

**Multi-Jurisdictional
Hazard Mitigation Plan:
City of Lemon Grove
Annex**

San Diego County, California

2023



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1. SECTION ONE: Determine the Planning Area and Resources

1.1. Planning Area: City of Lemon Grove

The City of Lemon Grove is located in Eastern San Diego County, approximately eight miles east of the City of San Diego. Lemon Grove is a small city with a rural ambiance. It is the third smallest jurisdiction in the San Diego region, based on population and geographic size. The City is 3.9 square miles of diverse residential, commercial, and industrial area.

Lemon Grove contracts with the San Diego County Sheriff's Department for law enforcement services and is part of a joint exercise of powers agreement for organizational management of fire protection, fire prevention services, emergency medical services and emergency management. These services are provided by Heartland Fire & Rescue, an ISO Class 1 Fire department.

Lemon Grove has a semi-arid Mediterranean climate and averages 263 sunny days per year. Winters are mild with periodic rain. Frost is rare but can occur in December and January. Summer is almost rain free, but sometimes overcast and cool in the months of May and June. While most days have mild and pleasant temperatures, hot dry Santa Ana winds bring high temperatures on a few days each year, mostly but not exclusively in the fall.

The City's housing is comprised of approximately 8,617 dwellings. There exists a cross-section of housing types, from lower cost mobile homes and apartments, to moderately priced condominiums, to higher cost single-family residences.

According to the most recent US Census data, the population of Lemon Grove is 28,089, comprised of the following ethnic groups:

- American Indian / Alaskan Native – 1.1%
- Asian – 6.9%
- Black / African American – 16.7%
- Native Hawaiian / Pacific Islander - .8%
- Two or More Races – 12.1%
- White – 53.3%

1.2. Community Rating System Requirements

The Community Rating System (CRS) is a FEMA program and rewards communities that go beyond the minimum standards for floodplain management under the National Flood Insurance Program (NFIP). Communities can potentially improve their Community Rating System and lower NFIP premiums by developing a CRS Plan.

For more information on the National Flood Insurance Program, see <http://www.fema.gov/national-flood-insurance-program>.

Community Rating System (CRS) Planning Steps	Local Mitigation Planning Handbook Tasks (44 CFR Part 201)
Step 1. Organize	Task 1: Determine the Planning Area and Resources Task 2: Build the Planning Team 44 CFR 201.6(c)(1)
Step 2. Involve the public	Task 3: Create an Outreach Strategy 44 CFR 201.6(b)(1)
Step 3. Coordinate	Task 4: Review Community Capabilities 44 CFR 201.6(b)(2) & (3)
Step 4. Assess the hazard	Task 5: Conduct a Risk Assessment 44 CFR 201.6(c)(2)(i) 44 CFR 201.6(c)(2)(ii) & (iii)
Step 5. Assess the problem	
Step 6. Set goals	
Step 7. Review possible activities	Task 6: Develop a Mitigation Strategy 44 CFR 201.6(c)(3)(i) 44 CFR 201.6(c)(3)(ii) 44 CFR 201.6(c)(3)(iii)
Step 8. Draft an action plan	
Step 9. Adopt the plan	Task 8: Review and Adopt the Plan 44 CFR 201.6(c)(5)
Step 10. Implement, evaluate, revise	Task 7: Keep the Plan Current Task 9: Create a Safe and Resilient Community 44 CFR 201.6(c)(4)

TABLE 1.1: DESCRIBES THE CRS REQUIREMENTS MET BY THE SAN DIEGO COUNTY MULTI-JURISDICTIONAL HAZARD MITIGATION PLAN.

Any jurisdiction or special district may participate in the hazard mitigation planning process. However, to request FEMA approval, each of the local jurisdictions must meet all requirements of 44 CFR §201.6. In addition to the requirement for participation in the process, the Federal regulation specifies the following requirements for multi-jurisdictional plans:

- The risk assessment must assess each jurisdiction’s risk where they may vary from the risks facing the entire planning area. (44 CFR §201.6(c)(2)(iii))

SECTION ONE: Determine the Planning Area and Resources

- There must be identifiable action items specific to the jurisdiction requesting FEMA approval or credit of the plan. (44 CFR §201.6(c)(3)(iv))
- Each jurisdiction requesting approval of the plan must document that it has been formally adopted. (44 CFR §201.6(c)(5))

The hazard mitigation plan must clearly list the jurisdictions that participated in the plan and are seeking plan approval.

- Refer to the San Diego County Multi-Jurisdictional Hazard Mitigation Plan for a list of participating jurisdictions.

2. SECTION TWO: Build the Planning Team

2.1. Planning Participants

City Mangers Office

Lydia Romero - City Manager

Community Development

Bill Chopyk - Community Development Manager

Lemon Grove Fire Department / Heartland Fire & Rescue

Andy McKellar – Emergency Preparedness Coordinator

Bent Koch – Chief, Operations

Shaun Richardson – Fire Marshall

San Diego County Sherriff's Department

Pat McEvoy – Lieutenant

2.2. Planning Process

The San Diego County Hazard Mitigation Working Group held regular meetings which were attended by the Emergency Preparedness Coordinator. A further series of meetings was held by the Local Planning Group (LPG). Due to COVID restrictions, these meetings were held online. The goals and objectives were developed by considering the risk assessment findings, localized hazard identification and loss/exposure estimates, and an analysis of the jurisdiction's current capabilities assessment. These preliminary goals, objectives and actions were developed to represent a vision of long-term hazard reduction or enhancement of capabilities. To help in further development of these goals and objectives, the LPG compiled and reviewed current jurisdictional sources including the City's planning documents, codes, and ordinances.

As with the 2018 plan, the 2023 Mitigation Plan will be utilized to inform updates to the City's General Plan as well as the Sustainability Plan, along with various city codes and ordinances.

See the *San Diego County Multi-Jurisdictional Hazard Mitigation Plan's* Section Two for details about the county-wide Planning Process.

City of Lemon Grove LPG Meetings

May 13, 2021 - Initial Meeting

April 13, 2022 – Final Meeting

3. SECTION THREE: Create an Outreach Strategy

See the *San Diego County Multi-Jurisdictional Hazard Mitigation Plan*'s Section Three for details about the county-wide outreach strategy.

4. SECTION FOUR: Review Community Capabilities

Local mitigation capabilities are existing authorities, policies, programs, and resources that reduce hazard impacts or that could be used to implement hazard mitigation activities, and must be included in a hazard mitigation plan by the planning team.

The planning team also may identify additional types of capabilities relevant to mitigation planning.

4.1. Capability Assessment

The primary types of capabilities for reducing long-term vulnerability through mitigation planning are:

- Planning and regulatory
- Administrative and technical
- Financial
- Education and outreach

Improvements in existing policies and programs in each of the four areas above can be obtained through increased cooperation between city departments, continued training of staff, and collaboration with local and regional partners.

SECTION FOUR: Review Community Capabilities

4.1.1. Planning and Regulatory

Planning and regulatory capabilities are the plans, policies, codes, and ordinances that prevent and reduce the impacts of hazards. Please indicate which of the following your jurisdiction has in place:

Plans	Yes/No Year	Does the plan address hazards? Does the plan identify projects to include in the mitigation strategy? Can the plan be used to implement mitigation actions?
Comprehensive/Master Plan	Yes 1996	Yes Yes Yes
Capital Improvements Plan	Yes 2021	Yes Yes Yes
Economic Development Plan	No N/A	N/A N/A N/A
Local Emergency Operations Plan	Yes 2013	Yes No Yes
Continuity of Operations Plan	Yes 2013	No No Yes
Transportation Plan	Yes 1996	Yes, through the Mobility Element of the General Plan Yes Yes
Stormwater Management Plan	Yes 2019	Yes, through the Drainage Master Plan Update and Jurisdictional Runoff Management Plan. Yes Yes
Community Wildfire Protection Plan	No	N/A N/A N/A
M. Real estate disclosure requirements	No	N/A N/A N/A
Other special plans (e.g., brownfields redevelopment, disaster recovery, coastal zone management, climate change adaptation)	Yes 2020	Yes, through the climate action plan and adaptation strategies. Yes Yes

TABLE 4.1.1: PLANNING AND REGULATORY - 4.1 DATA.

SECTION FOUR: Review Community Capabilities

4.1.2. Administrative and Technical

Administrative and technical capabilities include staff and their skills and tools that can be used for mitigation planning and to implement specific mitigation actions.

