

5.16 City of San Diego

The City of San Diego (San Diego) 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 San Diego summarized in Table 5.16-1. See Section 4.0 for additional details.

**Table 5.16-1
Summary of Potential Hazard-Related Exposure/Loss in San Diego**

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	148	8	2,252	3	1,215	0	0
Sea Level Rise	2,014	167	47,011	459	160,538	34	53,424
Dam Failure	75,686	28,036	7,892,134	1,206	5,404,930	444	389,597
Earthquake (Annualized Loss - Shaking and liquefaction components)	377,827*	165,860*	46,689,590*	91,223*	31,928,040*	1,436*	4,474,097*
Floods (Loss)							
100 Year	24,802	3,697	1,040,706	8,118	2,841,291	327	443,110
500 Year	55,587	15,026	4,229,819	20,788	7,275,973	555	1,054,872
Rain-Induced Landslide							
High Risk	137,095	48,049	13,525,794	1,072	4,804,382	152	65,478
Moderate Risk	10	3	845	0	0	0	0
Tsunami	10,360	5,357	1,507,996	1,736	607,514	37	51,550
Wildfire/ Structure Fire							
Fire regime II & IV	1,244,722	486,276	136,886,694	262,238	91,783,418	4,741	16,297,402

* Represents Rose Canyon Event

After reviewing the localized hazard maps and exposure/loss table above, the following hazards categories were identified by the San Diego LPG as its top twelve:

- **Coastal Storms/Erosion/Tsunami**
- **Cyber Disruption**
- **Dam Failure**
- **Drought**
- **Earthquakes**
- **Extreme Heat**
- **Floods**
- **Hazardous Materials**
- **Landslide**
- **Other Manmade Hazards**
- **Terrorism**
- **Wildfire/Structure Fire**

5.16.1 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 San Diego's fiscal capabilities that may be applicable to providing financial resources to implement identified mitigation action items.

5.16.1.1 Existing Institutions, Plans, Policies and Ordinances

The following is a summary of existing departments in San Diego 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 San Diego, as shown in Table 5.16-2, 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, and personnel with GIS skills.

DEVELOPMENT SERVICES DEPARTMENT

The Development Services Department manages the City of San Diego's land development process from concept to completion. The scope of responsibility for construction and development projects includes permit issuance; review of subdivision maps and public improvement and grading plans; compliance with land use regulations, community plans and environmental status; review of construction plans; and construction projects.

Land Development Code/Environmentally Sensitive Land Regulations and Coastal Development Regulations: These sections of the Land Development Code restrict development in areas prone to hazards, such as floodplains, steep slopes, and unstable soils or geologic formations and would require permits and compliance with specific requirements for any disturbance of defined environmentally sensitive lands (habitat, wetlands, steep hillsides, coastal bluffs, etc.) or for any work done to repair or restore an area damaged by those hazards included in this plan. However, provisions are provided to allow emergency work without delay.

ECONOMIC DEVELOPMENT DEPARTMENT

The May 2014 revision to the FY 2015 budget contains the re-establishment of the Economic Development Department which will separate the function from the current Planning, Neighborhoods, and Economic Development Department. This action reflects the Mayor's commitment to foster economic development throughout the City. This proposal creates a single department to coordinate economic development opportunities with local, national, and international stakeholders. This new department will assure new and existing businesses the City of San Diego is open for business and truly values business' contributions in creating a successful and diversified economy.

ENVIRONMENTAL SERVICES DEPARTMENT

The Environmental Services Department (ESD) was established in 1988 to protect the environment and to provide all San Diego residents with properly disposed municipal solid waste, along with an environment free of litter and illegal dumping.

ESD's mission has expanded to pursue waste reduction and recycling, composting and environmentally-sound landfill management to meet the City of San Diego's long term waste disposal needs. ESD has provided refuse pickup for 90 years and curbside recycling and yard waste collection for two decades. In addition, ESD oversees the City's management of energy, pursues innovative energy independence goals and works to advance more sustainable practices within the City organization and the community.

The Department is organized into three operational divisions:

Collections Services Division provides weekly refuse and every-other-week recyclables and yard waste collection services to 290,000 homes and places, and services street litter bins in commercial districts throughout the City. The Collection Services Division was named Fleet of the Year by Fleet Owner Magazine in 2005 and is the recipient of the Solid Waste Association of North America (SWANA) Excellence in Operations Silver Award in 2011.

Energy Sustainability and Environmental Protection Division develops and manages programs relating to energy use, sustainability, climate change, and the proper management of hazardous waste. This division includes energy, sustainability, and environmental protection programs. The Ridgehaven green building, one of America's most resource efficient buildings, is home to the Environmental Services Department. Ridgehaven holds the nation's first Energy Star label for buildings awarded by the U. S. Department of Energy and the U.S. Environmental Protection Agency in 1999. Green building features include energy savings, resource conservation, a healthy workplace, and operational savings.

