression of atmospheric circulation anomalies associated with both the Madden-Julian Oscillation and the El Niño–Southern Oscillation (ENSO)–forced component of the Pacific North American pattern —both of which would increase the subseasonal variability of cool season precipitation over and near California. Compounding the increase in extreme precipitation associated with AR events are warming temperatures themselves —which raise the mean elevation of snow accumulation in mountainous areas, increase instantaneous runoff rates as rain falls at the expense of snow, and raise the risk of "rain on snow" events. Collectively, these previous research findings motivate the question of whether climate change may substantially affect the odds of "low probability but high consequence" flood events.

3.4.9 Dam Failure

Hazard Description

Dam failure refers to the catastrophic breach or collapse of a dam, resulting in the uncontrolled release of the reservoir's water downstream. This can occur due to various reasons, including structural deficiencies, design flaws, natural disasters, lack of maintenance, overtopping, and seismic activities. Dam failures can be sudden, with little to no warning, or they can develop gradually as issues within the dam structure worsen over time. Structural deficiencies, weaknesses in the design, construction, or materials used in the dam, can lead to structural failure. Overtopping, excessive water flow over the top of the dam, often due to heavy rainfall or inadequate spillway capacity, can erode the dam structure. Uncontrolled seepage through the dam or its foundation can weaken the structure, leading to failure. Natural disasters, such as earthquakes, landslides, or extreme weather events, can compromise the integrity of the dam. Poor maintenance and lack of regular inspections can allow small issues to grow into major problems. Operational errors, such as mistakes in the management and operation of the dam, including improper water level management, can also lead to failure.

The failure of a dam can have devastating impacts on neighboring communities, causing loss of life, extensive property damage, and long-term environmental consequences. The uncontrolled release of water can lead to rapid and widespread flooding downstream, inundating homes, businesses, infrastructure, and agricultural lands. The floodwaters can be deep and fast-moving, increasing the potential for destruction and making escape difficult for residents. The extent of flooding can vary depending on the volume of water in the reservoir, the geography of the downstream area, and the nature of the breach. The rapid onset of flooding can trap people in their homes or vehicles, leading to drowning and injuries. The suddenness of a dam failure can complicate evacuation efforts, increasing the risk to human life. The destruction of buildings, including homes, businesses, and public buildings in the path of the floodwaters, can be severe. Roads, bridges, power lines, and communication networks can be washed away or damaged, disrupting transportation and utilities, leading to significant economic losses both immediate and long-term.

Environmental consequences can include severe erosion, altering landscapes and depositing large amounts of sediment downstream. The flood can contaminate water sources with debris, chemicals, and sewage, leading to water quality issues that can affect human health and aquatic life. Natural habitats for wildlife can be destroyed, leading to loss of biodiversity and long-term ecological impacts. Residents affected by the flooding may be displaced for extended periods, facing challenges in finding temporary shelter and eventually rebuilding their homes. The trauma and stress associated with the disaster can have long-lasting effects on the mental health of survivors. Recovery and rebuilding can take years, requiring significant financial resources and coordinated efforts from local, state, and federal agencies.

The Oroville Dam Spillway Incident in February 2017 serves as a case study. Heavy rainfall led to the damage of both the main and emergency spillways of the Oroville Dam, prompting concerns of a potential dam failure. Nearly 188,000 people were evacuated as a precaution. While the dam itself did not fail, the incident highlighted the potential risks and led to significant repairs and safety improvements. The Oroville incident underscored the importance of regular maintenance, infrastructure investment, and emergency preparedness to prevent and mitigate the impacts of potential dam failures.

Location and Extent

Whittier Narrows Dam

Whittier Narrows Dam is a flood risk management and water conservation project constructed in 1957 and operated by the U.S. Army Corps of Engineers, Los Angeles District. The project is located, as its name implies, at the "Whittier Narrows," a natural gap in the hills that form the southern boundary of the San Gabriel Valley. The Rio Hondo and the San Gabriel rivers flow through this gap and are impounded by the reservoir. The communities of Montebello and Pico Rivera are located immediately downstream

Whittier Narrows Dam, a typically dry flood risk management structure located 11 miles east of downtown Los Angeles, has been reclassified from Dam Safety Action Classification (DSAC) 2 to DSAC 1. The DSAC 1 rating indicates that the U.S. Army Corps of Engineers considers the incremental risk – the combination of life or economic consequences with the likelihood of failure – to be very high. The reclassification as DSAC 1 identifies the dam as one of the highest priority dam safety projects in the Corps' portfolio of dams. In a May 25, 2016, memorandum to Col. Kirk Gibbs, commander of the Corps' Los Angeles District, Mr. James Dalton, chief of Engineering and Construction at Corps headquarters, emphasized that new findings with respect to the anticipated performance of the spillway gates drove the reclassification.

The Los Angeles District is currently working with a nationwide team of experts to develop a plan to reduce the risk associated with the spillway. The Corps anticipates that some of the potential solutions will be in operation prior to the 2016-2017 winter rains; other measures will likely be installed before the end of 2017.

Garvey Reservoir

Garvey Reservoir, owned by the Metropolitan Water District of Southern California (MWD), stores municipal water supplies for MWD customers. The reservoir lies impounded behind a north dam and a south dam. MWD completed a substantial overhaul of the facility in 1999 to address seepage and ensure overall reservoir integrity. The state Department of Conservation, Division of Dam Safety conducts periodic dam inspections to verify the dams' ability to withstand

seismic stresses. A major seismic event has the potential to cause significant damage and potential failure at this facility.

According to the City of Monterey Park's website, in the unlikely event of a conjectured catastrophic failure at Garvey Reservoir, properties to the north and south of the reservoir could be flooded. If the south dam failed, flood waters of average depth six to seven feet would cascade down the slope bank and into the residential neighborhoods below. At the Pomona Freeway, the water would spread laterally along the north side of the freeway before flowing through freeway under crossings into the City of Montebello.

Previous Occurrences s

St. Francis Dam Failure (1928)

- **Date**: March 12, 1928
- **Location**: Near Santa Clarita, California
- **Cause**: Structural failure due to poor geological understanding and design flaws
- **Impact**: The failure of the St. Francis Dam resulted in one of the worst civil engineering disasters in American history. The collapse unleashed a massive wall of water, estimated at 12.4 billion gallons, that swept through the San Francisquito Canyon and into the Santa Clara River Valley, eventually reaching the Pacific Ocean. The flood killed approximately 431 people and caused extensive damage to homes, infrastructure, and farmland.

Baldwin Hills Dam Failure (1963)

- **Date**: December 14, 1963
- **Location**: Los Angeles, California
- **Cause**: Structural failure due to subsidence and leakage
- **Impact**: The Baldwin Hills Dam, a reservoir for urban water supply, failed suddenly, releasing approximately 250 million gallons of water into the surrounding residential area. The flood resulted in five fatalities and destroyed or damaged numerous homes and properties. The dam's failure was attributed to ground subsidence and internal erosion caused by leakage.

Lower San Fernando Dam Failure (1971)

- **Date**: February 9, 1971
- **Location**: San Fernando Valley, California
- **Cause**: Earthquake-induced liquefaction
- **Impact**: The Lower San Fernando Dam was severely damaged during the 1971 San Fernando earthquake (magnitude 6.6). The seismic activity caused liquefaction of the dam's foundation materials, leading to a near-collapse. Although the dam did not fail completely, it suffered significant structural damage, and the reservoir was rapidly drained to prevent a catastrophic breach.

Lower Jones Tract Levee Breach (2004)

- **Date**: June 3, 2004
- **Location**: Sacramento-San Joaquin Delta, California
- **Cause**: Levee breach due to unknown causes, possibly rodent burrows or structural weakness
- **Impact**: The levee breach in the Sacramento-San Joaquin Delta flooded the entire Lower Jones Tract, an area of about 12,000 acres, with water from the delta. The flooding caused extensive agricultural damage, impacted local communities, and necessitated a large-scale emergency response to repair the levee and pump out the water. This event highlighted the vulnerability of the Delta's levee system and the need for ongoing maintenance and reinforcement.

Oroville Dam Spillway Incident (2017)

- **Date**: February 2017
- **Location**: Oroville, California
- **Cause**: Damage to main and emergency spillways due to heavy rainfall and inadequate maintenance
- **Impact**: The Oroville Dam, the tallest dam in the United States, faced a critical situation when the main spillway was severely damaged during heavy rainfall. The emergency spillway, used for the first time in the dam's history, also showed signs of failure. Nearly 188,000 people were evacuated as a precautionary measure. Although the dam itself did not fail, the incident underscored the need for vigilant maintenance and robust emergency response plans. The repairs and upgrades following the incident cost hundreds of millions of dollars and led to a comprehensive review of dam safety protocols.

Probability of Future Events and Impacts of Climate Change

Overall probability over next five years: ***Unlikely.***

Whittier Narrows Dam serves primarily for flood control, water conservation, and recreation. The future risks associated with this dam include seismic activity, as it is situated in a seismically active region near major fault lines like the San Andreas Fault and the Whittier Fault. A strong earthquake could potentially damage the dam’s structure or induce liquefaction in the foundation materials, leading to partial or total failure. Another concern is aging infrastructure, given that the dam was completed in 1957. Over time, materials degrade, and components may become less reliable without regular maintenance and upgrades, increasing the risk of structural failure. Additionally, changes in hydrological patterns due to climate change could lead to increased hydraulic load on the dam. Intense and frequent storms could result in higher inflows, putting additional stress on the dam’s spillway and structural integrity. Human error, such as mismanagement of water levels or delayed response to structural issues, could also

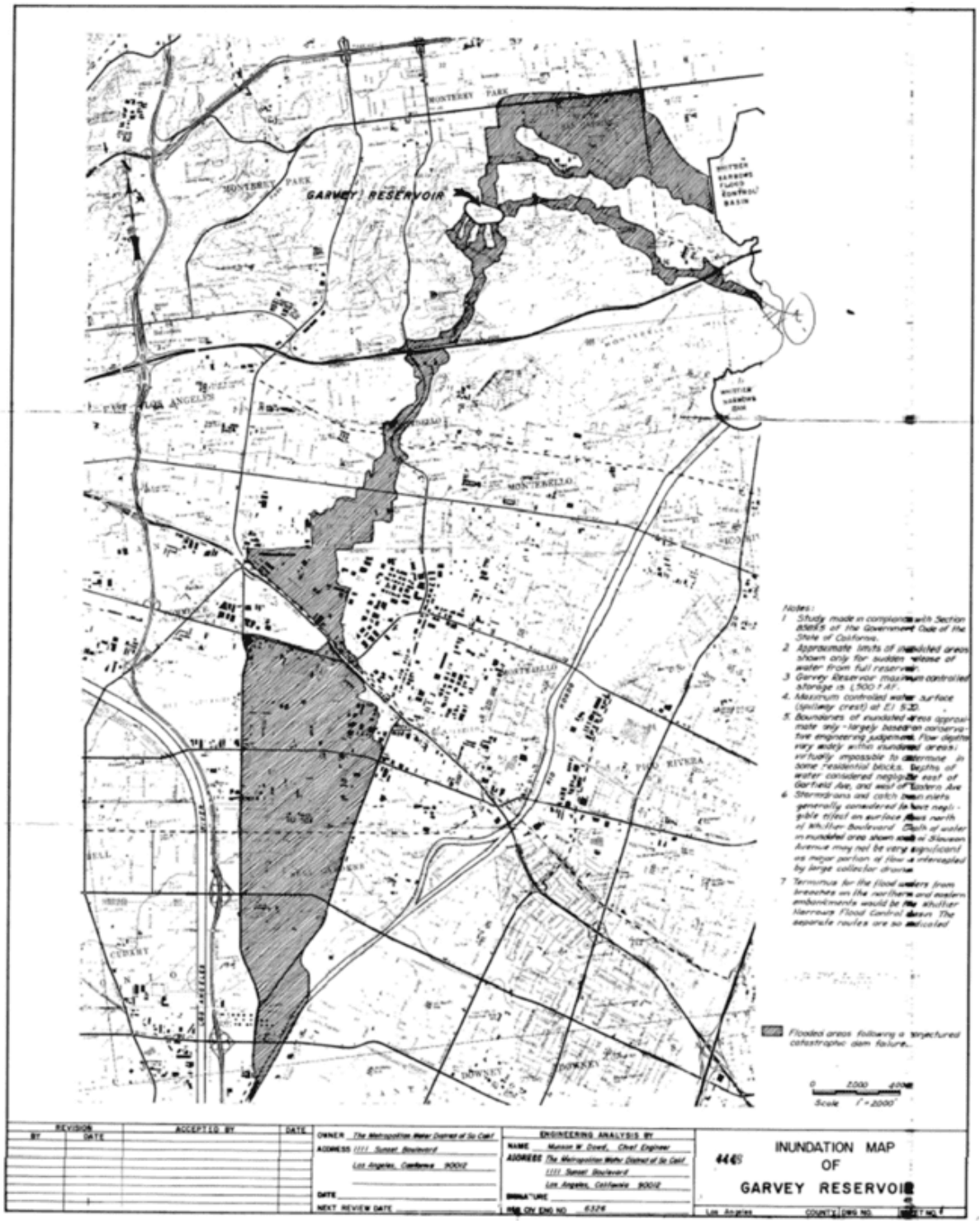
contribute to dam failure. Should Whittier Narrows Dam fail, it would result in catastrophic flooding downstream, affecting densely populated areas including parts of Los Angeles, Montebello, Pico Rivera, and other neighboring communities. This would cause extensive property damage, economic losses, potential casualties, and long-term environmental impacts due to erosion, habitat destruction, and water contamination.

Garvey Reservoir is primarily used for water storage for municipal use and flood control. The future risks for Garvey Reservoir include seismic activity, as it is also in a seismically active area. A major earthquake could damage the dam or its foundation, potentially leading to failure. Increased frequency and intensity of storms due to climate change could result in higher water inflows, overwhelming the reservoir's capacity and spillway design. Structural integrity may be compromised over time due to aging materials, increasing the likelihood of leaks or breaches if not properly maintained. Human error in managing water levels and structural integrity checks could also contribute to the risk of failure. Failure of Garvey Reservoir would release a significant volume of water into the surrounding area, causing flooding in Monterey Park and potentially impacting nearby communities including Montebello. This would result in property damage, infrastructure disruptions, potential casualties, and environmental effects such as soil erosion, habitat destruction, and water contamination.

Climate change poses several additional risks that can exacerbate the likelihood of dam failure. Increased precipitation and storm intensity are expected due to climate change, leading to greater inflows into reservoirs. This increased hydraulic load can stress dam structures and spillways beyond their design capacity, leading to overtopping or structural damage. Alternating periods of severe drought and heavy rainfall can weaken dam structures, with drought causing soil desiccation and cracks, and subsequent heavy rains exploiting these weaknesses, increasing the risk of structural failure. Elevated temperatures can accelerate the degradation of construction materials used in dams, reducing their lifespan and structural integrity. Some studies suggest that climate change could influence seismic activity indirectly by altering groundwater levels and distribution. Changes in water pressure and weight can affect fault lines, potentially increasing the frequency of earthquakes in certain regions.

Map: Dam Failure Inundation – Whittier Narrows Dam (HAZUS) Source: Emergency Planning Consultants

Map: Dam Failure Inundation – Garvey Reservoir (Source: Cal OES Dam Safety Program)



3.4.10 Terrorism/Active Assailant

Hazard Description

Terrorism is defined as the use of violence and intimidation in the pursuit of political, ideological, or religious aims. Terrorism can take many forms, but generally involves attacks or threats that are intended to cause harm, fear, or disruption to the community. Here are some examples of the types of terrorism that could impact an American city (cyberattacks are described in the preceding section):

- **Domestic Terrorism:** Domestic terrorism refers to acts of violence committed by individuals or groups based in the United States who seek to promote a political or social agenda. Domestic terrorism can take many forms, including hate crimes, extremist attacks, and targeted violence.
- **International Terrorism:** International terrorism refers to acts of violence committed by individuals or groups who are based outside of the United States and seek to cause harm to American interests. International terrorism can include attacks on American citizens, businesses, or institutions, as well as attacks on foreign targets that have an impact on American interests.
- **Biological Terrorism:** Biological terrorism refers to the intentional release of biological agents, such as viruses or bacteria, with the intention of causing harm to the public. Biological terrorism can cause widespread illness or death, as well as panic and fear within the community.
- **Chemical Terrorism:** Chemical terrorism refers to the intentional release of chemical agents with the intention of causing harm to the public. Chemical terrorism can cause widespread illness or death, as well as damage to infrastructure and the environment.

Location and Extent

While Montebello itself has not been a known target of past terrorist activities, its proximity to Los Angeles, a major urban center, can potentially increase its vulnerability due to the interconnected nature of urban areas. Factors influencing the probability of an attack include Montebello's location within Los Angeles County, near a major metropolis, which can indirectly influence its risk. Major cities often present more attractive targets due to their symbolic value, population density, and economic importance. Additionally, any city with critical infrastructure, such as transportation hubs, power grids, or water supplies, can be seen as a potential target. While Montebello does not host nationally significant infrastructure, it does have local and regional assets that could be targeted to cause disruption.

A prime example is the attacks on electrical transformers in the United States that have highlighted significant vulnerabilities in the nation's power grid. Notable incidents include the 2013 Metcalf sniper attack in San Jose, California, where unknown assailants fired over 100 rounds of ammunition into the Metcalf substation, severely damaging 17 transformers and causing $15 million in damage. The 2016 Utah substation attack saw an unknown individual or group damaging critical equipment at the Monument Substation, resulting in localized power outages and demonstrating the need for enhanced physical security. In December 2022, multiple substations in Moore County, North Carolina, were targeted by gunfire, leading to widespread power outages for tens of thousands of residents and underscoring the urgent need for improved security measures. Additionally, a series of coordinated attacks in 2023 targeted multiple substations in the Pacific Northwest, causing significant disruptions and prompting calls for increased security and advanced surveillance technologies.

Historically, smaller cities and suburbs like Montebello have been less targeted compared to larger urban centers. However, recent trends show that terrorists sometimes target less prominent locations to exploit perceived lower security measures. The effectiveness of local law enforcement, their collaboration with federal agencies, and the presence of proactive security measures can significantly reduce the likelihood of successful terrorist activities. Potential types of terrorist activities include attacks on public gatherings, where large groups of people gather, such as shopping centers, public events, or community festivals. These areas can be vulnerable due to the high concentration of individuals and the challenge of securing large open spaces. Vehicle ramming attacks, a common method used by terrorists, involve using vehicles to ram into crowds. This type of attack requires minimal resources and can be executed with little planning. Active shooter incidents may also occur, with terrorists conducting armed attacks in public spaces, targeting civilians to cause maximum fear and casualties. The use of improvised explosive devices (IEDs) in public places, buildings, or transportation systems remains a significant threat, as such attacks can cause extensive damage and casualties.

Previous Occurrences

There have been no major instances of terrorism directed at the City of Montebello since its founding.

Probability of Future Events

Overall probability over next five years: ***Unlikely***.

It is very difficult to predict the probability of future terrorist or active assailant-related events. While there is no way to eliminate the risk of such events, law enforcement and emergency services can take proactive measures to prevent and respond to potential threats.

3.4.11 Epidemic/Pandemic

Hazard Description

An infectious disease is a disease caused by pathogenic microorganisms, characterized by clinical symptoms. Infectious diseases pose a major threat worldwide and cause millions of deaths annually. Transmission of infectious diseases can occur through various modes such as direct physical contact with infected individuals, exposure to contaminated food or water, exposure to bodily fluids, contact with contaminated objects, airborne inhalation, or vector-borne dissemination.

An infectious disease can be classified based on its impact as endemic, epidemic, or pandemic. Endemic diseases are consistently present but at low levels (e.g., chicken pox in the United States). Epidemic diseases are sudden severe outbreaks (e.g., the bubonic plague during Medieval times). A pandemic disease is an epidemic that spreads widely across a region, continent, or the world (e.g., the 1957 flu pandemic caused millions of deaths globally). With global travel and trade, fears of pandemics have increased in recent years due to the potential for rapid spread.

A pandemic is defined by the CDC as a worldwide epidemic that affects many people and crosses international borders, creating a public health emergency that impacts all sectors of society. It occurs when a virus undergoes significant antigenic drift or shift, resulting in a new and efficient strain that spreads from person-to-person without pre-existing immunity. The severity of the outbreak is generally unpredictable.