Administration	Yes/No	Describe capability Is coordination effective?
Planner(s) or engineer(s) with knowledge of land development and land management practices	Yes	Planners/Engineers are trained to be familiar and to enforce all applicable Federal, State and local regulations and requirements of land development land management practices. Yes
Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Yes	Conduct of inspection of private and public construction project where materials and workmanship are reviewed to ensure compliance with the approved plans and specifications. Inspections occur prior to the start of construction, during construction and after completion. Yes
Planners or Engineer(s) with an understanding of natural and/or manmade hazards	Yes	Planners/Engineers understand the importance of mitigation measures in their respective area of expertise as it relates to understanding hazards and the associated risks. Yes
Mitigation Planning Committee	Yes	Lemon Grove Mitigation Planning Team made up of representatives from city departments.
Maintenance programs to reduce risk (e.g., tree trimming, clearing drainage systems)	Yes	Perform a variety of semi-skilled and skilled work in pruning, trimming, and topping trees with tree trimming equipment, as well as clearing drainage systems. Yes
Mutual aid agreements	Yes	Participate in the California Fire Rescue and Mutual Aid System, the San Diego County Operational Area Emergency Operations Plan. The California Master Mutual Aid Agreement. Law Enforcement and Public Works Yes

TABLE 4.1.2: ADMINISTRATIVE AND TECHNICAL - 4.1 DATA CONTINUED.

SECTION FOUR: Review Community Capabilities

Staff	Yes/No FT/PT1	Is staffing adequate to enforce regulations? Is staff trained on hazards and mitigation? Is coordination between agencies and staff effective?
Chief Building Official	Chief Building Official PT - 1	Yes Yes Yes
Floodplain Administrator	Floodplain Administrator PT - 1	Yes Yes Yes
Emergency Manager	Emergency Manager FT - 1	Staffing is adequate Staff is trained on hazards and mitigation Staff coordinates with various outside agencies regularly
Surveyors	Yes Contract-2	Yes Yes Yes
Staff with education or expertise to assess the community's vulnerability to hazards	Yes FT-5 Contract-4	Yes Yes Yes
Community Planner	Yes FT-3	Yes Yes Yes
Scientists familiar with the hazards of the community	No	N/A N/A N/A
Civil Engineer	Yes Contract-2	Yes Yes Yes
Personnel skilled in GIS and/or HAZUS	Yes Contract-2	Yes Yes Yes
Grant writers	Yes PT-4	Yes Yes Yes

TABLE 4.1.3: ADMINISTRATIVE AND TECHNICAL - 4.1 DATA CONTINUED.

SECTION FOUR: Review Community Capabilities

Technical	Yes/No	Describe capability Has capability been used to assess/mitigate risk in the past?
Warning systems/services (Reverse 911, outdoor warning signals)	Yes	Alert San Diego for Reverse 911 operations. Wireless Emergency Alerts (WEA) for emergency notifications Portable changeable message boards.
Hazard data and information	Yes	Previous Regional and Lemon Grove-specific hazard data and information has been used to identify and mitigate risks in the past
Grant writing	Yes PT	Various full-time staff have grant writing as part of their regular duties
Hazus analysis	Yes	Hazus program has been used to identify an mitigate risks

TABLE 4.1.4: ADMINISTRATIVE AND TECHNICAL – 4.1 DATA CONTINUED.

SECTION FOUR: Review Community Capabilities

4.1.3. Financial

Identify whether your jurisdiction has access to or is eligible to use the following funding resources for hazard mitigation:

Funding Resource	Access/ Eligibility (Yes/No)	Has the funding resource been used in past and for what type of activities? Could the resource be used to fund future mitigation actions?
Community Development Block Grants (CDBG)	Yes	Critical drainage system, transportation and road infrastructure projects. Yes
Capital improvements project funding	Yes	Drainage, Roadway, Sanitation, and Transportation projects. Yes
Authority to levy taxes for specific purposes	Yes	No Yes
Fees for water, sewer, gas, or electric service	Yes	Sewer funds have been used to maintain critical infrastructure. Water, Electrical and Gas services are provided by other parties. Yes
Impact fees for homebuyers or developers for new developments/homes	Yes	Impact fees have been used collaboratively with developers to mitigate critical public safety infrastructures. Yes
Incur debt through general obligation bonds	Yes	No Yes, with a public vote.
Incur debt through special tax and revenue bonds	Yes	No Yes, with a public vote.
Incur debt through private activity bonds	Yes	No Yes, with a public vote.
Community Development Block Grants (CDBG)	Yes	Critical drainage system, transportation and road infrastructure projects. Yes
Capital improvements project funding	Yes	Drainage, Roadway, Sanitation, and Transportation projects. Yes
Authority to levy taxes for specific purposes	Yes	No Yes

TABLE 4.1.5: FINANCIAL – 4.1 DATA CONTINUED.

SECTION FOUR: Review Community Capabilities

4.1.4. Education and Outreach

Identify education and outreach programs and methods already in place that could be used to implement mitigation activities and communicate hazard-related information:

Program/Organization	Yes/No	Describe program/organization and how relates to disaster resilience and mitigation. Could the program/organization help implement future mitigation activities?
Local citizen groups or non-profit organizations focused on environmental protection, emergency preparedness, access and functional needs populations, etc.	Yes	Lemon Grove works with a number of community organizations who have direct involvement in environmental protection, emergency preparedness and access and functional needs issues. Examples are the American Red Cross, Sierra Club, San Diego Regional Center and the International Rescue Committee. http://sandiegosierraclub.org/ https://www.rescue.org/united-states/san-diego-ca https://www.sdrc.org/ https://www.redcross.org/local/california/southern-california/about-us/locations/san-diego-imperial.html?CID=organic_gmb_listings East County Community Emergency Response Team (CERT) Yes
Ongoing public education or information program (e.g., responsible water use, fire safety, household preparedness, environmental education)	Yes	https://mtrp.org/ https://thegarden.org/ The City will provide information on its website related to water usage, fire safety, preparedness and education. Yes
Natural disaster or safety related school programs	Yes	In partnering with San Diego County Sheriff’s Department and Lemon Grove School District, the City shares public safety messages that share information about natural disasters and school safety programs. Yes
StormReady certification	No	
Firewise Communities certification	No	
Public-private partnership initiatives addressing disaster-related issues	Yes	Fire department along with CERT, SDGE, Red Cross and local community groups provide information on “all hazards” disaster preparedness and general fire safety. Using multiple federal, state and local resources, information is compiled and shared as it applies to specific disaster related issues that are encountered.

TABLE 4.1.6: EDUCATION AND OUTREACH - 4.1 DATA CONTINUED.

SECTION FOUR: Review Community Capabilities

4.2 Safe Growth Audit

Identify gaps in your community’s growth guidance instruments and improvements that could be made to reduce vulnerability to future development:

Comprehensive Plan	Yes	No
Land Use		
1. Does the future land-use map clearly identify natural hazard areas?		X
Natural hazard areas are described and mapped in the General Plan.		
2. Do the land-use policies discourage development or redevelopment within natural hazard areas?	X	
3. Does the plan provide adequate space for expected future growth in areas located outside natural hazard areas?	X	
Transportation		
1. Does the transportation plan limit access to hazard areas?		X
2. Is transportation policy used to guide growth to safe locations?	X	
3. Are movement systems designed to function under disaster conditions (e.g., evacuation)?		X

TABLE 4.2.1: SAFE GROWTH AUDIT - 4.2 DATA.

Comprehensive Plan (continued)	Yes	No
Environmental Management		
1. Are environmental systems that protect development from hazards identified and mapped?	X	
2. Do environmental policies maintain and restore protective ecosystems?	X	
3. Do environmental policies provide incentives to development that is located outside protective ecosystems?	X	
Public Safety		
1. Are the goals and policies of the comprehensive plan related to those of the FEMA Local Hazard Mitigation Plan?	X	
2. Is safety explicitly included in the plan’s growth and development policies?	X	
3. Does the monitoring and implementation section of the plan cover safe growth objectives?	X	

TABLE 4.2.2: SAFE GROWTH AUDIT - 4.2 DATA CONTINUED.

SECTION FOUR: Review Community Capabilities

Zoning Ordinance	Yes	No
1. Does the zoning ordinance conform to the comprehensive plan in terms of discouraging development or redevelopment within natural hazard areas?	X	
2. Does the ordinance contain natural hazard overlay zones that set conditions for land use within such zones?		X
Natural hazards identified in the General Plan are accounted for during the development review process.		
3. Do rezoning procedures recognize natural hazard areas as limits on zoning changes that allow greater intensity or density of use?	X	
4. Does the ordinance prohibit development within, or filling of, wetlands, floodways, and floodplains?		X
Floodplain management measures are codified in Title 15 of the Lemon Grove Municipal Code.		
Subdivision Regulations	Yes	No
1. Do the subdivision regulations restrict the subdivision of land within or adjacent to natural hazard areas?	X	
2. Do the regulations provide for conservation subdivisions or cluster subdivisions in order to conserve environmental resources?	X	
3. Do the regulations allow density transfers where hazard areas exist?	X	

TABLE 4.2.3: SAFE GROWTH AUDIT - 4.2 DATA CONTINUED.