Waste Reduction and Disposal Division develops and implements the City's solid waste reduction and diversion programs and policies, conducts disposal and composting operations at the City's Miramar Landfill, manages the City's inactive landfill sites, provides illegal dump and community cleanup services throughout the City, and enforces the City's solid waste codes.

The Department continues to implement programs to improve waste diversion in San Diego with a goal of 75% diversion by 2020. Less material generated translates into an extended life for the City's Miramar Landfill, currently schedule to close in 2025.

FIRE-RESCUE DEPARTMENT

The Fire-Rescue Department serves the eighth largest City in the United States and the second largest City in California. San Diego Fire-Rescue is a multi-faceted organization that provides City residents with fire and life safety services including fire protection, emergency medical services, and lifeguard protection at San Diego beaches.

Members of the department guarantee to the people of San Diego they will provide dependable service in a responsible fashion, while showing care and compassion for those in need. They protect lives, property, and the environment through fire suppression, medical care, emergency medical transport, technical rescue, hazardous materials response, fire investigation, explosives disarmament, fire safety inspections, fire prevention and education programs, disaster preparedness, hazardous materials mitigation, equipment and facilities maintenance, waterway and swimmer safety, and the operation of the 911 communications center.

OFFICE OF HOMELAND SECURITY

The San Diego Office of Homeland Security (SD-OHS) oversees the City's Preparedness Grant, Emergency Preparedness, Emergency Operations Center, and Public and Disaster Assistance programs. The collective purpose of these four programs and the mission of SD-OHS is to promote a secure and resilient city with the capabilities required across the whole community to prevent, protect against, mitigate, respond to, and recover from the threats and hazards that pose the greatest risk. These risks include events such as natural disasters, disease pandemics, chemical spills, and other manmade hazards, terrorist attacks, and cyber-attacks.

With the Preparedness Grant Program, SD-OHS is responsible for securing and managing federal Homeland Security grant funds for the entire San Diego region through the Federal Emergency Management Agency (FEMA) Urban Area Security Initiative (UASI). The UASI grants are intended to address the needs of high-threat, high-density urban areas, and assist them in building an enhanced and sustainable capacity to prevent, protect against, mitigate, respond to, and recover from acts of terrorism. The UASI grants focus on enhancing preparedness through regional collaboration and the development of integrated regional capabilities. SD-OHS also manages and administers other FEMA grant programs that are awarded or allocated directly to the City to improve its emergency preparedness capabilities. These other federal grant sources include the State Homeland Security Program and the Emergency Management Performance Grants Program.

The Emergency Preparedness Program enhances and supports the City's preparedness for major emergencies and disasters. This program leads the development and review of City-level emergency plans; facilitates the integration of the City's emergency plans both internally and externally; coordinates and collaborates with the County, State, and federal jurisdictions and agencies; manages and supports the City's readiness and utilization of the regional Community Emergency Notification System (i.e., Alert San Diego); facilitates the provision of information to the public and the business community to assist in emergency preparations and response; and coordinates and oversees relevant citywide emergency training and exercises.

During major emergencies and disasters, the City's Emergency Operations Center may be activated to support and coordinate the City's overall, multi-department emergency response and recovery operations. Under the Emergency Operations Center Program, SD-OHS maintains the operational readiness of the City's primary Emergency Operations Center (EOC) and alternate EOC. This program develops and updates EOC protocols and processes; manages the assignment, training, and readiness of EOC staff members; maintains and enhances EOC facilities, equipment, and information management systems; and develops and updates protocols and resources to support the SD-OHS Duty Officer. The SD-OHS Duty Officer is a rotating, two-week, 24/7 assignment that serves as an emergency point of contact and resource for City officials and regional partners.

Through the Public and Disaster Assistance Program, SD-OHS facilitates the City's recovery from major emergencies and disasters. With this program, SD-OHS manages and coordinates the City's participation in State and federal recovery-related financial assistance programs such as the FEMA Public Assistance Grant Program and the California Disaster Assistance Act Program.

INFORMATION TECHNOLOGY DEPARTMENT

The Information Technology Department provides responsive and dependable information technology services to City organizations to support fiscally sound and effective government. The department is responsible for providing the City of San Diego's Information Technology strategic direction, policies, procedures, and standards. The goals of the department are to effectively manage the delivery of City-wide technology services, guide technology decision-making to ensure consistency with the City-wide business direction, ensure a skilled, responsive, and innovative workforce that keeps current with evolving business-critical technologies, and provide a high quality of customer service.

PARK AND RECREATION DEPARTMENT

The mission of the Park and Recreation Department is to acquire, develop, and maintain a park and recreation system which enriches the quality of life for residents and visitors alike, and preserves it for future generations. The department is responsible for overseeing nearly 41,000 acres of developed and undeveloped space, more than 340 parks including Balboa Park, Mission Trails Regional Park, and Mission Bay Park; 26 miles of shoreline from Sunset Cliffs to La Jolla; 13 pools; 3 public golf complexes; 56 recreation centers and more. Park and recreation professionals and volunteers host hundreds of community events each year and provide safe places for thousands of children to go after school.