A high number of infectious disease cases can strain healthcare infrastructure. The impact on morbidity and mortality may differ depending on the disease; it can disproportionately affect either younger and healthier people, as seen in the 1918 influenza pandemic, or older and medically-at-risk people, as happened with the recent COVID-19 outbreak. This can lead to worker shortages due to illness, isolation/quarantine, or caring for sick family members. It may also disrupt daily life and lead to shortages of goods and services. Strategies like "stay-at-home" orders and closing non-essential businesses can limit disease transmission but may also create additional burdens on productivity and essential services.

Location and Extent

A pandemic of a human infectious disease has the potential to impact the entire country. Due to the integration of business and social activities both nationally and internationally, it is unreasonable to assume that any location would be exempt from the threat of a pandemic. Locations with high population concentration, such as schools, retail areas, and special event venues, are at the greatest risk.

Recent data on the COVID-19 outbreak indicates that individuals living in densely populated urban areas were more prone to contracting the virus, potentially due to close contact with other residents or visitors from other places. The ease of global transportation makes it increasingly challenging to contain local outbreaks, as infected or exposed individuals travel for business and leisure, possibly disseminating the disease worldwide within hours.

Previous Occurrences

The following data comes from FEMA's Disaster Declarations for States and Counties (https://www.fema.gov/data-visualization/disaster-declarations-states-and-counties; retrieved November 18, 2023).

Incident Subcategory	County	FEMA Declaration String	Calendar Year of Declaration	Date Month	Declaration Date	Declaration Title	State
Other	Los Angeles County	DR-4482-CA	2020	March	3/22/2020	COVID-19 PANDEMIC	CA
Other	Los Angeles County	EM-3428-CA	2020	March	3/13/2020	COVID-19	CA

- **Typhoid (19th and early 20th centuries):** Before the advent of modern sanitation and water treatment systems, California, like many other places, faced occasional outbreaks of typhoid fever.
- **Spanish Flu (1918 Influenza Pandemic):** The Spanish flu was a devastating influenza pandemic that swept across the globe between 1918 and 2020.
- **HIV/AIDS Epidemic (1980s - Present):** The HIV/AIDS epidemic has had a profound impact on California, particularly in cities like San Francisco and Los Angeles.
- **H1N1 Influenza (2009 Pandemic):** In 2009, a novel strain of influenza A (H1N1) emerged and caused a global pandemic.
- **Hepatitis A Outbreak (2017-2018):** California experienced a hepatitis A outbreak primarily affecting unhoused populations in 2017-2018.
- **COVID-19 Pandemic (2020 - 2022):** The COVID-19 pandemic, caused by the novel coronavirus SARS-CoV-2, had a significant impact on California.
- **Tuberculosis Epidemics (Various Periods):** Tuberculosis (TB) has been a recurring public health concern in California, particularly in densely populated urban areas.
- **West Nile Virus Outbreaks (Various Periods):** West Nile virus, transmitted by mosquitoes, has caused outbreaks in California over the years.
- **Measles Outbreaks (Multiple Occurrences):** Measles, a highly contagious viral disease, has had sporadic outbreaks in California over the years. These outbreaks have been attributed to low vaccination rates in some communities,

Probability of Future Occurrences and Impacts of Climate Change

Overall probability over next five years: ***Very unlikely.***

Pandemics are relatively rare when compared to the frequency of natural disasters. When they do occur, however, they can have far-reaching effects. Even suppressed outbreaks of disease can have significant impacts to the localities they affect.

It is difficult to accurately predict the likelihood of future pandemics. However, human encroachment into formerly natural areas worldwide increase the risk of hitherto unknown animal diseases making the jump into human populations. Public health systems should be aware of the potential for new diseases that may pose a threat to the populations they serve, and they should expect future pandemics to appear, some potentially more deadly than COVID-19. Climate change may impact the emergence and transmission of viruses by extending the habitat range of animals that carry them. Already, viruses such as West Nile or Zika have appeared in areas previously not hosting these viruses. It is likely that future diseases from warmer climates will spread along with those climates

SECTION 4 – VULNERABILITY ASSESSMENT

Element B: Risk Assessment Requirements
B2. Does the plan include a summary of the jurisdiction's vulnerability and the impacts on the community from the identified hazards? Does this summary also address NFIP insured structures that have been repetitively damaged by floods? (Requirement 44 CFR § 201.6(c)(2)(ii))

4.1 Lifelines and Critical Infrastructure

FEMA-Defined Community Lifelines

FEMA's Lifelines are a framework for identifying and prioritizing critical infrastructure and services that are essential to the functioning of communities during and after a disaster. The Lifelines framework was developed by the Federal Emergency Management Agency (FEMA) to help emergency managers and first responders prioritize their response efforts and allocate resources during a disaster.

The concept of Lifelines emerged from the realization that disasters can have wide-ranging impacts on a community's infrastructure and services, and that disruptions to these critical systems can significantly hinder response and recovery efforts. The Lifelines framework was developed to identify these critical systems and services and prioritize them based on their importance to overall community functioning and resilience.

There are eight FEMA Lifelines, each of which represents a critical area of infrastructure or service. Critical facilities are categorized under the following lifelines:

- **Safety and Security:** This includes law enforcement/security, search and rescue, fire services, government service, and responder safety.
- **Food, Water, and Shelter:** This encompasses evacuations, schools, food/potable water, shelter, durable goods, water infrastructure, and agriculture.
- **Health and Medical:** This lifeline involves medical care (hospitals), patient movement, public health, fatality management, health care, and supply chain.
- **Energy:** Power (grid), temporary power, and fuel.

- **Communications:** This includes infrastructure, alerts, warnings, messages, 911 and dispatch, responder communications, and financial services.
- **Transportation:** This encompasses highway/roadway, mass transit, railway, aviation, and pipeline.
- **Hazardous Materials:** This includes facilities, hazardous debris, pollutants, and contaminants.
- **Water Systems:** This includes potable water infrastructure and wastewater management.

The Lifelines framework is designed to help emergency managers and first responders prioritize their response efforts and allocate resources based on the criticality of each Lifeline. By prioritizing the most critical Lifelines, emergency responders can work to restore essential services and infrastructure more quickly, which can help to speed up the overall recovery process and reduce the impact of the disaster on the community.

City of Montebello Critical Facilities List

Name	Address	Lifeline	Critical Rank
City Hall	1600 W. Beverly Boulevard	Safety and Security	High
Montebello Fire Department (Station No. 56)	600 N. Montebello Boulevard	Safety and Security	High
Montebello Fire Station No. 56	1166 S. Greenwood Avenue	Safety and Security	High
Montebello Fire Station No. 57	2950 Via Acosta Street	Safety and Security	High
Montebello Police Department	1600 W. Beverly Boulevard	Safety and Security	High
Beverly Hospital	309 W. Beverly Boulevard	Health and Medical	Critical
Whittier Narrows Dam	909 N. Lincoln Avenue	Water Systems	Critical
Hazardous Materials Sites	This information is maintained by the City of Montebello Fire Department and is available upon request.	Hazardous Materials	Critical

4.2 Individual Hazard Vulnerability Analysis

A vulnerability assessment in its simplest form is a simultaneous look at the geographical location of hazards and an inventory of the underlying land uses (populations, structures, etc.). Facilities that provide critical and essential services following a major emergency are of particular concern because these locations house staff and equipment necessary to provide important public safety, emergency response, and/or disaster recovery functions.

This section serves to identify each hazard confronting the community and its vulnerabilities to that hazard.

4.3.1. Extreme Heat

4.3.1.1 Overall Vulnerability and Impact

The City of Montebello, along with the rest of Southern California, is increasingly vulnerable to extreme heat. Extreme heat includes heatwaves and sustained heat events.

4.3.1.2 Population

Extreme heat can have serious consequences for human health, including headaches, dizziness, weakness, cramping, nausea, vomiting, confusion, dehydration, and even death. Vulnerable populations such as the very young, elderly, the unhoused and those with special needs or disabilities are particularly at risk, especially during prolonged heat waves.

The following demographic groups may be especially susceptible to the effects of extreme heat:

- Women who are pregnant
- Persons with medical conditions (e.g., heart disease, diabetes, high blood pressure, insulin-dependent, dialysis)
- Persons with mental illness/disabilities or cognitive disorders
- Persons who use medical equipment (e.g., ventilators, oxygen, G-tubes)
- Individuals with drug or alcohol dependencies
- Persons with mobility devices (e.g., wheelchairs, walkers, canes)
- Persons who are non-ambulatory
- Persons who are socially isolated
- Persons who do not speak English with minimal access to current weather information in their own language.

4.3.1.3 Critical Facilities

Extreme heat can affect critical infrastructure such as roads, bridges, power lines, and water supply systems. Heat stress on metal and road materials, as well as increased use, can cause system breakdowns and outages as well as outright damage, as seen during the “heat dome” event in the Pacific Northwest in 2021. Additionally, the high demand for energy due to the increased use of air conditioning during heat events can cause utility “brownouts” and “blackouts.”

Power outages by themselves are a significant enough hazard in Montebello to be mentioned separately later in this section.

4.3.1.4 Non-Critical Facilities

Sustained extreme heat can have impacts on physical infrastructure such as overhead and transmission wires. By encouraging residences and businesses to use air conditioning, it can also put pressure on the power grid, increasing the possibility of power loss.

4.3.1.5 Environment

Prolonged extreme heat can cause severe damage to the natural environment, particularly the water supply, which can affect drinking water as well as other uses. The combination of extreme heat and drought can result in significant crop loss and increase the risk of wildfire. While Montebello has no predominately-agricultural land, this will affect plant growth and survival from personal gardens to shade trees and recreational landscapes.

4.3.1.6 Changes in Development Since Last Approved Plan

Development: There have been no significant changes in development since the last approved plan. However, as extreme heat events become more likely and more intense due to climate change, the vulnerability of the City will only grow. Therefore, vulnerability to extreme heat has increased since the last approved plan.

Land Use: There have been no significant changes in land use since the last approved plan. Vulnerability to extreme heat due to land use has remained the same since the last approved plan.

Population shifts: Population has increased but not significantly so since the last approved plan. However, as extreme heat events become more likely and more intense due to climate change, the vulnerability of the City will only grow. Therefore, vulnerability to extreme heat due to population shifts has increased since the last approved plan.

4.3.1.7 Impacts on Vulnerable Populations

Monolingual Spanish-speaking Populations: There are no specific impacts from extreme heat on monolingual Spanish-speaking populations.

Unhoused: Unhoused populations are at great risk from extreme heat events, even more so if they are accompanied by power outages.

Behavioral Health: There are no specific impacts from extreme heat on populations with behavioral health issues.

Older Adults: Older adults are particularly vulnerable to extreme heat events.

4.3.2 Drought

4.3.2.1 Overall Vulnerability and Impact

The City of Montebello, like its surrounding communities, are vulnerable to drought and secondary impacts of decreasing availability of water. Rising temperatures in California are expected to impact and reduce water supplies across the state. Much of California's water comes from snowmelt in the High Sierra, a part of the Sierra Nevada mountain range. As temperatures rise due to climate change, the precipitation that would have fallen as snow is expected to become rainfall, leading to less snowfall and therefore, less meltwater from the Sierra Nevada snowpack, reducing the water that would have flowed into Southern California's reservoirs and aqueducts. This could lead to a strain on the City's imported water supply, resulting in a greater reliance on local groundwater in Los Angeles County.

4.3.2.2 Population.

The entire population of the City of Montebello is vulnerable to drought. Drought impacts the entire city through reductions in water supply and related impacts. A shortage of water in individuals can cause dehydration, which can lead to symptoms such as headaches, dizziness, weakness, cramping, nausea, vomiting, confusion, and, in extreme cases, death. Drought also often coincides with high temperatures, exacerbating the effects and putting vulnerable populations, such as young children, the elderly, and those with disabilities, at greater risk.

4.3.2.3 Critical Facilities.

Drought does not have significant direct physical impacts on critical infrastructure with the exception of water utility lines and facilities and plants at recreational facilities.

During droughts, water customers are instructed to use less water, which in turn leads to decreased revenue for local water utilities with no reduction in fixed costs. As a result, water utilities often raise rates to make up for lost revenue. The reduction in water flow also leads to decreased sewage flows, causing an increase in contaminants in the water supply. This can affect the availability of drinking water and water for agriculture, leading to a decrease in food supply, a loss of biodiversity, increased mortality in humans and animals, an increase in disease, and a rise in endangered species.

4.3.2.4 Non-Critical Facilities.

Drought does not have major structural impacts on non-critical facilities but can impact residential water availability. Increased prices may result in lower-income populations using less water, increasing the likelihood of dehydration or other negative health impacts.

4.3.2.5 Environment

The environmental effects of drought are widespread and reach beyond geographic boundaries. Drought conditions result in decreased water availability for plant and animal habitat from sources such as lakes, streams, aquifers, soil, wetlands, springs, and other surface and subsurface sources. This reduction in water quality can alter the levels of salinity, bacteria, turbidity, pH, and temperature, potentially affecting the aquatic habitat of plants and animals, and the health of livestock if they ingest too much salt or bacteria.

4.3.2.6 Changes in Development Since Last Approved Plan

Development: There have been no significant changes in development since the last approved plan. Increased water use efficiency has decreased overall water use by many metrics. However, increasing temperatures and changing precipitation patterns have increased uncertainty around planning for drought. Overall, vulnerability to drought from development has remained the same since the last approved plan.

Land Use: There have been no significant changes in land use since the last approved plan. Vulnerability to drought from land use has remained the same since the last approved plan.

Population shifts: Population has increased but not significantly so since the last approved plan. Vulnerability from drought due to population shifts has remained the same since the last approved plan.

4.3.2.7 Impacts on Vulnerable Populations

Monolingual Spanish-speaking Populations: There are no specific impacts from drought on monolingual Spanish-speaking populations.

Unhoused: There are secondary impacts due to drought from potential increases in water costs on unhoused populations. Associated heat waves may significantly impact unhoused populations.

Behavioral Health: There are no specific impacts from drought on populations experiencing behavioral health issues.

Older Adults: Older adults may be vulnerable to increased water costs and reduced water intake during drought; associated heat waves may significantly impact older adults.

4.3.3 Earthquake

4.3.3.1 Overall Vulnerability and Impact

The City of Montebello, along with surrounding communities, is historically vulnerable to earthquakes. Earthquakes are traditionally one of the major hazards impacting California, and significant attention has been paid to understanding and mitigating against earthquake impacts.

Earthquakes can cause significant damage to the built environment, including collapsed structures that may trap or bury individuals, resulting in loss of life and expensive cleanup efforts. Many buildings in California, including Montebello, were constructed before 1993, when building codes were less stringent, and retrofitting is not mandatory except in certain circumstances, leading to a high number of vulnerable structures. After an earthquake, significant time is devoted to the removal of debris from various structures, including brick, glass, wood, steel, concrete building components, and office or home contents following damage.

Seismic activity poses a significant threat to businesses, from large corporations to small retail shops. Even a single day of production downtime can result in tremendous economic loss, particularly for businesses with national or global markets. These losses can be a burden for owners who may struggle to recover. According to FEMA, forty percent of businesses fail to reopen after a disaster, and another twenty-five percent fail within one year. Similarly, statistics from the United States Small Business Administration show that over ninety percent of businesses fail within two years after being hit by a disaster.

Fires are frequently triggered by downed power lines or broken gas mains during earthquakes. If fire stations sustain damage, there is a reduced chance of responders being able to promptly put out fires. Additionally, major incidents require a greater allocation of resources, leaving smaller fires and issues with little or inadequate attention in the initial hours following a significant earthquake event. The associated loss of electricity can also lower water pressure, further impeding firefighting efforts.

4.3.3.2 Population

The entire population of Montebello is vulnerable to an earthquake. Both indoor and outdoor environments can be hazardous during earthquakes, with collapsed buildings, falling equipment, and moving debris causing death and injury. Additionally, downed power lines, as well as broken water and gas lines, pose threats to human life.

4.3.3.3 Critical Facilities

Every structure in the City is potentially at risk during an earthquake.

An earthquake can cause damage to structures, utilities, transportation routes, and communication resulting in loss of revenue and ability to provide emergency, essential, and non-essential services. In addition, recovery includes substantial debris removal issues and multiple building inspections.

4.3.3.4 Non-Critical Facilities

Specific non-critical facilities vulnerable in the City of Montebello include various residential and commercial properties, social service agencies, and government resources. Older residential structures constructed before the introduction of stringent earthquake-related construction codes are particularly vulnerable to earthquakes. A severe earthquake could result in many of these buildings sustaining serious damage or even collapsing, leading to injury or loss of life.

Any substantial damage to housing stock in the City would result in additional constraints on housing supply, potentially leading to strain on many sectors of the City's population.

4.3.3.5 Environment

There are no major discrete environmental impacts from earthquakes. The ecology of California is well-adapted to them.

4.3.3.6 Changes in Development Since Last Approved Plan

Development: There have been no significant changes in development since the last approved plan. However, housing prices, as in many other markets in the United States , have increased far in excess of wages. This has greatly increased the difficulty of purchasing housing and, in the case of lower-income renters, has increased the chance of becoming unhoused. Any earthquake and the resulting damage to housing stock would greatly increase these strains. Therefore, vulnerability to earthquake due to development has increased since the last approved plan.

Land Use: There have been no significant changes in land use since the last approved plan. Vulnerability to earthquake has remained the same since the last approved plan.

Population shifts: Population has increased but not significantly so since the last approved plan. Overall population vulnerability to earthquakes has increased since the last approved plan.

4.3.3.7 Impacts on Vulnerable Populations

Monolingual Spanish-speaking Populations: Monolingual Spanish-speaking populations may be more likely to occupy older residential properties, and therefore be more vulnerable to earthquakes.

Unhoused: Due to their lack of stable housing, homeless people are at a higher risk of injury during an earthquake. They may be exposed to falling debris, collapsing structures, and hazardous conditions. Earthquakes can destroy existing makeshift shelters used by homeless individuals, leaving them without a place to seek refuge. This may also increase the likelihood of negative health impacts.

Behavioral Health: Disruptions to health care services and related organizations from earthquakes may have an impact on behavioral health services and their ability to reach out to impacted individuals.

Older Adults: Older adults may be more likely if lower-income to occupy older residential properties. They may also be more vulnerable to earthquake-related injuries.

4.3.4 High Wind/Storms

4.3.4.1 Overall Vulnerability and Impact

The City of Montebello seasonally experiences severe wind. Windstorms can cause damage to buildings, block roads and bridges, and damage traffic signals, streetlights, and parks, among other things. The inability to access emergency services due to blocked roads can limit the response operations during a windstorm, while industry and commerce can suffer losses from interrupted electric services and extended road closures. Such losses to buildings, personnel, and equipment, as well as service interruptions, may impact the local economy following a windstorm event.

4.3.4.2 Population

Population vulnerability to severe wind in the City of Montebello varies by incident. Very few injuries to people are recorded during the types of high winds that Southern California experiences. Most damage is to property, but roads blocked by fallen trees during a windstorm may have severe consequences to people who need access to emergency services. Unhoused people may be more vulnerable than others to the effects of severe wind including of flying objects.

In the event of a windstorm or microburst, emergency personnel may be required to respond to damage sustained by both residential and commercial structures, especially those with weak reinforcement. The debris carried by extreme winds can contribute to loss of life and failure of protective building elements. Downed trees, power lines, and damaged property can hinder emergency response and disaster recovery efforts.

4.3.4.3 Critical Facilities.

All critical facilities are at risk for damage from severe winds which can damage structures, roads, traffic signals, and streetlights.

Above-ground utility infrastructure is at special risk from severe wind. Falling trees have been a leading cause of power outages. Windstorms, including strong microbursts and Santa Ana winds, can result in flying debris and downed utility lines. Even in minor windstorm events, tree limbs can break in winds as low as 45 mph and be thrown over 75 feet, causing damage to overhead power lines. This can result in electric power lines falling to the ground, posing a potential risk of fatal electric shock.

4.3.4.4 Non-Critical Facilities.

All above-ground non-critical facilities in the City of Montebello are at risk for damage from severe winds.

