

1.1 City of Chula Vista

The City of Chula Vista (Chula Vista) reviewed a set of jurisdictional-level hazard maps, including detailed critical facility information and localized potential hazard exposure/loss estimates to help identify the top hazards threatening their jurisdiction. In addition, LPGs were supplied with exposure/loss estimates for Chula Vista, as summarized in Table 5.4-1. See Section 4.0 for additional details.

**Table 5.4-1
Summary of Potential Hazard-Related Exposure/Loss in Chula Vista**

Hazard Type	Exposed Population	Residential		Commercial		Critical Facilities	
		Number of Residential Buildings	Potential Exposure/Loss for Residential Buildings (x\$1,000)	Number of Commercial Buildings	Potential Exposure/Loss for Commercial Buildings (x\$1,000)	Number of Critical Facilities	Potential Exposure for Critical Facilities (x\$1,000)
Coastal Storm / Erosion	0	0	0	0	0	0	0
Sea level Change	22	0	0	12	4,085	4	3,978
Dam Failure	17,432	4,959	1,395,959	8,040	2,813,886	45	879,574
Earthquake (Annualized Loss - Includes shaking, liquefaction and landslide components)	232,095*	77,457*	21,804,146*	2,184*	9,788,033*	0*	0*
Flood (Loss)							
100 Year	2,225	666	187,479	1,116	390,720	45	310,762
500 Year	13,208	3,748	1,055,062	3,527	1,234,371	104	680,037
Rain-Induced Landslide							
High Risk	7	0	0	0	0	0	3
Moderate Risk	0	0	0	0	0	0	0
Tsunami	23	0	0	0	0	1	944
Wildfire / Structure Fire							
Fire Regime II & IV	227,269	72,446	20,393,549	24,923	8,722,910	589	1,747,946

* Represents best available data at this time.

After reviewing the localized hazard maps and exposure/loss table above, the following hazards were identified by the Chula Vista LPG as their top five hazards. A brief rationale for including each of these is included.

- **Wildfire/Structure Fire:** Due to the proximity of wildlands and natural and naturalized open spaces within steep canyon areas in and near urbanized areas developed prior to the enactment of the City's Urban-Wildland interface Code in 2000, combined with the probability of a wildland fire occurring in a given year, wildland/structure fires present the greatest hazard to the City of Chula Vista.
- **Geologic (Earthquake, Landslide, Liquefaction):** Due to its relative distance from the closest known active earthquake fault (Rose Canyon Fault), the City of Chula Vista is at low to moderate risk to damage from earthquakes, except in its northwestern most regions. The landslide threat is focused in the older developed areas around steep canyon slopes of known slide potential. The threat of liquefaction is relatively low; however, the alluvial areas of the Sweetwater and Otay Rivers and the Telegraph Canyon Channel are subject to liquefaction in both developed and undeveloped areas.
- **Floods/Dam Inundation:** Significant portions of the southerly, northerly, and westerly-developed areas of the City of Chula Vista are within FEMA-mapped 100-year floodplains. However, the threat of flood hazard is relatively low due to the City's emphasis on identifying and prioritizing for improvement a number of undersized and inadequate storm drains and drainage channels since the late 1960's, the low probability of the occurrence of flood-producing storms in any given year, and the requirement that new development includes flood-detention and flood control facilities. In addition, due to the fact that the City of Chula Vista is downstream of two major dams – the Savage (Lower Otay) Dam and the Sweetwater Dam – the possibility of dam inundation in and adjacent to the Sweetwater and Otay River Channels exists, although the likelihood of failure of these dams is considered relatively small due to their construction.
- **Other Manmade Hazards (Airplane Crashes, Hazardous Materials release/Rail Disaster Spills):** The City of Chula Vista is within the flight paths of Lindbergh Field, Brown Field, Tijuana Airport, Ream Field, and North Island Naval Station. The possibility of an airplane crash on take-off or approach from any of these facilities is relatively low, but the cumulative hazard from all of these facilities is significant. There are also a number of hazardous materials in large quantities in a few stationary locations within the City of Chula Vista, as well as mobile hazard sources. These hazardous materials although well contained, exist primarily west of Interstate 805 and have the potential to expose thousands of citizens to various degrees of hazard.
- **Extreme Heat and Drought:** While the City of Chula Vista enjoys a mild, Mediterranean climate, the community is still susceptible to extreme weather events, which are anticipated to be amplified by climate change. Scientists forecast that average summer temperatures will be 4.8°F higher in the near future, with extreme heat events also becoming more frequent and intense in the region. These heat events present a direct hazard to residents without air-conditioning and to vulnerable populations (such as seniors and the medically fragile). Extreme heat events can also impact local air quality conditions through the increase of smog-forming, ground-level ozone levels and result in additional public health concerns. Finally, sustained dry weather conditions further stress local water supplies as well as increase wildfire threats.

1.1.1 Capabilities Assessment

The LPG identified current capabilities available for implementing hazard mitigation activities. The Capability Assessment (Assessment) portion of the jurisdictional mitigation plan identifies administrative, technical, legal and fiscal capabilities. This includes a summary of departments and their responsibilities associated to hazard mitigation planning as well as codes, ordinances, and plans already in place associated to hazard mitigation planning. The second part of the Assessment provides Chula Vista's fiscal capabilities that may be applicable to providing financial resources to implement identified mitigation action items.