PLANNING DEPARTMENT

The mission of the Planning Department is to create a well-planned desirable living and working environment for all San Diegans. To achieve this mission, the department is responsible for the development and implementation of land use and transportation policies, as well as long-range fiscal planning for public facilities. San Diego's General Plan, adopted in 2008, is the blueprint for how the City of San Diego will grow and develop over the next 20 to 30 years. General Plan implementation occurs through a wide variety of programs and actions that involve many City departments. Planning staff also work with other agencies, including the San Diego Association of Governments (SANDAG), to help ensure the City and regional plans together represent a unified version and implementation strategy. As a participating jurisdiction in the County's Multi-Jurisdictional Hazard Mitigation Plan, the City, through its General Plan, has adopted policies that guide development away from hazardous sites while utilizing hazardous mitigation and other safety measures in the provision of future developments. The policies addressing hazardous mitigation are concentrated in the Land Use, Mobility, Urban Design, and Public Facilities, Services and Safety Elements.

On July 7, 2009, the City Council adopted the General Plan Action Plan, the implementation and monitoring document accompanying the General Plan. Both the General Plan and Action Plan contain policies that limit future development in hazardous areas. Because the General Plan does not address specific community zoning issues, these mitigation measures are achieved through the Community Plan Update process.

The City's community plans are integral components of the General Plan, refining the broad City-wide policies to more community-specific policies which remain consistent with the General Plan. The Department's primary responsibilities related to hazardous mitigation are implemented through the update of Community Plans.

POLICE DEPARTMENT

The San Diego Police Department provides law enforcement, scene and event security, evacuations, public emergency notifications, traffic and crowd control, traffic and criminal investigations, records management, permits and licensing for police regulated businesses, laboratory services, and support services. The City is represented by nine area commands, divided into 19 service areas, policing 122 neighborhoods. The Department plans for and implements the Dam Failure Plan and the San Diego River Road Closure Plan.

PUBLIC UTILITIES DEPARTMENT

The Public Utilities Department is comprised of the Wastewater and Water Sections. The emphasis for this department is to provide a streamlined, effective organization in oversight, strategic planning, and administration for the City's water storage, treatment, and delivery systems, the regional wastewater treatment and disposal services, and the Municipal Sewage System.

Metropolitan Wastewater's mission is to provide the public with a safe and efficient regional sewer system that protects our ocean water quality, supplements our limited water supply, and meets federal standards, at the lowest possible cost. Through state-of-the-art facilities, water reclamation, biosolids production and cogeneration, the City is a leader in maximizing the conservation of water and energy as part of the wastewater treatment process.

The City of San Diego entered the municipal water business in 1901 when the City bought the water system from a private company. More than 100 years later, San Diego's water infrastructure has become one of the most complex in the United States. San Diego operates more than 3,302 miles of water lines, 49 water pump plants, 90+ pressure zones, and more than 200 million gallons of potable water storage capacity in 32 standpipes, elevated tanks, and concrete and steel reservoirs. In addition to supplying more than 280,000 metered service connections within its own incorporated boundaries, San Diego conveys and sells potable water to the City of Del Mar, the Santa Fe and San Dieguito Irrigation Districts, and the California American Water Company, which, in turn, serves the Cities of Coronado and Imperial Beach and portions of south San Diego. San Diego also maintains several emergency connections to and from neighboring water agencies, including Santa Fe Irrigation District, the Poway Municipal Water District, and Otay Water District, the California American Water Company, and the Sweetwater Authority.

PUBLIC WORKS DEPARTMENT

- **ENGINEERING BRANCH**

Engineering provides a full range of engineering services for the City's capital investment in various types of infrastructure and provides traffic engineering services to the community. The department is responsible for planning, design, project management, and construction management of public improvement projects; quality control and inspection of private work permitted in the right-of-way; surveying and material testing; and providing traffic operations and transportation engineering services.

Engineering activities include work on various public infrastructure assets to rehabilitate, restore, improve and add to the City of San Diego's capital facilities. The Capital Improvement Program (CIP) covers a wide range of projects including: airports, bikeways, drainage and flood control facilities, libraries, parks and recreation centers, police, fire and lifeguard stations, street improvements, street lights, traffic signals, utilities undergrounding, water and sewer facilities and pipelines.

Traffic engineering services include transportation system forecasting and program management, responding to traffic requests from the public, maintaining the City's traffic signal system, and traffic safety analysis.

Other engineering services include quality control and inspection for private work permitted in the right of way, site grading and subdivision improvements, infrastructure asset management, CIP prioritization, and engineer functions for all City departments.

- **GENERAL SERVICES BRANCH**

This branch of Public Works is composed of five distinct elements providing a range of services to the City of San Diego.