Residential and commercial structures with weak reinforcement are vulnerable to windstorm damage. Wind pressure can push walls, doors, and windows inward, while passing currents create suction forces that pull building components and surfaces outward. Extreme wind forces can cause a building or its roof to fail, resulting in significant damage. In addition, even winds of 45 mph can cause tree limbs to become flying debris and damage structures. Overhead power lines can also be damaged and falling trees can bring electric power lines down to the pavement, creating a risk of electric shock.

Strong windstorms can affect local transportation by causing trees and electrical wires to fall onto streets and highways, leading to road closures. During periods of very strong winds, major highways may also be temporarily closed to trucks and recreational vehicles. However, these disruptions are usually short-lived and do not have a significant long-term economic impact on the region.

4.3.4.5 Environment

Strong winds may down trees, including those in City parks or street trees that provide shade for pedestrians.

4.3.4.6 Changes in Development Since Last Approved Plan

Development: There have been no significant changes in development since the last approved plan. Vulnerability to severe wind has remained the same since the last approved plan.

Land Use: There have been no significant changes in land use since the last approved plan. Vulnerability to severe wind has remained the same since the last approved plan.

Population shifts: Population has increased but not significantly so since the last approved plan. Overall population vulnerability to cyberattack has remained the same since the last approved plan.

4.3.4.7 Impacts on Vulnerable Populations

Monolingual Spainsh-speaking Populations: There are no specific impacts from severe wind on Russian-speaking populations.

Unhoused: Unhoused populations may be subject to greater impacts from severe wind if outside without shelter.

Behavioral Health: There are no specific impacts from severe wind on populations with behavioral health issues.

Older Adults: There are no specific impacts from severe wind on older adults. Power outages due to severe wind may be a secondary impact.

4.3.5 Wildfire

4.3.5.1 Overall Vulnerability and Impact

Southern California's brush plants are largely composed of chaparral, which grows quickly and leaves behind dead vegetation that is nutrient-rich and released into the soil through burning. Some chaparral plants, like *Ceanothus*, have flammable resin coatings on their leaves, while others, such as chamise (greasewood), produce volatile gases when burned and leave a water-resistant residue in the soil that can cause erosion on denuded slopes, increasing the risk of post-fire flash flooding and mudslides in nearby communities.

4.3.5.2 Population

More recently developed commercial and residential areas in the northern hills of Montebello are more vulnerable to potential fires than more urbanized lower parts of the City. Curvier access roads that are not As discussed above, smoke from wildfires in other areas can directly and adversely impact human health due to reductions in air quality.

4.3.5.3 Critical Facilities

There are no identified critical facilities at direct risk of fire in Montebello. However, fire also has several secondary effects, such as overburdened public utilities, reduced water supplies, disrupted communication systems due to downed utility lines and damaged transformers and road closures, that may have secondary impacts on critical facilities.

Wildfires can cause damage to structures, utilities, transportation routes, and communication resulting in loss of revenue and ability to provide emergency, essential, and non-essential services. The total area affected is less than one square mile.

4.3.5.4 Non-Critical Facilities

The specific non-critical facilities vulnerable in the City of Montebello include major commercial and residential properties in the north of Montebello.

4.3.5.5 Environment

Bare hillsides after major fires increase the flow of water and material downhill. This can lead to an increased chance of landslide or mudflow after a rain event as a secondary hazard.

4.3.5.6 Changes in Development Since Last Approved Plan

Development: There have been no significant changes in development since the last approved plan. Vulnerability to wildfire has remained the same since the last approved plan.

Land Use: There have been no significant changes in land use since the last approved plan. Vulnerability to wildfire has remained the same since the last approved plan.

Population shifts: Population has increased but not significantly so since the last approved plan. There has been a statistically significant increase in the unhoused population. Therefore, overall population vulnerability to wildfire has increased since the last approved plan.

4.3.5.7 Impacts on Vulnerable Populations

Monolingual Spanish-speaking populations: There are no specific impacts from wildfire on Russian-speaking populations; however, immigrant communities sometimes are less likely to have advanced central air and heating systems, making them potentially more vulnerable to impacts from wildfire smoke.

Unhoused: Without permanent shelter, unhoused populations may experience greater adverse health impacts due to smoke from wildfires.

Behavioral Health: There are no specific impacts from wildfire on populations with behavioral health issues. Populations with behavioral health issues may have a more difficult time in terms of evacuations, whether from wildfire danger or into safe spaces during severe smoke events.

Older Adults: Older adults often have a higher instance of respiratory issues, and therefore more vulnerable to the impacts of smoke from wildfires than other populations.

4.3.6 Power Outage

4.3.6.1 Overall Vulnerability and Impact

The City of Montebello is vulnerable to power outages impacting part of all of the City. Compounding issues such as the growing age of the electrical grid, increased demands due to growing IT applications such as the cloud and artificial intelligence and increasing high temperatures due to climate change combine to greatly increase the likelihood of power outages impacting the City.

4.3.6.2 Population

While vulnerable populations such as older adults and the unhoused may be impacted first, extended power outages could impact all of the inhabitants of the City without regard to income.

One of the most significant hazards of power outages during extreme heat is the risk of heat-related illnesses. When power goes out, air conditioning units and fans stop working, which can lead to indoor temperatures rising quickly. This can lead to dehydration, heat exhaustion, and even heatstroke, especially among vulnerable populations such as the elderly, young children, and those with preexisting medical conditions.

Historically, sustained extreme heat events have resulted in significant deaths among vulnerable populations without air conditioning or working fans, such as the 1995 Chicago heat wave.

4.3.6.3 Critical Facilities

All government facilities can be affected by rolling blackouts and power failures. It is predicted that the State of California will experience more rolling blackouts in the future.

In addition to homes and businesses, power outages can also impact essential services such as hospitals, emergency response systems, and water treatment facilities. Emergency response systems such as 911 call centers and police and fire departments also rely on electricity to function, and a power outage can hinder their ability to respond to emergencies quickly.

Water treatment facilities are another critical service that can be impacted by power outages. These facilities rely on electricity to pump and treat water, and a loss of power can result in a disruption in the water supply or a decrease in water quality.

4.3.6.4 Non-Critical Facilities

All neighborhoods in West Hollywood are vulnerable to rolling blackouts and power outages. The most immediate impact of a power outage is typically felt in homes and businesses. When the power goes out, residents and employees may experience a loss of lighting, heating, or cooling, and access to electronic devices. This can result in inconvenience, discomfort, and potential safety hazards, especially if the outage occurs at night or during extreme weather conditions.

Power outages also affect traffic signals. In the event of other major disasters that cause power outages, this can be a compounding hazard that affects the ability of people to evacuate and the ability of responders to enter the City.

4.3.6.5 Environment

There are relatively few impacts on the natural environment due to power outages.

4.3.6.6 Changes in Development Since Last Approved Plan

Development: There have been no significant changes in development since the last approved plan. However, increasing power demands from a variety of sources and vulnerability to extreme weather events increase the strain on the power grid. Vulnerability to power outages due to development has increased since the last approved plan.

Land Use: There have been no significant changes in land use since the last approved plan. Vulnerability to power outages due to land use remained the same since the last approved plan.

Population shifts: Population has decreased but not significantly so since the last approved plan. However, increasing demands and vulnerabilities impacting the power grid as well as increasing high temperatures increase the vulnerability from power outages to various populations in the City. Therefore, overall population vulnerability to power outages has increased since the last approved plan.

4.3.6.7 Impacts on Vulnerable Populations

Monolingual Spanish-speaking Populations: There are no specific impacts from power outages on monolingual Spanish-speaking populations.

Unhoused: There may be significant impacts from power outages on unhoused populations. Unhoused populations may have reduced access to medical facilities or treatment.

Behavioral Health: There may be significant additional vulnerabilities to power outages among populations with behavioral health issues.

Older Adults: Older adults are more vulnerable to periods of extreme heat, and power outages can put many at severe risk.

4.3.7 Cyberattack/IT Disruption

4.3.7.1 Overall Vulnerability and Impact

The City of Montebello, like governments throughout the country, are increasingly vulnerable to cyberattacks. Cyberattacks can impact local government, services, and businesses in a variety of ways, depending on the type and severity of the attack.

Laptops generally have 4-5 hours of power capacity, so in the event of a power outage, they could quickly run down without available power sources. And without an operating network to log in to, their utility would be seriously compromised. This becomes an issue in the case of another pandemic or other situation requiring widespread remote work as during the beginning of the COVID-19 pandemic – ensuring operation of the network will be key to ensuring the continued functioning of the City.

4.3.7.2 Population

The general population may be subject to cyberattack through attacks on other institutions or individual responses to phishing or other online scams. In addition, certain populations such as the elderly, disabled, and unhoused people may be more vulnerable to the impacts of cyberattacks on local government and services. For example, if emergency services or public utilities are disrupted, these populations may have a more difficult time accessing the resources they need to stay safe and healthy.

4.3.7.3 Critical Facilities

Every facility today is to some degree supported by IT technology, from access systems to the power grid. Beyond specific critical facilities, other elements of infrastructure could be affected, from traffic lights to modern electric vehicles.

Local Government:

- Emergency Services: Cyberattacks can disrupt emergency services such as 911 systems, which can prevent people from getting the help they need in a timely manner.
- Public Utilities: Cyberattacks can target public utilities such as water and power systems, potentially causing widespread outages and other disruptions.
- Transportation Networks: Cyberattacks can target transportation networks such as traffic signals and public transit systems, causing delays and safety hazards.
- Public Records: Cyberattacks can compromise public records such as birth certificates, social security numbers, and other sensitive information.

Services:

- Financial Services: Cyberattacks can target financial institutions such as banks and credit unions, potentially compromising sensitive financial data and disrupting financial transactions.
- Healthcare: Cyberattacks can compromise healthcare systems, putting patient data and even lives at risk.

4.3.7.4 Non-Critical Facilities

Virtually all non-critical facilities are vulnerable to cyberattack, although to lesser degrees.

Businesses:

- Intellectual Property: Cyberattacks can target businesses' intellectual property such as trade secrets, patents, and other sensitive information.
- Financial Information: Cyberattacks can compromise businesses' financial data, potentially leading to financial losses and reputational damage.
- Supply Chain Disruptions: Cyberattacks can disrupt businesses' supply chains, causing delays and financial losses.

4.3.7.5 Environment

Cyberattack has no direct impact on the environment. Shutdowns of certain systems may cause events that have impacts on the environment, however.

4.3.7.6 Changes in Development Since Last Approved Plan

Development: There have been no significant changes in development since the last approved plan. However, as networked systems and new forms of information technology such as artificial intelligence become more common, the City's vulnerability to cyberattack will only grow. Vulnerability to cyberattack has increased since the last approved plan.

Land Use: There have been no significant changes in land use since the last approved plan. Vulnerability to cyberattack has remained the same since the last approved plan.

Population shifts: Population has increased but not significantly so since the last approved plan. Cyberattacks have also become more sophisticated and widespread in the past several years Therefore, overall population vulnerability to cyberattack has increased since the last approved plan.

4.3.7.7 Impacts on Vulnerable Populations

Monolingual Spanish-speaking Populations: There are no specific impacts from cyberattack on Russian-speaking populations. Linguistic barriers may impede communication with and disseminating information to Russian-speaking populations during or after an event.

Unhoused: There are no specific impacts from cyberattack on unhoused populations.

Behavioral Health: Disruptions to health care services and related organizations from cyberattack may have an impact on behavioral health services and their ability to reach out to impacted individuals.

Older Adults: Disruptions to community and medical services from cyberattack may have direct impacts to services for older adults, including on their health and well-being.

4.3.8 Floods

4.3.8.1 Overall Vulnerability and Impact

The high density and associated impervious surfaces can impede natural water absorption and increase runoff during heavy rain events, potentially leading to localized flooding. The City's terrain includes hilly and sloped areas in its north, which can contribute to runoff during heavy rains. The Rio Hondo riverbed during prolonged and severe precipitation events could be an issue as well.

4.3.8.2 Population

Impact on population is limited mostly to development in proximity to the Rio Hondo River. The potential for harm to any unhoused persons camping in the Rio Hondo riverbed could be higher, however.

4.3.8.3 Critical Facilities

No specific critical facilities in the City of Montebello stand out for their greater vulnerability to flooding. However, during heavy rain events, stormwater can quickly overwhelm the capacity of storm drains, leading to flooding in streets and neighborhoods and potentially impacting critical facilities in the vicinity. This excess water can also flow into the sewer system, causing it to become overloaded and leading to backups and overflows in other areas.

In addition, stormwater runoff can carry pollutants, such as debris, trash, chemicals, and sediment, into the sewer system. These pollutants can cause blockages and damage to pipes and equipment, as well as pose a risk to human health and the environment.

4.3.8.4 Non-Critical Facilities.

No specific categories of non-critical facilities stand out in the City of Montebello for their vulnerability to flooding. Flooding can cause damage to structures, utilities, transportation routes, and communication resulting in loss of revenue and ability to provide emergency, essential, and non-essential services.

As described above, flash flooding after extreme events may impact both critical and non-critical facilities. Roads may act as channels for floodwaters, making crossing roads hazardous and damaging or even washing away vehicles.

The extent and nature of property damage from floods depend on the velocity and depth of floodwaters. Basement flooding and soil saturation from flood events can lead to significant

damage. Most flood damage occurs from water penetrating materials that are vulnerable to loss, such as wood, insulation, wallboard, fabric, furnishings, floor coverings, and appliances. In some cases, flood damage can make homes unlivable.

4.3.8.5 Environment

Any sustained flooding event is likely to impact the City's natural environment by potentially putting stress on aging trees and vegetation.

4.3.8.6 Changes in Development Since Last Approved Plan

Development: There have been no significant changes in development since the last approved plan. However, as the intensity of extreme rain events increases due to climate change, the risk of anomalous events impacting the City of Montebello is growing. Therefore, vulnerability to flooding has increased since the last approved plan.

Land Use: There have been no significant changes in land use since the last approved plan. However, as the intensity of extreme rain events increases due to climate change, the risk of anomalous events impacting the City of Montebello is growing. Therefore, vulnerability to flooding has increased since the last approved plan.

Population shifts: Population has increased but not significantly so since the last approved plan. However, as the intensity of extreme rain events increases due to climate change, the risk of anomalous events impacting the City of Montebello is growing. Therefore, vulnerability to flooding has increased since the last approved plan.

4.3.8.7 Impacts on Vulnerable Populations

Monolingual Spanish-speaking Populations: There are no specific impacts from flooding on monolingual Spanish-speaking populations.

Unhoused: Unhoused populations may be more vulnerable to floods due to their lack of permanent shelter. Any unhoused persons camping in vicinity of the Rio Hondo riverbed during potential flooding events could be impaced.

Behavioral Health: There are no specific impacts from flooding on populations experiencing behavioral health issues.

Older Adults: Older adults may have mobility issues preventing them from moving to higher or safer ground in the event of flooding.

4.3.9 Dam Failure

4.3.9.1 Overall Vulnerability and Impact

A dam failure could lead to catastrophic flooding, impacting densely populated areas downstream. The impact would be severe, causing extensive property damage, economic losses, potential casualties, and long-term environmental damage.

4.3.9.2 Population

The population at risk includes residents of the communities located downstream of Whittier Narrows Dam and Garvey Reservoir including Montebello. These areas are densely populated, and a dam failure could directly affect a large number of households.

4.3.9.3 Critical Facilities

While there may be no specific identified critical facilities at risk, the failure of a dam could severely disrupt essential services, complicating rescue operations and causing long-term outages in utilities, water supply, and emergency medical services.

4.3.9.4 Non-Critical Facilities

Non-critical facilities could suffer severe damage or destruction, leading to long-term economic impacts and displacement of residents and businesses.

4.3.9.5 Environment

The environmental impact of a dam failure would be substantial, including severe erosion, habitat destruction, and water contamination. Floodwaters could carry debris, chemicals, and sewage downstream, leading to long-term damage to aquatic ecosystems and a loss of biodiversity in affected areas.

4.3.9.6 Changes in Development Since Last Approved Plan

Development: There have been no significant changes in development since the last approved plan. Vulnerability to dam failure from development has remained the same since the last approved plan.

Land Use: There have been no significant changes in land use since the last approved plan. Vulnerability to dam failure from land use has remained the same since the last approved plan.

Population shifts: Population has decreased but not significantly so since the last approved plan. Overall population vulnerability to dam failure from population shifts has remained the same since the last approved plan.

4.3.9.7 Impacts on Vulnerable Populations

Monolingual Spanish-speaking Populations: There are no specific impacts from dam failure on monolingual Spanish-speaking populations.

Unhoused: There may be significant impacts from infectious disease on unhoused populations. The unhoused population, often residing in areas close to rivers or under bridges, is particularly vulnerable to sudden flooding, with few resources to escape or recover from such disasters.

Behavioral Health: There may be significant additional vulnerabilities to dam failure among populations with behavioral health issues. The trauma associated with a dam failure, including loss of homes and loved ones, could exacerbate mental health issues in the affected population, leading to increased anxiety, depression, and stress-related disorders.

Older Adults: Older adults may be more vulnerable to dam failure than other populations due to limited mobility.

4.3.10 Terrorism/Armed Assailant

4.3.10.1 Overall Vulnerability and Impact

Terrorism, whether from an organized group or from a lone active assailant, is a constant shadow over many aspects of life in the United States. These kind of events can be carried out not only with guns but with explosive devices or sabotage of infrastructure such as attacks on electrical transformers or attempts to poison water supplies.

4.3.10.2 Population

Overall population vulnerability is difficult to ascertain. Settings with large numbers of people are more vulnerable to armed assailants. The entire population is vulnerable to larger-scale attacks.

4.3.10.3 Critical Facilities

Critical infrastructure, such as power plants, water treatment facilities, and communication systems, are essential to the functioning of the City. An attack on these facilities could disrupt vital services and cause significant damage to the City's infrastructure.

4.3.10.4 Non-Critical Facilities

Businesses are vulnerable to terrorism. Public spaces, such as parks, shopping districts, and public transportation hubs, are potential targets for terrorist attacks. For example, an attack on a crowded public space could cause mass casualties and widespread panic.

4.3.10.5 Environment

The natural environment itself is not a major target of potential terrorist or active assailant incidents in the City of Montebello. Depending on the mode of attack, the natural environment could be impacted by attacks directed on other targets.

4.3.10.6 Changes in Development Since Last Approved Plan

Development: There have been no significant changes in development since the last approved plan. However, the political climate in the United States has fostered an increase in armed groups and individuals motivated by ideology that are capable of violence. Therefore, vulnerability to terrorism due to development has increased since the last approved plan.

Land Use: There have been no significant changes in land use since the last approved plan. Vulnerability to terrorism has remained the same since the last approved plan.

Population shifts: Population has decreased but not significantly so since the last approved plan. Therefore, vulnerability to terrorism due to population shifts has decreased since the last approved plan.

4.3.10.7 Impacts on Vulnerable Populations

Monolingual Spanish-speaking Populations: There are no specific impacts from terrorism on monolingual Spanish-speaking populations.

Unhoused: There are no specific impacts from terrorism on unhoused populations.

Behavioral Health: There are no specific impacts from terrorism on populations experiencing behavioral health issues.

Older Adults: There are no specific impacts from terrorism on older populations.

4.3.11 Infectious Disease

4.3.11.1 Overall Vulnerability and Impact

The City of Montebello is vulnerable to infectious disease. The vulnerability of a specific population to epidemic or pandemic is affected by several variables, including virus type, affected demographics, and environmental factors such as seasonality and individual medical conditions. While the Spanish Flu of 1920 impacted largely healthy young people, the COVID-19 pandemic was most impactful for elderly individuals, with morbidity and mortality rates highest among those aged 65 and older, particularly those 85 and older.

4.3.11.2 Population

The entire population of the City of Montebello is vulnerable to infectious disease. Most diseases impact certain segments of the population more than others; COVID-19 disproportionally affected the elderly and others with existing co-morbidities. Future pandemics may impact different population sectors.

4.3.11.3 Critical Facilities

As infectious disease impacts humans directly, it does not directly impact critical physical infrastructure. It would, however, impact staffing and human systems that support the physical infrastructure of the City. The City's recent experience of dealing with the COVID-19 pandemic revealed both strengths and vulnerabilities that could be considered in future pandemic planning.