1.1.2 Existing Institutions, Plans, Policies and Ordinances

The following is a summary of existing departments in Chula Vista and their responsibilities related to hazard mitigation planning and implementation, as well as existing planning documents and regulations related to mitigation efforts within the community. The administrative and technical capabilities of Chula Vista, as shown in Table 5.4-2, provides an identification of the staff, personnel, and department resources available to implement the actions identified in the mitigation section of the Plan. Specific resources reviewed include those involving technical personnel such as planners/engineers with knowledge of land development and land management practices, engineers trained in construction practices related to building and infrastructure, planners and engineers with an understanding of natural or manmade hazards, floodplain managers, surveyors, personnel with GIS skills and scientists familiar with hazards in the community.

- Chula Vista City Council:

Provides vision and direction in building and nurturing a progressive and cohesive community, which values its diversity, respects its citizens, honors its legacy, and embraces the opportunities of the future. Provides vision, adopts policies and regulations, and approves funding requests/budgets over all aspects of City government

- Chula Vista City Manager's Office

Provides the leadership and supervision that, in turn, implements the policies and decisions of the Chula Vista City Council, thereby ensuring the delivery of services to the community. Manages City staff, implements City Council decisions and policies over all aspects of City government, and assures the delivery of a wide range of services to the community.

- Chula Vista Finance Department

Assists the City Council and City Manager in maintaining public confidence in the fiscal integrity of the City by accounting for, controlling and reporting on the City's resources in accordance with sound public financial management practices. Assures all aspects of City financing, funding, and expenditures are within legal, prescribed guidelines and regulations. Tracks and audits expenditures.

- City of Chula Vista Development Services Department

Guides the physical development of the City through the implementation of the General Plan and Building Codes and is committed to enhancing the quality of life in the community by planning for sound infrastructure and public services, protecting of the environment, and promoting high quality social and economic growth.

Regulates land uses and land development in accordance with plans, policies, and regulations adopted by the City Council. Enforces local, State, and federal requirements for land development, building construction, and specific uses. Recommends additions and revisions to existing ordinances, plans, and policies when necessary.

Enhances the quality of life for the Chula Vista community by proactively planning and facilitating environmentally and socially sound economic development, revitalization and affordable housing opportunities.

Regulates land uses and land development in accordance with plans, policies, and regulations adopted by the City Council and Redevelopment Agency within redevelopment areas. Recommends additions and revisions to existing ordinances, plans, and policies with respect to redevelopment areas.

Implements and enforces programs, plans, policies, and regulations over land development and redevelopment in order to assure adequate and maintainable infrastructure.

Mutual aid with certified building inspectors and engineers for damage assessment following a disaster.

- City of Chula Vista Public Works Department

Provides a variety of engineering services including the review and inspection of privately constructed public facilities, infrastructure, and subdivisions; design and inspection of publicly funded infrastructure improvements; management and monitoring of existing and projected traffic conditions throughout the City; preparation of the City's long-term Capital Improvement Program and management of the City's sewer and storm drain systems.

Engineering also provides fiscal management for the City's Open Space Maintenance Districts Assessments, Community Facility Districts, and Development Impact Fees.

Maintains the basic infrastructure needed for the City to exist and thrive. These basic facilities include streets, curbs, gutters, sidewalks, wastewater systems, storm water systems, street trees, parks and open space areas, and street signage and striping. The department also maintains the City's vehicle fleet and all City communication equipment, particularly used by Police and Fire. Implements a wide range of programs, plans, and policies necessary to assure delivery of basic services to the citizens of Chula Vista and maintains the City's infrastructure and environmental quality. The Department of Public Works Operations is a first responder in natural and manmade emergencies.

- City of Chula Vista Police Department

Protects the community through the enforcement of laws and the analysis/reduction/ elimination of risks and, in times of emergency, provides for the orderly and rapid implementation of emergency plans.

Implements and/or enforces programs, plans, ordinances, and policies of the City over a wide range of activities related to law enforcement. The Police Department is a first responder in natural and manmade emergencies.

- City of Chula Vista Fire Department

Serves and safeguards the community through a professional, efficient and effective system of services, which protect life, environment, and property.

Implements programs, policies, and regulations over a wide range to reduce the loss of life, environment, and property. The Fire Department is a first responder in natural and manmade emergencies.

- City of Chula Vista Information Technology Services Department

Assists all departments with their technological needs and develops, implements, operates, and maintains hardware and software systems in order to support and improve the operational efficiency and effectiveness of City departments.

The department is comprised of four functional areas -- Operations & Telecommunications, Systems Administration & Security, Microcomputer and LAN Support, and GIS & Applications Support.