Communications provides primary service delivery for wireless communications technologies; engineers, installs, operates, and maintains private, metropolitan-wide, wireless voice and data communications systems and equipment; and contracts for commercially-provided wireless services. They ensure the provision of life-line voice and data communications for emergency first responders.

Facilities is responsible for ensuring the facilities where library, park and recreation centers, and other government services are provided and maintained in a safe and operable manner. More than 1,600 City facilities are in constant use and require preventive maintenance, custodial service, scheduled maintenance, and, in some cases, emergency repair to keep them in full operation. The Facilities staff, which includes plumbers, painters, electricians, carpenters, locksmiths, and other skilled-trades people, provides these services to City departments.

Fleet Services provides all City departments with motive equipment and a full range of fleet management services. These services include acquisition, fitting, maintenance and repair, the provision of parts and fuel, body repair, painting, metal fabrication, disposal services, and other motive equipment-related support services, such as machining, equipment rental, and operator training.

Publishing Services provides full reproduction capability, including offset press operations, high-volume copying and finishing services, and also provides graphic design and electronic publishing services.

TRANSPORTATION & STORM WATER DEPARTMENT

The Transportation & Storm Water Department is responsible for the operation and maintenance of streets and storm drains; leads efforts to protect and improve the water quality of rivers, creeks, bays, and the ocean; performs traffic and transportation system engineering; manages the Utilities Undergrounding Program; and plans and coordinates work in the public right-of-way. The department is comprised of four distinct divisions:

- Right- of-Way (ROW) Coordination
- Storm Water
- Streets
- Transportation Engineering Operations

The ROW Coordination Division provides centralized policies and ensures improvements are reviewed, permitted, and inspected for quality assurance and conformity to policies, procedures, and standards. The Division is responsible for coordination of activities within the public ROW among City departments, public and private utilities, developers, and other entities planning and performing work within the public ROW. In addition, the ROW Coordination Division manages the planning and implementation of the City's Utilities Undergrounding Program. The Utilities Undergrounding Program removes overhead utility lines (electric, phone, cable, etc.,) and relocates them underground in accordance with the City's Utilities Undergrounding Master Plan.

The Storm Water Division leads the City's efforts to protect and improve the water quality of rivers, creeks, bays, and the ocean. The Division's efforts are conducted to ensure compliance with the Municipal Storm Water Permit and other surface water quality regulations issued by the State of California. The Division's priorities are to identify and abate sources of pollution through the implementation of innovative and efficient public education, watershed management, storm water development and construction regulations, enforcement, City-wide training programs, and to provide the most efficient storm drain system operation and maintenance services to residents. The City has over 48,000 storm drain structures, 700 miles of drainage pipe, 15 storm water pump stations, and 26 Best Management Practices (BMPs). The Division is responsible for the inspection, maintenance, repair of storm drain systems in the public ROW and drainage easements, and ensuring this work is conducted in compliance with all local, State, and Federal environmental regulations. This work includes clearing blocked drains, removing debris from storm drain structures, cleaning and repairing damaged drain pipes and drainage structures, and conducting frequent inspection and maintenance of the permanent BMPs. In addition, the Division manages maintenance efforts for 84 miles of drainage channels and ditches located throughout the City. The Division is also responsible for street sweeping efforts, which reduce pollutants found in City roadways. The sweeping program helps remove debris that collects in gutters and can potentially clog drains, as well as collecting metal particles and other hazardous waste products left by passing vehicles. The City currently has over 2,700 miles of improved streets that are included in the sweeping program.

The Street Division is responsible for a wide range of services and operations that are provided by the following sections: Roadways/Trench Restoration, Electrical/Traffic and Trees, and Asset Management/Engineering and Contracts. The Division maintains and repairs all streets, alleys, sidewalks, bridges, guardrails, street lights, traffic signals, pavement markings, and trees in the right-of-way. The Division also manages the City's Resurfacing Program and administers annual resurfacing and slurry seal contracts.

The Transportation Engineering and Operations Division manages the City's transportation network in order to provide the efficient movement of goods, services, and people. Management of the system includes monitoring and making operations changes to improve traffic flow and safety for motorists, pedestrians, and cyclists. The Division also plans and programs transportation related capital improvement projects for the same goals. The Division's responsibilities include coordination of traffic investigations for signs, markings, traffic control devices, speeding concerns, and parking issues; crash data collection and analysis; traffic volume data collection; establishment of speed zones; traffic signal management (signal timing, installation, and modification); conducting mobility studies; and investigating and responding to the need for street lights, pedestrian safety improvements, traffic calming, and school safety improvements.