4.3.11.4 Non-Critical Facilities

Infectious disease does not directly impact non-critical physical infrastructure. Businesses and other entities may be impacted, however, due to closures and other mitigation measures. The economy can be Impacted by infectious disease outbreaks through measures such as limiting travel and public events, and closing non-essential businesses, creating a high demand for healthcare resources.

4.3.11.5 Environment

Infectious disease impacting humans does not directly impact the natural environment. Some diseases originating in animals may impact humans under the right conditions.

4.3.11.6 Changes in Development Since Last Approved Plan

Development: There have been no significant changes in development since the last approved plan. Vulnerability to infectious disease from development has remained the same since the last approved plan.

Land Use: There have been no significant changes in land use since the last approved plan. Vulnerability to infectious disease from land use has remained the same since the last approved plan.

Population shifts: Population has increased but not significantly so since the last approved plan. Overall population vulnerability to infectious disease from population shifts has remained the same since the last approved plan.

4.3.11.7 Impacts on Vulnerable Populations

Monolingual Spanish-speaking Populations: There are no specific impacts from infectious disease on monolingual Spanish-speaking populations.

Unhoused: There may be significant impacts from infectious disease on unhoused populations. Unhoused populations may have reduced access to medical facilities or treatment.

Behavioral Health: There may be significant additional vulnerabilities to infectious disease among populations with behavioral health issues.

Older Adults: Older adults are often more vulnerable to infectious disease than other populations.

4.4 National Flood Insurance Program Participation

CID	Community Name	County	Init FHBM Identified	Init FIRM Identified	Curr Eff Map Date	Reg-Emer Date	Tribal
060720	MONTEBELLO, CITY OF	LOS ANGELES COUNTY		6/18/87	9/26/08	6/18/87	No

The City of Montebello currently participates in the National Flood Insurance Program. Created by Congress in 1968, the NFIP makes flood insurance available in communities that enact minimum floodplain management rules consistent with the Code of Federal Regulations §60.3.

Flood zones are geographic areas that the FEMA has defined according to varying levels of flood risk. These zones are depicted on a community's Flood Insurance Rate Map (FIRM) or Flood Hazard Boundary Map. Each zone reflects the severity or type of flooding in the area.

The built areas of the City are in “Flood Zone X” and “Flood Zone D”. Zone X is defined as the area outside the 500-year flood and protected by levee from 100-year flood. Zone D is defined as areas in which flood hazards are undetermined (no analysis of flood hazards has been conducted), but possible.

According to FEMA, the City of Montebello is designated a No Special Flood Hazard Area (NSFHA). A Non-Special Flood Hazard Area (NSFHA) is an area that is in a moderate- to low-risk flood zone (Zones B, C, X Pre- and Post-FIRM). An NSFHA is not in any immediate danger from flooding caused by overflowing rivers or hard rains. However, it’s important to note that structures within a NSFHA are still at risk. In fact, over 20- percent of all flood insurance claims come from areas outside of mapped high-risk flood zones.

Moderate to Low Risk Areas

In communities that participate in the NFIP, flood insurance is available to all property owners and renters in these zones:

ZONE	DESCRIPTION
B and X (shaded)	Area of moderate flood hazard, usually the area between the limits of the 100- year and 500-year floods. B Zones are also used to designate base floodplains of lesser hazards, such as areas protected by levees from 100-year flood, or shallow flooding areas with average depths of less than one foot or drainage areas less than 1 square mile.
C and X (unshaded)	Area of minimal flood hazard, usually depicted on FIRMs as above the 500- year flood level. Zone C may have ponding and local drainage problems that don't warrant a detailed study or designation as base floodplain. Zone X is the area determined to be outside the 500-year flood and protected by levee from 100-year flood.

High Risk Areas

In communities that participate in the NFIP, mandatory flood insurance purchase requirements apply to all of these zones:

ZONE	DESCRIPTION
A	Areas with a 1% annual chance of flooding and a 26% chance of flooding over the life of a 30-year mortgage. Because detailed analyses are not performed for such areas; no depths or base flood elevations are shown within these zones.
AE	The base floodplain where base flood elevations are provided. AE Zones are now used on new format FIRMs instead of A1-A30 Zones.
A1-30	These are known as numbered A Zones (e.g., A7 or A14). This is the base floodplain where the FIRM shows a BFE (old format).
AH	Areas with a 1% annual chance of shallow flooding, usually in the form of a pond, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Base flood elevations derived from detailed analyses are shown at selected intervals within these zones.
AO	River or stream flood hazard areas, and areas with a 1% or greater chance of shallow flooding each year, usually in the form of sheet flow, with an average depth ranging from 1 to 3 feet. These areas have a 26% chance of flooding over the life of a 30-year mortgage. Average flood depths derived from detailed analyses are shown within these zones.

ZONE	DESCRIPTION
AR	Areas with a temporarily increased flood risk due to the building or restoration of a flood control system (such as a levee or a dam). Mandatory flood insurance purchase requirements will apply, but rates will not exceed the rates for unnumbered A zones if the structure is built or restored in compliance with Zone AR floodplain management regulations.
A99	Areas with a 1% annual chance of flooding that will be protected by a Federal flood control system where construction has reached specified legal requirements. No depths or base flood elevations are shown within these zones.

Undetermined Risk Areas

ZONE	DESCRIPTION
D	Areas with possible but undetermined flood hazards. No flood hazard analysis has been conducted. Flood insurance rates are commensurate with the uncertainty of the flood risk.

- **Adoption of NFIP minimum floodplain management criteria via local regulation.** No portions of Montebello lie within a federally designated mandatory flood insurance zone.
- **Adoption of the latest effective Flood Insurance Rate Map (FIRM).** The City of Montebello adopted the latest effective Flood Insurance Rate Map on XXXXXXX
- **Implementation and enforcement of local floodplain management regulations to regulate and permit development in SFHA's.** There are no portions of the City of Montebello that are within an SFHA.
- **Appointment of a designee or agency to implement the addressed commitments and requirements of the NFIP.** The City of Montebello's City Engineer is responsible for implementing the addressed commitments and requirements of the NFIP.
- **Description of how participants implement the substantial improvement/substantial damage provisions of their floodplain management regulations after an event.** The City of Montebello's City Engineer will implement all applicable provisions after a flood event. Chapter 15.40, *Flood Damage Prevention* (https://library.municode.com/ca/montebello/codes/code_of_ordinances?nodeId=TIT

15BUCO_CH15.40FLDAPR_15.40.020FI) details Montebello's specific floodplain management regulations.

Repetitive Loss Properties (RLPs) are most susceptible to flood damages; therefore, they have been the focus of flood hazard mitigation programs. Unlike a Countywide program, the Floodplain Management Plan (FMP) for repetitive loss properties involves highly diversified property profiles, drainage issues, and property owner's interest. It also requires public involvement processes unique to each RLP area. The objective of an FMP is to provide specific potential mitigation measures and activities to best address the problems and needs of communities with repetitive loss properties. A repetitive loss property is one for which two or more claims of $1,000 or more have been paid by the National Flood Insurance Program (NFIP) within any given ten-year period.

There are no repetitive loss properties within the boundaries of the City of Montebello.

Planning Director

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SECTION 5 – CAPABILITY ASSESSMENT

Element C: Mitigation Strategy Requirements
C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement 44 CFR § 201.6(c)(3))
C2. Does the plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement 44 CFR § 201.6(c)(3)(ii))

A capability assessment is an in-depth look at community mechanisms (such as plans, codes, ordinances, staffing, etc.) in place to support proposed mitigation activities. Performing the capability assessment helps communities identify regulatory, administrative, technical, and fiscal capacities and capabilities, and to consider ways that these tools can be used to further hazard mitigation and disaster resiliency goals.

5.1 Planning and Regulatory Capabilities

The Planning & Community Development Department plays a crucial role in shaping the city's growth, development, and overall community well-being. The department oversees several key areas, including the Planning Division, Economic Development Division, Housing Division, and Code Enforcement Division. Each of these divisions is integral to ensuring that Montebello remains a vibrant and livable city, balancing the need for development with the preservation of the community's character and resources. The department's responsibilities range from implementing the city's General Plan and Zoning Code to managing economic initiatives that stimulate local businesses and support job creation.

The Housing Division within the department is particularly focused on providing affordable housing solutions, ensuring that low and moderate-income residents have access to safe and adequate housing. This includes the management of Community Development Block Grant (CDBG) and HOME Investment Partnerships programs, which fund various housing and community improvement projects. The department also handles building safety, code enforcement, and parking enforcement, ensuring that the city's buildings and infrastructure meet safety standards and that community standards are maintained through regular inspections and enforcement actions.

Regarding hazard mitigation and disaster planning, the Fire Department is involved in efforts to enhance the city's resilience to natural disasters. This includes integrating hazard mitigation strategies into the General Plan and other long-term planning documents. The department also collaborates with other city departments, such as Public Works, to ensure that infrastructure improvements align with disaster preparedness goals.

Policy and Regulatory Resources

Policy and Regulatory Resources	Link / Location
2024-2040 General Plan	https://www.montebelloca.gov/departments/planning_community_development/planning_division/advanced_planning
Flood Damage Prevention	https://library.municode.com/ca/montebello/codes/code_of_ordinances?nodeId=TIT15BUCO_CH15.40FLDAPR
Buildings and Construction Code	https://library.municode.com/ca/montebello/codes/code_of_ordinances?nodeId=TIT15BUCO
Seismic Safety Code	https://library.municode.com/ca/montebello/codes/code_of_ordinances?nodeId=TIT15BUCO_CH15.36SESACO
Stormwater and Urban Runoff Pollution Prevention	https://library.municode.com/ca/montebello/codes/code_of_ordinances?nodeId=TIT8HESA_CH8.36STWAURRUPOPR
Subdivisions	https://library.municode.com/ca/montebello/codes/code_of_ordinances?nodeId=TIT16SU
Zoning	https://library.municode.com/ca/montebello/codes/code_of_ordinances?nodeId=TIT17ZO

Administrative Resources

Administrative Resources	Link / Location
Commissions and Committees	https://www.montebelloca.gov/departments/administration/city_clerks_office/commissions_and_committees
Fire	https://www.montebelloca.gov/departments/fire
Planning & Community Development	https://www.montebelloca.gov/departments/planning_community_development
Police	https://www.montebelloca.gov/departments/police
Public Works	https://www.montebelloca.gov/departments/public_works

5.2 Technical and Fiscal Capabilities

The City of Montebello's Finance Department is integral to managing the city's financial health, overseeing various functions such as budgeting, revenue collection, and financial reporting. The department handles major revenue streams including property taxes, sales taxes, and utility user taxes, which are essential for funding city services and projects. Additionally, the Finance Department is responsible for accounts payable, payroll, purchasing, and managing the city's investment portfolio.

In October 2021, the California State Auditor's report on high-risk local government agencies identified the City of Montebello as one of the entities facing significant financial challenges. Montebello ranked as one of the 18 local government agencies at high risk, primarily due to ongoing fiscal deficits and poor financial management practices. The audit revealed that Montebello had a general fund deficit of $15.6 million as of the end of the fiscal year 2020, and the city's general fund reserves were completely depleted. Additionally, the city faced substantial unfunded pension liabilities, contributing to its precarious financial position. The report highlighted the need for Montebello to implement stronger governance and oversight to mitigate these risks and ensure long-term fiscal sustainability.

Furthermore, the report underscores the importance of transparency in financial reporting and the adoption of sound fiscal practices to address Montebello's financial vulnerabilities. The audit called attention to the city's difficulty in maintaining balanced budgets and its reliance on short-term borrowing to cover operational costs. Without significant reforms and proactive financial management, Montebello could face increasing financial difficulties, potentially leading to insolvency or an inability to fund essential public services. The city's overall financial health was rated as high risk, emphasizing the urgency of addressing these fiscal challenges to avoid further deterioration of its financial stability.

From a fiscal perspective, Montebello's ability to finance mitigation options is supported by its taxation authority and access to funding through grants and bonds. The city can leverage its revenue streams, such as property taxes and special assessments, to fund climate-related projects. Additionally, Montebello can apply for state and federal grants aimed at disaster resilience and environmental sustainability, providing further financial resources for mitigation efforts.

The City of Montebello can apply for funding under FEMA programs such as the Hazard Mitigation Grant Program (HMGP) or the Building Resilient Infrastructure in Communities (BRIC) program. Another potential source of funding for hazard mitigation projects is through the Community Development Block Grant (CDBG) program, administered by the Department of Housing and Urban Development (HUD). This program provides funding to local communities

for a variety of projects, including those related to hazard mitigation. The City can apply for CDBG funding to implement projects such as drainage improvements, erosion control, or wildfire fuel reduction.

The City of Montebello can also consider issuing bonds to fund hazard mitigation projects. These bonds would be repaid over time through property taxes or other revenue sources and would allow the City to implement projects such as retrofitting critical infrastructure, building fire breaks, or developing early warning systems. Finally, the City can partner with other organizations and agencies to fund hazard mitigation projects. For example, the City can work with local businesses or non-profits to fund projects such as emergency preparedness education or the development of community-wide evacuation plans.

5.3 Education/Outreach

The City of Montebello has developed a robust educational and public outreach program focused on hazard mitigation, primarily coordinated through its Fire Department and Community Risk Reduction Division (CRRD). The department places significant emphasis on educating the community about safety practices and identifying hazardous conditions that could pose risks to life, property, and the environment. This includes a variety of public education initiatives designed to raise awareness about fire safety, disaster preparedness, and general risk reduction strategies. Through these efforts, the city aims to reduce the incidence of emergencies and enhance the community's overall resilience to disasters.

A key component of Montebello's public outreach capabilities is the Community Emergency Response Team (CERT) program. This program provides residents with essential training on disaster response, including how to safely turn off utilities, provide first aid, and manage emergency supplies. The CERT program is designed to empower community members to protect themselves, their families, and their neighbors during emergencies, thus enhancing the city's overall disaster preparedness. The Fire Department also conducts regular inspections and public safety communications to ensure that residents and businesses are informed and prepared for potential hazards.

Montebello's Fire Community Services & Outreach Division (FCS&OD) further extends these efforts by focusing on vulnerable populations, such as seniors, the unhoused, and those with medical or behavioral health challenges. Programs like the Montebello Community Assistance Program (MCAP) offer field-based outreach and support to these groups, helping to reduce their reliance on emergency services for non-emergency issues and improving their quality of life.

5.4 Potential for Improvement

Section 6, Mitigation Strategy, includes not only a list of actions that could expand upon and improve the City's capabilities but also a discussion of how best to implement them.

5.4.1 Policy/Regulatory

Close coordination internally with the Planning & Community Development Department and cultivation of relationships with the City Council to introduce and pass new and updated policy and codes will be essential. Planning and zoning regulations largely shape the physical nature of a community, and as such present a tremendous opportunity in building resilience. Enhanced building codes deriving from the work of the Institute for Building and Home Safety among other organizations can also aid in steadily increasing the overall level of resilience.

The city's General Plan and Hazard Mitigation Plan provide a foundation, but more robust integration of hazard mitigation into land-use planning, zoning regulations, and building codes could further reduce risks. Additionally, the city could adopt stricter enforcement mechanisms for existing regulations, ensuring that new developments are resilient to these hazards.

5.4.2 Admin/Technical

From an administrative and technical perspective, Montebello could benefit from enhancing its internal capabilities related to hazard mitigation. This could include investing in advanced Geographic Information Systems (GIS) for better hazard mapping and risk assessment, which would allow the city to identify and prioritize vulnerable areas more effectively. Additionally, increasing staffing or providing specialized training for existing personnel in emergency management and urban planning would improve the city's ability to plan for and respond to disasters. Developing stronger inter-departmental coordination, particularly between planning, public works, and emergency services, would ensure that mitigation strategies are implemented efficiently and effectively across all city operations.

A major vulnerability of the City, and of virtually all organizations, public and private, is their increasing dependence on information technology. Cyberattacks often are first in mind, but just as important are the infrastructure networks such as electricity that enable the network to work. COVID-19 was in many ways a test case for larger disasters, but it was easier to deal with given that it had no direct physical impact except to human health. A large earthquake, a Carrington event or other natural event that reduced or eliminated power to large areas for extended periods of time would be far more devastating to IT networks.

Montebello can consult directly with business continuity and resilience specialist firms to identify best practices to maintain cybersecurity and IT network resilience. Maintaining access to

alternate internet and cloud storage providers that can serve as backups will be vital. The City can also maintain its own independent network with dedicated, independent power sources and dedicated access through VPN or other methods. These should also include localized data backups that do not rely on the cloud. Working with business continuity specialists may be helpful as individual business operations rely much more on IT networks than on the kinds of physical structures that cities do.

5.4.3 Education/Outreach

Montebello's current public outreach efforts could be expanded to further engage and educate the community on hazard mitigation. The city could develop targeted outreach programs that focus on specific hazards, such as earthquake preparedness, flood safety, and wildfire risk reduction. These programs could utilize various communication channels, including social media, community workshops, and school programs, to reach a broader audience. Furthermore, enhancing the Community Emergency Response Team (CERT) program by offering more frequent training sessions and expanding participation would empower residents to take an active role in disaster preparedness.

5.4.4 Financial

To improve its fiscal standing and support resilience and mitigation, the City of Montebello could take several strategic actions. Following the California State Auditor's recommendations would greatly assist in improving the City's financial capabilities. Increasing its reserve funds and reducing reliance on short-term borrowing would strengthen its financial position and provide a buffer against unexpected economic downturns or emergencies. Montebello should also focus on reducing its pension liabilities through negotiation of more fiscally-sustainable pension plans or by making additional contributions to reduce unfunded liabilities.

In terms of supporting resilience and mitigation, Montebello can prioritize investments in infrastructure projects that enhance the city's ability to withstand natural disasters, such as improving drainage systems to reduce flood risk or retrofitting buildings to better resist earthquakes. Establishing a dedicated hazard mitigation fund would be an excellent option to support these investments. By securing grants and partnerships for these projects, the city can minimize the financial burden on its budget while still achieving significant improvements in community safety and resilience. Additionally, adopting green infrastructure solutions and increasing energy efficiency across municipal operations can help the city reduce long-term operational costs and promote sustainability, aligning with broader climate adaptation goals.

Finally, rising insurance costs across the country pose a problem to local and state government. Finding new methods of insurance and other forms of risk pooling will become ever-more important as disasters increase in frequency and intensity.

SECTION 6 – MITIGATION STRATEGY

Element C: Mitigation Strategy Requirements
C1. Does the plan document each jurisdiction's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement 44 CFR § 201.6(c)(3))
C2. Does the plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement 44 CFR § 201.6(c)(3)(ii))
C3. Does the plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement 44 CFR § 201.6(c)(3)(i))
C4. Does the plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement 44 CFR § 201.6(c)(3)(ii))
C5. Does the plan contain an action plan that describes how the actions identified will be prioritized (including cost benefit review), implemented and administered by each jurisdiction? (Requirement 44 CFR § 201.6(c)(3)(iii)); (Requirement 44 CFR § 201.6(c)(3)(iv))

6.1 Introduction

The Mitigation Strategy serves as a comprehensive guide for the City of Montebello in its pursuit of enhancing disaster resilience by reducing vulnerability to identified hazards. Through the identification of specific Mitigation Goals and Objectives, strategies and initiatives are formulated to prevent, minimize, and alleviate the impacts of both natural and manmade disasters on the local population and property within the planning area.

Strengthening community resilience involves the implementation of building codes, zoning ordinances, and other regulatory measures. During the review or update of these planning mechanisms, there is an opportunity to assess the feasibility of integrating mitigation strategies into policy changes. These proactive efforts contribute significantly to ensuring the City's sustained resilience in the face of hazard events.

City Staff make recommendations to the Montebello City Council regarding prioritization and funding of the above and future projects, yet the decision lies ultimately with the Councilmembers. Capital Improvement Projects and other Mitigation Projects may receive

public hearings as either part of the budgeting process or as individual staff items for City Council which allows for public input.

6.2 Mitigation Goals and Objectives

The Planning Team developed mitigation goals to avoid or reduce long-term vulnerabilities to hazards. These general principles clarify desired outcomes..

The goals are based on the risk assessment and Planning Team input, and represents a long-term vision for hazard reduction or enhanced mitigation capabilities. They are compatible with community needs and goals expressed in other planning documents prepared by the City.