SECTION FOUR: Review Community Capabilities

Capital Improvement Program and Infrastructure Policies	Yes	No
1. Does the capital improvement program limit expenditures on projects that would encourage development in areas vulnerable to natural hazards?	X	
2. Do infrastructure policies limit extension of existing facilities and services that would encourage development in areas vulnerable to natural hazards?	X	
3. Does the capital improvement program provide funding for hazard mitigation projects identified in the FEMA Mitigation Plan?		X
Other	Yes	No
1. Do small area or corridor plans recognize the need to avoid or mitigation natural hazards?	X	
2. Does the building code contain provisions to strengthen or elevate construction to withstand hazard forces?	X	
3. Do economic development or redevelopment strategies include provisions for mitigation natural hazards?	X	
4. Is there an adopted evacuation and shelter plan to deal with emergencies from natural hazards?	X	

TABLE 4.2.4: SAFE GROWTH AUDIT - 4.2 DATA CONTINUED.

4.2.1 Future Development Trends

The City of Lemon Grove is primarily land locked due to boundaries with other jurisdictions. These development constraints have led to increased infill development within the City. New development does not extend city boundaries, it is re-utilizing existing real estate within city limits. New development has not occurred in hazard prone areas. All light industrial and general commercial buildings located within the flood zone area along Chollas Creek, Federal Boulevard from College Avenue to the western boundary of the City were built prior to 2018. All Increased development has added to the population since 2018, however, with the exception of more people living within City boundaries and potentially exposed to natural hazards, this growth should not cause a significant increase in vulnerability of the City or community members to identified priority hazards.

City of Lemon Grove – Population (US Census Bureau)				
2018	2019	2020	2021	2022
26,782	26,669	27,656	27,413	28,089

SECTION FOUR: Review Community Capabilities

4.3 National Flood Insurance Program (NFIP)

As a participant in the National Flood Insurance Program (NFIP), a community develops capabilities for conducting flood mitigation activities. The hazard mitigation plan must describe each jurisdiction’s participation in the NFIP. Participating communities must describe their continued compliance with NFIP requirements. The mitigation plan must do more than state that the community will continue to comply with the NFIP. Each jurisdiction must describe their floodplain management program and address how they will continue to comply with the NFIP requirements. The local floodplain administrator is often the primary source for this information.

Jurisdictions where FEMA has issued a floodplain map but are currently not participating in the NFIP may meet this requirement by describing the reasons why the community does not participate. Plan updates must meet the same requirements and document any change in floodplain management programs.

The City of Lemon Grove continues to participate in the NFIP. According to the 2022 FEMA Repetitive Loss Summary Report, The City of Lemon Grove has no repetitive property loss.

NFIP Topic	Source of Information	Comments
Insurance Summary		
How many NFIP policies are in the community? What is the total premium and coverage?	State NFIP Coordinator or FEMA NFIP Specialist	As of May 23, 2021: 1 policy \$ premium – unknown \$250,000 building coverage \$100,000 content coverage
How many claims have been paid in the community? What is the total amount of paid claims? How many of the claims were for substantial damage?	FEMA NFIP or Insurance Specialist	1 paid claim \$ total amount paid – unknown X claims were for substantial damage – unknown
How many structures are exposed to flood risk within the community?	Community Floodplain Administrator (FPA)	34 structures in Zone A
Describe any areas of flood risk with limited NFIP policy coverage	Community FPA and FEMA Insurance Specialist	N/A
Staff Resources		
Is the Community FPA or NFIP Coordinator certified?	Community FPA	No.
Is floodplain management an auxiliary function?	Community FPA	Yes.
Provide an explanation of NFIP administration services (e.g., permit review, GIS, education or outreach, inspections, engineering capability)	Community FPA	Permit review and general information services.
What are the barriers to running an effective NFIP program in the community, if any?	Community FPA	Staff resources.

SECTION FOUR: Review Community Capabilities

Compliance History		
Is the community in good standing with the NFIP?	State NFIP Coordinator, FEMA NFIP Specialist, community records	Yes.
Are there any outstanding compliance issues (i.e., current violations)?		No.
When was the most recent Community Assistance Visit (CAV) or Community Assistance Contact (CAC)?		2006.
Is a CAV or CAC scheduled or needed?		No.

TABLE 2.3.1: NATIONAL FLOOD INSURANCE PROGRAM – 4.3 DATA.

NFIP Topic	Source of Information	Comments
Regulation		
When did the community enter the NFIP?	Community Status Book http://www.fema.gov/national-flood-insurance-program/national-flood-insurance-program-community-status-book	March 6, 1988.
Are the FIRMs digital or paper?	Community FPA	Both.
Do floodplain development regulations meet or exceed FEMA or State minimum requirements? If so, in what ways?	Community FPA	Flood plain regulations currently meet FEMA and California State minimum requirements.
Provide an explanation of the permitting process.	Community FPA, State, FEMA NFIP Flood Insurance Manual http://www.fema.gov/flood-insurance-manual Community FPA, FEMA CRS Coordinator, ISO representative	All projects shall comply with cities flood plain management regulations. Required findings for approval of projects include that the site is safe from flooding, does not cause or create hazards to adjacent properties, does not have adverse impact upstream or downstream and cumulative effect of projects does not increase water surface elevation. Typically, special permits are required for proposed construction within potential flood areas.
Community Rating System (CRS)		
Does the community participate in CRS?	Community FPA, State, FEMA NFIP	No.
What is the community's CRS Class Ranking?	Flood Insurance Manual http://www.fema.gov/flood-insurance-manual	N/A

SECTION FOUR: Review Community Capabilities

What categories and activities provide CRS points and how can the class be improved?		N/A
Does the plan include CRS planning requirements	Community FPA, FEMA CRS Coordinator, ISO representative	N/A

TABLE 4.3.2: NATIONAL FLOOD INSURANCE PROGRAM – 4.3 DATA CONTINUED.

5. SECTION FIVE: Conduct a Risk Assessment

The Local Planning Group conducted a risk assessment to determine the potential impacts of hazards to the people, economy, and built and natural environments of the community. In addition to informing the mitigation strategy, this risk assessment may be used to inform emergency preparedness and response priorities, land use and comprehensive planning, and for decision making by elected officials, city and county departments, businesses, and organizations in the community.

Highest Rated Jurisdictional Hazards

The final list prioritized hazards for Lemon Grove were hazards with Medium* Overall Significance. This list of hazards was determined by the LPG using historical data, vulnerability assessments, and information gathered from the County OES Hazard Seminar Series.

- **Drought:** Drought is a slow-onset hazard that can last for months or years. As a hazard, it has the potential to impact many aspects of life, including drinking water and food. Because of the long duration of droughts, the impacts last for years and can ripple through a community over time.

Vulnerability and Impacts: Given the semi-arid climate of El Cajon, the regular occurrences of multi-year droughts across the State and Southwest region, drought could have a major impact on El Cajon's resiliency.

- **Earthquake:** An earthquake is a sudden motion or trembling that is caused by a release of strain accumulated within or along the edge of the Earth's tectonic plates. The effects of an earthquake can be felt far beyond the site of its occurrence. They usually occur without warning and, after just a few seconds, can cause massive damage and extensive casualties. There is potential for injuries, loss of life, property damage, and disruption of services.

Vulnerability and Impacts: The largest impact to the jurisdiction will likely be providing support to the affected area through mutual aid to Fire and Police departments. The city may also be asked to open disaster shelters to provide relief for those directly affected by the earthquake.

- **Extreme Heat:** In most of the United States, including the entire planning area, extreme heat is a long period (2 to 3 days) of high heat and humidity with temperatures above 90 degrees. The city has seen an increase in the number of extreme heat events.

Vulnerability and Impacts: Extreme heat does not cause structural damage like floods, fires, and earthquakes; however, extreme heat events put vulnerable populations (such as older adults, children, people who are chronically ill, and people who work outside) at risk of heat-related illnesses and even death.

Extreme heat also has secondary impacts, such as power outages and poor air quality. Heat events, and the increased use of air conditioning, can lead to power outages, which makes the

SECTION FIVE: Conduct a Risk Assessment

events even more dangerous. Hotter temperatures may also lead to poorer air quality because ozone formation, a component of smog, increases with higher temperatures.

**Medium: The criteria fall mostly in the middle ranges of classifications and the event's impacts on the planning area are noticeable but not devastating. This rating is sometimes used for hazards with a high extent rating but very low probability rating. Following the Risk Assessment criteria below, Lemon Grove has no hazards that fall into the "High" category.*

5.1. Hazards Summary

The Local Planning Group reviewed the hazards identified in the previous Hazard Mitigation Plan and evaluated each to see if they still posed a risk to the jurisdiction. In addition, the hazards listed in the FEMA Local Mitigation Planning Handbook were also reviewed to determine if they should be added to the list of hazards to include in the plan revision.