**Table 5.16-2
City of San Diego: 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	Planning and Community Investment, Development Services, Environmental Services, and Engineering and Capital Projects
B. Engineer(s) or professional(s) trained in construction practices related to buildings and/or infrastructure	Y	Engineering and Capital Projects, General Services, and Development Services.
C. Planners or Engineer(s) with an understanding of natural and/or manmade hazards	Y	Fire-Rescue, Police, Development Services, Planning and Community Investment, Environmental Services, and Engineering and Capital Projects.
D. Floodplain manager	Y	Development Services, and Engineering and Capital Projects
E. Surveyors	Y	Engineering and Capital Projects, and Environmental Services
F. Staff with education or expertise to assess the community's vulnerability to hazards	Y	Development Services
G. Personnel skilled in GIS and/or HAZUS	Y	Information Technology, and Engineering and Capital Projects
H. Emergency manager	Y	Office of Homeland Security
I. Grant writers	Y	Financial Management, Park and Recreation and Environmental Services.

The legal and regulatory capabilities of San Diego are shown in Table 5.16-3, which presents the existing ordinances and codes that affect the physical or built environment of San Diego. 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 5.16-3
City of San Diego: 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

5.16.1.2 Fiscal Resources

Table 5.16-4 shows specific financial and budgetary tools available to San Diego 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 5.16-4
City of San Diego: Fiscal Capability**

Financial Resources	Accessible or Eligible to Use (Yes/No)
A. Community Development Block Grants (CDBG)	Yes
B. Capital improvements project funding	Yes
C. Authority to levy taxes for specific purposes	Yes
D. Fees for water, sewer, gas, or electric service	Yes
E. Impact fees for homebuyers or developers for new developments/homes	Yes
F. Incur debt through general obligation bonds	Yes
G. Incur debt through special tax and revenue bonds	Yes
H. Withhold spending in hazard-prone areas	Yes

5.16.2 Goals, Objectives and Actions

Listed below are San Diego'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 a specific goal and objective.

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. Representatives of numerous City departments involved in hazard mitigation planning, including Development Services, Economic Development, Environmental Services, Fire-Rescue, Information Technology, Office of Homeland Security, Park and Recreation, Planning, Police, Public Utilities, Public Works, and Transportation and Storm Water provided input to the San Diego LPG.

The actions contained in this update are new except for two that were enhanced from the prior update, two that were not completed until the current update commenced and therefore carried over and enhanced, and one dealing with the NFIP and its standards which is required for all updates.

The San Diego LPG members were:

- Jamal Batta – Senior Civil Engineer, Public Works Engineering
- John Clements – Deputy Director, Public Works Fleet Services
- Kurt Grube – Sergeant, San Diego Police Department
- Gary Hayslip – Deputy Director, Chief of Information Security Department of IT
- Roy Kirby – Deputy Director, Public Works
- Gene Matter – Assistant Deputy Director, Transportation and Storm Water
- Doug Nakama – Deputy Chief Special Operations, San Diego Fire Rescue
- Geoffrey Pack – Supervising Homeland Security Coordinator, Office of Homeland Security
- David Racela – Homeland Security Coordinator, Office of Homeland Security
- Eugene Ruzzini – Program Manager, Office of Homeland Security
- Mehdi Shadyab – Senior Structural Engineer, Development Services
- Dan Stone – Program Manager, Public Utilities
- Eriberto Valdez – Senior Management Analyst, Financial Management
- John Valencia – Executive Director, Office of Homeland Security
- Cathy Winterrowd – Deputy Director, Planning
- Hasan Yousef – Deputy Director, Transportation and Storm Water
- Chris Zirkle – Deputy Director, Park and Recreation
- Mark Zu Hone – Associate Civil Engineer, Environmental Services

The draft plan was posted on the Office of Emergency Services Website to present these preliminary goals, objectives and actions to citizens and to receive public input. Specific questions were asked and the public was requested to provide comments and suggestions regarding the draft plan and the proposed mitigation actions. An email address was provided for the public to send comments and suggestions to. This email address was checked daily for public input.

The Hazard Mitigation Plan Guidelines process requires the completed plan be submitted to Cal OES Governor's Office of Emergency Services and FEMA for approval prior to being taken to the City Council for adoption.

The following sections present the hazard-related goals, objectives and actions as prepared by San Diego's LPG in conjunction with the Hazard Mitigation Working Group, locally elected officials, and local citizens. The City of San Diego incorporates the Hazard Mitigation Plan into the Emergency Operations Plan.

5.16.2.1 Goals

The City of San Diego has developed the following **6** Goals for their Hazard Mitigation Plan.

- Goal 1.** Promote public understanding, support, and demand for hazard mitigation.
- Goal 2.** Improve hazard mitigation coordination and communication with federal, state, local, and tribal governments.
- Goal 3.** Reduce the possibility of damage and losses to people, critical facilities/infrastructure, and State-owned facilities, due to wildfire/structural fire, coastal storms/erosion/tsunami, landslide, hazardous materials, and other manmade hazards.
- Goal 4.** Reduce the possibility of damage and losses to people, critical facilities/infrastructure and State-owned facilities due to severe weather (e.g., El Nino storms, thunderstorms, lightning, tsunami, and extreme heat and drought).
- Goal 5.** Reduce the possibility of damage and losses to people, critical facilities/infrastructure and State-owned facilities due to earthquake and dam failure.
- Goal 6.** Reduce the high probability of damage and losses to people, critical facilities/infrastructure and State-owned facilities due to floods.