Each goal is supported by mitigation action items. The Planning Team developed these action items through its knowledge of the local area, risk assessment, review of past efforts, identification of mitigation activities, and qualitative analysis.

The five mitigation goals and descriptions are listed below.

Goal 1: Protect Life and Property

- Implement activities that assist in protecting lives by making homes, businesses, infrastructure, critical facilities, and other property more resistant to losses from natural, human-caused, and technological hazards.
- Improve hazard assessment information to make recommendations for avoiding new development in high hazard areas and encouraging preventative measures for existing development in areas vulnerable to natural, human-caused, and technological hazards.

Goal 2: Enhance Public Awareness

- Develop and implement education and outreach programs to increase public awareness of the risks associated with natural, human-caused, and technological hazards.
- Provide information on tools; partnership opportunities, and funding resources to assist in implementing mitigation activities.

Goal 3: Preserve Natural Systems

- Support management and land use planning practices with hazard mitigation to protect life. Preserve, rehabilitate, and enhance natural systems to serve hazard mitigation functions.

Goal 4: Encourage Partnerships and Implementation

- Strengthen communication and coordinate participation with public agencies, citizens, non-profit organizations, business, and industry to support implementation.
- Encourage leadership within the City and public organizations to prioritize and implement local and regional hazard mitigation activities.

Goal 5: Strengthen Emergency Services

- Establish policy to ensure mitigation projects for critical facilities, services, and infrastructure.
- Strengthen emergency operations by increasing collaboration and coordination among public agencies, non-profit organizations, business, and industry.
- Coordinate and integrate hazard mitigation activities where appropriate, with emergency operations plans and procedures.
- The Planning Team also developed hazard-specific mitigation goals, which appear in the Mitigation Strategies Section.

6.3 Mitigation Actions

The action items are a listing of activities in which City agencies and citizens can be engaged to reduce risk. Each action item includes an estimate of the timeline for implementation.

The action items are organized within the following Mitigation Actions Matrix, which lists all of the multi-hazard (actions that reduce risks for more than one specific hazard) and hazard-specific action items included in the mitigation plan. Data collection and research and the public participation process resulted in the development of these action items. The Matrix includes the following information for each action item:

Funding Source

The action items can be funded through a variety of sources, possibly including: operating budget/general fund, development fees, grants such as Community Development Block Grant (CDBG) and the Hazard Mitigation Grant Program (HMGP), private funding, Capital Improvement Plan, and other funding opportunities.

Coordinating Organization

The Mitigation Actions Matrix assigns primary responsibility for each of the action items. The hierarchies of the assignments vary – some are positions, others departments, and other committees.

Plan Goals Addressed

The plan goals addressed by each action item are included as a way to monitor and evaluate how well the mitigation plan is achieving its goals once implementation begins.

The plan goals are organized into the following five areas:

- Protect Life and Property
- Enhance Public Awareness
- Preserve Natural Systems
- Encourage Partnerships and Implementation
- Strengthen Emergency Services

Action	Description	Vulnerability	Goals	Coordinating Agency	Funding Source: AB-Annual Budget, GR-Grant, P-Private	Timeline	Priority: L-Low, M-Medium, H-High	In 2018 Plan ?
MULTIPLE HAZARDS								
Public Education Programs	Educate the general public on all-hazards mitigation & response (through phone directory, website and billing inserts) in English and Spanish. Encourage residents to prepare themselves by understanding their local hazards, stocking up with necessary items, and planning for how family members should respond if any of a number of possible emergency or disaster events strike.	Population	Public Awareness	Administration, Fire	AB	Ongoing	3	Yes
Promote business measures	Promote business mitigation awareness of hazards and opportunities for mitigation.	Non-Critical Infrastructure	Protect Life and Property, Public Awareness, Natural Systems, Emergency Services, Partnerships and Implementation	Fire, Police	AB	Ongoing	2	Yes
Site emergency management plans	Encourage development and testing of site emergency plans for schools, factories, office buildings, shopping malls, hospitals, correctional facilities, stadiums, recreation areas, and other similar facilities.	Critical Infrastructure, Non-Critical Infrastructure	Protect Life and Property, Public Awareness, Emergency Services, Partnerships and Implementation	Fire, Police	AB	Ongoing	1	Yes
CERT Promotion	Encourage participation by community members in Community Emergency Response Team (CERT). CERT is a volunteer group of citizens who are trained and equipped to respond if emergency services are unable to meet all of the immediate needs of the community following a major disaster.	Population	Protect Life and Property, Public Awareness, Natural Systems, Emergency Services, Partnerships and Implementation	Fire, Police	AB	Ongoing	1	Yes
Montebello Hills street planning	Provide a circulation system for the Montebello Hills which services the various types of residential and commercial development but at the same time preserves the unique environmental and aesthetic qualities of the hill area.	Non-Critical Infrastructure	Protect Life and Property, Public Awareness, Natural Systems, Emergency Services, Partnerships and Implementation	Public Works, Planning	AB, GR	1-5 years	1	Yes

Cooling centers	Provide as cooling centers to protect vulnerable residents from the effects of extreme heat, and to host a Community Meeting on how insulate dwellings against extreme weather.	Population, Critical Infrastructure	Protect Life and Property, Public Awareness, Natural Systems, Emergency Services, Partnerships and Implementation	Fire	AB	1-5 years	1	Yes
THIRA Preparation	Prepare a Threat & Hazard Identification and Risk Assessment (THIRA).	Critical Infrastructure	Protect Life and Property, Public Awareness, Natural Systems, Emergency Services, Partnerships and Implementation	Fire	AB	1-5 years	1	Yes
Emergency Operations Plan	Continue to implement the Emergency Operations Plan, which functions as the City's manual for communication protocol in the events of disaster.	Critical Infrastructure	Emergency Services	Fire	AB	Annually	2	Yes
Issuing Special-Purpose Bonds	Issue resilience/green infrastructure bonds or other special-purpose financial instruments.	Critical Infrastructure, Changes In Development Since Last Approved Plan, Non-Critical Infrastructure	Partnerships and Implementation	Finance	AB, P	New; initial survey to take place within one year after approval.	2	No
Public-Private Partnerships	Pursue public-private partnerships for resilience funding, especially in industrial areas or with new development.	Critical Infrastructure, Changes In Development Since Last Approved Plan, Non-Critical Infrastructure	Partnerships and Implementation	Finance	AB, P	New and subsequently ongoing.	2	No
Back-up generators	Provide back-up generators for critical facilities and schools	Critical Infrastructure, Non-Critical Infrastructure	Emergency Services	Fire, Police	AB	Not started; completion within one year	1	No
City Employee Disaster Training	Provide training to all City employees on their roles and responsibilities in times of disasters and local emergencies. Training should include comprehensive and realistic disaster exercises, and cross-training for multiple potential roles should be considered.	Critical Infrastructure, Non-Critical Infrastructure	Emergency Services	Fire, Police	AB	Annually	3	No

Earthquake Preparedness Drills	Conduct emergency preparedness and response drills for mock major earthquake events-the natural hazards with the greatest potential for injury, life loss, property damage and service interruptions. Drills should test disaster response systems and communication protocols. When preparing the drills, consider the wide range of potential risks associated with critical facilities and vulnerabilities. Include City officials, utility providers, emergency response stakeholders and representatives of vulnerable facilities.	Critical Infrastructure, Non-Critical Infrastructure	Emergency Services	Fire, Police	AB	Annually	4	No
Mutual Aid Agreement Participation	Continue to participate in Statewide Master Mutual Aid Agreements and local automatic aid agreements related to emergency response.	Critical Infrastructure, Non-Critical Infrastructure	Emergency Services	Fire, Police	AB	Annually	2	No
Funding Options for Hazards Mitigation	Conduct survey of disaster risk reduction and adaptation funding options for the City. Options could include special taxing districts, private/philanthropic sources, and others.	Critical Infrastructure, Non-Critical Infrastructure	Partnerships and Implementation	Fire, Police, Planning & Community Development	AB	Initial survey and report within two years after approval.	1	No
Program Cycle Management and Data Collection for Disaster Risk Reduction	Collect data and develop program methodology to adaptively manage hazard mitigation through examination of hazard events.	Critical Infrastructure, Non-Critical Infrastructure	Partnerships and Implementation	Fire, Police	AB	Every 5 years; first review within two years of plan approval, subsequent reviews to precede LHMP updates.	1	No
Resilience Centers	Supply cooling centers with refrigerators for storing medicine, backup water supplies, and social services information in multiple languages. Establish locations to provide disaster planning assistance and backup supplies and power sources. Backup power and outlets for personal device charging.	Critical Infrastructure, Population	Public Awareness	Fire, Police	AB	Annually	1	No
Green Space Networks	Green space networks: Promote the development to a network of green spaces throughout the City, prioritizing areas with low park access.	Environment	Protect Life and Property	Planning & Community Development (Planning)	AB	Ongoing	2	No

Sponge City Infrastructure - Normalize Water Cycle Flows	Use "sponge city" concepts to increase water flow and reduce undesired retention (i.e., flooding) to work with water cycle and retain water where desired.	Environment, Critical Infrastructure, Non-Critical Infrastructure	Protect Life and Property	Public Works	AB, P	New; emphasis on water flow to be mainstreamed into city contract consideration.	3	No
Environmental and Open-space Grants	Pursue environmental and open-space grants on federal and state level for at-risk parcels to fire, flood, and other hazards.	Environment, Non-Critical Infrastructure	Protect Life and Property	Planning & Community Development	GR	Ongoing	2	No
Green Streets Program	Develop a green streets program to support a sustainable approach to stormwater, drainage, groundwater recharge, and landscaping and incorporate green streets standards and guidelines in all streetscape improvements.	Environment, Non-Critical Infrastructure	Partnerships and Implementation	Public Works	AB, GR	Within one year after approval.	2	Yes
Adoption of new City building codes	Adoption of new City building code approximately every three years: Includes updating seismic and structural requirements. Electrification efforts should include language on hardening grid and power systems as well as promoting resilience to disasters and distributed energy generation (solar, etc.).	Changes In Development Since Last Approved Plan	Partnerships and Implementation	Planning & Community Development	AB	Every 3 years.	2	Yes
Code Enforcement	Enforce all applicable and current building & land use codes and ordinances. Adopt and develop new codes and standards that provide protection beyond minimum standards. Develop partnerships with business community to develop and maintain businesses with emphasis on pre-mitigation practices. Continue efforts to ensure that Critical facilities meet minimum building code standards for seismic and critical events. The overall goal is to minimize deaths and injuries that could be caused by the impact from a disaster.	Changes In Development Since Last Approved Plan	Partnerships and Implementation	Planning & Community Development	AB	Ongoing	2	Yes
Community Insurance Promotion	Promote uptake of disaster insurance; consider community-embedded insurance or other new disaster insurance models.	Changes In Development Since Last Approved Plan, Non-Critical Infrastructure	Partnerships and Implementation	Finance	AB	Within one year after approval	2	No

Leverage Development for Resilience Investment	Require developers to implement resilience measures through impact fees, tax increment financing, or other mechanisms.	Changes In Development Since Last Approved Plan, Non-Critical Infrastructure	Partnerships and Implementation	Planning & Community Development	AB	Within one year after approval.	2	No
Emergency Response Vehicle Traffic Control	Develop the specifications and designs for an emergency response vehicle-operated traffic control system.	Non-Critical Infrastructure	Emergency Services	Fire, Police	AB	Within one year after approval	2	No
Evacuation Routes	Continue to study and monitor the conditions of existing evacuation routes with particular attention to traffic conditions to incorporate a range of emergency scenarios including differences in hazard types, locations, and timing. Consider collaboration with neighboring jurisdictions for hazard scenarios that may cause regional evacuation.	Non-Critical Infrastructure	Emergency Services	Fire, Police	AB	Within two years after approval.	2	No
Hazard Recovery Program Database	Develop a repository of resources or case studies on relevant hazard recovery programs that could allow for nimble emergency ordinances, facilitate speedy recovery, and increase resilience for vulnerable populations.	Non-Critical Infrastructure	Emergency Services	Fire, Police	AB	Within three months after approval	1	No
Update and Maintain Geographic Information System (GIS) Program Capability	Update and maintain City Geographic Information System (GIS) capacity and ensure coordination between planning, public safety, and emergency management.	Non-Critical Infrastructure	Emergency Services	Public Affairs & Information Technology	AB	Annually and ongoing as needed.	4	Yes
Public WiFi Power Backup	Ensure battery backup at critical city facilities, including parks.	Non-Critical Infrastructure	Partnerships and Implementation	Public Works	AB	Evaluation complete within one year of approval.	1	Yes
Road Repair and Enhancement	Repave roadways, fix broken and damaged sidewalks, upgrade traffic signal equipment, install ADA ramps at the corners of streets, add landscaped medians and storm drain catch basins at locations. When possible and deemed necessary, or during regular road maintenance, upgrade existing roads to meet minimum road widths, surface, grade, radius, and turnarounds to ensure emergency vehicle access is possible.	Non-Critical Infrastructure	Partnerships and Implementation	Public Works	AB	Ongoing as required.	2	Yes

Financial Resources Post-Disaster	Public awareness to have cash on hand in case of disaster; develop methods to deliver cash to survivors in a timely fashion.	Population	Partnerships and Implementation	Fire, Police, Public Affairs & Information Technology	AB	New; campaign within one year after approval and then ongoing.	4	No
Continuation of Public Education Campaign "Live, Work, Play, Be Safe"	Used to address community emergency preparedness.	Population	Public Awareness	Fire, Police	AB	Completed Creation of Materials, Outreach Ongoing	4	Yes
Disaster Kit Distribution	Work with local places of worship and local non-profits to create disaster kits for lower-income residents. This should include disaster supplies and guidance on how to collect and store important documents.	Population	Public Awareness	Fire, Police	AB	Annually	3	No
Encourage and Promote Community Networks and Groups	Support programs such as Neighborhood Watch Organizations to build and train teams of community residents, leaders, and stakeholders to assist with emergency response and first aid. Make use of existing community networks to enlist participants.	Population	Public Awareness	Fire, Police	AB	Ongoing; greater emphasis on extreme weather resilience with subsequent updates to program	3	No
Know Your Neighbor Program	Coordinate a Know Your Neighbor Program where community leaders and neighbors provide resources and check in on vulnerable populations during hazard events where people shelter at home.	Population	Public Awareness	Fire, Police	AB	Annually	3	No
Regular Needs Assessment	Regularly meet with community leaders that represent special needs populations to maintain continuous two-way communication. This should include surveys and other needs assessments to refine notification and response policies.	Population	Public Awareness	Fire, Police	AB	Varies but at least bi-annually	2	Yes
Vulnerable Population Registry	Develop a voluntary vulnerable population registry and subsequent priority list to help first responders better provide services and meet the needs of those most in need.	Population	Public Awareness	Fire, Police, Communications	AB	New; within one year after approval.	3	No

Resilience Hubs	Develop and support a network of resilience hubs to facilitate health, food, medical, and emergency services, especially to vulnerable populations during climate hazards such as extreme heat events, flooding, and poor air quality events.	Non-Critical Infrastructure	Protect Life and Property, Public Awareness, Emergency Services, Partnerships and Implementation	Planning & Community Development, Fire	AB, GR	Within one year after approval	2	No
Climate Retrofitting of Critical Facilities	Evaluate critical facilities to assess the feasibility of retrofitting to increase long-term resilience to climate change haz- ards including extreme heat, extreme precipitation events, and wildfire.	Critical Infrastructure	Protect Life and Property	Planning & Community Development	AB, GR	Within one year after approval	2	No
Emergency Preparedness and Resilience Campaigns	Implement public education campaigns for residents and businesses about appropriate emergency preparedness measures and what to do in the event of a disaster. Develop special themes and topics to increase awareness of hazards.	Population, Non-Critical Infrastructure	Emergency Services	Fire, Police	AB	Annually	2	No
CYBERATTACK								
City-wide Cybersecurity Strategy	Update and implement citywide cyber-security strategy and operational plan to identify threats and vulnerabilities to all cyber systems (including , communications, signals, corporate data, security networks), and put operational plans in place to mitigate those threats and reduce vulnerabilities.	Critical Infrastructure	Protect Life and Property	Public Affairs & Information Technology	AB	New; within one year after approval.	1	No
Citywide Cybersecurity Awareness Program	Risk reduction through employee education via training and awareness initiatives including classroom, computer-based training courses, anti-phishing simulation testing and training, various media initiatives, and role-based training for users with privileged access.	Critical Infrastructure	Protect Life and Property	Public Affairs & Information Technology	AB	Ongoing as new employees are onboarded and annually for all existing employees.	2	No
IT Recovery Plan	Create, distribute, and implement a recovery plan to ensure continuity of IT operations in the event of a disaster.	Critical Infrastructure	Protect Life and Property	Public Affairs & Information Technology	AB	Plan to be revised annually.	1	No
Simulated Cyberattacks to Understand Vulnerability	Simulate cyberattacks including using "black-hat" intruders to understand and address cyber-vulnerabilities.	Critical Infrastructure	Protect Life and Property	Public Affairs & Information Technology	AB	Undetermined but at least annually	3	No

Update Authentication Methods for IT Access	Revise and update access to City networks.	Critical Infrastructure, Non-Critical Infrastructure	Protect Life and Property	Public Affairs & Information Technology	AB	Quarterly	2	Np
DROUGHT								
Incentives for Water-saving Appliances	Provide incentives for households and businesses to install water-saving appliances.	Changes In Development Since Last Approved Plan, Non-Critical Infrastructure	Protect Life and Property	Public Works	AB, P	Ongoing; annual reevaluation for additional opportunities.	3	No
Incentives for Water-saving Landscaping and Xeriscaping	Provide incentives for households and businesses to install water-saving landscaping, including xeriscaping.	Changes In Development Since Last Approved Plan, Non-Critical Infrastructure	Protect Life and Property	Public Works	AB, P	Ongoing; annual reevaluation for additional opportunities.	3	No
Encouraging Water-saving Measures	Encourage water saving measures by the City, residents, and businesses including installing low-flow water saving showerheads and toilets and washing of cars	Non-Critical Infrastructure	Protect Life and Property, Public Awareness, Natural Systems, Emergency Services, Partnerships and Implementation	Planning & Community Development	AB	Ongoing	1	Yes
Water Recycling for Non-Potable Uses	Use of greywater or recycled water for non-drinking water uses wherever possible.	Changes In Development Since Last Approved Plan, Non-Critical Infrastructure	Protect Life and Property	Public Works	AB	Ongoing; annual reevaluation for additional opportunities.	3	No
EARTHQUAKE								
Seismic Inspections	As projects are submitted, conduct seismic inspections for residential (and eventually commercial buildings) with pre-1960 foundations.	Critical Infrastructure, Non-Critical Infrastructure	Protect Life and Property, Public Awareness,	Planning & Community Development, Fire	AB	Ongoing	2	Yes
Retrofit City facilities	Evaluate City facilities that are subject to earthquake damage and design retrofit schedule to mitigate hazard.	Critical Infrastructure, Non-Critical Infrastructure	Protect Life and Property, Public Awareness, Natural Systems, Emergency Services, Partnerships and Implementation	Planning & Community Development, Fire	AB, GR	Ongoing	1	Yes

Public campaign to promote non-structural earthquake mitigation	Prepare a campaign for City facilities, residents, and businesses to utilize non-structural mitigation techniques. Many injuries in earthquakes are caused by non-structural hazards, such as attachments to buildings. These include lighting fixtures, windows (glass), pictures, tall bookcases, computers, ornamental decorations on the outside of the buildings (like parapets), gas lines, etc. Activities that can reduce the risk of injury and damage include: anchoring tall bookcases and file cabinets, installing latches on drawers and cabinet doors, restraining desktop computers and appliances, using flexible connections on gas and water lines, mounting framed pictures and mirrors securely, and anchoring and bracing propane tanks and gas cylinders.	Population	Protect Life and Property, Public Awareness, Natural Systems, Emergency Services, Partnerships and Implementation	Fire	AB, GR	1-5 years	1	Yes
Earthquake Insurance for All City Facilities	Secure earthquake insurance for all City facilities.	Critical Infrastructure, Changes In Development Since Last Approved Plan, Non-Critical Infrastructure	Protect Life and Property	Finance	AB	Renew and reevaluate yearly.	1	Yes
Require Geotechnical Investigations for Relevant Projects	Require geotechnical investigations by certified engineering geologist or other qualified professionals for all grading and construction projects subject to geologic hazards, including fault rupture, severe ground shaking, liquefaction, landslides, and collapsible or expansive soils. Particular attention should be paid to areas within Alquist-Priolo Earthquake Fault Zones.	Critical Infrastructure, Changes In Development Since Last Approved Plan, Non-Critical Infrastructure	Protect Life and Property	Planning & Community Development	AB, P	Ongoing	3	No
Earthquake Code Compliance	Require all construction to be in conformance with the Uniform Building Code (UBC) and the California Building Code (CBC), and to be consistent with the Municipal Code as it provides for earthquake resistant design, excavation, and grading.	Changes In Development Since Last Approved Plan	Protect Life and Property	Planning & Community Development	AB	Ongoing	3	No