**Table 5.4-2
City of Chula Vista: Administrative and Technical Capacity**

Staff/Personnel Resources	Y/N	Department/Agency and Position
A. Planner(s) or engineer(s) with knowledge of land development and land management practices	Y	Development Services and Public Works Departments
B. Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Development Services and Public Works Departments
C. Planners or Engineer(s) with an understanding of natural and/or manmade hazards	Y	Development Services and Public Works Departments
D. Floodplain manager	Y	City Engineer and Building Official
E. Surveyors	Y	Public Works Department
F. Staff with education or expertise to assess the community's vulnerability to hazards	Y	Development Services, Police, Fire, Information Technology Services, and Public Works Departments.
G. Personnel skilled in GIS and/or HAZUS	Y	Information Technology Services
H. Scientists familiar with the hazards of the community	N	City uses Consultant Scientists, as needed and as resources are available
I. Emergency Coordinator	Y	Fire Department- Emergency Services Coordinator
J. Grant writers	Y	All Departments
K. Personnel skilled in identifying, accessing and bringing to bear, both public and private economic recovery-related resources	Y	Development Services and Finance Departments

The legal and regulatory capabilities of Chula Vista are shown in Table 5.4-3 which presents the existing ordinances and codes that affect the physical or built environment of Chula Vista. Examples of legal and/or regulatory capabilities can include: the City's building codes, zoning ordinances, subdivision ordinances, special purpose ordinances, growth management ordinances, site plan review, general plans, capital improvement plans, economic development plans, emergency response plans, and real estate disclosure plans.

**Table 5.4-3
City of Chula Vista: Legal and Regulatory Capability**

Regulatory Tools (ordinances, codes, plans)	Local Authority (Y/N)	Does State Prohibit (Y/N)
A. Building code	Y	N
B. Zoning ordinance	Y	N
C. Subdivision ordinance or regulations	Y	N
D. Special purpose ordinances (floodplain management, storm water management, hillside or steep slope ordinances, wildfire ordinances, hazard setback requirements)	Y	N
E. Growth management ordinances (also called “smart growth” or anti-sprawl programs)	Y	N
F. Site plan review requirements	Y	N
G. General or comprehensive plan	Y	N
H. A capital improvements plan	Y	N
I. An economic development plan	Y	N
J. An emergency response plan	Y	N
K. A post-disaster recovery plan	Y	N
L. A post-disaster recovery ordinance	Y	N
M. Real estate disclosure requirements	Y	N
N. Shake Roof Retrofit Program	Y	N
O. Water Conservation Ordinance	Y	N
P. Clearing of Brush (Fuels) from City Property	Y	N
Q. National Pollutant Discharge Elimination System (NPDES)	Y	N
R. Land Development Ordinance	Y	N
S. California Building Code	Y	N
T. California Reference Standards Code	Y	N
U. California Mechanical Code	Y	N
V. California Electrical Code	Y	N
W. California Plumbing Code	Y	N
X. California Fire Code	Y	N
Y. California Statutes 21000-21178: Public Resources Code, Division 13 – Environmental Quality	Y	N
Z. Urban-Wildland Interface Code	Y	N
AA. Floodplain Regulations	Y	N
BB. Zoning and Specific Plans	Y	N
CC. Specific Plans	Y	N
DD. Precise Plan	Y	N

EE. Modified District	Y	N
FF. Sectional Planning Areas (SPA)	Y	N
GG. SPA Amendment	Y	N
HH. Supplemental SPA	Y	N
II. Land Use Overlay	Y	N
JJ. Modification of Urban-Wildland Interface Requirements	Y	N
KK. Consolidated Annual Plan – CDBG and HOME Programs	Y	N
LL. Redevelopment Plans – Bayfront, Town Centre I, Town Centre II, Otay Valley and Southwest	Y	N
MM. Landscape Conservation Ordinance	Y	N
NN. Standard Specifications for Public Works Construction (Greenbook)	Y	N
OO. Subdivision Manual	Y	N
PP. Local Energy Assurance Plan (LEAP)	Y	N

1.1.3 Fiscal Resources

Table 5.4-4 shows specific financial and budgetary tools available to Chula Vista such as community development block grants; capital improvements project funding; authority to levy taxes for specific purposes; fees for water, sewer, gas, or electric services; impact fees for homebuyers or developers for new development; ability to incur debt through general obligations bonds; and withholding spending in hazard-prone areas.

**Table 5.4-4
City of Chula Vista: Fiscal Capability**

Financial Resources	Accessible or Eligible to Use (Yes/No)
A. Community Development Block Grants (CDBG)	Yes, as resources are available and to the extent the funds are used to benefit eligible census tracts
B. Capital improvements project funding	Yes, as resources are available
C. Authority to levy taxes/assessments for specific purposes	Yes, but requires Proposition 218 Voter Approval (2/3 of all voters, simple majority of property owners for assessments). Voter approval highly unlikely in most cases.
D. Fees for sewer service	Yes, Sewer Fees only. City does not own or operate water, gas or electric utilities
E. Impact fees for homebuyers or developers for new developments/homes	Yes, are paid at time of permitting and for very specific purposes
F. Incur debt through general obligation bonds	Yes, as resources are available
G. Incur debt through special tax and revenue bonds	Yes, as resources are available
H. Incur debt through private activity bonds	Yes
I. Withhold spending in hazard-prone areas	Yes

1.1.4 Goals, Objectives and Actions

Listed below are Chula Vista’s specific hazard mitigation goals, objectives and related potential actions. For each goal, one or more objectives have been identified that provide strategies to attain the goal. Where appropriate, the City has identified a range of specific actions to achieve the objective and goal. 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.

Once developed, City staff presented submitted the plan the CalOES and FEMA for approval. Once approved by FEMA the plan will be taken to City Council for adoption.