5.16.2.2 Objectives and Actions

The City of San Diego developed the following broad list of objectives, and action items to assist in achieving and implementing each of its 6 identified hazard mitigation goals.

Goal 1: Promote public understanding, support and demand for hazard mitigation.		New, Old or Both
<i>Objective 1.A: Promote partnerships between the state, counties, local and tribal governments to identify, prioritize, and implement mitigation actions.</i>		
Action 1.A.1	Develop a comprehensive approach to educating the public of the importance of “defensible space” for protection of their homes and property.	Both

Goal 2: Improve hazard mitigation coordination and communication with federal, state, local, and tribal governments.		New, Old or Both
<i>Objective 2.A: Establish and maintain closer working relationships with state agencies, local, and tribal governments.</i>		
Action 2.A.1	Strengthen the development and enhancement of standardized City Emergency Operations Plan(s), and ensure they are coordinated with the appropriate County-wide Emergency Operations Plan(s).	Both
Action 2.A.2	Enhance operating the City’s Emergency Operations Center (EOC) and Department Operations Centers (DOC) following the Standardized Emergency Management System (SEMS) and Incident Command System (ICS). This includes training multiple staff members for each position in the EOC.	Both
Action 2.A.3	Strengthen City and region-wide threat and hazard identification through the use of a Risk Management Program that enables regional stakeholders to utilize and assess quantitative and qualitative data, e.g. Critical Infrastructure/Key Resources (CIKR) databases, relative risk rankings of CIKR sites, core capability assessments, etc.	Both

Goal 3: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and State-owned facilities, due to <u>wildfire/structure fire, coastal storms/erosion/tsunami, landslide, hazardous materials, and other manmade hazards.</u>		New, Old or Both
<i>Objective 3.A: Develop a comprehensive approach to reducing the possibility of damage and losses due to <u>wildfire/structural fire, coastal storms/erosion/tsunami, landslide, hazardous materials, and manmade hazards.</u></i>		
Action 3.A.1	Perform brush management activities within the open space, public owned brush management zone, on a bi-annual basis.	Both
Action 3.A.2	Maintain brush management inspection cycle of 42,505 parcels that are divided into 19 inspection areas and accomplished every 3.8 years.	Both
Action 3.A.3	Create buffer zones around residential and non-residential structures through the removal or reduction of flammable vegetation, including vertical clearance of tree branches and removal of dead or dry leaves, needles, twigs, and combustibles from roofs, decks, eaves, porches, and yards.	Both
Action 3.A.4	Create buffer zones around power lines, oil and gas lines, and other infrastructure systems, including replacing flammable vegetation with less flammable.	Both
Action 3.A.5	Maintain critical water and wastewater services to the region through effective critical infrastructure management, to include the use of multi-source power distribution systems, installation and maintenance of permanent alternate power generators at all plants and pumping stations, and the further development of redundancies in the data transmission of control systems.	Both

Goal 4: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and State-owned facilities, due to <u>severe weather</u> (e.g., El Nino storms/, thunderstorms, lightning, tsunami, and extreme heat and drought).		New, Old or Both
<i>Objective 4.A: Develop a comprehensive approach to reducing the possibility of damage and losses due to severe weather.</i>		
Action 4.A.1	Enhance procedures to better support storm mitigation measures including identifying coastal inundation zones, evacuation routes, alert warning notification procedures, staging areas, temporary shelters, community engagement, public information requirements, and enhancing collaboration with local, state and federal partners.	Both
Action 4.A.2	Update the Land Development Code to require private development in the coastal zone to elevate storm drains above anticipated sea level rise along the San Diego coastline.	New
Action 4.A.3	Enhance existing City partnerships with appropriate local agencies, community support groups, and service providers to better mitigate hazards that may increasingly result from severe weather and/or climate change.	Both
Action 4.A.4	Support water conservation policies and programs to enforce water use restrictions. These include municipal code enforcement and other restrictions on outdoor water use and indoor practices to mitigate the effects of severe weather and drought.	Both

Goal 5: Reduce the possibility of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and State-owned facilities, due to <u>earthquake and dam failure</u>.		New, Old or Both
<i>Objective 5.A: Develop a comprehensive approach to reducing the possibility of damage and losses due to earthquake and dam failure.</i>		
Action 5.A.1	Complete a seismic retrofit of the California Tower section of the Museum of Man in Balboa Park.	New
Action 5.A.2	Take actions to safeguard against dam failure, to include supporting public awareness initiatives, initiating structural studies and improvements in coordination with the State’s Division of Safety of Dams, and maintaining effective disaster planning in collaboration with local, state, and Federal agencies.	Both
Action 5.A.3	Enhance the means of providing water for fire-fighting when service is disrupted because of earthquake.	Both