Co-Seismic Hazard Management Zones	In the northern portion of the City above the projected location of the Puente Hills Blind Thrust Fault Zone, consider the development of potential Co-Seismic Hazard Management Zones (CSHMZs) for new construction and redevelop- ment to evaluate the potential impacts of surface movements such as uplift and ground tilting.	Non-Critical Infrastructure	Protect Life and Property	Planning & Community Development	AB	Within one year after approval	2	No
New Development Seismic Standards	Evaluate and update seismic standards for all new development based on best practices and needs.	Changes In Development Since Last Approved Plan, Non-Critical Infrastructure	Partnerships and Implementation	Planning & Community Development	AB	Every 3 years	2	No
EPIDEMIC/PANDEMIC								
Pandemic Planning and COVID-19 Response Report	Review pandemic response and history and proactively plan based on lessons learned for future pandemics. Develop report with successes and lessons learned,	Population	Protect Life and Property	Fire, Police	AB	New; within one year after approval.	3	No
Personal Protective Equipment (PPE) Storage and Maintenance	Maintain store of usable PPE in case of pandemic event.	Population	Protect Life and Property	Fire, Police	AB	Within six months of approval	3	No
EXTREME HEAT								
Street Tree Planting	Prioritize tree planting from approved street tree list based on the existing tree canopy and the population's vulnerability to extreme heat. Where possible, integrate shade trees with bike and pedestrian infrastructure.	Environment	Protect Life and Property	Planning & Community Development	AB	Ongoing as planting is necessary	3	No
Cool/Green/White Roofs	Explore the feasibility of incentivizing cool and/or green roofs for existing residential and existing/new commercial, industrial, institutional, and similar structures in the City. Develop user-friendly standards that clearly explain the process and requirements for incorporating cool roof systems in the City and train all relevant personnel in processes and requirements. Consider developing and implementing a white roof project, modeled after New York City's in the communities most highly burdened by heat island impacts.	Environment, Non-Critical Infrastructure	Protect Life and Property	Planning & Community Development	AB, P	New; within one year after approval.	2	No

Update Code to Require Air Conditioning	Require air conditioning in all rental units.	Changes In Development Since Last Approved Plan, Non-Critical Infrastructure	Partnerships and Implementation	Planning & Community Development	P	Subsequent to City Council action	2	No
Public Education Programs	Develop public education programs for what to do during extreme heat events and how to stay safe and hydrated.	Population	Protect Life and Property	Fire, Police	AB	New; within six months after approval.	2	No
Cooling Centers	Develop and expand designated network of cooling centers for use during extreme heat events. Cooling centers should remain open late into the evening when the temperature remains high.	Population, Non-Critical Infrastructure	Protect Life and Property	Fire, Police	AB	Ongoing; evaluation to be completed within one year after approval.	1	No
Generator Backup for Air Conditioning Systems in Cooling Centers and Backup City Facilities	Ensure generator backup for air conditioning systems exists for all cooling centers and City facilities that might be used as backup cooling centers.	Population, Non-Critical Infrastructure	Protect Life and Property	Public Works	AB	Complete within one year of approval.	1	No
FLOOD								
Flood Infrastructure and Drainage Projects In Conjunction with Road Construction / Expansion	For all future road or pavement expansion or construction, integrate flood control infrastructure and where possible nature-based solutions (swales, etc.)	Changes In Development Since Last Approved Plan, Non-Critical Infrastructure	Protect Life and Property	Public Works	AB, GR	Ongoing through projects as completed.	3	No
Promote Permeable Surfaces and Water Flow	Design new developments with water retention structures and permeable surfaces to minimize flooding of the surface drainage system by peak flows. Consider the potential for larger-scale capture via diversion to large-scale spreading grounds or other options on a site-by-site basis.	Changes In Development Since Last Approved Plan, Non-Critical Infrastructure	Protect Life and Property	Public Works	AB, P	Ongoing; update to standards based on current best practices within two years after approval.	3	No
Sewer Root Control	Annually treat approximately 20% of the citywide sewer system with herbicide to retard tree root intrusion. This prevents sewer blockages and overflows which are a health and safety emergency.	Changes In Development Since Last Approved Plan, Non-Critical Infrastructure	Protect Life and Property	Public Works	AB	Annually each June, began in 1995.	4	Yes
Update Engineering Standards considering Climate Change and More Extreme Rainfall	Update engineering standards for water infrastructure to handle increased stress from extreme weather and climate events.	Changes In Development Since Last Approved Plan, Non-Critical Infrastructure	Protect Life and Property	Public Works	AB	New; within two years after approval.	3	No

Street Failure Event Analysis	Study urban flood areas and determine if failure of streets are soil or pavement related.	Critical Infrastructure, Non-Critical Infrastructure	Protect Life and Property, Natural Systems, Emergency Services	Public Works, Planning & Community Development	GR	1-5 years	1	Yes
NFIP Information Distribution	Distribute information on the National Flood Insurance Program to local businesses in or near flood areas.	Non-Critical Infrastructure	Protect Life and Property, Public Awareness	Fire, Finance, Planning & Community Development	AB	Ongoing	4	Yes
Annual Storm Drain Cleanup	Proactive annual clean out storm drains.	Non-Critical Infrastructure	Protect Life and Property, Natural Systems, Emergency Services	Public Works	AB, GR	Ongoing	1	Yes
Pump Stations for Floodprone Areas	Design and construct pump stations in areas subject to urban flooding.	Non-Critical Infrastructure	Protect Life and Property, Natural Systems, Emergency Services	Public Works	AB, GR	1-5 years	1	Yes
Stormwater Plan Development	Seek funding and develop Storm Drain Management Plan and Waste Water Management Plan.	Critical Infrastructure, Non-Critical Infrastructure	Protect Life and Property, Natural Systems, Emergency Services	Public Works	AB, GR	1-5 years	1	Yes
Elevation Data Retention	Ensure subdivision design standards require elevation data collection during the platting process. Lots may be required to have buildable space above the base flood elevation.	Non-Critical Infrastructure, Changes in Development Since Last Approved Plan	Protect Life and Property, Natural Systems, Emergency Services	Planning & Community Development	AB, GR	1-5 years	1	Yes
Floodplain Construction Requirements	Requirements for building design standards and enforcement for properties in the floodplain include the following: 1) that a residential structure be elevated; and 2) that a nonresidential structure be elevated or floodproofed.	Non-Critical Infrastructure, Changes in Development Since Last Approved Plan	Protect Life and Property, Natural Systems, Emergency Services	Planning & Community Development	AB, GR	1-5 years	1	Yes
Write a Floodplain Ordinance	Write a Floodplain Ordinance	Critical Infrastructure, Non-Critical Infrastructure	Protect Life and Property, Public Awareness, Natural Systems, Emergency Services, Partnerships and Implementation	Planning & Community Development	GR	1-5 years	1	Yes
Drain Maintenance and Clearance	Maintain routine maintenance of down and bench drains in and around residential and commercial areas to avoid accumulation of debris which could lead to dangerous and destructive flooding.	Non-Critical Infrastructure	Protect Life and Property	Public Works	AB	Ongoing; to continue through life of LHMP.	3	No

HAZARDOUS MATERIALS								
Spill Control Packages in City Vehicles	Allows for faster clean-up to protect the citizens and environment.	Environment, Population	Protect Life and Property	Public Works	AB	New; within six months after approval.	3	No
Hazardous Materials User Inventory	Identify hazardous material users and generators within the City using field surveys, inspection programs, and licensing requirements.	Non-Critical Infrastructure	Protect Life and Property	Public Works	AB	New; within one year after approval.	2	No
STORMS								
Storm Drain Master Plan update & review	Review and update stormwater plans; communicate recommendations to planning and emergency management departments	Critical Infrastructure, Changes In Development Since Last Approved Plan, Non-Critical Infrastructure	Protect Life and Property	Public works	AB	Annually.	2	No
Windstorm Preparedness	Maintain local City and utility awareness of tree pruning and code sections relevant to wind-resistant utility operations.	Environment	Protect Life and Property	Public Works	AB	Ongoing; will continue annually.	4	No
Public Outreach on Windrpoofing Buildings	Hold a Community Meeting on how to “wind-proof” dwellings and residences through the use of landscaping design, structural “tie downs,” storage of outdoor furniture and children’s toys.	Non-Critical Infrastructure	Protect Life and Property, Public Awareness, Natural Systems, Emergency Services, Partnerships and Implementation	Fire	AB	1-5 years	1	Yes
Stormwater Infrastructure as part of capital improvement updates	Update stormwater infrastructure as identified in City's capital improvement program.	Critical Infrastructure, Changes In Development Since Last Approved Plan, Non-Critical Infrastructure	Protect Life and Property	Public Works	AB	Ongoing; continue to support implementation of stormwater program.	2	No
FIRE								
Public education on brush management	Educate the public on importance of the abatement of brush around their homes.		Protect Life and Property, Public Awareness, Emergency Services	Fire	AB	Ongoing	1	Yes

Public education on fire pattersn and structures	Inform the public that hillsides facing south or west are more vulnerable to increased dryness and heat from sun exposure. Structures should be set back from slopes outside of the "convection cone" of intense heat that is projected up the slope of a hill as a wildfire "climbs" it.	Non-Critical Infrastructure	Protect Life and Property, Public Awareness, Natural Systems, Emergency Services	Fire	AB, GR	Ongoing	1	Yes
Water supply for firefighting support	Water supplies for emergency firefighting should be maintained in accordance with National Fire Protection Association (NFPA) standards. Residents should identify and maintain any number of outside water sources such as small ponds, cisterns, wells, swimming pools or hydrants. It is a good idea to have a garden hose that is long enough to reach any area of a home or other structures on a property.	Critical Infrastructure, Non-Critical Infrastructure	Protect Life and Property, Public Awareness, Natural Systems, Emergency Services	Fire	AB, GR	Ongoing	1	Yes
Analysis of Smoke Impacts and Mitigation	Conduct analysis of smoke impacts, trajectory, and best mitigation methods.	Population, Changes in Development Since Last Approved Plan	Protect Life and Property	Fire	AB, GR	Within one year after approval	2	No
Emergency Egress for New Development	Ensure that all existing and new residential development located in the Wildland Urban Interface (WUI) and any other future designated wildfire hazard zones have at least two emergency evacuation routes as well as adequate evacua- tion access (ingress and egress).	Non-Critical Infrastructure, Changes in Development Since Last Approved Plan	Protect Life and Property	Planning & Community Development	AB	Within one year after approval	2	No
Brush Inspections	Continue annual brush inspections and enforce clearance requirements on public and private property within the Wildland Urban Interface and any other future designated wildfire hazard zones, as dictated by CAL FIRE, in ac- cordance with the Board of Forestry and Fire Protection Fire Safe Regulations, California Building Standards Code, and Montebello Municipal Code related to ongoing maintenance of vegetation clearance on public and private roads, roadside fuel reduction plan, and defensible space clearances.	Non-Critical Infrastructure, Changes in Development Since Last Approved Plan	Protect Life and Property	Planning & Community Development	AB, P	Within one year after approval	2	No

Enforce Water System Fire Flow Requirements	Require all new development to be served by a water system that meets applicable fire flow requirements.	Non-Critical Infrastructure, Changes in Development Since Last Approved Plan	Protect Life and Property	Planning & Community Development	AB, P	Within one year after approval	2	No
Public Facility Siting	Require development of new public facilities, when feasible, to be located outside of and any other future designated wildfire hazard zones to ensure critical infrastructure is fire resilient.	Critical Infrastructure, Non-Critical Infrastructure, Changes in Development Since Last Approved Plan	Protect Life and Property	Planning & Community Development	AB	Within one year after approval	2	No
Fire Safety Education and Partnership Programs	Develop new and expand existing public fire safety education programs and partnerships.	Population, Changes in Development Since Last Approved Plan	Public Awareness	Fire, Police	AB	Annually	3	No
Provide Air Filters to Low-Income Residents	Provide air filtration equipment to lower-income residents at low or no charge.	Population, Changes in Development Since Last Approved Plan, Impacts on Vulnerable Populations	Protect Life and Property	Fire, Police	AB	Within one year after approval; then ongoing.	1	No
DAM FAILURE								
Develop a Dam Inundation Evacuation Plan.	Develop a Dam Inundation Evacuation Plan.	Population, Critical Infrastructure, Non-Critical Infrastructure	Protect Life and Property, Public Awareness, Natural Systems, Emergency Services, Partnerships and Implementation	Fire	AB	1 year	2	Yes
Coordinate with LA County and Corps of Engineers on dam integrity	Work with LA County and Army Corps of Engineers to ensure integrity of dams and reservoirs. Although dams and levees may have been constructed properly, failure to maintain them can lead to significant loss of life and property if they are stressed and broken or breached during a flood event. An inspection, maintenance and enforcement program helps to ensure continued structural integrity. Dams or levees need to be kept in good repair.	Critical Infrastructure	Protect Life and Property, Natural Systems, Emergency Services	Planning & Community Development, Fire, Public Works	AB, GR	1-5 years	1	Yes

Outreach to At-risk Neighborhoods for Dam Failure	Educate the affected neighborhoods about their specific risks associated with dam failure.	Critical Infrastructure, Non-Critical Infrastructure	Protect Life and Property, Public Awareness, Natural Systems, Emergency Services, Partnerships and Implementation	Fire	GR	1-5 year	1	Yes
Dam Fallure Notification	Coordinate with LA County about notification system pertaining to the dams/reservoirs in the region.	Critical Infrastructure	Protect Life and Property, Public Awareness, Natural Systems, Emergency Services, Partnerships and Implementation	Fire, Police	AB	1 year	2	Yes
POWER OUTAGES								
Storm Hardening to Prevent Power Outages	Storm hardening for critical power and utility facilities	Critical Infrastructure	Protect Life and Property	Public Works	AB	New; to be completed within two years after approval	1	No
Microgrids and Redundancy Structuring	Isolate partial outages to smallest areas possible	Critical Infrastructure, Non-Critical Infrastructure	Protect Life and Property	Public Works	AB	New; outreach to utilities would begin shortly after approval.	2	No
Renewable Energy for Power Outages	Renewable energy for City infrastructure to reduce dependence on grid and susceptibility to broader power outages.	Critical Infrastructure, Non-Critical Infrastructure	Protect Life and Property	Public Works	AB	Formal program to be established within one year after approval.	3	No
Power Capacity Adjustment for High-Risk Heat Days	Explore capacity of adjusting power capacity and redundancy during extreme heat events to increase capacity of grid to run air conditioning.	Critical Infrastructure, Non-Critical Infrastructure, Population	Protect Life and Property	Public Works	AB	New; within one year after approval.	2	No
Encourage New Construction and Retrofit Consideration of Cooling Without Power	Encourage new construction to include porches, openable windows, and other structural methods to allow cooling without power. Explore a retrofit program to do the same for existing buildings.	Changes In Development Since Last Approved Plan, Non-Critical Infrastructure	Protect Life and Property	Planning & Community Development	AB, P	New	4	No
TERRORISM								
Emergency Planning for Events	Regularly update standard operating procedures for potential terrorist or active assailant events.	Impacts on Vulnerable Populations	Protect Life and Property	Fire, Police	AB, GR	Already existing; updates within six months of approval.	1	No

Improved Predictive Threat Methods	Software-based analysis to understand both potential events and potential perpetrators.	Impacts on Vulnerable Populations	Protect Life and Property	Fire, Police	AB	Unknown; requires evaluation of appropriate software and execution of contracts	2	No
Professional Mental Health Programs and Early Identification	Establish and promote mental health and anti-bullying programs to reduce chance of event by individuals suffering from mental illness.	Impacts on Vulnerable Populations	Protect Life and Property	Fire, Police	AB	Within one year after approval; then ongoing.	2	No
Socialize Lockdown Protocols	Socialize lockdown protocols for businesses in case of terrorist event to isolate extent of event.	Impacts on Vulnerable Populations	Protect Life and Property	Fire, Police	AB, GR	Within one year after approval; then ongoing.	1	No
Advertised First Aid Caches around City	Locate first aid caches around the City, especially at public gathering places, to reduce time immediate medical care could be given during an event	Non-Critical Infrastructure	Protect Life and Property	Fire, Police	AB	Within three months after approval	1	No

6.4 Status of Prior Mitigation Actions – alfredo estrada

Hazard	Mitigation Action Item	2017Timeline	2017 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes	2024 Status
Multi-hazard	MH-1 Educate the general public on all-hazards mitigation & response (through phone directory, website and billing inserts) in English and Spanish.	Ongoing	Ongoing	XXXXX
Multi-hazard	MH-2 Develop and promote relationships and interagency partnership to identify deficiencies of early warning systems.	Ongoing	Ongoing	XXXXX
Multi-hazard	MH-4 Educate the public about the importance of implementing the hazard mitigation plan.	Ongoing	Ongoing	XXXXX
Multi-hazard	MH-6 Educate the public about how to prepare for natural hazards relevant to location.	Ongoing	Ongoing	XXXXX
Multi-hazard	MH-7 Educate public about evacuation procedures.	Ongoing	Ongoing	XXXXX
Multi-hazard	MH-8 Promote business mitigation awareness of hazards and opportunities for mitigation.	Ongoing	Ongoing	XXXXX
Multi-hazard	MH-10 Provide schools with seasonal disasterpreparedness literature for students to take home to their families.	Ongoing	Ongoing	XXXXX
Multi-hazard	MH-11 Design and post disaster preparedness and related links on Fire Department web site.	Ongoing	Ongoing	XXXXX
Multi-hazard	MH-13 Improve interagency response methods and procedures.	Ongoing	Ongoing	XXXXX
Multi-hazard	MH-14 Develop disaster response drill pre-plans and procedures improved annually.	Ongoing	Ongoing	XXXXX
Multi-hazard	MH-16 Increase training, personnel and equipment through alternative funding sources.	Ongoing	Utilized AFG Grants in the past	XXXXX
Multi-hazard	MH-19 Maximize financial reimbursement following disaster declaration by updating knowledge of Disaster Cost Recovery regulations.	Ongoing	Revised action item and moved from EQ	XXXXX
Multi-hazard	MH-20 Develop Continuity of Operations Plans (COOP) for each department. COOP planning ensures that the critical functions can continue to operate during and after an emergency incident which may prevent access to normally operating systems, such as physical plant, data or communication networks, or transportation.	1-5 years	New, Status – Transit and Finance COOPs completed in 2012	XXXXX