Hazard	Location (Geographic Area Affected)	Maximum Probable Extent (Magnitude/Strength)	Probability of Future Events	Overall Significance Ranking
Avalanche	Negligible	Weak	Unlikely	Low
Dam Failure	Negligible	Weak	Unlikely	Low
Drought	Limited	Moderate	Occasional	Medium
Earthquake	Significant	Severe	Likely	Medium
Erosion	Negligible	Weak	Unlikely	Low
Expansive Soils	Negligible	Weak	Unlikely	Low
Extreme Cold	Negligible	Weak	Unlikely	Low
Extreme Heat	Significant	Moderate	Likely	Medium
Flood	Limited	Weak	Occasional	Low
Hail	Negligible	Weak	Unlikely	Low
Hurricane	Negligible	Weak	Unlikely	Low
Landslide	Limited	Weak	Occasional	Low
Lightning	Limited	Weak	Occasional	Low
Sea Level Rise	Negligible	Weak	Unlikely	Low
Severe Wind	Limited	Weak	Occasional	Low
Severe Winter Weather	Negligible	Moderate	Occasional	Low

SECTION FIVE: Conduct a Risk Assessment

Storm Surge	Negligible	Weak	Unlikely	Low
Subsidence	Negligible	Weak	Unlikely	Low
Tornado	Negligible	Weak	Unlikely	Low
Tsunami	Negligible	Weak	Unlikely	Low
Wildfire	Limited	Weak	Occasional	Low

TABLE 5.1.1: HAZARD SUMMARY – 5.1 DATA.

Definitions for Classifications

Location (Geographic Area Affected)

- **Negligible:** Less than 10 percent of planning area or isolated single-point occurrences
- **Limited:** 10 to 25 percent of the planning area or limited single-point occurrences
- **Significant:** 25 to 75 percent of planning area or frequent single-point occurrences
- **Extensive:** 75 to 100 percent of planning area or consistent single-point occurrences

Maximum Probable Extent (Magnitude/Strength based on historic events or future probability)

- **Weak:** Limited classification on scientific scale, slow speed of onset or short duration of event, resulting in little to no damage
- **Moderate:** Moderate classification on scientific scale, moderate speed of onset or moderate duration of event, resulting in some damage and loss of services for days
- **Severe:** Severe classification on scientific scale, fast speed of onset or long duration of event, resulting in devastating damage and loss of services for weeks or months
- **Extreme:** Extreme classification on scientific scale, immediate onset or extended duration of event, resulting in catastrophic damage and uninhabitable conditions

Hazard	Scale / Index	Weak	Moderate	Severe	Extreme
Drought	Palmer Drought Severity Index ³	-1.99 to +1.99	-2.00 to -2.99	-3.00 to -3.99	-4.00 and below
Earthquake	Modified Mercalli Scale ⁴	I to IV	V to VII	VII	IX to XII
	Richter Magnitude ⁵	2, 3	4, 5	6	7, 8
Hurricane Wind	Saffir-Simpson Hurricane Wind Scale ⁶	1	2	3	4, 5
Tornado	Fujita Tornado Damage Scale ⁷	F0	F1, F2	F3	F4, F5

Probability of Future Events

- **Unlikely:** Less than 1 percent probability of occurrence in the next year or a recurrence interval of greater than every 100 years.
- **Occasional:** 1 to 10 percent probability of occurrence in the next year or a recurrence interval of 11 to 100 years.
- **Likely:** 10 to 90 percent probability of occurrence in the next year or a recurrence interval of 1 to 10 years

SECTION FIVE: Conduct a Risk Assessment

- **Highly Likely:** 90 to 100 percent probability of occurrence in the next year or a recurrence interval of less than 1 year.

Overall Significance

- **Low:** Two or more criteria fall in lower classifications, or the event has a minimal impact on the planning area. This rating is sometimes used for hazards with a minimal or unknown record of occurrences or for hazards with minimal mitigation potential.
- **Medium:** The criteria fall mostly in the middle ranges of classifications and the event's impacts on the planning area are noticeable but not devastating. This rating is sometimes used for hazards with a high extent rating but very low probability rating.
- **High:** The criteria consistently fall in the high classifications and the event is likely/highly likely to occur with severe strength over a significant to extensive portion of the planning area.

- Cumulative meteorological drought and wet conditions: <http://ncdc.noaa.gov/>
- Earthquake intensity and effect on population and structures: <http://earthquake.usgs.gov>
- Earthquake magnitude as a logarithmic scale, measured by a seismograph: <http://earthquake.usgs.gov>
- Hurricane rating based on sustained wind speed: <http://nhc.noaa.gov>
- Tornado rating based on wind speed and associated damage: <http://spc.noaa.gov>

Critical Facility Type	Jurisdiction Name	Counts
EMERGENCY – EOC	LEMON GROVE	1
EMERGENCY – FIRE	LEMON GROVE	1
EMERGENCY – POLICE	LEMON GROVE	1

TABLE 5.1.2: HAZARD SUMMARY – 5.1 DATA CONTINUED.

5.2 Hazard Omission Rationale

During the initial evaluation, the Hazard Mitigation Planning Group (HMPG) determined certain hazards were not included in the original plan's profiling step because they were not prevalent hazards within San Diego County, were found to pose only minor or very minor threats to San Diego County compared to the other hazards (status had not changed), and would, therefore, not be included in this revision. Only hazards that received a High or Medium ranking in Section 5.1 were considered in this mitigation planning process.

Hazard	Description	Reason for Exclusion
Avalanche	A mass of snow moving down a slope. There are two basic elements to a slide; a steep, snow-covered slope and a trigger	Snowfall poses very minor threat compared to other hazards. NO significant snowfall has occurred within this jurisdiction.
Dam Failure	Catastrophic rupture of the dam structure causing downstream flooding and the possibility of human injury or loss of life.	Presents a minor threat to limited portions of the City.
Erosion	Erosion is the action of surface processes (such as water flow or wind) that removes soil, rock, or dissolved material from one location on the crust, and then transports it to another location where it is deposited.	Presents a minor threat to limited portions of the City.
Expansive soils	Expansive soils shrink when dry and swell when wet. This movement can exert enough pressure to crack sidewalks, driveways, basement floors, pipelines and even foundations	Presents a minor threat to limited portions of the City.
Hailstorm	Can occur during thunderstorms that bring heavy rains, strong winds, hail, lightning, and tornadoes	Occurs during severe thunderstorms; most likely to occur in the central and southern states; no historical record of this hazard in the region.
Land subsidence	Occurs when large amounts of ground water have been withdrawn from certain types of rocks, such as fine-grained sediments. The rock compacts because the water is partly responsible for holding the ground up. When the water is withdrawn, the rocks fall in on themselves.	Soils in the County are mostly granitic. Presents a minor threat to limited parts of the county. No historical record of this hazard in the region.
Tornado	A tornado is a violent windstorm characterized by a twisting, funnel-shaped cloud. It is spawned by a thunderstorm (or sometimes because of a hurricane) and produced when cool air overrides a layer of warm air, forcing the warm air to rise rapidly. The damage from a tornado is a result of the high wind velocity and wind-blown debris.	Less than one tornado event occurs in the entire State of California in any given year; poses very minor threat compared to other hazards. No historical record of this hazard in the region.

SECTION FIVE: Conduct a Risk Assessment

Volcano	A volcano is a mountain that is built up by an accumulation of lava, ash flows, and airborne ash and dust. When pressure from gases and the molten rock within the volcano becomes strong enough to cause an explosion, eruptions occur	No active volcanoes in San Diego County. No historical record of this hazard in the region.
Wildfire	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.	While wildfire occurs within the adjoining, unincorporated areas of the County, no wildfire has taken place inside City boundaries or had a sustained negative affect on City services.
Windstorm	A storm with winds that have reached a constant speed of 74 miles per hour or more	Maximum sustained wind speed recorded in the region is less than 60 miles per hour and would not be expected to cause major damage or injury.

Table 5.2.1: Hazard Omission Rationale

5.3 Potential Hazard Exposure and Loss Estimates

The City of Lemon Grove LPG reviewed a set of jurisdictional-level hazard maps and data provided by the County of San Diego, including detailed critical facility information and localized potential hazard exposure/loss estimates related to residential, commercial, and critical asset/facilities to identify the top hazards threatening the City.