Goal 6: Reduce the high probability of damage and losses to existing assets, particularly people, critical facilities/infrastructure, and State-owned facilities, due to <u>floods</u>.		New, Old or Both
<i>Objective 6.A: Develop a comprehensive approach to reducing the high probability of damage and losses due to floods.</i>		
Action 6.A.1	Work with U.S. Fish and Wildlife Service (USFWS), U.S. Army Corps of Engineers (USACE), and other Federal, State, and local agencies to restore the conveyance capacity of the following channels by removing deposited sediment, trash and accumulated vegetation to restore original channel cross sections: Cowles Mountain/San Carlos, Alvarado (Section 59 and 60 and 61-63), Industrial Court, Smythe, Auburn, Jamacha, Rancho Bernardo, South Chollas, Solola/Cottonwood, Sweetwater, and Tijuana River Valley.	Both
Action 6.A.2	Support a “Green Street” ordinance to protect and improve water quality of rivers, creeks, bays, and the ocean by reducing pollutants in compliance with water quality regulations and orders.	New
Action 6.A.3	Participate in the National Flood Insurance Program (NFIP) and meet the requirements for conformance with NFIP standards.	Both

5.16.2.3 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 our jurisdiction. This prioritized list of action items was formed by the LPG weighing STAPLEE criteria.

The Disaster Mitigation Action of 2000 (at 44CFR 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.

In addition to the actions taken in this update, the City of San Diego continues to conduct various preparedness and planning activities related to all hazards. Such as courses related to

terrorism/WMD/IED, swift water rescue, emergency management and leadership/incident management, and food emergencies. The City also has initiatives related to first responder safety, large scale natural disaster response and recovery, and regional collaboration and coordination. The San Diego Regional THIRA, submitted annually in December to FEMA and Cal OES, comprehensively addresses in detail most of the identified threats and hazards. Specifically, the region's THIRA includes scenarios, resource requirements based on selected FEMA director Core Capabilities, impacts, and desired outcomes for the following threats and hazards: Wildfire, Earthquake, Tsunami, Power Outage, Complex Coordinated Attack (i.e. terrorist attack to include explosives/HAZMIT), Cyber-Attack, and a Radiological/Nuclear (HAZMIT) Attack. The THIRA also takes into consideration the impacts of climate change and extreme heat. All the scenarios employed in the THIRA are selected based on real-world/recent events, or scenarios that have been vetted and observed by outside examiners and/or subject matter experts.

The City is also in the process of developing a revised Homeland Security Update for 2017 that will address all of these threats and hazards on a regional basis, and is currently updating VHEMP values for regional high priority critical infrastructure (CIKR) assets based on these threats and hazards.

The City is also designated NWS/NOAA (National Weather Service/National Oceanographic and Atmospheric Agency) certified Tsunami/Storm Ready Jurisdiction. The City is also registered NWS Ambassador, and routinely participates in enhanced outreach and engagement with NWS.

The City has Tsunami evacuation routes and a Public Outreach Plan, a partner in the Regional Cyber Disruption Plan, has Dam Failure Plans, participated in the State committee Public Outreach for drought, collaborates with the Earthquake Engineering Institute, partners with County Cool Zones, has a 100-yr Flood Plan including tactical fire/swift water rescue, Active Shooter Training Program for terrorism, and a Wildfire Urban Interface Plan for Wild/Structural Fire.

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

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 **19** prioritized mitigation actions as well as an implementation strategy for each are:

1. **Action 1.A.1** - Develop a comprehensive approach to educating the public of the importance of "defensible space" for protection of their homes and property.

Coordinating Department/Organization: Fire Rescue

Potential Funding Source: Budgeted

Implementation Timeline: On-going

2. **Action 3.A.1** - Perform brush management activities within the open space, public owned brush management zone, on a bi-annual basis.

Coordinating Department/Organization: Park and Recreation

Potential Funding Source: Budgeted

Implementation Timeline: On-going

3. **Action 3.A.2** - Maintain bush management inspection cycle of 42,505 parcels that are divided into 19 inspection areas and accomplished every 3.8 years.

Coordinating Department/Organization: Fire Rescue

Potential Funding Source: Budgeted

Implementation Timeline: On-going

4. **Action 3.A.3** - Create buffer zones around residential and non-residential structures through the removal or reduction of flammable vegetation, including vertical clearance of tree branches and removing dead or dry leaves, needles, twigs, and combustibles from roofs, decks, eaves, porches, and yards.

Coordinating Department/Organization: Fire Rescue

Potential Funding Source: Budgeted

Implementation Timeline: On-going

5. **Action 3.A.4** - Create buffer zones around power lines, oil and gas lines, and other infrastructure systems, including replacing flammable vegetation with less flammable.