Multi-hazard	MH-21 Based on hazard information in the Mitigation Plan and General Plan Safety Element, update the Land Use Element to: - Guide development away from hazardous areas; - Reduce density in the hazardous areas; or - Encourage greater development restrictions on the property.	1-5 years	New	XXXXX
Multi-hazard	MH-22 Encourage development and testing of site emergency plans for schools, factories, office buildings, shopping malls, hospitals, correctional facilities, stadiums, recreation areas, and other similar facilities.	Ongoing	New	XXXXX
Multi-hazard	MH-23 Train emergency response personnel for various contingencies and response activities, such as evacuation, traffic control, search, and rescue.	Ongoing	New	XXXXX
Multi-hazard	MH-24 Encourage participation by community members in Community Emergency Response Team (CERT). CERT is a volunteer group of citizens who are trained and equipped to respond if emergency services are unable to meet all of the immediate needs of the community following a major disaster.	Ongoing	New	XXXXX
Multi-hazard	MH-25 Educate the public on how insurance should not be considered an alternative to reducing damages for any type of hazard. Instead, insurance does have the value of protecting oneself from financial devastation if damage were to occur.	Ongoing	New	XXXXX
Multi-hazard	MH-26 Encourage residents to prepare themselves by understanding their local hazards, stocking up with necessary items, and planning for how family members should respond if any of a number of possible emergency or disaster events strike.	Ongoing	New	XXXXX
Multi-hazard	MH-27 City to pursue funding to purchase back-up generators for pumping and lift stations in sanitary sewer systems, along with other measures (e.g., alarms, meters, remote controls, and switchgear upgrades).	1-5 years	New	XXXXX
Multi-hazard	MH-28 Utilize new Digital Billboards along Interstate 5 to broadcast emergency notices.	Ongoing	New	XXXXX
Multi-hazard	MH-29 Replace Police Dispatch consoles to be P25 compliant.	ASAP	New	XXXXX
Multi-hazard	MH-30 Seek funding and write a Grading Ordinance.	1 year	New	XXXXX
Multi-hazard	MH-31 Pursue funding and prepare Technical Background Report in time for next update to the General Plan Safety Element.			XXXXX
Multi-hazard	MH-31 Prepare a post-disaster recovery ordinance that regulates repair activity. It prepares a community to respond to a disaster event in an orderly fashion by requiring citizens to: 1) obtain permits for repairs, 2) refrain from making repairs, or 3) make repairs using standard methods.	1-5 years	New	XXXXX
Multi-hazard	MH-32 Maintain the update the Disaster Movement and Evacuation Route Map.	Ongoing	New	XXXXX
Multi-hazard	MH-33 Upgrade and improve Greenwood Avenue and Montebello Boulevard as the community's major north-south connector.	1-5 years	New. Drawn from General Plan Circulation Element	XXXXX

Multi-hazard	MH-34 Improvements to Greenwood Avenue and Montebello Boulevard should include widening, grade separation structures and signalization.	1-5 years	New. Drawn from General Plan Circulation Element	XXXXX
Multi-hazard	MH-35 City should seek to provide an adequate circulation system in the hills which services major regional traffic generators, yet preserves areas which are attractive for residential, open space, and recreational development.	1-5 years	New. Drawn from General Plan Circulation Element	XXXXX
Multi-hazard	MH-36 City of Montebello should not be bisected by a new freeway route.	1-5 years	New. Drawn from General Plan Circulation Element	XXXXX
Multi-hazard	MH-37 Improve north-south circulation in Montebello by providing at least one major street with a grade-separated railroad crossing.	1-5 years	New. Drawn from General Plan Circulation Element	XXXXX
Multi-hazard	MH-38 Provide a circulation system for the Montebello Hills which services the various types of residential and commercial development but at the same time preserves the unique environmental and aesthetic qualities of the hill area.	1-5 years	New. Drawn from General Plan Circulation Element	XXXXX
Multi-hazard	MH-39 Provide heating centers as well as cooling centers to protect vulnerable residents from the effects of frost/freezing as well as those of excessive heat, and to host a Community Meeting on how insulate dwellings against extreme weather	1-5 years	New	XXXXX
Multi-hazard	MH-40 Hold a Community Meeting on how to “wind-proof” dwellings and residences through the use of landscaping design, structural “tie downs,” storage of outdoor furniture and children’s toys.	1-5 years	New	XXXXX
Multi-hazard	MH-41 Prepare a Threat & Hazard Identification and Risk Assessment (THIRA).	1-5 years	New	XXXXX
Earthquake	EQ-1 Interdepartmental personnel training for earthquake seismic construction and retrofit.	2005	Completed	XXXXX
Earthquake	EQ-2 As projects are submitted, conduct seismic inspections for residential (and eventually commercial buildings) with pre-1960 foundations.	Ongoing	Revised action item	XXXXX
Earthquake	EQ-4 Adopt Municipal Code to enforce seismic upgrades for existing buildings receiving inspections or permits and to ensure seismic codes are implemented in the plans of new buildings & infrastructure.	Ongoing	Adopted 2008, 2010, 2013,	XXXXX
Earthquake	EQ-8 Evaluate City facilities that are subject to earthquake damage and design retrofit schedule to mitigate hazard.	Ongoing	New	XXXXX
Earthquake	EQ-9 Protect new residential structures built within urban wild land interface development area.	Ongoing	Status – fuel modification completed as part of Specific Plan Development	XXXXX

Earthquake	EQ-10 Information gained from seismic hazard mapping can be used to assess risk. The first step is collection of geologic information on seismic sources, soil conditions, and related potential hazards. The second step is to prepare a map showing the approximate locations of various sources, soil conditions, and related potential hazards. The second step is to prepare a map showing the approximate locations of various hazards.	Ongoing	New	XXXXX
Earthquake	EQ-11 FEMA's HAZUS is a computer-based tool used to quantitatively estimate losses from an earthquake and other hazards. HAZUS was used in the 2016 Mitigation Plan and should be included in the next update.	5 years	New	XXXXX
Earthquake	EQ-12 Prepare a campaign for City facilities, residents, and businesses to utilize non-structural mitigation techniques. Many injuries in earthquakes are caused by non-structural hazards, such as attachments to buildings. These include lighting fixtures, windows (glass), pictures, tall bookcases, computers, ornamental decorations on the outside of the buildings (like parapets), gas lines, etc. Activities that can reduce the risk of injury and damage include: anchoring tall bookcases and file cabinets, installing latches on drawers and cabinet doors, restraining desktop computers and appliances, using flexible connections on gas and water lines, mounting framed pictures and mirrors securely, and anchoring and bracing propane tanks and gas cylinders.	1-5 years	New	XXXXX
Wildfire	WF-3 Educate the public on importance of the abatement of brush around their homes.	Ongoing	Revised timeline	XXXXX
Wildfire	WF-5 Prevent fires/additional damage due to earthquakes	2004		XXXXX
Wildfire	WF-9 Educate the public on the fact that wildfires can be prevented by arson prevention clean-up activities in areas of abandoned or collapsed structures, accumulated junk or debris, and in areas with a history of storing flammable materials where spills or dumping may have occurred.	Ongoing	New	XXXXX
Wildfire	WF-10 Roads and driveways should be kept accessible to emergency vehicles and fire equipment. Driveways should be relatively straight and flat, with at least some open spaces to turn. Bridges should be strong enough to support emergency vehicles, with clearance wide and high enough for two-way traffic and emergency vehicle access. Addresses should be visible from the road, and keys to gates around property should be provided to the Fire Department.	Ongoing	New	XXXXX
Wildfire	WF-11 Inform the public that hillsides facing south or west are more vulnerable to increased dryness and heat from sun exposure. Structures should be set back from slopes outside of the "convection cone" of intense heat that is projected up the slope of a hill as a wildfire "climbs" it.	Ongoing	New	XXXXX

Wildfire	WF-12 Inform public that in wildfire prone areas, risk may be decreased by enclosing the foundations of homes and other buildings, rather than leaving them open where undersides can be exposed to blown embers or other materials.	Ongoing	New	XXXXX
Wildfire	WF-13 Inform public that wildfire risk can be alleviated by safely using and storing necessary flammable materials, including machine fuels. Approved safety cans should be used for storing gasoline, oily rags and other flammable materials. Firewood should be stacked at least 100 feet away and uphill from homes.	Ongoing	New	XXXXX
Wildfire	WF-14 Inform public to install and maintain smoke detectors and fire extinguishers on each floor of their homes or other buildings. This equipment should be tested and/or inspected regularly, and smoke detector batteries should be changed twice a year. Everyone in a household or building can be taught how to use a fire extinguisher. Other valuable fire mitigation systems include interior and exterior sprinkler systems.	Ongoing	New	XXXXX
Wildfire	WF-15 Water supplies for emergency firefighting should be maintained in accordance with National Fire Protection Association (NFPA) standards. Residents should identify and maintain any number of outside water sources such as small ponds, cisterns, wells, swimming pools or hydrants. It is a good idea to have a garden hose that is long enough to reach any area of a home or other structures on a property.	Ongoing	New	XXXXX
Wildfire	WF-16 Instruct residents on proper evacuation procedures, such as wearing protective clothing (e.g., sturdy shoes, cotton or woolen clothing, long pants, a long-sleeved shirt, gloves and a handkerchief to protect the face); taking a Disaster Supplies Kit; and choosing a route away from fire hazards	Ongoing	New	XXXXX
Wildfire	WF-17 Instruct residents on need to keep roads and driveways accessible to emergency vehicles and fire equipment. Driveways should be relatively straight and flat, with at least some open spaces to turn. Bridges should be strong enough to support emergency vehicles, with clearance wide and high enough for two-way traffic and emergency vehicle access. Addresses should be visible from the road, and keys to gates around property should be provided to the local fire department.	Ongoing	New	XXXXX

Wildfire	WF-18 Develop program to encourage residents to plan several escape routes away from their homes, by car and foot. It is a good idea to keep a set of hand tools that can be used as fire tools, such as a rake, axe, hand/chainsaw, bucket and shovel. When wildfire threatens, residents should be instructed to carry and listen to battery-operated radios for reports and evacuation information, and follow instructions from local officials. Cars should be backed into garages or parked in open space facing the direction of escape, with doors and windows closed and the key in the ignition. Garage windows and doors should be closed but left unlocked. If residents have time, they can take steps to protect their homes by closing windows, vent doors, venetian blinds and heavy drapes; removing lightweight curtains; shutting off natural gas at the meter; turning off pilot lights; closing fireplace screens; and moving flammable furniture into the center of the home away from windows and sliding-glass doors. Outside, residents can seal attic and ground vents with precut plywood or commercial seals; turn off propane tanks; place combustible patio furniture inside; connect garden hose to outside taps; set up a portable gasoline-powered pump; place lawn sprinklers on the roof and near aboveground fuel tanks; wet the roof, wet or remove shrubs within 15 feet of the home; and gather fire tools	Ongoing	New	XXXXX
Wildfire	WF-19 Continue to utilize Code Enforcement staff to monitor overgrown vegetation and Palm fronds.	Ongoing	New	XXXXX
Flood	FLD-1 Study urban flood areas and determine if failure of streets are soil or pavement related.	1-5 years	Status – history of street collapses	XXXXX
Flood	FLD-2 Distribute information on the National Flood Insurance Program to local businesses in or near flood areas.	Ongoing		XXXXX
Flood	FLD-3 Prevent urban flooding from contamination of city drainage channels.	2004		XXXXX
Flood	FLD-4 Maximize effectiveness of mitigating against flood hazards impacting private properties.	Ongoing		XXXXX
Flood	FLD-5 Proactive annual clean out storm drains.	Ongoing	New	XXXXX
Flood	FLD-6 Design and construct pump stations in areas subject to urban flooding.	1-5 years	New	XXXXX
Flood	FLD-7 Seek funding and develop Storm Drain Management Plan and Waste Water Management Plan.	1-5 years	New	XXXXX
Flood	FLD-8 Ensure subdivision design standards require elevation data collection during the platting process. Lots may be required to have buildable space above the base flood elevation.	1-5 years	New	XXXXX
Flood	FLD-9 Requirements for building design standards and enforcement for properties in the floodplain include the following: 1) that a residential structure be elevated; and 2) that a nonresidential structure be elevated or floodproofed.	1-5 years	New	XXXXX

Flood	FLD-10 Inform residents that purchasing flood insurance does not prevent a flood from occurring, but it does mitigate a property owner's financial exposure to loss from flood damage. National Flood Insurance Program (NFIP) policies are only available in communities that participate in the program, which is administered by FEMA.	1-5 years	New	XXXXX
Flood	FLD-11 Use caution in considering alternative uses of wetlands to mitigate flooding. With special soils and hydrology, wetlands serve as natural collection basins for floodwaters. Acting like sponges, wetlands collect water, filter it, and release it slowly into rivers and streams. Protecting and preserving wetlands can go a long way toward preventing flooding in other areas.	1-5 years	New	XXXXX
Flood	FLD-12 Work with LA County and Army Corps of Engineers to ensure integrity of dams and reservoirs. Although dams and levees may have been constructed properly, failure to maintain them can lead to significant loss of life and property if they are stressed and broken or breached during a flood event. An inspection, maintenance and enforcement program helps to ensure continued structural integrity. Dams or levees need to be kept in good repair. Unnecessary or old and structurally unsound dams should be removed. Planning for dam breaks can include constructing emergency access roads as well as automating pump and flood gate operation. And it never hurts to regulate development in a dam's hydraulic shadow, where flooding would occur if there were a severe dam failure	1-5 years	New	XXXXX
Flood	FLD-13 Ensure Zoning Ordinance prohibits containers of hazardous materials such as petroleum or chemicals to be located in a flood hazard area. If such a location is necessary, hazardous material containers need to be anchored, because the contents can contaminate water and multiply the damaging effects of flooding by causing fires or explosions, or by otherwise making structures unusable.	1-5 years	New	XXXXX
Flood	FLD-14 Write a Floodplain Ordinance	1-5 years	New	XXXXX
Flood	FLD-15 Educate the affected neighborhoods about their specific risks associated with dam failure.	1-5 year	New	XXXXX
Flood	FLD-16 City staff should continue to work with the Army Corps of Engineers on possible solutions to minimizing threat of dam failure.	Ongoing	New	XXXXX
Dam Failure	DAM-1 Develop a Dam Inundation Evacuation Plan.	1 year	New	XXXXX
Dam Failure	DAM-2 Coordinate with LA County about notification system pertaining to the dams/reservoirs in the region.	1 year	New	XXXXX
Drought	DR-1 Enforce Water Conservation Ordinance which prioritizing or controls water use.	Ongoing	Status – Ordinance effective in 2015	XXXXX

Drought	DR-2 Encourage water saving measures by the City, residents, and businesses including installing low-flow water saving showerheads and toilets and washing of cars	Ongoing	New	XXXXX
Drought	DR-3 Continue the current restrictions on outdoor water usage; encourage water conservation (consider incentives such as small rewards or recognitions for installing drought resistance landscaping); discourage water waste by issuing warnings to offenders; host a Water Conservation workshop; invest in water-related “freebies” such as shower timers to give away during City events; encourage proper use of rain barrels; inquire about the Central Basin Municipal Water District retrofit fit efforts; and encourage the use of recycled water where appropriate.	Ongoing	New	XXXXX

6.5 Actions Considered But Not Included

Mitigation Action Item	2017 Comments and Status - Completed, Revised, Deleted, New, Deferred, and Notes	Reason for Not Being Included
Develop and promote relationships and interagency partnership to identify deficiencies of early warning systems.		
Educate the public about how to prepare for natural hazards relevant to location.		
Educate public about evacuation procedures.		
Maximize financial reimbursement following disaster declaration by updating knowledge of Disaster Cost Recovery regulations.	Revised action item and moved from EQ	
Educate the public on how insurance should not be considered an alternative to reducing damages for any type of hazard. Instead, insurance does have the value of protecting oneself from financial devastation if damage were to occur.	New	
City should seek to provide an adequate circulation system in the hills which services major regional traffic generators, yet preserves areas which are attractive for residential, open space, and recreational development.	New. Drawn from General Plan Circulation Element	
City of Montebello should not be bisected by a new freeway route.	New. Drawn from General Plan Circulation Element	
Improve north-south circulation in Montebello by providing at least one major street with a grade-separated railroad crossing.	New. Drawn from General Plan Circulation Element	

Information gained from seismic hazard mapping can be used to assess risk. The first step is collection of geologic information on seismic sources, soil conditions, and related potential hazards. The second step is to prepare a map showing the approximate locations of various hazards.	New	
FEMA's HAZUS is a computer-based tool used to quantitatively estimate losses from an earthquake and other hazards. HAZUS was used in the 2016 Mitigation Plan and should be included in the next update.	New	
Prevent fires/additional damage due to earthquakes.		
Educate the public on the fact that wildfires can be prevented by arson prevention clean-up activities in areas of abandoned or collapsed structures, accumulated junk or debris, and in areas with a history of storing flammable materials where spills or dumping may have occurred.	New	
Inform public that in wildfire prone areas, risk may be decreased by enclosing the foundations of homes and other buildings, rather than leaving them open where undersides can be exposed to blown embers or other materials.	New	
Inform public that wildfire risk can be alleviated by safely using and storing necessary alleviated by safely using and storing necessary flammable materials, including machine fuels. Approved safety cans should be used for storing gasoline, oily rags and other flammable materials. Firewood should be stacked at least 100 feet away and uphill from homes.	New	
Inform public to install and maintain smoke detectors and fire extinguishers on each floor of their homes or other buildings. This equipment should be tested and/or inspected regularly, and smoke detector batteries should be changed twice a year. Everyone in a household or building can be taught how to use a fire extinguisher. Other valuable fire mitigation systems include interior and exterior sprinkler systems.	New	
Instruct residents on proper evacuation procedures, such as wearing protective clothing (e.g., sturdy shoes, cotton or woolen clothing, long pants, a long-sleeved shirt, gloves and a handkerchief to protect the face); taking a Disaster Supplies Kit; and choosing a route away from fire hazards.	New	

Instruct residents on need to keep roads and driveways accessible to emergency vehicles and fire equipment. Driveways should be relatively straight and flat, with at least some open spaces to turn. Bridges should be strong enough to support emergency vehicles, with clearance wide and high enough for two-way traffic and emergency vehicle access. Addresses should be visible from the road, and keys to gates around property should be provided to the local fire department.	New	
Develop program to encourage residents to plan several escape routes away from their homes, by car and foot. It is a good idea to keep a set of hand tools that can be used as fire tools, such as a rake, axe, hand/chainsaw, bucket and shovel. When wildfire threatens, residents should be instructed to carry and listen to battery- operated radios for reports and evacuation information, and follow instructions from local officials. Cars should be backed into garages or parked in open space facing the direction of escape, with doors and windows closed and the key in the ignition. Garage windows and doors should be closed but left unlocked. If residents have time, they can take steps to protect their homes by closing windows, vent doors, venetian blinds and heavy drapes; removing lightweight curtains; shutting off natural gas at the meter; turning off pilot lights; closing fireplace screens; and moving flammable furniture into the center of the home away from windows and sliding-glass doors. Outside, residents can seal attic and ground vents with precut plywood or commercial seals; turn off propane tanks; place combustible patio furniture inside; connect garden hose to outside taps; set up a portable gasoline-powered pump; place lawn sprinklers on the roof and near aboveground fuel tanks; wet the roof, wet or remove shrubs within 15 feet of the home; and gather fire tools	New	
Maximize effectiveness of mitigating against flood hazards impacting private properties.		
Inform residents that purchasing flood insurance does not prevent a flood from occurring, but it does mitigate a property owner's financial exposure to loss from flood damage. National Flood Insurance Program (NFIP) policies are only available in communities that participate in the program, which is administered by FEMA.	New	

Use caution in considering alternative uses of wetlands to mitigate flooding. With special soils and hydrology, wetlands serve as natural collection basins for floodwaters. Acting like sponges, wetlands collect water, filter it, and release it slowly into rivers and streams. Protecting and preserving wetlands can go a long way toward preventing flooding in other areas. Unnecessary or old and structurally unsound dams should be removed. Planning for dam breaks can include constructing emergency access roads as well as automating pump and flood gate operation. And it never hurts to regulate development in a dam's hydraulic shadow, where flooding would occur if there were a severe dam failure.	New	

The Planning Team considered a range of actions, and the City has chosen to put forward an extremely comprehensive and broad-based mitigation strategy that focuses on infrastructure but does not neglect the human needs of the City. Our view of resilience is that it cannot focus solely on the built environment or physical infrastructure. Human systems are as important to hazard mitigation, especially in light of increasing extreme weather events and other threats.

During the course of mitigation action development, several actions were identified that, while worthy of implementation, were felt more appropriate to other funding sources or governmental entities. These actions are listed above.

6.6 Mitigation Prioritization and Implementation

Mitigation actions were prioritized and ranked on a scale from 1-4, 1 being a priority for most immediate implementation and/or foundational for other actions and 4 being determined to have the least need for immediate implementation. Please note that this ranking is not a ranking of the overall worth of an action – merely of prioritization over time and actions that may serve as a foundation for other actions to build upon.

The following factors were considered when prioritizing mitigation projects:

Does the action:

- solve the problem?
- reduce the exposure or vulnerability to the highest priority hazard?
- address multiple hazards?
- benefits equal or exceed costs?
- implement a goal, policy, or project identified in the General Plan or Capital Improvement Plan?