Public comments were solicited by the County Office of Emergency Services to present these goals, objectives and actions to citizens and to receive public input. Specific consideration was given to hazard identification/profiles and the vulnerability assessment results. The following sections present the hazard-related goals, objectives and actions as prepared by the City of Chula Vista in conjunction with the Hazard Mitigation Working Group, locally elected officials, and local citizens.

1.1.4.1 Goals

The City of Chula Vista has developed the following 10 Goals for their Hazard Mitigation Plan

Goal 1. Promote disaster-resistant land development

Goal 2. Increase public understanding, support and demand for effective hazard mitigation

Goal 3. Build and support local capacity and commitment to continuously become less vulnerable to hazards

Goal 4. Improve coordination and communication with federal, state and local governments

Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and City-owned facilities, due to:

Goal 5. Floods

Goal 6. Wildfires/Structure Fires

Goal 7. Dam Failure

Goal 8. Geologic Hazards

Goal 9. Extreme Heat and Drought

Goal 10. Other Manmade Hazards (See Attachment A)

1.1.4.2 Objectives and Actions

The City of Chula Vista developed the following broad list of objectives and actions to assist in the implementation of each of their 10 identified goals. The City of Chula Vista developed objectives to assist in achieving their hazard mitigation goals. For each of these objectives, specific actions were developed that would assist in their implementation. A discussion of the prioritization and implementation of the action items, as resources become available, is provided in Section 5.4.5.

Goal 1: Promote disaster resistant existing and future development.		Applies to New, Existing or Both
<i>Objective 1.A: Encourage and facilitate the development or updating of general plans and zoning ordinances to limit development in hazard areas.</i>		
Action 1.A.1	Review the City’s General Plan periodically and update the appropriate elements, as necessary.	
Action 1.A.2	Identify new hazardous occupancies as they are permitted or created and establish database for same.	
Action 1.A.3	Update the City’s zoning ordinance periodically and address development in hazard areas and minimize zoning ambiguities.	

Goal 1: Promote disaster resistant existing and future development.	Applies to New, Existing or Both
<i>Objective 1.A: Encourage and facilitate the development or updating of general plans and zoning ordinances to limit development in hazard areas.</i>	
<p>Action 1.A.4 Periodically revisit the City’s hazard mitigation-related ordinances to identify areas where improvements could be made.</p> <p>Action 1.A.5 Utilize hazard overlays to identify hazard-prone areas.</p> <p>Action 1.A.6 Establish buffer zones for development near hazard-prone areas.</p> <p>Action 1.A.7 Prohibit development in extreme hazard areas that cannot be adequately mitigated and set aside for open space.</p> <p>Action 1.A.8 Identify land uses appropriate to specific hazard areas.</p>	
<i>Objective 1.B: Encourage and facilitate the adoption of building codes that protect renovated existing assets and new development in hazard areas.</i>	
<p>Action 1.B.1 Adopt local building codes to address local building issues in hazard areas.</p> <p>Action 1.B.2 Amend the Zoning and Subdivision Ordinances, as required, to implement the appropriate policies of the General Plan.</p> <p>Action 1.B.3 Actively participate in the State- and Nation-wide building code development groups to ensure that development issues in hazard areas are properly addressed.</p> <p>Action 1.B.4 Amend the Fire Code and Building Code, as necessary, to be consistent with the appropriate policies of the General Plan.</p> <p>Action 1.B.5 Identify and improve buildings to mitigate hazards through elevation, retaining walls, dikes and flood diverting measures, relocating electrical outlets to higher elevations, increasing fire resistance, etc.</p> <p>Action 1.B.6 Identify and provide fire mitigation measures in buildings with hazardous materials, add ventilation systems to minimize explosions, as required, and add control areas.</p> <p>Action 1.B.7 Develop hazard-specific code requirements and/or technical opinions for each type of hazard area.</p> <p>Action 1.B.8 Require site-specific studies to evaluate specific hazards in hazard-prone areas and identify alternative site design criteria to mitigate hazards to the maximum extent possible.</p> <p>Action 1.B.9 Establish minimum structure setbacks adjacent to hazard areas, with respect to hazard specific code.</p>	
<i>Objective 1.C: Encourage consistent enforcement of general plans, zoning ordinances, and building codes.</i>	
<p>Action 1.C.1 Periodically review General Plan, Zoning Ordinance, Fire Codes, Subdivision Ordinance, and Building Codes for consistency for extreme hazard areas for open space uses.</p> <p>Action 1.C.2 Maintain ongoing training for development staff on development procedures and zoning and building code interpretation.</p> <p>Action 1.C.3 Continue to provide a hazmit compliance review any time a permit is obtained for any improvement on new and existing hazardous occupancies.</p>	