Coordinating Department/Organization: Fire Rescue

Potential Funding Source: Budgeted

Implementation Timeline: On-going

6. **Action 3.A.5** - Maintain critical water and wastewater services to the region through effective critical infrastructure management, to include the use of multi-source power distribution systems, installation and maintenance of permanent alternate power generators at all plants and pumping stations, and the further development of redundancies in the data transmission of control systems.

Coordinating Department/Organization: Public Utilities

Potential Funding Source: Budgeted

Implementation Timeline: On-going

7. **Action 4.A.4** – Support water conservation policies and programs to enforce water use restrictions. These include municipal code enforcement and other restrictions on outdoor water use and indoor practices to mitigate the effects of severe weather and drought.

Coordinating Department/Organization: Public Utilities

Potential Funding Source: Budgeted

Implementation Timeline: On-going

8. **Action 4.A.3** – Enhance existing City partnerships with appropriate local agencies, community support groups, and service providers to better mitigate hazards that may increasingly result from severe weather and/or climate change.

Coordinating Department/Organization: Office of Homeland Security

Potential Funding Source: Budgeted

Implementation Timeline: On-going

9. **Action 4.A.2** - Update the Land Development Code to require private development in the coastal zone to elevate storm drains above anticipated sea level rise along the San Diego coastline.

Coordinating Department/Organization: Planning

Potential Funding Source: Budgeted

Implementation Timeline: 1-3 years

10. **Action 6.A.1** – Work with U.S. Fish and Wildlife (USFWS), U.S. Army Corps of Engineers (USACE), and other federal, state, and local agencies to restore the conveyance capacity of the following channels by removing deposited sediment, trash and accumulated vegetation, to restore original channel cross sections: Cowles Mountain/San Carlos, Alvarado (Section 59 and 60 and 61-63), Industrial Court, Smythe, Auburn, Jamacha, Rancho Bernardo, South Chollas, Solola/Cottonwood, Sweetwater, and Tijuana River Valley.

Coordinating Department/Organization: Transportation/Storm Water

Potential Funding Source: Budgeted

Implementation Timeline: On-going

11. **Action 6.A.3** - Participate in the National Flood Insurance Program (NFIP) and meet the requirements for conformance with NFIP standards.

Coordinating Department/Organization: Public Works

Potential Funding Source: Budgeted

Implementation Timeline: On-going

12. **Action 6.A.2** - Support a “Green Street” ordinance to protect and improve water quality of rivers, creeks, bays, and the ocean by reducing pollutants in compliance with water quality regulations and orders.

Coordinating Department/Organization: Transportation/Storm Water

Potential Funding Source: Budgeted

Implementation Timeline: 1-3 year

13. **Action 4.A.1** – Enhance procedures to better support storm preparedness measures, including identifying coastal inundation zones, evacuation routes, alert warning notification procedures, staging areas, temporary shelters, community engagement, public information requirements, and enhancing collaboration with local, state, and federal partners.

Coordinating Department/Organization: Office of Homeland Security

Potential Funding Source: Budgeted

Implementation Timeline: 1-3 year

14. **Action 5.A.3** – Enhance the means of providing water for fire-fighting when service is disrupted because of earthquake.

Coordinating Department/Organization: Fire Rescue

Potential Funding Source: Need to Obtain Grant Funding

Implementation Timeline: 1-5 year

15. **Action 5.A.2** – Take actions to safeguard against dam failure, to include supporting public awareness initiatives, initiating structural studies and improvements in coordination with the State’s Division of Safety of Dams, and maintaining effective disaster planning in collaboration with local, state, and federal agencies.

Coordinating Department/Organization: Public Utilities

Potential Funding Source: Budgeted

Implementation Timeline: On-going

16. **Action 5.A.1** - Complete a seismic retrofit of the California Tower section of the Museum of Man in Balboa Park.

Coordinating Department/Organization: Park and Recreation

Potential Funding Source: Grant Funded

Implementation Timeline: 1-3 year

17. **Action 2.A.1** – Strengthen the development and enhancement of standardized City Emergency Operations Plan (s), and ensure they are coordinated with the appropriate County-wide Emergency Operations Plan (s).

Coordinating Department/Organization: Office of Homeland Security

Potential Funding Source: Budgeted

Implementation Timeline: On-going

18. **Action 2.A.2** – Enhance operating the City’s Emergency Operations Center (EOC), and Department Operations Centers (DOC) following the Standardized Emergency Management System (SEMS) and

Incident Command System (ICS). This includes training multiple staff members for each position in the EOC.

Coordinating Department/Organization: Office of Homeland Security

Potential Funding Source: Budgeted

Implementation Timeline: On-going

19. **Action 2.A.3** – Strengthen City and region-wide threat and hazard identification through the use of a Risk Management Project that enables regional stakeholders to utilize and assess quantitative and qualitative data, e.g. Critical Infrastructure/Key Resources (CIKR) databases, relative risk rankings of CIKR sites, core capability assessments, etc.

Coordinating Department/Organization: Office of Homeland Security

Potential Funding Source: Budgeted

Implementation Timeline: On-going

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