Hazard Type	Residential			Commercial		Critical Facilities	
	Exposed Population	Number of Residential Buildings	Potential Exposure Loss for Residential Buildings	Number of Commercial Buildings	Potential Exposure Loss for Commercial Buildings	Number of Critical Facilities	Potential Exposure for Critical Facilities
Coastal Storm	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Sea Level Rise							
Coastal Flooding	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Mean Higher High Water	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dam Failure	0	0	0	0	0	0	0
Earthquake (Loss)							
(Annualized Loss - Includes shaking, liquefaction and landslide components)	284	273	105,992,130	119	35,858,710	0	0
100 Year	0	0	0	0	0	0	0
500 Year	0	3	1,165,800	4	1,209,400	0	0
Rose Canyon M6.9 Scenario	26,480	6,522	2,5233,797,000	594	179,595,900	28	358,614,000
Floods (Loss)							
100 Year	0	3	1,165,800	4	1,209,400	0	0
500 Year	0	3	1,165,800	4	1,209,400	0	0
Rain-Induced Landslide							
High Risk	0	0	0	0	0	0	0
Moderate Risk	0	0	0	0	0	0	0
Tsunami	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Wildfire/Structure Fire							
High Fire Hazard	0	0	0	0	0	0	0
Very High Fire Hazard	0	0	0	0	0	0	0

TABLE 5.3.1: SUMMARY OF POTENTIAL HAZARD-RELATED EXPOSURE/LOSS IN THE CITY OF LEMON GROVE

6. SECTION SIX: Develop a Mitigation Strategy

The mitigation strategy serves as the long-term blueprint for reducing potential losses identified in the risk assessment. The mitigation strategy describes how the community will accomplish the overall purpose, or mission, of the planning process.

The mitigation strategy is made up of three main required components: mitigation goals, mitigation actions, and an action plan for implementation. These provide the framework to identify, prioritize, and implement actions to reduce risk to hazards.

Mitigation goals are general guidelines that explain what the community wants to achieve with the plan. They are usually broad policy-type statements that are long-term, and they represent visions for reducing or avoiding losses from the identified hazards

Mitigation actions are specific projects and activities that help achieve the goals.

The action plan describes how the mitigation actions will be implemented, including how those actions will be prioritized, administered, and incorporated into the community's existing planning mechanisms. In a multi-jurisdictional plan, each jurisdiction must have an action plan specific to that jurisdiction and its vulnerabilities.

Although not required, some communities choose to develop **objectives** to help define or organize mitigation actions. Objectives are broader than specific actions, but are measurable, unlike goals. Objectives connect goals with the actual mitigation actions

6.1 Mitigation Action Evaluation

The Local Planning Group for the City identified and prioritized the following new mitigation actions based on risk assessments, goals, and objectives. Background information as well as information on how the action will be implemented and administered, such as ideas for implementation, responsible office, partners, potential funding, estimated cost, and timeline also are described.

The mitigation strategy includes only those actions and projects which reflect the actual priorities and capacity of the jurisdiction to implement over the next five years covered by this plan. It should further be noted, that although a jurisdiction may not have specific projects identified for each significant (medium) hazard for the five-year coverage of this planning process, the jurisdiction has focused on identifying those projects which are realistic and reasonable for the City to implement. Should future projects be identified for significant hazards where the jurisdiction has the capacity to implement, the City would add those projects to the City's Annex.

Rank each of the criteria with a -1, 0 or 1 using the following scale:

- 1 = Highly effective or feasible
- 0 = Neutral
- -1 = Ineffective or not feasible

SECTION SIX: Develop a Mitigation Strategy

Example Evaluation Criteria:

- **Life Safety** – How effective will the action be at protecting lives and preventing injuries?
- **Property Protection** – How significant will the action be at eliminating or reducing damage to structures and infrastructure?
- **Technical** – Is the mitigation action technically feasible? Is it a long-term solution? Eliminate actions that, from a technical standpoint, will not meet the goals.
- **Political** – Is there overall public support for the mitigation action? Is there the political will to support it?
- **Legal** – Does the community have the authority to implement the action?
- **Environmental** – What are the potential environmental impacts of the action? Will it comply with environmental regulations?
- **Social** – Will the proposed action adversely affect one segment of the population? Will the action disrupt established neighborhoods, break up voting districts, or cause the relocation of lower income people?
- **Administrative** – Does the community have the personnel and administrative capabilities to implement the action and maintain it or will outside help be necessary?
- **Local Champion** – Is there a strong advocate for the action or project among local departments and agencies that will support the action's implementation?
- **Other Community Objectives** – Does the action advance other community objectives, such as capital improvements, economic development, environmental quality, or open space preservation? Does it support the policies of the comprehensive plan?

The information contained within this plan, including results from the Risk Assessment, and the Mitigation Strategy will be used by the City to help inform updates and the development of local plans, programs and policies. The City's Public Works Department may use the hazard information when implementing forestry, street, and solid waste division projects. This plan may also be utilized when implementing water, wastewater reclamation, and environmental projects that are part of the City's Sustainability Plan.

SECTION SIX: Develop a Mitigation Strategy

Mitigation Action	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
Local Plans and Regulations											
GOAL 1: Update and implement Lemon Grove’s Climate Action Plan, in order to mitigate damage and losses to existing assets, including people and critical infrastructure, due to climate change.											
Develop a comprehensive approach to reducing the possibility of damage and losses due to climate change	0	0	1	1	1	1	0	1	1	1	7
Increase public awareness and knowledge of damages and losses due to climate change through community awareness	0	1	1	1	1	1	0	1	1	1	8
GOAL 2: Reduce the possibility of damage and losses to existing assets, including people and critical infrastructure, due to structure / wildland fire.											
Maintain adequate planning and emergency response capability	1	1	1	1	1	0	0	1	1	1	8
Incorporate public messaging and awareness through the City’s newsletter, social media outlets and other materials, educating the public on how to reduce wildfire risk at home	1	1	1	1	1	0	0	1	1	1	8
Coordinate with and support existing efforts to mitigate structural / wildland fires	1	1	1	1	1	0	0	1	1	1	8
Maintain GIS mapping to best reflect potential vulnerability of assets from structural / wildland fire	1	1	1	1	1	0	0	1	1	1	8

TABLE 6.1.1: MITIGATION ACTION EVALUATION – 6.1 DATA.

SECTION SIX: Develop a Mitigation Strategy

Mitigation Action	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
Structure and Infrastructure Projects											
GOAL 4: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and City-owned facilities, due to other manmade hazards.											
Maintain adequate planning and emergency response capability	1	1	1	1	1	0	0	1	1	1	8
Develop a comprehensive approach to reducing the possibility of damage and losses due to manmade hazards	1	1	1	1	1	0	0	1	1	1	8
Coordinate with and support existing efforts to mitigate manmade hazards	1	1	1	1	1	0	0	1	1	1	8
Maintain IT awareness and GIS mapping to best reflect potential vulnerability of assets from manmade hazards	1	1	1	1	1	0	0	1	1	1	8
GOAL 5: Reduce the probability of injury to people as well as minimize damage and loss of existing infrastructure (to include critical facilities) due to hazardous materials incidents.											
Maintain adequate emergency response capability.	1	1	1	1	1	1	0	1	1	1	9
Develop a comprehensive approach to reducing the possibility of damage and losses due to hazardous materials incidents.	1	0	1	1	1	1	0	1	1	1	8
Coordinate with and support existing efforts to mitigate hazardous materials incidents.	1	0	1	1	1	1	0	1	1	1	8
Maintain GIS mapping to best reflect potential vulnerability of assets from HAZMAT.	1	0	1	1	1	1	0	1	1	1	8

TABLE 6.1.2: MITIGATION ACTION EVALUATION – 6.1 DATA CONTINUED.

SECTION SIX: Develop a Mitigation Strategy

Mitigation Action	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
Natural Systems Protection											
<i>The City of Lemon Grove currently has no mitigation actions related to natural systems protection</i>											

SECTION SIX: Develop a Mitigation Strategy

Mitigation Action	Life Safety	Property Protection	Technical	Political	Legal	Environmental	Social	Administrative	Local Champion	Other Community Objectives	Total Score
Education and Awareness Programs											
GOAL 3: Increase public understanding and support for effective hazard mitigation.											
Educate the public to increase awareness of hazards and opportunities for mitigation actions	1	1	1	1	1	0	0	1	1	1	8
Promote partnerships between the state, counties, and local jurisdictions and agencies to identify, prioritize, and implement mitigation actions	1	1	1	1	1	0	0	1	1	1	8
Work with the Chamber of Commerce, other businesses, and local agencies to promote hazard mitigation within the city.	1	1	1	1	1	0	0	1	1	1	8

TABLE 6.1.3: MITIGATION ACTION EVALUATION – 6.1 DATA CONTINUED.

SECTION SIX: Develop a Mitigation Strategy

6.2 Mitigation Action Implementation

In large part, hazard priorities remained unchanged from the last plan, though some hazards’ (such as Climate Change, Drought, and Extreme Heat) prevalence and/or probability of occurrence increased and, therefore, needed an updated Risk Assessment.