Goal 1: Promote disaster resistant existing and future development.	Applies to New, Existing or Both
<p>Action 1.C.4 Develop and implement specialized training on an on-going basis for appropriate Development Services staff for each type of hazard area.</p> <p>Action 1.C.5 Provide an inspection program to ensure maintenance of compliance to hazmit-related codes.</p>	
<p>Action 1.C.6 Follow development procedures to ensure development is consistent with the General Plan.</p> <p>Action 1.C.7 Provide educational sessions for owners of hazardous occupancies and encourage a maintenance program.</p>	
<i>Objective 1.D: Discourage future development that exacerbates hazardous conditions.</i>	
<p>Action 1.D.1 Update the zoning ordinance to limit future development of hazardous areas.</p> <p>Action 1.D.2 Apply for State/Federal grants/funds for the acquisition of developable land for open space development.</p> <p>Action 1.D.3 Take a proactive approach to fire code/building code compliance inspections with respect to concentration of hazardous material in one area or location.</p> <p>Action 1.D.4 Educate the public regarding hazardous locations, operations, buildings, etc.</p>	
<i>Objective 1.E: Address identified data limitations regarding the lack of information about new development and build-out potential in hazard areas.</i>	
<p>Action 1.E.1 Use hazard overlays to identify hazard-prone new development.</p> <p>Action 1.E.2 Utilize staff consultant expertise in evaluating technical studies/data.</p> <p>Action 1.E.3 Update databases/Geographic Information System (GIS), with particular attention to maintaining hazard overlay layers. Require electronic submittals of all reports and data in electronic form.</p> <p>Action 1.E.4 Require studies to evaluate specific hazards in hazard-prone areas and identify alternative site design criteria to mitigate hazards to the maximum extent possible.</p>	
<i>Objective 1.F: Actively pursue grant funding for citywide hazard mitigation.</i>	
<p>Action 1.F.1 Explore hazard mitigation funding, from state and nation-wide sources, and to inform the proper department head when potential grant funding is identified.</p> <p>Action 1.F.2 Apply for hazard mitigation grant funding, as it becomes available.</p> <p>Action 1.F.3 Identify target hazard mitigation projects to minimize delay when grant funding is available.</p>	

Goal 2: Promote public understanding, support and demand for hazard mitigation.		Applies to New, Existing or Both
<i>Objective 2.A: Educate the public and business community to increase awareness of hazards and opportunities for mitigation actions.</i>		
Action 2.A.1	Provide information to be distributed to the public at information booths at street fairs, community meetings, etc.	
Action 2.A.2	Continually provide Chula Vista citizens with Community Emergency Response Team training opportunities to increase public awareness of hazards and response to hazards.	
Action 2.A.3	Provide public information on geologic and firestorm hazards and safety.	
Action 2.A.4	Provide information at community meetings or other public gatherings.	
Action 2.A.5	Use City’s website to communicate information on what our citizens can do to minimize/mitigate these dangers.	
<i>Objective 2.B: Promote partnerships between the state, counties, and local governments to identify, prioritize, and implement mitigation actions.</i>		
Action 2.B.1	Identify state and federal hazard mitigation funds/programs for public and private entities.	
Action 2.B.2	Continue to participate in the San Diego County Multi-Hazard Mitigation Plan process.	
Action 2.B.3	Contact neighboring cities and counties to create shared programs and have periodic meetings to share information and open channels of communication.	
<i>Objective 2.C: Monitor and publicize the effectiveness of mitigation actions implemented.</i>		
Action 2.C.1	Create a program to report and monitor the mitigation implementation.	
Action 2.C.2	Provide specific outreach to citizens with special needs.	
<i>Objective 2.D: Discourage activities that exacerbate hazardous conditions.</i>		
Action 2.D.1	Promote an increased level of security of facilities storing hazardous materials.	
Action 2.D.2	Ensure land uses that do not conform to this Plan are not permitted.	
Action 2.D.3	In the event previously conforming land uses are damaged or destroyed in a disaster, ensure that reconstruction is consistent with Chula Vista Municipal Code, Chapter 19.64.	
Action 2.D.4	Provide guidelines in the usage of hazardous materials specifically in approved locations.	

Goal 3: Build and support local capacity and commitment to continuously become less vulnerable to hazards.		Applies to New, Existing or Both
<i>Objective 3.A: Increase awareness and knowledge of hazard mitigation principles and practices among state, and local officials.</i>		
Action 3.A.1	Establish the means to share information and innovations in various areas of hazard mitigation.	
Action 3.A.2	Coordinate hazard mitigation activities with local utilities, water suppliers, and critical facilities within the City of Chula Vista.	
<i>Objective 3.B: Seek technical assistance from State and Federal agencies in refining and implementing hazard mitigation plans.</i>		
Action 3.B.1	Seek State and Federal funding for implementation of the City's hazard mitigation plan.	
Action 3.B.2	Request periodic County Office of Emergency Services (OES), CalOES, and FEMA review of the City's hazard mitigation plan for recommendations for plan refinements and for potential funding sources.	
<i>Objective 3.C: Ensure adequate infrastructure is in-place for emergencies.</i>		
Action 3.C.1	Promote the establishment and maintenance of: safe and effective evacuation routes; ample peak-load water supply; adequate road widths; and, safe clearances around buildings.	
Action 3.C.2	Develop, implement and maintain, when necessary, mutual aid agreements.	
Action 3.C.3	Identify public and private resources available for various types of emergencies, including materials, equipment, debris removal/recycling, etc.	
Action 3.C.4	Establish emergency purchasing authority with local businesses, suppliers, disposal sites, and material recyclers.	
Action 3.C.5	Provide and maintain adequate training for City emergency personnel to carry out local responsibilities during various types of emergencies.	