Can the action:

- be implemented with existing funds?
- be implemented by existing state or federal grant programs?
- be completed within the 5-year life cycle of the LHMP?
- be implemented with currently available technologies?

Will the action:

- be accepted by the community?
- be supported by community leaders?
- adversely impact segments of the population or neighborhoods?
- require a change in local ordinances or zoning laws?
- positive or neutral impact on the environment?
- comply with all local, state and federal environmental laws and regulations?

Is there:

- sufficient staffing to undertake the project?
- existing authority to undertake the project?

As previously stated, although city staff make recommendations to the Montebello City Council regarding prioritization and funding of future projects, the decision lies ultimately with the Councilmembers to fund and implement each mitigation project, because City Council approves the budget. The public has the opportunity to speak about planned mitigation projects during public hearings, the budget approval process, or City Council meetings. Therefore, while these priority rankings are useful for planning, they may have little ultimate relation to what the City Council chooses to do.

Evaluating the proposed projects will be done by each responsible department by surveying City staff assigned and members of the public, reviewing citizen complaints and public safety records, and conducting a cost analysis. In leaner budget years, some projects may lack funding, but staff will continue to identify potential funding streams as well as to set priorities based on a needs assessment in addition to the costs and benefits.

The list of mitigation action discussed in this section is meant to be as comprehensive as possible, not only to guide City actions and priorities but to enable the City to apply for FEMA funding to carry out the broadest possible array of strategies to mitigate hazards and build resilience for the City.

It is, of course, the City's prerogative to determine its own priorities and processes. But from a hazard mitigation planning perspective, there are several strategic options that are worthy of consideration.

- Municipal codes and zoning are powerful tools to drive mitigation actions by the public and by business. These regulations determine the urban form of a city, and by adding elements to require conformance to mitigation and resilience best practices, much good hazard mitigation work can be accomplished. This should be a high priority.
- In terms of infrastructure, piggybacking mitigation actions through other infrastructure such as road repair and upgrades can be highly effective as well. Pavement covers a not-negligible percentage of any community and can be modified and enhanced to deliver a variety of benefits.
- Along those lines, actions that can deliver tangible climate adaptation benefits should be prioritized as well. Climate impacts are accelerating to the point that extreme weather is visible to most people. One textbook describes climate adaptation as "hazard mitigation ten years in the future". That view is a useful one to drive action.
- Finally, hazard mitigation can be expensive. A variety of funding sources, both public and private, should be pursued, and the City should take advantage of favorable financial conditions when available to fund efforts. Insurance is becoming an issue across California, and the City should proactively begin looking into new and innovative models

of insurance to protect its citizens before the insurance companies, wary of the growing cost of climate-fueled events, forces it to act.

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SECTION 7 – PLANNING PROCESS

Element A Requirements
A1. Does the plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement 44 CFR § 201.6(c)(1))
A2. Does the plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development, as well as businesses, academia, and other private and non-profit interests to be involved in the planning process? (Requirement 44 CFR § 201.6(b)(2))
A3. Does the plan document how the public was involved in the planning process during the drafting stage and prior to plan approval? (Requirement 44 CFR § 201.6(b)(1))
A4. Does the plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement 44 CFR § 201.6(b)(3))

7.1 Planning Process

This LHMP (Local Hazard Mitigation Plan) is designed to meet the requirements of the Disaster Mitigation Act of 2000 (DMA 2000) and to ensure that the City is eligible for all appropriate benefits under state and federal law and practices. The LHMP planning process considers natural and human-caused hazards facing the City, making sure that all federal and state requirements are met and supporting HMP review. The LHMP planning team gathered information from a variety of sources, including participating municipal and county agencies, local organizations and utilities, federal and state agencies, and residents of the City. They solicited information from individuals with specific knowledge of natural hazards, historical events, planning and zoning codes, and recent planning decisions affecting hazard mitigation. The natural hazard mitigation strategies were developed through an extensive planning process involving City agencies/officials and City

Throughout the project, the City followed its traditional approach to developing policy documents which included preparation of a First Draft Plan for review by the City's Hazard Mitigation Planning Team who served as the primary stakeholders. Next, following necessary updates from the internal review, a Second Draft Plan was shared with the secondary stakeholders including: general public, external agencies (utilities, special districts,

adjoining jurisdictions), and community meetings - all during the plan writing phase. Next, the comments gathered from the secondary stakeholders were incorporated into the Third Draft Plan and forwarded to Cal OES and FEMA for review and conditional approval. Mandated revisions were incorporated into the Final Plan, which was returned to CalOES and FEMA for final approval. After approval, the Plan was presented to City Council for adoption, and the adoption resolution was sent to FEMA for acknowledgement and final approval. before presentation to City Council.

PLANNING PHASES TIMELINE			
Plan Writing Phase (First & Second Draft Plan)	Plan Adoption Phase (Third Draft Plan & Fourth Draft Plan)	Plan Approval Phase (Fourth Draft & Final Draft Plan)	Plan Implementation Phase
· Planning Team input – research, meetings, writing, reading of First Draft Plan · Incorporate input into Second Draft Plan · Post Second Draft Plan and encourage input by the general public and external agencies · Post invitations and conduct two community meetings · Incorporate input gathered on Second Draft Plan into Third Draft Plan	· Post notice for City Council and conduct meeting · Incorporate results of Planning Commission and City Council meetings into Final Draft Plan	· Submit Final Draft Plan to FEMA · Incorporate any mandated revisions · Receive FEMA final approval. · Incorporate FEMA approval into Final Plan	· Conduct yearly Planning Team meetings · Integrate mitigation action items into budget, CIP and other funding and strategic documents

The planning area consists of the entire area within Montebello city limits.. The risk assessment for this hazard mitigation plan was performed for the entire planning area.

As listed on page 4 of this Plan, the Planning Team consisted of:

Fire Department

Angelica Palmeros
Alfredo Estrada
Veronica Lara

Stakeholder Group

TO BE FILLED IN AFTER SECOND STAKEHOLDER MEETING

Jacob Green and Associates

Patrick Marchman, AICP, SCR, Project Manager

All members with the exception of Jacob Green and Associates are affiliated with the City of Montebello. Team members were in close contact throughout the process, with several dedicated meetings in addition to bi-weekly standing meetings to ensure continued coordination taking place.

The Planning Team compiled a comprehensive list of stakeholders from multiple sectors to invite to participate in the planning process. The team also reached out to neighboring communities after completion and review of the First Draft Plan

Hazard mitigation planning must include review and incorporation of existing plans, studies, reports and technical information (44 CFR Section 201.6.b(3)). Information from the following plans, studies, reports, and technical information is incorporated as appropriate into the mitigation plan.

The Planning Team reviewed several existing City documents and policies to gather Information for the plan.

Plan / Documents	Description
2017 Montebello Hazard Mitigation Plan	The 2017 Plan was reviewed for descriptions of hazards and mitigation actions as well as general context.
City of Montebello General Plan and Elements	The Community Profile sections includes City specific geography, environmental, population, housing and demographic information, and transportation information.
California State Hazard Mitigation Plan	The State Hazard Mitigation Plan was reviewed for recent updates on state-wide hazard events and hazard information.

Los Angeles Hazard Mitigation Plan	The Los Angeles Hazard Mitigation Plan was reviewed for planning consistency and augmented event history for hazards that extend beyond Montebello city limits, such as drought and severe weather.
California's Fourth Climate Change Assessment	The Assessment was reviewed for specific information on future hazards, with portions included verbatim in this Plan.

Other external resources utilized included maps, histories of California hazards, as well as other city and county hazard mitigation plans. The information gathered from these documents was incorporated into the introduction, the risk assessment, and the mitigation strategies sections of this plan.

A planning meeting was held in advance of the scheduled plan update. At this meeting, members of the planning team outlined and assigned all of the necessary tasks for updating the Hazard Mitigation Plan. Afterwards, individual follow-up meetings/phone calls were used to complete subsequent edits. Precise documentation of the initial planning team meeting is unavailable, but the process was similar to previous Hazard Mitigation Plan updates.

7.2 Plan Update

Element E: Plan Update Requirements
E1. Was the plan revised to reflect changes in development? (Requirement 44 CFR § 201.6(d)(3))
E2. Was the plan revised to reflect changes in priorities and progress in local mitigation efforts? (Requirement 44 CFR § 201.6(d)(3))

The City of Montebello's first plan was in XXXX with updates in XXXX, and its most recent plan was updated in 2017. This update uses data from the U.S. Census Bureau and the recently-completed (as of 2024) Montebello General Plan to examine the impact of development changes on the residents of the City, with particular attention to renters and lower-income residents. Further information on development patterns can be found in Section 2.

This update to the City's LHMP is a more comprehensive update than previous versions. It expands the scope of the LHMP to reflect new FEMA guidance as of April 2023.

- This LHMP update incorporates climate impacts into every relevant hazard to add a new depth to descriptions as well as into mitigation action to encourage adaptation to climate change.
- This update also weaves equity throughout the plan, centering where appropriate vulnerable populations.

7.3 Stakeholder Involvement

Stakeholders were involved at multiple stages in the plan development process. As part of the initial research and analysis setting the foundation for the Plan, documents from not only the City of Montebello but also from neighboring jurisdictions were used to inform the Plan's context development.

Meetings of the core planning team were held biweekly and as otherwise required.

- **Local and regional agencies involved in hazard mitigation activities**
  - City of Montebello
    - XXXXXXXXXXX

- **Agencies that have the authority to regulate development**
  - City of Montebello Community Development

- **Neighboring communities**
  - Neighboring local governments were contacted at several stages during the process, and copies of the initial draft LHMP were sent for review and comment to the cities of:
    - TO BE COMPLETED AFTER FIRST DRAFT

- **Representatives of businesses, academia, and other private organizations**
  - Outreach took place by phone and by email to entities with both relevant knowledge and major local employers including
    - Southern California Edison
    - Montebello Chamber of Commerce

- **Representatives of nonprofit organizations, including community-based organizations, that work directly with and/or provide support to underserved communities and socially vulnerable populations, among others**
  - Attempts to solicit involvement and comment were made from the following organizations:
    - City of Montebello
      - Community Services
    - OTHER ORGANIZATIONS AFTER FIRST CITY DRAFT REVIEW

Upon completion of the initial draft, a copy of the Plan was made available for review on the City's website. Public comment was invited, as well as further comment from several communities that work closely with Montebello to enhance their common resilience from disasters.

7.4 Public Involvement

The City of Montebello provided members of the public several opportunities to participate in the planning, design, and review phases of the Hazard Mitigation Plan. Public input and discussion were possible during staff presentations and also during "public comment" at various City Council meetings. addition, members of the public, Commissioners, and Council members were given the opportunity to provide staff with recommendations both verbally and via e-mail.

Public outreach for input on the Plan took place in several ways.

- An advertisement in the July 2024 edition of the Montebello Reporter, a free mailed publication sent to over 11,500 households and businesses.
- Notification on the City's website and social media channels.
- A survey in English and Spanish was made available on the City's website through July 31, 2023, allowing residents to comment on their views of hazards impacting the City and actions to be taken to mitigate them.
- An in-person public meeting was held at Reggie Rodriguez Park on July 17, 2024.
- A virtual meeting was held on July 23, 2024, using the same format as the in-person meeting, and allowing residents to comment remotely.
- The Draft LHMP was published to the City's website on XXXXXX for a two-week public comment period.

Survey results summaries are included in the Appendices to the Plan as well as notices placed in print and social media as well as the City's website.

Public involvement was influential in the development and refining of mitigation actions as well as the characterization of several hazards, most notably in reference to extreme heat and wildfire. Frequent mention was also made of potential transportation bottlenecks and related issues, and resulted in the development of additional language throughout the LHMP as well as specific mitigation actions focused on mitigating those issues. Overall public feedback also provided greater context to community concerns over hazard impacts beyond the 5-year LHMP planning horizon, per FEMA guidance requiring communities to consider climate impacts which by their nature extend beyond that 5-year cycle.

Outreach to identified vulnerable communities took place through both outreach to local organizations and through relevant City departments as discussed in Section 7.3, Stakeholder Involvement, as well as through direct mailings as described above. For unhoused and populations with behavioral health issues, outreach to organizations working with those populations was the only feasible method to pursue a level of engagement and involvement.

Copies of the Plan will be catalogued and made available at City Hall and Montebello Public Library. The existence and location of these copies will be publicized on City websites and social media. A copy of the Plan and any proposed changes will be posted on the City's website. The website will also include an email address and phone number to which people can direct their comments, recommendations, and concerns.

The Hazard Mitigation Coordinator will work with stakeholders within City government to provide opportunities for the public to be involved throughout the five-year cycle, not just during the actual plan development phase. Opportunities may include piggybacking off existing public outreach meetings held by police or fire departments, booths at farmer's markets or other public events in the City, and periodic updates to City Council in public meetings.

Specific events that will be promoted as part of hazard mitigation planning public involvement will include:

- The Great California Shakeout
- National Fire Protection Association Fire Week
- City of Montebello Police Area Command Meeting

7.5 Plan Incorporation

The City of Montebello addresses statewide planning goals and legislative requirements through its General Plan, its Capital Improvement Plan, and City Building and Safety Codes. The Mitigation Plan provides a series of recommendations - many of which are closely related to the goals and objectives of existing planning programs. The City of Montebello will implement recommended mitigation action items through existing programs and procedures.

The City of Montebello Planning and Community Development Department is responsible for adhering to the State of California's Building and Safety Codes. In addition, the Planning Team will work with other agencies at the state level to review, develop and ensure Building and Safety Codes are adequate to mitigate or present damage by hazards. This is to ensure that life-safety criteria are met for new construction.

Some of the goals and action items in the Mitigation Plan will be achieved through activities recommended in the CIP. Various City departments develop the CIP and review it on an annual basis. Upon annual review of the CIP, the Planning Team will work with the City departments to identify areas that the Mitigation Plan action items are consistent with CIP goals and integrate them where appropriate.

Upon FEMA approval, the Planning Team will begin the process of incorporating existing planning mechanisms at the City level. The meetings of the Planning Team will provide an opportunity for Planning Team members to report back on the progress made.

7.6 Monitoring, Evaluating, and Updating the Plan

Element D: Plan Maintenance Requirements
D1. Is there discussion of how each community will continue public participation in the plan maintenance process? (Requirement 44 CFR § 201.6(c)(4)(iii))
D2. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating, and updating the mitigation plan within a five-year cycle)? (Requirement 44 CFR § 201.6(c)(4)(i))
D3. Does the plan describe a process by which each community will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement 44 CFR § 201.6(c)(4)(ii))

Monitoring

Under the direction of the Local Mitigation Officer, the Planning Team will take responsibility for plan maintenance and implementation. The Local Mitigation Officer will facilitate the Planning Team meetings and will assign tasks such as updating and presenting the Plan to the members of the Planning Team. This person will make a record of necessary revisions yearly to ensure that the most accurate and up to date information is included in the Plan. The Local Mitigation Officer will also reach out to relevant City departments to integrate their tracking updates for those actions that overlap with the LHMP Plan implementation and evaluation will be a shared responsibility among all of the Planning Team members. The Local Mitigation Officer will

coordinate with City leadership to ensure funding for 5-year updates to Plan as required by FEMA.

The Planning Team will be responsible for coordinating implementation of plan action items and undertaking the formal review process. The Local Mitigation Officer will be authorized to make changes in assignments to the current Planning Team.

	Year 1	Year 2	Year 3	Year 4	Year 5
Monitoring	X	X	X	X	X
Evaluating					X
Internal Planning Team Evaluation	X	X	X	X	X
Cal OES and FEMA Evaluation					X
Updating					X

The Planning Team will meet no less than yearly. Meeting dates will be scheduled once the final Planning Team has been established. These meetings will provide an opportunity to discuss the progress of the action items and maintain the partnerships that are essential for the sustainability of the mitigation plan.

Evaluating

The Mitigation Plan will be evaluated on an annual basis to determine the effectiveness of programs, and to reflect changes in land development or programs that may affect mitigation priorities. The evaluation process includes a firm schedule and timeline, and identifies the agencies and organizations participating in plan evaluation. The Local Mitigation Officer or designee will be responsible for contacting the Planning Team members and organizing the annual meeting. Planning Team members will be responsible for monitoring and evaluating the progress of the mitigation strategies in the Plan.

The Planning Team will review the goals and action items to determine their relevance to changing situations in the City, as well as changes in State or Federal policy, and to ensure they are addressing current and expected conditions. The Planning Team will also review the Risk Assessment portion of the Plan to determine if this information should be updated or modified, given any new available data. The coordinating organizations responsible for the various action items will report on the status of their projects, the success of various implementation processes, difficulties encountered, success of coordination efforts, and which strategies should be revised.

The Local Mitigation Officer will assign the duty of updating the Plan to one or more of the Planning Team members. The designated Planning Team members will have three months to

make appropriate changes to the Plan before submitting it to the Planning Team members. The Planning Team will also notify all holders of the City plan when changes have been made. Every five years the updated plan will be submitted to the the California Office of Emergency Services and the Federal Emergency Management Agency for review.

At each of the yearly Planning Team meetings, each mitigation action will be reviewed to determine its continued relevance to changing situations and land developments in the City, as well as changes in State or Federal policy, and to ensure that each action is addressing current and expected conditions. The risk assessment portion of the Plan will also be reviewed to determine if this information should be updated or modified. Factors to be reported on will include:

- Any changes in the nature or magnitude of risks identified in the Plan.
- The status of these actions, and, where applicable, will report on which actions worked well.
- Whether difficulties have been encountered, and if so, what they are.
- How coordination efforts have been proceeding, and which actions should be revised.

The Hazard Mitigation Plan evaluation process will be led by the Local Mitigation Officer. The Local Mitigation Officer will meet with key stakeholders, such as neighborhood groups, fire and law enforcement agencies, community groups, social service agencies, transportation, and public works to gather updated hazard mitigation information.

Updating

After the initial review and key stakeholder meetings, Public Safety personnel will present the plan with any recommendations from the core planning team to the Public Safety Commission. During the Public Safety Commission's review, members of the public will be able to attend a public meeting and voice any concerns or ideas for revisions to the plan. The agenda for each Public Safety Commission and City Council meeting is posted inside and outside of City Hall, faxed/emailed to the posting locations, and posted on the City website. Links to the agenda will also be shared using social media. At that point, the core planning team will meet and make all changes necessary and present an updated document to the Public Safety Commission and the Montebello City Council. In addition, the Community Safety Department will informally involve members of the public as well through presentations at neighborhood meetings, key informant interviews, public meetings, and existing public safety programs.

Prior to these Commission and Council meetings, the Local Mitigation Office will lead the monitoring and evaluating efforts to ensure that there is adequate funding for the mitigation

activities. After the City's budget is passed by City Council, the Local Mitigation Office will collaborate with the plan development team to apply for hazard mitigation grants that will help the City implement the mitigation activities that are not included in the City's budget. Starting at year four of the Plan, the Local Mitigation Officer will begin to go through a formal update to the Hazard Mitigation Plan. The formal five year update to the Hazard Mitigation Plan will be brought to the City Council for formal approval of the updated plan. These meetings will be widely advertised using social media and open to residents, property owners, business owners, and other stake holders. Copies of the Plan will be catalogued and kept in appropriate departments and public locations.

7.7 Plan Adoption

Element F: Plan Adoption
F1. For single-jurisdictional plans, has the governing body of the jurisdiction formally adopted the plan to be eligible for certain FEMA assistance? (Requirement 44 CFR § 201.6(c)(5))
F2. For multi-jurisdictional plans, has the governing body of each jurisdiction officially adopted the plan to be eligible for certain FEMA assistance? (Requirement 44 CFR § 201.6(c)(5))

Adoption of the Mitigation Plan by the City's governing body is one of the prime requirements for approval of the plan. Once the plan is completed, the City Council will be responsible for adopting the Mitigation Plan. The governing body has the responsibility and authority to promote sound public policy regarding hazards. The City Council will have the authority to periodically update the plan as it is revised to meet changes in the hazard risks and exposures in the City. The approved Mitigation Plan will be significant in the future growth and development of the City.

On XXXXXXXXXXX, during the monthly city council meeting, the Montebello City Council formally adopted the Montebello Local Hazard Mitigation Plan. The resolution of adoption by the City Council is in the Appendix.

Primary Point of Contact

The Point of Contact for information regarding this plan is:

XXXXXXXXX

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