The information contained within this plan, including results from the Risk Assessment, and the Mitigation Strategy will be used by the City to help inform updates and the development of local plans, programs and policies. The City’s Public Works Department may use the hazard information when implementing forestry, street, and solid waste division projects. The Engineering Department may utilize the hazard information when implementing water, wastewater reclamation, and environmental projects that are part of the City’s Capital Improvement Program. This plan’s goals and actions were updated from the last version to reflect current priorities within existing plans, including the Lemon Grove General Plan’s Safety Element and the city’s Climate Action Plan. For more information on potential funding sources and grants for mitigation actions, please see the County of San Diego Multi-jurisdictional Hazard Mitigation Base Plan, Section 6.2.

Jurisdiction:	City of Lemon Grove
Mitigation Action/Project Title:	<i>Mitigate damage and losses due to climate change – Extreme Heat Events</i> <u>Action:</u> Incorporate green infrastructure elements into new and existing City infrastructure to mitigate the urban heat island effect. <u>Action:</u> Increase public outreach and education programs to inform the public of the health risks associated with extreme heat events, with a focus on vulnerable populations.
Background/Issue:	The City of Lemon Grove wishes to keep its Climate Action Plan consistent with current legislative requirements and supportive of effective hazard mitigation planning.
Ideas for Integration:	Actions can be integrated into existing city plans, such as the General Plan, written policies, City of Lemon Grove Municipal Codes and ordinances codes, as well as any futures updates to the previously mentioned plans, ordinances and codes.
Responsible Agency:	City of Lemon Grove – City Manager’s Office, Climate Action
Partners:	<ul style="list-style-type: none"> • Lemon Grove – Community Development • Lemon Grove – Public Works • Lemon Grove – Public Information • Lemon Grove Fire Department / Heartland Fire & Rescue
Potential Funding:	General Fund or percentage of potential grant funding.
Cost Estimate:	Varies, dependent upon cost at time of implementation and/or response. Possible funding may come as a percentage of potential grant funding.
Benefits: (Losses Avoided)	Limiting losses of existing assets, including people and critical infrastructure, due to changes in climate.
Timeline:	2023 - 2028
Priority:	High
Worksheet Completed by:	Andy McKellar Emergency Preparedness Coordinator, Heartland Fire & Rescue

SECTION SIX: Develop a Mitigation Strategy

Jurisdiction:	City of Lemon Grove
Mitigation Action/Project Title:	<i>Structure / Wildland fire.</i> <u>Action:</u> Maintain GIS mapping to best reflect potential vulnerability of assets from structural fire/wildland fire <u>Action:</u> Incorporate public messaging and awareness through the City’s newsletter, social media outlets and other materials, educating the public on how to reduce wildfire risk at home
Background/Issue:	The City of Lemon Grove has experienced damage and losses due to structure / wildland fire.
Ideas for Integration:	Actions can be integrated into existing city plans, such as the General Plan, written policies, City of Lemon Grove Municipal Codes and ordinances codes, as well as any futures updates to the previously mentioned plans, ordinances and codes.
Responsible Agency:	<ul style="list-style-type: none"> • Lemon Grove Fire Department / Heartland Fire & Rescue • Lemon Grove Communications
Partners:	<ul style="list-style-type: none"> • Lemon Grove – Public Works • Lemon Grove – Community Development • County of San Diego Office of Emergency Services
Potential Funding:	General Fund or percentage of potential grant funding.
Cost Estimate:	Varies, dependent upon cost at time of implementation and/or response. Possible funding may come as a percentage of potential grant funding.
Benefits: (Losses Avoided)	Reducing the possibility of damage and losses to existing assets, including people and critical infrastructure, due to structure fire/wildland fire
Timeline:	2023 - 2028
Priority:	High
Worksheet Completed by:	Andy McKellar Emergency Preparedness Coordinator Heartland Fire & Rescue

SECTION SIX: Develop a Mitigation Strategy

Jurisdiction:	City of Lemon Grove
Mitigation Action/Project Title:	<p><i>Earthquake and Drought.</i> <i>Increase public understanding of effective, all hazard mitigation</i></p> <p><u>Action:</u> Form a plan implementation steering committee to prioritize and monitor progress on local mitigation actions with an emphasis on earthquake, climate change, and drought. Include a mix of representatives from the state, county, and local jurisdictions and agencies.</p> <p><u>Action:</u> Work with the Chamber of Commerce, other businesses, local and regional agencies to increase awareness of earthquake risk within the community, including developing an outreach program about earthquake risk and mitigation activities in homes, schools, and businesses.</p> <p><u>Action:</u> The City will coordinate with local and regional water resource agencies to support and improve water conservation efforts and programs for residents such as:</p> <ul style="list-style-type: none"> • Installing low-flow water saving showerheads and toilets • Adjusting sprinklers to minimize garden runoff • Checking for leaks in plumbing or dripping faucets • Installing rain capture systems for irrigation
Background/Issue:	To increase public understanding and support for effective hazard mitigation planning.
Ideas for Integration:	Actions can be integrated into existing city plans, such as the General Plan, written policies, City of Lemon Grove Municipal Codes and ordinances codes, as well as any futures updates to the previously mentioned plans, ordinances and codes.
Responsible Agency:	City of Lemon Grove – Public Information
Partners:	Lemon Grove Fire Department / Heartland Fire & Rescue – Emergency Preparedness.
Potential Funding:	General Fund or percentage of potential grant funding.
Cost Estimate:	Varies, dependent upon cost at time of implementation and/or response. Possible funding may come as a percentage of potential grant funding.
Benefits: (Losses Avoided)	Increasing public awareness, understanding and support for effective hazard mitigation.
Timeline:	2023 - 2028
Priority:	Medium
Worksheet Completed by:	Andy McKellar Emergency Preparedness Coordinator Heartland Fire & Rescue

SECTION SIX: Develop a Mitigation Strategy

Jurisdiction:	City of Lemon Grove
Mitigation Action/Project Title:	<p style="text-align: center;"><i>Manmade Hazard.</i></p> <p style="text-align: center;"><i>Reduce the possibility of damage and losses due to manmade hazards.</i></p> <p><u>Action:</u> Coordinate city departments and support existing efforts to mitigate manmade hazards</p> <p><u>Action:</u> Maintain IT awareness and GIS mapping to best reflect potential vulnerability of assets from manmade hazards</p>
Background/Issue:	The City of Lemon Grove has experienced damage and losses due to manmade hazards.
Ideas for Integration:	Actions can be integrated into existing city plans, such as the General Plan, written policies, City of Lemon Grove Municipal Codes and ordinances codes, as well as any futures updates to the previously mentioned plans, ordinances and codes.
Responsible Agency:	City of Lemon Grove – City Manager’s Office
Partners:	<ul style="list-style-type: none"> • City of Lemon Grove Public Works • San Diego County Sherriff’s Office • Lemon Grove Fire Department / Heartland Fire & Rescue
Potential Funding:	General Fund or percentage of potential grant funding.
Cost Estimate:	Varies, dependent upon cost at time of implementation and/or response. Possible funding may come as a percentage of potential grant funding.
Benefits: (Losses Avoided)	Reducing the possibility of damage and losses to existing assets, including people and critical infrastructure, due to manmade hazards.
Timeline:	2023 - 2028
Priority:	High
Worksheet Completed by:	<p style="text-align: center;">Andy McKellar Emergency Preparedness Coordinator Heartland Fire & Rescue</p>

SECTION SIX: Develop a Mitigation Strategy

Jurisdiction:	City of Lemon Grove
Mitigation Action/Project Title:	<i>Hazardous Materials Incident.</i> <i>Reduce the probability of damage due to hazardous materials incidents</i> <u>Action:</u> Maintain GIS mapping to best reflect potential vulnerability of assets from HAZMAT.
Background/Issue:	The City of Lemon Grove has experienced damage and losses due to manmade hazards.
Ideas for Integration:	Actions can be integrated into existing city plans, such as the General Plan, written policies, City of Lemon Grove Municipal Codes and ordinances codes, as well as any futures updates to the previously mentioned plans, ordinances and codes.
Responsible Agency:	Lemon Grove Fire Department / Heartland Fire & Rescue
Partners:	<ul style="list-style-type: none"> • City of Lemon Grove Community Development • San Diego County HAZMAT / CUPA
Potential Funding:	General Fund
Cost Estimate:	Varies, dependent upon cost at time of implementation and/or response. Possible funding may come as a percentage of potential grant funding.
Benefits: (Losses Avoided)	Reducing the possibility of damage and losses to existing assets, including people and critical infrastructure, due to hazardous material incidents.
Timeline:	2023 - 2028
Priority:	High
Worksheet Completed by:	Andy McKellar Emergency Preparedness Coordinator Heartland Fire & Rescue

7. SECTION SEVEN: Keep the Plan Current

Hazard Mitigation Plan maintenance is the process the planning team establishes to track the plan's implementation progress and to inform the plan update. Hazard Mitigation Plan updates provide the opportunity to consider how well the procedures established in the previously approved plan worked and revise them as needed.