Goal 4: Continuously improve hazard mitigation coordination and communication with federal, state and local governments.		Applies to New, Existing or Both
<i>Objective 4.A: Establish and maintain close working relationships with state agencies and other local governments.</i>		
Action 4.A.1	Attend multi-agency hazard mitigation planning meetings that deal with other local governments and County, State, and Federal entities.	
Action 4.A.2	Promote mutual aid agreements and interagency dialogue related to hazard mitigation planning.	
<i>Objective 4.B: Encourage other organizations to incorporate hazard mitigation activities.</i>		
Action 4.B.1	Encourage businesses and industrial operations in embracing hazard mitigation as a daily activity.	
Action 4.B.2	Promote hazard mitigation as a viable way of doing business for governmental entities, industry, businesses and the general public.	

Goal 4: Continuously improve hazard mitigation coordination and communication with federal, state and local governments.		Applies to New, Existing or Both
Action 4.B.3	Where applicable, discuss hazard mitigation plan activities with fellow municipal government workers within professional membership groups at group activities.	
<i>Objective 4.C: Improve the State's capability and efficiency at administering pre- and post-disaster mitigation.</i>		
Action 4.C.1	Establish standard GIS databases that contain all spatial data likely to be needed in an Emergency Operations Center and make these projects available to all local, regional and State governments, as resources are available. Safeguard the projects by storing in multiple locations. Promote the sharing of these projects and data with other agencies.	
Action 4.C.2	Support regional planning efforts for hazard mitigation and disaster recovery planning.	

Goal 5: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and City-owned facilities, due to <u>floods</u>.		Applies to New, Existing or Both
<i>Objective 5.A: Develop a comprehensive approach to reducing the possibility of damage and losses due to floods.</i>		
Action 5.A.1	Encourage the establishment of adequate open space in flood zones as indicated on FEMA flood maps.	
Action 5.A.2	Prevent deposit of fill or construction within any floodway.	
Action 5.A.3	Update Drainage Element of the General Plan based upon actual developed conditions (General Plan, GMOC Section).	
Action 5.A.4	Continue to review applications for new development within the City in compliance with the California Environmental Quality Act (CEQA) provisions set forth by the State of California, thereby requiring individualized studies for flood hazards on an as-needed basis and establishing mitigation measures for the development project before construction begins.	
Action 5.A.5	Monitor and enforce compliance with CEQA-mandated mitigation measures and FEMA requirements during development and construction, as the project requires.	
Action 5.A.6	Incorporate information on projected sea level rise into the assessment of areas affected by the 100-year flood.	
<i>Objective 5.B: Protect existing assets with the highest relative vulnerability to the effects of floods within the 100-year floodplain.</i>		
Action 5.B.1	Continue to require flood control improvements of new development where flooding is already a problem (existing ordinances).	
Action 5.B.2	Discourage the disruption of natural flowage patterns and encourage the maximum use of natural and naturalized drainage ways in new development (General Plan drainage and flood control policies).	
<i>Objective 5.C: Minimize repetitive losses caused by flooding.</i>		

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Action 5.C.1	Identify and define local hazard areas and to monitor floodplain management.	
Action 5.C.2	Where possible, implement drainage improvements with an emphasis on improving downstream facilities before improving upstream facilities, unless upstream mitigation (such as detention or retention basins) is provided.	
Action 5.C.3	Provide information on State and Federal funding sources available to flood-proof existing structures/facilities in flood-prone areas.	
<i>Objective 5.D: Request assistance from State and Federal governments, as necessary, to enable the City to maintain compliance with the National Flood Insurance Program (NFIP) requirements.</i>		
Action 5.D.1	Periodically review City compliance with NFIP requirements.	
Action 5.D.2	Require the submittal of Letters of Map Revision (LOMRs)/ Letters of Map Amendment (LOMAs) as required by FEMA.	
Action 5.D.3	Update Flood layers in GIS upon FEMA approval of LOMRs/LOMAs.	

Goal 6: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and publicly owned facilities, due to <u>wildfires and structural fires</u>.		Applies to New, Existing or Both
<i>Objective 6.A: Develop a comprehensive approach to reducing the possibility of damage and losses due to wildfires.</i>		
Action 6.A.1	Ensure the open space around structures is sufficient to promote fire safety.	
Action 6.A.2	Ensure the space separating buildings is consistent with the standards of fire-safety practices.	
Action 6.A.3	Continue to review applications for new development within the City in compliance with the California Environmental Quality Act (CEQA) provisions set forth by the State of California, thereby requiring individualized studies (i.e. Fire Protection Plans) for wildfire on an as-needed basis and establishing mitigation measures for the development project before construction begins.	
<i>Objective 6.B: Prevent the loss of life in wildland fires.</i>		
Action 6.B.1	Develop and promote public education programs in wildland fire safety and survival for all residents adjacent to wildland areas.	
<i>Objective 6.B: Prevent the loss of life in wildland fires (Continued).</i>		
Action 6.B.2	Develop and publicize evacuation plans and routes in areas threatened by wildland fires.	
Action 6.B.3	Add a Fire Educational Officer to the Fire Department's budget to implement Action 6.B.1 and ensure that the position is filled and has adequate resources.	
Action 6.B.4	Provide recommendations for managing open space preserves in a manner that minimizes fuel loads, through actions such as hand clearing and other appropriate means.	

Goal 6: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and publicly owned facilities, due to <u>wildfires and structural fires</u>.		Applies to New, Existing or Both
<i>Objective 6.C: Prevent the ignition of structures by wildland fires.</i>		
Action 6.C.1	Incorporate fire-resistant building materials and construction methods in new development adjacent to wildland and open space areas in accordance with adopted fire, building, wildland-urban interface codes, fire protection plans and community wildfire protection plan.	
Action 6.C.2	Ensure defensible fire-fighting space is afforded adjacent to wildland and open space areas in new developments.	
<i>Objective 6.D: Prevent wildland-caused structural conflagration.</i>		
Action 6.D.1	Adopt an ordinance requiring “Class A-rated” roofs and siding on all new and remodeled structures.	
Action 6.D.2	Require non-combustible window assemblies and double-pane glass in all new and remodeled structures facing a wildland.	
<i>Objective 6.E: Prevent the encroachment of wildland fire upon the community.</i>		
Action 6.E.1	Require a “greenbelt” or other defensible zone, as topography dictates, along the easterly edge of the easterly city limits.	
Action 6.E.2	Improve and ensure adequate access to wildland areas and adequate water supply for firefighters.	
Action 6.E.3	Increase budget to the Public Works Open Space Maintenance for brush clearing.	
<i>Objective 6.F: Investigate the possibility of doing further Community Vegetation Management Analysis.</i>		
Action 6.F.1	Finalize and adopt a <i>Community Wildfire Protection Plan</i> .	
Action 6.F.2	Investigate the possibility of adopting a final <i>Community Wildfire Protection Plan</i> and ensure the enforcement thereof.	
<i>Objective 6.G: Identify data needed to provide information related to wildland fires (e.g., a comprehensive database of California wildfires, a California wildfire risk model, and relative vulnerability of assets).</i>		
Action 6 G.1	Develop GIS layer(s) showing history and frequency of major wildland fire events. Include additional layers showing canyon names, acreage, fire department access points and evacuation routes.	
Action 6 G.2	Continue working with regional (SDREGIN) and federal agencies to establish procedures that will enable the City to acquire near real-time data on wildland fire extents to improve EOC response to an emergency. Establish a GIS project model that readily incorporates such data to reduce the amount of time required to produce field maps.	

Goal 7: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and publicly owned facilities, due to <u>dam failure</u>.		Applies to New, Existing or Both
<i>Objective 7.A: Develop a comprehensive approach for reducing the possibility of damage and losses due to dam failure.</i>		
Action 7.A.1	Continue to review applications for new development within the City in compliance with the California Environmental Quality Act (CEQA) provisions set forth by the State of California, thereby requiring individualized studies for flood hazards on an as-needed basis and establishing mitigation measures for the development project before construction begins.	
Action 7.A.2	Monitor and enforce compliance with CEQA mandated mitigation measures during development and construction, as the development project requires.	
Action 7.A.3	Review current dam failure information/data for clarity and accuracy.	
Action 7.A.4	Review current evacuation plans for accuracy and practicality and publicize these plans.	
Action 7.A.5	Obtain and review State-mandated annual dam assessment reports.	
<i>Objective 7.B: Protect existing assets with the highest relative vulnerability to the effects of dam failure.</i>		
Action 7.B.1	Identify and prioritize critical facilities within dam inundation zones.	
Action 7.B.2	Identify vulnerable populations within dam inundation areas.	
Action 7.B.3	Identify Federal and State funding to minimize/mitigate dam inundation hazards to critical facilities and vulnerable populations.	
<i>Objective 7.C: Identify data needed to provide information about the relative vulnerability of assets from dam failure.</i>		
Action 7.C.1	Update plans/data periodically to adequately represent existing conditions/vulnerable populations.	
Action 7.C.2	Conduct survey of assets within dam inundation areas.	

Goal 8: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and publicly owned facilities, due to <u>geological hazards</u>.		Applies to New, Existing or Both
<i>Objective 8.A: Develop a comprehensive approach to reducing the possibility of damage and losses due to geological hazards.</i>		
Action 8.A.1	Ensure the space separating buildings is consistent with building standards and fire-safety practices.	
Action 8.A.2	Ensure the structural characteristics of soil and requirements contained in building codes determine the type of construction allowed.	
Action 8.A.3	Ensure areas of development do not include hazard areas such as ancient landslides, unstable soils, or active fault zones unless mitigated.	

Goal 8: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and publicly owned facilities, due to <u>geological hazards</u>.		Applies to New, Existing or Both
Action 8.A.4	Ensure no lands are subdivided, developed or filled in the absence of supportable, professional evidence that the proposed subdivision, development, or landfill would be geologically safe.	
Action 8.A.5	Continue to review applications for new development within the City in compliance with the California Environmental Quality Act (CEQA) provisions set forth by the State of California, thereby requiring individualized studies for geological hazards on an as-needed basis and establishing mitigation measures for the development project before construction begins.	
Action 8.A.6	Monitor and enforce compliance with CEQA mandated mitigation measures during development and construction, as the development project requires.	
<i>Objective 8.B: Protect existing assets with the highest relative vulnerability to the effects of geological hazards.</i>		
Action 8.B.1	Wherever feasible, land uses and buildings that are determined to be unsafe from geologic hazards shall be mitigated, discontinued, removed, or relocated	
<i>Objective 8.C: Coordinate with and support existing efforts to mitigate geological hazards (e.g., California Geological Survey, US Geological Survey).</i>		
Action 8.C.1	Update GIS seismic data regularly to reflect new data from the California Geological Survey and the US Geological Survey.	