This annex is part of the most recent *San Diego County Multi-Jurisdictional Hazard Mitigation Plan* update. The plan was last updated in 2018. See the *San Diego County Multi-Jurisdictional Hazard Mitigation Plan - 2018* for more information.

SECTION SEVEN: Develop a Mitigation Strategy

7.1 Mitigation Action Progress

Plan monitoring means tracking the implementation of the plan over time. The plan must identify how, when, and by whom the plan will be monitored.

Mitigation Action Progress Report Form

Progress Report Period	From Date: February 2018	To Date: February 2023
Action/Project Title	Promote disaster-resistant future development.	
Responsible Agency	City of Lemon Grove – Community Development	
Contact Name	Andy McKellar	
Contact Phone/Email	619-772-2897 amckellar@heartlandfire.org	
Project Status	<ul style="list-style-type: none"> ● Project completed ● Project canceled ● Project on schedule ● Anticipated completion date: _____ ● Project delayed Explain _____ 	

Summary of Project Progress for this Report Period

1. What was accomplished for this project during this reporting period?
 - Encourage and facilitate the development or updating of general plans and zoning ordinances to limit development in hazard areas.
 - The City of Lemon Grove is currently in the process of updating its General Plan.
 - Encourage and facilitate the adoption of building codes that protect renovated existing assets and new development in hazard areas.
 - City staff continues to assess and update various uniform codes that pertain to safety issues.
 - Discourage future development that exacerbates hazardous conditions.
 - The City maintains a local mapping system. The City also requires an Environmental Impact report for each new building project. Recommendations for hazard reduction mitigation elements are included for building projects.

2. What obstacles, problems, or delays did the project encounter?

None

3. If uncompleted, is the project still relevant? Should the project be changed or revised?

The project is still relevant and remains ongoing.

4. Other comments

None

Mitigation Action Progress Report Form

Progress Report Period	From Date: February 2018	To Date: February 2023
Action/Project Title	Promote public understanding, support and demand for hazard mitigation.	
Responsible Agency	City of Lemon Grove – Public Information	
Contact Name	Andy McKellar	
Contact Phone/Email	619-772-2897 amckellar@heartlandfire.org	
Project Status	<ul style="list-style-type: none"> <input type="radio"/> Project completed <input type="radio"/> Project canceled <input checked="" type="radio"/> <u>Project on schedule</u> <input type="radio"/> Anticipated completion date: _____ <input type="radio"/> Project delayed Explain _____ 	

Summary of Project Progress for this Report Period

1. What was accomplished for this project during this reporting period?
 - Educate the public to increase awareness of hazards and opportunities for mitigation activities.
 - The City utilizes established media including its web page, newsletter, City correspondence, and Social Media sites to inform the public regarding hazard mitigation. Hazard mitigation information is also included during public activities.
 - Promote partnerships between the state, counties, local and tribal government to identify, prioritize and implement mitigation actions.
 - Through its continuing membership on the County’s Unified Disaster Council, the City promotes and maintains partnerships with Governmental and Tribal agencies.
 - Promote hazard mitigation in the private sector.
 - The City continues to include hazard mitigation with business license renewal documents.
 - The City collaborates with all local Chambers of Commerce to engage the local business sector in hazard mitigation.

2. What obstacles, problems, or delays did the project encounter?

None

3. If uncompleted, is the project still relevant? Should the project be changed or revised?

The project is still relevant and remains ongoing.

4. Other comments

None

SECTION SEVEN: Develop a Mitigation Strategy

Mitigation Action Progress Report Form

Progress Report Period	From Date: February 2018	To Date: February 2023
Action/Project Title	Build and support local capacity and commitment to continuously become less vulnerable to hazards.	
Responsible Agency	City of Lemon Grove – City Manager’s Office	
Contact Name	Andy McKellar	
Contact Phone/Email	619-772-2897 amckellar@heartlandfire.org	
Project Status	<ul style="list-style-type: none"> <input type="radio"/> Project completed <input type="radio"/> Project canceled <input checked="" type="radio"/> Project on schedule <input type="radio"/> Anticipated completion date: _____ <input type="radio"/> Project delayed Explain _____ 	

Summary of Project Progress for this Report Period

1. What was accomplished for this project during this reporting period?
 - Increase awareness and knowledge of hazard mitigation principles and practices among City staff.
 - City employees are made aware of potential hazards to the City and receive training on mitigation techniques.
 - Explore developing a web-based Hazard Mitigation Planning System and provide technical assistance.
 - Lemon Grove residents may submit service requests on the City webpage for a wide range of mitigation issues.
 - Continue to enhance the Emergency Operations Center (EOC).
 - The City conducts quarterly on-line WebEOC training for city EOC staff. The City is currently in the process of reassessing technological requirements within the EOC.

2. What obstacles, problems, or delays did the project encounter?

None

3. If uncompleted, is the project still relevant? Should the project be changed or revised?

The project is still relevant and remains ongoing.

4. Other comments

None

Mitigation Action Progress Report Form

Progress Report Period	From Date: February 2018	To Date: February 2023
Action/Project Title	Improve hazard mitigation coordination and communication with federal, state, local and tribal governments.	
Responsible Agency	City of Lemon Grove – Public Information	
Contact Name	Andy McKellar	
Contact Phone/Email	619-772-2897 amckellar@heartlandfire.org	
Project Status	<ul style="list-style-type: none"> <input type="radio"/> Project completed <input type="radio"/> Project canceled <input checked="" type="radio"/> Project on schedule <input type="radio"/> Anticipated completion date: _____ <input type="radio"/> Project delayed Explain _____ 	

Summary of Project Progress for this Report Period

1. What was accomplished for this project during this reporting period?
 - Establish and maintain closer working relationships with state agencies, local and tribal governments.
 - The City continues to support local partnerships through its participation on the Unified Disaster Council (UCD), Urban Area Working Group (UAWG) and through the coordination of Automatic and Mutual Aid agreements.
 - The City has embarked on a multi-jurisdictional, coordinated EOC project. Part of this effort will be multi-functional training and exercises aimed at enhancing hazard mitigation.
 - Support a coordinated permitting activities process.
 - The City continues to streamline policies to eliminate conflicts and duplication of effort and to collaboratively exchange resources and work with other agencies.
 - The City has also consolidated the administration of fire resources in conjunction with the neighboring Cities of El Cajon, La Mesa.
 - Improve the City’s capability and efficiency at administering pre- and post-disaster mitigation.
 - The City participates in regional Emergency Operations Center (EOC) table top and functional disaster exercises.
 - Improve capacity for selected City-owned facilities for use as shelters and/or alternate seats of government.
 - Explore installation of generators on selected facilities to ensure continuous power for use at shelters and/or alternate seats of government.

2. What obstacles, problems, or delays did the project encounter? - None

3. If uncompleted, is the project still relevant? Should the project be changed or revised? The project is still relevant and remains ongoing.

4. Other comments -None

Mitigation Action Progress Report Form

Progress Report Period	From Date: February 2018	To Date: February 2023
Action/Project Title	Reduce the possibility of damage and losses to existing assets, particularly people, critical infrastructure and public facilities due to <u>floods</u> .	
Responsible Agency	City of Lemon Grove – Public Information	
Contact Name	Andy McKellar	
Contact Phone/Email	619-772-2897 amckellar@heartlandfire.org	
Project Status	<ul style="list-style-type: none"> <input type="radio"/> Project completed <input type="radio"/> Project canceled <input checked="" type="radio"/> Project on schedule <input type="radio"/> Anticipated completion date: _____ <input type="radio"/> Project delayed Explain _____ 	

Summary of Project Progress for this Report Period

1. What was accomplished for this project during this reporting period?
 - Develop a comprehensive approach to reducing the possibility of damage and losses due to floods.
 - The City ensures that finish floor elevations of new developments are at least above the 100-year floodplain.
 - The City also requires drainage studies for major projects to ensure adequate measures are incorporated and that they do not adversely affect downstream or other surrounding properties. The City continues to limit uses in floodways to those tolerant of occasional flooding and to design new critical facilities to minimize potential flood damage
 - Protect existing assets with the highest relative vulnerability to the effects of floods within the 100-year floodplain.
 - The City continues to maintain flood control channels and storm drains, in accordance with habitat preservation policies, through periodic dredging, repair, de-silting, and clearing to prevent any loss in their effective use.
 - The City continues to identify and prioritize flood control projects and to pursue available grant funds for flood control projects.
 - Lemon Grove participates in the National Flood Insurance Program (NFIP) and requirement to review applications for conformance with the NFIP standards.
 - Minimize repetitive losses caused by flooding by analyzing historical losses.
 - The City continues preventative maintenance and inspection of floodway structures, storm drains, etc. consistent with applicable standards and to improve drainage courses in an environmentally sensitive manner to eliminate repetitive events.