Goal 9: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and publicly owned facilities, due to <u>extreme heat and drought</u>.		Applies to New, Existing or Both
<i>Objective 9.A: Expand programs and services to protect the community from more frequent and extreme heat and drought events.</i>		
Action 9.A.1	Identify populations that may be especially susceptible to extreme heat and drought using social vulnerability indices and other resources (such as the new California EnviroScreen Tool).	
Action 9.A.2	Establish new “Cool Zones” in the eastern and southern portions of the community to ensure their close proximity to all populations.	
Action 9.A.3	Ensure that designated emergency shelters are able to provide adequate air-conditioning and ventilation during loss of grid-supplied electricity (as outlined in the City’s Local Energy Assurance Plan.	
Action 9.A.4	Map the highest heat island index areas in order to more effectively target mitigation activities such as shade trees, cool roofs, and cool pavement.	
Action 9.A.5	Develop an action plan to comprehensively support public health and wellbeing, thus helping to increase the community’s resilience to extreme heat and drought events.	
Action 9.A.6	Integrate public awareness about extreme heat and drought and related air quality concerns into existing and new City outreach campaigns.	

Goal 9: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and publicly owned facilities, due to <u>extreme heat and drought</u>.		Applies to New, Existing or Both
<i>Objective 9.B: Maximize the efficient use of water resources to improve the community's resilience to long-term drought conditions.</i>		
Action 9.B.1	Promote waster efficiency and conservation through stricter municipal policies and building codes.	
Action 9.B.2	Facilitate graywater use by streamlining permits, providing technical assistance , and hosting community workshops.	
Action 9.B.3	Explore opportunities to capture, treat, and reuse storm water for irrigation purposes	
Action 9.B.4	Develop commercial building standards for indoor recycled water use in coordination with Otay Water District.	
Action 9.B.5	Implement water efficiency upgrades at municipal buildings and parks to reduce the City's use of potable water (as outlined in the new City Operations Sustainability Plan).	
<i>Objective 9.C.: Plan and prepare for local climate change impacts that are likely to amplify extreme heat and drought.</i>		
Action 9.C.1	Incorporate objectives and policies that address sea level rise into updates to the General Plan and related implementation documents	
Action 9.C.2	Continue the City's active participation in the San Diego Regional Climate Collaborative and other regional/state forums to share best practices and leverage resources concerning climate change preparedness.	
Action 9.C.3	Update the City's climate adaptation strategies, as needed, to incorporate the latest scientific data and to ensure that public service and infrastructure are resilient to climate change.	

1.1.5 Prioritization and Implementation of Action Items

Once the comprehensive list of jurisdictional goals, objectives, and action items listed above was developed, the proposed mitigation actions were prioritized. This step resulted in a list of acceptable and realistic actions that address the hazards identified in each jurisdiction. This prioritized list of action items was formed weighing STAPLEE criteria

The Disaster Mitigation Act of 2000 (at 44 CFR Parts 201 and 206) requires the development of an action plan that not only includes prioritized actions but one that includes information on how the prioritized actions will be implemented. Implementation consists of identifying who is responsible for which action, what kind of funding mechanisms and other resources are available or will be pursued, and when the action will be completed.

The prioritized actions below reflect progress in local mitigation efforts as well as changes in development.

The top prioritized mitigation actions as well as an implementation strategy for each are:

Action Item #1: Provide and maintain adequate training for City emergency personnel to carry out local responsibilities during various types of emergencies.

Coordinating Individual/Organization: Fire Department

Potential Funding Source: General Fund, Grants

Implementation Timeline: 1-5 Years

Action Item #2: Update the City's zoning ordinance periodically and address development in hazard areas and minimize zoning ambiguities.

Coordinating Individual/Organization: Development Services Department

Potential Funding Source: Development Fees, General Fund

Implementation Timeline: 1-5 Years

Action Item #3: Finalize and adopt a *Community Wildfire Protection Plan*.

Coordinating Individual/Organization: Fire Department

Potential Funding Source: General Fund

Implementation Timeline: 1-3 Years

Action Item #4: Develop, implement and maintain, when necessary, mutual aid agreements.

Coordinating Individual/Organization: All Team Members (Inter-Departmental)

Potential Funding Source: Solid Waste Fees, Solid Waste Grants, General Fund

Implementation Timeline: 1-3 Years

Action Item #5: Review applications for new development within the City in compliance with the California Environmental Quality Act (CEQA) provisions set forth by the State of California, thereby requiring individualized studies for flood hazards on an as-needed basis and establishing mitigation measures for the development project before construction begins.

Coordinating Individual/Organization: Development Services Department

Potential Funding Source: General Fund, Development Fees

Implementation Timeline: 5 Years

Action Item #6: Provide citizens with Community Emergency Response Team training opportunities to increase public awareness of hazards and response to hazards, as resources are available.

Coordinating Individual/Organization: Fire Department

Potential Funding Source: State Homeland Security Grant Program, General Fund

Implementation Timeline: On-going

Action Item #7: Require structural flood control improvements of new development where flooding is already a problem (existing ordinances).

Coordinating Individual/Organization: City Engineer

Potential Funding Source: General Fund, Developer Fees

Implementation Timeline: On-going

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