2. What obstacles, problems, or delays did the project encounter? - None

3. If uncompleted, is the project still relevant? Should the project be changed or revised? The project is still relevant and remains ongoing.

4. Other comments -None

SECTION SEVEN: Develop a Mitigation Strategy

Mitigation Action Progress Report Form

Progress Report Period	From Date: February 2018	To Date: February 2023
Action/Project Title	Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure and City-owned facilities due to <u>earthquakes</u> .	
Responsible Agency	City of Lemon Grove – Community Development	
Contact Name	Andy McKellar	
Contact Phone/Email	619-772-2897 amckellar@heartlandfire.org	
Project Status	<ul style="list-style-type: none"> ● Project completed ● Project canceled ● Project on schedule ● Anticipated completion date: _____ ● Project delayed Explain _____ 	

Summary of Project Progress for this Report Period

1. What was accomplished for this project during this reporting period?

- Develop a comprehensive approach to reducing the possibility of damage and losses due to geologic hazards.
 - The City continues to require soil reports and implement its recommendations for projects in identified areas where liquefaction or other soil issues exist, and to review all new construction to ensure conformance with seismic requirements specified in the California Building Code.
 - The City requires a Geotechnical Investigation Report and a report of satisfactory placement of fill prepared by a licensed civil engineer for all building and structures supported on fill.
 - The City requires a preliminary report for all buildings and structures supported on natural ground unless the foundations have been designed in accordance with Table No. 1806.2 of the Building Code.

- Protect existing assets with the highest relative vulnerability to the effects of geologic hazards.
 - This is accomplished by requiring seismic retrofits for major renovations in accordance with Historic and Building Code provisions and continues to utilize the California Building Code for Building Conservation for non-historic buildings.

2. What obstacles, problems, or delays did the project encounter? - None

3. If uncompleted, is the project still relevant? Should the project be changed or revised? The project is still relevant and remains ongoing.

4. Other comments -None

SECTION SEVEN: Develop a Mitigation Strategy

Mitigation Action Progress Report Form

Progress Report Period	From Date: February 2018	To Date: February 2023
Action/Project Title	Climate Change	
Responsible Agency	City of Lemon Grove – Community Development	
Contact Name	Andy McKellar	
Contact Phone/Email	619-772-2897 amckellar@heartlandfire.org	
Project Status	<ul style="list-style-type: none"> <input type="radio"/> Project completed <input type="radio"/> Project canceled <input checked="" type="radio"/> Project on schedule <input type="radio"/> Anticipated completion date: _____ <input type="radio"/> Project delayed Explain _____ 	

Summary of Project Progress for this Report Period

1. What was accomplished for this project during this reporting period?

- Develop a comprehensive approach to reducing the possibility of damage and losses due to severe weather.
 - The City continues to ensure that existing and new storm drain and street capacities are adequate to manage a 100-year flood event and to ensure that new construction projects include surface drainage management that will preserve the integrity of the facility and public infrastructure.
 - Lemon Grove partners with appropriate agencies, community support groups, and service partners to better prepare for and respond to the emergency and disaster needs of the whole community during severe weather and/or following incidents that are exacerbated by climate change.

- Protect existing assets with the highest relative vulnerability to the effects of severe weather.
 - The City ensures that existing essential service facilities are protected by retrofitting or maintaining severe weather utilities and infrastructure such as emergency generators, heating, ventilation and air conditioning systems, and information technology, etc.

- Educate the community on drought, its potential impacts and individual mitigation techniques that the public can use to help to prevent or reduce the impact of drought.
 - Lemon Grove provides educational materials on severe weather and mitigation strategies on the city and disaster preparedness website and through social media. This information is also provided at various public events.

2. What obstacles, problems, or delays did the project encounter? - None

3. If uncompleted, is the project still relevant? Should the project be changed or revised? The project is still relevant and remains ongoing.

4. Other comments -None

7.2 Plan Update Evaluation

Plan Section	Considerations	Explanation
Planning Process	Should new jurisdictions and/or districts be invited to participate in future plan updates?	Yes, as new business and/or community sector organizations form during the next project period
	Have any internal or external agencies been invaluable to the mitigation strategy?	Lemon Grove Public Works Lemon Grove Community Development – Climate Action Plan San Diego County Sherriff’s Department Lemon Grove Fire Department / Heartland Fire & Rescue - Emergency Management Lemon Grove Fire Department / Heartland Fire & Rescue - Emergency Services Lemon Grove Fire Department / Heartland Fire & Rescue - Fire Prevention Community Emergency Response Team (CERT)
	Can any procedures (e.g., meeting announcements, plan updates) be done differently or more efficiently?	Yes, the continuance of virtual meetings developed during the worldwide pandemic.
	Has the Planning Team undertaken any public outreach activities?	Yes, a variety of outreach activities continues to be developed and implemented and is ongoing.
	How can public participation be improved?	While we already have strong community support, Lemon Grove continues to seek ways to improve public participation.
	Have there been any changes in public support and/or decision- maker priorities related to hazard mitigation?	The COVID-19 pandemic showed conflicting priorities related to public support of mitigation efforts.
Capability Assessment	Have jurisdictions adopted new policies, plans, regulations, or reports that could be incorporated into this plan?	Yes, updated hazard mitigation plans are part of an ongoing aspect of Lemon Groves’ mitigation efforts.
	Are there different or additional administrative, human, technical, and financial resources available for mitigation planning?	As staff positions change, and budget priorities shift, this capability may see some limitation of available resources.
	Are there different or new education and outreach programs and resources available for mitigation activities?	Lemon Grove is always striving to incorporate new outreach programs and resources into its mitigation activities.
	Has NFIP participation changed in the participating jurisdictions?	No change indicated.

TABLE 7.2.1: PLAN UPDATE EVALUATION – 7.2 DATA.

SECTION SEVEN: Develop a Mitigation Strategy

Plan Section	Considerations	Explanation
Risk Assessment	Has a natural and/or technical or human-caused disaster occurred?	COVID-19 pandemic.
	Should the list of hazards addressed in the plan be modified?	Not at this time
	Are there new data sources and/or additional maps and studies available? If so, what are they and what have they revealed? Should the information be incorporated into future plan updates?	As new sources of GIS products, and technological tools (mobile apps, etc.) emerge, they will be identified and incorporated in future plans.
	Do any new critical facilities or infrastructure need to be added to the asset lists?	Not at this time.
	Have any changes in development trends occurred that could create additional risks?	Any significant changes in development trends will be monitored and addressed in plan updates.
	Are there repetitive losses and/or severe repetitive losses to document?	According to the 2022 FEMA Repetitive Loss Summary Report, The City of Lemon Grove has no repetitive property loss.
Mitigation Strategy	Is the mitigation strategy being implemented as anticipated? Were the cost and timeline estimate accurate?	Yes
	Should new mitigation actions be added to the Action Plan? Should existing mitigation actions be revised or eliminated from the plan?	As additional migration actions are identified, they will be considered for addition to the plan.
	Are there new obstacles that were not anticipated in the plan that will need to be considered in the next plan update?	Unknown
	Are there new funding sources to consider?	Unknown
	Have elements of the plan been incorporated into other planning mechanisms?	Yes, the Mitigation Plan was used to inform the development of Lemon Grove’s General and Climate Action Plans.
Plan Maintenance Procedures	Was the plan monitored and evaluated as anticipated?	Yes
	What are needed improvements to the procedures?	Ensure continued monitoring and evaluation by Emergency Management and involved city departments during the next project period.

TABLE 7.2.2: PLAN UPDATE EVALUATION - 7.2 DATA CONTINUED.

7.2 Plan Implementation and Integration

Following adoption of the Multi-Jurisdictional Hazard Mitigation Plan by the San Diego County Board of Supervisors, the City of Lemon Grove Local Planning Group will present the Lemon Grove Annex to City Council for approval. After adoption by the City, documentation of implementation of the Mitigation Actions will begin.

The Mitigation Actions will be used to inform future iterations and updates of the General Plan and its Safety Element, the Emergency Operations Plan, the Climate Action Plan, and any other future plans that were the Hazard Mitigation plan could have bearing.

Leadership the Community Development team, Fire Department, GIS and Law Enforcement meet on a regular basis to review all new plans submitted to the City, and all tenant improvements submitted. Each department reviews all plans and must approve them before moving forward.